

THE POLICE JOURNAL

*A Quarterly Review for the Police Forces
of the Empire*

ISSUED UNDER OFFICIAL PATRONAGE



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PHILIP ALLAN & CO., LTD.

69 GREAT RUSSELL STREET, LONDON, W.C. 1

Telegrams and Cables—"AQUALICOR, WESTCENT., LONDON"
Telephone—HOLBORN 3391 (2 lines)

American Agents:

PUBLIC ADMINISTRATION SERVICE

850 EAST FIFTY-EIGHTH STREET, CHICAGO, ILL.

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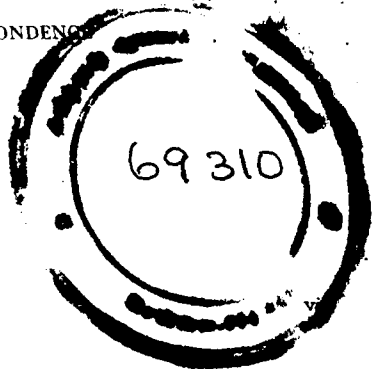
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POLICE JOURNAL

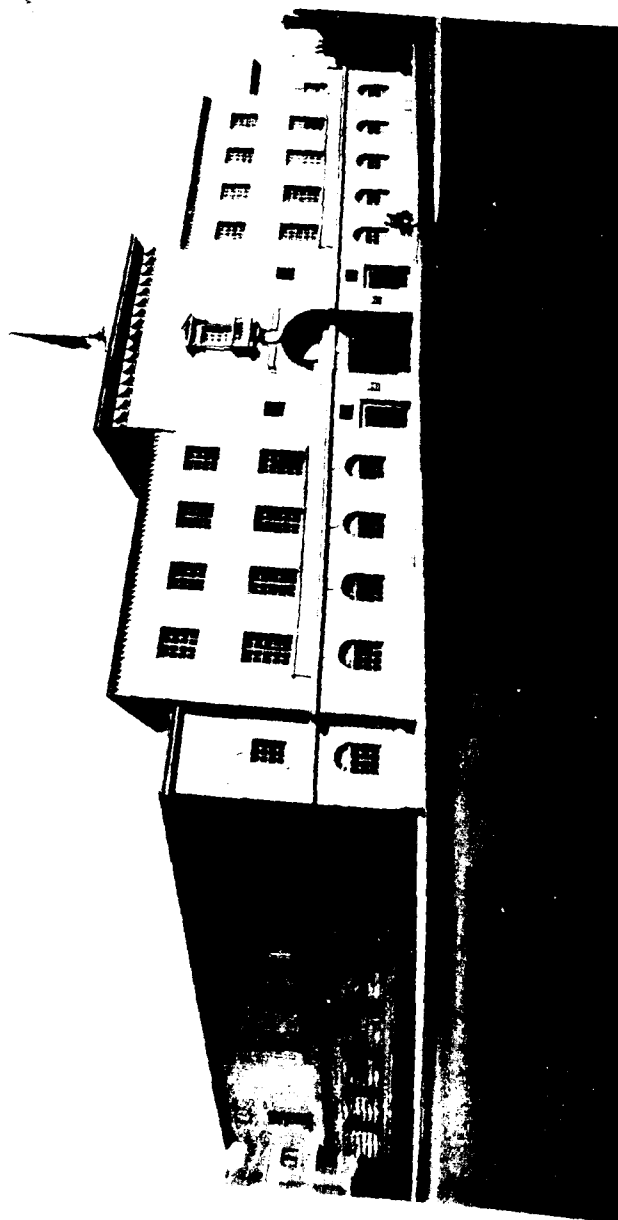
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Frontispiece



THE NEW HEADQUARTERS OF THE LEICESTER CITY POLICE

(see page 118, 'A Model')

THE POLICE JOURNAL

VOL. IX. No. 1

JANUARY-MARCH, 1936

Notes on Recent Crime

AN example of police persistence was once again shown, and later rewarded this autumn, when the finding of a tram ticket led to the conviction of a London house-painter. He was charged with stealing money from the premises of a fishmonger, during redecoration, but before the day's work had really commenced.

After the discovery of the theft, by the fishmonger on his return from the market, the police questioned all those present on the premises. The painter had contended that he had arrived there to work that morning about 8.25 a.m., rather later than usual.

Shortly afterwards, however, and without the knowledge of the painter, a newspaper boy told the police a story in direct conflict with that told by the painter. The boy stated that he knew the particular painter, who called him by the nickname of "Raspberry", and went on to say that he had seen him arrive at the premises at about 7.35 a.m., nearly an hour earlier.

The same evening, therefore, when the painter went home, he was followed by a police officer in plain clothes. It was this trail that led to the painter's ultimate conviction. When he threw away his used tram ticket, upon alighting at his destination, the officer astutely picked it up. It proved to be a "workman's return", and by means of it, and his "time-sheets", the conductor of the tram whence the ticket had been issued on the morning of the offence was able to

convince the Court that he had issued it at such a time and place, which, the painter having stated that he had gone direct from his home to his work, corroborated the boy's story as to the painter's earlier arrival, and repudiated the story told by the painter himself.

Everybody no doubt is familiar with cases of "suicide pacts", as they are called, when a young man and girl set about taking their own lives together, rather than face separation from each other. But it is somewhat amazing, to say the least of it, to find an allegation of a proposed "suicide pact" between two persons, both of the male sex. When a charge of another kind was heard recently in London it was alleged that two young men had gone away together to the seaside for a week-end by themselves. One of them had actually gone as far as taking with him a length of rubber-tubing, to enable life to be taken by "turning on the gas", because he was jealous of his companion's friendship for another man. He appeared only to have been frustrated by the presence, in the bedroom allotted to them, of an electric, and not a gas, stove.

In a charge of sending a letter threatening to murder a person, it appears that the police must certainly be in a position to prove that such a person exists. In a case tried lately at the Old Bailey, a man had admittedly written a letter to a woman, threatening to murder "your daughter Rita . . . the Russian dancer". The woman had in fact two daughters, but neither was called Rita, nor was either a Russian dancer. The police were not able to prove the existence of any Russian dancer called "Rita", and the charge failed, although the effect of the letter upon the mind of the recipient had been an immediate visit to the police.

The fact that recently a labourer was acquitted by a Devon jury of a charge the evidence in support of which

rested entirely on scientific analysis, does not necessarily detract from the value of such evidence. This is particularly the case where such "scientific evidence" is brought forward in conjunction with direct evidence of the more ordinary kind. The scientific evidence here, to support a charge of housebreaking, consisted in a comparative analysis of several substances found in a suit of clothes admittedly worn by the accused at the material time, with similar substances found in the farmhouse forcibly entered. A spot of pink candle wax upon the waistcoat corresponded with wax of a pink candle in the farmhouse, which had clearly been used at the time of the commission of the offence, by somebody. A streak of whitewash across the back of the coat corresponded with whitewash taken from the dairy, through which entry had been obtained. Both the wax and the whitewash did not correspond with other wax and whitewash found at the accused's own house. Nor did the whitewash on the coat tally with whitewash from the walls of the neighbouring inn, where the accused said he had spent at any rate a considerable part of the period during which the offence must have been committed, and where he had been seen.

Cow-hairs on the trousers corresponded with the cow-hairs taken from the cow shippen, through which it appeared the intruder had made his exit. Small particles of metal, "possibly zinc" according to the expert, were found in the turn-ups of the trousers, and entry had been effected through the zinc covering of the dairy window.

The presence of the wax, however, was greatly discounted by the additional presence, on the clothes, of wax from candles which lighted the accused's own house. This showed nothing sinister in the mere presence of wax upon the clothes. The cow-hairs were explained by a recent visit by the accused to the cow shippen, when he saw the farmer there in business.

The accused was acquitted, as stated above. Perhaps the jury were influenced by the principles of another accused at the same Assizes, who, charged with housebreaking solely upon the evidence of a finger-print on a bottle within the

house, refuted it in these words : " Nobody saw me going in, and nobody saw me coming out, so I'm having none of it."

How careful all witnesses must be not to mention the fact that an accused person has been in prison was once more stressed by the Court of Criminal Appeal in November last. The case under review had been tried originally before the Dorset Quarter Sessions. The charge was stealing or receiving some chickens. One of the witnesses for the prosecution was asked in cross-examination by the defending Counsel this question : " Have you ever visited the prisoner's house ? " His answer was : " Yes, when he was in prison." As a result the conviction was quashed by the Court of Criminal Appeal.

Such an answer may be made either maliciously or quite inadvertently. In any event, the Court of Criminal Appeal has now laid it down that, upon objection being made at the time by the defending counsel, a fresh trial must then and there be ordered.

It would seem that, in circumstances where there is any likelihood of such an answer being given, the witness cannot be too strongly warned against it beforehand by the police or a responsible person, from the point of view of saving the Court's time at any rate, apart from other considerations.

Incidentally, in the above case the prosecuting Counsel had referred in his address to the jury evidence in support of a second indictment against the accused upon which he neither was, nor could be, in charge of the jury at the same time as for the first indictment.

Recent Judicial Decisions

R. v. Donovan

A RECENT RULING ON 'CONSENT'

THIS case is reported in *25 Criminal Appeal Cases*, p. 1. The case against the appellant was that in order to gratify a perverted sexual passion he beat a girl with a cane which left seven or eight red marks on her body. He was charged with indecent assault and common assault, and, at the trial, relied upon the defence of consent. The Chairman of the Quarter Sessions overruled the submission made on behalf of the prosecution that, in the circumstances of the case, consent could not be advanced and directed the jury on the footing that consent or non-consent was the vital issue, but omitted to direct them that the onus of negating consent lay on the prosecution.

The appellant was convicted of indecent assault and common assault and was sentenced to concurrent terms of eighteen months' and six months' imprisonment, in each case with hard labour.

On the conclusion of the arguments the Lord Chief Justice said :—

" The Court is compelled, however reluctantly, to take the view that in the circumstances this conviction cannot safely be upheld and that this appeal must be allowed."

In the course of the considered judgment of the Court, which was delivered by Swift J., the following passages are of marked interest :—

" . . . If it be assumed that a verdict of guilty could be justified in this case only by proof that there was absence of consent, certain observations may properly be made.

First, it was of importance that the jury should be left in no doubt as to the incidence of the burden of proof in relation to consent. In May (8 *Cr. App. Rep.* 63 (1912), 3 *K.B.*, at p. 575) the principle applicable to cases of this kind was laid down by this Court in these words: 'The Court is of opinion that if the facts proved in evidence are such that the jury can reasonably find consent, there ought to be a direction by the Judge on that question, both as to the onus of negating consent being on the prosecution and as to the evidence in the particular case bearing on the question.'

"We have no doubt that the facts proved in the present case were such that the jury might reasonably have found consent. It is, indeed, difficult to reconcile some of the admitted facts with absence of consent. It was therefore of importance (if consent was in issue) that there should be no possibility of doubt in the minds of the jury upon the question whether it was for the Crown to negative consent, or for the defence to prove it. A second observation which may fairly be made is that consent, being a state of mind, is to be proved or negated only after a full and careful review of the behaviour of the person who is alleged to have consented. Unless a jury is satisfied beyond reasonable doubt that the conduct of the person has been such that, viewed as a whole, it shows that she did not consent, the prisoner is entitled to be acquitted.

"It is evident to the Court that the Chairman was at pains to sum-up an unusually difficult case with impartiality and precision. We think, nevertheless, that, if the summing-up be looked at in the light of the observations which we have made, it will be seen to be defective in two respects. First, we cannot find that the Chairman ever gave a clear direction to the jury that the onus of negating consent was on the prosecution. In that part of the summing-up where this aspect of the case is specifically dealt with, the Chairman, after using the words 'if there is consent, that is a complete answer', went on to say: 'Next you get to this vital question in the case, and that is whether the complainant in this case

... was, as she alleges, compelled by fear to submit to the defendant's wishes, or whether, as he alleges, there was no compulsion; that is the point. Because if there was no compulsion, if she was not, as she alleges, compelled by him to comply with his wishes, then she was a consenting party, and that is a good defence to each of the charges.'

"This material passage from the summing-up is, we think, so phrased as to leave the jury in doubt where the burden of proof lay on this part of the case, if, indeed, it did not lead them to believe that it was for the appellant to establish the defence of consent. . . . The second matter of complaint is a direction given to the jury in answer to a question. After a retirement which lasted for one hour, the jury returned to the Court and handed a note to the Chairman. The shorthand note of what then took place is as follows: '(The Chairman): Members of the jury, the question put to me is: If a man has reason to think that consent has been given, does that constitute consent? The answer is definitely "No". It is a question of fact. Do you want to retire again? (The Foreman of the Jury): I do not think we need retire again.' The jury then 'shortly conferred without leaving the jury-box', and returned their verdict of 'Guilty'.

"In our view this direction is open to grave objection. It is no doubt true that consent is a question of fact. The state of a person's mind is a question of fact, but, as we have said, it can be ascertained only by considering and weighing the ascertained facts about that person's conduct.

"The proper answer to the jury's question would have been that if they, as reasonable persons, thought that the conduct of the prosecutrix, viewed as a whole, was consistent with consent, they ought not to find that the prosecution had negated consent. It is, in our view, at least possible that such a direction, coupled with a correct and unambiguous direction as to the burden of proof, would have resulted in the acquittal of the appellant, and we are, therefore, compelled to come to the conclusion, notwithstanding the evident

desire of the Chairman to do justice to the appellant's case, that the trial was not satisfactory."

Later he went on to say :—

" . . . We think it of importance that we should state our opinion as to the law applicable in this case. If an act is unlawful in the sense of being in itself a criminal act, it is plain that it cannot be rendered lawful because the person to whose detriment it is done consents to it. No person can license another to commit a crime. So far as the criminal law is concerned, therefore, where the act charged is in itself unlawful, it can never be necessary to prove absence of consent on the part of the person wronged in order to obtain the conviction of the wrongdoer. There are, however, many acts in themselves harmless and lawful which become unlawful only if they are done without the consent of the person affected. What is, in one case, an innocent act of familiarity or affection may, in another, be an assault, for no other reason than that in the one case there is consent and in the other consent is absent. As a general rule, although it is a rule to which there are well-established exceptions, it is an unlawful act to beat another person with such a degree of violence that the infliction of bodily harm is a probable consequence, and when such an act is proved, consent is immaterial. We are aware that the existence of this rule has not always been clearly recognized. In his *Digest of the Criminal Law* (7th ed.), Article 290, Sir James FitzJames Stephen enunciates the proposition that 'every one has a right to consent to the infliction upon himself of bodily harm not amounting to a maim'. This may have been true in early times when the law of this country showed remarkable leniency towards crimes of personal violence, but it is a statement which now needs considerable qualification. . . .

" . . . There are, as we have said, well-established exceptions to the general rule that an act likely or intended to cause bodily harm is an unlawful act. One of them is dealt with by Sir Michael Foster in his *Crown Cases*, where he refers to the case of persons who in perfect friendship

engage by mutual consent in contests such as 'cudgels, foils, or wrestling' which are capable of causing bodily harm. The learned author at p. 260 emphasizes two points about such contests : (1) that bodily harm is not the motive on either side, and (2) that they are 'manly diversions, they tend to give strength, skill, and activity, and may fit people for defence, public as well as personal, in time of need'. For these reasons, he says that he cannot call these exercises unlawful.

"Another exception to the general rule, or, rather, another branch of the same class of exceptions, is to be found in cases of rough and undisciplined sport or play, where there is no anger and no intention to cause bodily harm. An example of this kind may be found in *Bruce* (1847), 2 *Cox C.C.* 262. In such cases the act is not in itself unlawful, and it becomes unlawful only if the person affected by it is not a consenting party.

"It is not necessary to deal in this judgment with other exceptions to the rule which are wholly remote from the present case, such as the reasonable chastisement of a child by a parent or by a person in *loco parentis*.

"In the present case it was not in dispute that the motive of the appellant was to gratify his own perverted desires. If, in the course of so doing, he acted so as to cause bodily harm, he cannot plead his corrupt motive as an excuse, and it may truly be said of him in Sir Michael Foster's words that 'he certainly beat . . . with an intention of doing . . . some bodily harm, he had no other intent', and that what he did was *malum in se*. Nothing could be more absurd or more repellent to the ordinary intelligence than to regard his conduct as comparable with that of a participant in one of those 'manly diversions' of which Sir Michael Foster wrote. Nor is his act to be compared with the rough but innocent horseplay in the case of *Bruce* (*supra*). Always supposing, therefore, that the blows which he struck were likely or intended to do bodily harm, we are of opinion that he was doing an unlawful act, no evidence having been given of

facts which would bring the case within any of the exceptions to the general rule. In our view, on the evidence given at the trial, the jury should have been directed that, if they were satisfied that the blows struck by the prisoner were likely or intended to do bodily harm to the prosecutrix, they ought to convict him and that it was only if they were not so satisfied, that it became necessary to consider the further question whether the prosecution had negatived consent. For this purpose we think that 'bodily harm' has its ordinary meaning and includes any hurt or injury calculated to interfere with the health or comfort of the prosecutor. Such hurt or injury need not be permanent but must, no doubt, be more than merely transient and trifling. . . ."

The judgment concluded by saying:—

"It is, therefore, impossible to say that facts have been proved which show the appellant's act to have been unlawful in itself. Without proof of such facts, he could be convicted only if the prosecution negatived consent, and upon the issue of consent there was a misdirection which may have led to a wrong verdict. For these reasons we came to the conclusion that the conviction must be quashed and the appellant discharged."

The conviction was accordingly quashed.

The Police and the Law

CLAIMS AGAINST POLICE AUTHORITIES

THOSE whose business it is to advise police authorities as to their legal position do not always find it an easy task. It happens not infrequently that the answer to a particular question affecting police administration is not to be found in any statute or judicial decision; and a study of legal textbooks more often than not fails to bring to light any real guidance or helpful discussion of the law so far as it affects the police authority's position. The reason for this paucity of authority is that our police system, whatever its advantages and disadvantages from other points of view, is not by any means free from anomalies from the legal standpoint.

As is pointed out in the Desborough Report, the police stand in a special relationship to the community. The constable does not act as the agent of the government but as "a citizen representing the rest of the community and exercising powers which, at any rate in their elements, are possessed by all citizens alike". Yet the police, as a body, are the instrument by which the central government preserves order; and the constable, though not an agent of the government, holds an office under the Crown and has a responsibility which is all his own in carrying out the duties which at common law belong to his office. Side by side with the peculiar position of the police, both collectively and individually, in relation to the Crown, the government, and community, there is the question of the legal relationship between the police forces in town and country and the authorities who are under a statutory duty to maintain them. This is the system which, in the words of a well-known American writer on police (Dr. L. F. Fuld), "combines in a peculiarly happy manner administrative efficiency with

local independence." It works well; yet sometimes it puzzles the lawyers and even the courts; and in spite of the now classic judgment of the late Mr. Justice McCardie in *Fisher v. Oldham Corporation* on the relationship of a police authority to the force it administers, there are still certain unsolved problems.

The Policeman in the Car

Among these problems is the question whether a police authority can in any circumstances be held liable in damages for injuries caused by the negligence of a policeman when driving a motor-car owned by the authority. Admittedly the authority can be made liable only if the police driver is the servant of the authority, and the decision in *Fisher's* case seems clearly to point to the conclusion that he is not their servant in the legal sense, at any rate when his services as driver are being used on ordinary police duties such as patrol work. But it may be argued that a constable when driving a police authority's car is acting in a special capacity which differentiates his position from that of the police when carrying out their ordinary duties; and that he is a mere driver or chauffeur and in that capacity is legally in the same position as a servant, whatever may be the nature of the particular police duty for which the car is being used at the time.

But to this argument we would reply that control by the employer over the way in which the person employed carries out his work is an essential element in the relationship of master and servant. Servants are simply agents of a particular kind, namely, those over whom such control is reserved and exercised by the employer. A police driver engaged on patrol work does not appear to be under the control of the police authority in such a way as to make the police authority his "master". The instructions on which he acts are instructions given by the Chief Constable or other superior officer, and the duty he is carrying out, though it might be disguised by saying that he is acting as chauffeur, is really

the duty of detecting or apprehending offenders against the law. If when he is driving there is another officer in the car who gives him orders as to how he should proceed, he is under the "control" of that other officer and not of the police authority. In the case of a car owned by the police authority the function of the authority is to provide the car as part of the equipment of the force. Logically it is difficult for this purpose to see any material difference between the use of a motor-car and the use of any other kind of equipment for police purposes. No one would think of holding the police authority liable for damage done by a police baton merely because the police authority owns the baton.

On the other hand, the driver of a car owned by the police authority may, in certain circumstances, in fact be subject to the kind of control by the authority which a car owner ordinarily exercises over his chauffeur. For example, a constable may be detailed to drive the car with a member of the Watch Committee as a passenger on the administrative business of the police authority. On such an occasion, the police driver, although not ordinarily the servant of the authority, might be held to be employed for the time being as an agent of the authority in circumstances which make him, in the legal sense, their servant. If so, the authority would be liable for damage to a third party in an accident caused by the negligence of the driver. If that is the legal position in the special circumstances described above, it follows that the authority would be liable for injury to any passenger in the car at the time of the accident; and the fact that a passenger who suffers injury is himself a member of the Watch Committee and in control of the car at the time would not appear to absolve the police authority from liability to compensate him for damage he has suffered in his personal capacity.

It is probable that the need for considering the legal niceties involved in such a situation can be avoided, and are in practice avoided, by suitable policies of insurance taken out by police authorities. We have here dealt with the problem rather by way of illustration of the anomalies and legal

uncertainties involved in our police system. On the subject of insurance in respect of cars owned by police authorities, which is a separate and by no means simple matter, it may be possible to say something in a future issue of this Journal.

Claims for Wrongful Acts

It may be of interest to consider the legal position of the police authority and the police in connexion with other possible claims by members of the public involving an allegation of some wrongful act or neglect by the police. For example, it might be alleged that a mistake by a constable on point duty in beckoning on a car at the wrong moment was the cause of an accident. A claim based on such an allegation could not in any circumstances be enforced against the police authority; and it is most unlikely that a mistake of that kind by a constable in the *bona fide* exercise of his duty would be held to be a ground for a claim against him personally.

Again, to take another example of a quite different kind, let us suppose that a policeman, entrusted with the duty of executing a search warrant on certain premises, takes the opportunity of putting a valuable necklace in his pocket. If he is clever enough to dispose of the necklace beyond recovery no question can arise of disposal by order under the Police (Property) Act, 1897, or by restitution, in the event of criminal proceedings against the policeman. But can any claim successfully be made by the owner against the police authority? The answer clearly is that no such claim could succeed. Let us assume for the purpose of argument that the policeman is a servant of the police authority. On that assumption the principle applicable is that a master is not liable for the act of his servant done outside the scope of his authority. *Prima facie*, a criminal act is wholly unauthorized, and certainly the police constable when he put the necklace in his pocket was doing something entirely outside his duty. The circumstances we are considering are entirely different from those which gave rise to the proceedings for the return of documents in the recent "cause célèbre" *Elias v. Pasmore*

(1934), 2 *K.B.* 164. So much is plain, but it might be suggested that where a constable is detailed for the special duty of executing a search warrant there is an obligation on the police authority to choose an officer whose honesty is believed to be beyond suspicion.

The true position, however, is that a police authority does not guarantee the individual honesty of each of the members of the force that it administers; nor does the authority impliedly undertake to act as insurer against loss incurred by anyone as the result of theft or other act of criminal dishonesty by any individual constable. This conclusion of law would apply even though the relationship of master and servant could be held to exist between police authority and police. That this is so is shown by such judicial decisions as *Cheshire v. Bailey* (1905), 1 *K.B.* 237 and *Mintz v. Silvertown* (1920), 36 *T.L.R.* 399. As Lord Reading stated in his judgment in the latter case, the principle applicable is that when a servant commits a crime for his own benefit he thereby severs his connexion with his employer and the employer is not responsible in the absence of personal negligence, unless he had held out his servant as having authority to do the act.

In the light of these decisions it is clear that any claim brought by a member of the public against a police authority for damage resulting from a criminal act by a constable could not be legally supported, even if it could be shown that the relationship between the two was analogous to that of master and servant.

Claims for Neglect

There is another possible claim which we may mention, *viz.* a claim by a member of the public for a failure of the police in carrying out their duty, with the result that a serious loss is caused to a member of the public. For example, a failure to act on information given by a member of the public may result in goods being stolen which, if the police had taken action promptly, would never have been stolen at all. We have heard of the suggestion that in such circumstances

a claim might lie against the police. But such a suggestion is, we think, wholly misconceived. The duty of the police to prevent and detect crime is a general duty towards the community as a whole. They are not under any special and particular duty in relation to a particular member of the public in this respect—certainly they are not under such a duty as to give rise to any shadow of a legal claim for compensation for loss arising in that way, even though the failure of the police may have been negligent.

It is significant that where the legislature has thought it necessary to impose upon the police authority liability for any failure on the part of the police to carry out the general police duty of preserving order, it has done so in specific and express terms. We may refer to the liability of the police fund under the Riot Damages Act, 1886. Under that Act, where damage to property has been proved to have taken place as the result of a riot, compensation is payable out of the police rate to persons who have suffered loss or injury; and it is the duty of the police authority to fix compensation. A refusal or failure of the authority to fix compensation can be the subject of a cause of action against the police authority (see *Farvis v. Surrey County Council* (1915), 1 K.B. 554 and *Ford v. Receiver for the Metropolitan Police District* (1921), 2 K.B. 345). In order to establish such a claim it must be shown that all the elements necessary to constitute a riot existed, viz. the assembly of at least three people with intent to carry out a common purpose by violence, if necessary, and the execution of the common purpose by violence causing alarm (*Field v. Receiver for the Metropolitan Police District* (1907), 2 K.B. 853).

Indeed, apart from the point that statutory provision has to be made in order to put upon the police authority liability to compensate members of the public for any failure of the police to carry out their general duties, there is judicial authority which indirectly seems to point to the same conclusion. In *Glasbrook Bros., Ltd. v. Glamorgan County Council* (1925), A.C. 270 it was held that although the police authority are

bound to provide sufficient protection to life and property without payment, yet if in particular circumstances at the request of an individual they provide a special form of protection outside the scope of their public duty, they may demand payment for it. It seems to follow from this decision of the House of Lords that any special services undertaken by the police for a particular member of the public *prima facie* falls outside the scope of their general duties; but it is conceivable that where a special arrangement is made, as in the Glamorgan case, and agreement is made for the provision of constables to perform for payment special services in the protection of property, an action for damages might lie against the police authority if there was a failure to give such special protection. Such an action, however, would be based on the agreement and not on any failure of the police to carry out their general duty of protecting life and property.

RIGHT TO ENTER PREMISES WHERE A PUBLIC MEETING IS BEING HELD

More than a hundred years have passed since the modern police system was first established in this country. Yet there is still a certain amount of doubt and difficulty in determining exactly what are the powers and functions of the police in relation to the prevention of public disorder, and the lawful means of dealing with disorder after it has arisen. Certain points have been clarified by judicial decisions from time to time, and in the last issue of THE POLICE JOURNAL we considered in these notes the effect of *Thomas v. Sawkins*, 51 *Times L.R.* 514—a decision of the High Court as to the circumstances in which the police have a right to enter premises in which a public meeting is being held. Since then there has been another judicial decision of equal interest to the police, viz. *Duncan v. Jones*, reported in *The Times* of 17th October, 1935. In that case the Divisional Court decided, in effect, that the police have the right and the duty to prevent a meeting from being held in a particular public place if they reasonably apprehend that the meeting, if held in that place,

might lead to a breach of the peace; and, accordingly, anyone who interferes with a policeman on such an occasion runs the risk of proceedings on a charge of obstructing the police in the execution of their duty. In view of the importance of this decision, we propose to discuss it in more detail when a full report of the judgments is available. In the meantime, in connexion with this subject, there are one or two points on which we should like to offer a few observations.

Breaches of the Peace

It may be suggested that there is still some doubt as to the steps which the police are legally justified in taking for the purpose of preventing breaches of the peace or bringing to an end an actual disturbance. If there is any doubt at all it is partly due to the fact that the powers of the police are not defined in any statute but depend upon the common law. The courts have been of great assistance to the police in stating clearly the common law principles and in applying them to the facts of a particular case; but it is impossible that there should be judicial decisions covering every variety of circumstances. Further, it cannot often happen that the police have any real difficulty in deciding whether the action they propose to take, or have taken, can legally be supported. We have heard it suggested that if their powers in this connexion were clearly defined by statute the police would no longer be handicapped by uncertainties as to what can lawfully be done. The answer is that there is often uncertainty as to the meaning of an Act of Parliament and its application to particular facts. Indeed, it is manifest that the police are better served by the common law—with all its elasticity and adaptability—than they would be by any rigid statutory code; and in our view, at any rate, their existing powers at common law, including the power to take preventive action in connexion with apprehended breaches of the peace and the power of dispersing an unlawful assembly or a riot, are sufficient to enable the police to discharge effectively their responsibilities.

LOITERING WITH INTENT

In the Metropolis, and in the large cities and towns in the Provinces, there are frequently charges made against persons of the well-known offence of "Loitering with intent to commit a felony". Generally speaking, up till 1924 there was no doubt as to what evidence was required under the Statutes to prove the case. Under Section 4 of the Vagrancy Act, 1824, it is an offence for any suspected person or reputed thief to frequent, amongst other places, any street or highway or any place adjacent with intent to commit a felony, and the legal interpretation of what is meant by "intent to commit a felony" is provided by Section 15 of the Prevention of Crimes Act, 1871. This states that in proving such intent it shall not be necessary to show the person suspected was guilty of any particular act or acts tending to show his purpose or intent; he may be convicted if, from the circumstances of the case and from his known character as proved to the Justice, it appears to such Justice that his intent was to commit a felony. It seems clear, therefore, that under this Section the evidence does not have to go so far as to show a definite or actual attempt to steal.

Typical cases will be in the minds of all police officers who are concerned in such cases. Generally speaking, a man is seen hanging about and going from shop-door to shop-door and trying the handles of each or from house to house, or where there are many motor-cars parked in the streets from one car to another trying the handles of the doors of the cars which contain luggage or other things capable of being stolen. Evidence of acts like these does not as a rule show actual attempts to steal, but such evidence has always been thought sufficient to prove the case of "Loitering with intent to commit a felony". There must be, of course, more than one of such incidents in order to prove the offence.

The two Statutes referred to have been strengthened by Section 7 of the Penal Servitude Act, 1891, which says that

such Statutes apply also to every suspected person or reputed thief frequenting or loitering about or in any of the said places with the said intent. The offence generally charged now is that of "Loitering with intent to commit a felony". A difficulty was, however, created by a case which was an appeal against the sentence of an incorrigible rogue who had been sentenced to nine months' imprisonment with hard labour at the Birmingham City Sessions on the 29th July, 1924. The case referred to is that of Frederick Dean and it is reported in Volume xviii of the *Criminal Appeal Reports* at page 133. The facts in this particular case are not fully set out, but the Lord Chief Justice in his decision referred to some of them. It must be remembered that the appeal was an appeal against sentence only and not against the conviction. The Lord Chief Justice in giving the Court's decision said :—

"Counsel has urged that there ought not to have been a conviction here, as the requirements of the law were not satisfied. In the opinion of the Court that point fails; but the matter does not stop there. In dealing with the question of sentence, this Court must look into the facts of the case to see what the proper sentence is, just as the Court of Quarter Sessions must do so. When the Court of Quarter Sessions approached the task of sentencing the appellant, a police officer said that he was afraid that the appellant had developed into a bad criminal, and that he had been getting his living by housebreaking. If that is so, he has been singularly lucky in not being convicted or even charged. It looks very much as if it was thought that there was not enough evidence to charge the appellant with attempted housebreaking, and this other method was adopted. It would be in the highest degree unfortunate if in any part of the country those who are responsible for setting in motion the criminal law should entertain, connive at, or coquette with the idea that in a case where there is not enough evidence to charge the prisoner with an attempt to commit a crime, the prosecution may, nevertheless, on such insufficient evidence, succeed in obtaining

and upholding a conviction under the Vagrancy Act, 1824. Having regard to all the facts of this case—this Court is only concerned with the sentence—the Court is of opinion that the sentence which has been passed on the appellant may suitably be reduced to one day's imprisonment."

This decision is not referred to at any length in Stone's *Justices' Manual*; the learned Editor there simply quotes one sentence as follows :—

"This Statute was not intended as a convenient method for supplying a hiatus in the evidence of felony."

No one could say what was meant by that, and we doubt if there are many chief constables or superintendents of police who are possessed of the *Criminal Appeal Reports*. They would not, therefore, be able to ascertain what the case of Frederick Dean really meant and what was really decided. It has, however, happened, on a number of occasions, that a man who has been charged with "Loitering with intent to commit a felony" has been represented by a learned Counsel or Solicitor who knows his law and in particular this case of Frederick Dean, and when the constable was in the witness-box and gave his evidence, saying that he had seen the accused going from door to door, he has been asked, "Did you see the prisoner attempt to steal anything?" and the constable says, "No I did not," and then he is asked, "During the whole of the time you were watching him did you actually see him attempt to steal anything at all?" and the constable says, quite truthfully, "No; I saw him trying the doors of the different houses or shops." Having got this admission from the constable, the learned Counsel then quotes the case of Frederick Dean and the sentence of the Lord Chief Justice: "It would be in the highest degree unfortunate if in any part of the country those who are responsible for setting in motion the criminal law should entertain, connive at, or coquette with the idea that in a case where there is not enough evidence to charge the prisoner with an attempt to commit a crime, the prosecution may, nevertheless, on such insufficient evidence, succeed in obtaining

and upholding a conviction under the Vagrancy Act, 1824." Evidently in this case the police were of the opinion that the accused had, prior to this particular offence, been getting his living by housebreaking. It was an unfortunate thing to have said, because it could have been suspicion only, as had the man been guilty of the offence of housebreaking and there had been evidence of this, he certainly would have been charged with it. This led to the remonstrance by the Lord Chief Justice; but with the fullest possible respect to the learned Judge we are bound to point out that under Section 15 of the Prevention of Crimes Act, 1871, which has been quoted, it is not necessary to prove any particular act or acts tending to show the intent to commit a felony, but that the accused may be convicted if from the circumstances of the case it appears that his intention was to commit a felony. If, therefore, the conduct of the accused justifies the reasonable inference that he was loitering with intent to steal, then that should under the Statute be sufficient.

There is also this last point, and it is a legal one of importance, that what the Lord Chief Justice said in the case of Dean was not in fact a decision; it was an *obiter dictum* of his brought about by the facts in that particular case. The point to be decided in Dean's case was whether the sentence should be reduced. The Court had power to reduce it and in the circumstances of the case did reduce it. In the last sentence of his judgment the Lord Chief Justice said, "Having regard to all the facts of this case—this Court is only concerned with the sentence—the Court is of opinion that the sentence which has been passed on the appellant may suitably be reduced to one day's imprisonment."

In the Metropolitan Police Area there have been a good many cases in which this case of 'Dean' has been quoted by Counsel to show that no offence has been committed. The cases have been typical cases where there has been no actual attempt to steal, but in many of these cases the evidence has been sufficient within the meaning of the Vagrancy Act to secure convictions.

In a recent case of a prosecution against a man for committing the offence of incest the accused was acquitted because the prosecution had failed to obtain the necessary fiat from the Attorney-General to prosecute. Presumably the police authority was not aware that a fiat was necessary, and the clerk or assistant clerk to the Justices before whom the case came was either unaware or had missed the point that the Attorney-General's fiat was essential. The need for the fiat arises under the Incest Act, 1908, and Section 6 of this Act provides that no prosecution is to be commenced without the sanction of the Attorney-General, unless commenced by or on behalf of the Director of Public Prosecutions. Apparently in this case the Director was not the prosecutor.

This is not the only case in which the Attorney-General's fiat is required. Under the Larceny Act, 1916, Section 21, a prosecution cannot be commenced against trustees for fraudulent misappropriation or conversion without the sanction of the Attorney-General or, if his office is vacant, of the Solicitor-General.

Another instance where the Attorney-General's fiat is required arises under the Prevention of Corruption Act, 1916. This refers chiefly to bribery cases in which the sanction of the Attorney-General or Solicitor-General must always be obtained first. When bribery or attempted bribery is alleged, the facts have to be laid before the Attorney-General. He requires the statements of the witnesses, and if he considers there should be a prosecution he issues his fiat, and this must be done before the proceedings are commenced. Until the fiat has been obtained there should be no arrest, no warrant, no summons.

SERVING NOTICES IN MOTORING CASES

It may be useful to call attention to a provision which has sometimes been overlooked and is found in Section 21 of the Road Traffic Act, 1930, relating to prosecutions for

exceeding the speed limit and to driving without due care and attention and driving in a manner dangerous or recklessly. An intended defendant cannot be convicted for either of these offences unless either he is warned at the time the offence was committed that he may be prosecuted, or within fourteen days of the commission of the offence a summons is served upon him, or within the said fourteen days a notice of the intended prosecution, specifying details of the offence, is served or sent by registered post to him. After the police officer has ascertained sufficient to satisfy him that proceedings may be taken, he should then warn the driver.

With regard to the notice which has to be sent if verbal warning is not given, it sometimes happens that such a notice is sent from the headquarters of the police authority, but when the case comes to be proved in Court there is no one from headquarters present to prove that the notice was sent. To obviate the necessity of calling the witness from headquarters the notice with a copy should be given to the police officer who is a witness in the case and he should serve it himself, and then he can prove that he has done so if the necessity arises.

Those experienced in these matters have sometimes found that where the defendant is represented by Solicitor or Counsel, at the end of the case for the prosecution, if no evidence has been given of the warning or of notice having been sent, the defendant's Solicitor or Counsel contends that the case for the prosecution must fail, because no evidence of warning or notice has been given. This has happened on more than one occasion; but the objection by the defendant is altogether wrong. If one turns to the end of Section 21 there is a provision which states, "the requirements of this section shall in every case be deemed to have been complied with unless the contrary is proved." The police authority in these cases, therefore, should take care not to lose their cases by omitting to refer to this last sub-section. Under this the onus is on the defence to show that warning was not given or that notice was not given.

SPEED IN BUILT-UP AREAS

Recently there was a case before the Feltham Justices relating to the infringement of the speed limit imposed by Section 1 of the Road Traffic Act, 1934. This Section provides that it shall not be lawful for any person to drive a motor vehicle on a road in a "built-up area" at a speed exceeding 30 miles per hour.

The question at once arises, what is a "built-up area?" In sub-section (a), it is defined as being a road where a system of street lighting by means of lamps which are not more than 200 yards apart is provided. A road is also deemed to be a road in a "built-up area" if there is a direction of the Minister of Transport that it shall be deemed to be such a road.

In the Feltham case there was a road called the Kingston Road, the first part of which, leading from Staines, has lamps provided which are less than 200 yards apart; then there is, or was, a section of about three-quarters of a mile in length with lamps upon it which were more than 200 yards apart; and after this comes a following section with lamps upon it which are less than 200 yards apart. Naturally it was a rather inconvenient road for motorists to use, particularly as there were no road signs showing that any section of the road was restricted as regards speed. Counsel for the defendant made a great complaint about this and the Justices, who were sympathetic, dismissed the summons. The Press gave great prominence to the case, but at a subsequent date the Chairman of the Bench stated that the summons had been dismissed as the Bench were not satisfied the speed had been exceeded on that part of the road where the speed was restricted. About a fortnight later there were nine or ten more summonses of a similar kind against persons who had exceeded the speed limit on the restricted section of the road. Those cases were all satisfactorily proved, but in some of them the summonses were dismissed on payment of Court costs only, in others a penalty of 10s. was imposed, and in some cases the licence was endorsed. The Press account of these cases was that all

had been dismissed under the Probation of First Offenders Act on payment of costs ; this was not so.

In considering cases for prosecution it is always desirable to bear circumstances such as these in mind, because if there is a real hardship on the motorist, and no definite blame can be attached to him, then it is not always advisable to prosecute ; a suitable caution may serve the purpose just as well. Moreover it is seen from this case that although there may be a system of street lighting by lamps it does not follow that they are all less than 200 yards apart. The police authority must, therefore, make sure before instituting proceedings that the road, where the alleged offence takes place, is a road within a "built-up area" within the meaning of Section 1 of the Road Traffic Act, 1934, and that the lamps are less than 200 yards apart.

Should there be a Direction in force that a road shall be deemed to be a road in a "built-up area", the question of lamps does not arise. In the London Traffic Area such Direction is given by the Minister of Transport ; elsewhere by the Local Authority : S. 1 (4).

LOUD SPEAKERS ON VEHICLES

In a recent case the question arose as to whether a motor vehicle proceeding along a street and carrying a gramophone with a loud speaker attachment and announcing in loud tones that could be heard 100 yards or more away was a lawful thing to do. The case in which this arose was *Adams v. Baldwin*, which came before the Divisional Court, Crown Paper, on 18th October last, and the facts were that the proprietor of the vehicle in question was carrying on a publicity business and was advertising an entertainment at a local theatre by means of a loud speaker. Under Section 54 (14) of the Metropolitan Police Act, 1839, it is an offence for any person, amongst other things, to blow any horn or use any other noisy instrument for the purpose of calling persons together or for announcing any show or entertainment. In pursuance of this Section some years ago a member of the

Salvation Army was convicted for beating a drum in the street in order to gather a congregation together (*Paget v. Phillips*, 14th January, 1890). It was argued in the present case that a loud speaker was not a noisy instrument within the meaning of the Act. The Court, however, was satisfied that the case was fully proved and confirmed the decision of the learned Magistrate who had convicted the appellant.

It is perhaps strange that we find a provision in the Police Act of 1839 being applied for the purpose of controlling the use of one of the most modern inventions. In the opinion of the police authority there was no doubt that a gramophone with a loud speaker going along the street and emitting an announcement of some theatrical entertainment was a noisy instrument within the meaning of this Section, and it is undoubtedly fortunate that it is so held, as the noise in the streets is sufficient already, but it could be a great deal worse and perhaps far more irritating if loud speakers were allowed to parade the streets for advertising purposes.

ACCOMMODATION ADDRESSES

"Letters may be received here." Many of our readers have probably seen a notice in these or similar words in the window of some shop, generally a newspaper shop, and they intimate that the occupier of the shop keeps an accommodation address there at which, for a small fee, generally a penny per letter, letters are allowed to be received.

Prior to the Official Secrets Act, 1920, such keepers of accommodation addresses were under no obligation to ascertain the names and addresses of persons who were their customers. The address in practically all cases was one of convenience and generally used by persons who were indulging in some form of social intrigue, or who were carrying on some fraudulent scheme, such as a fraudulent lottery, or may be in connexion with some spying activity. All that the man had to do, who desired to use such an address, was to give a name, generally not his own, and nothing else, and when letters came addressed to him they would be addressed in

that name and they were called for either by the person using the address or by some messenger on his behalf.

It is tolerably plain from this that an accommodation address might very well be used for mischievous purposes, either social, political, or criminal, and accordingly in 1920 the Official Secrets Act was passed and this imposed upon the keeper of such business the duty, in the first place, of registering his name and address with the chief officer of police, and in the second place it imposed upon him the duty of keeping a book in which certain specified particulars had to be entered, namely, the name and address of every person for whom a postal packet was received, or who had requested that the postal packets received might be delivered or forwarded to him, and further the duty of not delivering a letter to any such person until that person had signed a receipt for it in the book. Under this it is clear that a person using the address has to give his name and address, and also has to sign for any letter before it is delivered to him. It is further provided that the book kept, and all postal packets received, by the person carrying on the business, and any instructions as to delivery, shall be open to inspection by any police constable.

We think, on reading these clauses, that it would seem that the provisions here are directed against the keeper of the accommodation address; he is the person who is required to register, to keep a book to enter in it the names and address of persons for whom letters are received, and not to deliver such letters until the persons to whom they are addressed have signed for them. Further, that the keeper of the accommodation address has to produce the book and postal packets for inspection to any police constable at any reasonable time. The next sub-section, however, raised a doubt in the minds of some criminal lawyers as to whether the Section created an offence by the person using the accommodation address. Section 5, sub-section 4, provides "that if any person contravenes or fails to comply with any of the provisions of this Section, or furnishes any false information, or makes any false entry, he shall be guilty of an offence under this Act."

It was thought that, having regard to the wording of the provisions of sub-sections 1, 2, and 3 to Section 5, the only persons who could contravene or fail to comply with the Section, or who could furnish any false information or make any false entry within the meaning of the Section, was the keeper of the accommodation address. Seeing that the plain object of the Act was to enable police authorities to trace any person who was using an accommodation address it followed that if such a person gave false information which concealed his identity he was certainly doing something which was within the mischief of the Act of Parliament.

The point was raised in a case heard by the Divisional Court on the 29th October last. It was the case of *Stevenson v. Fulton* and the Judges were the Lord Chief Justice, Mr. Justice Humphreys, and Mr. Justice Singleton. The Lord Chief Justice, in giving the decision of the Court, said the question was whether the words of Section 5, sub-section 4, of the Official Secrets Act, "if any person furnishes any false information," were wide enough to cover the act of the persons who make use of accommodation addresses giving to the keeper of the premises false information as to their actual names and addresses. In the present case the respondent gave a false address, concealing his own identity. He thought that the Magistrate had taken too narrow a view of the Section and that if one looked at the scheme of the Section it was tolerably clear that the Magistrate came to a wrong conclusion. He thought, therefore, the Magistrate *had* come to the wrong conclusion. The words were wide enough and precise enough to cover what the respondent had done, and the case would have to go back to the Magistrate with a direction to find the offence proved. Mr. Justice Humphreys also gave judgment to the same effect, and Mr. Justice Singleton agreed.

It is a fortunate decision, as if the police authority in making their inquiries cannot trace the recipient of any letter because he has given a false name and address, then the provisions of the Act would in an essential degree be futile. It is useful, of course, for the police authorities to know who

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the persons are who keep these accommodation addresses, but it is far more useful for them to know who the persons are who use those addresses. The law in this respect has been made clear by the case of *Stevenson v. Fulton*, and persons giving false information to keepers of accommodation addresses can be prosecuted.

GAMING AND UNLAWFUL GAMING

A recent case (*Ankers v. Bartlett*) in the High Court drew attention to the legality or otherwise of the playing of games of skill in refreshment houses. The older School of criminal lawyers would probably have thought that this question was settled long ago. 'Unlawful gaming or gaming' is prohibited in public-houses by Section 79 of the Licensing Act, 1910, and in licensed refreshment houses by Section 32 of the Refreshment Houses Act, 1860, and there is a similar provision in Section 44 of the Metropolitan Police Act, 1839. Under this last mentioned Act it is an offence for any person who keeps any house within the Metropolitan Police District, wherein refreshments are sold or consumed, knowingly to suffer any 'unlawful games or any gaming whatsoever therein'. Under Section 32 of the Refreshment Houses Act, 1860, which applies to the whole of the country, it is an offence for every person licensed to keep a refreshment house knowingly to suffer any 'unlawful games or gaming therein', and under Section 79 of the Licensing Act, 1910, it is an offence for the holder of a Justices' Licence to suffer any 'gaming or unlawful gaming' to be carried on on his premises.

It will be seen that the words in each case are almost identical, being, any gaming or unlawful gaming. Obviously it was intended that the word 'gaming' should have a wider meaning than the words 'unlawful gaming', that is a game of chance. As long ago as 1852 (*Rex v. Ashton*) it was decided that to play dominoes, which is a game of skill, is gaming, and it is gaming whether money, or money's worth, is played for. Another case of the same effect was *Dyson v.*

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Mason, 53 J.P. 262, which related to the game of 'skittle pool', and that too, of course, is a game of skill.

The law, therefore, seemed clear; but recently a case was decided by the Feltham Justices under Section 44 of the Metropolitan Police Act, 1839, which related to the playing of a game on an automatic machine in a house wherein refreshments were sold. It was a machine having miniature grappling irons, and the player could place the grappling irons in such a position as he judged would enable them, when lowered, to grasp a prize that was upon the floor of the machine. The player had to place the grappling irons where he wanted them and then place his 2d. in the machine, and this set the crane in motion. It was contended in that case that the machine involved skill to operate it; but the Justices held that, skill or no skill, playing the machine was 'gaming' within the meaning of Section 44 of the Metropolitan Police Act, 1839, and convicted the defendant and imposed a penalty. There was an appeal from this conviction to the Court of Quarter Sessions in Middlesex, and the majority of the Justices comprising the Appeal Committee there held that the operation of the machine involved substantial skill and for that reason they allowed the appeal and quashed the conviction with costs.

From this decision, there was an appeal to the Divisional Court by way of Special Case, and it was heard by the Lord Chief Justice, Mr. Justice Humphreys, and Mr. Justice Singleton. This Court held that the question of skill was not material to the issue. The Lord Chief Justice said the Justices had directed their minds to the wrong question; the question was not whether it was a game of skill, the question was whether it was gaming within the meaning of Section 44 of the Metropolitan Police Act, 1839. The learned Judge then went on to refer to the preamble of the Act, which is in these words: "And whereas it is expedient that the provisions made by law for preventing disorderly conduct in the houses of licensed victuallers be extended to other houses of public resort." He mentioned this because

the respondent contended that although any gaming was unlawful in public-houses yet a refreshment house was not the same and the same principle did not apply, but this preamble coupled public-houses and refreshment houses together. He further referred to *Dyson v. Mason*, in which Mr. Justice Wills said: "It seems to me to have been held, and rightly held, that playing any game for money is gaming," and the learned Judge further referred to the case of *Patten v. Rhymer*, in which Mr. Justice Wightman said: "The words 'any gaming whatsoever' are wide enough to prohibit gaming of every description." The Court therefore held that it was immaterial that the operation of the machine required skill, and the appeal from the decision of the Court of Quarter Sessions was allowed, and the case was sent back to that Court with the direction that the conviction by the Feltham Justices had been wrongfully quashed and the conviction should be restored.

The case is of importance, not only because it refers to the Metropolitan Police Area under the Metropolitan Police Act, 1839, but it also bears directly upon similar offences under Section 32 of the Refreshment Houses Act, 1860, which covers the whole of the country and it makes it plain that whether the house be a public-house, or whether it be a licensed refreshment house under the Act of 1860, or a refreshment house such as is defined in the Metropolitan Police Act of 1839, gaming of any description in it for money or money's worth is unlawful.

Scientific Aids in Criminal Investigation

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PART I

IT has been said that the three qualities which mark a successful detective officer are tact, patience, and perseverance: and it is owing to the possession or cultivation of these qualities by most members of detective forces that the incidence of crime in this country has been kept within reasonable limits.

Other countries, in which serious crimes were more numerous and varied, found it necessary as long ago as the latter quarter of last century to resort to means other than the natural gifts of their police officers to maintain the upper hand in the perpetual struggle of society against the criminal. Austria, Germany, and France, among others, recognized the help that science is able to give to the detective officer in his work, and each, in various ways, and in different degrees, built up in the early years of the present century organizations in which, by co-operation between their police forces and workers skilled in chemistry, biology, and other sciences, the maximum efficiency was secured for their forces in the fight against crime.

Great Britain has lagged in this progress of police organization. Of the various causes of this backwardness those chiefly responsible were probably the difference between the outlook of justice in this country and in some continental countries, and the recognition on the continent earlier than in Great Britain of the importance of science in national life. In this country it has always been the proud boast of the

law that a suspect is to be treated as innocent until his guilt has been proved beyond reasonable doubt. In many of the continental courts the law demands that the prisoner should prove his innocence rather than that the prosecution should prove his guilt. This fairness, of which British public opinion is so proud in its treatment of the criminal, has perhaps caused a certain amount of doubt of the desirability of making use of circumstantial evidence, particularly when that is based on scientific observations of a type with which the man in the street is personally unfamiliar.

The recognition of such sciences as chemistry and physics as among the most important factors in the life of a nation was delayed in this country until their applications became painfully apparent in the Great War: before then, to most people 'science' meant something or everything within the scope of the medical practitioner: and generally it was he alone of the men of science who played any part in the bringing to justice of the criminal. The spread of scientific knowledge during and after the War, as well as the growth of crime which is an unfortunate consequence of the trade depressions which follow war, have prepared the way and strengthened the necessity for the co-operation between science and criminal investigation which has begun in this country in the last few years.

The object of this article, the first of a series, is to attempt to show in what ways science is able to assist in the detection of crime, and to give, particularly to those younger officers who have just entered, or hope to enter, the detective branch, some idea of the help they can give to make the co-operation of the scientist and the police officer as effective as possible. It has been felt that such articles may fulfil a useful purpose at a time when the Home Office is beginning to put into action schemes which it has prepared for the fostering and extension of scientific aids among the police forces of the country.

First, perhaps, it is well to define what is meant by the term 'scientific aids' in so far as it refers to these articles.

By the term is meant that type of information or evidence which is obtained by bringing to bear on a police investigation the knowledge which belongs to such sciences as chemistry, physics, botany, and zoology. This usually involves the examination by someone skilled in such sciences of something found at the scene of a crime, or on a suspect, or on the victim of a crime. No matter how willing the scientist may be to assist the police officer he can do nothing until he has the material on which to work. It is, moreover, seldom that the scientist is able to visit the scene of a crime and to collect there the material or exhibits which he thinks will repay examination. As a rule he can only examine what is brought to him by the officer in charge of the case. It is clear, therefore, that it is generally the police officer who has to decide, when he is making an examination at the scene of a crime, whether there is anything there that might yield useful evidence if he takes it to a laboratory for examination. This means that the police officer must know what sort of material the scientist needs, and the sort of results that he can produce.

It might appear from this that it is necessary for the officer to receive a scientific training. But this is not so. The officer need know only what sort of results can be obtained in a scientific examination, and is not concerned with the way in which the work is actually done.

An attempt has been made to present this information in skeleton form in the pamphlet *Scientific Aids in Detection*, which has been prepared by the Home Office for issue to police officers. Thus, if an officer has found, say, a suspicious-looking dark red stain at the site of a supposed offence, it is enough if he knows to what kind of questions about it he may reasonably expect answers from a scientist; for example, is it blood?; if so, is it human blood? If it is human blood, how long has it been shed? Could it have come from the suspected person, or from the victim? Or, again, it may happen that there are found on the clothes of the victim of an assault some loose fibres which clearly have not come from the victim's garments. It is enough in such a case for

the officer to know that an appropriate expert may be able to tell him the types and quality of the fibres, and possibly the nature of the dye with which they are dyed, and the sort of weave of the fabric from which they came. If a suspect is arrested the officer may learn whether or not the fibres could have come from the suspect's garments.

Simple examples such as these will serve to show that although it undoubtedly will be of help for an officer to know what the various scientific experts are able to do in their respective fields of work, yet that knowledge need not be very profound. Above all, however, the need for co-operation must be emphasized. At the present time the number of scientific workers in contact with police investigations is not large, but the number is increasing, as also is the number of police officers with some measure of scientific training. It is these officers in particular who will be able to help the growth of the application of scientific aids, on the one hand by bringing police problems to the notice of the scientists, and on the other by stimulating the interest of younger officers in the subject.

It may be felt that this acquaintance with the possibilities of scientific aids is a matter only for those officers who are in the detective branch. This is not so. It is equally important for the uniformed officer. For he is generally the first member of the force called to the scene of a crime, and although it may not be his duty to collect material for scientific examination, it certainly is his duty to see that such material is not lost or damaged, for example, by members of the public, before the detective officers arrive. This duty he cannot carry out adequately unless he too is familiar with the sort of materials which can be regarded as 'clues' from the scientific viewpoint.

Further, in rural areas, where considerable time may elapse before the arrival of the detective officer, the responsibility of the uniformed man is greater, and he may have to undertake certain duties in connexion with the collection of material for scientific examination which normally would

belong to the detective officer. Thus, it might seem in his judgment that certain material at the scene of the crime, which he knows might repay examination, is liable to suffer damage from a threatened storm, or be blown away by a rising wind. It would then properly be his duty to collect such material for examination. But, it is clear, he can only exercise this judgment if he has made himself familiar with the use of scientific aids equally with his colleagues in the detective branch.

At the same time it cannot be too strongly stressed that the essential duty of the uniformed officer who is first called to the scene of a crime is to see that as little as possible is moved or disturbed, whilst at the same time of course pushing forward with his inquiries and interrogations. The principle may be expressed by saying that both the uniformed and detective officer must cultivate the powers of observation, but that the uniformed officer should view the crime and its site as a whole, leaving the detailed examination of its parts to the detective officer. It is for the former to 'look around', and for the latter to 'peer and handle'.

This principle may perhaps be illustrated by reference to a case of breaking. A uniformed officer, summoned by a householder, before calling the detective officer, has primarily to satisfy himself that an offence has been committed and that the intruder is not still on the premises. When this is done he will best assist his colleague by impressing on the members of the household the advisability of touching nothing, and if possible of not using the room or rooms entered by the intruder. This he can well do by his own example in concentrating on his interrogations, and making his investigations round about the premises rather than within them. An early description of the criminal, if seen, or alternatively of suspicious loiterers in the vicinity, is of more use at this stage of the investigation than a detailed hunt for material clues. This does not preclude the uniformed officer from using his eyes to detect the mode of entry or path of approach, but such observations should be made without handling

anything, without too close approach, and with careful memorization of his own movements. The last point is important so that risk of confusion may be avoided between evidence of the actions of the criminal and any traces such as foot- or finger-prints left by the officer in his preliminary investigations.

It will be shown in later articles that the 'clues' on which scientific evidence is based are often exceedingly minute : single hairs, a few fragments of leaves, some particles of dust, a splinter of wood or metal, a small twist of fibres, and similar trifles have frequently figured as the basis of crucial evidence in criminal cases. Such traces need special care in handling and in transport, and call for special methods of packing. It is not to be expected that the uniformed officer will carry the materials necessary for such packing, and thus it is important that the collection of such material should be left to the detective officer who comes prepared for such work. Some of the simpler methods of packing need only articles that every detective officer can carry in his pocket : but as the application of scientific aids extends it is likely that selected detective officers will be trained and equipped for the work of searching at the scene of a crime for materials likely to yield scientific evidence. Such officers would take with them to their work all the articles necessary for the safe packing of whatever search might yield.

It is, moreover, desirable and probable that an officer who has received such special training should be attached to each divisional headquarters, so that he may be summoned to the scene of any serious crime in which it is thought likely that traces worth scientific examination may occur. Such officers, naturally, would need to have a wider acquaintance than the average with the possibilities of scientific aids. They also would have important duties in acting as liaison officers between the staffs of police laboratories and the members of their forces. It must be remembered that the use of scientific aids in police work in this country is in its infancy, and that it is passing through a period of rapid

growth. This growth, however, can only continue so long as the spread of knowledge is maintained. In many parts of the country this kind of training has been introduced into detective training courses, so that there is growing up a body of instructors who will be able ultimately to ensure that every police officer has some knowledge of the subject.

It ought here to be pointed out that the purpose of this extension of the use of scientific aids is to apply to minor crimes, such as housebreaking and larceny, those methods which have in the past been adopted in dealing with major crimes involving injury to the person. In the latter cases the medical witness, either a general practitioner, police surgeon, or pathologist, is of necessity involved ; and in the past his examination at the scene of the crime, or of the victim or suspect, has frequently brought to light 'traces' which have given important evidence on examination. Such witnesses, however, are not available in the case of minor crimes, and thus a great deal of useful material in the form of 'traces' must be escaping notice. It is in the hope of collecting and examining such material that police laboratories are being established, and that the knowledge of the possibilities of scientific methods is being encouraged.

In the succeeding articles different branches of the work of the scientific expert will be described in simple form. Wherever possible information will be given as to where fuller accounts may be found : it must be remembered that it is usually more useful to know where to go to get detailed information on a subject than to attempt to memorize a few of the details of it. So far as possible, accounts will be given of cases in which scientific evidence has played its part : such evidence is usually fully reported in newspapers, and junior officers especially can obtain useful knowledge of the type of material to seek, and of where to search for it, by careful reading of the reports of cases in which scientific aids have been used.

It is hoped to deal at some length with the search by detective officers for 'traces' at the scene of the crime. Such

All About Finger-prints

By SUPT. H. BATTLE

Officer in Charge, Finger-print Branch and Criminal Record Office,
New Scotland Yard

I

I HAVE been asked to contribute a series of articles to THE POLICE JOURNAL, the object being that the advice and instruction contained therein may prove of assistance to members of Forces generally and, in particular, to junior officers who have yet not come into contact with any investigations connected with finger-prints; and it is to the latter that this series is primarily dedicated.

Many of you will no doubt be well acquainted with the general principles of the finger-print system of identification and also its infinite value to police in the successful investigation of crime. I do not intend to discuss at length the classification systems, but merely to give you some idea of how this valuable asset to police duty can be utilized to the best possible advantage.

Fig. 1, you will see, is an impression of the palmar surface of the hand, which is traversed in all directions by what at first sight appear to be lines varying in length and forming themselves, more particularly on the end joints of the digits, into distinctive patterns.

The most conspicuous lines are the creases, which are nothing more than the lines of flexure of the skin, and bear no relation to the much more numerous but less conspicuous lines.

The latter are the papillary ridges, which are studded with tiny pores—the mouths of the ducts of the sweat glands—which are constantly exuding perspiration.

This wonderful arrangement of papillary ridges assumes varying forms in regard to general pattern, and in the finer



FIG. 1

searching must be systematic, unhurried, and accompanied by the making of all essential notes. Only by making the search on a systematic and logical plan is it possible to make sure that nothing of value has been overlooked ; ground that has been covered methodically and unhurriedly is not likely to need covering a second time, and therefore in the long run represents a saving of time. The evidence that an officer obtains in such a search does not necessarily appear in the final presentation of his case. Often, of course, it forms an essential part, and is then the basis of circumstantial evidence that extends or supports the 'ordinary' police evidence. At times, however, the value of such evidence is in the suggestion of new lines of inquiry, or in enabling certain of a number of suspects to be eliminated from the case.

It is perhaps worth repeating that much of the material used in scientific examinations is very small in amount, and sometimes even is invisible to the naked eye. Thus judgment has to be exercised by the officer in knowing what sorts of objects and what types of places are likely to bear evidence of this kind. So, although he may be unable to detect the actual traces himself, he can bring in for examination at the police laboratory articles likely to carry the traces.

In conclusion it may perhaps be emphasized that scientific evidence must be regarded as aiding and not replacing 'ordinary' police evidence. Its introduction in a case, at least in court, is only advisable when it forms an essential link in the presentation of a case. Further, it is necessary that scientific evidence should not be used unless it is strong, convincing, and above suspicion : nothing is more likely to retard the growth of this new aspect of police work than cases lost in court through the introduction of weak or unsound scientific evidence. Much of the scientific work may not appear in court, and the greater the restraint with which it is employed the more effective will it be when soundly used.

It is only fair also to point out that scientific evidence may be of help to the defence as well as to the prosecution, and cases are on record in which work in police laboratories

in this country has cleared suspects. Therefore in the search for material which may yield evidence which will further his investigation the officer should be careful not to destroy or damage material which might conceivably yield evidence of value to the defence. His judgment of what may bear evidence likely to support his case will enable him equally to decide what might be of help to the defence.

The fact should be emphasized that the range of subjects involved in the examination of exhibits in police cases covers almost the whole of science, and is far beyond the capabilities of any one worker. In the articles which are to follow, subjects belonging to the province of medicine and pathology, and subjects, such as finger-prints, which are the study of expert police officers, will not be discussed. Experience has shown that the application of scientific aids to minor cases involves chiefly the use of chemistry and microscopy, and although it may be necessary in later articles to go rather beyond the scope of these two subjects which lie within the special field of the writer, it is only the essential capabilities of these and other subjects that will be described. The writer does not feel competent to go far into detail regarding subjects other than the two mentioned, nor, in fact, is it necessary to do so.

In the next article searching for traces at the scene of crime will be considered.

PHOTOGRAPHIC ENLARGEMENT OF
IMPRINT OF LEFT
FOREFINGER OF PRISONER.



PHOTOGRAPHIC ENLARGEMENT OF
FINGER PRINT ON WINDOW.

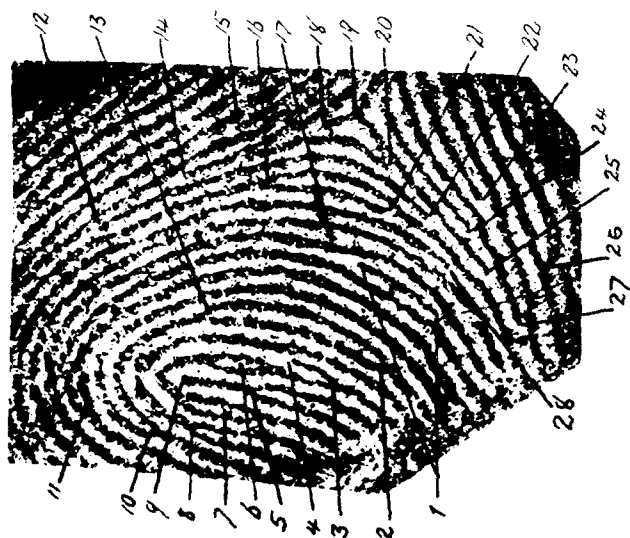


FIG. 2

ALL ABOUT FINGER-PRINTS

43

details which are termed "ridge characteristics". These ridge characteristics are shown in Fig. 2. The lines which have been drawn with ink and which are numbered 1 to 28 denote the ridge characteristics which are in agreement in both impressions. The different types of characteristics in the particular impressions are as follows :—

' 1 ' is a short independent ridge.

' 2 ' is a bifurcation or forking of a ridge in an upward direction.

' 4 ' is a ridge terminating in an upward direction.

' 5 ' is a bifurcation or forking of a ridge in a downward direction.

' 6 ' is a small lake or enclosure.

' 17 ' is a short independent ridge or dot.

' 20 ' is a ridge terminating in a downward direction.

The only other parts of the body where these papillary ridges appear are on the soles of the feet.

There is no doubt concerning the persistence of these ridge characteristics throughout life, and even after death, until such time as the skin is totally destroyed through decomposition. Careful inquiry by the pioneers of the finger-print system of identification proved this conclusively. Fig. 3 illustrates impressions of three fingers taken at different periods, (a) and (b) being impressions of the same finger, (c) and (d) being impressions of the same finger, and also (e) and (f) being impressions of the same finger.

It will be observed that there is no change in any of the characteristics after a lapse of years. I should, however, explain that the thin white space on the right of the impression taken in 1908 is a slight superficial scar.

Although the dimensions of the patterns and ridges change with the growth of the body, the form and sequence of the characteristics never alter, and it is upon *sequence alone* of the ridge characteristics that the identity of an impression is established. I will explain this more fully in a later article.

Many persons seem astounded when they are informed that injuries to the skin do not, unless the true skin has been damaged, prevent these ridge characteristics from assuming the same form when the skin heals as before the injuries. Fig. 4 shows impressions of the fingers of a prisoner taken in 1898. Fig. 5 shows impressions of the same fingers of the same prisoner, who, to avoid the tracing of his former criminal record, mutilated the skin of his fingers after arrest in 1903. Fig. 6 shows the impressions of the same fingers taken in 1905 after the skin had healed. Compare Figs. 6 and 4 and it will be observed that there is no difference in any of the ridge characteristics.

Scenes of Crime

The most spectacular branch of finger-print work, and the one which I think will appeal to you most, is that dealing with scenes of crime, etc.

The number of cases in which imprints—the majority of them being only fragmentary impressions—left at scenes of crime are identified as those of criminals is increasing daily, and the assistance of finger-print work to the police officer investigating an offence, in connexion with which imprints have been discovered, cannot be too highly estimated, as in most of these cases the investigating officer has no idea of the identity of the perpetrator(s).

In 1924 the number of criminals identified by means of imprints left at scenes of crime was fourteen. In 1930 the Single Finger-print System was introduced, and the number of identifications for each of the following years is as follows :—

1931	.	.	389
1932	.	.	605
1933	.	.	646
1934	.	.	780

The total for 1935 is not yet available, but it will be far in excess of that for 1934.

It is strongly recommended that a qualified finger-print officer and photographer should be the first persons to

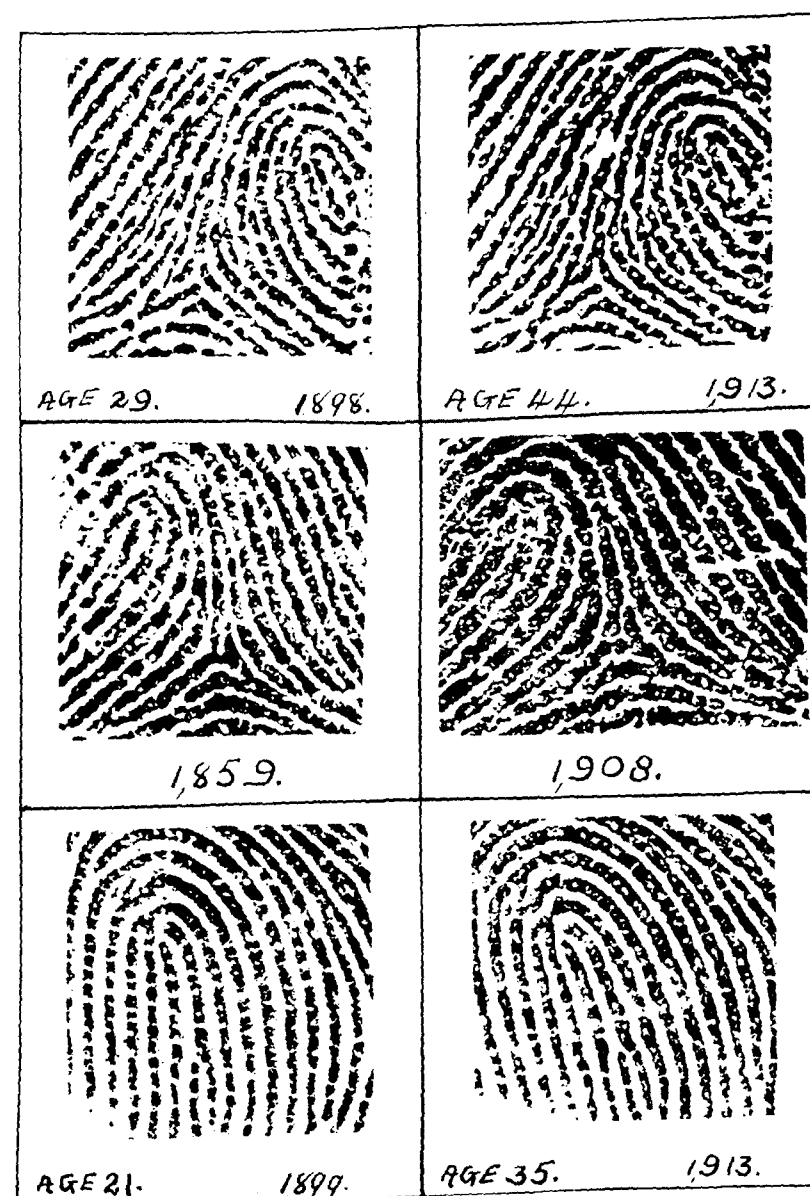


FIG. 3

(face p. 44)

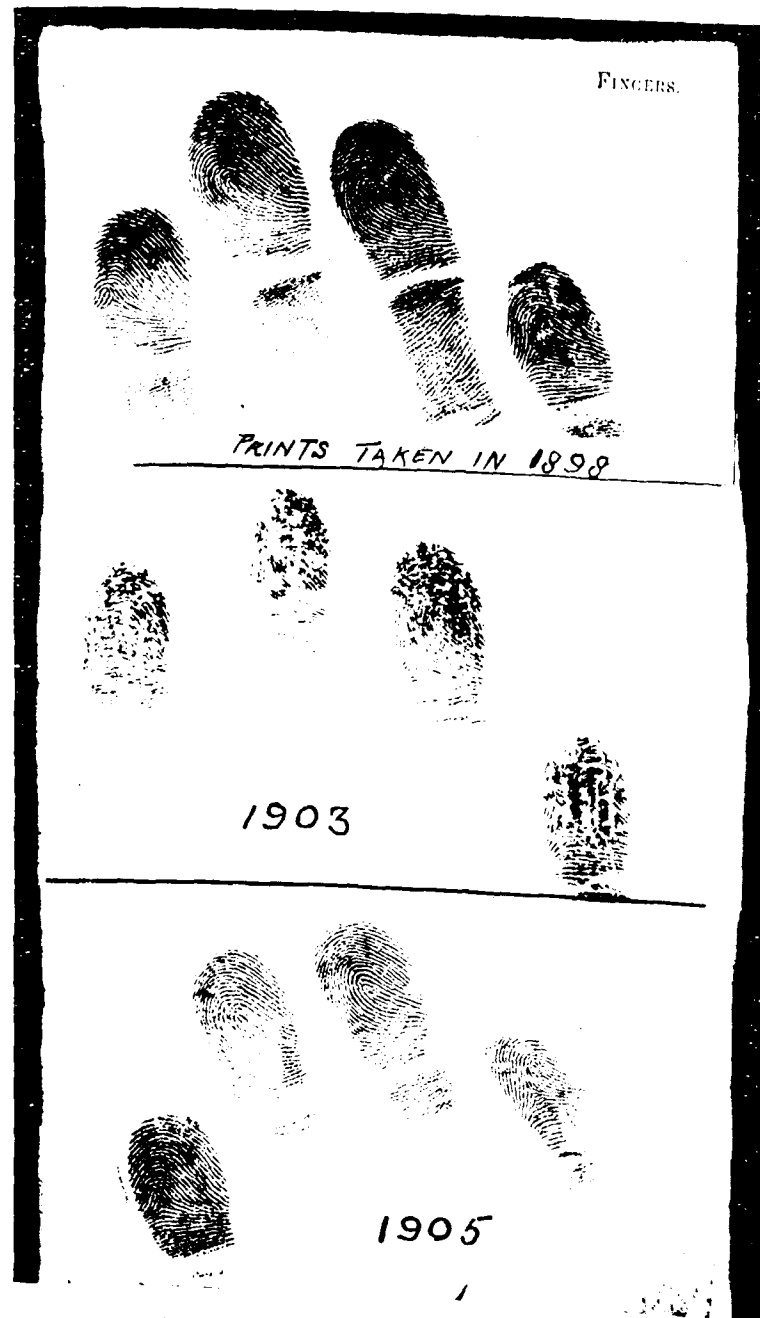


FIG. 4 (above). FIG. 5 (middle). FIG. 6 (below)

examine any scene of crime. If this is not done, and other officers arrive to conduct their investigations, imprints left by criminals on various articles, etc., which may be moved or handled without care, may be damaged or completely ruined.

Upon arrival at the scene of a crime the investigating officer should warn all persons on, or who have legitimate access to, the premises not to touch anything, lest by obliteration, or superimposition of their own impressions, they damage any finger-marks left by the criminal(s). Such impressions are generally perspiration marks, and if touched, or if anything is allowed to come into contact with them, they will be rendered useless for purposes of identification.

The investigating officer should reconstruct the crime, as far as possible, and should be careful not to handle articles, etc., indiscriminately, as anything he touches will bear his finger-impressions and, more often than not, may obliterate any imprints which may already be on the article.

Any article(s) which may bear finger-prints should be carefully examined and preserved. Gloves may be worn when conducting the examination, but whilst this prevents the officer leaving his own impressions on any particular article, it does not follow that an inexperienced officer will not, by unskilful handling of an article, render useless any impressions that may possibly have been left by the criminal(s).

The impressions on articles known to have been moved or handled by the criminal may be latent, *i.e.* invisible. It should not, therefore, be assumed that because an article appears not to bear impressions it would not be possible to discover any.

Where imprints are discovered on articles, a note should be made by the investigating officer of the actual position of the articles as they were found by him. If photographs of the scene of the crime are taken, including the articles in question, that will suffice; but where photographs are not available it is very useful to be able subsequently to give the *exact* position where any particular article was found by the officer.

Much astonishment — sometimes bewilderment — is expressed when officers have been informed that their own impressions have been discovered on articles. Difficulty is occasionally experienced in convincing them that such is the case, yet the explanation is quite simple. What usually happens is this.

An officer is called to the scene of a crime, and certain articles are pointed out to him as having been moved by the criminal(s). Without hesitation, he picks them up in the customary manner, *i.e.* as one would ordinarily handle the particular article, whether it be a glass, bottle, box, etc., completely overlooking the fact that when the article is set down it bears his own imprints which he has just impressed. The article may subsequently be examined by a different officer. Instances have occurred when it has been re-examined by the same officer. Certain impressions are discovered and are later found to be those of the officer who first handled the article. Thus it will be agreed that the officer who first handled the article overlooked an elementary point he should have remembered.

Many readers may, perhaps, be of the opinion that the foregoing could not possibly happen, or, on the other hand, that if it has, it should not have occurred. I can assure you all that it has happened repeatedly, and I shall be more than surprised if this article prevents a repetition, although I am hoping that it will considerably lessen the number of such cases.

With the aid of a few illustrations, I will explain how articles should be handled when examining them for fingerprints. The following articles are some which officers are most frequently called upon to examine.

Bottle—see Figs. 7 and 8.

Place the tips of the fingers on the cork, or a finger in the aperture if the cork is missing. Tilt the bottle to one side, and place a finger or fingers of the disengaged hand on the edge of the base. By carefully revolving the bottle between both hands the whole surface can be examined without placing



FIG. 7 (above)
FIG. 9 (middle)
FIG. 11 (below)

FIG. 8 (above)
FIG. 10 (middle)
FIG. 12 (below)

(face p. 46)

a digit, or any other part of the palmar surface, on the parts of the bottle where imprints are likely to be found.

Tumbler—see Figs. 9, 10, and 11.

If standing in the correct position, *i.e.* with the aperture uppermost, handle as in the case of a bottle. Place the fingers over the aperture, tilt the tumbler, and place a finger or fingers on the edge of the base. The tumbler can then be lifted and examined with ease. Should the base be uppermost, first examine the base before attempting to move it, and if no imprints are discovered it can be handled in the same way as if the aperture had been uppermost, except that, as no imprints are on the base, for greater support, all the fingers could be placed across it—see Fig. 12. In the event of marks being discovered on the base, care, of course, should be exercised in tilting the glass, and it should be lifted as shown in Fig. 11. In no circumstances, however, is it necessary for the officer to place any of his impressions on any portion of the surface of the glass.

Piece of Glass—see Figs. 13 and 14.

This article is usually found broken, but the handling of it should present no difficulty. Place the fingers on either side of the glass, and then lift. Keep the fingers extended, taking care that the thumbs do not come into contact with the surface of the glass. Gloves should be worn to prevent injuries being caused to the digits by the sharp edges of the glass.

Box—see Figs. 16 and 17.

Examine the top first. To lift it, keep the hand outstretched and place the middle of the palm against one corner of the box. Place the tip of a finger firmly against the base of the opposite diagonal corner, and tilt. It can then easily be lifted and examined.

Knife—see Fig. 15.

The tips of the forefingers of both hands should be firmly placed, one at the end of the blade and the other at the end of the handle, and the knife can then be lifted for examination.



FIG. 13 (above). FIG. 14 (middle). FIG. 15 (below)

When a finger-print is found on part of a window which has been broken to gain admission to premises, all the pieces of glass should be preserved, so as to be available as proof that the piece bearing the finger-print was part of the window broken. In such cases an endeavour should be made to ascertain whether the print is on the inner side or outer side of the window glass. You will all appreciate that if it were proved that the imprint was on the inner side, such a fact would increase its value as evidence, more especially if the window were that of a shop or on a ground floor to which the public had access.

In many finger-print cases presented in the Courts a finger-print is the only evidence against the prisoner, and if it can be proved to the satisfaction of the Court that the impression was legitimately impressed, the case will inevitably be dismissed.

The evidence put forward in support of a claim that the imprints were not impressed at the time the crime was committed, could often be disproved if it had definitely been ascertained, at the time the premises, etc., were examined by the investigating officer, which side of a piece of glass—produced as an exhibit—bore the finger-prints. It has frequently happened that when an officer, who first discovered the glass, has been asked in the witness-box which side of the glass bore the imprints, he has been unable to answer.

To illustrate this point, in a case of shopbreaking a portion of the plate-glass window, bearing finger impressions on one side, was brought to the Finger-print Branch for examination, the officer bringing the article stating that in his opinion the marks were on the inner side of the window glass.

The imprints were subsequently identified as those of an old convict. Apart from the finger-prints, there was no other evidence.

When the case was being heard at Sessions the officer who discovered the glass admitted under cross-examination that the marks *might* have been on the outside of the window.

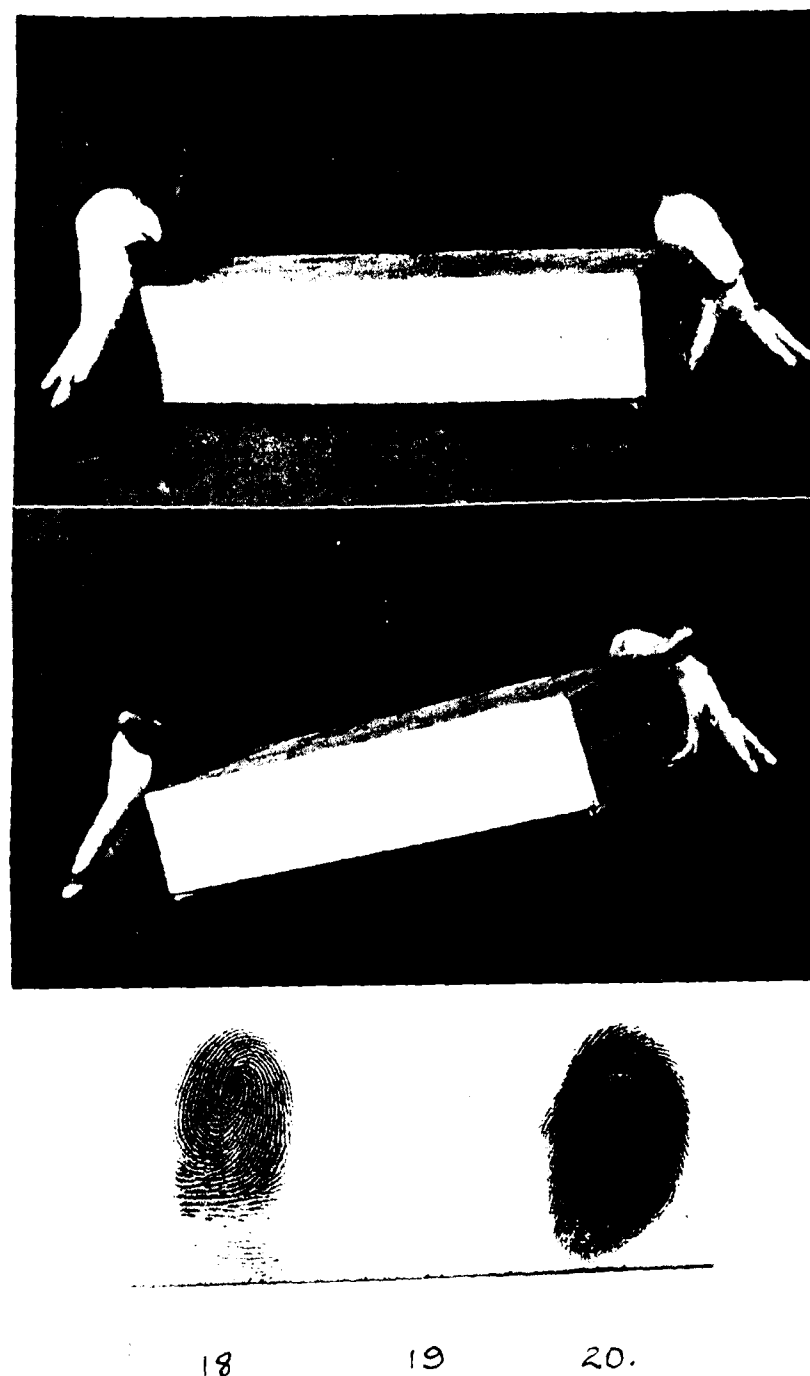


FIG. 16 (above). FIG. 17 (middle). FIGS. 18-20 (below)

(face p. 48)

The prisoner, giving evidence on his own behalf, admitted that the imprints were his, stating that he was looking into the shop window on the evening the offence was committed, and distinctly remembered placing his hand on the window glass. As a result the prisoner was acquitted.

It is only fair to state that in some cases where a window has been smashed into fragments it is impossible to fit the pieces together. The fact remains, however, that this is an important point which should not be overlooked, as it may mean the difference between acquittal and conviction.

Cases often occur in which sarcastic notes have been written on paper and left by criminals at the scenes of their exploits. It only remains for me to impress upon you that such pieces of paper should be treated as carefully as other articles suspected of bearing finger-impressions. The criminal may have unwittingly "signed" the note otherwise than by writing his name or words—by the mere fact that he has *handled* the paper.

A cardinal rule applies to all articles examined. *Do not touch a smooth surface.* Temptation may be great in some cases, such as when it is desired to remove pieces of glass left in the frame of a broken window. Such situations have in the past invited many officers to place a thumb and forefinger on either side of the pieces of glass, then remove the pieces and bring them to the Bureau for examination—the glass, of course, bearing the finger-impressions of the officer. To those of you who are not well acquainted with this side of police duty it is only necessary for me to emphasize that when examining the scene of a crime great care should be exercised in handling *any* article, lest valuable evidence as to the criminal's identity, which may already exist on the article in question, be destroyed by inexpert treatment.

As I have previously told you, the papillary ridges are studded with microscopic pores which are constantly discharging perspiration. Consequently when a portion of the palmar surface of the hand touches any article with a smooth surface, the pattern of the ridge system may be left on the

D



FIG. 1



FIG. 2

CASTS OF FIRE-ARM BARRELS (see page 72)

surface of the article touched, in the form of minute particles of perspiration.

Such impressions, even though invisible, can be successfully developed with the aid of certain powders. Once the imprints are visible, it is then for the finger-print expert to decide whether or not such imprints are useless. It is admitted that in many cases it is not possible to express an opinion as to the quality of an imprint until photographs of it are available for scrutiny.

Different Forces adopt varying practices with regard to exhibits handled, or thought to have been handled, by criminals at scenes of crime. The chief of these are:—

(1) In some cases the articles are dispatched to New Scotland Yard for expert examination, etc., irrespective of whether or not the marks are already visible.

(2) In other cases, where qualified officers are available—I say “qualified” for a definite reason which I will explain later—the imprints are discovered and developed with the correct powder, and then, should the imprints disclose data which appear to be clearly defined, the articles themselves are sent to New Scotland Yard to be dealt with.

There is no doubt that the powdering of imprints is essentially a task that should be entrusted only to a fully qualified officer. I definitely do not recommend development of imprints by unskilled officers, as cases may arise—I speak from experience—where perfectly good prints are subjected to injudicious treatment by a novice, with the result that they are absolutely ruined from an identification point of view. The development of imprints is an extremely delicate operation, and it is quite a simple matter to mar or destroy all the detail necessary for identification. On certain surfaces, the mere flick of a fine camel-hair brush will completely eliminate a useful impression. Unless the prints are latent, it would be advisable for the investigator not to use any powder before consulting an officer with a good knowledge of the subject. Where prints are visible it is often possible to obtain a photograph of the marks without the use of powder.

(3) Finally, many Forces now undertake the photography of any imprints which may be discovered, and photographs only of the impressions are sent to New Scotland Yard.

This, undoubtedly, in the majority of cases, materially assists the work of the Finger-print Branch. Again, in these cases, obstacles have been encountered where the best results in dealing with imprints have not been attained. I refer to those instances where, through faulty treatment of impressions, it has not been possible to effect positive identifications, or where the imprints photographed appear in reverse, *i.e.* the ridge lines appearing white instead of black, and even in some cases where the direction of the ridges—either sloping to the right or to the left—has not been correctly shown.

Several such instances have arisen, either through unqualified persons developing imprints or from bad photography, and in some cases either better photographs or expert examination of the actual article has resulted in positive identifications of imprints, where, before, it was only possible to express an indefinite opinion as to their identity.

Where photographs of imprints and not the article(s) themselves are sent to the Finger-print Branch, it would be of great assistance if two or three copies of each photograph could be forwarded. Often only one copy of a photograph is received, and, in such cases, where the imprints photographed are good enough to warrant their being filed for future reference, the photographs have to be copied at the Finger-print Branch, thus causing much unnecessary labour and expense. Moreover, each photograph submitted should be suitably endorsed either with a reference number or with particulars of the offence, etc.

A great deal of uncertainty appears to exist in the minds of many officers as to what is really a decipherable impression, that is to say, one which is sufficiently clear and can be used for identification purposes. There is a tendency for an imprint made by a digit which has been heavily impressed, or where such digit is moved when in contact with the particular article, to be accepted as a useful imprint, whereas an extremely faint

impression disclosing ample ridge characteristic data is very often overlooked or rejected.

The following illustrations furnish examples of the varying quality of imprints which may be encountered from time to time, and may assist readers to discriminate between a useful and a useless impression.

Fig. 18.—A perfect imprint which gives the appearance of having been deliberately impressed without movement of any description.

Fig. 19.—A faint imprint of the same digit, not so heavily impressed, but disclosing all the essential characteristic details necessary for purposes of comparison or identification.

Fig. 20.—An imprint of the same digit where very heavy pressure has been applied and where movement after contact with the article has obviously taken place. Impressions of this nature are absolutely useless.

It is important to bear in mind that an impression discovered at the scene of a crime should not be rejected as useless merely because it *appears* to the naked eye to be valueless from an identification point of view. Consult the illustrations again and it will readily be seen that the characteristics in the imprint in Fig. 19, although not so clearly defined, are all in agreement and of equal value with those disclosed in the imprint in Fig. 18. None of the characteristics is missing.

When examining articles at scenes of crime it is generally found that impressions which do not disclose clearly defined ridge characteristic data, when viewed through a magnifying glass, are useless.

There is one point which may not be known by some officers, and that is that imprints left at scenes of crime may be impressions of portions of the palmar surface of the hand, other than the end joint of a digit. There is no "collection" of palmar, or "thenar", imprints classified and filed at New Scotland Yard, but the palmar impressions of persons

suspected in connexion with any particular offence have been obtained and forwarded to the Finger-Print Branch for comparison with the imprints. When identifications have been effected, the evidence of a finger-print officer has been given and accepted in different Courts in the same way as the ordinary *finger-print* evidence.

In my next article I shall deal with processes used for the development, etc., of imprints, and other points to be observed in the investigation of any crime in connexion with which imprints are discovered.

Obtaining Information

By DETECTIVE-SERGEANT ARTHUR CAIN

Special Branch, Metropolitan Police

SO far as a police officer is concerned, *Information* is the guide to action. The more complete the information, the more sure is the action—if we know how to apply information when it has been obtained.

I want you to consider how to obtain information, because you can develop the art of obtaining information just as you can develop most qualities of the human being.

Information is obtained from reading, records, observation, and interviews; and upon the accuracy of information depends the success of police action.

In order to estimate the significance of information obtained, the information must be related to other information. But in doing that, don't compare things as similar when they are not alike. Also beware of "false facts"; by that I mean those things which indicate occurrences which cannot possibly happen. Moreover, don't mistake causes for effects; and don't generalize, it's a bad habit in police work. Draw your conclusions when you have all the facts, or all the facts that you can get; and then test your conclusions.

To obtain reliable information you must know how to distinguish between a fact, an opinion, and an assumption.

A statement of fact is not open to question, because it is a fact.

A statement of opinion is open to question, because it may be based on limited or incorrect information.

An assumption is also open to question, because it may

not be reasonable. That is to say, the circumstances on which it is assumed may not warrant it.

Whenever possible, obtain adequate proof of every statement made to you; because if you do obtain proof, then the statements become statements of fact. On the other hand, you need not disregard opinions or assumptions; but when you assess their value, bear in mind the character of the person who expresses them.

You are expected to know all the legal and official sources from which you can obtain reliable information. These are always important because such sources are at your immediate disposal, and from them you may easily obtain information that will start you off in other directions. For example, Stubbs and Bradstreets, the Commercial Agencies in the City; the Business Names Registry, the Company Registry, the Passport Office, the Chamber of Commerce, the Voters List kept at every town hall; and there are many others with which you should be familiar.

If you ask yourself, concerning every inquiry, the following questions, and seek the *information* to answer those questions, you will be approaching a good standard as an investigator:—

"Who, When, Where;

"What, How, and Why;

"Who in the deed did share?"

Despite the advanced forms of mechanism now used in police work, the collecting and interpretation of information remains almost a purely human activity. That is because only a human being understands the meaning of what is seen, heard, smelt, tasted, or touched; for no man has yet invented a machine with the power of *judgment*.

Even when the wireless, telephone, and radio-photo are in use, human beings must operate them; and in the transmission of information, sending or receiving, the means is generally the English language—that is, words—or signs representing words. This is true for the wireless message as well as the typewritten report. I stress this point because in recording information there is a possibility of inaccuracy; in fact, in

the actual business of collecting information and submitting it, there are certain weak links, and this article is designed to assist you to strengthen some of those weak links.

The first condition of getting accurate information is to possess efficient sense organs. You can only know Colour, for instance, through your eyes; Odours through your nose; Sounds through your ears; and the more difficult the circumstances of gathering information, the keener must be your senses. For inaccuracies are more prevalent when conditions make it difficult for you to get your information.

Perhaps you are aware that about four men in a hundred are practically colour blind. Even those men whose colour vision is normal differ in the sharpness of their vision. Flawless vision is a rare phenomenon in human beings, and the sensitivity of the eyesight is a matter of great variation. Yet approximately 80 per cent of the things you know, 80 per cent of your sum total of knowledge, you have learned or acquired through your sense of *sight*.

Has it ever occurred to you that artificial light changes things a great deal? Unreal things may appear real in artificial light. Think of an actor's make-up. If you see an actor with make-up walking in the street in daylight, you will notice it immediately. If you see an actor working on the stage without make-up, you will notice that too. But when you see an actor working on the stage and he has make-up, the whole seems reasonably correct; yet, as you know, it is entirely artificial. That merely illustrates how misleading apparently real things can be.

Apart from looking at things, you must hear things too; and being a *good listener* is a quality all police officers should cultivate. Always appear interested in what people tell you; it gives them confidence to talk to you.

Not so long ago a policeman was able to establish that a man was staying in a certain house, which was under close observation, by reason of the fact that the man, quite naturally, pulled the chain after using the lavatory. Subsequently, the man was arrested and sentenced at the Old

Bailey. The point is that the policeman first got to know that his man was in the house by hearing a sound and recognizing what it meant.

The acuteness of your senses may be good or poor; but it is unlikely that you will ever measure their acuteness. You will more likely say, "Well, I didn't hear that," or "I didn't see anything like that happen"; while the thing may have happened right against your ear or immediately beneath your eyes.

If you doubt this statement, just sit through a Walt Disney coloured "Silly Symphony" twice, and during the second sitting you just ask yourself, "Did I see and hear that at the first show?"

Or try to recall the detail of any film or play you have seen. I suggest films because the speed of the action and sound in films is so much greater than the actual speed of that same action and sound in ordinary life; but what you see and hear at the cinema you will think of in terms of ordinary life. You just practise this idea with newsreels, and you will see that it is a severe test indeed. If you do practise it you will improve your sensory acuteness a great deal.

There are many things happening all around you, and you will never see or hear them unless you look for them, because your sense organs are stimulated by your brain just as much as your brain is stimulated by your sense organs.

When your sense organs are tired it causes two things to happen. Some things you will imagine to have happened—those are chiefly the things you expect to happen; while other things which you have not thought of may happen, but you will not notice them owing to fatigue.

You can guard against these possible errors, at least to some extent. When you are on observation, get the problem clearly fixed in your mind, but assume a responsive mental attitude to whatever you observe, because you may see more than you expect to see. Get all the facts about one thing at one time; although when you observe single facts you

must also give them their true relationship to the whole inquiry.

Cultivate a questioning attitude regarding what you see. For instance, if you see a man driving about in a smart car don't assume on that fact alone that he is doing good business. Better to ask, "Is the car paid for?" Always write down what you see and hear as soon as possible, and allow for the element of human error, not only in those you are observing but also in yourself.

As a rule we tend to see and hear what we expect to see and hear. That holds good for all times and for all people. But if this expectant attention is properly directed, the efficiency of your powers of observation will be greatly increased.

The ability to grasp the full significance of the things you observe depends to a considerable extent on your general mentality. The sharpest senses are never much use, even to a police officer, unless that police officer is aware that *anything* may happen. You must never be failing in general intelligence.

Good observers are found to be persons who are naturally curious about the detail of things they see and hear; and they naturally back up that curiosity with a good stock of general knowledge and a practical ability to apply it in their work. Such persons cultivate the habit of observing. The more they observe the more they know, and the more they know the more intelligently they observe. You will find that it is important to realize your own limitations. Therefore always guard against yourself thinking you are clever or smart.

You will find that in the moment of seeing and hearing things you will think that you will be able to recall them easily. Most people are caught out that way; for later on they cannot remember what they believed was fixed in their mind at the time it happened. Often you will hear a man's name mentioned, and five minutes later you will not be able to remember that name. At the time of hearing it you probably thought you could recall it easily. Sometimes you

can recall the names of persons by recalling their appearance—which is known as "the association of ideas" and is really the basis of Pelmanism.

Nevertheless, even in the most favourable conditions there is a limit to the number of things that a human being can attend to at one moment. This limit varies with each individual, and the power of memory varies as well.

Moreover, the amount of attention you can give to things you see and hear is not constant; it varies from moment to moment; especially in difficult observations. Actually, the best attention of an observer can only be given when he knows what he is looking for and expects it to happen, because he has been given a warning that it is about to happen. Which means that you must know what is going to happen and when it is likely to happen. But we are rarely in that happy position.

If you expect a thing to happen and you are called upon to wait and wait for it, you will find that the waiting is extremely trying on all your senses. If the thing does happen at the end of a long wait, that long wait will almost certainly reduce the accuracy and completeness of your record of the occurrence.

Certain things attract attention even when you don't want to look at them. Moving things are especially strong in this respect; they will often attract your attention from something that you may want to continue looking at. A change round in the position of the things you are observing is also distracting. These effects are noticed by the most skilful and clever observers, and it is necessary that you should know that these effects apply to everybody when they are on observation.

Whenever an interval of time elapses between the actual carrying out of the observation and the recording of it by words, the accuracy and completeness of the record tend to be reduced by errors of memory.

This inaccuracy and incompleteness occur from two causes. First through errors of memory, secondly by a misrepresentation of the actual facts—which misrepresentation

is brought about by the working of the imagination in an effort to overcome the loss of detail that has slipped from your memory.

The golden rule is : WRITE IT DOWN AS SOON AS POSSIBLE.

This common form of error due to inadequate memory is not limited to omissions, because your imagination will put in things which your memory has lost. Whatever you put in will be "plausible"; that is, the detail *might* have been there, or the occurrence *may* have happened. Generally, these plausible additions refer to minor matters; but in criminal investigation minor matters often prove to be important at a later stage of the inquiry.

These circumstances are serious when you are recalling something out of the usual run of events, and most matters that a police officer has to do with contain an element of unusualness. The strange part about the working of your imagination which causes you to introduce detail which "might have happened" is that you may not be aware of it; you may not realize that you are "faking"; so you must watch yourself carefully on these matters.

Another difficulty is in remembering the order of events, as well as the time taken up by the several parts, and the actual and relative space occupied by the various objects at a scene of crime.

When a person is not aware or not sure of these matters he generally arranges the order of events, the amount of time taken up by the event, and the size of the objects, in accordance with what he thinks they should be. Sometimes he is right in his thinking, but more often he is incorrect.

Always remember that the omissions, insertions, substitutions, and transpositions, each and all affecting the accuracy of recall and the reliability of reports, are often quite unnoticed by the persons who make them. They are not intentional; they merely illustrate that "human beings are prone to error", and it requires a special concentrated effort to obtain accuracy and completeness in observations and reports.

Therefore, when the first class observer, the man who

is trained and experienced in the work, settles down to make out his report of an observation, he must couple with his power of detailed memory a sense of caution. He must actually make himself think that he may have forgotten, changed, or imagined something.

Even if you can accurately recall the features of one object or part of an event, that does not mean that you can accurately recall *all* the features or *all* the objects of a single event—even if you did witness them.

Practically all police officers can improve their powers of observation and their ability to report by learning to read quicker, acquiring a logical, clear style of speech, and, above all, by training themselves to think quickly and clearly. The slightest improvement made in any of these matters will be seen immediately in your reports, because you can only learn to read quicker, only learn to speak better, and only learn to think more clearly, by increasing your knowledge of English and using that knowledge in your daily work.

During every hour of your work look out for exceptions in everything, and be ready for them. But don't offer an exception as an excuse for not making a success of an inquiry.

When you have obtained a mass of information and you settle down to value it, you can do so by asking yourself the following questions :—

"Is the information free from prejudice and bias?"

"Are the facts essential and pertinent; are they representative, reliable, and comprehensive; do they add up?"

"Do the circumstances surrounding the matter and the witnesses—as well as the statements—add up?"

"Are the persons I interviewed reliable and is their information up to date?"

"Did they obtain their information by observation or hearsay?"

"Does the information cover the whole scope of the inquiry?"

You can take it as a safe general rule that a reliable observer possesses a good degree of intelligence, and his reports will

reflect his knowledge and, to some extent, his ability to apply that knowledge to practical affairs. But, beyond all else, reports reflect to a remarkable degree the observer's *power of judgment*.

Now, good judgment is hard to come by; for it is a pearl that matches wisdom.

The dictionary defines *Investigation* as the process of inquiry or examination, with systematic attention to detail and relationship. That work involves critical observation, accurate description, scientific analysis, and classification of the facts bearing on the problem. Those qualifications are not acquired in a day; but they are the only means by which you can acquire *judgment*.

Finally, cultivate the art of "suspended judgment". It takes a great mental effort and much patience as well as wide experience to acquire that art, but there are some events which must work themselves out before you can pass judgment. If in your capacity as a police officer you can watch the working out of any matter concerning which you are inquiring, then you will be in a strong position to pass a sound final judgment on the whole occurrence.

Remember that a police officer does not try the facts. It is not for you to say who is "guilty" or otherwise. But you can report everything you can find out; for it is your business to find out all you can and to gather the evidence that is acceptable to a court of law, and there the question of "guilty" or "not guilty" will be decided. You have to remember that to every story there are two sides, and very often more, and it is your job to get *all* of them.

In the next number of THE POLICE JOURNAL I shall deal with "Interviewing".

Simple Photography for Policemen

By DETECTIVE-INSPECTOR J. O'BRIEN

Metropolitan Police

I

IT has been said that a picture says more than a thousand words. If this is true of the ordinary picture, there can be no doubt but that it is doubly so of photographs which are taken for police purposes.

The application of photography in the prevention of crime and the detection of criminals has become so important in the last thirty years that it has gradually developed a technique of its own, and it may be that a word or two on the experiences which have come my way, and the difficulties which have been overcome during some fifteen years in the Photographic Department at New Scotland Yard, may be of interest, and perhaps of assistance, to other police officers engaged in this work.

Any suggestions which I may put forward in this article are not intended to be in any sense dogmatic, but rather to be of assistance to officers who have come up against difficulties, and who, as time goes on, are pretty sure to meet more difficulties.

Now a word or two about the Photographic Section at Scotland Yard.

Before the adoption of the Finger-print system of identification, there was no real photographic section in the Metropolitan Police. Such photographs as were taken were the results of the efforts of individual officers, who used cameras which were their personal property. When the late Sir Edward Henry established the Finger-print Department it was realized that if it was to function to its fullest extent, a photographic section, where finger-print forms could be copied for exchange with the police forces of other countries, and where impressions left behind at places where

crimes had been committed could be reproduced, was a necessity. Thus photography became a part of the recognized work of the Criminal Investigation Department.

In its early days the work of the department was not very arduous. I think this was because it was something of a novelty, and the detectives of that day, with the conservatism which was a trait of most police officers up to within recent years, had no use for newfangled ideas.

The first equipment consisted of a large copying camera for reproducing copies of finger-print forms, photographs of persons wanted, and similar work which could be carried out in the room in which the camera was installed.

Later, the work of the section gradually became more appreciated, and it was decided that photographs taken of the scene of a crime, and the immediate locality, would be of assistance in laying a case before a Court. This led to the purchase of a half-plate camera, which was used in most of the crimes which have now become classics.

Both the cameras referred to above are still at the Yard, and although they are not so reliable as they were in their youth, they can still be called upon in an emergency to give a good account of themselves.

Since those far-off days the Department has developed to an enormous extent; fresh methods have been adopted, with the consequent addition of new equipment, until now it has almost outgrown its accommodation, and there is no branch of photography which is not undertaken.

But enough of the Photographic Section at the Yard. Let us deal with the work of the police photographer.

Photography, from the police point of view, can be broadly divided into three classes:—

- (a) Photographs of scenes of crime.
- (b) Photographs of finger-prints.
- (c) Photographs of prisoners for record purposes.

I will deal with each of these in turn, and later discuss the most suitable equipment for each.

First, then, photographs of scenes of crime.

The object of the officer taking the photographs should be to produce a pictorial record of everything appertaining to the matter under investigation, in its proper place and in relation to any other object which may have a bearing on the case, or be referred to in evidence.

The reason for this is twofold: first, to enable the Court to visualize the actual scenes referred to by witnesses, thus ensuring that the evidence is clearly followed, and second, that places referred to are visualized by members of the jury exactly as they are.

Now, to supply a series of properly taken photographs is far more satisfactory than to rely upon verbal assumptions; for if each of half a dozen people describe a particular scene they will all describe it differently; and when, in addition, you have twelve members of a jury trying to reconstruct a scene from word-pictures only, the result will probably be twelve different conceptions of what those giving evidence wish to convey.

Another point in favour of photographic evidence is that most people are extraordinarily unobservant; so much so that many of us, if asked to make a list of the articles in a room we are using every day, would be unable to do so.

Even police officers, who are trained to be observant, fail, on occasion, when asked to give the details of what they have seen in a place they have visited in the course of their inquiries. I remember some years ago an officer, quite honestly, but none the less emphatically, denying, in the witness-box, that a particular window in a house he had visited was there at all, until he was shown a photograph of it.

Now to deal with the question of taking photographs which will convey all that is necessary, and at the same time not be so numerous as to create confusion; for to have too many is almost as bad as to have none at all.

Let us suppose that we have a case of murder to deal with, in which the crime has been committed in the bedroom, and that there are details, such as ransacked drawers, or a forced door in two other rooms.

The first thing to do is to take two or three photographs of the body of the victim in the position in which it is *when you arrive*. If it has been moved by someone else before your arrival, that is no business of the photographer's. His job is to reproduce exactly what he saw on his arrival. Anything which has been moved prior to the photograph being taken is the responsibility of the person who has moved it; any attempt to reconstruct a scene must obviously destroy the value of any photographs taken, and it is quite certain that they will not be admitted as evidence.

The best way to tackle this rather unpleasant task is to get the full details of the affair as far as is known up to the time of your arrival. This is the story you will have to illustrate, as it were, with your pictures. I have found it the best plan, after photographing the murdered person, to take sufficient pictures to show the whole of the contents of the room. This is not such a formidable job as it seems, for with a good wide angle lens the whole of an ordinary room can be shown in three or four pictures.

Generally the best place to take the first view from is the doorway, as here there is usually sufficient space in front of the camera to obtain a fairly comprehensive view of the room without obstruction by furniture. Another reason for taking a photograph from this position is that it shows exactly what was first seen by any person who entered the room.

The remaining pictures must, of necessity, be taken from positions which are governed by the circumstances, and it would be useless to try to lay down any hard and fast rule; but generally they should, if possible, be taken from the corners of the room. This will in most cases provide an overlap to each picture, so that the relation of one view to another can be followed by articles shown in each.

In many cases it is necessary to move pieces of furniture to enable a complete pictorial record to be made. If this is done, every care must be taken to make an exposure of the part of the room *before* the article it is proposed to displace is removed.

The difficult thing about interior photography, especially in small rooms in which there is a lot of furniture, is *distortion*. This cannot always be entirely overcome, but it can be eliminated to a great extent by the use of good lenses and care in the use of the camera.

For interior work, a first-class wide angle lens is of paramount importance, and a little extra money spent on a really good lens is more than repaid by the quality of the photographs it produces.

Now with regard to the camera. This should have a good swing back and adjustable front movement.

Full advantage should be taken of both these fittings, particularly the swing back; for a judicious use of this brings the immediate foreground, as well as the farthest limits of the picture, into crisp definition; whilst the rising and falling front enables a balanced picture to be obtained.

An important point to bear in mind with regard to interior work is to make sure that the camera is perfectly level; otherwise lines which should be perpendicular will appear as converging lines in the finished print.

If the camera is not fitted with a spirit-level, one should be carried in the camera case as part of the equipment.

The next thing to consider is the question of providing a means of illumination for interiors.

To rely on the ordinary domestic lighting is out of the question, as it is generally unsuitably placed, and of insufficient power to be of much use for photographic purposes.

It is true that, where electricity is available, a supplementary unit can be attached to the existing supply; but this is an unsatisfactory arrangement, as it means that lengths of flex, which have to be kept out of the picture, must be used. The risk of overloading the fuses must be added to this; so that on the whole this method of lighting is not worth considering, except in cases where conditions make it impossible to use any other.

The use of daylight for interior work is not satisfactory, as generally the only place from which a good picture can

be obtained is from the side of the room on which the window is placed. Any photographs taken from the opposite end which include the window will generally be over-exposed in that part which shows the window and under-exposed in the other parts. By far the best practice is to provide your own means of lighting, either with flash powder or flash bulbs.

In the majority of cases flash powder will be found to be by far the most suitable means for providing light.

There are many types of flash lamp on the market, some fitted with flint and steel, some with electric batteries, and others fired with a percussion cap. I prefer the lamp used with the percussion cap. It is simple to operate, economical, and not given to firing unexpectedly.

This last point is of some importance, as it should be remembered that a painful burn can be received by a flash igniting whilst being prepared.

The next thing to decide is the type of plate we are going to use. There is no need to use one that is very fast, nor is it necessary that it should be panchromatic. An orthochromatic plate of about 400 H. and D. will suit the purpose admirably.

I should explain that the H. and D. number found on most boxes of plates is an indication of the speed of the plate. The calculation is made by a method of measurement of sensitivity to light devised by Dr. Ferdinand Hurter and Vera C. Duffield. The numbers vary from 9, for a very slow lantern plate, to 1500 for an exceptionally fast press plate.

Now having decided on our means of lighting and the plate we are going to use, let us get on with our case of murder.

We have decided on the number of pictures we are going to take in this particular room and the viewpoint of each, so we will make the first exposure.

Now, the stop at which a wide angle lens works is very small, and the light in an average room is not very bright; so when we look on the ground-glass focusing screen of the camera, we can see hardly anything of the scene we wish to take and, therefore, cannot tell if it is in focus or what is included in the picture.

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The difficulty which presents itself can be overcome by the use of a pocket torch or the flame of a candle. I prefer the candle, for a reason which will become apparent presently.

First, we must set the camera up in such a position that the part of the room we wish to take comes roughly within the angle of the lens.

Now get an assistant to place the lighted candle in the centre of the picture. The tiny flame will be seen quite clearly on the ground-glass screen. The camera should then be adjusted to bring the flame into the centre of the plate, and focused, with the aid of a focusing magnifier, so that the wick of the candle appears quite sharp on the screen.

We now know that the camera is focused correctly on the scene immediately in front of it, and the next thing is to find out the area covered by the lens.

To do this the assistant must move the candle, first towards one side of the room, and then to the other. Meanwhile the photographer watches the progress of the flame on the ground-glass, and proves, when it disappears off the edge, that the limit of the picture has been reached. The same procedure must be used to find out the amount of foreground and the height that will be embraced in the picture.

When the flame of the candle reaches each edge of the screen the focus should be checked, to make sure that all parts of the picture are quite sharp. Any slight adjustment that is needed can usually be effected by the use of the swing back.

A difficulty sometimes arises, when the camera is used very low on the stand, of bringing the immediate foreground into focus, and at the same time of keeping the remainder of the picture sharp. If it cannot be managed with a swing back, stopping the lens down to about F. 22 will generally have the desired effect.

We are now ready to make our first exposure.

In this connexion it must be remembered that with flashlight photography the exposure is not governed by the length of time that the lens is uncovered, but by the amount

of flash powder used. For an average room with ordinary furniture, a heaped dessertspoonful is ample; indeed, most professional photographers would consider it too much; but as an error due to over-exposure is much easier to rectify than one due to under-exposure, it is safer to err from using too much than too little.

Before fixing the flash one or two precautions are necessary if we are to obtain a satisfactory picture. It sometimes happens that a large mirror is facing the camera, and if the flash is fired in such a position that the light is caught by the mirror and reflected back into the lens, the picture will be a failure.

Now, the flash must always be fired from behind the camera, or from some position well out of the range of the lens and at the same time from such a position that it will not be reflected back; so that there is not a great choice of position from which to work.

To find a suitable spot, the photographer should stand immediately behind the camera and get the assistant to move about until he is in such a position that his reflection cannot be seen in the mirror from the camera. Generally a position somewhere along the wall immediately behind the camera will meet the purpose, but if the difficulty cannot be overcome this way, the only thing to do is to either cover the mirror up with a cloth, or to paint the glass with whitening or some similar substance. Another thing to do before firing the flash is to cover the camera and slide with the focusing cloth, to prevent any of the intense light from the flash creeping in through the light traps or joints in either.

Now turn off any lights which are burning in the room, if they come within the range of the lens; take off the lens cap, and fire the flash powder.

If for any reason the flash does not go off, put the cap gently back on the lens, taking care not to move the camera; the plate will be quite all right for another attempt, provided that it has not been exposed for too long a time.

A mistake is sometimes made in loading the flash-lamp by putting a heap of powder on top of the cap. The correct

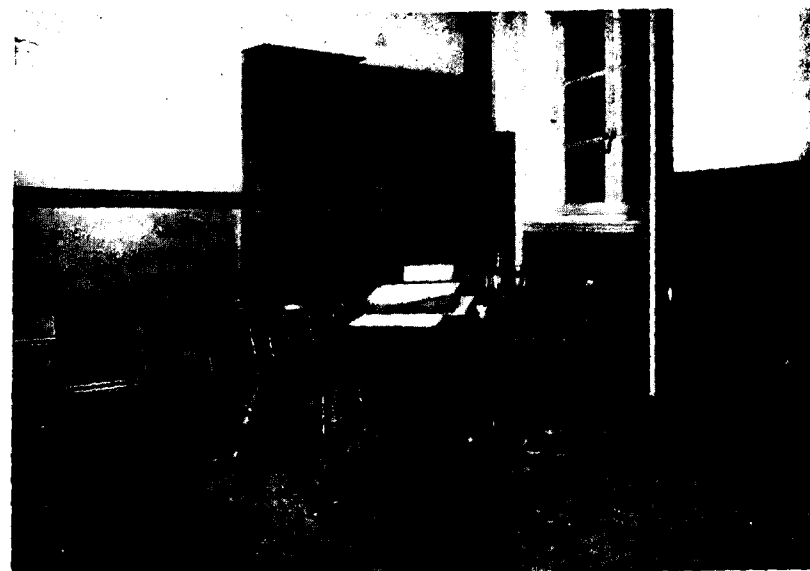


FIG. 1.—A PHOTOGRAPH OF THE INTERIOR OF A ROOM, TAKEN WITH THE CAMERA CORRECTLY LEVELLED, ENSURING THAT THE VERTICAL LINES ARE ALL PARALLEL.



FIG. 2.—A PHOTOGRAPH OF THE SAME INTERIOR, TAKEN WITH THE CAMERA RAISED TO TOO GREAT A HEIGHT AND POINTED DOWNWARDS, CAUSING DISTORTION OF VERTICAL LINES.

(face p. 70)

method is to spread the powder evenly along the tray, with just sufficient about the cap to form a train to the rest of the powder.

Now with regard to the other rooms at the scene of our murder. The pictures should be taken in exactly the same way as I have just described. Pictures should also be taken of the passages or stairs connecting the rooms, to show the relation of one to another, and to provide a continuity of the illustrations.

Now, having as far as possible taken sufficient photographs to illustrate the whole story of the crime, let us get back to the dark-room and develop the plates. Any standard developer will serve our purpose, and as our negatives are for use in the enlarger, they should be kept slightly on the thin side. Development should be continued until the high lights begin to appear through the back of the plate.

If development is carried too far, a lot of trouble will be experienced when we come to making the enlarged prints.

When the plates are developed they should be fixed in a good acid hypo bath, washed for about half an hour, and put on the rack to dry.

When making enlargements for production at Court, a print made on 12×10 in. paper, having a border 1 inch wide at the bottom and left-hand side, and $\frac{1}{4}$ in. wide on the other two edges, has been found very convenient. The reason for the two wide borders is that the bottom one provides space for writing a description of the picture, or for any notes for stressing particular points the court may desire to make. And the left-hand margin permits the photographs to be bound in an album, without any of the picture being obscured by the binding.

Generally, twelve albums will be found sufficient for the purpose of a trial. This allows one copy for the judge, six for the jury, two for the prosecution, two for the defence, and one for the use of witnesses.

In the next issue of THE POLICE JOURNAL I shall deal with photographing motor-car accidents and finger-prints.

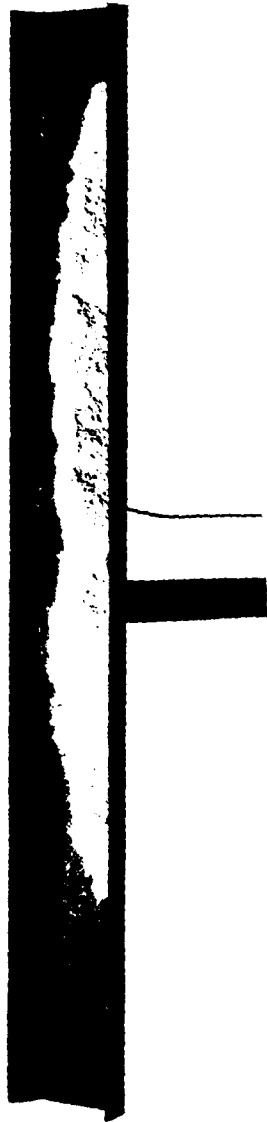


FIG. 1.—A FLASH LAMP BADLY LOADED. THE POWDER HEAPED OVER THE PRECUSSION CAP WILL PROBABLY PREVENT IT EXPLODING.

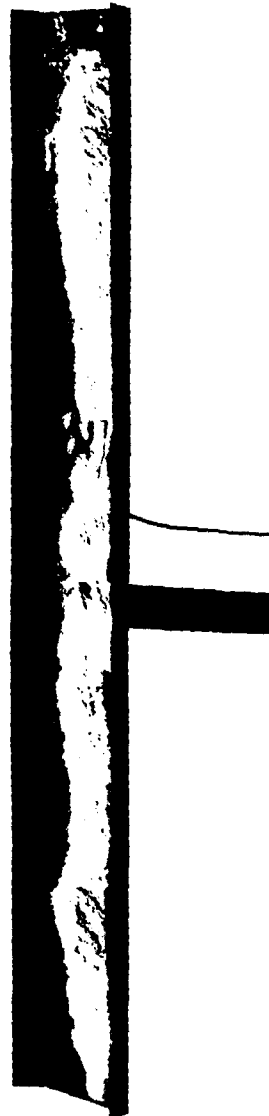


FIG. 2.—A FLASH LAMP PROPERLY LOADED WITH JUST SUFFICIENT POWDER ON THE CAP TO IGNITE THE REMAINDER.

A Simple Method of Taking Casts of Fire-arm Barrels

By F. W. MARTIN, M.D.

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IN the investigation of crime it is essential that the investigator makes use of the latest advancements in science.

In fire-arm injuries, particularly, much progress has been made during the past few years in methods of identification of the weapon.

The bullet-firing weapon lends itself to identification, since the inner surface of the barrel has a series of grooves. These grooves give to the bullet a rotating or spinning movement, and this movement persists after the bullet has made its exit from the barrel. As a result the bullet acquires steadiness in flight. A cast can be made of these grooves, and in all cases an examination should be made of these casts.

This is not a difficult task if the proper method is adopted.

Plugging the barrel with "plasticine" has been recommended, but this is an amateurish method, more likely to result in failure than in success.

The old method of filling the barrel with melted sulphur is difficult in execution, especially when dealing with a rifle; furthermore it is messy in its application.

The writer has carried out a number of experiments, using a waxy material called "Celerit". It has the great advantage, over the usual methods, of ease and simplicity in application.

The barrel of the weapon is first wiped with an oily "pull through". A mixture of "Celerit" and black lead is

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slowly melted, and when it is of a thin consistency it is poured gently into the barrel, one end of which is plugged with cotton-wool. After an interval of five minutes, to allow for cooling, the cast can be pushed out of the barrel.

The accompanying photographs show casts prepared in this way.

Figure 1, in the illustration facing page 49, shows a cast from the barrel of an ordinary revolver.

Figure 2 is a cast from a Lee-Enfield rifle.

I am indebted to Professor Glaister, Forensic Medicine Department, Glasgow University, for allowing me the use of his laboratory, and to Mr. Thomas Newton for his valuable assistance in helping to carry out the experiments, and for taking the photographs.

The Traffic Problem

BY H. ALKER TRIPP, C.B.E.

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(Being an abridged version of the lecture delivered by Mr. H. Alker Tripp at the Advanced Course of Lectures for Senior Police Officers on 11th July, 1935)

PART I: POLICE RESPONSIBILITIES

Traffic Work is Police Work

MY first point may seem elementary, but it is fundamental. The traffic work that we perform is police work. It is not some new and extraneous task added to the policeman's burden. One often hears talk about the police being "withdrawn from their legitimate duties" in order to deal with traffic. What, then, *are* their "legitimate duties?"

The late Lord Brampton summarized the objects of the police in a very familiar paragraph: "The primary object of an efficient police is the prevention of crime: the next that of detection and punishment of offenders if crime is committed. To these ends all the efforts of police must be directed. The protection of life and property, the preservation of public tranquillity, and the absence of crime, will alone prove whether those efforts have been successful, and whether the objects for which the police were appointed have been attained."

The protection of life is put in the forefront. In 1933 there were in England and Wales 139 murders and nearly 6,500 sudden deaths on the road. It may of course be contended that the former were crimes and the latter were not. But the "first characteristic of crime is the danger to the community as a whole which the conduct of the offender is felt to involve."¹ Offences against the person, which are essentially crimes,

¹ *Stephen's Commentaries.*

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include "acts which cause bodily harm accompanied by a specific illegal intent, and acts which are intrinsically dangerous even though no actual harm results".¹ In other words all negligent or careless driving, all disregard of traffic signals, and a multiplicity of other acts which are potential causes of accident are crimes, irrespective of whether bodily harm is done or not. Considering the appalling amount of damage done to the community by traffic crimes, it is clear that no phase of police duty could be more directly, indeed indispensably, "legitimate" than traffic work.

My object in thus introducing this subject is not merely to stress the point that road traffic is essentially a police matter, but also to indicate that it is a matter of first grade importance. The more one studies it the more one realizes that the whole subject is a complicated and difficult science. Herbert Spencer said (though not in such colloquial terms) that the more a scientist knows, the more he finds he doesn't know. It is just the same with traffic; though casual people may think that they "know all about it", the serious student soon discovers how little he really does know.

Faced thus with a difficult science, what are the police going to do about it? They are in close touch with it every day, they are able to study its problems with a first-hand intimacy which no one else can really obtain. Despite these advantages, is the senior police officer going to be content merely to enforce laws in the same way as a hand in a factory may operate complex machinery, the manufacture of which is high above his own understanding; or will he decide to become a serious student himself and try really to understand the why and wherefore of everything? It is in the latter capacity that he will prove to be the more enlightened administrator of traffic law and policy.

Let us begin by trying to get a clearer idea of what we are talking about by defining one or two terms. There is, for instance, a definite difference between transport control and traffic control.

¹ *Stephen's Commentaries.*

Transport Control and Traffic Control

The whole problem of regulating, co-ordinating and controlling the use of the roads falls under two distinct headings, *viz.* transport control and traffic control. There is at the present time a certain amount of confusion between transport and traffic, and this the gradual evolution of an exact science will in course of time dissipate. Transport control and traffic control are not only distinct, but may at times be at mutual variance. "Transport" relates to the general subject of carriage or conveyance; "Traffic" is "applied collectively to the goods, passengers, and vehicles . . . *passing to and fro over the streets, roads, etc.*" This means that "Traffic" is the general interchange of vehicles, etc., upon the roads, or the general give-and-take as between public and private passenger vehicles, goods vehicles, pedestrians, driven animals, and everything else. The problem of transport is being more and more closely studied by the Traffic Commissioners with a view to better co-ordination and control; but the problem of road traffic itself must inevitably continue to fall primarily and mainly upon the police.

"Dynamic" and "Static" Aspects

In Traffic, furthermore, there are two sections which are complementary the one to the other. These may in broad terms be called the "dynamic" and the "static". In other words, on the one hand there is the general problem of handling the movement of traffic, and on the other there is the provision of fixed lay-outs, etc., to facilitate that handling. Clearly the former must condition the latter. None the less there is at the present time a great danger of the two being reversed, with the result that lay-outs and general town-planning are worked out by experts on the "static" side without that initial advice and guidance from the experts on the "dynamic" side which is essential. Though the point is elementary it has not as yet received the practical recognition which it demands. It is no use trying to put the cart before the horse. As things are, schemes of town-planning and

of new arterial roads are sometimes worked out in detail without any initial reference at all to the authorities responsible for the daily control of traffic who have—or ought to have—their own definite ideas as to the lines along which traffic should be handled. To this matter I will again refer later.

Traffic Law

In relation to the "dynamic" side of our subject there is the important question of the traffic law which the police are called upon to enforce. The first point to be appreciated is that the whole gamut of traffic law (apart from a few provisions dealing with revenue and with noise) is directed at promoting traffic circulation and public safety, and at nothing else.

"Technical" Offences

It seems to have become a fashion among motorists to dismiss lightly the offences which they most usually commit by calling them "technical offences".

The man who fails to switch on the lights of his car, or who fails to have his number plate properly illuminated, calls the offences mere technicalities, and says that the police ought to be looking out for burglars; or perhaps he may concede that a little traffic work is necessary, and say that the police ought to concentrate upon dangerous driving. He forgets that the mere driving of an unlighted car is dangerous driving and may lead to a *death* on the road—an effect far worse than the effect of any burglary; and also that, if the police are to be able to take the numbers of dangerous drivers at night, they must insist upon all identification plates being properly illuminated. The vital point is really this. It is the multiplicity of observance or the multiplicity of breach of these so-called "technical" laws that determines to a very great extent whether life is to be effectively protected and traffic circulation properly safeguarded, or whether public safety is to be imperilled by traffic conditions that are unregulated and chaotic. If indeed there is any offence

which is merely technical and nothing more, the police should bring it to notice immediately through the proper channels, with a view to getting it abolished. The fact is that many of these so-called technical offences are really crimes.

Offences of Opinion and Offences of Fact

In postulating the necessity for traffic law in this way it is not of course intended to suggest that all traffic law is good. The object of good law is to prevent offences, not to create them. If offences are to be prevented people must know definitely what acts are to be avoided; and those acts must be specific. We are all left in a bad position if we are to be judged guilty or innocent merely *on the personal opinion* of some other party or parties.

I always remember in this connexion a case which I witnessed, where no less than five separate parties were all in some degree culpably responsible for a serious happening on the road, and the one who precipitated the trouble was (as it happened) a non-prosecutable pedestrian. Various witnesses would have had various impressions of the occurrence, according to how much they had seen of the whole facts. The tendency is to single out one driver and to try to fix the whole of the blame upon him.

For driving, a code of definite rules is required which can be observed to the letter by all drivers of goodwill. Such a code will consist of appropriate speed limits, respect for properly designed white lines, pedestrian crossings, stop streets, *defense de doubler*, and so forth; and for more technical matters a specification in each case is required which leaves no shadow of doubt. Bad law, as I see it, is law that is not in itself definite but has to be elucidated by the findings of Courts after police proceedings have had to be instituted, with all the irritation and resentment which they inevitably arouse.

The matter is one of cardinal importance from the police point of view. Public opinion is the power whereby the police operate. For that reason the police aspect must be regarded as the primary aspect in all traffic law, and not a secondary

one. Unless there is to be great estrangement between public and police, with resultant weakening of the power of the police to serve the public, the law itself must define the offences with the greatest possible precision and must not leave matters to the mere opinion of the police. We want to see the principle of specific requirement and mechanical check developed to the utmost possible extent.

Ultimately (though here I am anticipating a phase of the subject with which I shall deal later) we shall go further still when roads are properly designed and pedestrians and standing vehicles are excluded from the "running road". Speed limits will become unnecessary, save in exceptional cases, and then, when imposed at all, they will be imposed by means of progressive traffic signals which no one but a deliberate law-breaker would ignore. But in the meantime we must work forward solidly in the direction of preventing offences at source and thus reducing to an absolute minimum the occasions for police intervention and prosecution.

The Need for Flexibility

The most striking feature of this traffic problem of ours is its rapid intensification. The amount of motor traffic on the roads has trebled since the War; and the increase of vehicles, and still more of vehicle mileage, continues. Such rapidity of change in traffic conditions and traffic density is quite without parallel in history. To cope with so shifting a situation a high degree of flexibility is necessary in the mind of the traffic authorities and indeed in regard to the law itself.

The law must be able to adapt itself continually to conditions that are continually changing, and the public realization is becoming more and more definite that traffic law must be firmly based upon ascertained traffic fact. This is recognized with equal clearness in America. "Traffic regulations," it was said to me more than once over there, "can only really be handled by people who handle the traffic." That perhaps is rather too wide a generalization,

but no one can deny that the police have a most important part to play; and they must make it their business not only to assemble traffic fact but to deduce from it the necessities of traffic law.

Above a certain line, traffic law is (whether in America or England) a matter for the legislature, because general policy is involved; below that line traffic law and practice become—more particularly in their local adaptation—inevitably a matter which must be decided (whether in America, France, or England) on the word and advice of the police authorities, who alone are responsible for the day-to-day handling of traffic. Alike in special emergency and normal practice the responsible police authority of a great city (whether it be New York, Paris, or London) remains the most effective regulative agent.

Part to be Played by the Police

The position therefore is that the police can and should develop, from their practical knowledge, a ground-plan of the lines upon which laws or regulations appear to be needed, with a view to promote public safety and free traffic circulation; but it is for other Departments, and for Parliament itself, to decide by what stages and in what manner these ends can be achieved, more especially when the freedom of individual public movement is to be in any way curtailed.

In order effectively to discharge this function, the senior police officer must become a really independent student of traffic problems. He must consider nothing sacred merely because it exists, nor must he regard himself merely as an executive officer implementing the designs of some higher intelligence at work over his head, be that intelligence a local authority, a Government department, or Parliament. Needless to say he will, in regard to the immediate discharge of his own duties, be absolutely loyal to all existing law and all constituted authority, but he must at the same time maintain his own personal independence of outlook. If, as a result of his own experience and observation, he is able to show better

and more effective ways of doing things, it is his duty to advance his ideas through the regular and ordained channels.

The senior police officer has opportunities which no other student of traffic problems can possess. In common with other students he can tap all the sources of statistical and other information which are available; but then to that he can superadd his own practical experience, which is often worth whole bucketsful of theory. He has had his own immediate traffic problems to unravel, and he is dealing with everything at first hand. On various occasions he has perhaps regulated all traffic movements from some point of central control, and has been altering the flow of his traffic from minute to minute by telephone or wireless, moving his units like the pieces on a chess-board. He, in short, has really "handled the traffic". Such training is simply incomparable; in traffic matters the senior police officer has the opportunity of achieving a more informed and wider vision than is open to anyone else.

In the matter of the structural or "static" work the police officer who becomes a real traffic expert will also find an extremely important part awaiting him in the general scheme of things.

Take the question of roads.

Roads are built to the specification of road engineers. The senior police officer, however, must on no account regard the road engineer as an oracle in traffic matters; it is indeed for the regulating authority and traffic expert to inform the road-maker of his requirements, or in other words, to construct the ideas for the road engineer to implement.¹

If senior police officers are, as they should be, practical traffic experts, their value will be of the very highest importance, not only in road design but in town-planning. Specialists in traffic supervision are the people best able to compute the nature and direction of the traffic flow. Roads and road

¹ This aspect of the matter was examined in some detail in the author's paper on "Design of Streets for Traffic Requirements" read before the Institute of Transport on the 13th November, 1933.

systems cannot effectively be planned by road engineers alone, save from the point of view of engineering. The same considerations apply to town-planning. Town-planning resolves itself very largely into a lay-out of roads. Roads are not for ornament but to carry traffic; they are in fact traffic veins, and veins cannot be effectively designed save in relation to arteries, while arteries can only be effectively designed in relation to traffic facts and traffic policy as a whole. Traffic policy should thus have a decisive influence in town-planning, and must to a great extent condition it.

To succeed, the senior police officer must see widely. It is no use dealing with traffic merely on a local basis; a bird's-eye view of the whole problem is required. All local projects should be evolved in accordance with a general science and related to a general master-plan. In the absence of a general traffic policy the means do not exist to criticize any new project effectively in relation to the whole. In other words there is no general criterion.

PART II: GENERAL TRAFFIC POLICY

Fundamental Considerations

A line of policy can only be successfully developed if the underlying and fundamental realities are studied as well as their practical effects. The main basic fact can be briefly stated. The advent of the motor-car has vastly increased the volume and the speed of road traffic; this high-speed traffic is shown by its effects to be most dangerous to life and limb, yet it has been loosed on towns and villages without even a tithe of the preparation which was essential to render it innocuous.

That mistake was not made in the case of railways. Our forefathers saw clearly that, if vehicles were to proceed at high speeds, particularly in populous areas, their tracks must be fenced off from the general public. This was no doubt a great handicap to the early development of steam traction. Vast expenditure was necessitated. But quicker

transport meant handsome returns upon the outlay, and the funds were forthcoming. First the prepared tracks, second the high speeds.

In the case of motor traffic, the process has been exactly reversed. High speeds have been developed first, and only now is provision for safeguarding the tracks beginning to be developed and in a very gradual fashion. The effect of the inversion of orderly development has been inevitable and automatic—death and injury. That inversion is the root of the whole trouble; to rectify it is the central problem with which we are confronted.

Fifty years ago, mechanically propelled vehicles, if used on the roads, were only permitted to travel at 4 miles an hour and had to be preceded by a man with a red flag. It is usual to regard this arrangement as childish. In point of fact, it represented mere common sense. Free circulation of vehicles at high speeds and free pedestrian circulation are incompatible. Motor traffic will never, and can never, mix safely with pedestrians and pedal cyclists. It is the policy of continuing to mix them that is hindering the proper and orderly development of motor traction.

To a great extent the key to the situation rests in the idea that lay behind the man with the red flag. Either on the one hand the motor-car must be on the carriageway on the merest sufferance and must be made harmless by regulations of a very stringent character, or, on the other hand, the motor-car can be given the free run of the road, in which event proper tracks must be provided and the pedestrian and the pedal cyclist must be kept completely out of its path.

Ideal Street Design

Perfect traffic conditions would really be possible only in a brand new lay-out for a brand new country. The ideal is worth studying. Each line of traffic would move at uniform speed and the streams would never stop, though units from them would of course do so. Passage is the purpose for which

the highway is designed ; to stop upon it at all is really an abuse, and for that reason bays or docks would be provided for loading and unloading and for waiting vehicles. Or alternatively, if the number of "lanes" on the road could be increased sufficiently, one line could be reserved for standing vehicles.

Each road would have six or more lanes ; there would be duplicate carriageways, whereby the two traffic streams would be segregated. Traffic in each stream would proceed on the general principle that the decelerating vehicle works inward toward the nearside in order to allow others to overtake, and the accelerating vehicle works outward on the offside in order to overtake others. Speed would adjust itself according to place and density ; and the turns at cross-roads would be dealt with by traffic roundabouts. Pedestrian footways everywhere would be high above the road (*viz.* at bridge level) and they would be linked by bridges so that no pedestrian would ever set foot on the carriageway. All of this would produce a system whereby the traffic streams would never stop and would never cut one another, but each could run in a stream of consistent fluidity without any undue thickness in any part of it.

The adaptation of these principles to existing places can only be partial. The main object must be (a) to separate the opposing traffic streams ; (b) to control traffic movement at cross-roads and road junctions ; (c) to provide accommodation off the highway for all standing vehicles ; (d) to segregate pedestrians from vehicular traffic ; and (e) to segregate pedal cyclists from the remainder of the wheeled traffic. In other words we want the construction of roads upon which there is an uninterrupted and orderly flow of wheeled traffic in a single direction without the confusion and hazards brought about by promiscuous standing vehicles and by pedal cyclists and pedestrians. In the case of all main roads this can in course of time be consummated just as effectively as it has been in the case of the railways. In the meantime public safety can only be maintained by restrictive measures which

will answer the same purpose as physical safeguards will ultimately achieve.

Structural Work and Restrictive Measures Required

In the light of these considerations the whole problem can be brought into perspective. If high speed on the road is to be allowed, the duty of the authorities must clearly be to make the roads structurally as safe and as well adapted for high vehicle-speeds as the railways are. That, however, cannot be accomplished in a day or even a generation. Pending the completion of the task, a civilized degree of safety can only be achieved by definite restriction on freedom of movement, and by no other means.

For that reason the entire traffic policy must consciously be regarded as falling into two sections :—

(1) Structural work to make the road as well adapted, fenced, and arranged for high speed without danger to others as the railways are.

(2) Restrictive measures upon public liberty to maintain public safety, pending the completion of the structural work.

The former represents the path to complete solution, the latter the provisional measures that, in the meantime, are indispensable.

If this conception is regarded, not merely as an orderly statement of the obvious, but as a pronouncement of principle, definitely deduced from the preceding facts and now applicable to the whole traffic problem at the moment, it can be very helpful. It will produce the basis of a real traffic policy.

In developing such a policy it will be found that no orderly and systematized advance will really be effected until there is a definite division of all roads into two classes, *viz.*—

(1) Arterial (which means all really main roads both in town and country, irrespective of their date of construction).

(2) Secondary or Distributive.

In the case of the former the requirements, both as to construction and use, will be quite different from those

which obtain in the case of the latter. When it is desired really to designate a particular thoroughfare as an *artery* for wheeled transport it is not only proper but needful to confer upon the wheeled traffic a defined dominance over the pedestrian traffic, though no such dominance is either necessary or proper in the case of secondary or distributive roads. This is a matter which I have developed more fully elsewhere and I cannot deal with it in any detail here.

When I talk of "developing a policy", please do not imagine that I am suggesting that senior police officers should get too big for their boots by regarding themselves as legislating authorities. Legislation is for Parliament; but the police are the practical expert advisers, and they cannot discharge that rôle of practical expert unless they can also assess the practicability of translating into legislation the ideas which they bring forward. A study of the problem from the point of view of an administrative authority is thus essential to the general make-up of a traffic expert.

The scope of structural possibilities is definitely limited in the case of our great towns. It is necessary to accept broadly the limitations of space imposed by the buildings and streets already in existence. As has often been pointed out, many towns have now reached an unwieldy size, and no person projecting a new town would voluntarily propose an aggregation of the size of London or New York.

As regards London the lay-out of a vast number of streets in the centre was designed (if consciously designed at all) for the traffic of several centuries ago. It is a commonplace to say that traffic has a tendency to increase in volume the nearer it approaches the centre of a town and to thin out as the distance from the centre increases. From the combined effect of these two features the traffic problem inherited by London is of a very serious character, having regard to the prohibitive cost of any radical improvement in the general lay-out.

The object of an administrative authority faced with this problem is to create such improvements and impose

such regulations in regard to traffic as will strike a just balance between the factors of—

- (a) Free circulation.
- (b) Safety.
- (c) Economics.

Unfortunately it is seldom possible to legislate in favour of any one of these three without instant repercussion upon one or both of the other two, and that repercussion is generally of an adverse character. To take the simplest possible example: the speeding-up (or in other words the freer circulation) of traffic will very often have an adverse effect upon safety; the slowing-down of traffic in order to secure safety will have an adverse effect upon economics, for it means that all journeys are slower, and a greater number of commercial vehicles are required to accomplish the same amount of work, thus costing more.

Let us now consider these three subjects *seriatim*.

Free Circulation

We take the matter of free circulation first, and notice its repercussions on the other two items. Many measures have been adopted, such as the creation of one-way streets, roundabouts, the removal of roadside obstructions, regulation of stopping places, prohibition of standing vehicles. In the case of one-way workings, frontagers almost always declare that business and rateable values are adversely affected; while the effect upon business of the prohibition of standing vehicles (which are the main cause of traffic congestion) is obvious. Despite that consideration, however, it is essential—if the rapidly increasing traffic is to be accommodated—that all main routes should be freed from the incubus of standing vehicles. For that purpose standing accommodation, readily accessible but off the highway, is essential. At present matters are moving in a vicious circle. People will not sink money in garages unless police action is so drastic as to force the cars into them; but the police cannot take drastic action until the garages exist into which the cars can be sent. No

effort should be spared to induce local authorities to use the powers they possess to provide, or to assist in the provision of, garages at places that are really appropriate; badly placed, they are useless.

The object of street design is to provide for a smooth, safe and even flow of vehicular traffic without endangering pedestrians, and for safe and easy progress for pedestrians without congesting the wheeled traffic; and it must always be the object to achieve these things automatically, without need for day-to-day enforcement of arbitrary regulations. For that reason the police are most anxious to see legislation promoted whereby all new premises which attract motor vehicles shall be compelled to include, as an integral part of their design, provision for the accommodation of those vehicles off the highway. The Ribbon Development Act does not go far enough in this respect; it only provides for vehicles loading and unloading, not for waiting vehicles. Take a new theatre or a new hotel, for instance. If each has its own parking accommodation immediately accessible, people will naturally and automatically leave their vehicles there, thus obviating the need for police to force them into parking places by means of prosecution.

Somewhat the same considerations apply in the case of traffic signals. Great assistance to traffic has already been given by the development of the automatic signal. The value of the employment of these signals as compared with the use of police officers for traffic regulation is twofold; they can be more widely installed and their phasing can be more rapid. For physical reasons a man is not able to keep changing over as frequently as the signal can; and it is beyond question that short time-cycles achieve the best results. Also there is a definiteness and certainty in the mechanical method which facilitates movement. The defect of the signals is that they cannot enforce their own behests as the policeman can; and unfortunately human nature is such that a great deal of attention is found to be required to prevent wilful or careless disregard of the red or yellow light.

It is a great mistake, moreover, to think that traffic signals are in themselves necessarily a traffic asset, for in a town nothing could be more harmful than to scatter them about at random as from a pepper pot. Motorists will not tolerate being pulled up perpetually time after time, especially when there is little or no cross-traffic to justify it. The last named point is to some extent met by the vehicle-actuated signal; but that in itself does not go nearly far enough, for traffic cannot successfully run in a series of jerks. The difficulty as to frequent stoppages may be largely overcome by linking a series of vehicle-actuated signals together, but this, while providing for a co-ordinated flow along the main road, still does not make sufficient allowance for the safe passage of pedestrians, and to that extent the arrangement is still deficient.

There is thus still room for considerable progress in the matter of co-ordinated systems of signals in our great towns. In providing for a freer traffic flow without adverse repercussion upon pedestrian safety, the desideratum is to obtain a system of signalling which, while expediting the traffic flow, shall provide such stoppages of traffic as will enable pedestrians to get across the street with safety at specified points *at fixed intervals of time and space*. These objects could be achieved by a specialized application of fixed-time cycle signals working on a flexible progressive system. This would enable the traffic to get a sufficiently free and consistent run to make it worth its while to select the main thoroughfare and not to seek alternative routes through back streets, a habit which (already developing to a disquieting extent where main roads are signalled with detached installations) only spreads and increases traffic dangers.

In the case of most main roads, however, the junctions with minor roads are not so spaced as to fit in easily with a progressive system; the position of the signals should therefore be determined by (a) the *main* intersections and (b) the places for the pedestrian crossings, which should be sited at regular intervals. The signalling of minor side streets would be unnecessary, and signalled pedestrian crossings

would often occur where there were no road junctions at all. The ideal would be to seal up altogether the ends of the less important roads; but that is not often practicable. The practicable policy is to require all traffic emerging from such minor roads into the main road to turn left; and there are various other administrative details which cannot be elaborated in the space at my disposal.

The principle to be aimed at must be to give the wheeled traffic a defined dominance over pedestrian traffic in all roads of an arterial character, but at the same time to provide regulated zones of safety for the pedestrians. In addition, in order to prevent promiscuous crossing by pedestrians, it may be necessary, as I have long advocated, to provide guard rails along main roads (and please call them "guard rails" and not "barriers"; we already employ barriers in the roads in connexion with road works and crowd-control; our barriers are transverse and not longitudinal erections). If such facilities and safeguards are provided it will pay both vehicular traffic and pedestrians to conform to orderly movement, and they will do so without any form of coercion by the police.

The erection of guard-rails along the edge of the footway is among the few measures which promote traffic circulation and public safety at one and the same time. The guard-rails prevent the pedestrian from carelessly stepping off the pavement in front of the oncoming traffic, and they enable the wheeled traffic to use the whole of the roadway right up to the edge of the kerb, instead of having to allow a substantial margin from the kerb to provide for unexpected action on the part of pedestrians. In so far as guard-rails prevent promiscuous crossing they of course aid traffic circulation and promote pedestrian safety.

Safety

Now we come to the item of safety, and the repercussion of safety measures upon traffic circulation and economics. The pedestrian crossings, introduced on the Paris model,

are a good example. In London the police, before they could take the initiative in recommending the introduction of the crossings here, had to assess beforehand the measure of their effect in slowing up the traffic-flow and to consider whether their adoption would so much retard it as to cause really serious traffic congestion. Considerable repercussion upon traffic circulation was inevitable; the problem was, and is, to obtain the utmost amount of safety from the crossings without putting such added checks upon the traffic as to strangle its progress. If, as indicated already, the pedestrian public desire to obtain *absolute* sanctuary at the crossings, they will have to refrain from using the road elsewhere. They cannot have it both ways. The driver cannot give way absolutely to them on the crossings and at the same time be dodging and pulling up for them everywhere else. This matter will have to be given time to work itself out; and in the meantime a policy of temporary compromise is inevitable.

As a further example in regard to road-safety we can take the matter of dangerous driving, the elimination of which is so important to public safety. Some of the difficulties in regard to this matter have already been examined. On analysis it is found that dangerous driving most often occurs when the driver is forcing his pace and/or is attempting to overtake. Our aim must always be to prevent offences at source, and so not to have to deal with them after they have occurred. A great amount of dangerous driving is eliminated at a stroke if a uniform flow of traffic is promoted, which proceeds at a uniform speed, to the exclusion of all that jockeying for position and impinging on the offside of the road which occurs in an unregulated stream of traffic. For that reason a speed limit in built-up areas enforced by a warning not to overtake any vehicle which is itself proceeding at the legal limit prevents at source a great deal of dangerous driving. At the same time it has its inevitable repercussion; it may slow up the traffic stream.

Economics

Finally there is the factor of economics. The economic value of free circulation has already been referred to. It is clear, however, that in providing for free circulation, a point may be reached where the economic effect is reversed. If, for instance, in order to promote free circulation, the prohibition of standing vehicles were carried so far as to prevent satisfactory and economical loading and unloading of goods, the net immediate effect might be very adverse from the point of view of economics. When one-way workings in business streets are introduced we are almost always told (as already mentioned) that there is a seriously adverse effect upon rateable values. Similarly, if operators who find horse-transport better adapted for their purposes than motor-transport are excluded from using certain streets, the economic result may be very unfavourable to them. Again, if regulations are made which affect certain trades only (*e.g.* with regard to the lowering of casks or delivery of coal), there is always the danger that an unfair discrimination between the different trades may be made, thus imposing a burden which is equivalent to a tax upon some trades but not upon others. These are examples only.

This sketch of the interaction between the three factors of free circulation, safety, and economics is of course very hasty and slight; but enough has been said to indicate that an accurate and discriminating balance between these three establishes the line both for general traffic law and for local traffic regulations. As regards the venue for the application, both of statute law and of local regulations, the need for a definite distinction as between arterial and distributive roads has already been mentioned.

BEGINNINGS OF A REASONED POLICY

Accidents and Dangerous Driving

Before I leave this subject, it will be of interest to police officers to examine the extent to which present-day measures are based upon fact and principle. In the first place a glance

at past history is needful. The Motor Car Act of 1903 was out of date and unenforceable even before the War, and in 1930, the serious step was taken of abolishing the general and local speed limits. The idea underlying the removal of these speed limits was that, if dangerous driving could be eliminated, public safety—so gravely threatened and assailed by motor traffic—could be re-established.

At the time, that conception was regarded by most people as reasonable enough. It was freely said that the police had been given all the powers that they needed, and that, if they would only prosecute dangerous driving out of existence, all would be well.

The matter has since been put to a practical test. A critical examination of our accident reports was made; expert assessors were set to analyse carefully the facts disclosed by these reports and to determine in how many cases the accident had been due to dangerous or careless driving of a prosecutable order, irrespective of whether there was corroborative evidence or not.

It was already known that in only about 3 per cent of the total had prosecution actually been possible, one of the reasons for this paucity being that evidence which will stand the test of a Court of Law is always difficult to obtain. The result of the investigation established that the proportion of cases of definitely culpable or careless driving was less than 15 per cent of the whole. This meant that, if all the (prosecutably) dangerous or careless driving which leads to casualties could be eliminated beforehand, the casualty lists would not be reduced by more than 15 per cent.

This negative result, however, was only a beginning. The balance, *viz.* at least 85 per cent of the accident-total, had still to be accounted for. That those accidents had not been *wilfully* caused was obvious. They had been due to human error of varying sorts and degrees. Human error in the case of motorists has not been brought down to an irreducible minimum, as it has, for instance, in the case of shipmasters at sea or pilots in the air. The margin of error

is considerable. But every such error, whether on the part of motor driver or pedestrian, becomes more lethal as vehicle speed increases.

Take, for example, the case of a pedestrian who, with his back to the traffic, steps carelessly off the kerb. If the vehicle directly behind him is a pedal box tricycle proceeding at 4 miles an hour, the chances of injury are not high; even if the approaching vehicle is a car coming at 10 miles an hour, he may still be able to recoil in time. If, however, the car is proceeding at 20 or 30 miles an hour, injury is likely to be occasioned; while, if the speed is as high as 40, death will almost certainly result. Yet the human error on the part of the pedestrian was precisely the same in all four cases; the matter of vehicle-speed was the decisive factor.

The same proposition holds good to exactly the same extent in the case of human errors on the part of the driver; an error of direction at 4 miles an hour can generally be rectified before harm is caused; at 10 or 20 miles an hour the chances of recovery are proportionately reduced, while at 40 miles an hour the self-same error would be likely to produce very serious results. In other words the greater the speed the shorter is the time-interval for the protective reaction on either side.

This being so, the vast majority of casualties (*viz.* at least 85 per cent) are found to result from an undue but non-prosecutable margin of human error, the lethal effect of which is increased as vehicle-speeds increase and is reduced as vehicle-speeds are reduced, thus leading to the clear conclusion that "if pedestrians are to remain free, vehicle-speed must be reduced. Conversely, if speed is to remain high, pedestrians must be controlled", and such measures, "either separately or in combination," are indicated as the solution.

Speed Limit

In the light of the foregoing details it will be realized that—from a practical point of view—the police may regard

the speed limit (laid down by the Road Traffic Act, 1934), as a measure based upon fact and principle. If therefore its results do not come up to expectation, that will not mean that the limit is wrong; it will rather mean one or more of three things, *viz.* (a) that the limit must be more closely enforced, or (b) that it is set at too high a figure, or (c) that its areas of application need to be reviewed.

Opponents of the speed limit contend with perfect truth that the ideal arrangement would be (1) that the driver should regulate his speed solely upon conditions prevailing at the moment, and (2) that the driver should drive in such a manner as to have his car completely under control at all times. They add furthermore with equal justice that these effects cannot be brought about by an arbitrary speed limit; such a limit, applied to all built-up areas, is sometimes too high and sometimes too low.

The simple answer to them is that ideal arrangements do not always hold good in this un-ideal world. The reasons why, despite the theoretical justice of their claims, it is necessary to impose a speed limit are (1) that unfortunately in practice the average motorist is found not to adjust his speed to time and place with sufficient accuracy, but to err perpetually on the side of high speed; while (2) the casualty records show all too often and all too clearly that he has not had his car under anything like such complete control as he imagines. If we had to deal with ideal humanity it would be quite a different matter.

The individual driver (often himself highly skilled and of long experience) who opposes the speed limit looks at the problem from the point of view of the individual driver. A controlling authority, on the contrary, must consider the aggregate effect. If we are even to approximate remotely to that *co-ordination of units* whereby the railways have reduced accidents to a minimum we cannot depend upon the various personal standards of individual drivers, but must have a settled code. The uniform flow, which must result from a speed limit loyally observed, does to a very large extent promote the desired co-ordination of traffic units.

Pedestrian Crossings

From a police point of view the central problem of accident causation is capable of very simple statement. The policy (apart from the creation of physical safeguards) must follow two definite lines, (1) to reduce and control speed in crowded areas, and (2) to segregate motor vehicles and pedestrians.

When the latter was seen as a clear matter of principle, the introduction to London of pedestrian crossings (and it is interesting to note that the principle of these crossings is really a police invention borrowed from Paris) logically ensued; and the measure was subsequently embodied in the Road Traffic Act, 1934.

As regards motor roads in built-up areas, the case to be "got across" to the public is simple. When approaching any "agg'omeration" or built-up area the driver must (a) reduce his speed at least to 30 miles an hour, and (b) be prepared to give way at any moment to any pedestrian who appears on the appointed crossing places in the road. The pedestrian on his side must—if he is to obtain the full measure of consideration—limit his appearance in the road to the appointed crossing places. In addition, needless to mention, the ordinary obligations as to care on both sides remain.

Pedal Cyclists

The speed limit and pedestrian crossings, as embodied in the Road Traffic Act, 1934, are thus in conformity with definite principle, and are beginning to implement a real policy. In the Statute, however, the difficult question of pedal cyclists was not effectively dealt with at all, a minor palliative measure being the only restriction imposed. As the mortality among pedal cyclists is not only high, but is rapidly increasing, the principles which are already in course of being applied in the case of motorists and pedestrians must inevitably in course of time be applied *mutatis mutandis* to pedal cyclists also; but the question of "how" and "when" is a matter which Parliament alone can decide.

Summary

I think I can sum up my main points in quite a few words. Pending the completion of the structural alterations required to make roads as safe for high speed traffic—from the point of view of all comers—as the railways are, public safety (so seriously threatened at present) can only be maintained by restrictive measures upon the freedom of public movement. Not only are restrictive measures in regard to road-users necessary, but breach of them is very often actually a crime. In view of the heavy toll of road casualties, traffic work is among the most essential and important tasks assigned to the police. Both the laws and the structural work for achieving a safe and free flow for all classes of road traffic must be based upon traffic fact, and the most practical traffic experts will always be (unless they fail to make use of their pre-eminent advantages) the police, who are responsible for the day-to-day handling of traffic. A reasoned and co-ordinated traffic policy is required, the materials for which are very largely to hand already. As traffic law must be enforced by the police and the power of the police is entirely based upon public goodwill, the police aspect of traffic legislation is a primary and not a secondary one. The radical distinction between the "dynamic" and "static" sides of the science of road traffic is not yet appreciated as it requires to be, thus leading to a frequent tendency to "put the cart before the horse".

To this summary I would add that full recognition will only be accorded to the "dynamic" aspect when the practical students of traffic have constructed such an effective body of scientific knowledge on that side as to compel the development of a new perspective in these matters; it is only by means of sheer efficiency that any scientist can extort recognition for his own science.

Robbing the Mail

IT is a far cry from the days of the highwayman who plied his nefarious 'trade' on the turnpike roads of England, holding up the mail coaches on their journeys from London to Bath, York, and other cities; but even to-day there exist certain criminals for whom the robbing of mail bags has a special attraction.

The methods of the highwayman of old were of necessity very different from those which are available to-day; then he had to rely upon the moral effect produced upon the drivers of the mail coaches and their passengers by the presentation of a huge pistol or blunderbuss, and, having completed his crime, upon the speed of his horse to remove him as far as possible from the scene of his exploits in the shortest possible time.

To-day, such methods would be of little use. The advent of modern methods of fast transport and locked vans offer much greater difficulties to the criminal bent upon enriching himself and his confederates at the expense of the community at large, and considerable organizing ability and careful planning are necessary in order to hope even remotely for success in such crimes.

The extent of the preparations which were made in a recent crime of this nature, and how nearly they came to succeeding, are shown by the following facts.

In the spring of 1934 three men conceived the idea of obtaining access to the van in which mail bags were conveyed from a London terminus to a certain seaport, and while in the van to secure the bags and get them out of the train before it reached its destination. They decided upon the following method:—

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A large wicker-work hamper, of the type commonly used by commercial travellers in what is known as "Manchester goods", was to be procured and the metal fastenings so converted that they could only be secured on the *inside*. This basket, fitted up with blankets and a pillow, would be a reasonably comfortable 'hide' for a man of average height and build. A black trunk, measuring about 3 feet by 1 foot 6 inches by 10 inches, was also to be procured.

It was decided that one of the men should be secreted in the hamper and be loaded into the luggage van of the train conveying the mail bags. During the journey, he would open his basket, seize the selected mail bags, and place them in the black trunk. Both hamper and trunk would be consigned to an address at the first stopping place en route, and on arriving there the hamper and trunk would be unloaded and collected by a motor-van, which would convey them to a point on the London road, where they would be transferred to a fast motor-car and taken back to London.

All the details of the plan were carefully thought out. The basket and trunk were obtained; a second-hand motor-van was purchased for a few pounds at one of the London car marts, and in due course the van was sent to a rendezvous within a few miles of the station where the first stop was made, to await instructions.

Having settled the details so far, it was decided to put the plan into operation.

One evening in May a small commercial motor-van drove up to a station in London. From it were unloaded a large hamper and a trunk, which were put on a luggage barrow and wheeled to the train. As is generally the case with luggage, the labelling and stowing in the luggage van were left to the railway staff. And, generally speaking, such a procedure is all that could be desired. But when the 'luggage' contains a live man, too much attention to detail cannot be paid. In this case the occupant of the hamper had cause to remember the railway staff's attentions; for, unhappily for him, this particular hamper was loaded into the van upside down—

a proceeding which not only effectively prevented its occupant from opening the lid as originally intended, but, owing to the presence of blankets and pillows, came perilously near to suffocating him. He was obliged to travel 30 miles bumpity-bump, and doubtless emerged with his feathers a bit ruffled.

Such an unfortunate incident would have damped most people's ardour. But our crooks were made of sterner stuff. The contretemps served only to point out a little error in organization which would be rectified in any future attempt.

The next attempt was made less than a week later, and this time there was no mistake. The hamper, with a thin cardboard box labelled FRAGILE: THIS SIDE UP tied to the lid, was loaded into the train by two confederates. And during the journey the occupant of the hamper emerged from his 'hide', secured three mail bags containing registered letters and other valuables, transferred them to the trunk, and retired once more to his hamper.

At the first stopping place he was duly unloaded and placed, with the trunk, into the waiting van, and the return journey to London was begun. Just outside the town a fast car overtook the van; the mail bags and the occupant of the hamper were transferred to it, and the driver was given instructions to make his way to London, with the empty hamper.

But even the best laid schemes of crooks go wrong. While travelling at high speed along the road towards London, a small car suddenly emerged from a side road and came into the path of the faster moving vehicle. A collision resulted in which the fast car was badly damaged, its occupants injured, and the contents of the mail bags strewn about the floor of the car.

This event, unhappily for them, had not entered into the calculations of the criminals, and it can be well imagined what feelings it aroused in their minds. Their first thoughts were for self-preservation, and they took to their heels and ran for it.

Information of the collision and the unusual contents of the vehicle soon reached the police of the district. Strategic posts around the area were rapidly manned, and an organized search through the woods and commons, which abound in the neighbourhood, was begun at once. Later that night two of the criminals walked right into one of these points, and were promptly arrested.

The third man, who had been the occupant of the hamper, was arrested at an inn where he arrived an hour and a half after the collision, having laid low in order to recover from the effects of the severe shaking he had received in the collision. It must have been rather a bumpy day for him.

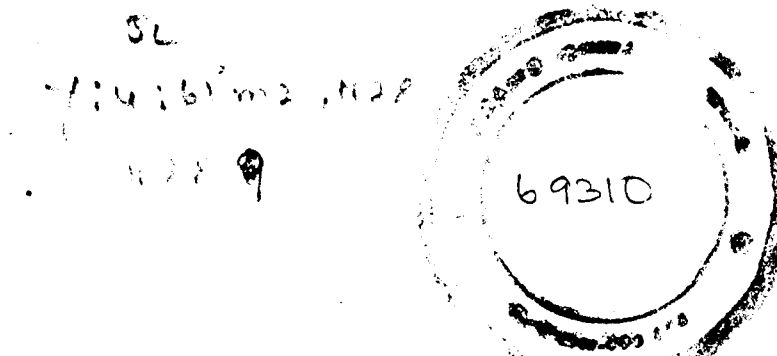
Inquiries by police enabled them eventually to trace the motor van to a garage at a small town some thirteen miles from the scene of the unloading. Here the hamper and trunk were found just as they had been left after the transfer had been made.

Thus, in the words of the poet Burns, "the best laid schemes o' mice an' men gang aft agley."

The luck on this occasion was against the criminals and on the side of the police; for, had it not been for the totally unforeseen accident, caused by their ill-considered haste to get back to London with the proceeds of their crime, the scheme had every chance of being a success, at least for the time being.

At the trial, before Mr. Justice Mackinnon at the Assizes, the prisoners put forward the defence that, having found the mail bags by the roadside, they were hurrying to hand them over to the G.P.O.! This defence, however, appealed only to the sense of humour of the learned Judge; for in his summing up to the jury he said: "You may think that explanation so wild, that if it were told to the Marines, not one member of that proverbially credulous regiment would believe it."

SCRIBE.



The Sack Murder

By T. H. SPENCELEY

Liverpool City Police

FREQUENTLY, though not always so, the odds of avoiding detection are in the criminal's favour. This would be especially so in the case of murder and all the more serious offences against the person and property which, "with malice aforethought," are generally carefully and thoroughly planned, but for the fact that particular police attention is always focused upon the investigation of serious crime. Even so, if a murderer is captured and convicted, usually it is because he bungled, became incautious, over-talkative, or too confiding. It will be seen in the history of the following celebrated Liverpool trial, referred to locally as "the Sack Murder", that all the well-laid plans of the murderer went wrong: indeed, it would be difficult to cite another case in which the culprit was so adversely beset by circumstances and fate.

Catherine Christina Bradfield, 40 years, was the manageress of a lock-up sack manufacturer's office and warehouse, 86 Oldhall Street, Liverpool. Her employer was her brother, whose attentions were chiefly confined to the management of the factory, situated in the near-by township of Seaforth. Miss Bradfield was responsible for attending to the correspondence of the firm, to the booking of local orders, and to the dispatch of orders for sacks and tarpaulins received through the firm's travellers. To assist her in her duties, there was a typist, Miss Venables, a packer named George Sumner, 22 years, and a handcart boy named Samuel Angeles Elltoft, 18 years.

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In the management of the warehouse Miss Bradfield acted upon definite instructions received from her brother. Every morning at 8 a.m. she would open up the premises, order the youth Elltoft to sweep and tidy up the ground floor, and, in wintry weather, instruct Sumner to light a fire. The two men would then be told off to carry on with the routine work of the day. Work generally ceased at about 5 p.m., but at times, when rush orders had to be executed, Miss Bradfield received instructions to make the staff work overtime. On such occasions it was customary to provide them with tea. Mr. Bradfield usually called at the warehouse at least once a day, generally several times, but if for business reasons he was unable to do so, he would send along his general manager, Mr. Okill.

Accounts with the firm were frequently settled by payments to Miss Bradfield, who kept all money and cheques in a drawer in the office desk until she could hand over the same to her brother. If Mr. Bradfield did not call before the office closed for the day, Miss Bradfield would carry the money home with her in a satchel. She had definite instructions never to entrust the keys to Sumner and never to leave him in the office alone, as he was suspected of dishonesty. Only Miss Bradfield and her brother were in possession of keys to the warehouse, and, on the rare occasions when Miss Bradfield knew she would be unable to open up the premises at the usual time, she would ask her brother to oblige her by attending to the matter, or make the same request to Mr. Okill and hand over her keys to him.

At 5.55 p.m. on Wednesday, the 10th December, 1913, Mr. Bradfield and Mr. Okill visited the warehouse, spent some time examining and checking the stock, and left at 6.30 p.m. At that time Sumner and Elltoft were employed sewing tallies on to coal-bags; Miss Venables was busy typing letters; and Miss Bradfield—who appeared to be in unusually good health and spirits—was busy at her desk. She never suggested she would be late in starting at the office on the following morning, nor did she ask Mr. Bradfield or Mr. Okill

to open up the premises for her. Immediately her brother had left, Miss Bradfield announced that the work for the day was finished, and when Miss Venables left at 6.35 p.m. she noticed that Sumner and Elltoft were tidying up and preparing to leave.

Miss Bradfield was never seen alive again.

When Miss Venables arrived at the office on the following morning Sumner was busy cleaning the floor of the warehouse (doing Elltoft's usual work). Elltoft was tidying up the office. Miss Venables inquired for Miss Bradfield, and Sumner said, "She won't be down until nine this morning. She handed me the keys last night saying she was calling somewhere on her way down to business and would not be down before nine." Elltoft was standing by when this was said, but passed no comment.

During the morning Miss Bradfield's landlady telephoned to the office, stating Miss Bradfield had not been home since leaving at 7.15 a.m. on the previous day. Although both Miss Venables and the landlady considered this unusual and strange, they presumed Miss Bradfield had spent the night with one of her numerous relatives living in the district. Shortly afterwards Mr. Bradfield called at the office and, upon hearing of his sister's absence, instructed Elltoft to go and make inquiries at the addresses of several of his sister's relatives, whilst he telephoned to some of her relatives and acquaintances living in Merseyside. He called Sumner to him and closely questioned him about Miss Bradfield's movements on the previous evening, and Sumner said, "I left Miss Bradfield outside the Cotton Exchange at a quarter to seven. She gave me the letters to post, all except one, which she kept and posted herself. She then gave me the keys and asked me to open up the premises in the morning. She said she meant to have given the keys to Mr. Okill but didn't like to do so in front of you!"

Inquiries for the missing woman were made at local hospitals, railway stations, public institutions, and all other likely places, but without result, and on the evening of the

same day Mr. Bradfield obtained a description of the clothing his sister was wearing when last seen, and reported her as missing to the police. He totalled up the cash accounts and found a deficit of £7 os. 1d., the amount of the takings on the previous day. Miss Bradfield's watch, which always stood on the office desk, was also missing.

At 12.20 p.m. on the 11th December—the day following the disappearance of Miss Bradfield—Francis Robinson, master of the flat, *William*, plying on the Leeds and Liverpool Canal, attempted to open one of the lock gates but found he was unable to do so, owing to some obstruction on the bed of the canal. He obtained a boat-hook, grappled with the obstruction, and fished up a sack containing what appeared to be a female body. The police were informed, and later that day Mr. Bradfield identified the body as that of his sister.

The police had been immediately informed of the discovery, and at the coroner's inquest, held the following day, the officers engaged upon the inquiry deposed that the body had been placed head first into the sack with the feet protruding. Rods of iron had been secured with ropes to either side of the body, and the body had been trussed up with ropes before being placed in the sack. When the sack was cut open it was noticed that the clothing of the body was greatly disarranged, in such a manner as to suggest that an attempt had been made to outrage the unfortunate woman. The deceased's broken umbrella had been thrust into the sack, underneath the body. The medical officer who conducted the post-mortem stated there were contusions all over the face, arms, and head, and that death had probably resulted from any of the numerous deep lacerated wounds on the left side of the top of the head.

As soon as the deceased had been identified the police made a careful examination of the premises, 86 Oldhall Street. On the floor of the warehouse was a large stain, apparently blood, whilst numerous pieces of string, similar to that used to truss up the body, were found lying about on the floor. Hidden behind an inner door was a diaper which it was

reasonably supposed had been torn from safety pins attached to the clothing of the deceased. Under the counter was a rag—saturated with blood—and hidden away in a bale of sacks the police discovered a blood-stained, battered sail-maker's fid.

The police decided to interview the two male shop assistants, and at 1.30 a.m. on the 12th—exactly 12 hours after the discovery of the body in the canal—Elltoft, the younger assistant, was seen at his home and closely questioned regarding his movements on the night of the 10th. At first he stated that Miss Bradfield had left the premises before him and that he and Sumner had been instructed to work late that evening; but when informed that the body of Miss Bradfield had been discovered in the canal and that he would have to be detained on suspicion, he said, "I will tell the truth. Miss Bradfield had told us to go home that night, and when we got to the door, Sumner said to me, 'Wait outside till I come back, I won't be long.' I waited for half an hour, and then he came out with a handcart with something on it—a sack covered with a tarpaulin sheet. I thought the sack contained rubbish. Sumner told me to push the handcart, which I did, and he walked alongside of me to show me the way to go. We took the handcart across a field until we reached a stony spot where we could push it no further. We took the sack out and dragged it down to the canal, and threw it in. I have never seen rubbish carted away to the canal at that time of night from the warehouse."

He was detained pending further inquiries.

Meanwhile inquiries had been made for Sumner. His landlady, when interviewed at his lodgings, told an astonishing story. Sumner, whose real name was Ball, had lodged with her for the past two years. At first he had been addicted to drink, but of late he had been very steady and was rarely known to go out in the evening. On the morning of the day of the crime he left his lodgings to go to his place of business at the usual time, but did not return until 9 p.m. that evening. He appeared to be very agitated and for some time walked up

and down the kitchen in a restless manner. His landlady, having observed two deep long scratches on his face, suggested to him that he had been squabbling with some girl. This he denied. At 11 p.m. he retired for the night, and on the following morning left the house at the usual hour to go to business. He was then wearing a different suit from the one he had been wearing on the previous day.

At 7 p.m. that evening—the 11th of December—his landlady met him by accident whilst she was out shopping. Upon seeing her, he said, "Wait a minute; I am going to Elltoft's home to see why he wasn't at work to-day." The landlady waited for twenty minutes or so and then, knowing where the boy Elltoft lived, went to his (Elltoft's) house and inquired for Sumner. She was then informed that Sumner had not called there, and went home. Sumner was not there and did not return. She handed over to the police the suit he had been wearing on the day of the crime; it was heavily blood-stained.

It seemed as if Sumner had a very good reason for disappearing, and the police felt certain that—even if he was not the murderer—he knew who had committed the crime. Amongst the possessions of the deceased was a photograph of Sumner, a copy of which, together with his description, was supplied to the press and circulated, not only locally but throughout the country. Seldom has the public been so anxious to co-operate with the police and within twenty-four hours of the hue and cry being raised Sumner's photograph had been shown on the screens of all the local cinemas.

The deceased had been well known in the city, and even if Sumner was not immediately located, information poured in from all sides—none of it helpful to Sumner and all of it invaluable to the police in piecing together the details of the grim tragedy. Following closely upon the discovery of the body, witnesses came forward and stated that they had seen a loaded handcart being pushed into the lock-fields by a man and a boy; others testified that they had seen a man and a boy lift a loaded sack from a handcart drawn up on the lock-fields,

and drag the loaded sack in the direction of the lock. A young steward told the following amazing tale :—

"I was courting a girl who was employed in Oldhall Street, and arranged to meet her at 7.30 p.m. on the night of the crime. As I was passing Bradfield's warehouse, on my way to keep this appointment, a shutter fell on my head, damaging a new hat which I was wearing at the time. I cannot say what caused the shutter to fall, but almost immediately after the accident a lad came out of the warehouse and picked the shutter up. I complained to him about the damage to my hat, and whilst I was doing so a second man, several years older than the boy, came out. I addressed my complaint to him, whereupon he offered me two shillings to 'square it'. He took the money out of a white looking cash bag. Immediately afterwards the youth and the man re-entered the warehouse, where there was a dim light. Ten minutes later, as I was standing outside one of the adjoining shops, I saw them both reappear. This time the boy was dragging a handcart on which was a load covered with a tarpaulin. After the elder man had locked the door, both passed me, bid me 'Good night', and walked away in the direction of the canal."

Every feature of the case pointed to Sumner as the culprit; but Sumner had disappeared, and despite widespread interest in the case, could not be traced. The fullest possible description of the wanted man was circulated, and on the 16th of December, 1913, the police offered a reward of £50 to be paid to anyone giving information resulting in his apprehension. Through the medium of the popular press the offer of the rewards was widely circulated throughout the country. In the Liverpool district amateur detectives banded themselves together and pooled their resources in an endeavour to apprehend Sumner (and incidentally to secure the substantial reward), whilst up and down the country statements that the wanted man had been seen were hourly reported to the police. On one day alone—the 17th of December, 1913—he was not only 'spotted' in Castle

Street, Liverpool, but at the same time he was seen in Hyde Park, boarding a tram at Clapham, sightseeing in the back-waters of Manchester, and 'apprehended' at Bradford and Bishop's Stortford. All these suspects, and many others, had to be interrogated, and it is interesting to note that whilst the police could not deny the possibility that Sumner had left the port for a foreign country, or that he might be tramping the country, those in charge of the investigations favoured the idea that the wanted man was 'lying low' somewhere in Liverpool, which theory eventually proved correct.

Late in the evening of his birthday, the 20th of December, 1913, Sumner was arrested in Liverpool in the following dramatic circumstances. An old-time acquaintance of his was walking along Lime Street, one of Liverpool's most crowded thoroughfares, when he saw a man ahead of him swinging along in a manner which he recalled as peculiar to Sumner. At first he could not see the man's face, and when he did he only noticed a slight resemblance to the official description of the wanted man. But very wisely he shadowed the man he believed to be Sumner until he entered 84 St. James Street, a sailor's lodging-house. The amateur detective then informed a passing police sergeant of his suspicions, and this officer entered the lodging house to interview the suspect. There the officer saw the man said to resemble Sumner standing by the fireplace of the dining-hall and felt convinced that, whoever the man might be, he had made no little effort to disguise himself. His black hair had been dyed to a golden colour, and over the right eye he was wearing a flesh coloured eyeshade. At a first glance he appeared only slightly to resemble Sumner.

The officer asked him for particulars about himself, and in answer to questions the man stated he was Albert King, a seaman trimmer, a native of Deansgate, Manchester. He could not produce his seaman's discharge book, which he stated had been stolen from him. He was wearing a pair of cheap glasses as well as the eyeshade, and over a lounge suit, which answered the description of the suit Sumner

was believed to be wearing when he disappeared on the 12th December, 1913, he was wearing a suit of brown overalls.

The police officer's suspicions being aroused, he asked the man why he was wearing an eyeshade when his eye appeared to be perfectly normal; then, whilst examining the man's eye, the officer noticed that the suspect's eyebrows were short and stubby and appeared to have been shaved. The man denied he was Sumner, *alias* Ball, but when told he would be detained pending further inquiries into his very unsatisfactory statement, he said, "I will admit it. I am Sumner; but I did not do the murder." He was conveyed to Bridewell and, when searched, the watch belonging to the deceased was found in his possession. When formally cautioned and charged with the wilful murder of Miss Catherine Christina Bradfield at the warehouse, 86 Oldhall Street, on the 10th December, 1913, he volunteered the following amazing and improbable statement:—

"I am not guilty. A chap with a brown moustache came into the place and threatened me what he would do if I did not do what he asked. This was whilst I stood at the foot of the stairs leading to the storeroom. He pointed a revolver at me, then, as I stood there, he struck Miss Bradfield twice over the head with a marline-spike just as she was stooping to turn off the gas. The man then said to me, 'I'll clear out of this and leave you to it.' As he said this he snatched up Miss Bradfield's satchel and, in doing so, her watch fell to the floor. He went out. I then picked up the watch, and realizing things looked black against me I called in Elltoft and with his assistance I trussed up the body, placed it on a handcart, and together we left the shop with it. The rest you know."

From this point the police had little difficulty in building up the case for the prosecution. It was definitely established that Sumner and Elltoft had not been instructed to work overtime on the night of the crime and that £7. os. 1d. was missing from the office. Miss Venables stated that Elltoft usually swept up the floor of the warehouse, whereas on the

morning after the crime Sumner was busily employed doing this, and it was proved that the rubbish and sweepings from the floor of the warehouse and office generally weighed about three to four pounds and was daily placed outside the premises for the dustmen to collect. Every present or previous employee of the firm, answering the description of the man alleged by Sumner to have committed the crime, could give a satisfactory account of his movements on the night in question. It was established that stains on the clothing of Sumner were of human blood. The clothing of Elltoft was not stained.

An interesting witness was a young Australian sailor living in the same lodging-house as Sumner. The story of an astonishing friendship that sprang up between this man and Sumner is so vivid that I take the liberty of quoting rather fully from his deposition:—

"On the morning of the 15th December, 1913, I saw Sumner in the kitchen of the lodging-house. He was wearing the flesh coloured eyeshade and the spectacles and the brown dungarees over his suit. After striking up a conversation with me he asked me where I hailed from. I told him Australia, after which he closely questioned me about conditions of life there and told me he would very much like to go out there with me. He told me he had been to sea for some time on steam trawlers and had just come home, and that since coming ashore he had lost his discharge book, which had been 'pinched' from him in a lodging-house. At his request I promised to help to get him to Australia and later accompanied him to a neighbouring public house, where he picked up a newspaper and drew my attention to the murder of Miss Bradfield. Sumner said it was a terrible crime and entered into conversation with the publican as to the whereabouts of George Sumner, saying, 'He must be smart if he gets away!' After further conversation on the subject we returned to the lodging-house, and then Sumner told me his name was Albert King, and that he was a native of Deansgate, Manchester. Between the 15th and the 20th

December, 1913, we were constantly in one another's company, openly walking about the main streets of Liverpool, frequently going to cinemas, and spending a good deal of time in public houses. Upon entering a public house Sumner would invariably stand drinks to all the men standing by and would always bring the conversation round to the subject of the murder. He never conveyed to me that he knew anything about it; indeed to impress me with the idea that he was a stranger to Liverpool he would frequently ask passers-by to direct us to certain places. He never suggested that a third person was responsible for the crime, and once when we were in a cinema and Sumner's photograph was flashed on the screen he turned to me and said, 'Well, I'm —, what will they show next?' During the time we were together he spent about 7s. each day on drinks and had other extravagances, so I was not surprised when he told me on the 20th December, 1913, that he was 'broke'."

Sumner and Elltoft were arraigned before Mr. Justice Aiken at the Liverpool Spring Assizes, 1914. Both were charged with the wilful murder of Miss Bradfield, and a second count of being an accessory after the fact was preferred against Elltoft. Mr. Gordon Hewart and Mr. Laski prosecuted for the Crown, Sumner was represented by Mr. Singleton and Mr. Tobin, and Mr. Lindon Riley and Mr. Rowan were briefed for Elltoft.

Elltoft pleaded not guilty, his defence being that he had no idea murder had been committed, and when called upon by Sumner to push the handcart to the canal, he did this as a matter of duty, believing the contents of the sack was rubbish. Sumner pleaded not guilty and elaborated his previous statement by drawing attention to the fact that in the Bradfields' office a trap-door gave access to a ladder which led to a cellar beneath the warehouse. He contended that on the night of the crime the murderer, intent upon robbery, had entered the cellar by the street door and, having robbed Miss Bradfield, would have made a successful escape but for Sumner's timely arrival on the scene of the crime.

Counsel for the Prosecution ably discredited the theory of the third man and pointed out that at 6.40 p.m. on the fatal evening both Sumner and Elltoft were alone with the deceased on the premises. At 7.45 p.m. they were seen to leave together pushing a handcart which, it was not disputed, contained the body of the unfortunate woman, who by this time had been murdered, not by two or three blows from a marline-spike, as suggested by Sumner, but by a number of vicious blows, the number of which it was impossible to state with certainty. It was clear that barely threequarters of an hour had elapsed between the time when Miss Venables left the prisoners and the deceased alone in the office and the time when the prisoners were seen to leave the premises with their grim burden. "During that time," suggested Mr. Tobin, "Miss Bradfield's clothing had been torn from her body. She had been murdered and she had been trussed up and roped up in such a short time that it was impossible to think all this could be the work of one man. How came the deceased's umbrella to be broken, and why was it placed in the sack along with the body? Because, being broken, it suggested that Miss Bradfield had defended herself against an attack of a grave criminal nature, more serious than the suggestion of theft."

The trial lasted for four days and resulted in Sumner being convicted of murder and sentenced to death. Elltoft was convicted as an accessory after the fact and sentenced to four years' penal servitude. Sumner did not appeal. Elltoft appealed but without success.

The case has many interesting issues. It shows how the police may encourage the public into taking a valuable active part in the apprehension of felons; indeed, in this case the public displayed interest and zeal not previously experienced in Liverpool. It illustrates the importance of possessing photographs of wanted persons and the advantage of bringing such photographs to the notice of the public through the medium of the cinema and the popular press.

The odds were set heavily against the murderer. On

the night of the crime he probably attempted to assault Miss Bradfield, and, being repulsed, decided on the spur of the moment to silence her for ever. He next took all the available money, either to make robbery appear to be the motive for Miss Bradfield's disappearance or to assist him in case he was obliged to fly. Assuming Elltoft did not witness the crime, the youth was posted at the door at Sumner's own request and had to be taken into confidence. At this juncture a shutter fell upon a passer-by, thus drawing his attention to trivial incidents. Later on, Sumner and Elltoft were seen with a loaded handcart on the canal banks, and by other witnesses were seen to tip the load into the canal. Then Fate decreed that a body, so heavily weighted with irons that it should have found its way out to sea and never again have seen the light of day, should foul a lock gate and be recovered within twenty-four hours of the offence. Finally, after disguising himself in a most able and original manner, Sumner was betrayed by his gait.

On the eve of his execution he confessed, and died fortified with the rites of Holy Church.

NOTES FROM THE FORCES

COMMON SENSE ON THE BEAT

A CONSTABLE in the Dorset Constabulary recently had good reason to congratulate himself on his astuteness in handling a man and woman whom he decided to arrest on suspicion for an offence committed in the jurisdiction of a neighbouring Force.

The story began in this way. About noon on a Saturday in August a perambulator, in which was an eight-weeks-old baby girl, was seen standing outside a shop in the road approaching the Central railway station in the town of "X". As time passed and no one came to take charge of it a shop-keeper examined the perambulator and found a note which read, "Please love me and care for me. Mummy has no job, no money and no one to help her now."

Accordingly baby came into the hands of the police. Her only visible means of identity was a bottle of dill-water bearing the label, "Boots the Chemists, Fowey." Inquiries were made there and led to the investigation of an empty furnished house in the neighbourhood recently tenanted by a man and woman from London, and vacated two days previously. They had been reticent people, and not given to discussing their domestic affairs with neighbours or the district nurse and midwife who had been called for a confinement during their stay, and there appeared to be no evidence of their present whereabouts.

Before 'fitting', a considerable quantity of letters had been burnt in the sitting-room grate. These charred remains were carefully preserved and transmitted to the laboratory of the University College of the South-West at Exeter, where Professor Britton, in charge of the Chemistry Department, with the aid of the ultra-violet light, soon furnished eight addresses of relatives and other correspondents of the couple who had occupied the house. Moreover, it transpired that the baby was illegitimate, this fact providing a clear motive for the abandonment of the child, and the burnt letters contained references to a wish on the part of the mother to get it adopted.

The investigation was now comparatively simple, and, armed with a telephone message bearing an address in the jurisdiction of his patrol, the constable knocked at the door, and found both Mr. and Mrs. B. at home. Quickly establishing their identity as the suspected couple, the constable's difficulty arose when first the man and then the woman sought excuses to "go upstairs" for purposes of toilet. Obeying the sound rule that once you have a prisoner he should not be allowed out of sight, the constable

declined to lose sight of them, and being convinced of the futility of endeavouring to evade arrest, they were soon at the police station. Returning to the house to make the usual search, the constable was rewarded by finding in an upstairs room a revolver and ammunition.

None of these facts were revealed to the Court, being inappropriate to the issue, and, in the manner of modern administration of justice, the prisoners were duly admonished, bound over, and advised to marry and provide a home for the child.

The case was very little removed from the commonplace. It merely illustrates the value of what Mr. Buchan calls the kingly quality of the good sense of the plain man. Had he lacked that essential quality, the Dorset constable, diligently carrying out his patrols, might have seen a tragic sequel to his call at the house on his beat to commence his inquiries.

A TELL-TALE SCREW-DRIVER

A RECENT case at Oxford affords a good example of how the laboratory can assist the detective and is one where, without the aid of the scientist, it is hardly likely that successful proceedings could have been taken.

The complainant was a common lodging-house keeper and kept a small general shop two doors away from the lodging-house. He and his wife occupied the front bedroom on the first floor at the lodging-house, and the door of the bedroom was secured by means of a padlock and hasp, the latter having only one screw and that on the outside of the door. By removing the screw the door could be opened.

In a cheap metal trunk in the bedroom the complainant kept £350 in £1 and 10s. notes, wrapped up in brown paper and hidden beneath some clothes. The trunk was painted brown and had a rather flimsy brass lock of the usual trunk type.

On the same floor there were two other bedrooms, each occupied by a lodger. On the day of the theft the wife of the complainant went to a neighbouring town in the early morning and the complainant himself looked after the shop. At intervals during the day he visited the house to see that his money was safe.

The two lodgers did not go to work but spent the morning in public-houses in the neighbourhood. At 12 noon the money was intact and in the early afternoon the lodgers returned to the house. One of them occupied a middle bedroom and went to bed. At 3.30 p.m. the complainant went to the house and, from the foot of the stairs, saw the second lodger stepping from the landing into his own bedroom, which was at the back of the house. The complainant went upstairs and, on reaching the door of the front bedroom, turned and noticed that the second lodger was kneeling by the side of the bed in the back bedroom. He was not wearing boots.

The complainant then noticed that the head of the screw holding the hasp on the door of the front bedroom was bright and had obviously been tampered with although the door was still secure. On entering the bedroom he found that the lock on the trunk had been forced and £174 was missing from the packet of money. He shouted and heard the lodger he had previously

noticed hurrying downstairs, still in his stockinged feet. The loser followed him, and the lodger went through the back scullery into an open yard and then went into the lavatory. The complainant followed him almost immediately and opened the door. The lodger was adjusting his braces and, on being told of the theft, followed the complainant back to the house. It is interesting here to observe that the back-yard was littered with broken-up timber and nails from a building being demolished in the neighbourhood, not a usual place to walk about without boots.

Two other lodgers had come into the house during this period and they sat in the kitchen where the second lodger joined them. The police were sent for and a sergeant and constable arrived shortly afterwards. Whilst the sergeant was interrogating the second lodger in the front sittingroom the occupier noticed that the door of a washing copper in the scullery had been disturbed, and, on going on his hands and knees, found the money underneath a shelf which was 5 inches from the floor. It was concealed from the view of anyone walking in the scullery but had the appearance of having been hurriedly thrown there.

The first lodger was found to be asleep in his bedroom and all of the lodgers were detained whilst further inquiries were made. All of them denied all knowledge of the theft, and although the fullest inquiries were made no other evidence was forthcoming.

The back bedroom was searched by the sergeant in the presence of the complainant, and in a trunk under the second lodger's bed there was found a screw-driver and other tools, together with clothing. The screw-driver, however, was on top of the clothing and just inside the case, whilst the other tools were beneath the clothing.

The trunk from which the money had been stolen was taken to the police station and carefully examined for finger impressions, but none could be found.

The lodgers were later released, the suspect on bail under Section 45 of the Criminal Justice Act, 1925.

The screw-driver was examined under the microscope and was found to have what appeared to be brass on the shank. It was sent, together with a sample of paint from the trunk, to the Police Laboratory at Nottingham for examination. In the meantime inquiries were continued, but no further evidence could be obtained.

The physicist at the laboratory examined the screw-driver and found on it, 1 centimetre from the tip, a minute speck of brown substance. The yellow metallic trace was 2.5 centimetres from the end, and this was subject to spectrographic analysis and found to be brass. The brown speck was also examined and tested, comparison being made with the sample of paint submitted.

It was found to resemble the paint from the trunk in the following respects: (1) the same colour under magnification; (2) the same state physically; (3) under spectrographic analysis it was found to contain iron and calcium, two of the principal constituents of the paint from the trunk.

On the trunk, beneath the catch of the lock, was found a small indentation, and when the point of the screw-driver was placed in this it was found that the position of the brass trace on the screw-driver shank coincided with the edge of the catch where, as indicated by bending and rubbing of the

metal, the forcing instrument had pressed. The brass on the screw-driver was well pressed in and this, together with its position, suggested that the screw-driver had been used to exert considerable pressure against a brass fulcrum.

The suspect stated that he had not used the screw-driver recently nor had he lent it to anyone else.

On this evidence he was charged with the theft and, although he was defended and pleaded not guilty, he was convicted and sentenced to four months' hard labour.

SMART WORK

At 12.20 p.m. on the 3rd July, 1935, Detective-Officer Shand was on duty in Bridge Street, Worksop, Notts, when he noticed a saloon motor-car containing three men whose appearance and actions aroused his suspicion. He kept the men under observation and saw them enter the 'Ship Inn', Worksop. The officer followed and overheard their conversation with the landlord and his wife, to whom they said that they were seamen and had purchased a carpet (produced) in the Persian Gulf and had smuggled it into this country. They then attempted to obtain £10 for it. The officer then apprehended the men, who turned out to be Cornelius Knight, C.R.O. 24486-32, Joseph Hibbs, C.R.O. 9864-33, and Harry Bridges, W.R.C. 4177-34, and charged them with attempting to obtain £10 by means of false pretences. At Worksop Petty Sessions on 4th July, 1935, Knight and Hibbs were each fined £10 and Bridges £5. At the hearing Detective-Officer Shand was complimented by the Bench for his conduct in this case.

At 8.25 p.m. on 16th August, 1935, P.C. 218 Buswell was on duty on Nottingham Road, Edwinstowe, Notts, when he saw two men (James Reid, aged 22, miner, of 17 George Terrace, Blackburn-by-Bathgate, Scotland, and John McPhail, aged 21, miner, of 9 George Terrace, Blackburn-by-Bathgate, Scotland) in possession of bicycles, a kit bag, and rucksack. The officer interrogated them as to their movements, searched them, and found in their possession a quantity of cigarettes and tobacco which they admitted having stolen by means of shopbreaking at Heworth, Yorks., N.R., between the 14th and 15th August, 1935. The men were handed over to the North Riding Police, and at York Petty Sessions on 23rd August, 1935, the charge was reduced to simple larceny and the prisoners were each fined 20s. At the hearing P.C. Buswell was commended by the Bench for his conduct in this case.

A MODEL POLICE STATION

OUR frontispiece in this number is that of the new City Police Headquarters at Leicester. This was opened by the Rt. Hon. Douglas H. Hacking, O.B.E., M.P., Parliamentary Under-Secretary of State, in September, 1934. The site had been chosen in 1930 and the plans drawn up during the summer of 1931. The whole of the building has been designed by the City Surveyor's Agricultural Department.

The building is a model police headquarters, and it may be of interest briefly to describe the planning. The left-hand side of the main entrance is given to the executive wing, which includes the parade room on the ground floor and the detective department on the first floor.

The right-hand side is devoted to the administrative wing, which includes inquiries, chief constable's suite, and committee room. Behind the administrative wing are the cells, charge office, lost property office, and exercising yard for prisoners.

The second floor is given up to recreation and reading, while on the top floor are the tank room and stores.

All the main front walls are 18 inches thick (at ground floor level) and are faced with brown Portland Whitbed stone, while the walls at the back and in the yards are faced with a silver-grey hand-made brick of Leicestershire origin. Fire-resisting material is used throughout, the floors are reinforced concrete on the *in situ* trough principle and partitions of hollow bricks.

No electric light, bell, or telephone conduits have been allowed to show on the surface of any walls or ceilings, all conduit tubes being bedded in the screed under the floor finishings, with inspection boxes at required intervals.

The cell walls are constructed of 14 in. and 9 in. brickwork in cement. Silver-grey facings to exterior and white glazed bricks to the interior. Reinforced concrete floors and roofs. The floors are finished in granolithic paving and carborundum. Ventilation is by means of an inlet, with hit and miss grating behind the heating pipes, all worked from outside by the warder, and extraction is by means of a duct constructed in the roof connected to each cell and w.c., and also to a fan chamber; a separate system being used for male and female blocks.

A special signalling system has been installed by which means any vehicle can be summoned by pressing a button in the four chief officials' offices; these buttons ring a bell in the garage and automatically switch on a coloured light indicating by different colours which vehicle is required. Another system of signals is incorporated on the same lines for summoning any of the chief officials from any spot in the building, the switching being operated by the telephone operator in his room on the first floor.

The bell installation in the cells is by means of a button on the floor in each cell worked by pressure of the foot. This works an indicator in the warder's or matron's room as the case may be. Improper use is checked by the warder with a switch in his room.

National telephones are run to every office in the building, all connected to the operator on the first floor, forming a private exchange.

Arrangements are made for all outside police boxes to be in communication with these headquarters direct.

Special electrical apparatus has been arranged for in the studio for the obtaining of photos, finger-prints, and all necessary information of prisoners and suspects.

The building is equipped throughout with steel furniture, counters, and filing systems, with the exception of the committee room and the Chief Constable's private office, where it is of Austrian oak to match the panelling.

All main offices have "Vita" glass fitted to the windows.

REIGATE POLICE AIRCRAFT SECTION

THE Chief Constable of Reigate, Mr. W. H. Beacher, has lately formed an aircraft section of the Reigate Police Force. It consists of twelve first-class pilots who have been sworn in as special constables. There are seven aeroplanes and one gyroplane at the section's disposal.

All of the pilots are members of the Redhill Flying Club. Each of them is pledged to take any urgent call, by day or night. The value of such an auxiliary force is obvious, particularly in woody country such as Surrey. The section have already carried out practices, such as the duties of directing traffic during congested periods and of helping in man-hunts.

This 'flying squad' reinforces the mobile police squad, which was described in our pages in a recent article.¹

THE COLONIAL POLICE

THE following appointments are announced by the Colonial Office:—

ADAMS, C. O. (Third Class Inspector of Constabulary, Jamaica)	Assistant Commissioner of Police, Nigeria.
COCHRANE, Captain B. W. D. (Assistant Superintendent of Police)	Superintendent of Police, Kenya.
COLLINS, W. O. H. (Sub-Inspector of Police, British Guiana)	Assistant Superintendent of Police, Tanganyika.
DAWES, C. P.	Sub-Inspector of Police, Leeward Islands.
HALSTEAD, H.	Sub-Inspector of Constabulary, British Guiana.
HODGE, J. E. (Sub-Inspector of Constabulary, Jamaica)	Assistant Commissioner of Police, Nigeria.
MAYDON, G. P. (Sub-Inspector of Police)	Inspector of Police, Leeward Islands.
O'RORKE, M. S. (Assistant Superintendent of Police)	District Superintendent of Police, Palestine.
PARKER, Captain M. B. (Inspector of Police, Barbados)	Inspector of Police, Bermuda.
SYER, W. G. (Police Constable, Gibraltar)	Sub-Inspector of Constabulary, Jamaica.
WOOL-LEWIS, Lieut. C. E.	Assistant Commissioner of Police, Sierra Leone.

¹ Vol. VII, No. 2, p. 183.

QUESTIONS AND ANSWERS

POLICE AT THE POLLING STATION

THE Deputy Acting Returning Officer in a Borough makes the usual application for a constable at each polling station. Constables and their officers make the necessary declaration of secrecy, and are instructed to perform duty at the stations from the commencement to the close of the poll. Each constable is relieved by another for refreshment and during the day one or more visits of supervision to the constables are made by an officer. Each of these men has also made the usual declaration. It has been suggested that a constable is solely under the supervision of the presiding officer and all instructions as to his duty and hours for refreshment are a matter for that officer.

My view is that the constable carries out only lawful orders of the presiding officer as in Section 9 of the Ballot Act, 1872, and that the constable is there to maintain and aid in maintaining the secrecy of the ballot and that the presiding officer has no legal power to exclude the constable on duty from the polling station. In fact, "He is there fulfilling his duty as a public servant and an officer of the Crown sworn to preserve the peace by day and by night, to prevent robberies and other felonies and misdemeanours and to apprehend offenders against the peace" (Mr. Justice McCauley in *Fisher v. Oldham Corporation*).

Questions

1. Is there statutory authority for the suggestion that a constable is solely under the jurisdiction of a presiding officer during polling hours (notwithstanding police regulations)?
2. That the presiding officer can dispense with the constable's services during any period of the polling although the constable is on duty there on instructions and at the request of the returning officer?
3. That the presiding officer can refuse to allow officers of police to "supervise" constables on duty at the polling station?
4. That the question of relief for refreshments is a matter for the presiding officer?
5. Is it part of a policeman's duty to see that the presiding officer as well as all others maintains and aids in maintaining the secrecy of the ballot?

THISTLE.

Answers

1. The answer is in the negative.
2. Under 6 and 7 Vict. c. 18, S. 90 it is the duty of the returning officer to secure the attendance of sufficient constables at each booth. Section 86 rather suggests that the primary object is that personation may be dealt with, and with reference to that, the returning officer may order the constable to take a supposed offender into custody. This seems the only case where the returning officer can exercise authority over a constable, but this is only

analogous to a Justice of the Peace issuing a warrant of arrest. Such a power gives him no right to control or to exercise discipline with reference to any constable. It seems that the returning officer cannot properly dispense with the attendance of a constable, as a case of personation may crop up at any moment. If, however, he should be so rash as to dispense with police attendance, he would incur serious responsibility, if in their absence a breach of the peace or other disorder occurred.

Apart from the special necessity of the attendance of police, it is most prudent of a returning officer to secure the attendance of adequate police to preserve good order, upon so important an occasion as an election, but he has no further right to control the police than any private individual who may apply for police protection.

3. He has no right so to refuse.
4. Emphatically, not.
5. Yes, in the same way that he must take cognizance of any offence that may be committed in his presence.

OUR CONTEMPORARIES

The Analyst, August, 1935. T. E. Wallis (p. 520) describes a simple counting-field finder for use with a microscope which has no mechanical stage; the device can be drawn quite easily on a card. B. Mukhopadhyaya and K. K. Tampy (Madras) (p. 529) describe a method of estimating the various pulp constituents of paper, which might be very useful in determining the identity of various papers.

September, 1935. A review of Technical Paper No. 16 of the Division of Forest Products under the Australian Council for Scientific and Industrial Research (p. 616) gives the outlines of a key for the identification of Australian woods, which might be applied usefully in police laboratory work for the identification of small fragments of timber, if the key can be adapted to British woods.

October, 1935. An interesting murder case tried at the West Riding Assizes in December, 1934, is mentioned in a review of the annual report of the City Analyst of Leeds (p. 686). "Certain powders were analysed in connexion with the case, one of them being a face powder contained in a 'Phul-Nana' powder box found in the prisoner's possession and identified as the dead woman's property by the shape of a tear on the lid. The defence having submitted that the box and powder belonged to the prisoner's wife, who stated that she had mixed some white Yardley compact with the 'Phul-Nana' powder in her box, evidence was given to the effect that the white lumps in the box were not those of another face powder, but consisted of boric acid, which constituted 85 per cent of the mixture. Neither of the face powders mentioned contains boric acid."

The November issue (vol. 60, No. 716) contains an article on the Determination of Mercury in Viscera. The method here advocated, and described in detail, relies on the volatility of mercury chloride, and is especially valuable when other heavy metals are present.

Revue Internationale de Criminalistique, 1935, No. 2. Henri Stahl (Roumania) (p. 96) describes an interesting document case involving the signature of a blind person and discusses blind persons' writing in general. The following general conclusions may be noted:—

- (1) A pencil is preferred by blind writers, on account of the difficulty in dipping the pen in the inkpot, the fear of taking too much ink, or of the ink running dry in the pen and the fear of smudges.
- (2) A ruler may be used to regulate the base line of the writing, but the tops of the letters will show great variation.
- (3) The writing will show the personal characteristics, but will also show hesitation.
- (4) In a long word, the dots on the i's and the crossing of the t's will be misplaced, although they may be properly placed in a short one.
- (5) The spacing of the words is usually very irregular.

(6) If ink is used, its distribution will usually betray the lack of sight. Sometimes the pen merely scratches the paper and leaves no ink mark, owing to lack of ink in the nib, while in other places the ink will make blots owing to excess.

On p. 117 there is a description of certain pathological conditions which may cause disappearance of typical finger-print ridges, but these appear to act only by causing destruction of the upper and underlying tissues and are thus of little importance, since they can be seen readily.

Journal of Criminal Law and Criminology (Chicago), vol. xxvi, No. 2, July, 1935. This contains articles by George H. Brereton on Police Training, discussing the problem from an American standpoint, and an article on the Polygraph Lie-detector describing a case where it was admitted as evidence in court, as a result of an agreement and stipulation entered into between prosecution and defence.

Vol. xxvi, No. 3, September, 1935. Mosier and Hames give an account of the use of scopolamine, a narcotic, for the identification of an amnesia victim, who claimed to be unable to remember his name or any other facts about himself. Certain useful information was obtained, and the writers are of the opinion that this procedure should be a subject for further study. A similar subject is dealt with in a review of an article in "Criminal Confessions under Narcosis", using sodium amytal.

Jamaica. We welcome the appearance of a new journal devoted to the interests of the Jamaican Police Force. The contents-bill indicates the variety of the fare provided, as may be seen from the following extracts: Police and the Law, Birds and Fishes, Crime with a Smile, Stewart the Dude, Notes *re* Recent Cases. The journal is well illustrated.

Canada. The Report of the Royal Canadian Mounted Police for the year ended 31st March, 1935, makes most interesting reading, not only on account of the very interesting cases where scientific evidence has been used, but also on account of the extraordinary distances that have to be travelled by some of the officers in tracing their fugitives. In Ontario scientific tests are applied to race-horses to detect doping by means of narcotic drugs. The case described on pp. 50 and 51 shows identification by means of scraps of paper, wool fibres, steel filings, and slivers of cherry-wood. In the case mentioned on p. 60 of murder in the North-West Territory, the occurrence was first reported in August, 1932, investigated by travelling by dog teams and air in March and April, 1933, when the ground was suitable for travelling, committed for trial in May, 1933, delayed to discover the remains of the body, and finally concluded in August, 1934, and owed much of its success to the use of wireless and aeroplanes. In another case the "patrol took thirty-seven days and some 700 miles were covered. Generally speaking it was a very difficult patrol owing to there being very little daylight. The weather as 55 or 60 degrees below zero were met with. . . . Geographical features of the country traversed have been furnished to the Department of the Interior for their information and record, as details of the topography of the area patrolled on their files were very meagre". Somewhat different from a patrol in England.

Off-Duty, vol. ix, No. 12 (p. 181), is able to record the following:—We were amazingly lucky to be able to invite to the Burma-Ceylon Boxing Competition Mr. Gene Tunney, ex-heavy-weight boxing champion of the world, who retired undefeated in 1926. He was introduced from the ring to the audience by the Inspector-General. Later, at the request of His Excellency the Governor, Mr. Gene Tunney presented the Challenge Cup to Mr. Jenkins, the Captain of the Ceylon team, and the cups to the individual winners and shook hands with each of them. In doing so he made each winner doubly proud of his achievement. He then publicly announced that he would give a Challenge Cup for the Burma-Ceylon contests.

His letter which gives the conditions attached to the winning of his Cup is published below.

GALLE FACE HOTEL,
COLOMBO.

11th March, 1935.

DEAR SIR HERBERT,—It gives me great pleasure to present to you for the Police of Ceylon and of Burma a perpetual Challenge Cup to be awarded annually to the best boxer and sportsman who participates in the boxing competition on behalf of the Police of Ceylon or Burma.

The Cup which I shall order will be inscribed in accordance with our conversation to-day, and sent to you upon my return to the United States. The name of the winner is to be inscribed and dated each year and the trophy kept at Police Headquarters in either Ceylon or Burma according to the nationality of the winner.

Good sportsmanship knows no boundaries of race, religion, or nationality, and should tend to unite in friendship all nations, creeds, and races. That this trophy may tend to increase friendly feeling between Ceylon, Burma, and the United States of America as well as to stimulate interest in good boxing and sportsmanship is my sincere hope.

Permit me to express once more my appreciation of your courtesies and of my good fortune in having been in Colombo for the boxing contests on 9th March, 1935.

Yours sincerely,
GENE TUNNEY.

SIR HERBERT L. DOWBIGGIN, C.M.G.,
Inspector-General of Police,
Colombo.

REVIEWS

It has been decided to discontinue the regular list of reviews which have hitherto appeared in each number of THE POLICE JOURNAL. In the October-December number, however, we hope to include notices of the leading books which have been published during the year relating to police work.

CORRESPONDENCE

CRIME INVESTIGATION EQUIPMENT

To the Editor of THE POLICE JOURNAL.

SIR,

It may interest your readers to read the following description of a hand-case for criminal investigation, which I have made.

The case itself measures 17 x 22 x 6 inches, and was designed and constructed by me under authority of Mr. Henry B. Lewis, Chief of Police, as an aid to the criminal investigator at the scene of the crime in the discovery and preservation of important evidence. It can be properly termed a portable laboratory, and contains the following pieces of apparatus and equipment, each fitted into its particular compartment or position in the lined case:—

1. Precision 6 in. rule.
2. Inside calipers.
3. Outside calipers.
4. Small machine hammer.
5. Glass cutter.
6. Physician's scalpel.
7. Heavy duty pliers and wire cutters.
8. Long nosed pliers.
9. Carpenter's 6 in. rule.
10. Set of skeleton keys and lock picks.
11. Combination screw-driver (five in one).
12. Tweezers.
13. Ridge counter.
14. Flat file.
15. Triangle file.
16. Large scissors.
17. Small scissors.
18. Pencils.
19. Paper clips.
20. Paper pins.
21. Drawing-pins.
22. Rubber bands.
23. Blue.

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24. Small bottle of benzine.
 25. 1 jar black developing powder (latent prints).
 26. 1 „ grey „ „ „
 27. 1 „ white „ „ „
 28. 3 „ assorted „ „ „
 29. Fine camel hair brushes.
 30. Test tubes.
 31. Assorted chemicals for ordinary tests such as for presence of blood, etc.
 32. Hermetically sealed jars for preservation of hairs, dusts, fibres, and similar types of evidence.
 33. Large magnifying glass.
 34. Roll of adhesive tape.
 35. Tape line for measuring distances.
 36. Small triangle and T square for making crime scene drawings.
 37. Drawing paper.
 38. Razor blade holder.
 39. Two latent finger-print developing powder atomizers.
 40. Small precision 6 ft. tape line.
 41. Finger-print magnifying glass.
 42. Microscope slides and cover glasses.
 43. Canada Balsam.
 44. Small spool fine wire.
 45. Equipment for obtaining finger-prints of the corpse.
 46. Blank finger-print cards.
 47. Flashlight.
 48. Envelopes.
 49. Electric extension cord and light, with condensing lens.
 50. Compartment for holding miscellaneous items, such as clean rags, etc.
- The entire case fully equipped weighs but 19 pounds, and is easily carried to any point. It is taken to the scene of every major investigation, such as homicide, burglary, robbery, automobile theft, and similar crimes, and is daily proving its worth as an indispensable piece of equipment. Needless to say, a complete line of camera and photographic equipment is available in the identification bureau to supplement the investigation kit.

V. A. LEONARD (Superintendent of Identification
Police Department).

CITY OF FORT WORTH,
TEXAS.

The
POLICE JOURNAL



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ROAD TRAFFIC ACT (DRIVING LICENCE) REGULATIONS, 1934

To the Editor of THE POLICE JOURNAL.

SIR,

I submit for your consideration my opinion of a loophole in the above Regulations whereby drivers of motor-cycles are eligible to drive a motor-car without undergoing a test. My point is: a person who held a driving licence before 1st April, 1934, does not require to undergo a test, but that person may have been driving a motor-cycle only and he can, without committing an offence, learn to drive a motor-car without having an experienced driver of motor-cars with him and without carrying "L" plates attached to his car.

Similarly, a person applying for a driving licence after 1st April, 1934, is required to undergo a test, but if he is a motor-cyclist he naturally passes his test as the driver of a motor-cycle, and is then entitled to hold a driving licence which covers the driving of a motor vehicle of any class or description if he is over 21 years of age, and if between 17 and 21 he is licensed to drive light motor-cars and motor-cycles only, although tested on a motor-cycle.

In my opinion the driving of a motor-cycle is very different to the driving of a motor-car, and a person, even though he may have driven a motor-cycle for years, can be a danger on the road when learning to drive a motor-car without an experienced driver to help him.

I know of several persons who have been tested on motor-cycles and have been issued with licences to drive any class of vehicle, and in my opinion a person should be issued with a licence to drive the class of vehicle on which he was tested.

H. L. TREDREE, P.C. 53.

THE POLICE JOURNAL

*A Quarterly Review for the Police Forces
of the Empire*

ISSUED UNDER OFFICIAL PATRONAGE



NOTICE TO CONTRIBUTORS

THE POLICE JOURNAL is published on the first day of January, April, July, and October.

The Editor will be happy to consider articles suitable for publication in THE POLICE JOURNAL. Contributions should be typewritten (double spacing) and *must* bear the name and address of the sender on the first page. Articles can be signed with a *nom de plume* if desired. All contributions should be addressed to "The Editor of THE POLICE JOURNAL, 69 Great Russell Street, London, W.C. 1." A covering letter is desirable.

Unaccepted contributions will be returned if accompanied by an addressed envelope and stamps. All reasonable care is taken of MSS., photographs and other material submitted; but the Editor cannot hold himself responsible for any loss or damage.

Publishers and Distributing Agents:

PHILIP ALLAN & CO., LTD.

69 GREAT RUSSELL STREET, LONDON, W.C. 1

Telegrams and Cables—"AQUALLICOR, WESTCENT., LONDON"
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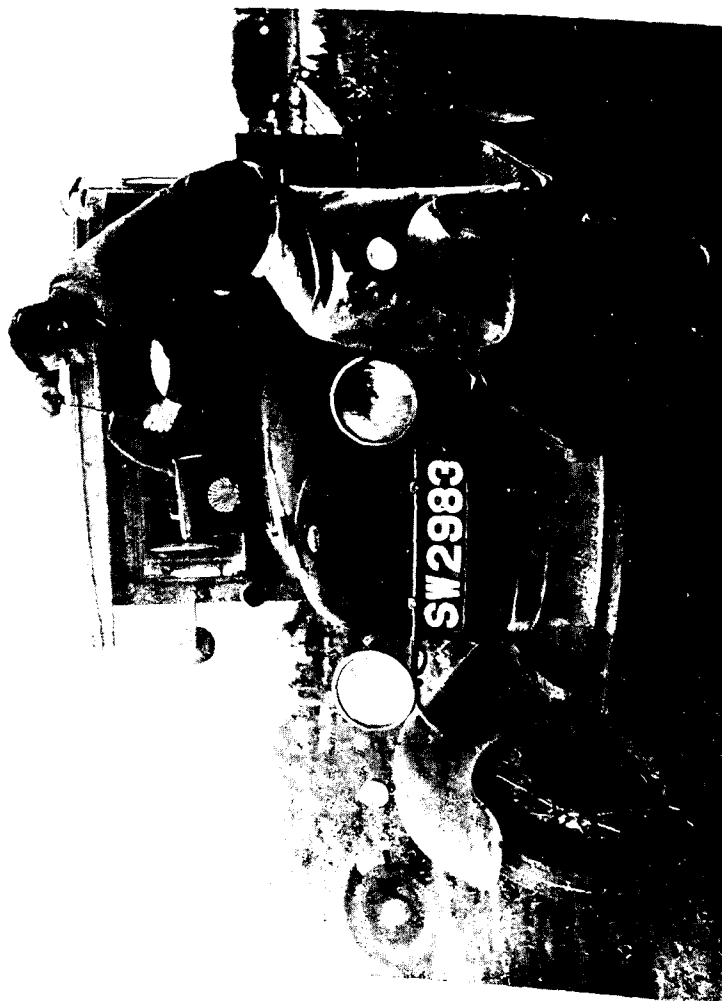
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"A SOMEWHAT UNUSUAL EXHIBITION ON THE PUBLIC HIGHWAY"
(see page 231)

(face p. 129)

THE POLICE JOURNAL

VOL. IX. No. 2

APRIL-JUNE, 1936

Notes on Recent Crime

TWICE more has the credulity of human nature been shown in the last few months. In the first instance, three adventurers, namely a Major Impey, a Mrs. Bamberger, and a man called Rogers, were sentenced to substantial terms at the Old Bailey for frauds involving such a sum as £40,000, at least. The unfortunate victim in this case was an aged widow, getting on towards 90 years of age, who lived in London, and whose association with the Major began because her late husband had also been "in the service". The Major so wormed his way into the old lady's confidence that not only did he live in her house but even received from time to time sums in the neighbourhood of twenty pounds "as pocket money", as she put it.

The old lady was more striking in appearance than those who exploited her, wearing unusual clothes, and with a slight Romany look about her. She was too ill when the trial came on to travel to the Old Bailey to give evidence there, and to the last she never seemed to realize how the Major had swindled her, for she persisted that, apart from the actual fraud, he had always treated her properly.

Mrs Bamberger was of striking appearance too, but in the more obvious sense of the term, and had previously been convicted of perjury. The stories that the old lady was told by the three persons grew more astounding as the trial continued. The crux of the matter, as usual in a case of this class, was a lamentable shortage of capital. Mrs. Bamberger was said to be divorcing her husband in America, and huge sums of money were said to be held there in trust for

her, the liberation of which depended on there being sufficient funds at once to meet the demands of the lawyers, who were striving for the release of the trust money. Alas, the old lady paid up!

The story had all those embellishments so dear to the heart of the Press, with the introduction into the tale of a kidnapping, a chase at sea ending in a shipwreck, a telegram in code, and finally an Alsatian dog keeping the police at bay when they came to arrest its mistress—Mrs. Bamberger.

In the second instance, last February, a couple both pleaded guilty at the Devon Assizes to obtaining about £44,000 by false pretences. Of this sum, about £14,000 was obtained from the people around Dawlish, and about £30,000 from a lady at Brighton. The couple, Mr. and Mrs. Hardin, were each sentenced by Mr. Justice Charles to five years' penal servitude. Both Mr. and Mrs. Hardin had been twice previously convicted together of false pretences. So often, it would seem, a hitherto honest person gets caught the very first time in an attempt to obtain money dishonestly. Yet this couple, impressing the whole neighbourhood with an appearance of wealth, and tales of good breeding, imposed upon South Devon over a period of years.

The woman actually had been born in Nottingham, and had married the man some years ago. She posed as being "the last of the Romanoffs", a descendant of the late Czar of Russia, and even produced a bogus marriage certificate in support of her claim. She claimed, moreover, to have estates in both Greece and at Lulworth in Dorset, and further stated that expensive and protracted litigation was being maintained by her to prove her titles to these estates which were in dispute. Money was lent her wholesale, and in fact one man even went so far as to borrow money, that he might hand her the more. Exorbitant rates of interest were promised, and of course were not forthcoming, until finally the police were informed, and a complete exposure resulted. "Gather ye rosebuds while ye may" was one of the mottoes

in the large house the couple occupied in the neighbourhood. They certainly seemed to have lived up to it.

The curious feature of the whole case was the appearance of the couple themselves. When all due allowances are made for an appearance in the dock after a period in custody, yet the fact remains that the couple certainly did not look the part. True, respectability predominated, but there was lacking that air of distinction, that bearing, which an observer would naturally have expected at any rate from the woman, who laid claim to such a background.

When Arthur Charles Mortimer was convicted of murder before Mr. Justice Finlay at the Winchester Assizes last November, it seems that "the man with the glaring eyes" has been at last brought to book. He was a lance-corporal, married, and admittedly an epileptic subject. Terror seems to have been caused by him over a district of Southern England. The actual charge of murder centred round the killing of a young girl cyclist by a car which had been stolen and which was being driven by the accused. The means of killing were unusual, and the case became known as the "murder by motor-car" crime.

Equally interesting, too, was the admission of certain evidence, objected to by the defence, which showed at the trial that two other women cyclists had been knocked over by the car driven by the accused upon a night previous, and that they had been afterwards assaulted, though their injuries did not prove fatal. Further, that on the evening of the day of the murder, yet another woman cyclist had been knocked over in the same way by the accused, and her bag had been stolen. The bag was found in the car upon the arrest of the accused, after a desperate pursuit by the police through the streets of Guildford.

An ignition key, fitting the first stolen car, was found upon Mortimer. There were also some fair hairs found on that car, which was damaged. The dead girl was a light

blonde. This evidence of conduct by the accused, previous and subsequent to the murder, was admitted to prove system or intent, and to negative the defence of accident.

From the medical evidence at the trial, and indeed from the very facts themselves, it would seem clear that the accused was the possessor of sadistic tendencies, though the mode he chose of gratifying such tendencies was somewhat unusual. The murder would appear to fall under what has been called the "murder for the lust of killing" variety. The sentence was commuted.

The trial of Lord de Clifford in the House of Lords for "motor manslaughter" is likely to have one important result, and it raised at least one point of interest. The probable result is an early abolition of the trial of a peer upon a charge of felony by his peers in the House of Lords. Thus a lot of expense will be saved. Incidentally, a peer is not entitled to waive his right to such a trial; a good many people seem to think otherwise. Upon a charge of misdemeanour, a peer can always be tried in the ordinary way before a common jury. A recent instance of this was the trial of the Duke of Manchester for fraud at the Old Bailey. His conviction was quashed by the Court of Criminal Appeal.

The point of interest was as follows. At the close of the Crown case Sir Henry Curtis-Bennett, K.C., on behalf of Lord de Clifford, and without calling any evidence for the defence, submitted that there was no case to answer. For the purpose of his submission Sir Henry strongly relied upon a statement to the Police made by Lord de Clifford very soon after the accident as evidence of the facts therein contained. The statement explained how Lord de Clifford came to be for a time upon his wrong side of the road and contradicted the evidence for the Crown as to the position of the other car involved in the collision. A police officer gave evidence of it at the trial.

This reliance was queried by the Lord High Steward (Viscount Hailsham) who presided. The Attorney-General

(Sir Thomas Inskip, K.C.) for the Crown treated the statement as showing no more than that Lord de Clifford had conducted himself in a manner consistent with the evidence which he would later give upon oath and which the House would either accept or reject. The submission was held to be well founded, and Lord de Clifford was acquitted.

Inferentially, therefore, although the point was not specifically dealt with, Sir Henry's contention was accepted by the House albeit the statement had not been reaffirmed upon oath. Statements made by accused persons, either to the police or indeed to anyone else, after an occurrence likely to be the subject of a criminal charge, are daily relied upon in the Courts, when they are adverse to the accused's interests, as some evidence of his guilt. Surely therefore, when such statements tell in his favour, they should also be relied upon with equal confidence. If the accused disputes the statement and is going to tell a story upon oath differing from it, this of course will be foreshadowed by the cross-examination of the witnesses testifying to the statement. Similarly, when the statement is going to be relied upon by the defence, that also will appear in the same way, as in the case under review.

Machines which invite the public to put a penny, or a coin of greater value, into the slot in order to carry out a game which the machine controls, are a familiar feature at many seaside resorts. If the competitor is fortunate, he will either get his money back or win a prize: if he fails, he loses his coin and perhaps tries again.

Are these machines genuine games of skill, or does their use contravene the Betting Act, 1853, or the Gaming Houses Act, 1854? In a recent case heard before the Felixstowe Police Court this question was argued at considerable length. In Butlin's Amusement Park at Felixstowe a number of these machines were standing and a police raid upon them made in execution of a warrant under the Gaming Act, 1845, resulted in summonses being issued against the alleged

owners of the Amusement Park under sections 1 and 3 of the Betting Act, 1853, and section 4 of the Gaming Houses Act, 1854; against the manager of the Park under section 4 of the Gaming Act, 1845, and section 4 of the Gaming Houses Act, 1854; and also against ten other persons, the owners of the machines, under the last-mentioned Acts and sections.

Proceedings against six persons who were playing with the machines and who were arrested when the warrant was executed were not proceeded with.

The cases were heard at the Police Court at Felixstowe on the 2nd September, 1935, and the defendants were convicted.

Appeals against the convictions were heard on the 1st November, 1935, by the Appeal Committee of the East Suffolk Quarter Sessions. The question before the Court, raised by the appellants, was whether the use of the machines constituted gaming or whether their use was subject to such a large amount of skill that they were outside the purview of the Gaming Acts. It is to be noted that the owners of the machines offered prizes in each case, but certain machines were so adjusted as to take a percentage of the money used in any case, and it was claimed by the appellants that a very large element of skill was involved. The Court decided, however, that the appeal should be dismissed against the owners of the machines, but allowed the appeals of Butlin's Auto Car Company, Limited, on the ground that sufficient evidence of the occupation by the Company—which was registered as a private one—was not available; and of the manager presumably on the ground that he did not know what was going on.

Nine cases of a similar nature were brought before the Lowestoft Justices on the 19th September, 1935, and were in respect of somewhat similar machines used at holiday camps. In all these cases the Bench convicted and ordered the destruction of the machines. There was no appeal.

The question of gaming by machines is a matter of some importance to the police, and we deal with it further in 'The Police and the Law' (page 148).

Recent Judicial Decisions

SENTENCES OF PREVENTIVE DETENTION—CHARGING A PRISONER AFTER RELEASE WITH OFFENCES COMMITTED PRIOR TO SENTENCE

R. v. Silverman

(Reported on page 101 of 25 Criminal Appeal Reports)

THIS was an appeal by an habitual criminal who had been sentenced to three years' penal servitude and five years preventive detention.

In the course of his judgment the Lord Chief Justice criticized once again the practice of charging a prisoner after his release with offences committed prior to the commencement of his term of imprisonment.

Later in his judgment he pointed out that a sentence of preventive detention need not automatically follow because a man is convicted as an habitual criminal. He said: "the law which provides for the conviction of a person as an habitual criminal in a proper case does not render it necessary that the Court should after such a conviction pass a sentence of preventive detention. The matter is one left to the discretion of the Judge, having regard to all the circumstances of the case."

In the result the sentence of penal servitude and the finding that the appellant was an habitual criminal was confirmed and the sentence of preventive detention was quashed.

CROSS-EXAMINATION OF PRISONERS—DUTY OF COUNSEL FOR THE PROSECUTION

In three recent cases the Court of Criminal Appeal quashed convictions as a result of unfairness in the prosecution of prisoners.

*R. v. Sugarman**(Reported on page 109 of 25 Criminal Appeal Reports)*

The prisoner appealed against a conviction for receiving stolen property. The appeal was allowed, it being held that cross-examination suggesting the receiving of other portions of stolen property, of which there was no evidence, was inadmissible.

In the course of his judgment the Lord Chief Justice said :—

“ It seems impossible to escape the conclusion that the cross-examination might well convey to the jury the suggestion that the appellant had received stolen property other than that which was the subject of the charge and concerning the receipt of which the prosecution had no evidence, and indeed that he was a man who was in the habit of having in his possession property which he knew to be stolen. No impression could have been more injurious to the appellant, and, when one looks at the words used in the judgment of the House of Lords in *Maxwell* (24 Cr. App. R. 152), it seems to me that questions of that kind, asked in that context, come clearly within the mischief of the questions which in that case were held to be improper. They were not only likely to lead the minds of the jury astray into a false issue whether the appellant had feloniously received other stolen property, but were well calculated to lead the jury into thinking that it was probable that the appellant had committed the offence with which he was charged as being just the sort of man likely to be guilty of that kind of offence.”

And later :—

“ As the Lord Chancellor (Lord Sankey) said in *Maxwell* (24 Cr. App. R. 152 at p. 176), ‘ It must be remembered that the whole policy of English criminal law has been to see that as against the prisoner every rule in his favour is observed and that no rule is broken so as to prejudice the chance of the jury fairly trying the true issues. The sanction for the

observance of the rules of evidence in criminal cases is that, if they are broken in any case, the conviction may be quashed.’

“ The Court has no alternative in this case, whatever its merits or demerits otherwise may be, but to allow the appeal and quash the conviction.”

*R. v. Wadey**(Reported on page 105 of 25 Criminal Appeal Reports)*

The appeal against a conviction for indecent assault was allowed owing to inadmissible cross-examination with regard to previous complaints by other girls of similar conduct.

Once again the law as laid down in the House of Lords in *R. v. Maxwell* was quoted and, in his judgment, the Lord Chief Justice commented severely on what he described as a deplorable trial and added : “ Counsel entrusted with the public task of prosecuting accused persons should realize that one of their primary duties is to be absolutely fair.”

*R. v. Peckham**(Reported on page 125 of 25 Criminal Appeal Reports)*

In this case the appellant was convicted of stealing a number of domestic fowls and sentenced to eighteen months’ hard labour. His appeal was allowed on two grounds :—

1. Because he had been unnecessarily charged on two indictments and when tried on one of these indictments evidence which was only relevant to the other was improperly admitted, and

2. In the course of the trial a witness for the prosecution inadvertently let it out that he had been in the prisoner’s house whilst the latter was away in prison. The appellant’s counsel thereupon asked that the trial should be begun again with a new jury but his petition was overruled.

The Court of Criminal Appeal held that : “ where a statement with regard to a prisoner’s previous record is inadvertently made from the witness-box to his prejudice,

and his counsel applies for the trial to be begun again before another jury, the Court ought to begin the trial again."

The Judges also commented strongly on the necessity for Counsel for the prosecution always acquainting themselves with the contents of the indictment by seeing either the actual indictment or a copy of it before attending the case.

COMMITTAL TO ASSIZES FOR COUNTY OTHER THAN COUNTY WHERE THE CRIME IS COMMITTED

R. v. Murray

(Reported on page 129 of 25 Criminal Appeal Reports)

The appellant was convicted at Northamptonshire Assizes of indecent assault. He appealed upon the ground that he had been wrongly committed to the Northamptonshire Assizes. The crime was committed in Bedfordshire, on 11th October, 1935, which was the Commission Day for the Bedfordshire Autumn Assizes. It was contended that the prisoner ought to have been sent for trial to these Assizes.

The Court of Criminal Appeal upheld the decision of the Judge who tried the case, which was that the prisoner had properly been committed to Northamptonshire Assizes, which were held on 17th October, 1935.

The case turned upon the meaning of Section 14 (1) of the Criminal Justices Act, 1925, which reads as follows:—

The Justices before whom any person is charged with an indictable offence, may, instead of committing him to be tried at the assizes or quarter sessions for a place to which but for this section he might have been committed, commit him to be tried at the assizes for some other place or (if the offence is within the jurisdiction of a court of quarter sessions) at the quarter sessions for some other place if it appears to them, having regard to the time when and the place where the last-mentioned assizes or quarter sessions are to be held, to be more convenient to commit the accused person to those assizes or quarter sessions with a view either to expediting his trial or saving expense:—

Provided that the power given by this subsection shall not be exercised:—

(a) Unless the examining Justices are satisfied at the date of the committal that the next assizes or quarter sessions to which but for this section he might have been committed will not be held within one month from that date; or

(b) In any case in which the accused satisfies the examining Justices that he would, if the power were exercised, suffer hardship.

The Court of Criminal Appeal held that, in the proviso of Section 14: "the word 'next' plainly means 'next after the date of committal'."

"Applying that construction in the present case, the next assizes for the county of Bedford were the assizes commencing next after 11th October, 1935, that is to say the Winter Assizes which would be held in January, 1936. The Justices were, therefore, entitled to commit the accused person to Northamptonshire Assizes, it being plainly more convenient that the trial should take place there (within a few days) than at Bedford in January, 1936."

OFFICIAL SECRETS ACT—LIABILITY FOR FALSE INFORMATION (GIVEN) BY USERS OF THE ADDRESS

Case of Stevenson v. Fulton

(Reported in "The Times" Law Reports, vol. 52, pages 73-90)

This was an appeal by case stated from a decision of a Metropolitan magistrate who had dismissed an information in which it was alleged that the respondent had given a false address to the keeper of an accommodation address, registered for the receipt of letters.

The question at issue was whether subsection (4) of Section 5 of the Official Secrets Act, 1920, applied only to persons who carried on the business of receiving letters.

The subsection reads as follows:—

If any person contravenes or fails to comply with any of the provisions of this section, or furnishes any false information or

makes any false entry, he shall be guilty of an offence under this Act, and shall, for each offence, be liable on conviction under the Summary Jurisdiction Acts, to imprisonment with or without hard labour for a term not exceeding one month, or to a fine not exceeding ten pounds, or to both such imprisonment and fine.

In the course of his judgment the Lord Chief Justice said :—

“In this case the respondent on various occasions gave false names and addresses to be registered in order that he might afterwards collect letters or postal packets, concealing his own identity. It is said by the magistrate that, in his opinion, to bring such a person within the net of furnishing any false information within the meaning of Section 5 (4) would be to give an unduly wide interpretation to that subsection. He was of the opinion that the Act of Parliament contemplated offences committed only by a particular class—that is to say, by the keepers, as distinguished from the mere users, of accommodation addresses.

“With all due respect to the magistrate, I cannot help thinking that he has taken too narrow a view. He seems to have been misled to some extent by the words of the marginal note to Section 5 : ‘Registration and regulation of persons carrying on the business of receiving postal packets.’ That marginal note is no more than a label showing the subject-matter which is being dealt with in the section.

“But, if one looks at the scheme of the section, I think that it is tolerably plain that the magistrate came to a wrong conclusion. Subsection (1) begins with the expression, ‘Every person who carries on . . . the business,’ etc. Subsection (2) begins with the expression ‘Every person who carries on such a business as aforesaid’, etc. In the course of those two subsections and in the words which follow other persons are mentioned, and in particular ‘every person for whom any postal packet is received, or who has requested that postal packets received may be delivered or forwarded to him’. It is after the section has used those expressions

that subsection (4) provides, *inter alia*, that if any person furnishes any false information he shall be guilty of an offence—not any person who carries on such a business, but any person who furnishes false information with reference to the matters therein treated.

“I think that the view which the magistrate has so well expressed fails to give sufficient effect to what seems to me to be the clear antithesis between the expression ‘every person who carried on such a business’ and the expression ‘any person’, especially as the words ‘any person’ follow an enumeration of persons including persons other than the person carrying on the business. . . .

“... It seems to me that, on the plain words of this subsection, accentuated by contrast with other words appearing in the other subsections of the section, the respondent does come within the mischief which is covered by the Act. He furnished false information of the most vital and fundamental character, because all the inquiries which this section is intended to facilitate would be rendered nugatory if, although a register proper in form were kept, the register consisted not of true names and addresses but of names and addresses deliberately falsified.”

In the result the case was sent back to the magistrate for a conviction to be registered against the individual charged.

APPEAL TO QUARTER SESSIONS—NON-APPEARANCE OF THE PROSECUTOR—DUTY OF THE JUSTICES

R. v. Kent Justice, ex parte Commissioner of Police (reported on page 78 of Volume 52 of “The Times” Law Reports)

The defendant who had pleaded “guilty” to a charge of larceny appealed against his sentence to Quarter Sessions. The charge had been preferred by a private prosecutor. On the hearing of the appeal the prosecutor did not appear, but Counsel for the Commissioner of Police sought to argue in opposition to the appeal.

Quarter Sessions refused to hear him and held that as no one was present to put before them the case for the prosecution it was their duty to quash the conviction.

It was held in the Divisional Court that as the appeal was against sentence only Quarter Sessions had no jurisdiction to quash the conviction.

The Lord Chief Justice said: "I have no doubt at all that the Justices came to an erroneous conclusion when they decided that in the circumstances no course was open to them except to proceed to deal with the appeal in the absence of evidence. They might have obtained evidence themselves, or they might have adjourned the appeal, as they were asked to do. But, even if they had been right in proceeding in the absence of evidence to hear the appeal against sentence they had no jurisdiction to quash the conviction."

At the same time the Court did not decide whether the Commissioner of Police was entitled, in the circumstances, to be represented at the appeal to Quarter Sessions. At the end of his judgment Mr. Justice Humphreys said: "In my own opinion, it would be very desirable in future if Justices think it right to take such a course, to put the matter beyond doubt by directing their clerk to apply to the local police authority in writing requesting that authority to act on their behalf and to represent them on the hearing before quarter sessions, which was not done in this case."

This is an interesting decision on the question of exactly what ought to be done when there is an appeal against a conviction in a case brought by a private prosecutor and the private prosecutor takes no steps to deal with the appeal.

The Police and the Law

LEGAL EFFECT OF THE DEMISE OF THE CROWN

THIRTY-FIVE years ago Parliament, by passing a simple declaratory Act—the Demise of the Crown Act, 1901—disposed once for all of any doubt as to the effect of the death of the Sovereign upon the holding of offices under the Crown. The Act declares in effect that the holding of such offices is not affected nor is any fresh appointment thereto required by the Demise of the Crown. It seems reasonably clear, however, that continuance in office of the police on the death of the Sovereign is not dependent on the Act of 1901. A constable on his appointment makes a declaration that he will well and truly serve His Majesty the King; and he is a public servant who is often described, no doubt correctly, as holding an office under the Crown. But he is not appointed by the Crown and he is not in the same position as a civil servant who holds his office under a contract which is terminable "at the pleasure of the Crown". It follows that the death of the Sovereign could not, quite apart from the Demise of the Crown Act, make any break in the continuity of the service of the police.

It may be, and indeed has been, suggested that as every constable on his appointment is required to make the declaration of service to the King, he ought to renew that declaration to the new Sovereign on his accession. It is by some contended that there is a legal obligation to do so, at any rate in those cases (of which there are apparently some instances) where the declaration was to "serve well and truly His Majesty King George V"—with no mention of his heirs and successors.

In this connexion it may be mentioned that in 1910

the question whether officers under the Crown were, notwithstanding the Act of 1901, still under an obligation to take the oath of allegiance to the new Sovereign, and (in the case of judicial officers) the judicial oath, was referred to the Judicial Committee of the Privy Council, who decided that it was unnecessary in any such case that the oath of allegiance or judicial oath should be taken again to the new Sovereign. It appears to us that, if there is no legal necessity for judicial officers (including justices of the peace) to take the oath of allegiance on the death of the Sovereign, it is reasonable to conclude that the police need not renew the constables' declaration made on their appointment.

It may be thought strange that the form of the constables' declaration in county and borough forces is not uniform throughout the country, and uniformity is unlikely to be secured so long as there is no generally applicable form prescribed by statute. The traditional form of constables' oath as given in the old textbooks required the constable to swear that he would well and truly serve the King in his office as constable. In the first modern statute which dealt with constables, *viz.* Special Constables Act, 1 and 2 Will. IV, c. 41, the prescribed form of oath was "I, A. B., do swear that I will well and truly serve our Sovereign Lord and King in the office of Special Constable". Later, by s. 12 of the Promissory Oaths Act, 1868, it was provided that a declaration "to the like effect" must be substituted for an oath; but no special form of declaration was prescribed. In the case of borough constables the position is governed by s. 191 (2) of the Municipal Corporations Act, 1882, which required men appointed by the Watch Committee to be sworn in order to acquire the status of constables.

CRIMINAL LIBEL

Defamatory libel is a branch of the criminal law which is, no doubt, rather "off the beat" of most police officers. Nevertheless it is a subject which may fairly be said to concern

the police, because the gist of libel in its criminal aspect is its tendency to lead to a disturbance of the peace. That does not mean, however, that in every case it is necessary for the prosecution to prove that the particular libel was likely to result in a breach of the peace—a point which was recently made clear in the judgment of the Court of Criminal Appeal in *R. v. Wicks*, reported in *The Times* newspaper of 18th February, 1936. In that case the libel was contained in a letter addressed by the appellant to another man who at the date when it was written had been arrested and charged with forgery and other criminal offences at the instance of an insurance company. The allegations which were the subject of the proceedings for libel were made against the character of the solicitor of that company. The defendant was found guilty and was sentenced to twelve months' imprisonment at the Central Criminal Court. He appealed and in their judgment the Court of Criminal Appeal pointed out there had been no plea of justification and that, therefore, the allegations and libel must be taken to be false. The particular point of interest with which we are now concerned, however, was the argument addressed to the Court that there had been no case to go to the jury because there was no evidence that the libel was likely to result in a breach of the peace. In the course of the judgment of the court delivered by du Parc J. the following passage occurs, as reported in *The Times* :—

"It was true that a criminal prosecution for libel ought not to be instituted, and, if instituted, would probably be regarded with disfavour by Judge and jury, when the libel complained of was of so trivial a character as to be unlikely either to disturb the peace of the community or seriously to affect the reputation of the person defamed."

Upon this question the Court expressed the view that there was no ground for the suggestion that it was incumbent on the prosecution to prove that the libel in question would have been unusually likely to provoke the wrath of the person defamed, or that the person defamed was unusually likely

to resent an imputation on his character. The Court could find no support for that theory in any judgment, and the following passage from the judgment delivered by Mansfield C.J. in *Thorley v. Lord Kerry*, 4 Taunt. 355 at p. 364, was quoted by the Court :—

“There is no doubt that this was a libel, for which the plaintiff in error might have been indicted and punished; because, though the words impute no punishable crime, they contain that sort of imputation which is calculated to vilify a man, and bring him, as the books say, into hatred, contempt, and ridicule; for all words of that description an indictment lies.”

Nevertheless, while *R. v. Wicks* shows that it is unnecessary for the prosecution to prove that the libel was unusually likely to provoke the person libelled it remains, we think, true to say, as is stated in a well-known textbook (*Russell on Crimes*) that “defamatory libel is ranked among criminal offences because of its supposed tendency to raise angry passion, provoke revenge, and thus endanger the public peace”; and for this statement there is judicial authority (*R. v. Holbrook*, 4 Q.B.D. per Lush J. at p. 46).

One special characteristic of a defamatory libel is, of course, that it may be the subject either of civil proceedings for damages or a criminal prosecution. It is not always easy to decide which is the proper remedy in any particular case. Clearly no jury would convict a person indicted for libel (at common law or under the Libel Act, 1843) if the defamatory words were trivial or where civil proceedings were manifestly the proper remedy. But, apart from this obvious limitation, a libel which is actionable is also indictable; but in certain cases, of which a libel on a dead person is an instance, defamation may be indictable though no action for libel could be brought (see *Russell on Crimes*, 8th edition, vol. 1, p. 984). In any such case the libel could not apparently properly be made the subject of a prosecution unless it was intended, and not merely calculated, to provoke sorrowing relations.

RECENT STATUTES AFFECTING THE POLICE

A number of statutory provisions affecting the police in one way or another are passed every year, and it is difficult to see how the police can keep pace with them. It is contemplated in future issues of this Journal to summarize, from time to time, the effect of these enactments; but, in the meantime, it may be useful to draw attention to certain provisions which have come into force during the past two or three years. Let us take, for example, the Betting and Lotteries Act, 1934. In that Act, quite apart from alterations in the criminal law as to lotteries, there are at least half a dozen sections which affect the police either because they actually create new duties or because the section directly or indirectly involves some police action. Under section 6 (2) notice in writing of an intention to apply for a licence for a dog track must be given to the Chief Officer of Police in the area concerned; and by subsection (4) of the same section the Chief Officer of Police or his representative is entitled to be heard at the hearing of the application. In relation to the licensing of dog tracks the police are, therefore, put very much in the same position as they are in relation to an application for a liquor licence. There is a further provision in section 9 (2) of the same Act requiring notices to be given to the Chief Officer of Police before any transfer of a dog track licence is made by the licensing authority. These provisions give the police an opportunity of taking any action which seems to them desirable upon receipt of notice, and clearly it is reasonable and necessary that such notices should be given to them. They are probably in a better position than any other section of the community to help the local licensing authority in arriving at a decision. It is inevitable that whenever Parliament thinks fit to impose in the interests of the community as a whole restrictions on the activities of a particular section of the community the police should have new duties and responsibilities in connexion with these restrictions.

The most notable instance of this trend of modern legislation is to be found, of course, in the Road Traffic Acts, 1930 and 1934. Section 15 (4) of the 1930 Act contains power to arrest without warrant in the case of "any person committing an offence under that section", *i.e.* a person found to be driving, attempting to drive, or in charge of a motor vehicle on a road or other public place when that person is under the influence of drink so as to be incapable of having proper control of it. Similarly, by section 20 (2) a police constable may arrest without warrant the driver of a motor vehicle who within his view commits any offence under the provisions of the Act as to reckless or dangerous driving or careless driving, unless the driver either gives his name and address or produces his licence for examination.

A police constable may also arrest without warrant a person whom he reasonably suspects of having committed or of attempting to commit the offence of taking and driving away a motor vehicle without the consent of the owner or other lawful authority (section 28 (3)).

Of the many other provisions in the Road Traffic Act, 1930, which add new duties to or confer new powers upon the police it is not possible to enter into details here. But we may mention amongst others section 27 (1) (power of police to require a person in charge of a motor vehicle to allow it to be weighed); and section 83 (2) (power of police constable to inspect and take copies or extracts from the records of licence under Part IV of the Act of 1930).

AUTOMATIC GAMING MACHINES

Amongst other attractions that have come into vogue in recent years for the purpose of bringing profit to those who make and deal in them and for the purpose of exploiting the gambling instincts of the people are the automatic gaming machines. There are no doubt many thousands of them in this country and they are to be found in shops such as tobacconists, cafés, and clubs, particularly

those of questionable reputation. The stake for using them varies from 1d. to 1s. or more, and the form of gaming provided is varied in many different ways. Some of these machines are such that chance alone governs the result, in others skill is required in order to operate them with any degree of success.

With regard to those in which the result depends upon chance alone no difficulty arises as to how the persons providing the machines shall be prosecuted. Such machines have been held to be gaming machines (see *Fielding v. Turner*, 67 J.P. 252) and a person using his premises on two or more days for the purpose of such a machine being used can be prosecuted under the Gaming Houses Act of 1854, Section 4, for "using his premises for the purpose of unlawful gaming". It is an essential element that the persons using the machines, that is to say the punters, should stake some money and should stand a chance of winning a prize.

A difficulty does, however, arise when the machine is not one of chance, but requires skill to operate it. In such a case a machine cannot be said to be a gaming machine as when chance alone governs the result. Prosecutions against persons having in their premises machines requiring skill, which their customers use on payment of a penny or more and stand the chance of winning a prize or prizes of different value, can be taken under the Betting Act of 1853, Sections 1 and 3. Under this Statute it is an offence for any owner, occupier, or other person using premises to use them for the purpose of receiving moneys as a consideration to pay thereafter moneys or valuable things on events or contingencies relating to, amongst other things, any game.

It has been held that all machines requiring skill do not come within the meaning and scope of that Section. The distinction between those which are lawful or unlawful under the Betting Act seems to be this. If the machine is one which the punter uses solely with the object of winning a prize, that is to say solely as a gamble, then the machine is unlawful; but if, on the other hand, he uses it for the

purpose of exercising his skill, then the machine is not unlawful. One can well imagine a number of machines where skill is certainly required in order to be successful and where, as is often the case, the prizes are quite small. Here the player uses the machine for the purpose of exercising his skill and seeing whether he can achieve success on it. That is his particular object. Should, however, his particular object be the winning of a prize, then the machine is unlawful. This point was discussed in two cases which came before the Divisional Court in December, 1915, and which are reported in 80 *J.P.* 181. The cases are *Peers v. Caldwell* and *Taylor v. Caldwell*, and they related to a typical gaming machine. The heading of the Report says this:—

“The Appellant, Peers, was the owner of machines kept in a shop occupied by the Appellant Taylor. The machines were worked by putting into a slot a halfpenny, which set a ball in motion, and if the operator by manipulating a handle could catch the ball in a certain position a check was ejected which entitled the operator to obtain in the shop a pennyworth or twopennyworth of sweets, and to have another turn free of charge. A large number of persons visited the shop to play with the machines, and the Appellants shared the profits. On a Summons against the Appellants under Section 3 of the Betting Act, 1853, the Magistrate, while holding that the game was a game of skill, convicted the Appellants.” The conviction was held to be right.

Mr. Justice Avory in giving judgment said that he would assume that for the purpose of his judgment the game was a game of skill, that is a game which affords scope for skill and is not a mere game of chance. Further that he had before him the fact that in the course of twelve minutes seventeen boys used the machines twenty-seven times, and he had to decide whether that user of the machines brought their owner and the occupier of the shop within the second part of Section 1 of the Betting Act, 1853. The learned Judge went on: “Now, I agree that if it was clear that the halfpennies paid by the boys were paid as entrance fees for

the purpose of enabling them to take part in a game of skill, that would not constitute betting and would not be an offence. But, on the other hand, if it was clear that the consideration for the payment of the halfpenny was solely the promise on the part of the Appellants to give twopennyworth of sweets if the ball fell into the clown's cap, that would be within the second part of the Section. In my opinion it was open to the Magistrate to hold that the halfpennies were not paid as entrance fees for taking part in a game of skill, but that the sole consideration for the halfpenny was a promise made by the Appellants to give the boy twopennyworth of sweets in the event of the ball falling into the clown's cap. I take that to mean that in the Magistrate's opinion the boys were not in any sense paying their halfpennies as a consideration for the privilege of competing in a game of skill (and I do not for a moment believe that they were doing anything of the kind) but were simply gambling on the chance of getting twopennyworth of sweets. I think that the Magistrate was right in holding that the case came within the second part of the Section.”

Police authorities who have some difficulty in deciding how to deal with cases of this kind would do well to refer to this case and read it in full, as it is most explicit on what the law is. In cases where it is doubtful whether the machine is one of mere chance only, that is to say an unlawful gaming machine, then it is as well to issue alternative summonses under the Betting Act, 1853, and the Gaming Houses Act of 1854, so that if the game is considered to be one requiring skill the Betting Act may be held to apply.

Scientific Aids in Criminal Investigation

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PART II

SEARCHING AT THE SCENE OF CRIME

IN the first article of this series it was pointed out that the uniformed officer on the beat is often the first to reach the scene of a crime, and it was suggested that his most useful function, after ascertaining that an offence had been committed, was to preserve unaltered the conditions at the place of the crime so that later investigations by specialist officers should be unhampered. The object of the present article is to offer suggestions which may be of value in determining the course of the detailed search for clues which may yield useful evidence as the result of scientific examination.

Clearly the first thing that is of importance in a search is a knowledge of the material which is to be sought: later articles will describe in detail the types of traces on which circumstantial scientific evidence is based and therefore only general indications of their nature will be given at this stage. All officers are familiar with the particular forms of circumstantial evidence that are based on the finding of footprints and finger-prints; the finding and the technique of preserving and examining these have become special branches of police duty. In the development of these specialized duties officers have become familiar with such points as the types of surface on which finger-prints may be obvious, the kinds of surface on which they may be latent, the materials

which are unlikely to take impressions, and the places, such as door-handles, under-edges of drawers or tables, broken glass, or tumblers, in which finger-prints are to be found.

Similar developments in knowledge in regard to the nature of other traces and of the places where they are likely to occur will be necessary before the maximum efficiency is reached in the collaboration of the police services and the scientist. The first difficulty in such developments is the multitude of types of traces to be sought, and the great variety of places and circumstances in which they may occur.

The three chief points in the search for traces are the knowledge of, first, the sorts of traces that may be found at the scene of a crime; secondly, where it is most likely that they will be found; thirdly, how best they may be preserved intact and unaltered for examination by the scientist.

The term "traces" is perhaps easier to understand than to define: for the present purpose it may be taken to mean anything, great or small, which may yield useful evidence on scientific examination. In recent cases such traces as single hairs or fibres, tiny splashes of metal on a man's trousers, a steel turning imbedded in a shoe, a little dust in a pocket, under a hat-band, or in the welt of a shoe, a spot of candle grease on a waistcoat, sweepings from motor-cars, specks of paint on screw-drivers, garments, and motor vehicles, scratches on doors, drawers, and safes, and particles of rubber on an altered document, have all played essential parts.

It will be clear, then, that a mere catalogue of such traces, since they are so many and varied, is of limited use. There seem to be two suggestions that may help in acquiring the knowledge of the sorts of traces that are to be sought. The first is to study reports of cases in which scientific evidence is offered, noting not only the nature of the traces, but the places where they were discovered. The second is to cultivate the habit of asking the question when making a search "what sort of traces might occur in this particular case, and where should they be sought?" As a guiding rule in answering this

question the statement of Locard, the criminologist in charge of the Police Laboratory at Lyons, may be used. Locard has stated, in effect, "that every contact leaves its traces." This must not be interpreted too rigidly, but contains enough truth to make it of value: and the rapid developments in police science add continually to its importance.

The statement implies that when two objects come into contact something of the first is left on the second, and something of the second on the first. In this sense the statement embodies what may be called the principle of exchange.

A very simple example is that of a person wearing a rough tweed suit brushing against a piece of unplanned wood. It is reasonable to expect that fibres will be torn from the suit and caught on the rough surface of the wood, and possible also that splinters of the wood will remain entangled in the fabric of the suit. Thus an exchange of traces has occurred between the two objects that formed the contact. The principle is well illustrated by the evidence in a recent case of manslaughter in Lincolnshire: in this case a cyclist was run down by a car of which the bumpers and headlights had been painted crudely with aluminium paint. On the car were found traces of white paint and black enamel which agreed with similar materials on the bicycle, and on the victim's coat and bicycle traces of aluminium paint were found. In this simple example it is clear that the above traces were the ones which would naturally suggest themselves in answer to the question, "what traces are likely to occur as a result of the collision between such a car and a cyclist?"

The same example may be used to illustrate another important point in connexion with the finding of traces: that is, that the exact position of the trace may be just as important as its nature. The defence in the above manslaughter case was that, although the car might have knocked over the cyclist, the fatal injuries were inflicted by a bus which, it was admitted, had touched the victim as he lay in the road. This argument, however, was shown to be untenable, since the three chief stains of aluminium paint, which it was proved could have

come from the car, but not from the 'bus, were in positions on the victim's coat which corresponded with those on his body of his major physical injuries.

It will thus be realized that traces found at a scene of crime may possibly not carry their full weight as evidence unless careful precautions have been taken to note precisely the positions in which they occurred: thus it might happen that crucial points in fixing details in a case might be, for example, the level of the oil in a table lamp, or the position of some fallen ash in relation to the position of a half-smoked cigar or cigarette. The importance of the position of traces emphasizes the need for very full and precise note-taking during a search. It must be admitted that the burden on the searching officer thus becomes very heavy, especially when it is remembered that the significance of traces may not be evident in the initial stages of a case, and it is therefore necessary to note apparently unimportant and irrelevant details. At the same time it is clear that if the traces are not found and preserved in the first search at the scene it may be too late to rectify the omission in a second survey: traces may have been accidentally or designedly moved or destroyed. When traces are discovered the first step should thus be to record precisely, in words, or, more easily, by a dimensioned sketch the exact position of the trace, or article bearing it. The suggestion may be made here that the search might be made more thorough and its burden of note-taking lessened by the extended use of photography during its progress. The miniature cameras, employing cinematograph film, and fitted with a wide-aperture lens coupled with a range-finder, offer a rapid means of recording not only the position of traces as they are discovered, but also the position of traces or objects of which the importance may not have been noted during the search. In the instance cited above of the possible importance of the level of the oil in a lamp, a series of miniature photographs of the room would have automatically recorded this level, if, as frequently happens, the reservoir had been of glass. Thus, the essential information would

have been available in later stages of the case, even if the officer making the search had failed to recognize its importance at the time. Apart from the cost of the camera, the use of miniature photography is inexpensive, and the type of photographs suggested, being for record rather than for exhibit, calls for a minimum of skill in taking. The need might be mentioned, however, for recording in some suitable way the exact positions and heights of the camera at the time of taking the photographs. The method is also of much value in recording the position of traces on movable objects, such as motor-cars, before the traces are of necessity removed for examination. Fragments of hair or fabric or flesh, specks of paint or splashes of blood must be removed from the vehicle before they can be examined, and, as the case cited above indicates, the position of such traces may be all-important: the recording of their positions by means of miniature photography is a matter of a few moments only.

By keeping in mind the principle of exchange it is probable that some indication will be obtained as to the possible traces to be found as soon as the *modus operandi* of the crime is established. Thus if entrance to premises has been made by climbing up a fall-pipe the principle of exchange suggests firstly that characteristic scratches may be made on the paint of the pipe by the culprit's footwear, and that these latter may have left smears of boot polish, streaks of rubber, or splashes of mud on the pipe; and secondly that the culprit's footwear may have picked up traces of paint or rust from the pipe: in a scramble across a roof the same principle suggests looking for characteristic scratches or patterns on slates or leads, and for any characteristic dust or dirt from the roof on the suspect's clothes or boots.

Sometimes the exchange is not complete, a one-way transfer alone occurring: thus in a walk through a field a person may not leave any characteristic traces, but is scarcely likely to avoid picking up traces of vegetable matter—broken leaves, seeds, pollen—especially in the turn-ups of the trousers, or round the hem of a skirt. Often, of course, the criminal

recognizes the principle of exchange, as for example when he attempts to wipe traces of blood from his hands or a weapon; in such obvious cases the detective officer must fall back on the principle that the criminal thinks usually of only the simplest types of exchange, and forgets, perhaps, that before he has wiped his hands he has hidden them in his pockets, and has left traces of blood on the linings thereof; or, in wiping a knife, overlooks the fact that blood may run by capillary attraction into crevices or cracks, and thus that traces may remain after the obvious stain has been removed.

The exchange principle is frequently illustrated in evidence found in sexual cases, in which exchange of hairs, fibres, blood, or seminal and vaginal discharges may occur between the culprit and the victim: in such cases, therefore, it is advisable to take particular note of the nature of the victim's clothing and of the position of any stains occurring on it, and of any unusual material in the locality of the offence in order to recognize what type of material the exchange principle indicates as likely to occur on the person of a suspect. Similarly especial note should be made of any floor-coverings or upholstery in cases of breaking, particularly when these coverings are of loose or long-fibred material: the footwear, and to a less extent the clothes, of entrants are likely to pick up fibres from these coverings, the more readily if the weather at the time is wet, and the surroundings of the premises muddy.

Another suggestion that seems worth developing is the study of *modus operandi* in typical cases in relation to the sort of traces which may be left. If we take as the basic principle of the M.O. System the assumption that an habitual criminal signs his work by adopting a procedure that varies little in his different jobs, it is worth while to consider to what extent the given M.O. is countersigned, as it were, by the occurrence of traces likely to be of value in a scientific examination. This would imply little more than an amplification of the second and third points of inquiry in the *modus*

operandi classification; in consequence, the recognition of a typical *modus operandi* in the initial survey of the scene of a crime would suggest the nature of the traces which might be found when the principle of exchange is applied. It may be, for example, that from the tale, time, or object a particular job is recognized as the work of X: then, if it is remembered that one of X's characteristics is that he always works in stockinged feet, the exchange principle indicates that he is likely to shed fibres from his socks on rough surfaces, and equally likely to pick up on his socks dust and fibres of floor-coverings from the scene of crime; these traces would accordingly be sought. It should be noted that in such a case the traces might be found inside, and not outside, the suspect's footwear. Again, the *modus operandi* may be recognized as that of Y, who is in the habit of approaching his objective by a circuitous route which may take him in the given case across fields, through a hedge, or over a fence, and to make his entry by climbing a fall-pipe, and forcing a first-floor window: in such a case the exchange principle indicates a search along the path to the crime for fibres on hedges or fences, for scratches on the fall-pipe, and a search of the suspect's clothing or footwear for vegetable debris of the kinds noted on the path to the scene, for paint from the fall-pipe, etc. As a last example may be considered the work of a thief who makes entry by first chipping away the putty that binds a pane of glass in its frame. The exchange principle indicates that the kind of traces to be sought are characteristic marks on the window frame, and traces of putty-dust or traces of paint or varnish from the frame in the crevices of the suspect's pocket knife, or any other tool he may be carrying, or even in the dust of his pockets.

Any search for traces based on the exchange principle should be made systematically, firstly along the route to the scene of the crime, secondly at the scene itself, and lastly along the route of departure; and in each of these three sections the probable steps in the *modus operandi* should be considered separately, and for each the question asked, "What

sort of trace does the exchange principle indicate is likely to have been left by this step?"

It must be remembered, moreover, that the search must include traces which may be neither obvious nor even visible to the eye. Some traces may be "latent" in the sense that finger-prints are latent on certain surfaces. The existence of this sort of trace is likely to be suspected if an officer applies the exchange principle, which in this case will suggest to him that certain articles should be seized so that expert examination may have the chance of bringing to light the latent trace. Thus when a thief has walked on a carpet in muddy shoes, the expert examination of the footwear should not be omitted because fibres are not visible in the mud to the investigating officer: the exchange principle suggests that this mud might hold evidential fibres, and the search for them is then the duty of the police laboratory.

Reasoning of this type applies particularly to cases in which instrument marks are found, or in which material has been cut. An instrument mark on a soft material such as brass or painted wood implies not only the existence of a tool which can produce a mark with the characteristics of the one found, but also the possibility that the harder tool will carry traces of the softer material, in the shape of specks of brass, paint, or varnish. In several recent safe robberies not only has it been possible to show that marks on the opened safes were characteristic of the tools suspected of making them, but traces of paint have been found on the tools and shown by analysis to correspond with that on the safe.

In applying the exchange principle it is worth remembering the search most likely to be successful is that for traces of the softer material upon the harder. If wires or cables have been cut, the cut ends should be carefully preserved since it may be possible to show that the fine structure of the cuts agrees with that produced by a given knife or pair of cutting pliers. Since it is possible on occasion to show that even thin sheet metal has been cut by a particular instrument, all such cut surfaces should be preserved: it may

be, for example, that entry is made into a house by cutting away zinc gauze over a pantry window, or by removing glass from a leaded window ; the cut gauze or the torn lead may in such a case provide useful clues.

From the various examples cited in this article it will have been realized that no hard and fast rules can be laid down to govern the search for traces at the scene of crime : beyond remembering firstly the need for system in searching, so that the whole route to and from the scene of crime and the entire environment of the actual crime may be thoroughly searched piecemeal, and secondly the need for a complete record of the search either by notes, sketches, or photographs, only a close study of cases in which scientific evidence has been offered and a conscientious application of the exchange principle will suggest to the officer the type of trace which he is likely to find.

The next article will deal with methods of searching for traces on specific objects, and the ways of ensuring integrity of exhibits from the time they are found until they appear as exhibits in a trial.

All About Finger-prints

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II

IN my first article I dealt with the ridge characteristics which are found on the palmar surface of the hand and the sole of the foot, and their persistence. I also gave various hints for the successful investigation of crimes in connection with which finger- or palm-prints are discovered.

In this article I propose to deal with the processes used for the development of imprints, and points to be observed in the investigation of any crime in connection with which imprints are discovered.

POWDERS

With regard to the development of imprints by means of the various powders which, as I have said before, should only be entrusted to fully qualified officers :—

Any article with a smooth, clear surface is likely to retain imprints of value if touched, but those on rough surfaces are generally found to possess little or no characteristic detail, and, therefore, to be useless for purposes of analysis or comparison with other finger impressions.

Glass, plated and silver goods, candles, the parts of motor-cars where imprints of a criminal(s) are likely to be discovered, smooth metal, and any articles with highly polished surfaces are excellent media for retaining imprints. It is sometimes difficult to locate impressions, particularly on highly polished surfaces. The best advice I can give the investigating officer when articles of this description are

being examined is that the easiest and quickest way to discover latent impressions is to scrutinize the area from an angle, *i.e.* to view the object obliquely. It will be impossible to discern an impression on these surfaces by examining them directly or vertically, but scrutiny from one side or the other may yield the desired result.

It has also been found that breathing over a suspected area will reveal an impression for a few seconds until the thin film on the article, caused by the breath, has cleared.

Various methods are employed in different parts of the world for the development of latent impressions, such as grey powder, graphite, charcoal powder, lamp black, iodine fumes, aluminium powder, dragon's blood, anthracene, and silver nitrate, etc. These are only a few of them, and the list is not exhausted by any means; but, as I have explained in my book, *Single Finger-prints*,¹ the following have been found to meet all requirements:—

Grey Powder (Hydrarg. cum Cretae (B.P.))

This consists of metallic mercury (1 part) and *prepared* chalk (2 parts)—both by weight as distinct from measure. In no circumstances should french chalk be used. Grey powder has been found to fulfil all necessary requirements for the development of latent impressions upon glass, plated and silver goods, or japanned and dark surfaces. This powder, however, owing to the absorbent nature of the chalk, is liable to be affected by climatic conditions, and, in damp climates, care must be taken to ensure that it is kept perfectly dry.

Inquiries have been addressed to me regarding the source from which we purchase grey powder, as difficulty has been experienced by some Forces in obtaining powder of the required consistency. For the benefit of those who have had similar difficulty, I will explain that so far as the Finger-print

¹ *Single Finger Prints*, by H. Battley, published by H.M. Stationery Office, Adastral House, Kingsway, W.C. 2, price 7s. 6d. net.

Branch, New Scotland Yard, is concerned, grey powder is not purchased as such, but its constituents—*i.e.* metallic mercury and *prepared* chalk—are obtained and are mixed together at the Finger-print Branch in the proportion given above. The mixing is done with the aid of an ordinary pestle and mortar. The method found to be most satisfactory is to place all the mercury in the mortar and then to add the chalk gradually, pounding the mixture thoroughly with the pestle the whole time. The mixing should not be hurried. It takes approximately 1½ hours to mix thoroughly 1 lb. of mercury and 2 lb. of chalk. Unless the mixing is done thoroughly, the powder will prove to be very unsatisfactory in use.

Powdered Graphite (deepest black) and Vegetable Charcoal (Pulv. Carbo. Lig. (subtil))

Ordinary graphite powder (deepest black) has been found to be the most suitable substance for the development of latent impressions on light surfaces, but charcoal powder is an excellent medium for developing such imprints on all grades of paper, including blotting paper, although not suitable for all light surfaces.

Charcoal powder should be powdered as finely as possible, and of the consistency supplied by manufacturers of artists' materials. It is very light in weight but can be safely applied with a brush, and may be permanently fixed on paper by immersion of the paper in a solution of equal parts of milk and water. Imprints have been developed on paper by the means of charcoal powder even after the surfaces upon which they appeared have been subjected to vigorous rubbing.

The brushes used at New Scotland Yard for the development of imprints are known as "Wash brushes for lacquer work—Series 14a—large, flat", and are obtainable from Messrs. Winsor and Newton, Rathbone Place, London, W., price 1s. 6d. each.

The application of aluminium powder to imprints on

light surfaces gives fairly satisfactory results, but it is not recommended as it is found that during photography, reflection emanates from prints to which this powder has been applied, and the results are much inferior to those obtained by the use of grey powder.

Anthracene powder is a fairly recent discovery and is used for the development of latent impressions on multi-coloured objects. Impressions on such articles are developed with anthracene powder, and are photographed with the aid of a quartz lamp as the luminant instead of the ordinary arc lamps. By this means, the background on the article is eliminated and all that appears in the photographs is the impression itself or, in other words, the ridges of the impression to which the anthracene powder adhered.

Anthracene powder is extremely light and the greatest care is necessary for the satisfactory development of impressions by its means. My only objection to using it, without wishing in any way to detract from the value of the discovery, is when considering articles on which impressions have been developed with this powder which are subsequently produced in courts as exhibits. The imprints so developed cannot be readily seen.

Speaking from experience, should an excellent black and white print be produced with the background entirely eliminated, I fear that some juries might need a deal of convincing that they were the actual marks photographed from the article(s) produced. In the past, it has always been possible at New Scotland Yard satisfactorily to photograph in the ordinary way all imprints on coloured backgrounds. Whilst they may not have been so clearly defined as might be possible with the aid of anthracene powder, the resultant photographs did reveal that they were photographed from the actual exhibits produced in the court.

Regarding silver nitrate, this, too, has only recently been brought to notice. It is claimed by this method that imprints on fabric and clothing can be developed with good results. I have seen and examined an impression so treated. The

fabric to which it had been applied was comparatively smooth, closely resembling rubber, and the characteristic data disclosed was sufficient to establish identity. Upon the same piece of fabric another impression was developed with the aid of ordinary charcoal powder and a far more satisfactory result was obtained.

Equally good results have been secured with the charcoal powder on rough pieces of canvas, and at present I am rather sceptical as to whether or not the silver nitrate process will enable anyone to develop impressions which cannot be developed by any other means. I have yet to be convinced that impressions on woollen clothing or very rough surfaces can be satisfactorily developed by any known process. Of course amongst 'clothing' I am not including smooth rubber surfaces.

I feel that a little advice in the powdering of impressions will not be amiss. When latent impressions are being developed, immediately the ridges become visible, the powder should be applied in the direction of their trend, and not across the ridges. All extraneous powder in the interspaces should be meticulously brushed away. Failure to do this may result in the appearance of foreign matter, and the obscuring of essential data. Skilful treatment with powders makes all the difference between success and an indifferent result.

TRANSFER OF IMPRESSIONS

Latent impressions may be transferred or 'lifted', after development, by means of folien, which consists of a dark surface to which an adhesive preparation has been applied. When the adhesive surface is brought into contact with the powdered imprints, the powder immediately adheres. Impressions transferred in this way appear in reverse—i.e. left for right. A transparent material is placed over the marks so obtained, which adheres to the specially prepared surface and so affords protection to the prints.

A similar process can be carried out with dactyloscopic foil, which consists of celluloid and an adhesive substance used in conjunction with black powder.

Whichever is used, it is not considered advisable to remove the second surface after initial application.

To avoid confusion in subsequent reproduction of imprints which it is intended to transfer by means of folien or dactyloscopic foil, a note should be made of the direction of the ridges of the patterns prior to transference—*i.e.* sloping to the right or the left.

A word of warning is necessary in connection with the use of foil and folien. In finger-print cases it is the practice in this country to produce in court either the article bearing the actual impression(s) or a photograph of the impressions—photographed whilst the imprints were on the article itself. There is a possibility that if either folien or foil was introduced instead of the actual article or photographs of the marks on the article, there might be considerable reluctance on the part of the judge or jury to accept it as material evidence. The argument might be put forward that it was a manufactured impression and this would be difficult to refute.

I would not recommend the adoption of either of these processes, save in exceptional circumstances such as when impressions are discovered on nonportable articles and where it is impossible to reach them with a camera, or in the case of imprints in dust. The latter are generally of little use as they cannot be developed but in some instances they can be satisfactorily 'lifted' by means of the dactyloscopic foil. Only in such cases would I suggest that these preparations be employed. When using either of these preparations, except in the case of imprints in dust which, of course, cannot be developed, the powder which is retained on the impression during development adheres to the adhesive substance, as stated above, and is 'lifted'. The actual impression made by the papillary ridges remains on the article and can be developed again if necessary.

FINGER-PRINTS OF PERSONS WHO HAVE LEGITIMATE ACCESS TO SCENES OF CRIME WHERE IMPRINTS ARE DISCOVERED

In all cases where finger-marks are discovered at the scene of a crime, the investigating officer should endeavour to obtain by consent the finger-prints or, if thenar imprints are discovered, the palmar impressions of all residents and other persons who have had legitimate access to the article(s), etc., on which the imprints are found. The finger impressions of these persons should be forwarded, together with the article(s) or photographs of the imprints, to the Finger-print Branch for comparison purposes. Should there be any difficulty in obtaining the finger impressions or palmar impressions of the persons who have had legitimate access to the articles in question, through reluctance on the part of the individual concerned, the purpose for which the impressions are needed should be explained to him, and that, if he so desires, the prints will be returned to him.

It is unnecessary to take the impressions on an official finger-print form—a plain sheet of paper will serve the same purpose, and will probably prevent any objections being raised. Experience has proved that the mere sight of an official finger-print form to many persons convinces them immediately that they are to be branded with the hall-mark of a criminal. A little tact on the part of the investigating officer will usually put their minds at rest.

Since a great deal of uncertainty exists as to why the finger-prints of all persons who had legitimate access to any articles are required, I should here explain that comparison with those impressions and any imprints which may be found at the scene of a crime will, if the latter imprints are found to be identical with those of any person(s) who had legitimate access to the articles on which the marks were found, prevent useless searches being made in the collection, and valueless clues being further investigated. It is no uncommon occurrence for finger-prints believed to be those of a criminal, to prove subsequently to be those of some person residing

at the premises in question, or of a police officer who had been present at the scene of the crime.

Cases occur from time to time where articles bearing imprints are received at the Finger-print Branch, together with an intimation from the Force concerned that the imprints on the articles are definitely those of the criminal. It is pointed out by the Force that as a consequence the finger-prints of the persons residing on the premises, or other persons who have had legitimate access to the articles, have not been taken.

Much unnecessary correspondence is usually involved in eventually obtaining the impressions of these persons for purposes of comparison, and, as I have mentioned above, it very frequently happens that imprints which have been photographed, searched with, and compared with those of many persons who were suspected of being implicated in the offence in question have later been identified as those of some person who had legitimate access to the articles, etc., on which the imprints were discovered.

It should be generally recognized and appreciated that residents at premises where an offence has been committed in connection with the investigation of which finger-marks, supposed to be those of the criminal(s) are found, are prone to leave their finger-prints on articles which they may daily touch or handle. The fact that an article has been moved by a criminal does not by any means imply that the finger-marks discovered thereon were made by him. Elimination by comparison of the finger-prints of all persons who might have legitimately handled that particular article will alone prove whether that statement is true.

Two very common reasons given by officers for not supplying finger impressions for elimination purposes are:—

(a) "The tumbler was taken from a dresser by the criminal(s). It was polished and placed on the shelf the previous evening by the maid, who was the last person in the house to touch it."

(b) "The cabinet was broken open, and this decanter,

which was found on a nearby table, was taken from it by the criminal. The cabinet had not been opened by anyone in the house for nine months or perhaps longer."

With regard to (a) assuming that the maid had carefully wiped the tumbler before placing it upon the shelf, the point to be considered is "How was it placed upon the shelf?" Unless it was covered by a cloth before being transferred—the cloth shielding the glass from the hand—it is fairly safe to assume that the maid's finger or palmar imprints would be found upon the glass. The criminal may have been wearing gloves, or he might have superimposed one of his digital impressions over one of the prints belonging to the maid. He even might have successfully avoided leaving any imprints on the tumbler.

The same would apply in the case of (b). Although the decanter had not, prior to the commission of the offence, been taken out of the cabinet for nine months or longer, the question immediately arises "How was it placed there?" The same reasoning can be applied as in the case of the tumbler placed on the shelf.

Perhaps it should be explained that no finger-print expert can definitely determine the age of a finger-mark. Varying conditions and circumstances have to be considered. For instance, an imprint on a piece of glass exposed to the elements might last for a few days or might remain visible for some weeks. On the other hand, latent impressions left on glass which had not been exposed to the atmosphere have been developed two years later. To emphasize my point I quote the following case. A burglar, apparently well aware of the risk of discovery by finger-prints, took the precaution of dropping into a rain-water butt the pieces of window glass he had broken in making his entry. However, he underrated the intelligence of the local police, who, failing to account for the whole of the glass from the broken window, instituted a search for the missing fragments, and eventually found them in the water butt. They were carefully retrieved, dried, and brought to the Finger-print Branch at New Scotland

Yard. Here several latent impressions were developed, the marks having suffered very little from their immersion for many hours. They were identified as those of a local criminal, who, on this evidence, was tried for the offence, found guilty, and sentenced to a long term of imprisonment.

It will, therefore, be realized that it does not necessarily follow that imprints found in circumstances referred to in (a) and (b) are those of the criminal(s), and I cannot too strongly emphasize the necessity of obtaining and forwarding to the Finger-print Branch the finger impressions of all persons likely to have handled articles discovered at scenes of crime and bearing finger impressions. Experience has definitely proved over and over again the great saving of time and labour to everyone concerned when such impressions are forwarded at the same time as the articles bearing the imprints.

On the other hand, when a criminal's digital or portion of his palmar impression is believed to have been left on an article at the scene of a crime, it should never be assumed that circumstances, such as subsequent handling by other people, have made it incapable of adequate development or identification.

At the scene of a case of shopbreaking, a pickle bottle was discovered literally covered with impressions. The prints were examined in detail, and it was found that all the imprints on it, with one exception, had been made by persons employed on the premises. This one exception subsequently proved to be the only evidence against the person who had committed the offence, and resulted in his conviction.

I think that special reference should be made to imprints found on certain articles at scenes of crime and imprints made with blood.

Many successful identifications have been effected with imprints left on candles. When impressed on a candle, the ridges of the palmar surface of the hand create furrows similar

in pattern to those of the ridges. Such impressions require slightly different treatment.

One method is to cover the impression with printing ink, the superfluous ink afterwards being carefully removed with a piece of cotton wool or very soft rag until only that left in the furrows remains.

Another process is to apply charcoal powder with a brush, taking care to work the powder well into the furrows. The surface of that particular area should then be gently rubbed with cotton wool so as to remove the surplus powder.

The latter method will yield much better results than when ink is used in those cases where the ridges have only been lightly impressed or where the furrows created are extremely shallow.

It sometimes happens that imprints made with blood are discovered at the scene of a crime. These imprints are somewhat different from ordinary impressions which are subsequently developed. The impression is made in blood, but, unless the article has been but very lightly touched, instead of the 'ridge lines' of the impression representing the ridges of the digit or portion of the palm and the 'interspaces', the furrows, the opposite may be the case. The 'ridge lines' in the blood imprint may represent the furrows, and the interspaces may represent the ridges of the actual digit. This is due to the fact that when an article is gripped tightly, the blood which is on the skin may be forced from the summits of the ridges into the furrows of the skin surface as a result of the pressure which is applied. The resultant impression may be a reversal of an impression taken in the ordinary way with finger-print ink, *i.e.* the 'ridges' being actually the furrows in the skin surface and the 'interspaces' being the ridges themselves. Slightly different procedure in the photography of the blood mark is then necessary.

Blood marks have, however, been encountered where part of the impression has been in reversal whilst the remaining portion has been correct, *i.e.* the same as if the impression was made in the ordinary way with finger-print ink. Special

care is necessary when dealing with marks of this description or indeed with any marks made with other substances such as ordinary writing ink, etc.

Identifications have also been made at the Finger-print Branch, New Scotland Yard, with imprints on such articles as chocolate, butter, and cheese. Extreme care is essential when dealing with these particular articles or any others of a greasy nature. In many instances development of the impressions on these articles is impracticable, but when such development is carried out, it is of such a delicate nature that it can only be accomplished by means of an extremely fine artist's brush. It is necessary to develop the ridges one at a time, and nobody but an expert should attempt such a task.

When photographing impressions on butter, chocolate, and similar articles, it must be remembered that, if arc lamps are being used, the exhibit must be carefully watched as otherwise it may melt with the heat from the lamps before the photographs have been taken.

In my next article I will deal with the packing for dispatch to the Finger-print Branch of articles bearing or believed to bear finger-prints or palm-prints, how identity of an imprint is established, the vexed question which is constantly being put to me—"How many ridge characteristics in agreement do you require before you can say that two impressions are identical?" etc.

Simple Photography for Policemen

By DETECTIVE-INSPECTOR J. O'BRIEN

Metropolitan Police

II

THE best time of the day for taking photographs of the scene of a road accident is in the early morning just after daylight. The roads are then generally devoid of heavy traffic, enabling the work to be carried out free from constant interruption.

Never attempt to take photographs of road accidents at night, unless it is absolutely essential. If this is the case they will have to be taken with the aid of a charge of flash-powder or by means of flares, and the results are never very successful.

If traffic is heavy on the road, obtain the aid of officers to stop the flow whilst an exposure is being made, or if this is not practicable and the exposure is a fairly lengthy one, carefully cap and uncap the lens each time the road is clear, or if a shutter is in use open and close this intermittently.

If an officer is present preparing plans of the accident, collaborate with him to ensure correctness of detail.

As in my previous article, let us once again assume that we have to visit an occurrence. This time we are going to take photographs at the scene of a motor accident where one motor-car has collided with another, the result being fatal to one of the occupants. We arrive at the spot and find both the vehicles in the roadway badly damaged and skid marks from one of them extending some distance along the surface of the road. At the time we do not always know

what will emanate from such a collision, there is always a possibility that a charge of some kind may be preferred against a person involved in the accident. Bearing this in mind our photographs must do all they can to assist the coroner, and possibly subsequent juries, to come to a satisfactory conclusion.

We fit the camera on to the tripod and adjust it to a suitable height. In all cases of road accidents this height should be more or less standard. The best height, I think, to work from is one that is consistent with the view the driver of the car would have of the road. This height will of course vary. A person driving a low-built private car will not have the same view of the road as one driving a large commercial or public carriage vehicle; one must be guided by circumstances.

We do not use our wide angle lens this time but a good anastigmat lens. I should suggest a lens having a focal length of about 7 inches. The angle of view taken by this lens is not so great as one of a shorter focal length, but distant objects are given a better rendering. The view we are going to take must include such things as lamp-posts, refuges, traffic lights, and other salient features. As with interior work and the use of the wide angle lens, it is just as necessary in this case to ensure that the camera is level, otherwise a distorted view of the road camber may be portrayed, or buildings on the roadside that are incorporated in the photograph will appear to be falling over instead of assuming their natural vertical position.

Having levelled our camera we proceed to focus on the object ahead. A good point to focus on is somewhere midway between the nearest and the furthest points from the camera, then by stopping down the lens a fair amount, sharpness all over the picture is assured.

When the sun is out it generally has the objectionable habit of shining in the lens, and as every camera user knows, this is fatal to a good photograph. As we are unable to move our object the best must be made of the trying conditions.

Usually if the sun is fairly high it can be shielded from the lens with a hat or like object, taking care that this is not embodied in the field of view taken by the camera. Some lenses can be fitted with hoods that are effective in keeping the direct rays of the sun from the lens.

We are now on the point of making our exposure, but find there is something else to be encountered. This is mist or haze, very prevalent in the early mornings. Generally speaking mist of the light variety can be successfully eliminated by the use of a light yellow filter of a reputable make. This is attached in front of the lens; the relative increase in exposure being given by the makers. When using the yellow filter be sure that an orthochromatic or panchromatic plate is employed. I will explain these plates later.

The exposure our plate will require varies considerably with conditions. The type of subject, aperture of the lens, strength of the light, and the speed of the plate are the four primary factors to be taken into consideration. Experience is the best guide to exposure, but there are on the market numerous types of photographic exposure meters by the aid of which the most uninitiated can calculate the exposure within a reasonable degree of accuracy.

We move our camera and again set it up in position ready for the second exposure. This time our photograph will be taken looking in the opposite direction, remembering to incorporate as far as is possible the same characteristics as before. If the photographs we have just taken do not include the skid marks or show them up clearly we must now turn our attention to them, the chief object being to show the point where they commence and also where they terminate. This latter point will be indicated if the vehicle that caused them is still in position. If these two points cannot be clearly seen on one photograph, two will have to be taken, as both these features must be embodied.

Photographs to show the damage to the vehicles must be considered also. It is more satisfactory to take photographs of the vehicles in their original positions than to have them

moved, but if the damage cannot be illustrated clearly there is no harm in adopting this measure, as they are already incorporated in the road views. We will now photograph the point of impact and render pictorially any other essentials that may be of assistance in subsequent proceedings.

When photographing an object such as a car, care must be taken not to get too near, otherwise distortion will occur, the front wheels of the vehicle being out of proportion with the rear. This is where a lens having a long focal length is an advantage. It enables the operator to obtain an image in correct perspective.

Unless other photographs are required to illustrate any particular point we can now take our plates back to the dark room to develop.

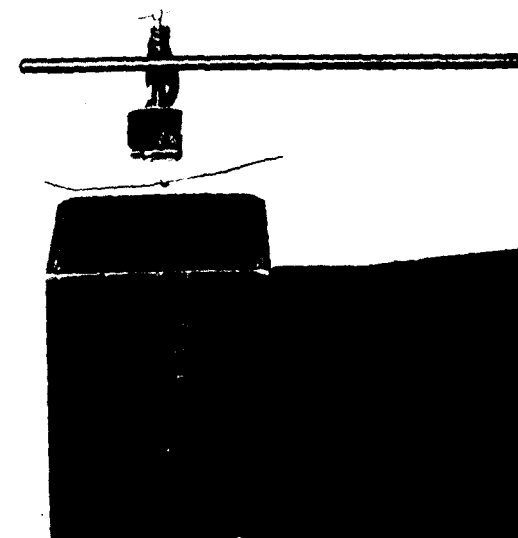
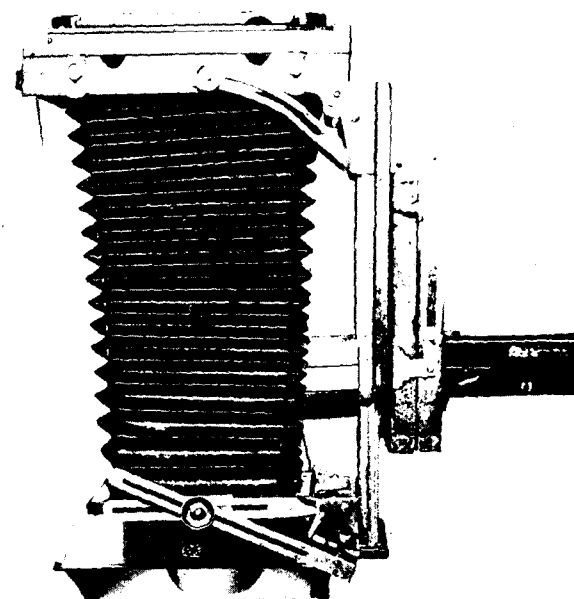
As before, enlargements are made and bound in albums ready for production when required.

Other types of cameras can be used for the work described above besides the stand camera. Reflex and Anschutz cameras will give good results, but are limited in their movements and not so easy to get accustomed to; but in my next article in THE POLICE JOURNAL I shall deal with the subject of equipment more fully.

Photography of Finger-prints

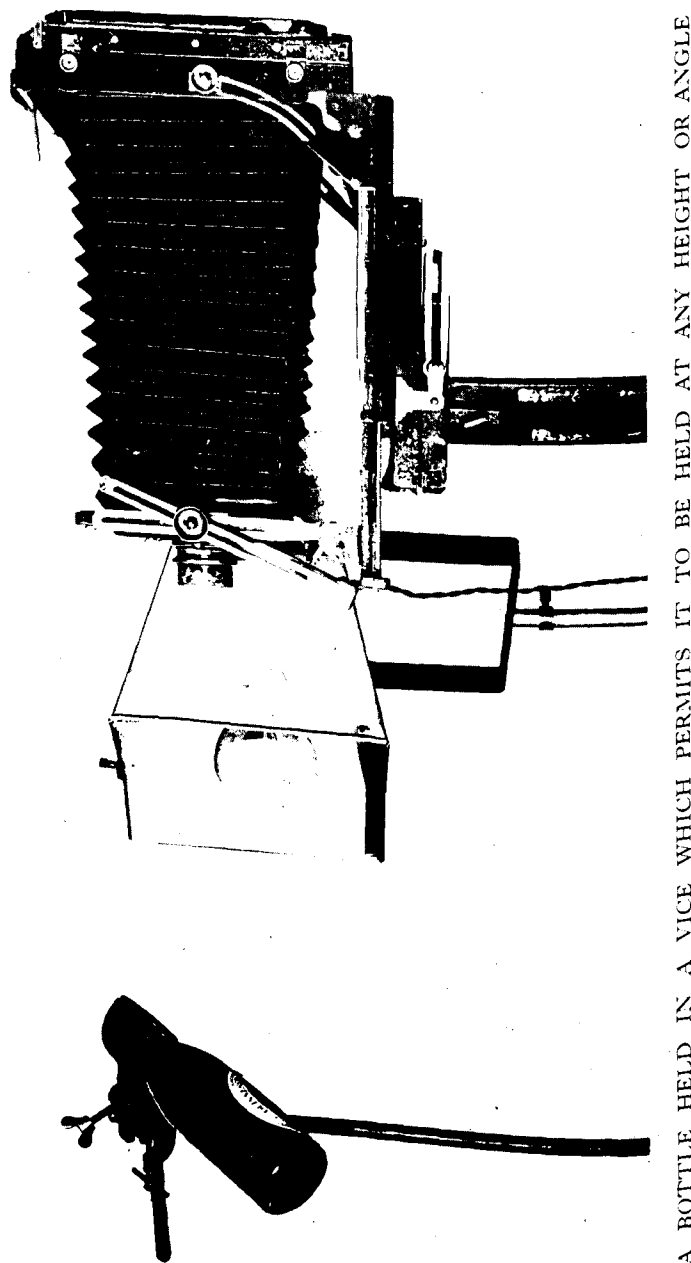
Finger-print photography is a branch of police photography that is comparatively easy if a few simple rules are strictly adhered to.

Except when required for production at Court, always copy finger impressions the same size. Do not try to secure prints absolutely black and white; if this is done there will be a tendency to lose some of the fainter ridge lines present in the original, or they will become broken up. A flat print is much better if it shows more detail. Printing on a softer grade of paper may secure this. With transparent articles, after they have been powdered and before photographing, they should be given some form of background that will ensure good contrast with the ridge lines.



ARRANGEMENT OF APPARATUS TO PHOTOGRAPH A FINGER-PRINT ON A PIECE OF GLASS. THE BLACK VELVET-LINED BOX CAUSES THE PRINT TO BE SHOWN UP IN STRONG RELIEF

(face p. 176)



A BOTTLE HELD IN A VICE WHICH PERMITS IT TO BE HELD AT ANY HEIGHT OR ANGLE

Before dealing with the actual photography I will put forward some ideas for obtaining the necessary background to give contrast in finger impressions, the execution of which I have found successful. Where finger-marks occur on bottles or any transparent article capable of holding liquid, an inexpensive medium to use for obtaining a dead black background is permanganate of potash and water; a few grains will make gallons of solution. For broken pieces of bottle, tumblers, corrugated or artistic types of glass, I find the best method is to use a black greasy ink; ordinary finger-print ink answers well. This should be rubbed on to the opposite side of the glass to that on which the impression occurs. Ordinary glass requires a little different treatment. Contrast is here obtained by the use of a box about 18 inches deep, lined with black velvet. This is placed on its side with the open end immediately behind the finger-mark. The illumination must not be allowed to reach the far end of the box. This ensures a dead black background.

The above remarks apply only to marks that have been powdered with grey powder.

Where the finger impression is on an object that cannot be moved to headquarters and it is inexpedient to transport the lined box to the scene of the crime, an ordinary square of black velvet answers well and can easily be carried with the remainder of the equipment.

We will now turn our attention to the actual photography of finger impressions. The camera to be used should be one capable of copying objects the same size. It is a wise plan to mark the camera so that when required for photographing finger-prints it can be readily adjusted without the necessity of measuring each time.

Set an object up in front of the camera, preferably a graduated rule, and focus this carefully on the screen until it is exactly the same size as the original, then mark the base-board so that this position can be obtained at any time with the minimum of trouble.

The article bearing the finger impression should be

fixed up in front of the camera ; small articles such as bottles, knives, etc., can be conveniently held in a clamp attached to a retort stand such as a chemist uses. The advantage of such a clamp can be readily appreciated when it is used. The clamp enables the object to be twisted in any position, making impressions that occur in difficult places easily accessible to the lens.

Now carefully focus on the screen the print required, but before doing so place a piece of clear newsprint in proximity to the mark. This newsprint is a good guide to sharpness when focussing and also has another use which I shall explain later. I cannot, of course, suggest any definite illumination for the object, as sources of supply vary ; but if available, some form of electric lighting is the best ; an ordinary bulb of a fairly high wattage consumption with a suitable reflector. A portable lamp like this can form part of the equipment, together with a good length of flex fitted with adapters for use in places where the mark is in a fixed position and is some distance from the supply of electricity.

Where electricity is not available other means will have to be adopted. Incandescent gas and oil lamps can be employed but are not so convenient to handle. As a last resource a length of magnesium ribbon should meet the purpose. This last means of illumination is very useful and should always be borne in mind before setting out on any investigation.

To obtain photographs of finger impressions successfully, a lot depends on the way the light strikes the object. Different objects require different treatment ; silver articles and the like are especially difficult in this respect.

Where an impression is bold and on a flat surface, a good result will be obtained if it is illuminated from behind the lens, the light striking the object at an angle of 45 degrees. Where the impression is very faint it may be found necessary to illuminate it obliquely, *i.e.* from one side at an angle of a very few degrees from the plane of the print. The light will then strike the sides of the ridges and should throw them out in bold relief. If the print comes on a curved surface,

either convex or concave, the lighting is even more difficult, as reflection occurs in the print. No definite ruling can be given for illuminating such marks, but a way of ensuring freedom of reflection and adequate lighting is to turn the object about in various directions until it can be seen with the naked eye, then place the camera in exactly the same position and view the mark on the screen.

Impressions left at scenes of crime and which have been developed with powders may be divided into two classes :—

- (1) Those in which the ridge lines show up dark against the background.
- (2) Those in which the ridge lines show up light against the background.

In all cases the finished photograph should show the ridge lines black against the background.

With regard to (1) it will be seen that the imprint is of the correct colour required in the finished photograph, that is, black ridges on a light ground. This photograph is secured in the usual way without any intermediate complications. The plate or film is loaded in the dark slide or carrier with the dull side (*i.e.* the side coated with emulsion) facing the lens when the slide is placed in the camera. After exposure and development the plate is printed in the ordinary way, the finished print showing the ridges black on light ground, as in the original.

In the case of (2), to photograph a finger-print which shows up white against a dark background, the process is somewhat different. The plate or film should be placed in the carrier the opposite way to the one just mentioned. This time the glass or glossy side must face the front of the camera, the emulsion side being at the back. After exposure, development, etc., the plate should be placed in the printing frame and another sensitized undeveloped plate placed in contact with it, the two dull sides being together. The frame should be held about 3 feet from a 40 watt bulb and exposed to the light for the merest flash. This second plate should be taken

through the developing bath, fixed, etc. Great care should be taken not to over-expose the second plate. The exposure should in fact be as short as possible, just switch the light on and off quickly. When this second plate or transparency is dry obtain a print from it on bromide or gaslight paper in the normal way. If the above operation is carried out the result should show an exact reproduction of the original, except that the colour is reversed; the black parts on the original are white on the photograph and the white parts are black. This is where the newsprint previously mentioned plays its part. If the photograph has been correctly taken the newsprint should be readable in the ordinary way, but should be white on a black ground.

The plate to be used for the above operation should not be too speedy. For ordinary imprints of fairly good quality a plate having an H and D speed of 100 would suit admirably. When the mark is faint, a slower plate should be used, if possible a process plate. Backed plates should never be used for any of the above processes.

Often finger impressions are found on coloured objects, and to photograph these successfully the procedure to be adopted is different from that already mentioned. Such articles may require the use of filters, and in combination with these panchromatic or orthochromatic plates.

Before proceeding to the actual operation I will say a few words about colour sensitive plates and filters.

White light, as is well known to-day, is made up of a number of different colours. This can be easily seen by the rainbow caused by the sun shining through the falling rain-drops; or if a narrow beam of light is allowed to traverse a solid angle of glass, it emerges as a broadened band of many colours known as a spectrum. Roughly, the colours visible to the eye are: red, orange, yellow, green, blue, deep blue or indigo, and violet. There are also invisible rays. Beyond the violet we have the ultra-violet rays and beyond the red, the infra-red. Now, it is the ultra-violet rays that play a large part in photography. All photographic plates are sensitive

to these rays, and it is through their presence that ordinary photography is possible. The majority of ordinary plates on the market are sensitive to these rays only, making it possible to develop the plates in a red light. Then there are the well-known orthochromatic plates that are particularly sensitive to yellow-green light, but are practically insensitive to red; these again can be developed in red light. Panchromatic plates, however, are sensitive to *all* the visible colours as well as the ultra-violet. These plates must be developed in complete darkness or by means of the makers' recommended safelight.

By the use of suitable filters and panchromatic plates it is possible to isolate colours and make them appear light or dark on the finished print as desired.

A good test before making an exposure is a visual one, *i.e.* look at the coloured article bearing the imprint, and see which filter shows up the mark best. The following list I have prepared is by no means comprehensive but is given as a guide to officers who may undertake such photography. As will be seen, this only applies where the article is powdered either black or white.

<i>Colour of article.</i>	<i>Colour imprint is powdered.</i>	<i>Direction of plate in camera.</i>	<i>Filter to be used.</i>	<i>Type of plate.</i>
RED	BLACK WHITE	DIRECT REVERSED	RED NONE	PANCHROMATIC ORDINARY
GREEN	BLACK WHITE	DIRECT REVERSED	GREEN NONE	PANCHROMATIC ORDINARY
BLUE	BLACK WHITE	DIRECT REVERSED	NONE RED	ORDINARY PANCHROMATIC
YELLOW	BLACK WHITE	DIRECT REVERSED	YELLOW NONE	ORTHOCHROMATIC ORDINARY

Where a reversed plate is used, the second negative or transparency must be made and the process carried through in the usual manner.

Before closing this article mention might also be made of photographing finger impressions by filtered ultra-violet light. The imprint is powdered with triturated anthracene

and is subjected to filtered ultra-violet rays. Under these rays the anthracene powder fluoresces strongly.

The imprint can then be recorded photographically in the normal way. A filter is used in front of the camera to cut out the extraneous ultra-violet light, the imprint recording itself on the plate by its own fluorescence.

In the next issue of *THE POLICE JOURNAL* I shall deal with portraiture of persons in custody, and suitable equipment for police purposes.

DESCRIPTION OF THE PHOTOGRAPH OPPOSITE

Illustration showing (1, 2 and 3) the result of the most common errors made when photographing finger impressions and (4) the result of correct photography. This shows the difficulty of making an identification when the correct photographic procedure is not carried out.

A. is in each case a photographic reproduction of a finger-print taken in the ordinary way by rolling the inked finger on a piece of white paper.

B. (1, 2 and 3) are photographs of the impression of the same digit on a piece of glass and developed with grey powder.

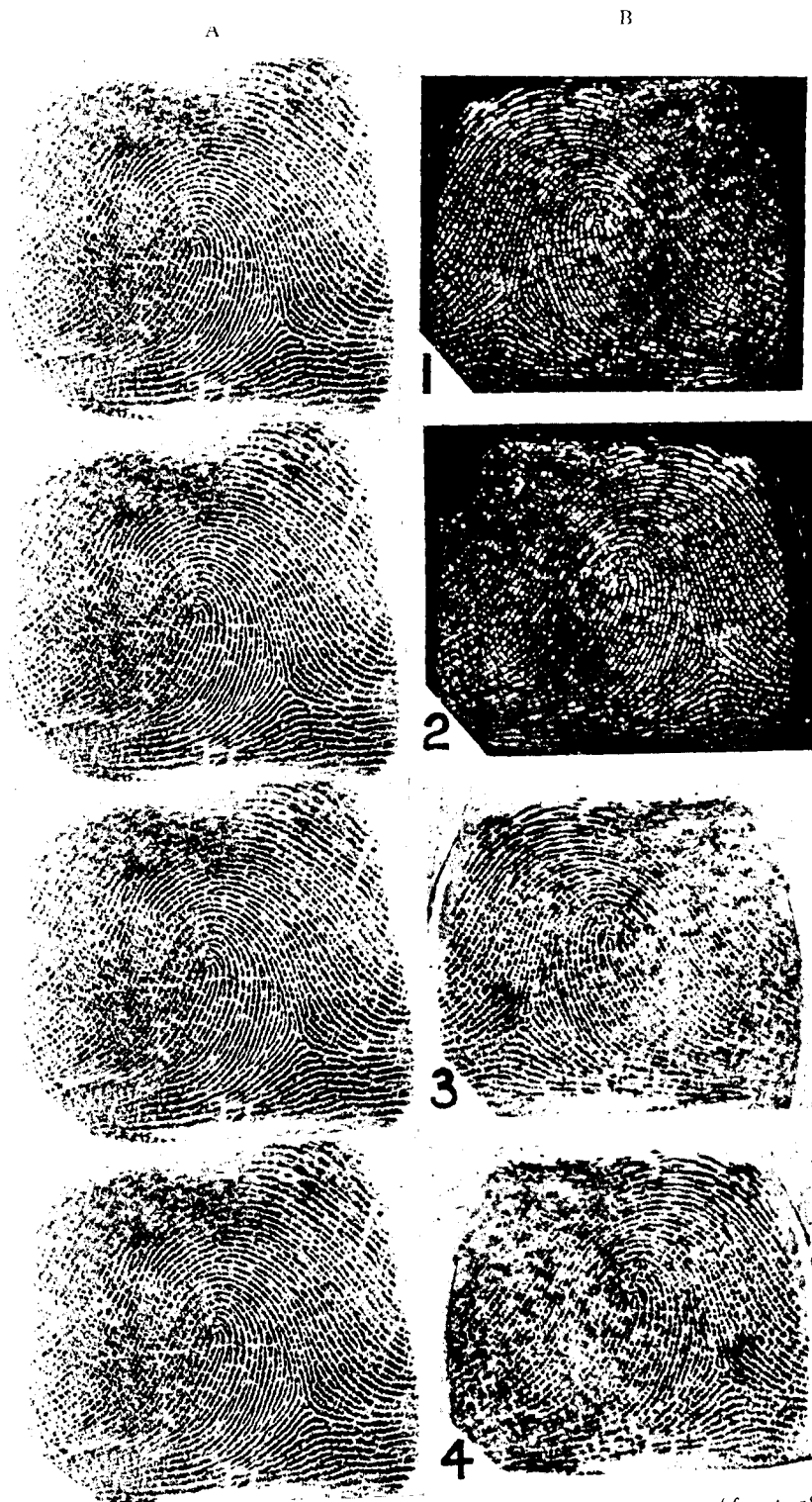
1. Both the colour and the direction of the ridges are wrong. This is caused by reversing the first plate and omitting to make a positive.

2. The direction is right but the colour is wrong. The first plate has not been reversed and no positive has been made.

3. The colour is correct but the direction is opposite to that which it should be. The first plate has not been reversed but a positive has been made.

4. The print properly photographed. The first plate has been reversed and a positive made.

The print is now easily comparable with the inked impression.





PEDAL-BICYCLE RECEIVER SHOWING THE LOUD-SPEAKER EARPHONE CLIPPED ON THE HANDLEBARS AND THE BAG IN WHICH THE RECEIVER IS CARRIED

Wireless Experiments in Liverpool

EXPERIMENTS in wireless communication were commenced in Liverpool during the month of May, 1932.

This article is a history of those experiments. It gives an idea of some of the obstacles encountered, and also particulars of equipment used and discarded, and that now in successful daily use.

No attempt has been made to enter into any discussion on the relative merits of speech or morse as the medium of communication, and the account also purposely refrains from any discussion as to what circumstances justify Police wireless installations.

The facts are merely circulated in the hope that they may be found of interest and, possibly, of some assistance.

How the Experiments were carried out

The Liverpool City Police have, as a result of the experiments which have been carried out during the past three years, an efficient system of wireless communication between their main transmitting station and all motor patrols in the City.

When the experiments began, it was considered desirable, for obvious reasons, to commence with the object of establishing two-way communication, and to what extent this was found possible of achievement is shown in the history of the experiments which follows.

To begin with, a transmitter, together with a three-valve receiver, was built and installed at the Headquarters of the Motor Patrol and Transport Department. The transmitter had a maximum input of 60 watts, and was capable of operating on continuous wave (C.W.) morse only. A crystal controlled

portable transmitter, having a maximum input of 50 watts, also operating on C.W. morse only, and a receiver similar to that in the main station, were built and fitted in a car. By this time, it had been found that a number of members of the department were capable of passing the G.P.O. morse test, and these formed the nucleus of the Wireless Section.

Tests with this equipment showed that a reliable two-way range of about two miles only could be obtained. This poor reception was due to the fact that the main station was located in a low part of the city under a hill, and as the district was also industrial, containing much electrical plant, the interference was so great that the signals from the car were obliterated at distances over the two miles.

With the object of finding a location suitable for the main transmitter, which would be fairly free from interference, portable transmitters and receivers were installed in two patrol cars, and tests were made at various points in the City by using one car as a fixed station. Finally a site was chosen at a divisional station, situated approximately in the geographical centre of the City area, and standing at an elevation of about 150 feet above sea-level. The City area takes roughly the form of an ellipse on the north bank of the River Mersey and extends from the selected station about seven miles in each direction north and south, and three miles in each direction to east and west.

The main transmitter was rebuilt to be capable of an input of 100 watts, a four-valve receiver for the station was made, and the whole equipment transferred to the new location.

The tests which followed showed a considerable increase in the two-way range, so much so that the reception of signals in a car was not so good as reception at the main station. Four-valve receivers were therefore fitted to the cars in place of the existing three-valve receivers, and two-way working could then be obtained over the greater part of the City.

A test was then arranged under actual working conditions by broadcasting, to three cars patrolling different districts,

the description of a car which was touring the City. The test proved highly successful and the car was stopped by all three patrol cars in a comparatively short period.

Attention was then turned to the motor-cycle combinations. Owing to the limited space available for an aerial, it was found that a five-valve receiver was required to give reception comparable with that obtained by the cars. Four such receivers were built and fitted to combinations, and regular working was commenced.

After a short period of regular working, it was found that the use of continuous wave morse was not ideal for the purpose as, for reception, the receivers had to be in a state of oscillation. Receivers in this condition are very sensitive to outside electrical interferences, such as those created by tramcars, flashing signs, etc. The main transmitter was then adapted so that a modulated morse note could be emitted, and this helped to overcome a considerable amount of interference.

Speech Transmission

It became clear that this new and growing department must of necessity consist of experienced men capable of reading morse at a reasonable working speed, and of others not so experienced, and therefore messages had to be transmitted at such speed as to enable the least experienced to read them. This meant that a lengthy message took a considerable time to transmit, even when abbreviations were used, and led to repeat messages being asked for very frequently.

Speech transmission from the main station was then introduced, and was an immediate success. The number of calls asking for messages to be repeated was very few, and the time required to broadcast a message was shortened considerably.

When plain speech is broadcast, the message is open to anyone who cares to listen, and it is not always desirable that police messages should become common knowledge. In order, therefore, to ensure privacy for messages for police

only, a simple code was evolved, covering all normal requirements. As an example of the working of the code, a message could be broadcast as follows "X.90; P.52; A.25; No. 17; X.91; Vauxhall "Brown"; A.K.B. 16; X.76". This might appear formidable to the uninitiated, but is in fact simple. The message decoded reads:—"Smash and grab raid, 17 Pembroke Place. Vauxhall saloon motor-car, brown colour used. Registered number, A.K.B. 16; Cancel points, patrol areas, sharp lookout."

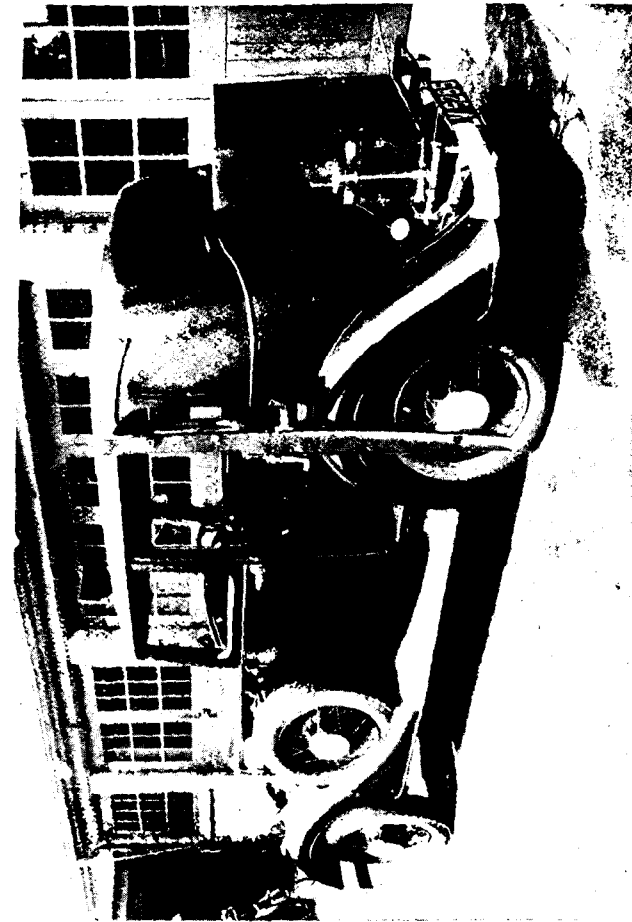
A copy of the code is carried by each man on motor patrol duty, and it is only a matter of a few seconds to decode any message. Anything not covered by the code can, of course, be transmitted in morse.

Complaints of interference to owners of private sets were received when the transmission of speech began. The use of speech disclosed the transmitter which was responsible and the absence of complaints whilst morse was the medium of communication is doubtless accounted for by the fact that the identity of the police transmitter could not be established.

A large number of complaints were investigated by Post Office officials, and it was found that, as the nearest broadcasting station is over forty miles from Liverpool, a large number of unselective receivers, using obsolete circuits, were still in use in Liverpool, and it was the owner of this class of receiver who complained. A modern super heterodyne receiver will receive broadcast stations, both British and foreign, without interference, when used on an aerial parallel to the transmitting aerial and only ten feet away from it. Any selective receiver will do this at a few yards distance, and the most unselective set can be cured of interference by a wave trap costing approximately 1s. 6d.

Commercial Receivers

Tests of a commercial six valve super-heterodyne portable receiver showed that its capabilities greatly exceeded those of the police built receivers, and in consequence four cars and five combinations were fitted with commercial sets.



SALOON CAR SHOWING CAR TRANSMITTER AND BOX FRAME AERIAL
AT THE REAR

(face p. 186)

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Five cars are now fitted with transmitters, and two-way communication is maintained between the main station and the cars throughout the City. The only fading that is observed is at two spots in the centre of the City, covering about 25 yards each, and this peculiarity is probably due to local absorption.

Aerials

Telescopic mast aerials (copper tube) are fitted to the sidecars of the motor-cycle combinations and these have proved satisfactory for the receivers in the combinations.

This type of aerial was tried on the patrol cars, but was found to be inefficient for transmitting when two-way communication was worked. A frame aerial, in box form, and fitted to the rear luggage carrier was then tried as was also one in the roof of the car. The latter has proved most successful.

Range

The maximum reliable two-way range of those cars which are saloons is approximately ten miles in all directions, except to the east where it extends to about fifteen miles, this district being fairly flat. With the same equipment in a touring car, carrying an aerial in the hood, these distances are nearly doubled. The greatest range obtained with the touring car has been thirty-five miles. Reception by the cars is always possible for several miles after the main station is unable to receive transmission from the cars. The range to the cars is not affected by daylight or darkness, but the range of the main station to another fixed station is about 100 miles in daylight, and after dark speech has been transmitted to Aberdeen, Norway, and Paris.

Power

The power to operate the main transmitter is derived from the City lighting system at 230 volts 50 cycles A.C. and is transformed and rectified to give supplies of 250, 400,



MOTOR-CYCLE COMBINATION SHOWING RECEIVER AND TELESCOPIC AERIAL

550, and 1,000 volts D.C. The input to the transmitter is 100 watts, Post Office rating, and the total draw from the mains is about 800 watts. The mobile receivers operate off the car or motor-cycle lighting batteries, whilst the mobile transmitters use two separate batteries, one 6 volt to light the valves, and one 12 volt to drive the generator, which delivers 600 volts to their anodes.

Speech from Mobile Transmitters

Two of the patrol cars are now fitted with a transmitter capable of speech transmission, in addition to morse, the input on speech being 40 watts and on morse 50 watts. This, up to the present, is still in the nature of an experiment, but good quality speech can be received at the main station from these cars anywhere in the City, except that part, covering an area of about one square mile on the western boundary, in which the industrial centre is situated.

The main station is manned by trained operators from 7 a.m. to 11 p.m. daily, and two-way working used. From 11 p.m. to 7 a.m. the transmitter can be operated by remote control, on speech only, from the station Charge Room, and messages of importance can immediately be sent to the night car patrol. One-way working only is used during the latter period.

The advantages of two-way working are shown by the number of messages received from the cars, such as reports of traffic accidents; requests for an ambulance or patrol wagon; motor vehicles stolen or recovered, and any matter dealt with by the police in the street requiring speedy communication. The cars have also proved useful on the occasion of labour demonstrations and during periods of sectarian disturbances, by keeping Headquarters informed as to the state of affairs at any given point.

The latest type of patrol car added to the fleet is the 1½ litre "Le Mans" Singer, with sports body specially adapted for carrying wireless equipment. Experiments have been carried out on one of these cars, fitted with speech

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and morse transmitter, and satisfactory results have been obtained over considerable distances.

Pedal Cycle Receivers

A miniature receiver has been developed, suitable for use on a pedal cycle. It uses two valves only, and these with an aerial and high and low tension batteries, are contained in a case measuring 6 in. by 4 in. by 3 in. The weight is 3 lb. The receiver is carried in the usual cycle bag, fitted inside the frame of the machine, and a socket is fitted to take a connection for the loud speaking earphone, which is clipped to the handlebars of the cycle.

To call the cyclist an I.C.W. note is transmitted from the wireless station for 30 seconds. This note is received by the cycle set at such strength that the man riding the machine can hear it whilst in motion in any part of the City, and the note continuing for 30 seconds allows him, if necessary, to go off the main road into a quiet side street to receive the message. This, however, is only necessary in the centre of the City. On beats normally patrolled by cyclists clear reception can be obtained at any spot.

A long distance test was made with this receiver in a car, using only the aerial inside the receiver, and good reception of speech was obtained up to twenty-seven miles, and morse (I.C.W.) up to thirty-one miles. This was with an input of 100 watts to the main transmitter. An increase of power would naturally result in greater ranges being obtained, for instance at night time clear reception of speech transmitted from the Brighton Police wireless station can be obtained in this City without difficulty. At twenty-five miles the receiver was carried about in the roadway and perfect reception of speech obtained.

Interviewing

By DETECTIVE-SERGEANT ARTHUR CAIN

Special Branch, Metropolitan Police

AN *interview* is a conversation with a purpose, and it is relied upon in a great variety of situations.

Interviewing is direct and economical, and a great deal of information can only be obtained in that way. It is often the means of cultivating the favourable attention of the public, it develops their real interest in our work and arouses their desire to assist us; and usually it is the method adopted to secure helpful action. In consequence, the work of an investigator demands expertness in interviewing.

There are pitfalls in interviewing and the interviewer must always ask two questions of himself:—

“Is it safe to rely on information obtained by interviews?”

“Can the information obtained by means of interviews be tested?”

Every interview must be considered a thing apart from all other interviews. That is because all the information obtained by interviews reflects in some measure the emotional reactions of the interviewer and the person interviewed—their attitudes towards each other and their self-interests, besides expression of tastes, emotional reactions, and intellectual considerations.

To master the general principles of interviewing so that you can obtain the best results in your work, you must remember that you are considered to be the interviewer, and your personal bias, with your emotional and mental make-up,

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will have a profound effect on the reported result of your interviews. Therefore, you must know yourself, that is, know your limitations and guard against them.

The interviewing you will be called upon to do is chiefly to obtain information, but as a result of your interviews you may influence the immediate and future conduct of the persons you interview; and you may be able—by your knowledge of the English language and your ability to speak it effectively—to instruct in a subtle way the persons interviewed. Apart from these primary results from interviewing, you, as the interviewer, will probably win co-operation from the public for the police; you may establish working arrangements for investigations which are spread over a period; certainly you will often receive advice and get to know men's opinions, all of which should be of lasting value to you as a policeman.

First of all, you must remember that interviews are usually conducted by means of the spoken word, so speak clearly and use words of which you and the person interviewed know the meaning—the same meaning. If all police officers trained themselves to speak English with distinction, the public, and our foreign visitors, would have one more point of interest when they express their regard for “the English policeman”.

Apart from the sounds of our language, successful speech is largely a matter of adjusting the facial expressions, securing a pleasant light in the eyes, adopting an easy manner of deportment, and restraining yourself from all gestures; in fact, it means adjusting your whole personality and demeanour. For if you don't ‘get over’ with the public in your interviews it is your own fault, and one of the chief reasons for not ‘getting over’ is slipshod speech.

Before you begin an interview—plan it.

Know what you are going after. Don't imagine that means your interviews will be stereotyped; in fact, you must strive for a spontaneity in all your interviews.

Make up your mind where you are going to hold the

interview, for environment plays a big part in getting people to talk.

Before you start talking, weigh up the person you are going to interview. If possible, get to know beforehand what he or she is like in character and conduct, thought and feeling; although you are not always able to do that.

Proficiency in interviewing can be acquired by reading verbatim reports of trials, by listening to other persons when they are interviewing, and by the 'trial and error' method; which means that you must constantly review your methods in order to become a skilful interviewer.

When you interview a person to obtain information you will often have to create a 'willingness to tell' in the mind of the person you interview. Lots of people don't like answering questions put to them by a police officer. They resent what they incorrectly term 'cross-examination' and 'third degree'. You must circumvent that resentment by tact, friendliness, and personal charm.

Some persons will tell you everything about other people but carefully conceal their own part, or present it in a favourable light.

Very often the persons you interview will not realize the significance of what they know. If you are a good interviewer you will help them to tell you everything you want to know, which may be quite different from the things they want to tell you. In accomplishing this you will have to relate the purpose of your interview to the motives of the person you interview.

If possible get information about the matter before you begin your interviews. A great deal of valuable information is contained in police records, and whenever possible make use of the general reference books which are usually kept in the public libraries. Moreover, a day's quiet observation on a man or woman will help you to know his or her habits, and when you have to interview a person who has been under observation you have an excellent means of checking the truth of his statements. Often you will surprise a person by

knowing so much of his character and habits, and in consequence he will tell you much more of himself in order to explain his conduct.

Be sure that the 'object of your interview is really worth while to the job in hand'. Don't ever let yourself develop into a mere busybody, because the public doesn't like busybodies of any sort.

Sometimes you can use an interview as a means to get a look at a man, or to glance over the office where he works or the home where he lives. But in such cases you must create a reason for the interview, and the 'reason' has to be equal to the intelligence of the man you interview, so that he does not realize the real object of your interview.

If you interview several persons about the same matter you will find that their statements do not always coincide. That doesn't mean that they are all telling lies—although they may be—it more often illustrates the truth of the very old saying, "No two people ever think or feel alike." When you find any great difference of opinion, suggest a cause for the difference and that will often get your client talking freely and truthfully.

In such cases you must learn to distinguish between statements of fact and statements of opinion; and you must also establish the circumstances in which each person was able to learn the facts or form an opinion.

Most human beings believe what they want to believe—it is much easier for the mind. Everything that is unpalatable or unbelievable at first appearance causes quite a struggle in the mind before it is accepted. Few people like hard mental work.

Once again, Know What You Are Going After. Know all the angles to the problem—work them out before you start to interview people. You may want to write out your questions—by all means do so—but don't let the other fellow talk you out of putting those questions, and don't arrange your questions so that the person interviewed gets the hang of them before you ask them. Because if you do,

he will beat you at it and then you will pat yourself on the back and go away satisfied that you have obtained your information. Meanwhile, the person interviewed will be able to say that he fooled the police officer easily.

Despite that, be on the look out to see the other fellow's point of view. He may not know as much as you think he does; he may know more. If he doesn't know as much as you think he does, master your disappointment—and here I would mention that you should try not to let anybody see you disappointed—but question the person from another angle just to check up whether he is hiding something, telling a lie, or doesn't really know.

Don't argue with people; don't contradict them; and don't insist that they should tell you anything.

Sometimes a person will give you a straightforward narrative account of his action or an occurrence, and it then remains for you to put questions to fill in the gaps. You may not always realize that there are gaps. Sometimes those gaps are left deliberately; more often they occur because the person interviewed does not remember all the details of the occurrence.

Your skill as an interviewer will show itself when a person has forgotten something that you want him to remember and you set out to help him remember.

In such cases you must first gain his confidence—let the person think you are friendly and helpful, in fact be friendly and helpful whenever you can, for there is no reason why you shouldn't be so. But don't go outside the limits of your job. Be pleasant—not the back slapping, “You know, old man,” or “Have you heard this one?” form of friendliness; but a respectful, understanding, sympathetic style of friendliness, which instils confidence and aids the flow of ideas, creates an association of ideas, and loosens the tongue of the person being interviewed.

Except in rare cases carefully avoid being ‘tough’.

Do everything you can to make the person interviewed feel at ease and ready to talk. Let him tell you about his wife

or newest baby if he wants to; it will make him feel comfortably equal with you. Wherever possible, show an interest in his work, for every man or woman experiences a feeling of pleasure when he finds somebody to recognize his ability, particularly if he is a craftsman.

Your questions and conversation must stimulate a person to talk, not only of the matter you have in mind but of the circumstances which led up to the person being concerned in it.

Ask only a few direct questions, and try to conceal the real part of your question in something that is easy to answer. For example, when Guy Browne, one of the men charged and hanged for the murder of Constable Gutteridge, the Essex policeman, was arrested, he had in his possession several fire-arms. He denied all knowledge of the murder but he willingly told the police how long he had been in possession of the revolvers found in his motor-car at the time of his arrest. Later on, police were able to prove that Brown acknowledged having in his possession at the time of the murder the only revolver which could have fired the bullet found in the head of the murdered policeman.

This shows that you must be on the alert to find interesting points related to the object of your interview, although you may not always realize the full significance of the points when they are first referred to in the course of the interview. Often you can guide the statements of the interviewed person by carefully framed questions; but when the other fellow starts to talk freely you must listen, and listening is a difficult art to cultivate.

Sometimes a person doesn't wish to answer a question. When that happens you can often learn a great deal by saying:—

“If you feel that you don't want to commit yourself I'll understand. You can just say ‘Well, if you don't mind, I would rather not answer that question’.”

In those circumstances it generally means that the person knows quite a lot but prefers not to talk of it.

If he didn't know he would probably tell you so. From that you can well understand that a person's silence will often convey more to you than a reply.

Where it is possible to be straightforward and frank in your manner, always create that impression—there is nothing to prevent you being shrewd and clever at the same time—if you have it in you to be shrewd and clever. But carefully avoid anything that appears 'tricky' or 'didactic'.

You will sometimes have to explain a section of the Criminal Law to let the person being interviewed feel that you are justified in your action, and also to help the person interviewed to realize his or her responsibility for giving you the facts. Never be impertinent. If you cannot get an answer to an important question, drop it for a bit, and later on ask it in a slightly different form. Always give the interviewed person a fair chance to qualify any of his or her statements. A good way to get a person to qualify his statements is to say to him :—

"I want to believe what you are telling me, but that last part seems a bit strange on the face of things. I mean, would you believe it if you were in my position?"

After that remark most honest persons will search their minds for more data to help the police officer. It is a good way to handle liars too; because they frequently respond to that move and hasten to justify their first lie by telling more lies. Generally they tell so many lies that a skilled investigator gets a fair idea of the truth.

A little difference of opinion among several persons interviewed concerning the same matter will tend to show that they are NOT getting together on the job. You can always allow for some difference of opinion by reason of the various points of view. In such cases try to 'add up all the statements'. It is not usual for one person to know everything of a matter, but several pieces from several persons usually make up the whole.

Don't be in a hurry when interviewing people. When you only get "Yes" or "No" to your questions, you are

treading on dangerous ground. A man or woman needs time to think when he or she is going to say something really worth while. On the other hand, don't dawdle. Keep control of the interview and close the talk when you feel you have got all the facts in a full background, and when you have given a person time to say, "I don't think there is anything more I can tell you about it."

Nevertheless, leave the way open for the person to tell you something else if he remembers it after you have left him. There are two reasons for this. When you leave the person he will go over the whole matter in his own mind, and he may talk it over with a friend. He may feel comfortable while you are with him, but after you leave he may become uneasy. If you leave the way open for him to write to you, telephone you, or you promise to call on him again in the near future, he will generally feel much more at ease. Sometimes you can tell a person "Not to let it worry them", or "To leave well alone at present". That is because some problems have to be left alone at times in order to materialize or smooth out. But lots of people need to be assured of that.

When you come to record the results of your interviews there are many things to remember. You can sometimes take a shorthand note of the questions and answers, but the sight of a note-book puts people on their guard. Nevertheless write down the statements as soon as possible.

Remember that what a person tells you depends on his position in the occurrence or series of events. If the occurrence was a novel event to him his attention was probably held all the time, but the novelty will cause most persons to over-emphasize the novel parts. But you will find that the things told to you are often more than one person could see or hear at one moment unless it is a trained observer whom you are interviewing—and that means the person has discussed the matter with other persons who saw the occurrence, and when he tells you about it he includes somebody else's observations with his own.

A completely strange event will cause most people to be upset, and it usually takes a little time for them to think clearly and logically after viewing a new thing. You must allow for that period of adjustment.

Generally when people describe other persons the descriptions fall into more or less preconceived types, such as:—“A Jew,” “A Black man with fuzzy hair,” or “An Indian with a turban”; “A nice girl,” “A decent sort of a fella.” In such cases you must help the person to enlarge on such general descriptions. But guard against persons who embellish their statements to make them seem more interesting, more dramatic, or more funny. Bear in mind that emotion produces decided distortions in persons' minds. For instance, some women think a man says a ‘beastly word’ when a fellow calls another fellow ‘a bastard’; that’s because the particular woman has been brought up in a sheltered home. Nevertheless, you will meet some women and girls who will be in their element when they can call a police officer ‘a bastard’.

Sex affects statements a good deal. A man will naturally recall the facts of a masculine matter with a greater accuracy than a woman; likewise a woman on matters of feminine interest. But you must be careful of excitable women who imagine things dealing with sexual matters. Then again, as a person gets older he or she acquires bias, and that bias generally acts in two ways. A person becomes set in opinions and outlook, and also degrades anything associated with youth.

The best statements are obtained when a person is made to feel the serious responsibility of speaking only what he or she knows to be true. Generally speaking, only one-half of any statement is completely true, and that half is confined to facts of which a person can be reasonably sure or certain. Approximately 75 per cent of statements made in good faith are accurate; and although individual statements of the same event may vary considerably, they will still remain 75 per cent accurate in what they contain.

It may interest you to know that people remember, in the following order:—

First the mere presence of things, then the number of persons present if the number is small, then space relationships, followed by the conditions of the objects seen. After that they remember the order of events, then the colours, the size, and the quantity—occasionally the quality—of the objects. After that they think of the sounds and the duration of time. That sequence is based on wide experiments carried on with all types and ages of people.

Even though people see and hear, smell, taste, and touch, and some have an extra sense of speed, their understanding of things may be weak; besides which, it is really difficult for any person to accurately recall in words the smell, taste, and touch impressions, because the English language is lacking in words to describe those impressions.

Once again remember that people omit things—they just cannot remember; they also add, elaborate, and exaggerate; but when a witness is reporting an incident, questions help him to remember the correct relationship of the date, time, place, and persons present. Sometimes people imagine things take place, and their imagination is so strong that they eventually accept their imagination as a record of fact. You will find that it is so with persons who are often before the public, such as actors, actresses, film stars, and those flashy journalists called ‘gossip writers’. Other persons will substitute for what they cannot remember, or transpose the sequence of events.

You will find that errors are not so much in the actual observation as in the recalling process, and the criticism and formation of what is observed, when it has to be described in words.

I will now give you a few odd facts about remembering. TIME up to two minutes is generally overestimated. Most people reckon from five to ten minutes accurately; after ten minutes they underestimate the duration of time. But there are exceptions to this, particularly if you are waiting

for somebody who is late or you have to wait a long time in one place.

The longer time that has elapsed after the event, the less reliable is the memory.

Persons and their actions; objects and animals, as well as spatial relationships, are generally remembered with about 75 per cent accuracy. Colour is rarely remembered with more than 45 per cent accuracy.

When you help people to remember by asking them questions you nearly always get a wider statement, but you will inevitably raise the percentage of error by as much as 50 per cent, sometimes more.

If persons hear of something from somebody else and repeat it, the tendency is to exaggerate; but they don't often alter the original matter they are told. In this respect the word-of-mouth process changes a possibility to an unqualified actuality. You must be on your guard against this because you will often meet it, but even more carefully you must guard not only the statement you are given but the report that you make of it afterwards.

If you cross-examine a person it causes that person to be cautious, more cautious than is usual for that same person when he or she is giving a narrative form of statement; yet with all the caution, there is little gain in completeness or accuracy. Nevertheless, caution does sometimes secure a general completeness and some increase in accuracy in statements; but in almost equal degree it leads to a lack of detail.

The accurate appraisal of character if it is performed quickly is a difficult and elusive art, but close observation of actual behaviour, including posture, voice, eyes, facial expressions, and manner of dress, will help you to form an opinion of a person's character during an interview. But remember that it is only an opinion.

Be on your guard when a person shows a tendency to repeat questions or answers to you, or talks in an almost inaudible tone, or acts as if the interview is being carried

on too long. Watch for any unnatural emphasis of statement, or any attitude of defence or offence, or any attempt at forced humour or laughter. When you meet somebody who unnecessarily stresses minute accuracy of certain details, frequently expresses a desire to help you do your job, repeatedly assures you that he is telling the truth, or indulges in an uncalled-for swearing of oaths to tell the truth, you can safely reckon you are dealing with a double-crosser or a liar, because those things don't ring true.

In estimating the value of statements made to you when you are interviewing people, you will find the following ideas worthy of study.

Think of a person's face as a 'study of character in action'. Facial expressions of sorrow and pain you will immediately understand, but when a person tries to hide his real feelings and thoughts, you as an interviewer must be on the alert. First, if a person is telling a lie, he or she will try to look as if he is telling the truth, which means that a state of mind will be experienced by the person who will try to make his face convey something different. It is in this attempt to control the features that the liar gives himself away. His mind knows one thing and registers it, and at the same time he tries to make his face convey something different. That sets up a conflict which you should see portrayed in the person's face.

As a rule facial expressions are estimated according to the *eyes*—their width, the wrinkles and folds of the eyelids; then the character and movement of the *mouth*, then the length of the face, and afterwards the movements of the eyebrows. But there is little use in judging facial expressions unless you regard those expressions as an indication of something that is happening, has happened, or is about to happen, within the mind of the person whose face you are observing.

In conclusion I will indicate the order in which human emotions are most easily recognized.

First of all is laughter, then surprise, after that fear, followed by breathless interest. You don't need to worry

much about the first, but the second is important because as a police officer you will so often surprise people when you call on them. You must learn to distinguish between fear and breathless interest—because you will often meet people who are afraid of you and of what you may be able to do; on the other hand you will find most people anxious to say, “Your’s must be an interesting job. What exciting things do you do? Do you catch murderers?” Which is merely an example of breathless interest.

You will often meet contempt, and a contemptuous person is not easy to handle. Generally speaking, the next on the list, horror, is more prevalent among women. But you will find men determined, and often their determination is set in defeating you. You must recognize it because it is often linked with disgust, sneers, and hate. Then come despair and pain, followed by shame.

These last three emotions are common among women; also rage and suspicion. Whenever you interview women it is almost certain that they will be suspicious of individual police officers. Sometimes by tact you can create a friendly spirit in a woman, but always be extra careful of the ladies. At one moment they like you, but the next moment they hate you.

Three other emotions are pity, general interest, and justifiable anger. Try not to cause the latter emotion in any person you interview.

I said you would recognize laughter easily, and that is equally true of delight and physical suffering. In nearly all cases you will see and recognize those conditions immediately; but be on your guard when you meet astonishment and grief, because they are deeper under the skin of people, and observers have misinterpreted those two emotions more than any of the others.

Some may wonder why I have made reference to these abnormal conditions in an article on interviewing. The reason is because you will so often have to interview people who have been wounded, robbed, tricked, or are suffering from a sense of grievance, and you must be careful in the way you

approach them. You must also make allowance for their condition when you evaluate their statements; for when people are emotionally disturbed they rarely observe accurately, although they invariably think they do.

It may be considered that the latter part of this article borders on psychology—it does, practical psychology; and there is no better quality in the make-up of a competent, understanding, reliable police officer who is called upon to interview all sorts of people in all phases of life.

Engaged as we are in the investigation of human activities, we must bring to the work a certain familiarity with the facts of life, and an ability to single out those topics which are revelant and indispensable for the successful accomplishment of the job in hand—whatever it may be.

Each officer will go a long way in doing that if he will take the trouble to acquire a wide knowledge and a sound judgment of what, for want of a better phrase, we can term “The Art of Interviewing”.

In the next number of THE POLICE JOURNAL I shall deal with “Reports”.

Television Simply Explained

By H. J. BARTON-CHAPPLE, WH.SCH., B.Sc. (HONS.),
A.C.G.I., D.I.C., A.M.I.E.E.

THE subject of television has certainly captured public imagination, and apart from its application to home entertainment there are various commercial uses which add considerably to the importance of its development. As far as the Police Force is concerned, a glimpse into the future when the science has approached towards a higher degree of perfection has revealed several ways in which the work of those who maintain the law will be made easier, while the criminal will be faced with problems which make his task almost impossible.

For example, not only will descriptions of wanted men and women be flashed from station to station as at present, but television pictures and portraits will enable these descriptions to be amplified enormously. The suspect will be confronted, at the station, with life size portraits of the wanted man and pictures of the scene of the crime. . . . Identification will be easier. Measures now taken to protect national and personal treasures will be strengthened by harnessing the principles of television to these schemes, and it behoves every member of the police to familiarize himself with the methods, now being developed rapidly, to establish the transmission of pictures to a distance, and so add to the measure of intelligence which can be transferred from place to place.

Television Defined

Defined in simple terms, television is really the transmission, by electrical methods of communication, of the images of scenes or objects, either in motion or at rest, for

reproduction at a distance in a visible form with the aid of special receiving apparatus. As far as the human eye is concerned, the impression conveyed to it will be a miniature light replica of the scene observed by any eye-witness positioned at the spot from which the transmission emanated.

In every form of television transmission and reception so far demonstrated, the process of *scanning* is involved, and it is helpful to introduce this by referring to the eye, which, after all, is Nature's perfect television system. When viewing a scene or object, under any circumstances, a proportion of the natural or artificial light illuminating the subject is reflected, to be picked up by the eye. The wonderful and delicate structure of this human organ enables the light-image to be focussed on the retina (the back of the eyeball). Each cell of the retina, although extremely minute in structure (there are millions of them in every eye), is stimulated to a degree dependent upon the proportion of light which acts on it. This excitation of the cell is conveyed to the brain, to give the sensation of sight.

A Rapid Adjustment of Focus

Again, the eye adjusts itself rapidly to any focus that may be desired, and for the detailed analysis of any panorama the eye unconsciously scans it section by section. For example, while reading this printed article each person is scanning it line by line in an ordered direction from left to right and top to bottom. This is the only way in which the individual letters or words can convey a sequence of intelligence to the brain.

When it is desired to transmit vision to a distance, therefore, means must be adopted whereby the structure of the eye can, in some measure, be duplicated, and the analysis of every separate light value carried out in sequence, for subsequent conversion to terms of *relative brilliance*, in such a rapid manner that the eye is deceived into imagining it is a bright, complete picture, with no perceptible flicker.

Using a Spiral Disc

The first method to be used successfully for this work, and one, incidentally, which is still employed (it was demonstrated by Mr. J. L. Baird in January, 1926) uses the "flying" light spot. A very tiny but very brilliant area of light is made to move over the scene to be televised in a series of horizontal

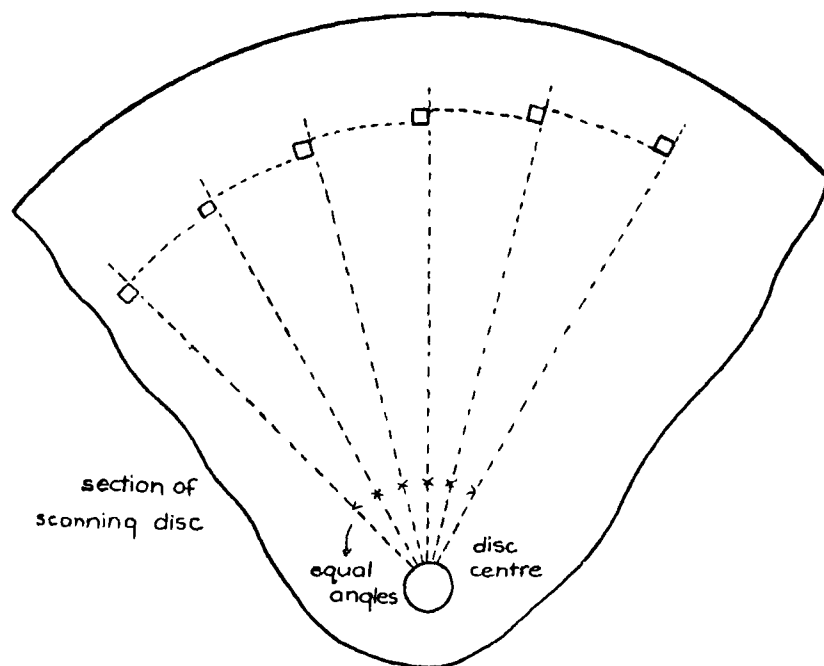


FIG. 1.—The individual disc holes are positioned so that they lie on a single spiral near the disc edge.

lines, each line being 'cheek by jowl' with its immediate predecessor. In modern high definition scanning apparatus this is carried out by allowing the concentrated light from a high intensity arc lamp to fall on a metal mask having a rectangular hole cut in it. Behind the mask is the top rim of a thin disc having a number of tiny apertures, positioned on a spiral line as shown in Fig. 1. The angle made by joining each hole to the centre of the disc is the same, as shown in the diagram. Moving round the spiral it will be noticed that

each hole is nearer to the disc centre than its predecessor by a distance equal to its own width, and by revolving the disc before the hole in the mask filled with light a beam of light in the form of a narrow ray will pass through every aperture in turn as it moves rapidly across the mask (see Fig. 2). By this simple method a whole series of lines of light are traced in turn across a given area, and when the spot of light

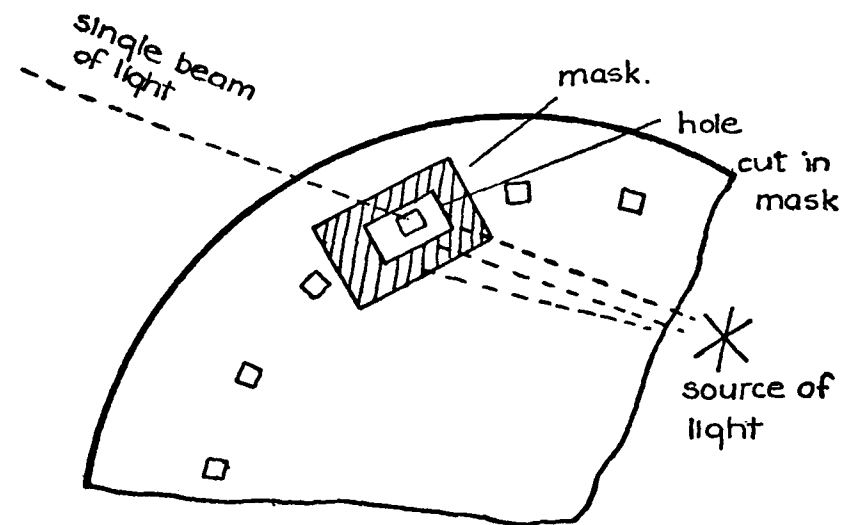


FIG. 2.—Showing how a single beam of light is produced by each disc aperture as it passes the mask hole.

has finished its first scan by "covering" the area completely (this is equal to one revolution of the disc) the process is repeated again and again at a rate dependent on the speed with which the disc is revolved.

Reflected Light

It will be appreciated quite readily from this brief description that at every instant during each single light spot's motion (only one disc hole at a time passes across the mask cut-out) it will illuminate the particular tiny area it covers at that moment. According to the nature and quality of the

surface thus illuminated a certain proportion of this light will be reflected just as when you shine your police torch in a darkened room, and as the surface varies during the spot's movement so the reflected light will vary in direct proportion. This reflected light is made to fall on photo electric cells which have the remarkable property of being able to convert the amount of light which falls on them into an electrical current, the strength of which is directly proportional to the light stimulation received. During the continuous

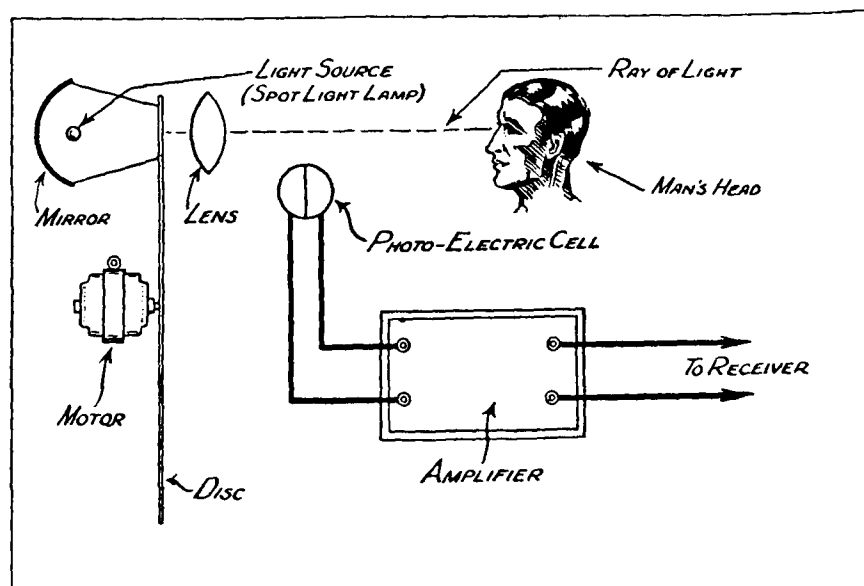
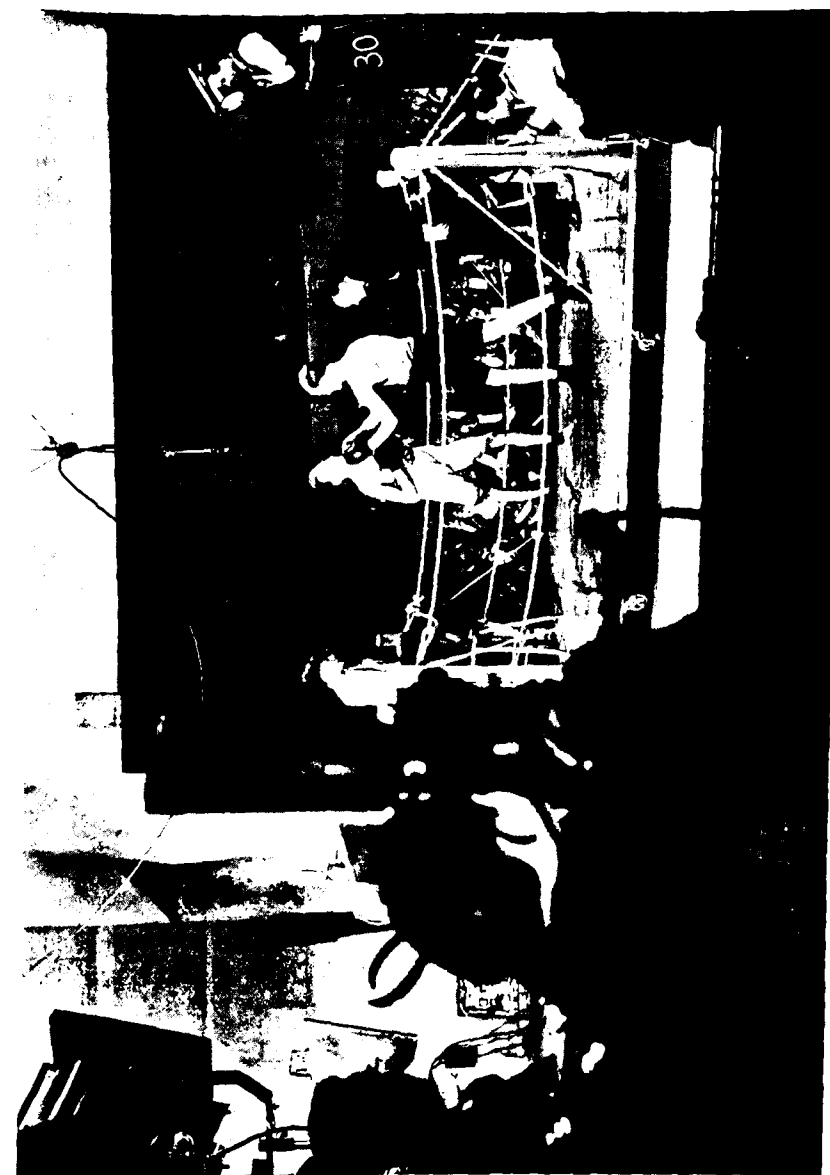


FIG. 3.—Simply explaining the principles of spot light scanning.

exploration of the scene and the resultant continuous but varied light reflection, the photo electric cells deliver to a valve amplifier circuit a minute signal, which is really an electrical replica in current values of the changing light values (see Fig. 3). This signal is radiated into space by established methods of radio communication using ultra short waves. These are then received on television sets by methods to be described later.



DIRECT TELEVISION OF A BOXING CONTEST IN NO. 1 STUDIO BY THE INTERMEDIATE FILM PROCESS AS SEEN FROM THE CENTRE CAMERA ROOM. 245-LINES

Eye Deception

The whole process of scanning at the transmitting and receiving ends is carried out at such a rapid rate that the eye is deceived into imagining that the effects it perceives on the receiving screen are really complete pictures. This is because of the natural human phenomenon called persistence of vision, whereby the eye retains a visual impression of the scene it has watched for a short period after the scene has disappeared. This simple effect is perhaps emphasized most readily by realizing that when at the local cinema watching a modern talking film, the results are produced by projecting a series of still pictures on to the screen, each picture showing a complete action just slightly different to its immediate predecessor.

The light spot method of television, from its very nature, is rather limited in its application, and other schemes have been devised to extend the scope of television's applications. One of the most outstanding examples of this is the intermediate film process. Here, a special form of intermittent type film camera photographs the scene to be televised on to a cinematograph film and at the same time records the accompanying sound on the film by standard talking picture methods. This film is then processed rapidly (developed, fixed, and washed) by passing it through a series of tanks, so that it emerges from the last tank as a perfect film negative.

Film Scanning

Now the separate pictures on the film are really a grading of shades on the sensitive emulsion and if they are placed before a focussed beam of light from an arc lamp the scene in this picture will be projected on to any surface as a replica in light and shade of all the film material (a simple lantern slide is ample evidence of this fact). To scan this, a disc having a number of tiny apertures located on a circle near the disc edge is revolved at high speed. The film pictures are



A BLACK AND WHITE PICTURE PRODUCED ON A TELEVISION RECEIVING SET

focussed on to the disc, and since they pass down across the disc at a steady rate owing to the movement of the film itself from one spool box to another, each hole in the disc traces across the picture a "line", each line being traced in sequence. Wherever the hole is positioned at any instant a certain proportion of picture light will pass right through it and if this is focussed on to a photo electric cell during the whole period of the picture analysis, then owing to the inherent property of the cell mentioned earlier, electrical signals will be generated. These are of varying strength but directly proportional to the picture lighting, and in consequence represent the television signal which has to be transferred to the radio transmitter for radiation into space. This is shown in a simple manner in Fig. 4.

The most remarkable feature of this equipment, however, lies in the fact that there is a lapse of time of only thirty seconds between the time the scene is photographically recorded on the film by the intermittent camera and its conversion to a line dissected television image from the finished film negative. This has only been made possible by an intensive development of a new photographic technique, especially insofar as film emulsions and developing chemicals are concerned.

A Practical Case

To take a concrete case of scanning dissection, if the film is made to move downwards through the "gate" of the projector machine at the rate of 25 pictures per second, then this can be coupled with a disc having 120 holes revolving at 3,000 revolutions per minute. For each picture movement through the "gate" this disc will be revolved twice and in consequence 2×120 apertures will trace across it, giving a 240 line dissection. This apparatus can be used for televising events of international or national importance, either interior or exterior, and the results shown so far leave no doubt as to the efficiency of the method.

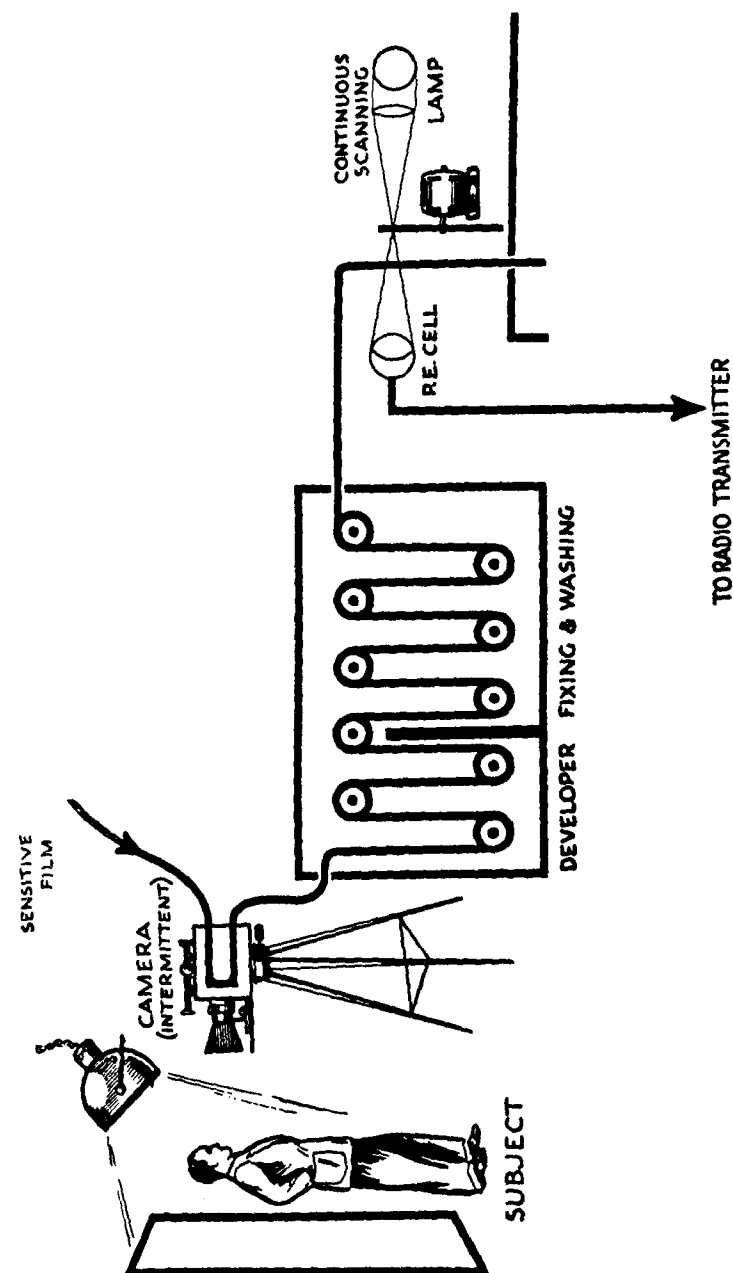


FIG. 4.—Showing pictorially how the intermediate film apparatus works.

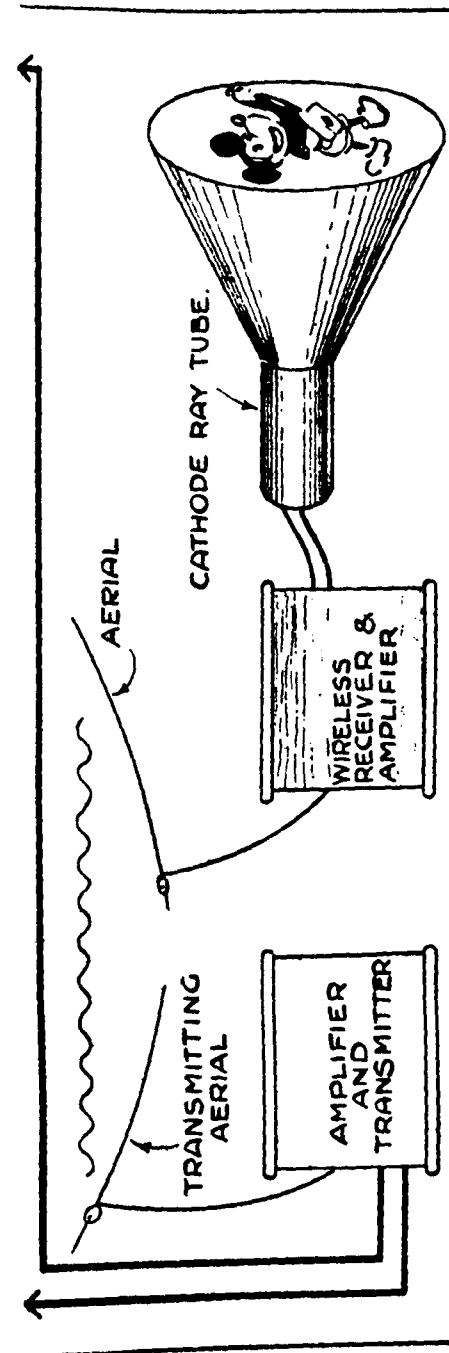
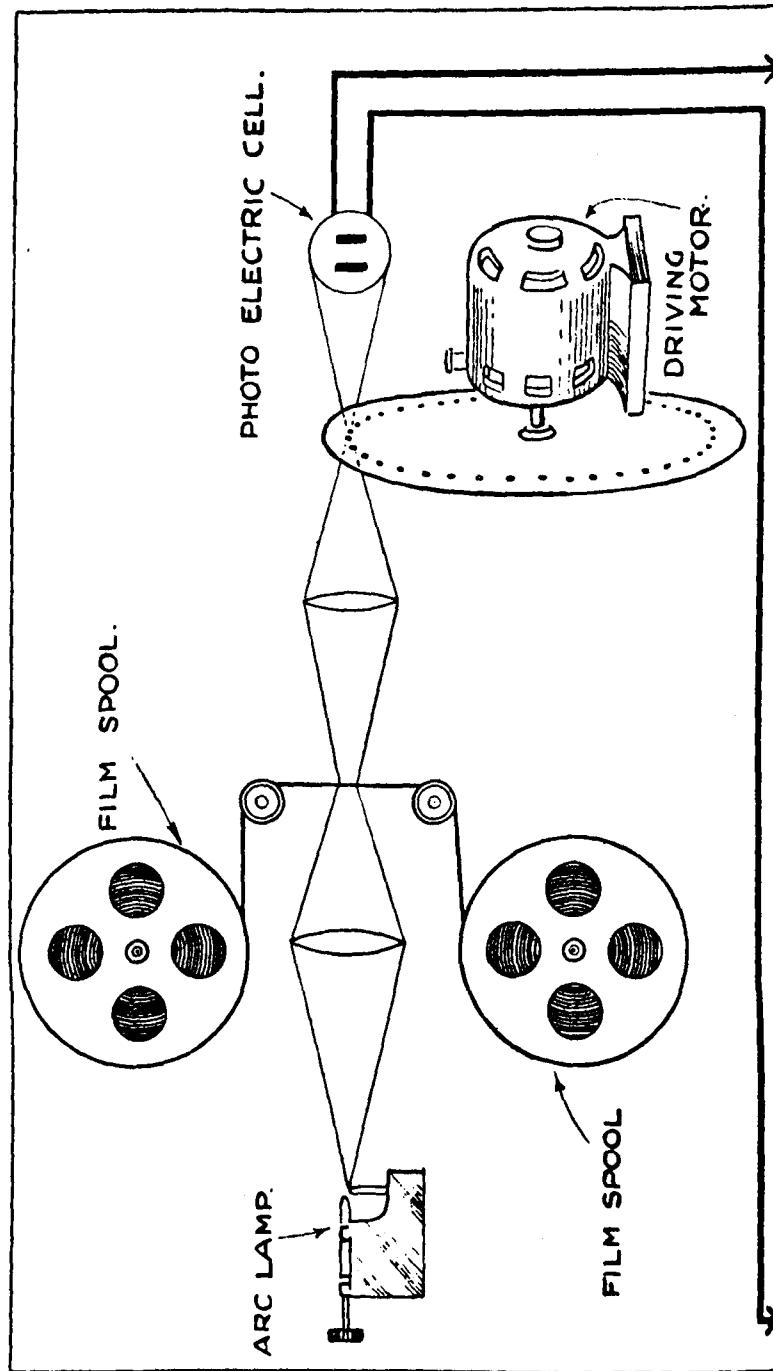


FIG. 5.—The televising of standard talking films is carried out in this way.

When it is desired to televise standard talking films no photographic processing is required as the film is supplied as a celluloid print. For scanning purposes, therefore, the camera and tanks are replaced by a talking film projector which has its interrupter mechanism removed to allow the film to pass through the "gate" at a steady speed. The method employed for scanning is identical with that for the intermediate film apparatus, that is, it utilizes a rapidly revolving disc having a circle of apertures, an arc lamp, and a photo electric cell with amplifier as shown in Fig. 5. The transmission of visual transparencies in this way has reached a high stage of development, but the desire for showing persons and scenes from real life instantaneously instead of from a celluloid

record has stimulated the invention of other scanning devices which avoid any form of mechanisms such as discs, prisms, mirror drums, etc. It is anticipated that these wholly electronic scanners because of their relative simplicity and small size will find their place quite soon in every commercial application.

An Electron Camera

In one of these devices a normal system of lenses focusses an optical image of the scene to be televised on to a circular plate located at the back of a cylindrical glass tube having all the air pumped out. A uniform coating of sensitive photo electric material covers this surface and the optical image in terms of light variations produces an emission of electrons (tiny particles of negative electricity) from every point on the surface which is directly proportional to the light intensity at that point. This resultant electron image is drawn forward by a positive voltage applied to a small diameter metal anode cylinder at the other end of the tube, the correct focus being maintained by a coil surrounding the tube and extending nearly the whole length. With the previous devices described, a scanning aperture or spot has explored the scene to be televised, but with this electronic device the electron image is moved bodily over a fixed aperture. This is brought about by having two pairs of coils mounted at right angles to one another external to the tube. Varying currents are passed through the coils, one at high frequency (6,000) and one at low frequency (25). Fluctuating magnetic fields are thereby produced and these have the effect of displacing the complete electron image in both a horizontal and vertical direction in the plane of the tubular anode. By having a very tiny aperture in the anode plane with a metal collector disc behind it, the electrons of the image pass through the aperture in their correct density formation in a series of horizontal lines in sequential formation. The successive elementary portions of the image so collected constitute the derived

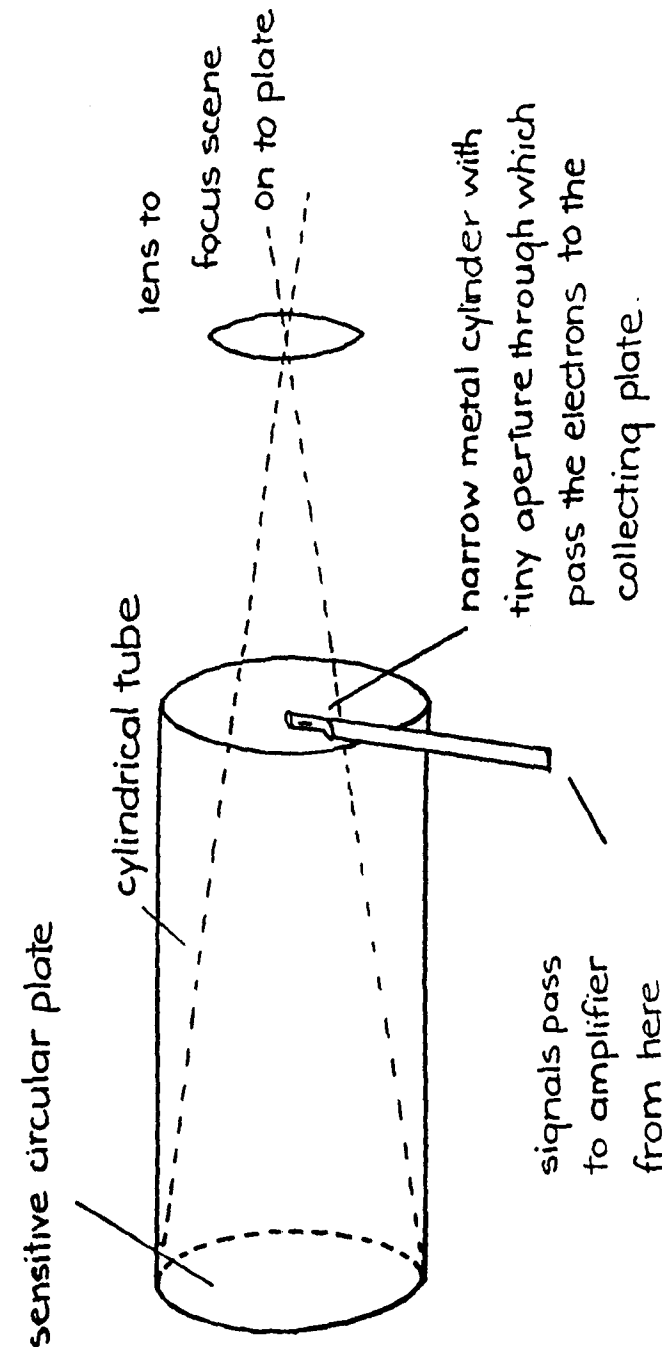


FIG. 6.—The bare details of the glass tube used in the electron camera. Focussing and scanning coils surround this tube when it is used in practice.

television signal for this electron density (and in consequence the electrical signal so produced) and are directly proportional to the original light and shade of the optical image (see Fig. 6).

Radiating the Signal

No matter how the television signal is generated it has to be radiated into space as a radio signal in order to allow it to be received on the appropriate television sets (see Fig. 7).

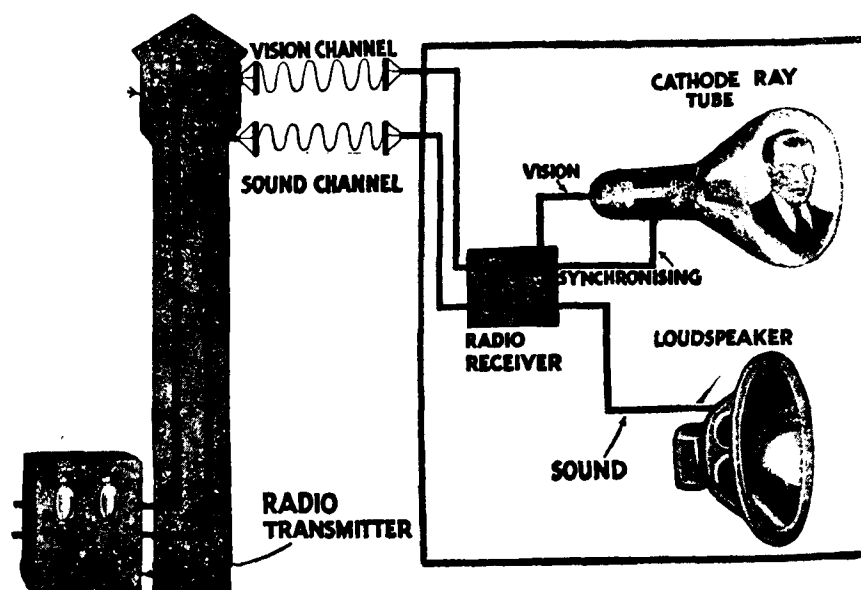


FIG. 7.—Showing how the signals are radiated into space for reception purposes.

Due to the enormous frequencies involved in a high definition television signal (the maximum frequency exceeds two million cycles per second) it is not possible to use the ordinary medium or long waves so familiar to users of sound receiving sets. It has been found necessary to employ ultra short waves, that is, those with a wavelength below 10 metres. Unfortunately, the range over which these waves will extend is limited almost to the horizon so that it is necessary to choose a high site for positioning the transmitting aerial. In this

way the range can be extended, for the waves travel in straight lines somewhat like rays of light. It is as well to record, however, that ultra short wave signals are free from fading troubles such as are encountered in radio reception on the broadcast band.

As far as the radio receiver is concerned this must be of a special type capable of handling without mutilation the enormously high frequencies involved in the signal. Instead of passing the set's output signal to a loud-speaker, however, it must be made to operate a device which will reproduce pictures in light and shade which are replicas of the scene televised from the receiving end. This involves the use of a cathode ray tube, a device which is no doubt unfamiliar to many readers of this journal. In general it consists of a large evacuated glass envelope, cylindrical in shape at one end where the electrodes are accommodated, and then opening out to a conical form to terminate in an almost flat circularly bounded face as shown in Fig. 8.

A Cathode Ray Tube

The first active electrode is called the cathode, being rendered active by passing an electrical current through it, just as with the filament of an ordinary valve used in a radio set to-day. The activity evidences itself as an intense electronic agitation inside the filament, and owing to the high temperature generated some of the electrons (minute particles of negative electricity) near the surface are actually "boiled off" or overcome the surface tension and attraction, just as water vapour escapes when the water is heated. The electrons form a cloud (invisible to the eye) round the cathode and it then becomes necessary to guide them electrically along a path towards the front of the cathode ray tube.

For this purpose an anode, in the shape of a circular metal disc having a small central hole, is positioned close to the cathode (see Fig. 8). Some of these attracted electrons instead of striking the anode now pass right through the hole and proceed to the screen, but a large proportion of them are

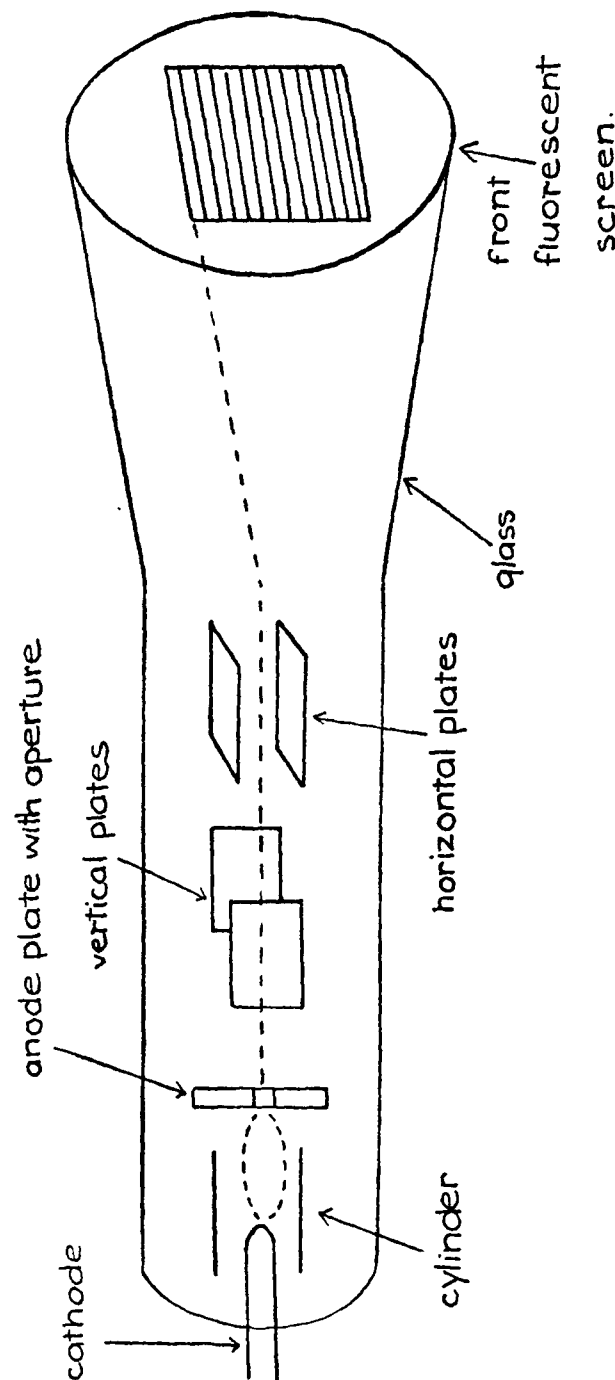


FIG. 8.—The bare elements of a cathode ray tube.

obstructed by the plate itself. In order to minimize this effect an electrical focussing is introduced by surrounding the filament with a cylindrical shield. To this is applied a negative voltage and the resultant electrostatic field repels or guides the negative electrons so that they crowd towards the anode hole, while the high positive anode voltage accelerates them so that they pass through the orifice at very high velocities and proceed to the screen in the form of a narrow beam.

The high velocity with which they strike the fluorescent coating of the screen (a chemical preparation sprayed on the interior during manufacture) renders them visible as a spot of bright light and this can be focussed down to a very small area. If no external influence is brought to bear on this electron beam it will remain steady and the spot evidence itself as a stationary but small light area on the screen. For television picture reception, movement must be imparted to the spot in an ordered number of built-up lines to cover the available scanning area with rectangular boundary limits.

Moving the Spot

In one scheme a small pair of metal plates is located between the anode and the screen (see Fig. 8) inside the tube neck so that the stream of electrons passes between them in its passage to the screen. Owing to the electron's negative electrical character, the beam will be "bent" from its original neutral path if a voltage difference is caused to exist between this pair of plates, the amount of divergence naturally being dependent upon the magnitude of the potential applied to the plates. By varying this voltage the spot will move in exact relation to the voltage changes.

By imparting to the vertical plates a steadily increasing potential, the spot will move across the screen and trace a horizontal line at constant velocity. Now at the end of the traverse it can be arranged for the voltage to be removed suddenly and so make the spot "fly back" at a very high speed to its initial position. This cycle of changes involving a steady voltage rise and an immediate reversion to original

conditions is popularly termed a saw tooth movement and is really the first criterion of the required scanning action, where at the transmitting end this condition is produced by the exploring apparatus described earlier.

With this single pair of deflector plates the bright spot traces and flies back over the same path on the screen, whereas it is essential to make this repetitive action take place over separate and distinct paths next to one another. This is done by inserting another pair of metal plates similar to the first pair but located between them and the screen, the plates in this case being mounted horizontally, as shown in Fig. 8.

Without any varying field applied to the vertical plates, a varying potential of similar characteristics to that just described imparted to the horizontal plates, makes the spot trace a vertical line on the screen. These two traces are now combined, making the horizontal one (vertical plates) of high repetitive frequency (actually the line sequence frequency which in a 240 line 25 pictures per second television system requires a pulse variation $240 \times 25 = 6,000$ times per second) and the vertical one (horizontal plates) of low repetitive frequency (in practice this conforms to the pictures per second). With this double field variation acting on the beam of electrons the spot will trace out a rectangular area of light in a series of horizontal lines.

Tracing the Lines

Starting at the top of the screen, the spot moves from left to right (A to B in Fig. 9), due to the steady rise in voltage applied to the vertical deflector plates. At the same time a more gradual voltage rise applied to the horizontal deflector plates causes the spot to trace, not an exactly horizontal line, but one which slopes *very* slightly in the direction of its motion. At the end of its sweep (B) the spot is really just below the plane occupied at the beginning of the trace (A), and at this instant the electrical device producing the electrostatic field between the vertical pair of deflecting plates is made to bring about a collapse of the field. This

makes the fluorescent spot fly back horizontally at enormous speed to C.

The cycle of operations is repeated and the next line (CD) traced, and so on down the available screen area, each line being just below the trace of its immediate predecessor owing to the more gradual attracting action of the potential changes applied to the horizontal deflector plates. When

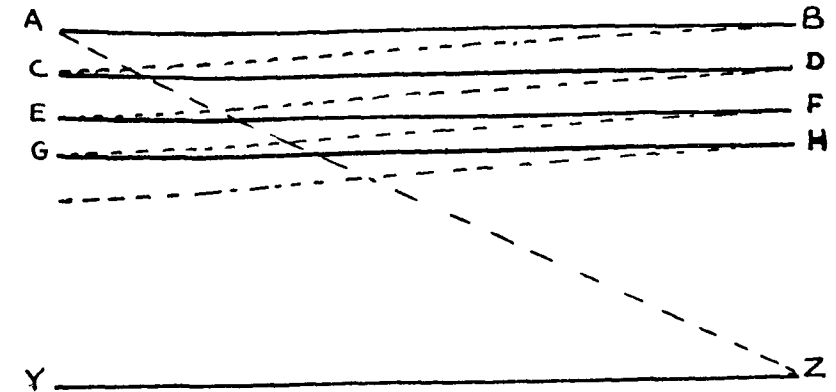


FIG. 9.—An exaggerated impression of how the lines are traced out on the cathode ray tube screen.

the last line (YZ) has been traced the electrical device connected to the horizontal plates "triggers" and the spot (due now to the synchronized collapse of both electrostatic fields) flies back to the starting point to commence the whole series of operations over again.

For the purpose of reproducing these double voltage changes in saw tooth formation but at different frequencies, dual electrical time bases are employed. It is really outside the scope of this article to deal with the design and complete functioning of this equipment. It can be stated, however, that the required voltage variations are brought about by the controlled charge and discharge of fixed condensers connected to the deflector plates.

The spot traces and retraces its path to give 240 horizontal lines (or more or less) twenty-five times per second, and in this way simulates the scanning conditions of the transmitting end.

Modulation and Focussing

Unmodulated, the number of electrons reaching the screen is a constant quantity, but if this number can be increased and decreased the effect will be to produce light and dark picture portions respectively. This is known as intensity modulation and is the most common method employed in the receivers now being developed. If this varying signal voltage from the radio receiver was applied direct to the negatively biased cylinder of Fig. 8 without any other electrode adjustment, then the intensity of the spot would vary but in addition the focus of the spot would alter and an imperfect or "fluffy" picture be obtained.

In practice, therefore, the electrode system used in the highly evacuated cathode ray tubes employed for high definition television receivers is modified somewhat when compared with the simple cathode, cylinder, anode, and deflector plate combination just described. One method is to use a cathode and control electrode (negative cylinder) together with a pair of accelerating electrodes. The last-named in conjunction with the cylinder accomplish electro-statically the focussing of the beam.

By a proper adjustment of the applied voltages the spot focus is maintained while allowing the incoming radio signals to modulate the cylinder and so produce the intensity variation of the moving spot on the screen. The spot size remains constant but its intrinsic brilliancy alters in exact conformation to the incoming signals, and so builds up the picture in light miniature of the scene at the transmitting end. This is always a difficult subject to portray photographically, but in an accompanying illustration is shown an actual untouched reproduction of a radio picture as seen on a cathode ray tube screen in a complete receiving set.

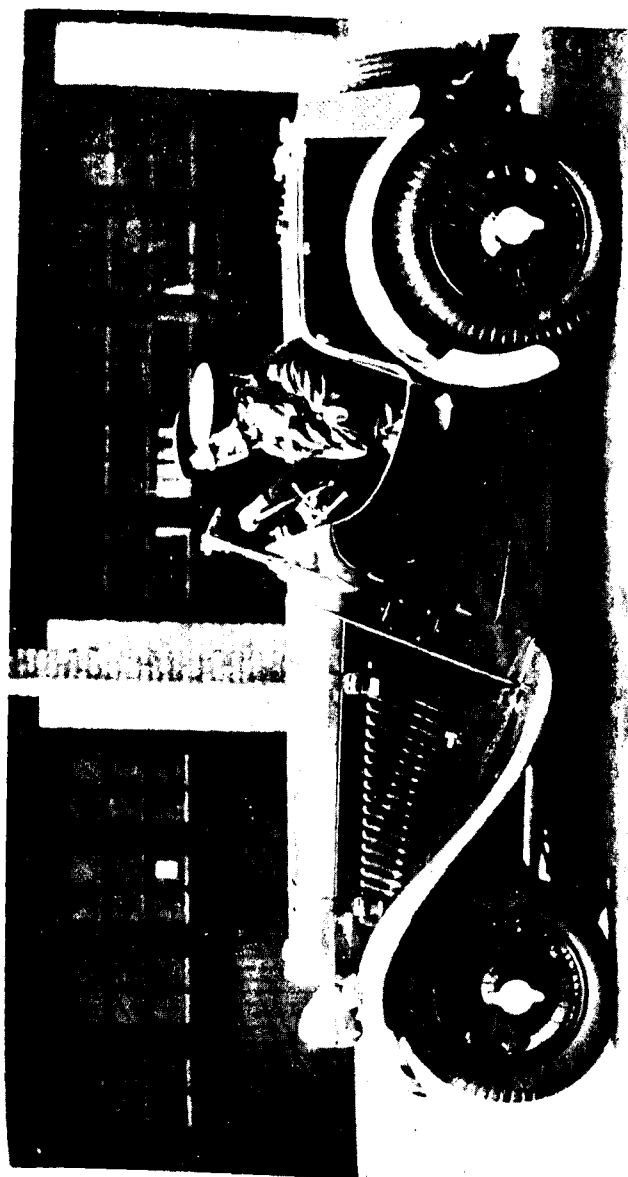
Receiving Sets

Full details of the television sets are not yet available, but in general they will be supplied complete with aerial equipment consisting of a dipole aerial (thick stiff wire limited to half the wavelength employed for the transmission



THE 10 KILOWATT 7-METRE ULTRA SHORT WAVE RADIO TRANSMITTER INSTALLED AT THE CRYSTAL PALACE

(face p. 222)



THE LATEST TYPE OF WIRELESS CAR. THE 'LE MANS' SINGER. THE WHOLE OF THE WIRELESS EQUIPMENT IS CARRIED IN THE SPACE BETWEEN THE SEATING AND THE PETROL TANK AT THE REAR

TELEVISION SIMPLY EXPLAINED 223

of the vision signals) and a screened down-lead. This aerial is mounted on the roof of the house for the best results, but quite satisfactory reception of the television picture will be obtained when the aerial is attached to the side of the house, or even accommodated inside the room in which the television pictures are to be observed.

With large size cathode ray tubes it is better to accommodate the tube in vertical supports so that the fluorescent screen is at the top of the set. The image built up on the screen is then reflected into a mirror mounted in the hinged lid, and this can be observed very clearly by a seated audience when the mirror is inclined at an angle of 45 degrees. The picture area limits are, at the moment, 12 inches horizontal by 9 inches vertical, while the image is black and white in colour and extremely bright.

With any high definition television service it is, of course, necessary to synchronize both the receiver and the transmitter, otherwise the picture will not remain steady within its frame. In the case of a 240 line 25 picture per second transmission this means a high-frequency synchronizing pulse of 6,000 per second and a low-frequency synchronizing pulse of 25 per second. These signals are generated at the transmitting end by apparatus associated with the original scanning equipment, and the double pulse produced in this way is injected into the picture modulation signal to be radiated into space on the radio carrier wave.

At the receiving end these three distinct signals are separated out by special selector circuits. The picture modulation passes to the appropriate modulation electrode of the cathode ray tube, while the high-frequency and low-frequency synchronizing pulses are fed to the grid of a valve in the appropriate time base generating circuits. Here they are made to trigger or control the scanning action of the spot on the tube's fluorescent screen, the synchronizing being most effective and capable of producing a rock steady picture, quite apart from the extremely important advantage that the apparatus is noiseless in operation and involves no moving parts.

Theft of Petrol

(A NOVEL IDENTIFICATION TEST)

By SUPERINTENDENT WILLIAM KERR

Stewartry of Kirkcudbright Constabulary

A CASE which not only tested the craft and ingenuity of the police officers to whose lot fell the task of its investigation, but which also created wide interest on account of the original methods employed in its detection, was one of petrol stealing which came before the Sheriff Court at Kirkcudbright in 1934. A novel feature, which brought unstinted praise from the Bench, and has been the import of inquiries since received from Chiefs of Police in this and other countries, was the successful use of phenolphthalein in tracing and identifying the stolen spirit.

Through the kind offices of his principal, Alexander Donald, Esq., O.B.E., Chief Constable of the Counties of Kirkcudbright and Wigtown, the author has been permitted to publish the following notes of the case, in the hope that these may be of interest to readers of THE POLICE JOURNAL.

Early in 1934 a dairy farmer in the Stewartry of Kirkcudbright complained to the police that petrol was being stolen from the petrol tank of a motor lorry used for the haulage of milk from his farm to Kirkcudbright railway station. The dairy was under the charge of a dairyman and his family, including two sons whose special duty it was to haul the milk to the station.

A 24 h.p. Ford motor lorry was placed at the disposal of the dairymen for this special purpose, and each son acted as driver on alternate weeks. The free hand allowed in the use of the lorry had been extended to them in the purchase of petrol, and it had been the practice of the drivers to obtain

THEFT OF PETROL

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supplies at the village garage, situated 2 miles from the farm on the road to Kirkcudbright.

It had lately been suspected that supplies of petrol for use in the lorry were considerably in excess of legitimate requirements. Suspicion had fallen upon the dairymen, particularly upon the two drivers of the milk lorry, by whom the petrol was ordered and received. They possessed and regularly used a private car of their own, and it was believed that they were keeping themselves supplied with petrol taken from the tank of the lorry. It was understood that they no longer purchased private supplies at the village garage.

Undoubtedly the statement *prima facie* pointed to theft by these servants of their master's property. Nevertheless, there was much uncertainty about the matter. The lorry was an old vehicle and its rate of petrol consumption was a matter of guess-work. It might be using more spirit than was thought to be the case. It was possible, too, that the dairymen could be obtaining supplies of petrol for their own car further afield.

Moreover, evidence that all the petrol delivered into the tank of the motor lorry could not be consumed by the engine of that vehicle in the haulage of milk to the railway station, would not be, of itself, sufficient proof that the persons in charge stole the balance of the spirit. And even if petrol was, in fact, being stolen as suggested, it was being almost immediately thereafter consumed.

Investigations were undertaken by the writer (at the time an inspector) and Constable Charles K. Hutchinson, Kirkcudbright. An early opportunity was taken to ascertain the rate of petrol consumption of the motor lorry under normal running conditions. This was found to be 15 miles per gallon. It was confirmed that for nine months prior to the complaint being lodged no petrol had been purchased at the village garage by the suspects for their own car.

Examination of the accounts for petrol for the lorry showed that supplies for this purpose were in quantity much the same each month. When compared with the approved

mileage of the lorry, however, it was quite apparent that only about half of the petrol drawn could possibly be consumed in the haulage of milk, a double journey daily that did not normally exceed 32 miles.

In the preceding month of November the amount of petrol delivered into the tank of the lorry was 125 gallons, while the mileage for that month was 928. This gave the ridiculous figure of 7 miles per gallon approximately. At 15 miles per gallon, which was considered to have been normal at that time, the approximate consumption would have been about 62 gallons, which left 63 gallons unaccounted for in a single month.

In the three succeeding months of December, January, and February, they had drawn a total of 340 gallons and covered 2,684 miles. At the same rate of consumption—15 miles per gallon—about 179 gallons only could have been used in the lorry, leaving 161 gallons presumably stolen. With petrol at 1s. 4d. per gallon, the loss to the farmer over that period of four months was, therefore, in the neighbourhood of £15; or at the rate of £45 per annum.

Watch was kept on the lorry between the farm and the railway station, but nothing suspicious was observed to take place *en route*. A rather odd circumstance noted was that although a shed was provided for garaging the lorry at the farm, it was invariably parked at the back door of the dairyman's house. No doubt this was done with a view to facilitating the nightly raid on the tank's contents. Certainly the shelter which the position afforded could do much to guarantee safety from discovery.

In strange contrast to the cunning later exercised here in its extraction was the brazen effrontery of the two drivers taking in supplies of spirit. Although their daily needs hardly exceeded 2 gallons of fuel, they would, without the slightest attempt at an explanation, day after day, draw in at the source of supply, and call upon the attendant to "fill her up".

So stood the position at the end of a month's observation and inquiry. Everything pointed to deliberate and systematic

theft of petrol by the two drivers of the lorry, a theft of which the father, if not an active participator, could hardly be in ignorance. Yet, near as the police had got to detection of the culprits, they could not say beyond a shadow of doubt that these two drivers of the lorry were the thieves of the surplus petrol.

To attempt long nightly watches on the chance of catching them in the act was considered impracticable. The farm was a large one, and situated near the dairy premises there were six occupied cottages, besides the dwelling-houses of the farmer and dairyman. The coming and going of residents, while rendering the theft a somewhat risky business at any time, would make impossible a nightly watch from dark to daylight.

Another difficulty was that of proving the identity of petrol which the police might find in the petrol tank of the dairymen's private car, or elsewhere in the possession of the drivers. The question of "doping" the petrol in the tank of the motor lorry and afterwards taking a sample from the tank of the dairymen's car had been in the minds of the police officers for some time. It certainly appeared that before the alleged stolen spirit could be identified to the satisfaction of a judge, it would require to be marked in some way that would put doubt beyond question.

A local chemist suggested the use of iodine crystals previously dissolved in petrol to "dope" the lorry tank. This was tried once or twice, but the chemist who examined samples taken would not say more than that there was "something" in them. This was no real help to the police, and so that particular method was abandoned. It was just as well perhaps, as the lorry began to give trouble, owing to "funny looking stuff" choking the carburetter. Fortunately for the police, the particular brand of petrol being used in the lorry was not a popular one in the district, and the garage proprietor merely got blamed for supplying dirty petrol.

However, the officers were nearer than they thought to a solution of this difficulty. The chief chemist of a large

petrol manufacturing company, whom they consulted regarding the point, recommended the use of a chemical compound named phenolphthalein. Phenolphthalein is an infallible indicator in the identification of petrol. When dissolved in pure alcohol it will readily associate with petrol, and can be used in the tank of a motor vehicle without affecting in any way the running of the engine. Not only so, but phenolphthalein is invisible in petrol until a certain detector is added to a sample under test.

The detector can be either a 1 per cent caustic soda solution, or a 50 p.c. solution of sodium carbonate. For clean petrol either detector is suitable, but if samples under test are very oily it is advisable to use the sodium carbonate solution.

If phenolphthalein were present in a sample under test, the application of the detector solution would cause the petrol to show a pink coloration. If no phenolphthalein were present in the sample the result would prove negative, i.e. no change of colour would take place in the petrol when detector solution was added.

Ten gr. phenolphthalein dissolved in 20 c.c. of pure alcohol would be ample to "dope" a petrol tank containing 10 gallons of petrol. The use of small bore test tubes was advisable in making tests. Two or three fluid ounces of the suspected petrol should be poured into a tube. Detector should then be added; one part detector to three parts of petrol, it was said, would give satisfactory results.

Recommended quantities of phenolphthalein and pure alcohol were purchased from a chemist, and tests carried out with the police patrol car. The results of these, to say the least, were startling. With this new dope the officers conducting the inquiries could now carry on, confident that if petrol was, in fact, being stolen from the tank of the lorry and transferred to the tank of the private car, phenolphthalein would indicate this at once.

In preparation for the first "doping" of the lorry tank, $6\frac{1}{2}$ grains phenolphthalein dissolved in 10 c.c. pure alcohol, sufficient for six or seven gallons of petrol, about the amount

thought to be in the tank, was procured and made ready in a small bottle for use when the time arrived. The use of the police car as a conveyance to and from the farm was out of the question, as the car was too well known locally. To get over this difficulty arrangements were made with a trustworthy garage proprietor for the use of a car of his at any time of the night.

In the dead of night the two officers motored to within half a mile of the farm and there side-tracked the car. They completed the remainder of the journey on foot, and arrived at the farm steading about 2 a.m. The lorry, barely visible in the darkness, was located on its usual parking ground at the back door of the dairyman's house. A light burned in the kitchen and sounds of snoring came down to them from a bedroom above, but without hesitation the officers closed upon their objective and groped for the cap of the petrol tank. In the calm atmosphere of the night the screeching of its unwilling thread sounded like a pneumatic drill in action; but at last it came free.

In another second the phial of dope was out and emptied down the open neck of the tank, the faintest gurgling sound telling the anxious administrators that it had gone safely home. Replacement of the cap disposed of the only clue to their visit, and with this successfully accomplished they silently retraced their steps to the waiting car; and home.

Two nights later, after having allowed time for doped petrol to be transferred from the tank of the lorry to the tank of the car, the officers returned again to the farm for the purpose of securing the desired samples for test. A much more difficult task this than doping the lorry, and one requiring the exercise of extreme caution. Success depended upon secrecy; discovery meant failure.

At 2 a.m. they drew near the farm, armed with a length of small bore rubber tubing and a few clean 5 gill bottles. The strange sounds of farm life in the night-time made approach to their objective something of a "hair-raising" experience, until the sources of their harmless origin were

satisfactorily traced—to a clattering windmill, rattling cow chains, champing horses, or scampering rats.

Reached at last, the garage door was found to be bolted on the outside, but it was only the work of a minute or two for them to quietly slip the bolt and let themselves inside. Closing the door behind them, they risked the flash of a hand torch to get their bearings, and found that with the exception of a foot or so on either side the car took up most of the floor space. This made movement within rather difficult in the darkness, but without further loss of time they groped their way to the front of the car and commenced operations.

Unlike that of the Ford, the petrol cap of the car was under the bonnet. This necessitated the bonnet being raised, an action which caused it to creak alarmingly (until later experience with it showed that it was best raised with a jerk); but the cap of the tank was less noisy than that of the lorry.

One end of the rubber tubing was then slipped into the tank, and through the tube 5 gills of the tank's contents were syphoned into a bottle. The cap of the tank was immediately replaced and the bonnet closed down, after which time was taken for a hasty look round the garage for any other clue. A 2 gallon can found on the floor was inspected, and from its dregs a second sample was taken, the can being left where found. Outside again, they closed and rebolted the door, then slipped away in the darkness.

In daylight the samples were tested in the recommended manner. Both were found to contain traces of phenolphthalein, but not in sufficient quantity to satisfy the officers. On pouring a little of each sample into test tubes and adding detector solution pink specks, but only specks, burst into view. It was considered advisable to continue doping and taking samples until more positive results were obtained. Future samples, it was thought, were likely to contain more and more phenolphthalein.

Night after night almost for more than a week afterwards similar visits were made to the farm, when the lorry was doped and further samples taken from the car and sundry cans in

the garage. To accelerate matters the doses of phenolphthalein and pure alcohol were sometimes doubled, and on one or two occasions an extra tube of dry phenolphthalein was discharged into the tank.

During this time the petrol gauge of the car was observed to rise and fall, rise again, then drop to about zero. Gradually, as the more heavily doped tank was drawn upon, the samples taken from the car became stronger and stronger in their proof of the presence of phenolphthalein. On their ninth visit, when it was observed that the tank of the car had been completely replenished, samples procured from tank and cans produced evidence of the dope that was positive to an unexpected degree. Tested in daylight these turned wholly pink.

It was now time to take definite action against the thieves, which was done without further delay, and in the open. Inquiries by telephone to the farmhouse brought word that the car had recently been driven away from the dairy. A quick search of the district in the police patrol car soon located it, however, parked on the side of the public road opposite the cottage of a friend, where members of the dairyman's family had gone to visit.

The car was in charge of one of the suspected sons, who was at once charged with stealing a certain quantity of petrol over a specified period. Thereupon there followed a somewhat unusual exhibition on the public highway. Three police officers, with three lengths of rubber tubing, syphoning petrol from the tank of a car into three petrol cans. In addition the spare can was removed from the car and taken possession of.

The next step in the inquiries was at the farm. Here a search of the dairyman's garage produced a hand suction pump with piece of rubber hose attached. This smelled strongly of petrol, and proved to be the instrument used by the thieves to extract the stolen petrol from the tank of the lorry. One or two petrol cans, believed to have been used to carry the stolen petrol from tank to tank, were also secured

for examination and test. The dairyman strenuously denied all knowledge of the theft.

The lorry, driven by the second accused son, was met by the police returning from Kirkcudbright. They took possession of it and acquainted the driver with the charge against him. The lorry was then driven away by the police to the village garage near-by, where all the petrol was syphoned off it into cans and kept for examination and production along with other samples.

For the purpose of testing the lorry and ascertaining its rate of petrol consumption, a fresh gallon of petrol was put into the tank and the tests were made by Constable Hutchinson, who is a qualified motor engineer. It was found that the vehicle was only running on three of its four cylinders, trouble which it had developed within the preceding twenty-four hours. However, it ran 10.1 miles before the gallon of spirit gave out. Later tests, when it had been overhauled and the engine put right, showed that it was capable of doing 22 miles per gallon.

In order that the source of supply might be proved to be free from phenolphthalein, 2 gallons of petrol from the pump at the village garage, from which the lorry had been regularly supplied, were also taken possession of by the police.

Interesting tests were also later made with the hand suction pump found in the dairymen's garage, when it was found that 2 gallons of petrol could be pumped with it from the lorry tank in nine seconds without creating the slightest noise.

A report of the case charging the three accused—father and two sons—with having between 1st November, 1933, and 21st March, 1934, stolen 201 gallons or thereabouts of petrol, was lodged with the Procurator Fiscal of the Sheriff Court at Kirkcudbright, James Williamson, Esq., M.A., LL.B., who in due course issued a Complaint against them.

In the meantime the principal samples of petrol, together with the hand pump, had been submitted by the Chief Constable to Robert Guy, Esq., Chief Chemist of Scottish Oils, Limited, Central Laboratory, Middleton Hall, Uphall,

West Lothian, for his expert examination and report. The following is a copy of part of Mr. Guy's report of the result of his examination :—

RESULT OF TEST FOR DETECTION OF PHENOLPHTHALEIN

<i>Description of Samples.</i>	<i>Quantity in ccs.</i>	<i>Result of Test.</i>	<i>Remarks.</i>
1. From tank of private car on 9/3/34 . . .	250	Positive	
2. From black can in garage on 9/3/34 . . .	70	Positive	
3. From tank of private car on 15/3/34 . . .	575	Positive	
4. From black can in garage on 15/3/34 . . .	230	Positive	
5. From tank of private car on 18/3/34 . . .	410	Positive	
6. From yellow can in garage on 18/3/34 . . .	14	Negative	Quantity too small for exhaustive test.
7. From spare can on private car on 19/3/34 . . .	215	Negative	
8. From tank of private car on 19/3/34 . . .	185	Positive	
9. From tank of private car on 20/3/34 . . .	115	Positive	Purple coloration distinct.
10. From tank of private car on 21/3/34 . . .	580	Positive	Purple coloration distinct.
11. From source of supply (garage petrol pump) on 22/3/34 . . .	510	Negative	
12. From tank of private car on public road on 21/3/34 . . .	9,000	Positive	Purple coloration distinct.
13. From spare can on car on 21/3/34 . . .	4,500	Positive	Purple coloration very faint ; only traces present.
14. From can in garage on 21/3/34 . . .	130	Positive	Purple coloration very deep.
15. From tank of Ford lorry on 21/3/34 . . .	9,000	Positive	Purple coloration very distinct.

The hand pump, with piece of hose attached, was examined for presence of phenolphthalein. Only a mere trace was detected on the metal parts, but its presence was easily proved on the inside of the rubber hose.

The trial took place on 3rd May, 1934. In their evidence the police officers described how they had treated the petrol in the tank of the lorry with phenolphthalein, and how they had taken samples from the tank of the accuseds' car and sundry cans, etc.; and also of the various tests made.

The examination of the samples submitted to Mr. Guy was sworn to by him. In addition he gave a demonstration in Court of the use of phenolphthalein in the identification of petrol, and of the methods by which he arrived at his conclusions. To the accused in the dock this "turning of the water into wine" was the last straw. Their agent (solicitor) rose and asked leave of the Court to consult with his clients.

On the Court resuming after the short adjournment granted for this purpose, defending agent intimated that he now desired to tender a plea of guilty on behalf of the two sons, but that the father still adhered to his plea of not guilty. This was accepted by the Procurator Fiscal, and the Judge thereupon proceeded to address the Court and pronounce sentence on the two remaining accused.

Such was the satisfactory ending of an extremely trying, if not uninteresting, case. Like many another in the same category, there was much about the investigations that was not evidence, and much that was not told in the witness-box. But when the police feel that their prestige is at stake there is little that they will not risk to maintain that precious virtue of the Service.

That policemen would make successful burglars may or may not be true, but when the Judge says, as he said to the accused in this case, "£15 or sixty days' imprisonment," and to the police, as he remarked of the officers in charge, "Never has a charge been more clearly proved. It has been the most concrete case which the Crown has yet placed before me," well—better policeman than burglar!

The Exercise of Discretion

"DISCRETION is the science of understanding to discern between falsity and truth, between right and wrong, between shadows and substance, between equity and colourable glosses and pretences, not according to the will and private affections." (*Rooke's case*, A.D. 1598.)

"Discretion means . . . that something is to be done within the rules of reason and justice, and not according to private opinion, according to law and not humour. It is not to be vague and fanciful, but legal and regular." (*Lord Halsbury*.)

These familiar footnotes appear in every book on magisterial law—they are quoted no less than sixteen times in the 45th (current) edition of Paterson's *Licensing Acts*—and help justices to exercise their important functions, particularly in relation to their administration of intoxicating liquor laws, in such cases as they are charged to grant or refuse, *as they think fit*, applications which come before them.

The result is that, in the exercise of their judicial discretion, justices and others concerned with the administration of justice are armed with precedents (appropriately recited in the available authorities and textbooks) which enable them to conform to the dicta above quoted.

The simply expressed injunctions of the Elizabethan and Victorian jurists apply with equal emphasis to the work of the police; for few steps are taken by policemen, in all ranks, in the course of their duties, without the need arising for the exercise, in some degree, of the virtue of discretion. The extent to which discretion should be exercised inevitably depends on the individual circumstances of the particular

case, and, like the English Constitution, it is unwise to attempt to frame, in cold print, any dogmatic definition of the term as it should be applied to police work.

Discretion in Arresting

To exercise the discretion required of him, after instruction in the rudiments of his work, the policeman must rely on his common sense and, largely, on his own personal experience. He sees a man in the street in a drunken condition. Now, beyond the fact that "drunk" means "drunk", no legal authority will come to his aid in deciding whether or not he should effect an arrest. He must, in his discretion, decide his own course of action on the circumstances as they arise. If the inebriated and incapable subject of his observation is being moved, with a companion's help, and without hindrance or annoyance to others, in the direction of some convenient place, *e.g.* his home, and he appears unlikely to become a danger to others or himself, a sensible discretion will teach the constable to refrain from exercising the power he possesses to arrest the offender.

Similarly, in other cases where the Statute confers on the constable the power to arrest without warrant for a specific offence, he may, and will, decide on the circumstances of the case whether, on seeing and interviewing the accused, he will apprehend him, as empowered by Statute, or use the alternative of submitting a report to his superior officer for a decision to be taken whether the offender should be brought before the court by process of warrant or summons, or perhaps not at all.

Discretion in Bail

Whenever the constable apprehends without a warrant the law demands the exercise of a judicial discretion by the officer in charge of the police station to which the prisoner is taken in custody, and two courses may be adopted : (i) where

the accused is "charged" with the nature of the offence and informed of the statute under which it is framed ; and (ii) in other cases where, the inquiries being incomplete, it is impracticable immediately to frame the charge for the alleged offender to be brought forthwith, or within 24 hours, before the justices.

The original Statute (Section 38 of the Summary Jurisdiction Act, 1879) which deals with this subject of bail has been amended on two subsequent occasions, *viz.* in 1914 (Criminal Justice Administration Act) and in 1925 (Criminal Justice Act). The amended Section 38 now reads as follows :—

"(1) On a person being taken into custody for an offence without a warrant, a superintendent or inspector of police, or other officer of justice of equal or superior rank, or in charge of any police station, may in any case, and shall, if not practicable to bring such person before a court of summary jurisdiction within 24 hours after he was so taken into custody, inquire into the case, and, unless the offence appears to such superintendent, inspector, or officer to be of a serious nature, discharge the person upon his entering into a recognizance with or without sureties for a reasonable amount to appear before some court of summary jurisdiction at the time and place named in the recognizance, but where such person is retained in custody he shall be brought before a court of summary jurisdiction as soon as practicable.

"(2) If, on a person being so taken into custody as aforesaid, it appears to the superintendent, inspector or other officer aforesaid, that the inquiry into the case cannot be completed *forthwith*, he *may* discharge the said person on his entering into a recognizance, with or without sureties for a reasonable amount, to appear at such police station and at such time as is named in the recognizance, unless he previously receives notice in writing from the officer of police in charge of that police station that his attendance is not required, and any such recognizance may be enforced as if it were a recognizance conditioned for the appearance of the said person before the court of summary jurisdiction for the

place in which the police station named in the recognizance is situate."

Thus when a constable arrests, a statutory obligation is imposed on the officer in charge of the station to whom the person is taken in custody to exercise a wise discretion in the matter of bail.

Discretion on the Beat

It is not, however, solely in connexion with the prosecution of offenders that the police find it necessary to exercise a judicial and sensible discretion, important as the use of that quality is in dealing with alleged offenders. The constable must assume individual responsibility for his acts. The nature of his work, performed as it must be without the close supervision of superiors, depends for success more on the exercise of a sensible discretion than on the other virtues which he should possess. This increasingly applies as the incidents of routine patrol on the beat, even in remote rural areas, become so frequent as to engage the constable's attention for more hours than he should, normally, be required to perform in every twenty-four.

In towns particularly is this so. During the past ten years much reorganization of beats and patrols has been accomplished, to meet modern requirements and conditions, and the tendency has been to abolish the "fixed" routine and methodical patrol of the beat for what is termed "discretionary" beat working. This is done, in effect, by posting the constable to a particular beat, providing him with the machinery, by police boxes or otherwise, for making contact with his appropriate section station or headquarters at periodic intervals, and instructing him to patrol the beats in such a way as he, the individual constable, thinks fit so to do. The success which attended this method of working, in comparison with the old inflexible system of fixed beats, received the approbation of His Majesty's inspectors of constabulary. The inauguration of the discretionary system of beat patrol undoubtedly gave scope to men with initiative

to work their beats with the degree of intelligence and diligence which, more than any other preventive measures, serves to suppress the crimes of theft from the streets and public places, and of breakings into property.

During the initial years of the introduction of discretionary working this system was aided by the fact that constables were armed with their former experience of working beats by routine and methodical patrol. The more intelligent men could distinguish between the defects of a system which required them to patrol, in the fashion of the obedient and disciplined soldier, first up one street and then down another, and the new system which enabled them by personal initiative to deviate from the routine and give their concentrated attention to vulnerable portions of the beat as circumstances required.

In the passage of time, however, it is observed that some of the younger constables, who lack the experience afforded to the older men of working beats by methodical patrol, appear not to possess the ability to exercise the discretion in working a beat which effective patrol demands. There is thus a grave risk that some men, in the initial years of their service, by lack of experience rather than want of zeal, will fail to learn how to patrol in such a way as not to call forth that cynical assertion of the suburban ratepayer—that a policeman is never where he is wanted.

It may be asserted that in his initial years, having regard to the process by which he is selected for appointment and subsequently trained, every constable is keen to patrol his beat in a manner which, if not suppressing crime, will enable him to detect the perpetrators of crime. In the early years, lack of direction and tuition create the risk of inefficiency in patrolling the beat.

To meet this, in the recent reorganization of beats in a City Force, the old system of methodical beat patrol has been reintroduced in a new form, and the following description of one of the reorganized beats illustrates the principle adopted :—

BEAT NO. 4 (THREE RELIEF, FOOT PATROL), SOUTH STREET AND
SOUTHERNHAY

POLICE BOXES.

Principal box : Magdalen Bridge.

Auxiliary boxes : (i) Kiosk at St. Leonard's Road.
(ii) Pillar at Valiant Soldier.
(iii) P.O. Kiosk, Barnfield Road.
(iv) P.O. Kiosk, College Road.

AREA COVERED.

The beat comprises the whole of South Street, the lower part of Cathedral Yard, Southernhay, and Barnfield. The boundary commences at the top of South Street, in Little Stile by St. Mary Major Church; thence down Palace Gate; South Street; Trinity Street; West Southernhay; East Southernhay to Dix's Field; Barnfield Road and Crescent; Archibald Road; Denmark Road; up Heavitree Hill; along Spicer Road to the Mount Radford Inn; thence Magdalen Road; St. Leonard's Road; Magdalen Street; Bull Meadow Road; Holloway Street; the Friars; Horse Lane; Quay Hill; Coombe Street; South Street, taking Sun Street; Guinea Street and George Street to where the boundary commenced.

DESCRIPTION OF BEAT.

With the exception of the shopping area of South Street, Holloway Street, and Magdalen Street, this beat is composed of a good class residential district, and it must be so worked that, whilst the proper supervision is given to the residential area, adequate protection is given to the business property by night, and to the traffic in the main streets by day. The following points are dangerous to traffic and when in the neighbourhood special attention must be paid thereto :—

Barnfield Road at its junction with Denmark Road;
Magdalen Road at its junction with Denmark Road; and
Southernhay East by Magdalen Street.

VARIATIONS.

From 1 p.m. to 2 p.m. relieve No. 4 Traffic Patrol.

REFRESHMENT PERIODS.

<i>Days</i>	<i>Time commences on each relief</i>		
	<i>No. 1</i>	<i>No. 2</i>	<i>No. 3</i>
Mondays and Wednesdays	9.15 a.m.	5.30 p.m.	1.45 a.m.
Tuesdays, Thursdays, and Saturdays	9.15 a.m.	5 p.m.	2 a.m.
Fridays and Sundays	9.30 a.m.	5.45 p.m.	1.30 a.m.

ROUTINE DUTIES.

Switch traffic signals at Mount Radford on and off at the prescribed times; supervise signals at Mount Radford and East Southernhay.

SPECIAL SUPERVISION.

Conduct of licensed houses; see parking regulations are observed at Southernhay East; unnecessary obstruction of streets and foot-paths; prostitutes in Cathedral Yard; begging in Cathedral Yard and Southernhay; conduct of persons leaving the Barnfield Hall; children assembling for and leaving Holloway Street School for Girls and Infants.

POINTS VULNERABLE TO CRIME.

Messrs. Bannisters' pawnshop, 9 South Street and Calanderhay; South Street Post Office; Post Office at 31 Magdalen Road; National Provincial Bank, 49 Magdalen Road; Cathedral and St. Mary Major Church, Cathedral Close; Roman Catholic Church, 25 South Street; jewellers' shops in George Street; lock-up shops; Municipal Offices in Southernhay West; unoccupied houses published in Daily Orders.

METHODICAL PATROL.

Parade at Headquarters at ten minutes to the hour for commencing duty.

Routes on ODD dates

1ST HOUR.—Magdalen Street; St. Leonard's Road; South Street; Palace Gate; Bear Street; South Street; Calanderhay; Little Stile; South Street to the top; George Street; Guinea Street; South Street; Sun Street to Market Street; South Street; Coombe Street; Quay Hill; Quay Lane; Horse Lane; the Friars; Holloway Street; Magdalen Street to the principal box at the scheduled time.

2ND HOUR.—Magdalen Road to College Road; up Spicer Road to Heavitree Road; Barnfield Hill; Denmark Road to Heavitree Road; Archibald Road or Athelstan Road (alternately); thence Barnfield Road; Barnfield Crescent; Southernhay West to the Gas Company's offices; thence Dix's Field; Southernhay East; Magdalen Street to the principal box at the scheduled time.

3RD HOUR.—Magdalen Street; South Street; in Little Stile; out Calanderhay; thence George Street; Guinea Street; South Street; Coombe Street; James' Street; South Street; Holloway Street; Bull Meadow Road; Magdalen Street to the principal box at the scheduled time.

4TH HOUR.—Magdalen Street; St. Leonard's Road; South Street; Palace Gate; Bear Street; South Street to the top; thence George Street; Guinea Street; South Street; Coombe Street; Quay Hill; Quay Lane; South Street to Coombe Street; thence Holloway Street to the Friars; thence Trinity Street; Southernhay West to Bedford Circus; thence Barnfield Road; Denmark Road and Magdalen Road to the principal box at the scheduled time.

Repeat above during the second half of the tour of duty.

Routes on EVEN dates

1ST HOUR.—Magdalen Road to College Road; St. Leonard's Road; Spicer Road to Heavitree Road; thence Barnfield Hill; Denmark Road to Heavitree Road; thence Archibald Road or Athelstan Road (alternately); thence Barnfield Road; Barnfield Crescent; Southernhay West to the Gas Company's offices; thence Dix's Field; Southernhay East; Magdalen Street to the principal box at the scheduled time.

2ND HOUR.—Magdalen Street; South Street; Palace Gate; Bear Street; South Street; Calanderhay; Little Stile; South Street to the top; George Street; Guinea Street; thence down South Street; Sun Street to Market Street; thence South Street; Coombe Street; Quay Hill; Quay Lane; Horse Lane; the Friars; thence Holloway Street and Magdalen Street to the principal box at the scheduled time.

3RD HOUR.—Magdalen Street; South Street; Palace Gate; Bear Street; South Street to the top; George Street; Guinea

Street; South Street; Coombe Street; Quay Hill; Quay Lane; South Street to Coombe Street; thence Holloway Street to the Friars; Trinity Street; Southernhay West to Bedford Circus; Barnfield Road; Denmark Road and Magdalen Road to the principal box at the scheduled time.

4TH HOUR.—Magdalen Street; St. Leonard's Road; South Street; Calanderhay; George Street; Guinea Street; South Street; Coombe Street; James' Street; thence South Street; Holloway Street; Bull Meadow Road; Magdalen Street; thence to the principal box at the scheduled time.

Repeat above during the second half of the tour of duty.

The standing instructions provide that constables on probation, and any other constables individually directed from time to time, will work their beats by the methodical patrol indicated above, subject, of course, to the fixed patrol being abandoned on any occasion when an emergency or other incident of police duty arises to demand their attention. Under no circumstances must formal compliance with the instructions be put forward as an excuse for omitting to attend to an incident of police duty, or to render police services to the general public. The beat descriptions (a separate one is prepared for each beat) are intended also to serve as a basis for the intelligent discretionary working of beats, where discretionary patrol is authorized. "First hour" and "second hour" mean the first and second complete hours between reports from boxes, and, as is usual in the Police Box organization, the system provides for daily variations in the times at which the constables ring in from their respective headquarters. With the above exceptions, all other constables continue to work their beats by discretion. That is to say, the direction he takes in patrolling the beat, and the times at which he will visit his vulnerable properties and premises requiring special supervision, are left to the constable's intelligent discretion. In the course of their visits of supervision the officers and sergeants must satisfy themselves that this discretion is being intelligently exercised, and otherwise

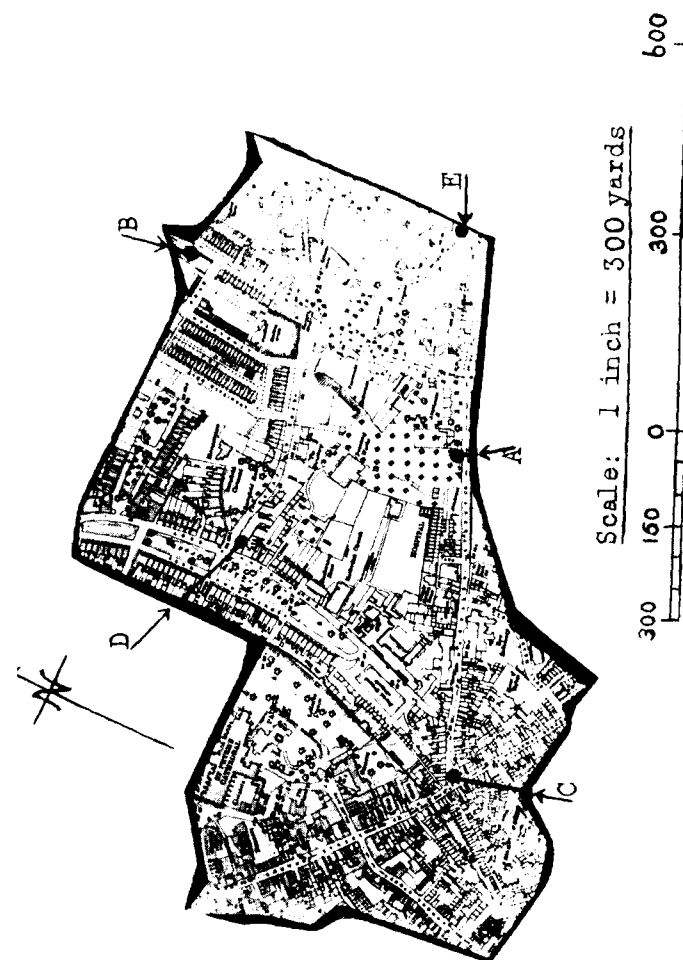
submit a recommendation for instructions to be issued for the particular beat to be methodically patrolled.

It will be noted that the Police Box system is in use, opportunity having been taken in a recent reorganization to install the standard micro-telephone kiosks and pillars supplied by the General Post Office on a party-line system.

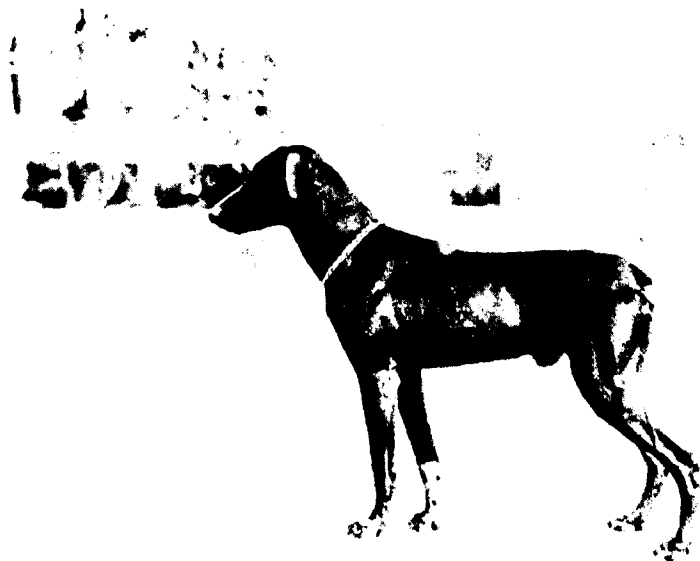
Experience shows that most constables who have already shown their capacity to exercise an intelligent discretion in beat patrol find the foregoing description a useful guide, and an aid to their efforts to suppress crime and complaints on the beat.

In the superior ranks the exercise of discretion is an important matter, and the responsible functions of deciding questions of process were dealt with by Sir Leonard Dunning, who contributed an article on this subject to *THE POLICE JOURNAL* in its first number (Vol. I (1928), p. 39). The Legislature has also found it convenient to entrust Chief Officers of Police with ministerial functions in the regulation and prohibition of fire-arms, explosives, and in the control of pedlars. In these and other spheres the statutory requirement is that applications made pursuant to the particular statute shall be considered judically, and in the decision to grant or refuse a discretion shall be exercised, "within the rules of reason and justice."

F. T. T.



A BEAT IN A CITY FORCE
The boundaries and area covered by the above beat are described on page 240. A: Principal box; B: Auxiliary telephone kiosk; C: Street pillar; D and E: Public telephone kiosks, also available as auxiliary police telephones.
(face p. 244)



"MEYER"



"GIFT"

The New Detective

By R. G. B. SPICER, C.M.G., M.C.

Inspector-General of Police, Palestine

IN 1927 the Kenya Government sent me to Quaagport in South Africa to study the methods of the South African Police with their police dogs used in connexion with the detection of crime.¹ I was given every facility to inspect and inquire into their methods, allowed to watch the training, to ask questions, to read their files, to talk to the dog-masters, and even to walk a trail myself across the veldt one afternoon at 4 p.m. and to come back at 9 a.m. the next morning in order to watch the bitch puzzle the line out every inch of the way, several miles across dry veldt. It would only be right to say that in walking this trail I tried every stratagem and trick performed by a hunted stag. I doubled my tracks, chose stony ground, went round in circles and jumped out; but the bitch never missed a yard and marked my entry into a car on the main road with no hesitation.

I was convinced—I will not say converted because I had never been sceptical; but I became enthusiastic. The Kenya Government were, however, not in a financial position to take up the system, and it is only since my transfer to Palestine that these dog dreams have come true.

Let it be clearly understood that the South African police dog system differs from any that I have ever heard of or read of. The whole training of these dogs is concentrated on the trail; they are not employed on patrol or for watch and ward, but solely for trailing purposes. The results are marvellous and these dogs certainly lead the world. The

¹ Previous articles in THE POLICE JOURNAL on police dogs are: "The Police Dog: His Selection and Training," by Supt. R. Arundel, Vol. I (1928), p. 423; "Dogs as Detectives in South Africa," by Col. I. P. de Villiers, Vol. II (1929), p. 188; and "Police Dog Training: German Practice," by P. L. Cecil-Gurney, Vol. III (1930), p. 526.

difficulty is to get others than South Africans to believe; the sceptics say absurd—impossible. I can prove that it is not absurd and not impossible. The rest of the police world, Great Britain included, may have finger-print experts, wireless, mobile cars, and telephone kiosks, but until they take up the police dog as their best detective, they cannot expect to compare with the South African Police or for that matter with any dog-equipped force.

In 1927 the South African authorities were experimenting with cross-breeds—the first cross between the Bloodhound and the Airedale, the Doberman Pincher and Bloodhound. Now I believe they have reverted entirely for practical purposes to the Doberman Pincher, which has proved itself to be the best. But they are trying out experimentally another pure breed, the Rotweiler.

Being convinced as to the amazing powers of these dogs, I was fortunate enough to persuade the Palestine Government to allow me to send two picked members of the Force to South Africa to be trained as dog-masters. The dog-master must be a real dog lover, a man of even temper, placid, patient, and in every way steady and reliable. Such men were fortunately available and by the great courtesy, kindness and, I may say, generosity of the South African Government, everything possible was done for them. Colonel I. P. de Villiers, M.C., the Commissioner of Police, South Africa, gave all the authority necessary. Captain de Wit most interestedly saw that Detective-Sergeant Parker and Detective-Constable Pringle were given a thorough training and every facility. On completion of their training they were allowed to purchase and bring back to Palestine with them three trained pure-bred Doberman Pinchers :—

‘Mayer’: Red dog. Age 2 years 5 months.

‘Gift’: Black and tan bitch. Age 4 years 6 months.

‘Ria’: Black and tan bitch. Age 2 years 3 months (in whelp to a trained dog not related to ‘Mayer’ or ‘Gift’).

‘Ria’ had been warded before leaving and duly arrived in Palestine well in whelp.

Then came one of those tragedies in the dog world. ‘Ria’ whelped down five pups, but three of them died; two, however, survived and are magnificent specimens. But worse than losing the three puppies was the almost irreparable loss of ‘Ria’ herself who, in spite of every care and attention, died as a result of toxæmia, undoubtedly brought on by whelping, change of climate, and certain other factors which I shall not discuss.

The obedience apparatus had been erected and we waited with some impatience for the dogs’ real test, their first trail in Palestine; but not too impatiently, for we realized the vital importance of allowing them to become acclimatized before being put to what must be a hard test in this poor scenting country.

I will now quote the actual official reports of their first three cases, for I believe these hard facts will prove more convincing than any words of mine can hope to.

CASE NO. 1

(1) Nature of Crime: Agrarian. Destruction of almond trees.

(2) Crime committed between the hours of sunset on 10th March and sunrise on 11th March.

(3) Reported to police at 9 a.m. on 12th March.

(4) Dogs under Detective-Constable Pringle arrived at the scene at 11 a.m., 12th March.

(5) Footprint of suspected accused at scene of crime pointed out to Detective-Constable Pringle.

(6) Dog ‘Mayer’ given scent from the footprint.

(7) Conditions: Ground damp from rain but sun strong; fairly strong westerly breeze.

(8) Age of scent: between 36 and 40 hours old.

(9) Dog ‘Mayer’ took trail to village of Khirbet Abu Fellah.

(10) Took trail through village to house of one Omer Ali.

(11) Here dog ‘Mayer’ was attacked by village pariahs.

(12) He doubled back on his trail and worked to the

house of one Abid el Rassoul, where he gave tongue. The house was locked and Abid el Rassoul was absent.

(13) Later Abid el Rassoul returned to the village.

(14) A return was made to the scene of the crime and an identification parade was held. The suspected accused was told to place himself where he wished.

(15) Another fresh spoor was given as scent to dog 'Mayer' and bitch 'Gift'. Each in turn picked out Abid el Rassoul.

(16) Abid el Rassoul's house was searched and a pair of shoes was found of which the right shoe was minus the heel and had large nails on the inner side of the sole towards the toe. These points were clearly visible in the spoor and were corroboratory evidence.

(17) Omer Ali proved to be a close relative of Abid el Rassoul.

(18) The distance of the trail from spoor to house was 3 miles.

(19) Subsequent to his identification by both dogs, Abid el Rassoul made a full and voluntary confession of having committed the crime.

CASE NO. 2

Nature of Crime: Attempted murder by shooting of a resident of Hebron.

(1) Crime committed at 4 a.m. on 17th March.

(2) Dogs arrived at Hebron at 9.15 a.m. on 17th March under Detective-Constable Pringle.

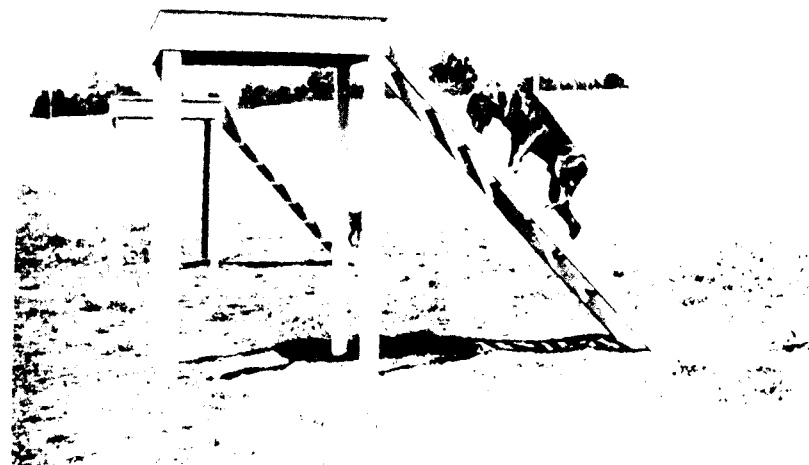
(3) Dog 'Mayer' given scent from two sets of footprints found at the spot from which shot had been fired.

(4) 'Mayer' trailed on to the Jerusalem-Hebron Road; it is macadamized and twenty to thirty cars had driven over it that morning.

(5) Took trail for a kilometre and stopped outside a coffee house, came out and took the trail through the crowded bazaar to the house of one Rasmiah, where he gave tongue.



OBEDIENCE TEST: 'GIFT,' JUMPING



OBEDIENCE TEST: THE STEPS. ONE STEP AT A TIME

(face p. 248)

(6) Nobody was present in the house.

(7) 'Mayer' returned to the bazaar and took a line to the house of Hussein Amin. Here he again gave tongue.

(8) 'Gift' was then given the scent from the spoor. She went to the back of the house where the shooting had occurred and retrieved a leather belt. This belt has proved to belong to Hussein Amin.

(9) The suspects having been arrested, identification parades were held for both accused by both dogs on 18th March at 2.45 p.m. Both accused changed their positions on each parade, changed their clothing and even tied towels round their heads to disguise themselves. Each dog picked out the accused from the respective footprint spoor scent on each occasion.

One of the accused, after the identification parade, said in Arabic to the responsible officers: "Finish; good enough; the dog is not a liar."

The spoor of the identification parade was 36 hours old.

CASE No. 3

Nature of Crime: Theft of a mule.

(1) Reported on the evening of 21st March.

(2) Dogs reported at Enab Station at 8.30 a.m. on 22nd March.

(3) Arrived at the scene of the theft at 9.30 a.m.

(4) 'Gift' given scent from an indistinct booted footprint in the yard of the house of complainant from whom the mule had been stolen.

(5) 'Gift' trailed through the village and to the village of Biddu. On the outskirts 'Gift' lost the trail. Detective-Constable Pringle was able to pick up the tracks of a mule and followed that spoor for about two kilometres. Here footprints again appeared. (N.B.—It is obvious that the accused had ridden the mule during this stage. This will interest Mr. Budgett if he should read this article.)

(6) 'Gift' again given scent and took trail to the village

of Gedeireh. Just outside this village, the police were met by five individuals with the mule, which they stated they had recovered from a man unknown of Gedeireh to whom they had paid £P1.

(7) The trail continued into Gedeireh village. 'Gift' trailed to the house of Suliman Ahmed Suliman and gave tongue. House empty.

(8) Suliman Ahmed Suliman came to the scene. Identification parade held. 'Gift' unhesitatingly marked Suliman Ahmed Suliman.

(9) His house was searched and the search revealed:—

(a) One revolver and eleven rounds.

(b) One .303 rifle with magazine charged with nine rounds.

(c) Forty-seven rounds of .303.

(10) Suliman Ahmed Suliman was taken back to the scene of the theft. Dog 'Mayer' twice identified him, having been given scent from the original footmarks.

(11) 'Gift' travelled 20 kilometres on this trail from scene of the theft to the accused's house.

(12) The trail was 11 hours old.

(13) The weather was fine and sunny, the wind light, and the ground slightly damp from the rain of the day before.

(14) The five men of the complainant's village, who had given the unknown man £P1 to recover the mule, subsequently identified Suliman Ahmed Suliman as the man in whose possession they had found the mule and to whom they had paid the money.

I can only submit in the light of the above facts that these dogs are uncanny in their scenting powers and in their intelligence. They are, in my opinion, as infallible in identification as finger-prints; but of course experts in the latter will not agree. Against that I say that many a finger-print is not left for the convenience of the police, and even if found on the scene of a crime is blurred and indecipherable; but to a Doberman Pincher the smell of one human being cannot be repeated or copied, and, so far as I know, the Palestine

criminal is not more odiferous than criminals in other parts of the world.

In a case the other day the accused gave 'Gift' her best compliment yet, when, after being identified by her on a Sunday and independently the next day, he said: "It's all over; the dog can't lie; I did it."

Admittedly our Palestine experience is as yet ephemeral; we are but the veriest tyros compared with the South African Police; but if we are able to spread the police dog cult into other Colonies and into the British Police Forces themselves, our efforts will not have been in vain.

It should be stated that these police dogs are not a cheap form of detective. They are expensive. Your dog-masters must give up their whole undivided time to them. It is useless to buy a Doberman, to give him to a police officer, and say, "Now get on with it." The dog-master must be trained. He can do nothing else; he must have first-class kennels and transport; he must have expert veterinary advice, and the training of the puppy must be alone a full time job. From its earliest days the dog must be entirely obedient and indeed subservient to its master's command; the dog-master's whole life must be devoted to the guiding of its intelligence, obedience, and olfactory powers to the trailing and identification of criminals. The dog's training must not let up, day in or day out; it must go through its obedience tests daily or else the same results can never be achieved. It cannot be made a pet of one day and be expected to do its police work the next. Its life must be entirely devoted to police work. With that understood, the results are beyond anything that even Mr. Budgett of scent theory has ever thought of.

To the enthusiasts I say, with the greatest possible respect, forget the bloodhound, adopt the Doberman Pincher, see that every country and county has its quota of dog-masters and trained dogs, and you will be able to detect crime in a manner beyond the wildest dreams of Conan Doyle and Edgar Wallace. I am not romancing; I am not exaggerating. I have never been more serious in my life.

NOTES FROM THE FORCES

A TELL-TALE PIECE OF WOOD

AT 11.35 one night last spring a telephone message was received at Police Headquarters from a resident in Leicester, stating that he had arrived home to find that someone had broken into his house. A detective officer and constable at once drove off in a motor-car to visit the scene of the crime.

On the way, however, the police officer saw two youths whom he knew, walking in the opposite direction from that in which the car was travelling. The officer knew that these youths were some distance away from their houses, and as they were only a mile away from the house which had been entered and the hour was late, he became suspicious. He drove on a little way, turned the car, followed, and overtook them. He informed them that a house had been broken into in a road near-by, and asked whether they cared to tell him where they had been. Their reply was that they had merely been for a walk.

The police officer was not satisfied, and said that he must search them. In the pockets of one of the youths was found a chisel, a pair of gloves, 3s. 8½d. in silver and coppers, and a small portion of wood with jagged ends, measuring about 1½ in. long and ¾ in. deep. There was a slight dent in the wood, and when the chisel was tried on it, it was found to fit. In the pocket of the other youth was found a pair of pliers, a packet of cigarettes, a pair of gloves, and 3s. 5d. in money. The police officer was convinced that some offence had been committed, and therefore took possession of their property and escorted them to Police Headquarters, where they were detained.

At headquarters another telephone message had just been received, stating that a shop had been entered. Leaving the portion of wood in the Detective Office, the police officer drove off to the house from which the first message had been received. He saw the owner and made a thorough examination of the premises. He found that entrance had been gained by forcing the dining-room window at the bottom. There were several marks in the woodwork, and on trying the pliers and chisel on them, they were found to fit exactly. The householder mentioned that he had received a packet of cigarettes and that they were of the 'Marcovitch' brand, the same brand as those found in the pocket of the youth.

A visit was then paid to the shop. There entrance had been gained by breaking a pane of glass in the shop-door, inserting a hand and releasing the spring lock. The inside of the shop was in a state of disorder and the drawer of the cash-till had been smashed and also part of the wooden

counter, to which the till was fitted. Pieces of broken wood were strewn about the floor and the police officer noticed that the wood was somewhat similar to the piece of wood he had previously found in the jacket pocket of one of the youths. The officer took possession of part of the broken wood. On the shop floor near to the door there was a small piece of glass, with marks upon it as if they had been made by a rubber sole or heel. This was also retained. The manageress of the shop was called, but she only missed 4s. in money, which consisted of two 2s. pieces, and a small notecase. Arrangements were made with her to leave the shop as it was, until the following morning, so that an examination for finger-prints, etc., could be carried out next morning. On returning to the Detective Office and on comparing the two pieces of wood, the officer discovered that they were similar in grain and texture.

The youths were then questioned—but both strongly denied breaking either into the house or the shop. They said that they had found the packet of cigarettes in another road earlier in the evening. They were, however, jointly charged with breaking and entering the house and stealing the cigarettes.

About 9 a.m. the following morning a report was received that the office of a firm of builders had been entered. On arrival there it was found that entrance to the office had been gained by means of smashing a pane of glass in the ground floor office window at the rear of the premises, inserting a hand, slipping the catch, and climbing through. The broken window was examined and also the broken glass which had been pulled out and placed against the wall. It was found that the intruder had worn woollen gloves, as minute particles of wool were found adhering to the broken glass, these marks corresponding to the thumb and four fingers of the right hand. The front office door had been barricaded with a large tool-chest and the general office was in a state of disorder. Papers, maps, and other articles were strewn about the floor. Only a small amount of money was missed, and this comprised several 6d. pieces. The proprietors of the shop could not state that any identifiable property had been taken. After searching for about an hour amongst the papers on the floor of the office, a bill-head of the company was found on which was an impression in dirt of a rubber sole or heel with the letters "A.R.B." thereon. The footwear of the occupants of the office was examined, but it was found that none were identical and it was concluded that the marks must have been made by the footwear of the intruder.

After this a visit was paid to the other shop and a thorough examination made in daylight, but no finger-prints were found.

The private house was again visited, and another police officer fitted the chisel and pair of pliers in the marks on the forced window, in order that he might substantiate the evidence that the tools found on the prisoners fitted.

The two youths appeared before the Magistrates that morning, were charged with breaking and entering the house, and were remanded in custody for one week. They were afterwards brought to Police Headquarters and their footwear examined. It was found that one of the prisoners was wearing rubbers on his heels and that these bore the letters "A.R.B.R.O.". The heels were powdered with graphite and the prisoner was asked to stand on

a plain piece of paper. It was then found that his heel impressions were identical with the mark found on the bill-head taken from the builder's office. The paper on which the impressions were taken was endorsed and the prisoner signed it. The small piece of glass found on the floor at the other shop was examined, and it was found that the marks on this were identical with the heel prints of the same prisoner. The marks on the bill-head and the impressions of the heels worn by him were placed side by side and were photographed.

The prisoners were then again cautioned and interrogated with reference to these offences, but they strongly denied committing them.

Later the same day a report was received that an attempt had been made to enter another shop in the district. Several marks were found on the rear door and the chisel and pliers exactly fitted them. The prisoners were later interrogated with regard to this offence, but again denied it.

The same evening the small piece of wood, together with the piece of wood taken from the shop, were microscopically photographed and were examined by Professor Holden, of Nottingham University. It was found that the pieces of wood were larch. Three sections from each piece were photographed and when enlarged and placed side by side it was quite evident they were the same.

Inquiries were made in this city at Messrs. Woolworth's and other multiple firms who supply rubber heels, but it was ascertained that they did not stock "A.R.B.R.O." brand. It was subsequently discovered that the rubber heel had been cut from a rubber sole manufactured solely by Messrs. Briggs & Co., Market Harborough, and only fitted to new material.

The prisoners were charged with breaking and entering the house and the shop. The prisoner whose footwear had been examined was also charged with breaking and entering the office of the builders. The prisoners were committed for trial at the Quarter Sessions.

At the Quarter Sessions they both pleaded "Guilty" to the three offences.

The moral of this story is the tell-tale pieces of wood, and it is interesting to add that both the prisoners admitted, after their conviction, that had it not been for this evidence and the impressions of the footmark, they would have continued to protest their innocence.

Police Gold Medal Essay Competition

The Council of the Police Gold Medal Essay Competition have the honour to present their report on the Competition which closed on the 1st November, 1935. The subject was :—

"DISCUSS THE ADVANTAGES AND DISADVANTAGES OF PLACING THE VARIOUS POLICE FORCES IN THE UNITED KINGDOM UNDER A COMMON ADMINISTRATION."

There were not so many essays as last year, but the standard reached was higher. The Council had some difficulty in determining which essay merited second prize. Two were of equal merit and it was therefore decided to divide the second and third prizes.

Awards were made as follows :—

His Majesty's Gold Medal and First Prize of thirty guineas :—

P. McA. Stewart, Superintendent of Police, Bombay Presidency.

Second and Third Prizes (twenty guineas and ten guineas) :—

Joseph Simpson, Junior Station Inspector, Metropolitan Police.

F. B. Carter, Inspector, Bristol City Police.

The following competitor has received "Hon. Mention" for his essay :—

Harry Kitchin, Detective Officer, Chesterfield Borough Police.

The following competitors have received "Mention" :—

Reginald Breffit, Superintendent, Wiltshire Constabulary, Chippenham.

James Madill, Constable, Glasgow City Police.

Arthur Cain, Sergeant, Metropolitan Police.

A. E. Blackwell, Inspector, Metropolitan Police.

Funds for awarding prizes for the Competition are badly needed and, as no doubt some Forces and private individuals might like to contribute to this object, any donations would be gratefully received and should be forwarded to—

THE SECRETARY TO THE COUNCIL,
POLICE GOLD MEDAL ESSAY COMPETITION,
HOME OFFICE,
WHITEHALL,
LONDON, S.W. 1.

Police Gold Medal Essay Competition

RULES FOR THE 1936 COMPETITION

1. The Competition shall be held annually and shall be open to serving members of regular Police Forces within the Empire or Mandated Territories. Any question as to the eligibility of any competitor shall be determined by the Council.

2. His Majesty's Gold Medal and a cash prize of thirty guineas will be awarded for the essay which is adjudged to be the best, provided it is considered of sufficient merit, and second and third prizes (of twenty guineas and ten guineas respectively) will be awarded under the same conditions for the essays adjudged to be next in order of merit.

3. (a) Essays must be the original work of the competitor.

(b) Essays must not be less than 7,000 or more than 11,000 words in length and must be typewritten and submitted in triplicate.

(c) Where a reference is made to any published work the title must be quoted in a footnote.

4. Essays must be submitted ANONYMOUSLY. Each essay must be accompanied by a sealed envelope bearing on the outside a *nom de plume* or motto, and containing the competitor's name, rank and address.

5. The Council may at their discretion appoint such persons as they think fit to act as Referees or Judges of the Essays under such conditions as they may prescribe.

6. The award of the Council shall be made public in such a manner as the Council shall think fit, and any essays submitted for the competition and adjudged of sufficient merit may be published by the Council in *The Police Journal* or otherwise.

SUBJECT OF THE ESSAY FOR 1936

"What Steps can be taken either by Legislation or by Police Action towards Improving the Circulation of Traffic and the Reduction of Accidents."

Essays must be submitted on or before 1st November, 1936, to—

THE SECRETARY OF THE COUNCIL OF THE
POLICE GOLD MEDAL ESSAY COMPETITION,
HOME OFFICE,
WHITEHALL,
LONDON, S.W. 1.

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VOL. IX, No. 3

JULY-SEPT., 1936

THE POLICE JOURNAL

*A Quarterly Review for the Police Forces
of the Empire*

ISSUED UNDER OFFICIAL PATRONAGE



NOTICE TO CONTRIBUTORS

THE POLICE JOURNAL is published on the first day of January, April, July, and October.

The Editor will be happy to consider articles suitable for publication in THE POLICE JOURNAL. Contributions should be typewritten (double spacing) and *must* bear the name and address of the sender on the first page. Articles can be signed with a *nom de plume* if desired. All contributions should be addressed to "The Editor of THE POLICE JOURNAL, 69 Great Russell Street, London, W.C. 1." A covering letter is desirable.

Unaccepted contributions will be returned if accompanied by an addressed envelope and stamps. All reasonable care is taken of MSS., photographs and other material submitted; but the Editor cannot hold himself responsible for any loss or damage.

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PHILIP ALLAN & CO., LTD.

69 GREAT RUSSELL STREET, LONDON, W.C. 1

Telegrams and Cables—"AQUALLICOR, WESTCENT., LONDON"
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The
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THE POLICE JOURNAL

Notes on Recent Crime

SMALL tradesmen generally, and in particular tobacconists, must have been relieved to hear it authoritatively stated in open court at the Old Bailey, early this year, that the work of the bank-note forgers in this country has been definitely curtailed. Successful prosecutions have taken place in the North of England, in London, in Somerset, and in Hampshire.

Two recent murders have excited the usual public attention, but it is difficult to comment upon the evidence in either case. In one, Nurse Waddingham was convicted of the murder by poisoning of a patient in her nursing-home in Nottingham, for which the motive was financial gain. In the other, Dr. Ruxton was convicted of the murder of his wife and a nursemaid. In each case the accused was duly hanged.

It is difficult to appreciate upon what grounds numerous people signed a petition for a reprieve in each instance. Presumably they must have been ardent disciples of Mrs. Van der Elst. In the first case, had a reprieve been granted, it would surely have seemed that in future the death penalty was not to apply to women in England. In the second case, both bodies were dismembered, a feature which always goes hard with the accused before the jury.

London tobacconists recently have suffered thieving from the cigarette-machines placed outside their premises at night. By the insertion of metal discs many packets of cigarettes are stolen.

A remarkable case of the kind was tried this year at the Marylebone Police Court, before Mr. Ivan Snell. A man was convicted for stealing in this way, and sentenced to imprisonment. He appealed, and the County of London Sessions not only allowed his appeal, but gave costs against the police. The story, retold, is as follows :—

A tobacconist and two police officers kept watch after midnight upon the illuminated machine outside a shop in the Bayswater district. The shop itself, where the watchers were concealed, was in darkness. All saw a man drive up alone in a car, and go to the machine in question. There was no doubt, from an immediate examination of the machine, that this man, whoever he was, inserted discs into it, and thereby stole some packets of cigarettes. He had then driven off again. All three watchers noted the number of the car, and two of them at least had written it down there and then. But not content with that, one of their number sought to go one step better. As the car was being driven away one of the police officers flung his torch and hit the car hard upon one side. The torch was recovered from the roadway, and was found to have upon it the marks of some dark substance resembling paint, and new dents. The car was painted a dark colour, and had been going slowly and quite near to the officer who flung the torch. Immediate police inquiries in the small hours of the same morning revealed a dark coloured car, of the number recorded by the watchers, at a neighbouring garage. Its engine was still warm.

The owner of this car was a 'cut-price' tobacconist, and was found in bed in a near-by flat. He was identified by the three watchers, though no identity parade was held. Whilst admitting that he had driven the car that night he contended that he had garaged it soon after midnight. Two garage-hands supported this. No cigarette packets, of the kind stolen, were found either on his person or premises. He was a man of good character.

Now, the inexplicable feature of the case was this. No trace at all was found upon the car of the resounding blow

it must have received from the torch. At the police court, it is true, the police sought to show the existence of such a mark upon the car. But this point was exploded by a motor expert of over 30 years' experience, who had also examined the car and whom the defence called. Such marks as the car did possess were not of recent origin, and all showed signs of corrosion. This point, therefore, was abandoned by the police, at the appeal.

So there was this curious position. Three persons identified the man, recorded the number of his car, and even gave some slight description of it, which fitted the car of that particular number. Yet, as against that, it was conceded that the thrown torch must certainly have marked the car which it hit. And no such mark could be traced ! With such an element of doubt, there could be only one verdict, and the man was acquitted. Incidentally, as he had at once denied that he was the man in question it seems a pity that no identity parade was held, since the omission afforded comment to the defence.

The behaviour of a man who, unknown to them, had no less than fifteen previous convictions for indecent assault upon small girls and boys, was watched recently from a window by two mothers, waiting for the return of their young daughters from school. This man was seen to approach the girls as a complete stranger, and to appear to speak to them. He then chucked one girl under the chin, and stroked her head. At that the girls backed away towards a wall, but soon afterwards were seen to accompany him in the opposite direction to their homes. Indignantly the mothers rushed out into the street, and catching hold of the man in a near-by park held him securely whilst a policeman was fetched. The girls then said, and the man agreed, that he had asked them to post a letter for him. But no letter was he able to produce. There can be no question that his purpose was to lure the girls away, for the purpose of indecently assaulting them.

So far, the case was clear. But when it came to the question

of preferring charges against the man, the matter was not so clear. The charges in fact preferred against him were: (1) Loitering with intent to commit a felony; (2) Using insulting behaviour, whereby a breach of the peace was likely to be caused; (3) Common assault, upon the one girl whom he had touched, to her evident discomfiture. The man was convicted only upon the third charge, and received the maximum sentence thereon, of two months' imprisonment.

The difficulties were these, as regards charge 1. Assuming there was some evidence of loitering, what was the felony he was going to commit? There were two alternatives open: child stealing and rape. The evidence did not support the former, albeit that no intent "permanently to deprive" the parent is necessary; because, as soon as the irate mothers rushed out, the girls admitted that the man had said, "Go back to your mothers." As regards the latter, the man's past record showed no tendency to actual rape, which is a felony, but every tendency to indecent assault, which is only a misdemeanour. So that would not do.

It appears that to loiter outside a girls' school with intent to steal their bicycles would support the first charge. But to loiter outside the same school with intent to commit an indecent assault upon one of the girls will not so support it.

Surely it is high time that this absurd distinction between a felony and a misdemeanour is now at last done away with. Steal a bun, value one penny, and it is a felony, carrying a maximum sentence of five years' penal servitude. But obtain credit by fraud, up to any amount, and it is only a misdemeanour, carrying with it a maximum sentence of one year's imprisonment.

As regards charge 2, the evidence hardly supported insulting behaviour, although an actual breach of the peace was caused by the conduct of the irate mothers.

The vital importance of the regular taking down of depositions at police courts, in strict accordance with the

requisite statutes, was stressed of the Court of Criminal Appeal in a recent case from Oldham.

Mr. Justice Goddard, who delivered the judgment of the Court, referring to the Indictable Offences Act, 1848, Section 17, said, "The Act was passed to standardize the procedure in cases of indictable offences, which might go for trial, and it is of the utmost importance that magistrates should understand that the provisions of that Act should be strictly complied with."

In the Oldham case it seemed that the usual practice in the investigation of an indictable offence was for the Chief Constable first, quite properly, to interview the potential witnesses, to find out whether a case lay, and then to take their statements. These statements were then typewritten, and put before the magistrates, when the accused was brought before them. No copy was provided for the defence, and apparently no opportunity afforded for cross-examination. The clerk simply checked over each statement with the witness, who then signed it.

The Court of Criminal Appeal considered this so irregular that the convictions were quashed. Some such procedure was tried last year at the Marylebone Police Court in a lengthy case but was discontinued.

A witness will often say one thing to a police officer, and quite another in court. In any event, in a lawyer's hands a statement is almost bound to require augmenting in certain particulars, and curtailing in others. Further, the demeanour of a witness, which plays an important part in all trials, cannot be gauged by the Court, whose duty is to decide upon the evidence whether a case has been made out sufficient to warrant sending the accused for trial.

Recent Judicial Decisions

MOTOR-CAR OFFENCES

Thomas Pomeroy—Criminal Appeal Cases, page 147

IN this case the appellant, whilst driving a motor-car along a road in Kent, ran on to the greensward at the side of the road and collided with a group of hop-pickers, one of whom was killed. The appellant jumped out of the car and disappeared. He was sentenced to concurrent terms of two years and six months imprisonment upon charges of dangerous driving and of driving whilst disqualified from holding a licence.

In giving judgment Mr. Justice Goddard, after stating the facts, said :—

“ For some reason which this Court cannot understand but which is to be deplored, if not censured, the magistrates committed the appellant to Quarter Sessions, merely on charges of driving to the danger of the public and driving while disqualified, instead of to the Assizes on a charge of manslaughter. When I say that the appellant has no fewer than twenty convictions against him for road traffic offences, besides eleven convictions for larceny, wounding and assault, it is difficult to conceive how any magistrates could have thought this was a proper case to be dealt with on a minor charge. If he had been sent to Assizes, it is possible, if not probable, that he would have received a long term of penal servitude.

“ The only complaint made with regard to the trial is that the two charges of dangerous driving and of driving when disqualified were tried together. While it was possible in law to adopt that course, it is, in the opinion of the Court, undesirable that that course should be adopted in a case such as the present, because, although no details were given with

RECENT JUDICIAL DECISIONS

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regard to the reason why the appellant was disqualified from holding a licence, the mere mention of the fact that he was disqualified might, and probably would, indicate to the jury that he had been convicted of some motoring offence of a more or less serious character. In the present case, however, there has been no miscarriage of justice, because the appellant's defence was not that he was not driving dangerously, but that he was not the driver of the car in question. Further, though the appellant was defended by counsel of experience, no application was made to the Court that the two counts should be tried separately, and it is too late to take such a point on appeal. The appeal against conviction must, therefore, be dismissed.”

It is interesting that in this case nobody seems to have taken the obvious point that, upon the evidence available, the police ought to have charged this man with manslaughter. The learned Judge seems to imply that he had been charged with manslaughter and that the justices ignored the charge. The report in *Criminal Appeal Cases* rather implies that it was the business of the justices to prefer a charge of manslaughter, but what really happened so far as charging with manslaughter is concerned does not emerge from the report.

It is also interesting that the Judge should have implied that the magistrates, in deciding upon how serious a charge the prisoner should be committed for trial, should bear in mind the previous criminal history of the individual concerned.

EVIDENCE OF SIMILAR ACTS COMMITTED BY THE PRISONER

R. v. Morton

(Reported on page 150 of the same volume of Criminal Appeal Cases)

In this case the prisoner was charged with murder, that is to say, knocking down a woman cyclist by deliberately driving a motor-car at her. The old question of whether evidence of the fact that shortly before the occurrence which

was the subject of the charge the prisoner had knocked down two other women cyclists in a similar way and had stopped his car and assaulted them and that shortly afterwards he had knocked down another woman cyclist and stolen her bag, ought to be admitted, was debated. In the course of his judgment the Lord Chief Justice said :—

“ The whole point in this appeal is that this evidence relating to matters other than the collision with the bicycle of Miss Oakes ought not to have been admitted. It is said that the evidence, admitted as it was, went beyond the principle governing, as the well-known cases show, the admissibility of evidence of such a character. The rule has been stated again and again, but perhaps never more clearly than in the well-known words of Lord Herschell in *Makin v. Att. Gen. for New South Wales* (1894), *A.C.* 57. At page 65 Lord Herschell said this : ‘ The mere fact that the evidence adduced tends to show the commission of other crime does not render it inadmissible if it be relevant to an issue before the jury, and it may be so relevant if it bears upon the question whether the acts alleged to constitute the crime charged in the indictment were designed or accidental, or to rebut a defence which would otherwise be open to the accused.’

“ It appears to us that it was of crucial importance to show that what was done in relation to Miss Oakes was deliberately and intentionally done. If the defence was to be, as indeed it proved to be in one of its aspects, that what was done amounted to no more than manslaughter, it was manifestly fundamental to establish the guilty intent of the prisoner either to kill, or, at any rate, to cause grievous bodily harm. It seems to us that the evidence which was admitted, in spite of the able criticisms of Mr. Tucker, was of the very kind which in such a case was proper to be admitted. Undoubtedly, where such evidence is offered, great responsibility lies upon the Judge, and as was said by Bray J., in *Bond* (1906), 2 *K.B.* 389 at page 417, in view of the strong prejudice that would necessarily be created in the minds of the jury by evidence of this class, which shows that the

prisoner has been guilty on another occasion of a similar offence, the greatest care ought to be taken to reject such evidence unless it is plainly necessary to prove something which is really in issue. In our opinion, this evidence satisfied that test ; it was plainly necessary to prove something which was really in issue, namely, the intent with which the prisoner did the act, if he was the person who did it.”

In the result it was held that the evidence of similar acts was properly admitted and the appeal was dismissed.

R. v. Roberts

(Reported on page 158 of the same volume of *Criminal Appeal Cases*)

“ The appellant was jointly indicted with a prisoner named Moore, the appellant being charged with the fraudulent conversion of a sum of money entrusted to him by a Mrs. Steel, contrary to Section 20 (1) (iv) (a) of the Larceny Act, 1916, and Moore being charged in two counts with causing by false pretences two distinct sums of money to be paid by Mrs. Steel to the appellant, contrary to Section 32 (1) of the same Act. The false pretences alleged in each count were the same.”

The conviction of the appellant was quashed because he was cross-examined by the second prisoner's counsel as to a previous conviction for forgery and the Court held that circumstances to justify such cross-examination did not exist.

The judgment of Mr. Justice Talbot is interesting. He said :—

“ During the course of the trial the appellant was cross-examined as to a previous conviction by Moore's counsel. The appellant had provoked that question by stating—whether truly or not it is unnecessary to consider—that Moore had signed certain documents in the appellant's presence. This Moore denied and implied that the appellant had forged his signature. The question was asked after the

appellant had been duly prepared for it, and the matter was mentioned by the Judge in his summing-up. It never seems to have struck anyone that there was any difficulty about the matter.

"The appellant now appeals against conviction on the ground that it is improper to cross-examine a prisoner under trial as to a previous conviction except in certain limited circumstances defined by the Criminal Evidence Act, 1898. By that Act persons indicted for crimes were allowed to give evidence on their own behalf and were put generally on the footing of ordinary witnesses—a course which had already been taken in certain particular cases. They were not, however, put for all purposes on the footing of ordinary witnesses, and were protected against certain questions, including questions about any previous conviction. That harmonizes with and follows one of the most cardinal principles of the criminal law, that a prisoner is to be tried on the question whether it is sufficiently proved that he has committed the offence with which he is then charged, and it cannot be suggested to the jury, directly or indirectly, that he is likely to have committed it because he has already done something of the same kind.

To the general rule there are, however, certain exceptions and it is upon one of these that the question in this case arises. By Section 1, proviso (f) of the Criminal Evidence Act, 1898: 'A person charged and called as a witness in pursuance of this Act shall not be asked, and if asked shall not be required to answer, any question tending to show that he has committed or been convicted or been charged with any offence other than that wherewith he is then charged, or is of bad character, unless . . . (iii) he has given evidence against any other person charged with the same offence.'

"That proviso must be strictly construed. One can easily conceive an argument for making the rule more extensive—that is to say, for allowing a further exception to the exemption of prisoners from this particular line of cross-examination, but one must interpret the Act as it is. That brings the Court

face to face with the question whether the offence with which Moore was charged was the same as that with which the appellant was charged. It is quite clear that it would be impossible to say that the offences were the same, and counsel for the Crown very properly has recognized this. This is a fatal bar to the correctness of the conviction. The conviction must be quashed and the appellant discharged."

The Police and the Law

GAMING HOUSE WARRANTS

AN irregularity in the execution of a Gaming House Warrant brought about the quashing of a conviction by the Divisional Court on 21st April, 1936. The case was *Eyre v. Brumfield*. It is well known, of course, that under the Gaming Act, 1845, Section 3, a Warrant may be issued authorizing the Police to enter any House suspected of being a common gaming house and to arrest persons found therein and to seize all instruments of unlawful gaming. It is provided by Section 8 of the Gaming Act, 1845, that where persons are so arrested and taken before the Justices by virtue of the Warrant the Justices may direct "all such tables and instruments of gaming to be forthwith destroyed". Two points of practical importance on this Section have come before the Divisional Court lately. In the case above quoted, *Eyre v. Brumfield*, the Police Officer who executed the Warrant siezed 21 automatic gaming machines but did not arrest and bring before the Court the Proprietor or any person found upon the premises. Subsequently Summonses were taken out under Section 4 of the Gaming Houses Act, 1854, against the Occupier of the premises for using his premises for the purpose of unlawful gaming with automatic machines being carried on therein. The Justices convicted and imposed a penalty and ordered the destruction of the gaming machines. There was an Appeal to the Divisional Court and the case came before the Lord Chief Justice and two other Judges, and it was held that as the Appellant was not taken before the Justices by virtue of the Warrant but appeared in answer to a Summons based on Section 54 of the Gaming Houses Act, 1854, the Justices had no power to order the destruction of the machines, and the Appeal was allowed.

It is clear, therefore, that what the Police Officer ought to have done was to have arrested the Occupier when he executed the Warrant and have taken him before the Justices and charged him with being the keeper of a Common Gaming House under Section 4 of the Act of 1845. The Police Officer could later have issued his Summons under Section 4 of the Act of 1854. This is frequently done, particularly where there is some difficulty in showing that a house is a Common Gaming House. Shops, or fun-fairs, where unlawful gaming machines are kept, are not in the ordinary sense Common Gaming Houses, and it often makes a prosecution more simple if the additional Summons under Section 4 of the Act of 1854 is taken out.

That is one point; the other one is certainly of equal importance and worthy of the attention of all Police Authorities. It will be remembered that the Warrant under the Act of 1845 authorizes the arrest of the Keepers of Gaming Houses or Premises where the machines are found, and also the "persons there haunting resorting and playing to be dealt with according to law". In the ordinary Gaming Houses which are solely used for the purpose of unlawful gaming or betting, generally speaking all the persons who go to the premises go for the purpose of gaming or betting; but there are more often than not places which serve a different and legitimate purpose as well, such as refreshment houses, tobacconists' shops, newsagents' shops, the bars of public houses and other places where some legitimate business or trade is carried on. In these cases the unlawful gaming or betting that goes on is generally ancillary to the other business. It was held as long ago as the year 1910 that the power of arrest under this Gaming House Warrant was limited to the arrest of persons found on the premises for the purpose of betting, or gaming, as the case might be (*Davis v. Sly*, 26 T.L.R., 460).

On 1st May of this year a similar case came before the Divisional Court consisting of the Lord Chief Justice and two other learned Judges. The case was *Roden v. Brett*.

In that case the Police had the Warrant to enter and search a house known as the Crown Inn, Bognor Regis. The Police had evidence that betting had been taking place at the premises and they followed the usual course and obtained the Warrant enabling them to enter and arrest the persons concerned in the betting. There happened to be there a man who was a builder and was upon the premises in connexion with some repairs that were being done by him; he was having a drink at the time the Police came in. He had been there about three minutes and the Police arrested him and others whom they took to the Police Station. The Appellant had not had any betting transactions whatever and did not know that there were facilities in the premises for making bets. He was subsequently brought up before the Justices on a Summons which charged him with being found unlawfully resorting to a certain Common Gaming House, the Crown Inn, Bognor Regis. After the evidence in the case had been given he was convicted and bound over in the sum of £5 not to play haunt or exercise from thenceforth at any Common Gaming House and he was ordered to pay 4s. costs. It was clear from the facts stated in the Special Case that the Defendant was upon the premises for a legitimate purpose only, and that he was not concerned in any betting transactions at all. The Court allowed the Appeal and the Lord Chief Justice in giving his Judgment spoke in somewhat strong language concerning the conviction of this man. He said:—

“The matter disclosed by the case was so outrageous that it was difficult to refer to it with the patience and restraint which were suitable to a Court of Justice. It had been admitted that the present unfortunate Appellant was to all intents and purposes in the position in which a Doctor would have been if he had, at the time when the police entered, been attending the occupier's sick child. The Solicitor for the Prosecution had read the head-note of *Murphy v. Arrow* and told the Justices that they were entitled to convict the Appellant and to bind him over—notwithstanding

the fact that the Appellant had established the innocent purpose, which was the only purpose for which he was on the premises. After hearing that argument the Justices came to the conclusion that they ought to convict and did so. If ever there was a case in which it was clear that ‘a little learning is a dangerous thing’ it was the present case. If anybody had taken the trouble to look beyond the head-note of the case above cited he would have seen the ludicrous nature of the task to which the Justices were being invited. In that case some 88 men, in addition to the Appellant, had been arrested at a gaming house in Soho. Evidence was given of what was going on on those premises, and that was the only evidence; no answer was offered on behalf of the Appellant or his companions. In the present case the Appellant was not on the premises for the purpose of play, but, on the contrary, for his legitimate work as a builder. It was inconceivable how the Justices, although satisfied that the Appellant was not on the premises for the purpose of any unlawful game, but, on the contrary, was there in the lawful pursuit of his own business, could have convicted the Appellant and bound him over not to do again that which they found he was not doing. They were, in effect, convicting a man whom they had found to be innocent. It was strange that it should be possible in the year 1936 that such a shocking position could arise. It was perfectly obvious that the Appellant's innocence had been established to the satisfaction of the Court and it was an outrage in those circumstances to have convicted and bound him over. The Appeal must be allowed and the conviction quashed.”

The Justices were no doubt laymen and would not have much knowledge of matters of this kind, and no doubt they did not have the assistance which they should have had. The case of *Davis v. Sly* is and has been quoted in Stone's *Justices' Manual* for years past and in the year 1933 another case, *Vines v. Rawsthorne*, was heard on 7th April of that year and in that case damages were recovered against the Police Superintendent for arresting a man found on premises

who was not there for the purpose of betting; that case is also quoted in Stone's *Justices' Manual* and it is clear that persons who may be upon premises innocently and for a legitimate purpose are immune from arrest under the Gaming House Warrant.

Although the Warrant authorizes the arrest of persons found upon premises for the purpose of gaming or betting it is frequently difficult to decide what the actual purpose is. Take the instance of the bar of a public house. The Police enter; they find the bookmaker there and a number of persons in the bar; those persons are searched and some of them, perhaps the majority, have no betting slips upon them, they generally say that they came there as customers to have a drink, and in such a case, the law being clear, those men should not be arrested. Other men found there may have betting slips in their possession; some of them may admit that they were going to give the slips to the bookmaker, but others may say that they were not going to bet in the public house at all and the slips in their possession were going to be given to some other bookmaker elsewhere. This cannot be disproved, the statements may be true, and if true there is no case against these men. There is some evidence, the possession of the slips, that they were upon the premises for the purpose of betting; but it is not conclusive, and it would clearly be unwise to arrest those men. The men who could be arrested would be those who have slips and who admit they were going to give them to the bookmaker in the bar.

Looking at the matter more broadly still, and taking a practical view of it, is it worth while for the Police Authority to run any risk about arresting punters? Generally speaking, it is not. If they find the bookmaker upon the premises with betting slips in his possession and if they find slips in the possession of other persons, and possibly persons may come in with slips after the Police have entered, surely the Police have achieved their object. They can arrest the bookmaker and take him to the Station and charge him, and they can

tell the Licensee that proceedings will be taken against him for suffering betting upon his premises contrary to Section 79 of the Licensing Act, 1910. That course is the course generally followed in the Metropolitan Police Area where there have been many Prosecutions under the Gaming and Betting Acts. There is no object in taking before the Bench a number of men who have gone to a place to make small bets. They make a grievance of it and all that can happen is that they can be bound over not to frequent betting houses in the future. What the Police Authority want to establish in such cases is that the bookmaker is using premises for the purpose of betting and that the Licensee is allowing it, and that being so there is little to be gained by prosecuting punters, and running considerable risks.

TAXICABS AND 'EXPRESS CARRIAGES'

A good many people who read about the case of the Taxicab being held to be an Express Carriage when it is used by a number of persons who pay separate fares must have been surprised at the decision of the Divisional Court given in that case. No one would, in the ordinary way, regard a taxi as a stage or 'Express Carriage'. It was the case of *Newell v. Cross* which was reported in *The Times* on the 13th May last. It is owing to the definition of an 'Express Carriage' that the taxicab, in the circumstances which existed at the time it was being used for carrying a number of people, on that occasion became an 'Express Carriage' within the meaning of Section 61 of the Road Traffic Act, 1930. An Express Carriage is defined as a motor vehicle carrying passengers for hire or reward at separate fares none of which is less than 1s., and there is a further Section, sub-section 2 of which says that where persons are carried in a motor vehicle in consideration of separate payments by them, whether to the owner of the vehicle or to any other persons, the vehicle shall be deemed to be a vehicle carrying passengers for hire or reward separate fares.

In the case in question a Miss Cross had hired a taxicab and arranged to pay 14s. for the use of it to take herself and six other friends to a dance. The taxi was stopped *en route* by a Police Officer and an Officer of the Commissioner of Traffic, and in answer to questions Miss Cross admitted that she was paying 14s. for the taxi and that she was collecting 2s. from each of her six friends who were also riding in the taxi. It was clear therefore that the passengers were all paying 'separate fares' and the taxicab was therefore being used as an Express Carriage. Not only can a taxicab be so used, but there has been certainly one case, if not more, where the owner of an Austin Seven has been prosecuted and convicted for using his motor-car as a Stage Carriage. In that case the owner driver was a workman employed at a large factory and it was his habit every day to take three other men as his passengers to the same factory, charging them 6d. or some similar sum for the journey. There the little vehicle was being used for carrying passengers at separate fares and in that case, the fare being less than 1s., it was being used as a 'Stage Carriage', and as there was no Licence authorizing the service the owner driver was convicted.

There is, however, another matter which is of general interest to Police Authorities in connexion with this case. Evidence that the passengers were paying separate fares was obtained by the Police Officer or the Traffic Examiner by asking questions of Miss Cross. If she had made no admission as to the hiring arrangement there would have been no evidence of any infringement of the law against her. The Lord Chief Justice called attention to this. He said:—

"He desired to add one word on the methods observed. It was quite clear that, if it had not been for the admissions extracted by some officers from persons in the taxicab, the prosecution would have had no evidence to go on. The fair thing would be to administer some warning that persons were not bound to answer such questions, and it might well be that they would have thought it prudent to refrain even

from words of good omen." Mr. Justice Goddard, another of the Judges, also said that he desired to add a word to the last observation of the Lord Chief Justice. He said: "Parliament had laid down in the Road Traffic Act certain matters on which the Police were entitled to ask, and on which persons were bound to give, information. He could find no provision which authorized the Police to examine passengers in taxicabs, or which required passengers in taxicabs to answer. If such questions were put to him, he would refuse, he hoped politely, but certainly with emphasis, to answer them. It was common fairness, if Police Officers were going to put such questions, to administer the caution laid down for use in examining persons suspected of other criminal offences."

There is therefore a definite judicial expression of opinion that Officers ought not to question people in cases of this kind without first warning them they are not obliged to answer the questions, and that anything that is said may be used in evidence. One knows of the difficulties the authorities have in proving cases of this kind, but it comes to this that the Police and the Officers of the Traffic Commissioner are not entitled to question persons, in the absence of express legal authority, as to whether they have committed an offence or not without first giving the usual caution. There are, of course, in certain fraud and other cases matters about which the Police are entitled to put questions, but the same power does not exist in cases such as the one that was before the Court.

Court of Criminal Appeal

A CASE which came before the Court in May was concerned with the delicate, and often difficult, question of the showing of photographs by the police to persons who may be witnesses in the prosecution of one or more of the persons included in the photographs shown. There have been many decisions of the Court dealing with this matter and the law may be said to be settled, substantially, though its application is by no means free from difficulty in some cases.

In the particular instance a shop was broken into at Wakefield on the afternoon of 29th September last and watches and other articles stolen. Some two hours after the offence had been committed a car was seen in Keighley under circumstances which caused several people to take notice of it. Four of them watched it because it was standing on a pedestrian crossing; one, a motorist, had a good look at it because of the way in which it was being driven; one, a policeman, because he tried to stop it and was very nearly knocked down, and last of all, the storekeeper of a garage into which the car was driven by someone who left in a great hurry without waiting for a receipt.

In the car were found, later, some of the watches and other property stolen. All these persons had seen the driver of the car. Later in the day a batch of photographs was shown to all of them, including the policeman, and all but one picked out the photograph of the Appellant as being that of the driver of the car. The policeman had taken a batch of twenty-four photographs to the storekeeper of the garage without telling him that he, himself, might be a witness in a prosecution as he had seen photographs and had picked one out.

The accused was not arrested till five months after these events and then in London. The police officer sent to fetch him from there to Keighley was the policeman who had nearly been knocked down by the car, who had been present when the photographs had been examined by the others and who himself had picked out that of the Appellant. No identification parade was held, but all the witnesses saw the Appellant in the dock at the police court at Keighley and said he was the driver of the car.

Incidentally, it may, perhaps, be said that it seems a somewhat unfortunate choice to have picked on the policeman referred to above as the one to take photographs to another person and to go to London to receive into his custody a man arrested there partly on his identification of a photograph. It might perhaps have been better also had he not been present when the other persons were shown the photographs.

At the trial there was considerable discussion, in the absence of the jury, as to whether the jury should know of the examination of the photographs before arrest, and the Judge, in the circumstances, decided it was better that they should have that evidence placed before them.

The chief point taken on appeal was that this was a wrong decision inasmuch as, under the circumstances, the jury would be sure to come to the conclusion that the accused had been convicted before since his photograph was in the possession of the police and shown to persons on the very same day as the offence was committed. The court held that, under all the circumstances of the particular case, the Judge had acted rightly. The jury were not allowed to see the photographs.

No complaint was made with reference to the showing of the photographs for the purpose of helping to find out who had committed the crime and of effecting his arrest. But as the subject is one of great importance and often of considerable difficulty, it may be of value to examine some of the many cases in which the matter has come before the

Court of Criminal Appeal and to state the chief decisions of that court.

It is clearly laid down that there is nothing improper in a police officer who is in doubt on the question as to who shall be arrested in connexion with a particular crime showing a batch of photographs to persons in order to obtain information or possible clues upon that question. But on the other hand it is equally clear that it is highly improper for the police to show to persons who are to be brought to an identification parade for the purpose of picking out, if they can, a particular person who has already been arrested in connexion with a particular crime, a photograph of that person for the purpose of helping in the identification.

The guiding principle is that it is the duty of the police to behave with exemplary fairness, remembering always that the interest of the prosecution lies only in securing the conviction of the right person, not merely securing a conviction.

It is not so clear as to whether or not an identification parade should be held after an arrest has been effected as the result of showing a batch of photographs to persons who had an opportunity of seeing the commission of the crime or some incident connected with it. The cases do not establish that under no circumstances ought persons who have already picked out one photograph from a batch to be brought to an identification parade for the purpose of testing whether they can pick out the original of that photograph from a number of other similar persons. The holding of such a parade or the refraining from holding it must depend upon the special circumstances of the case. On the one hand it does not necessarily follow that the person who has chosen a photograph will choose the original when he sees him in the flesh. To some extent it must depend upon the goodness or otherwise of the photograph. It may have been of no help at all in the personal identification, and the second identification may therefore strengthen the first. On the other hand a subsequent identification in the flesh always

gives the opportunity to the defence to urge that the second was *because* of the first and therefore is of no value. No definite rule can be laid down, though the opinion may perhaps be ventured that less complication may arise during the trial of an accused person if there has been an identification parade in the flesh and no mention at all is made by the prosecution that, before arrest, a batch of photographs had been seen by the witnesses for the purpose of effecting the arrest, it being left to the defence to bring out that fact if thought in the interest of the accused so to do.

Some other matters are quite clear: Whenever photographs are used by the police, they should be in a batch or album and the utmost care should be taken that knowledge that the photographs are of convicted persons should be kept from the persons seeing them, so far as this is possible. In the way adopted of showing the batch or album the matters indicating a conviction contained in or about the photographs should be concealed and *a fortiori* there should be no such information by word of mouth.

At a trial on indictment it is, as a general rule, improper for the prosecution to bring out the fact of the existence of a photograph at all, and *a fortiori* that actual photographs shall be shown to the jury as part of its case. If that is done it becomes almost, if not quite, impossible to prevent the acquisition of knowledge by the jury of a previous conviction and thus one of the most jealously guarded principles of the administration of the criminal law in England about which, generally speaking, we can justly be proud, is violated.

In another case heard on the same day as the one above, the conviction was quashed in the main because the jury, under somewhat extraordinary circumstances, had acquired knowledge of previous convictions of the accused. Counsel for the defence, acting upon instructions, put questions to a police witness in cross-examination, suggesting that the accused had been arrested because the witness knew the accused had been previously convicted of a similar offence to that for which he was then being tried and not because the

witness had really seen the accused sufficiently well to enable him to identify the accused as one of three persons whom he had seen at the premises broken into. The police witnesses denied such knowledge. When the accused went into the box to give evidence his counsel brought out the facts of that and other convictions. In cross-examination he was asked by counsel for the prosecution whether it was his suggestion that he had been accused falsely because of the knowledge of the police of a previous conviction. He agreed that was so, and also made other attacks on the police.

So jealous for the fair administration of the criminal law is the Court of Criminal Appeal that the conviction was quashed on the ground that, notwithstanding the attitude adopted by the defence, the jury had been caused to lose sight of the real issue in the case partly because of some of the questions put by counsel for the prosecution and partly by the direction in the summing up. The jury were told that in weighing the evidence of the accused as against that of the witnesses for the prosecution they could bear in mind the confession of the accused that he had been guilty of the same kind of crime before instead of being advised to put all such knowledge out of their minds as having no real bearing upon the real issue of identity.

The Court thought that the accused might have been better protected from himself and that too much stress had been laid on the accusations made against the police, so that the jury may have been influenced by the fear of the consequences to the police witnesses if their verdict was in favour of the accused.

Certainly no one can, rightly, have any ground for the belief that the Court leans against appellants and is not anxious to uphold the highest traditions of the fairness of English trials. This case affords a strong illustration of that desire since the result might well have been otherwise but for it.

Personal Descriptions (Portrait Parlé or Speaking Likeness)¹

By MAJOR A. W. H. CONYERS-BAKER

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INTRODUCTION

THE Bertillon System of personal description, known as 'Portrait Parlé', which may be translated as 'Speaking Likeness', is really rather a fascinating study and this is an attempt to give an outline of the subject, because it is certain that anyone who knows a little of what to look for in people's faces quite unconsciously develops his power of observation which is, of course, a matter of real importance to all police officers.

Some of the Continental Police Forces go in for a much more elaborate form of personal description than any that is attempted in the British Forces. This is to some extent a survival of the original Bertillon anthropometric system which involves a whole series of minute and elaborate measurements of various parts of the body. Whilst this anthropometric system is to all intents and purposes dead since the introduction of the science of identification by means of fingerprints, the system 'Portrait Parlé' is very much alive. Almost anybody can describe a peculiarity. Hardly anybody can describe ordinary features in such a way as to enable others to distinguish the owner of those features from anybody else. The root idea of the Portrait Parlé system is to make it possible for those who have studied it to give such descriptions

¹ Most of the material in this article is prepared from a contribution by M. F. E. Louwage entitled "Le Signalement descriptif du Portrait parlé" which appears in the 1934 number of the *Syllabus de Cours du Degré Inférieur de L'Ecole Belge de Criminologie et de Police Scientifique*. What M. Louwage wrote on the subject of the Bertillon System has been invaluable. Herr Klaiber of Stuttgart, who has lectured on this subject for many years, read a paper on it to the International Criminal Police Commission at Copenhagen in 1935, and this paper has also been of great assistance.

themselves and to recognize individuals from such descriptions given by others.

At the International Criminal Police Commission held in Copenhagen last June, one of the subjects which was very much to the fore was this business of portrait parlé. Some of our Continental colleagues aim at an international system of description which could be used for communicating between Forces of different countries either by letter or by cable, but before dealing with this question from an international point of view there is crying need in this country for serious efforts to be made with a view to improving our present way of describing wanted persons, etc. The average description that appears in the *Police Gazette* is confined to particulars of height, age, build, dress, colour of eyes and hair, plus any peculiarities that are easily noticeable. In the past, personal descriptions were fuller than they are nowadays, and there seems no reason why the present standard should not be made a great deal better than it is.

Here is a picture which gives a good idea of the standard of the descriptions in the police publications in the past.

Metropolitan Police Office.

INFORMATIONS. 1888.

PERSONS WANTED.

CO (C.I.D. No. 51610). Woodcut likeness and description of person against whom a warrant has been issued for forging and uttering the acceptances to bills of exchange—age 31 (looks much older), height 5ft. 7 to 8in., complexion sallow, hair very dark (streaked with grey, long, brushed back, and turns up slightly over collar), bald at top of head, moustache full (long and black), chin and cheeks very black where shaved, long hairs on cheek bones, Wellington nose, slight scar on left side, large protruding eyes with watery pimples on upper lids, thin body, very thin legs, upright carriage; dress, black rough Chesterfield overcoat, brown corduroy vest (of clerical cut), blue trousers with black braid down sides, or grey trousers, tall linen collar, tie in sailor's knot with large head pin or a sapphire pin. Known at 34 and 40, Eaton-square, and at the Midland and Buckingham Palace Hotels.



Actually this particular notice appeared in *Informations* in the year 1888, nearly fifty years ago. It is certainly better than the average description furnished to-day.

Real improvement in the descriptions in police publications will only be achieved by co-operation between officers in Metropolitan Police Divisions, the Criminal Record Office, Provincial Forces, and Prison Authorities.

No doubt quite rightly, emphasis is laid whenever possible in our present descriptions on peculiarities of face, carriage, speech, and manner, but it is not always possible to spot a peculiarity that marks one man out from among his fellows. It can be said that the average person has no easily remarkable characteristic which makes him stand out from among the herd. The real point of the 'Speaking Likeness' system is to enable those who understand it to describe a combination of ordinary features *in words* in such a way as to make the identification of the owners of those features easy for anyone capable of taking trouble. It is on the description of this ordinary type of person that we should try and concentrate, so that we can describe him in such a way that a police officer of average intelligence will be in a position to recognize him when he sees him.

It is quite uncommon in police descriptions for any intimation to be given as to how an individual wears his clothes, and yet people differ almost as much in the way in which they carry their clothes as in the kind of clothes they carry.

The description given of a wanted person in police publications is usually very meagre and often disgracefully inadequate. Here is one picked out at random from the *Police Gazette* :—

Persons Wanted

For escaping from a Certified Institution, subject to an Order under the Mental Deficiency Act, 1913.—... *alias* ... C.R.O. No. ... b. (London), 1913, 5 ft. 4 in., c. fresh, h. brown, e. blue.

Pre. con. of larceny. Is suspected of stealing from outside a public-house, between 9.15 and 10.30 p.m. 30th ult., a gent's Raleigh roadster bicycle, enamelled black, 3-speed gear, oilbath gear-case, dent on top bar near saddle, brass top on bell, Palmer tyre on front, oil lamp.

In this case the description of the bicycle is very much better than that of the man who, as will have been noted, has a C.R.O. record and has been an inmate of a mental institution, so there have been ample opportunities of obtaining a full description of him. There is no description of clothes although presumably he was wearing something.

The police officer is hardly in a position to recognize an unknown individual thus inadequately described if he has to arrest him, say, at the exit of a railway station or the landing-stage of a steamer. It is even more difficult to pick him up in a crowded street. The marvel is that so many arrests are made on such inadequate descriptions, but how often does a criminal escape arrest because it is impracticable to recognize the person wanted from the description given?

Even photographs are not always a reliable guide. A person's appearance may change considerably with the passage of years. Also, the photograph of one man may resemble strongly a quite different person. There was the case of the twin brothers, born in 1857, who were active together as poachers in Hertfordshire between 1875 and 1917. They were so much alike that the local police were unable to differentiate between them. If one was in custody he always stated that it was his brother who had committed the offence and vice versa. Finger-prints had to be taken to determine identity conclusively.

The illustration shows the two twins on the right and, on the left, another individual who strongly resembles them, but who was in no way connected.

If to the present brief particulars that appear in police publications some few simple characteristics of parts of the face were added, the resulting description would be of much

more use, provided terms are used which are easily recognized and known by all detective officers.

The following extract from Sir Howard Vincent's *Police Code* is of interest. (Sir H. Vincent was the first head of the C.I.D. when it was reconstituted on more or less its present basis in 1878):—

"An officer taking down a description should ascertain the minutest facts. The smallest thing may lead to detection. The essential is to give characteristics which cannot be changed, removed, or dyed, and note—everyone is proficient in something, physical or mental, or has a favourite habit, a weak side, a partiality in food, drink, smoke, conversation, companionship, amusement. The skilful officer will get it from those acquainted with the person wanted, by plying them with questions, backwards and forwards. They will never communicate it voluntarily, for they will never think of the details. Former female companions may often be useful in filling up the blanks. *Police should practise taking down descriptions of each other.* It looks simple. It is very difficult."

It is interesting to note that the Assistant Commissioner of the C.I.D. was fully alive to the value of Portrait Parlé, the Speaking Likeness, or the Facial Index as the system has variously been described. It is pathetic to think that his advice has been largely neglected for so long. It is quite time that interest in the subject was revived and it is quite time that people gave up refusing to consider it upon the ground that the full Bertillon System was unnecessarily elaborate and impracticable for everyday use. It is true that the full system is far too elaborate for practical police day to day work, but the underlying idea is fundamentally sound, and a modified form of the original system of inestimable value.

In a recent murder case a man robbed and battered to death a poor old woman, who with her daughter had befriended him and allowed him to live in their flat. The murderer disappeared and it took some days to find him. The officer in

charge of the case obtained an excellent sketch of the murderer from a girl, who knew him well and who also happened to be something of an artist. Copies of this sketch were circulated. Later on in the inquiry a photograph was obtained and it will be seen from the illustration opposite how closely the photograph and the sketch agree.

Of course, it is unusual to be able to get a description from someone who can draw a good sketch, but this serves to emphasize the point made by Sir Howard Vincent, that a skilful officer will get information from those acquainted with the person wanted, by plying them with questions, backwards and forwards.

It is now proposed to describe the appearance of various parts of the body in a simple way and without going into the minute detail employed in the Bertillon System. In all cases it is presumed that the person being described holds his head in a normal way, looking straight to his front.

Peculiarities should be particularly noted as, of course, nothing is more easy to pick out.

The descriptive terms employed in relation to the personal features mentioned are in everyday use and as far as possible obvious in their meaning.

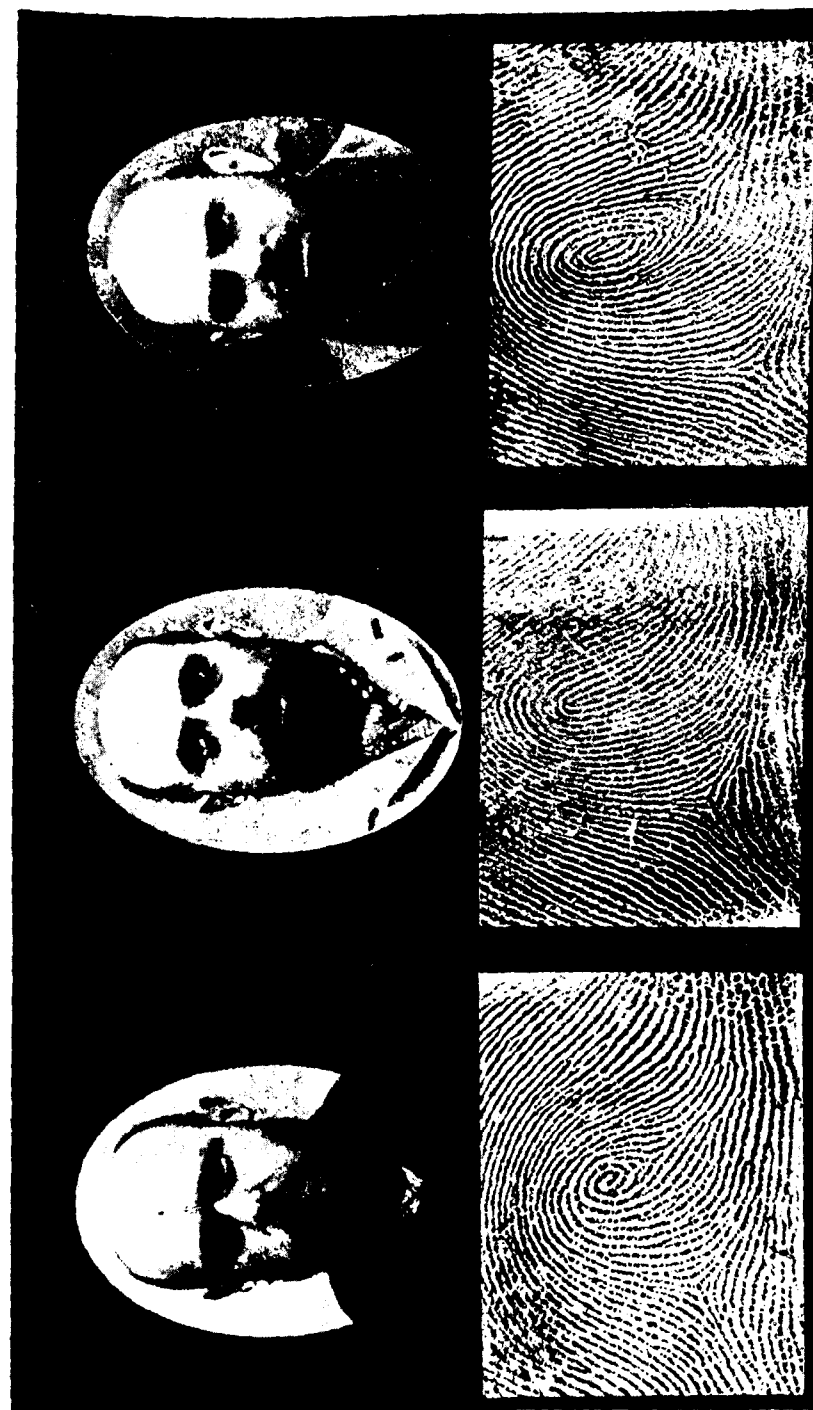
A. The Forehead

(1) *The slope of the forehead is observed in profile and is described as—*

(a) *receding.*



If it is much inclined with reference to the vertical.



This picture shows Albert Ebenezzer on the right, and Ebenezzer Albert in the centre, who by the way got ten years for rape, which broke up the partnership, for the time being. The other individual on the left is someone quite unconnected, who appears strongly to resemble the twin brothers. This individual is now dead, and there is no record to show who he was. One brother is dead, the other is believed to be still alive.



SKETCH OF MURDERER MADE FROM MEMORY BY AN ACQUAINTANCE.



PHOTOGRAPH OF A MURDERER

(b) *medium.*



If it is a little inclined.

(c) *vertical.*



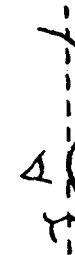
If it coincides with the vertical.

(d) *prominent.*



If it is straight but in advance of the vertical.

(e) *bulging.*



If it is curved and in advance of the vertical.

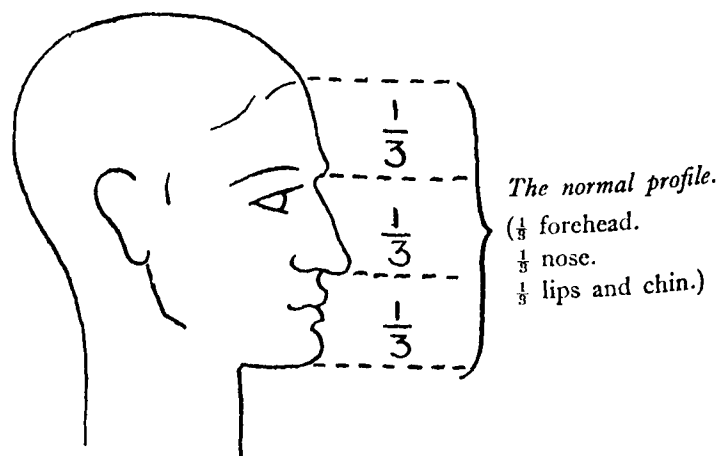
(2) *The Height* of the forehead, observed in profile, is the vertical distance which separates the hair from the eyebrows. It is expressed as *low*, *medium*, or *high*, according as this distance is less, equal to, or greater than one-third of the profile from the root of the hair to the point of the chin.

(3) *The Width* of the forehead, estimated from the front, is the distance separating the two temples. It is expressed as *narrow, medium, broad*.

(4) *Peculiarities*, such as the following may be noted:—

Pronounced permanent frown.

Deep horizontal wrinkles.



B. The Nose

The form of the nose is observed in profile; one examines separately—

- (1) The depth of the root,
- (2) The general form of the line of the nose,
- (3) The slope of its base.

(1) *Root*.—This is the cavity more or less pronounced which is found on top of the nose between the two eyes. According as this cavity seen in profile is more or less pronounced, it may be described as *small, medium, or large*.

(2) *Line of the Nose*.—This is the line which starts from the hollowest part of the root to join the point of the nose. The line can have one of the following forms:—

(a) *Concave*.



The line of the nose inclines towards the base on leaving the root, rising again towards the tip, thus forming a concave curve.

(b) *Straight*.



The line of the nose forms a straight line from the root to the tip.

(c) *Jewish, Convex, or Hooked*.



The line of the nose curves in the shape of a crescent from the root to the tip. (Mention should be made of the aquiline or eagle nose, which is between a straight and a hooked nose.)

(d) *Roman*.

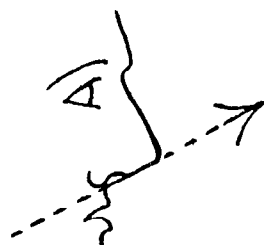


In this last case, the line of the nose takes the form of a broken line of which the two portions form an obtuse angle about a third of the way down from the root.

(3) *Base of Nose*.—By the slope of the base of the nose is understood the slope of the line which, starting at the point

of junction of the nostril with the cheek, follows the edge of the nostril to the tip of the nose.

(a) *Turned-up*
(*retroussé* or *snub*).



Turned up above
the horizontal.

(b) *Horizontal*.



(c) *Downward*.



Turned down-
wards below the
horizontal.

(4) *Dimensions*.—From the point of view of the dimensions one examines—

- (a) *The Length*,
- (b) *The Projection*,
- (c) *The Width*.

(a) *The Length* of the nose observed in profile is judged vertically from the hollowest part of the root to the point

of attachment of the nostril to the cheek. A *medium* nose is one which is about one-third of the height of the profile of the head from the root of the hair to the point of the chin. A *long* nose is more than and a *short* nose less than one-third of the profile.

(b) *The Projection* is the distance observed in profile which separates the point of attachment of the nostril from the tip of the nose, and may be expressed as *small*, *medium*, or *large*.

(c) *The Width* of the nose is the horizontal distance which separates the two sides of the nose at their greatest breadth. This is observed from the front, and is expressed by one of the terms *narrow*, *medium*, *wide*.

(5) *Peculiarities*.—The following peculiarities of the nose may be noted :—

Crushed Nose.—As the result of an accident.

Twisted Nose.—The tip is tilted to right or left.

Dilated Nostrils.

Pointed Nose.

Undulating Line.

C. The Ear

The ear is the most important factor of identification of the whole face, because it is the part of the body which suffers least variations of form. Besides, it is almost impossible to find two ears which are identical. But its characteristics are less easy to learn and observe than those of other parts of the face.

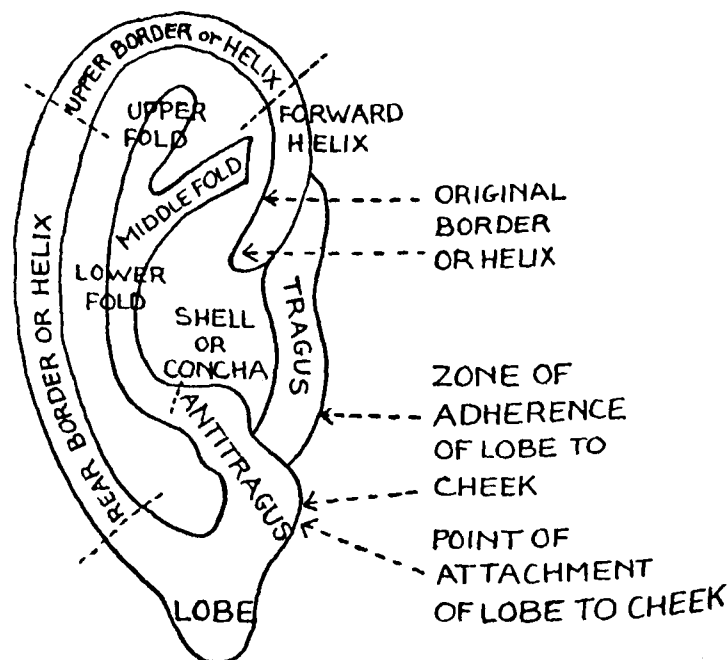
The ear is composed of a series of ridges and hollows of which it is only proposed to describe the ridges. These are named as follows :—

The Border or Helix.

The Lobe.

The Tragus.

The Antitragus and the Folds.



The above sketch shows where the various parts of the ridges of the ear are situated.

(1) *Border or Helix*.—The border of the ear starts at the central depression (or shell) above the ear-hole and borders as with a gutter two-thirds of the circle of the ear.

The Border or Helix is divided into four parts :—

(a) *The Original Border* rises in the shell ; it is examined from the point of view of its length or of its degree of penetration into the shell. It may be totally lacking, when it is termed *nil*. According to whether it rises more or less forward in the shell, it is termed *short, medium, long*.

(b) *The Forward Border* has no importance as it is more or less the same in all forms of ear, and is therefore not considered here.

(c) *The Upper Border* is examined not according to its length but from the point of view of its width. If it is totally absent it is termed *flat*. If it exists, the border is qualified as *narrow, medium, or wide*.

(d) *The Rear Border* is examined like the upper border and may also be termed *flat, narrow, medium, or wide*.

One also examines its "degree of opening", that is to say, the distance which separates it from the lower fold of the ear ; this may be termed *open, medium, close*.

(2) *The Lobe*.—The lobe is the soft part of the ear which begins at the point where the border ends and is attached to the cheek. The lobe is here considered under two forms, the length and the contour.

(a) *The Length* of the lobe is taken from the bottom of the antitragus to the lowest point of the lobe. It is expressed by means of the terms *short, medium, long*.

(b) *The Contour* of the lobe is the manner in which the line, that ends the lobe at its lower part, is attached to the cheek.

The contour of the lobe may be one of the following :—

(i) *descending*.



(The lobe finishing in a descending point attached along the cheek.)

(ii) *square*.



(The lobe ending in a line horizontal to the cheek.)

(iii) *medium.*

(The lobe joining the cheek so as to form with it a re-entrant angle)

(iv) *gulfed.*

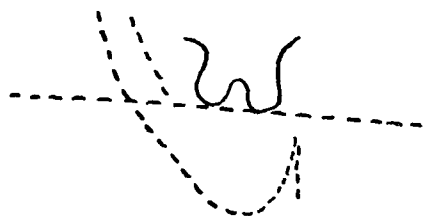
(The lobe being entirely isolated from the cheek.)

(3) *The Antitragus* is only considered here under two headings, the Slope and the Size.

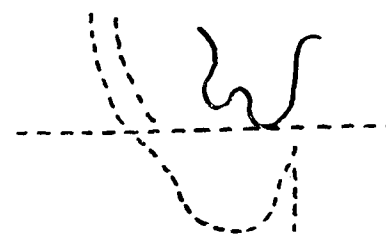
(a) *The Slope* of the antitragus is indicated by the angle it makes with a horizontal imaginary line at the base of the antitragus.

It may be (i) horizontal or level, (ii) oblique or sloping.

(i) *Horizontal*.—If the line of direction is the same as the horizontal, when the person is looking straight to his front.



(ii) *Oblique*.—If the line of direction makes with the horizontal an angle approaching 45 degrees.



(b) *The Size* of the antitragus may be :—

*Nil**Small**Large*

(4) *General Shape of the Ear*.—Oval is the most general shape of the ear, therefore the shape is not shown unless the ear is *triangular*, *rectangular*, or *round*.

(5) *Separation from Head*.—The ear may be *close* to, or *protruding* from the head.

(6) *Size of Ear*.—The ear may be *large*, *medium*, or *small*.

(7) *Peculiarities*.—A few are :—

Rumpled Border, *Cut Border*,

Pierced lobe, *Lobeless*,

Low Setting of Ear, i.e. if the upper border is in a line with or below the level of the eye.

General Note on the Ear.—From the above it will be seen that the peculiarities and description that may be applied to the ear are somewhat complicated. Whilst the formation of the ear is easy enough to describe in theory, it is by no means

easy to supply details in individual cases, because the boundaries between the various classifications are small.

It is not to be expected that any very detailed descriptions of ears can be supplied in the ordinary way, but it is well that police officers should know the various terms that are used in connexion with the ear in the Portrait Parlé system.

It is true that a woman's hair very often conceals her ears, so that this feature is of little use in describing a female, but on the other hand the vast majority of criminals are male.

In the *Gazette* and other police publications photographs in profile as well as full-face are printed. By concentrating on and memorizing the shape, etc., of an ear it will often be possible to pick out a wanted person whose identification might otherwise not have been possible. A profile can also be studied deliberately, when to look intently at a man's full-face would draw undue attention.

The main items to note as regards the ear for descriptive purposes are those shown under (4), (5), (6), and (7) above, that is, the general shape, separation from head, size, and peculiarities.

D. The Lips

The lips are examined under two headings, the length of upper lip and the thickness of lips.

(1) *The Length* of the upper lip is the distance between the base of the nose and the line of the mouth. It may be *long* or *short*.

(2) *The Thickness* of the lips may vary from *thin* to *thick*.

(3) *Peculiarities* which may be noted are :—

Overhanging upper lip, Pendant lower lip, Hare lip, Pouting lips.

E. The Mouth

(1) *Size*.—The mouth seen from the front is judged by its size. It may be noted as *large, medium, or small*.

(2) *Teeth* may be noted as :—

Prominent upper incisors.

False (stating if upper or lower).

Missing upper incisors.

Missing lower incisors.

Discoloured (if out of the ordinary).

White (if out of the ordinary).

F. The Chin

The chin is considered from the point of view of :—

(1) *The General Slope* of the line of its profile, which may in extreme cases be termed *jutting out*, or *receding*.

(2) *The Size* of the chin, which is estimated from the front and is expressed by the terms : *small* or *pointed*; *large* or *square*.

(3) *The Length* is estimated vertically from the mouth to the point of the chin by the terms *long* or *short*.

(4) *Peculiarities* may be :—*Double Chin*; *Dimpled Chin*.

G. The Face and Head

(1) *The Shape* of the face, seen from the front, is the result of the apparent relation between its height and its breadth.

It may be described as *square, broad, round, long, or oval* (which is the usual form).

(2) *Shape of Head* may be described as (a) *round*, (b) *high in crown, flat at back*, (c) *long, bulging at back*, (d) *egg or keel shape*.

(3) *Complexion* may be shown as *fair, fresh, dark, sun-burnt, brick red, sallow, yellow, black, brown*.

(4) *Peculiarities of the Face* that may be noted are :—*Prominent cheek bones*; *flabby cheeks*; *full* (or *fat*); *bony* (or *thin*); *smiling, scowling* (where these expressions are habitual).

H. The Eyes

The eyes are examined from the front and are noted as follows :—

- (1) *Size*, whether *large* or *small*.
- (2) *Colour*, either *black*, *blue*, *grey*, *brown*.
- (3) *Peculiarities* such as :—

Squint.

Cast.

Glass eye.

Protruding ; Sunken ; Long lashes ; Short sighted ;
Wears glasses (or pince-nez, or eye-glass) ; Blinks.

I. The Eyebrows

The eyebrows can be classified under five headings :—

- (1) *Shape*.—This may be noted as *arched*, *straight*, or *oblique*. (Slightly curved is the ordinary shape and need not be noted.)
- (2) *Length*.—*Long*, *short*, *nearly united*, *united*.
- (3) *Breadth*.—*Thin*, *thick*, or *plucked* (pencilled).
- (4) *Colour*.—*Sandy*, *red*, *black*, *grey*, *white* (if different from colour of hair of head).
- (5) *Peculiarities*.—e.g. *elevated*, *beetling*.

J. The Neck

The neck is noted according to—

- (1) *Length*.—*Long* or *short*.
- (2) *Thickness*.—*Thin* or *thick*.
- (3) *Peculiarities*.—i.e. pronounced *Adam's Apple* ; *Goitre*.

K. The Shoulders

- (1) *The Slope* of the shoulders may vary from the horizontal to a pronounced obliqueness, hence the terms :—
Horizontal ; medium ; oblique.
- (2) *The Breadth* may be *narrow* or *broad*.
- (3) *Peculiarities* may be :—
Dropped right shoulder ; dropped left shoulder.

L. The Build

Under this heading the following points may be considered :—

- (1) *Carriage*.—The usual way of holding the head, back, and shoulders may be shown as *erect*, *stooping*, *hunch-back*.
- (2) *Chest*.—May be shown as *narrow*, *broad*, *bulging*.
- (3) *Waist*.—May be *slim*, *medium*, *stout*.

M. The Hair

This is to be noted under :—

- (1) *Head* ; (2) *Moustache* ; (3) *Beard*.

In each case should be shown—

- (a) *The Colour* of the hair : *black*, *grey*, *brown*, *red*, *sandy*, *white*, *golden*, *flaxen*.
- (b) *The Style*.—*Long*, *short*, *thin*, *thick*, *curly*.

Peculiarities may be shown against each type of hair thus :—

- (1) *Head*.—*Bald*, *bald at temples*, *bald on top*, *tonsure*.
- (2) *Moustache*.—*Waxed-ends*, *tooth-brush*, *heavy*.
- (3) *Beard*.—*Square*, *goatee*, *pointed*, *imperial*.

N. Peculiarities of Manner

Any noticeably apparent peculiarities of manner or habit are useful for identification purposes, as they are not easily disguised unless a person is continually on his guard. Some that may be remarked are :—

- (a) *Walk*.—*Long*, *short*, *slow*, or *quick* strides ; *limp*, *pigeon toed*, *splay feet*, *club foot*.
- (b) *Appearance or Look of eyes*.—*Straight*, *oblique*, *piercing*, *dull*, *fixed*, *mobile*, *frank*, *fugitive*.
- (c) *Voice*.—*Accent* (cockney, foreign, Scotch, cultivated, Irish, etc.).
Nasal.
Feminine (as regards a man).

Male (as regards a woman).

Stutter.

(d) *Physical or Mental.*—Favourite habit, weak side, partiality food, drink, smoke, conversation, companionship, amusement.

O. Marks

Under this heading may be included such obvious marks as scars, abscesses, birth-marks, tattoo marks, moles, pimples. Whatever the mark, it is important to show where exactly it is situated, the colour and the size. In the case of tattoos the actual design is naturally important.

All forms for use in connection with items to appear in the *Police Gazette*, Information, etc., have been very recently amended to include most of the headings "A" to "O" mentioned above. This means that officers are expected, in future, to provide many more particulars of wanted persons' personal characteristics than was the case in the past.

The particulars printed on the specimen form below show the details that now as far as possible have to be provided.

CONCLUSION

In conclusion it may be added that what has been said above has been with the intention of giving officers help in completing forms for police publications, so that in time these publications and the Criminal Record Office will give fuller particulars of persons to whom they relate.

When a person is in custody there is no excuse for failure to give full details. Where the time for observation is short, in the absence of any outstanding feature the most useful points to concentrate on are (1) the Ear, (2) the Nose. It is, of course, assumed that in every description reference will be made to the apparent age and height before anything else is considered.

Particulars of a Person* Wanted.
Suspected.
In Custody.

County }
City } *Force.
Borough }

If in custody, date and place of remand or trial

†Offence, and classification giving place, time, and date committed

†Full details of *modus operandi*. If property involved, give full description (attach separate sheet if necessary)

Name in which wanted (or charged)

* Address
Address unknown
No fixed abode

Registered name and *alias*

C.R.O. No. Supplement A or E ref. (when known)

Previous circulation in *Police Gazette*

Native of (if known) Age (approx.) Occupation

Height Build Complexion

Hair Eyes (glasses, if any) Hair on face

Nose (large, small, Jewish, turned-up)

Mouth (including teeth)

Ears (large, small, close to head, protruding, pierced)

Marks (e.g. scars, tattoo, etc.)

Habits (fond of racing, smoking, drinking, etc.)

Peculiarities (stammer, accent, squint, gait, etc.)

Dress :

Warrant issued or not Can person(s) be identified or not

Date Officer making the report.

* Delete as necessary. †Offence and M.O. should agree.



Finally, as a word of warning to show that sometimes the best descriptions may be nullified by the action of the wanted person concerned, here is an extract from a report recently written :—

“ . . . is a troublesome prisoner and does all he can to disguise himself, in order that witnesses cannot definitely identify him. At the West London Police Court on 9th October, 1935, he looked more like a made-up comedian than his actual self. He had a tooth-brush moustache with two or three days' growth of beard and side whiskers. He was also wearing horn-rimmed spectacles. His hair, instead of being brushed back from the side, was parted in the middle and plastered down over his forehead in the Dan Leno style.”

It is said that his own mother failed to recognize him when she went to visit him at Pentonville Prison.

Scientific Aids in Criminal Investigation

By F. G. TRYHORN, D.Sc.(Liv.), A.I.C.

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PART III

SEARCHING AND PACKING

IN the previous articles indications have been given of the types of material which constitute 'traces', and suggestions have been put forward whereby the general search of a scene of crime may be made systematic so far as the discovery of 'traces' is concerned. It is proposed to deal in the present article with the search of garments and footwear, and, briefly, with the preservation of the integrity of exhibits during their passage from the finder to their final appearance in a court of law.

The searching of garments is necessary in many types of case : where breaking has been committed the clothes of the suspect may bear such traces as fibres, paint, candle grease, or dusts of characteristic types : in sexual cases stains of semen or blood may occur on the clothes of both victim and assailant : footwear may carry soil or mud, fibres or vegetable debris, which may link a suspect with a crime ; in safe robberies the finding of safe-ballast on prisoners' clothing frequently figures as part of the evidence. It is important, therefore, that some systematic procedure be adopted in searching garments for traces of these kinds ; the first aim of this systematic procedure being to ensure that the whole of the garment shall be included in the search. The second aim should be to record unambiguously the positions on the garment in which any traces occur : the importance of being able to state, for example, in a case of sexual assault, exactly where a hair or fibre occurs on the suspect's garments cannot be too strongly emphasized.

Provided these two aims are secured, the exact nature of the searching system adopted is immaterial: the system to be described has the merit of simplicity, and calls for little expense in equipment. It has, moreover, the advantage of enabling a clear and concise record of the findings of the search to be made.

Before considering the details of this method it may be advisable to consider the circumstances in which a detective officer may be called upon to conduct the search of garments. It will be taken for granted that in major cases specially trained officers or laboratory specialists will be present to conduct the search. But in minor cases, and in remote stations, it may be necessary for a detective officer to make the search himself, primarily with a view to satisfying himself that nothing is present on the garments which may be lost or misplaced during transit to headquarters. In such a case care must be taken to keep the individual garments free from contact with one another before the detailed search: thus, in taking garments from a suspect, each garment should be folded as little as possible, and separated from other garments by a sheet of paper. Footwear should be removed first and placed on a clean sheet of paper to avoid losing traces of soil, etc. If there is any reason to suspect the presence on the suspect's clothes of easily dislodged material, the removal of his garments should take place while he is standing on a clean floor or large sheet of paper. The floor or paper should be examined after the removal of each separate garment and any material found on it noted as having come from the garment last removed. Where the officer has occasion to proceed with the detailed search the following method is suggested.

SEARCHING-BOARD.

The searching-board has been devised in order that, if the occasion later arises, a given garment may be spread out exactly as it was during the original search, and the point indicated with high precision from which a given exhibit,

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e.g. a hair, was taken. In this method the need for stating the position of an exhibit in terms of measurements (e.g. "3 inches from the middle button and 1 inch below the breast pocket") is eliminated.

The searching-board is made from a standard 5 ft. by 4 ft. sheet of three-ply wood. Starting 2 inches from a corner, each edge is marked off in 4 in. intervals by small notches: notches on opposite edges are joined by black painted lines, so that the whole board is divided up into squares with 4 in. edges. Along one edge the intervals between the notches are lettered A, B, C . . . and along an adjacent edge the intervals are numbered 1, 2, 3 . . . In this way reference may be made to any point on the board by referring the square in which it occurs to the row and column in which this square appears. Thus square B₂ lies below square B₁ and above square B₃, to the left of square C₂, and to the right of square A₂. By this system any point on the board will be determined, on the average, with an accuracy of within 2 inches. If, as sometimes happens, it is necessary to refer to a point with greater accuracy than this, a 4 in. square may be imagined as being divided into four

equal squares, lettered a, b, c, d—thus

a	b
c	*d

 . If the whole square is E₄, the position of the point *x* is given by the symbol E₄d to within an average accuracy of 1 inch. Specification of the position of a point to within ½ in., if necessary, may be obtained by imagining one of the smaller squares again subdivided, thus for the 2 in. square E₄d—

a'	b'
*c'	d'

 ; here the point *x* is represented by the symbol E₄dc'. It is seldom, however, that accuracy of the last order is needed in practice.

The dimensions of the sheet of material of which the searching board is made are immaterial: the intervals between the notches (*i.e.* the size of the squares) must, however, be

fixed and taken as standard : experience has shown that the 4 in. is the most convenient size of square for this purpose. But, subject to this restriction that 4 in. squares are taken as standard, a search made on one board may be repeated in all details on a second board of different overall dimensions.

PINNING OUT THE GARMENT.

The first step in making the search is to pin out the garment on the board according to fixed conventions. For this purpose stout drawing pins, with $\frac{1}{2}$ in. shanks, may be used, but the long glass—or composition-headed—photographic pins are preferable. After pinning out the garment the position of each pin used should be indicated by means of a tiny knot of coloured silk or cotton sewn on to the garment. The conventions given here are those that have been found convenient in practice, but they should not be regarded as unalterable : it is, however, essential that, having adopted certain conventions in laying out garments on the board, the searcher should stick to them, and should indicate them clearly in his notes.

General Convention.—In pinning out garments, pins should be placed in the centres of squares. It is sufficient then to say, for example, in pinning out a pair of trousers, that the pins are at E1, J1, E11, H11. By this convention it will be realized that the pins were fixed in the centres of these squares, and the garment may later be pinned out on the same, or any other board, with the knowledge that it is in an exactly corresponding position.

PINNING OUT A MAN'S JACKET.

1. Lay the jacket, back downwards on the board, which should first be dusted, with the centre-line of the back down the centre-line of the board ; bring the front edges of the coat together, and let the sleeves of the jacket lie naturally and flat (Fig. 1). The collar of the coat should be turned

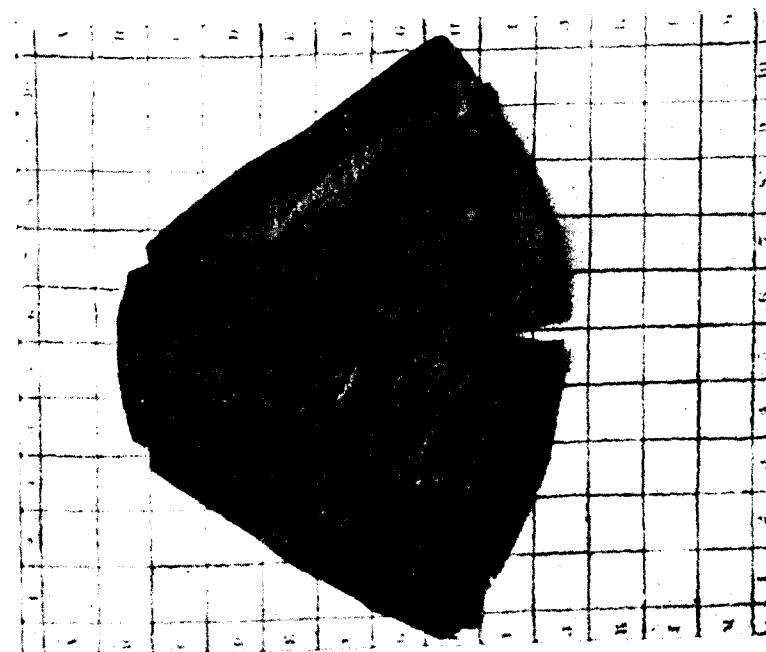


FIG. 2

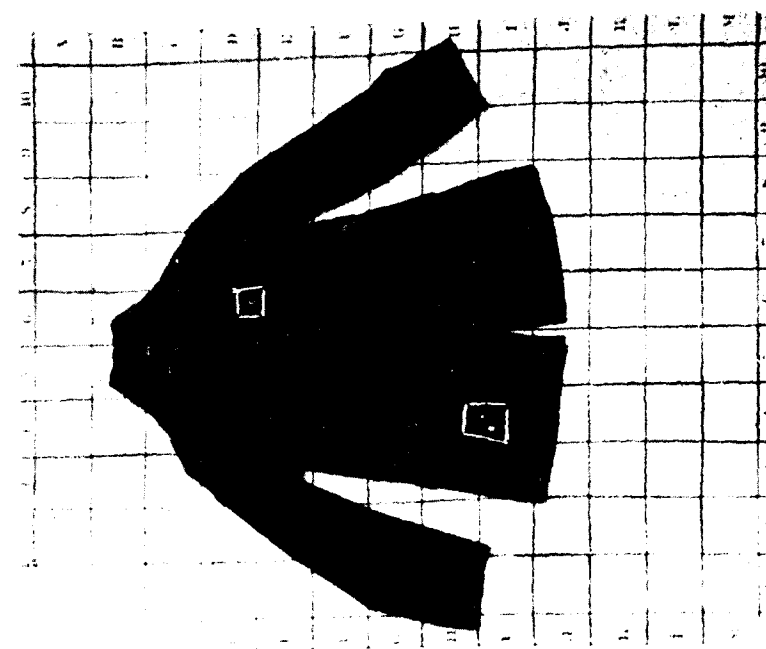


FIG. 1

THE SEARCHING-BOARD

(face p. 306)

up. Pin the jacket by six pins : one at each shoulder, one at the cuff of each sleeve, and one at each bottom corner of the jacket as it lies on the board. These pins must be placed in centres of squares, and the squares noted. In this position a systematic search may be made of the front of the jacket and sleeves, the lapels, and the whole of the collar-facing. Suggestions will be given later for methods of collecting and mounting the material found in this search.

2. Having searched the first aspect of the jacket, turn out the front-flaps of the coat, so that they lie naturally, and the whole of the lining of the coat is exposed for searching (Fig. 2).

3. Bring the front-flaps of the coat together, and remove the pins : turn the coat face downwards on the board, and again pin it out. Since a jacket is a symmetrical garment, the pins may be put in their original places both in the garment as indicated by the knots of silk, and in the board, as indicated by the squares named. By these three operations the whole of the surface of the coat, apart from the sleeve linings and pockets will have been presented for examination. The lower portions of the sleeve linings should always be inspected while the coat is in position 1.

PINNING OUT TROUSERS.

1. Lay the trousers out flat on the board as if putting them into a press, but, instead of turning in the front edges to the first buttons, let them lie flat with the edges of the flies outwards. Bring the bottoms of the trouser legs, which lie on one another, as near the bottom edge of the board as possible : bring the front edge of the trousers into alignment with one of the vertical lines on the boards. Pin with four pins : one at each extremity of the top edges of the trousers, and one at each bottom corner of the trouser leg in contact with the board. Mark the position of the pins with coloured silk, and arrange that the pins are at the centres of squares which are duly recorded. Search the whole face of the trousers thus exposed.

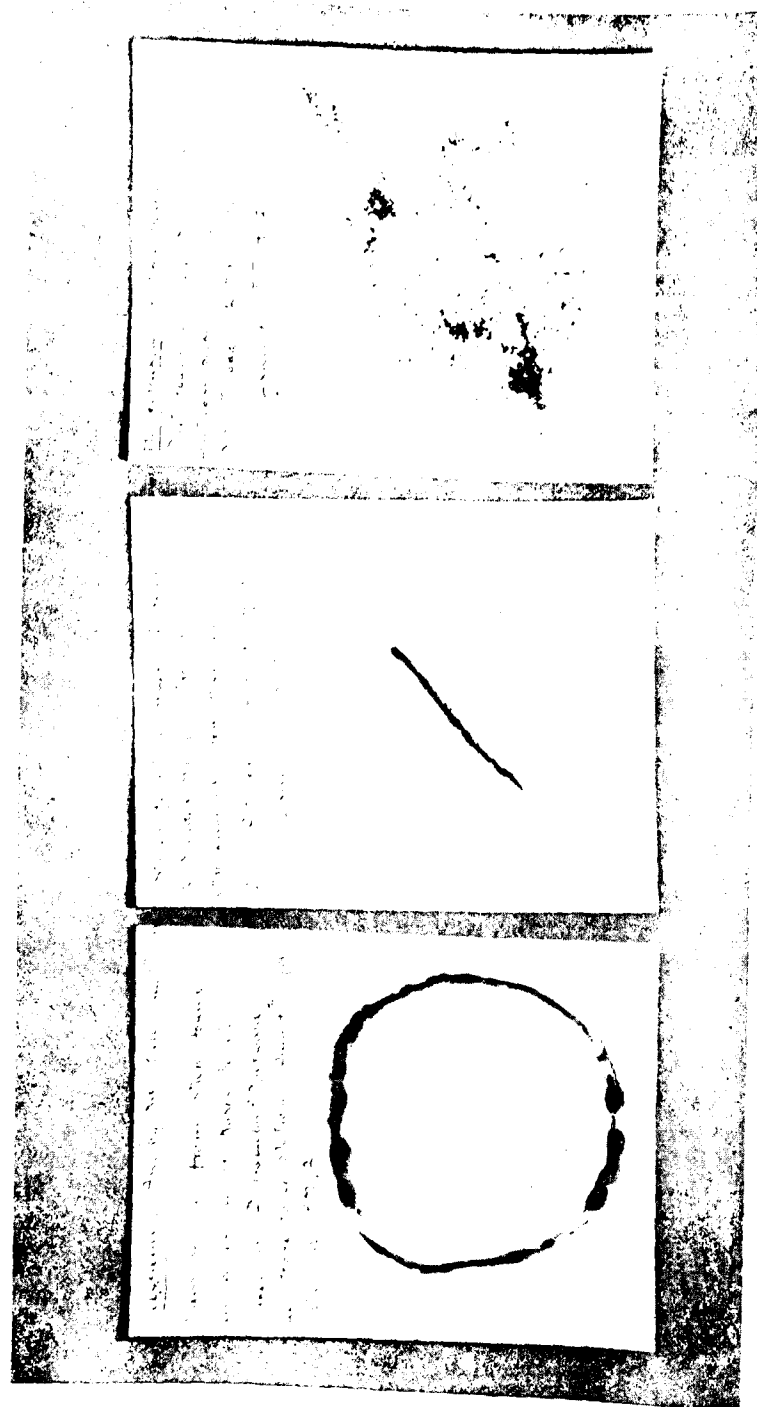


FIG. 3.—THE MOUNTING OF 'TRACES'

2. Lift up the top trouser leg and turn it back over the top of the board : search the upper surface of the leg which is pinned to the board and now exposed.

3. Fold back the top trouser leg into its first position, remove the pins, and turn the trousers over so that the face which was in contact with the board is now uppermost. Pin out the trousers again placing the pins through the four silk knots previously made. It must be noted that since trousers when thus laid out are not symmetrical it will not be possible to put the pins in the same positions on the board as in the No. 1 position : the new positions of the pins must be recorded.

4. Again fold back the upper leg of the trousers and search the fresh surface exposed. In these four operations all the exterior surfaces of the garment will have been searched : a special search of the inside of the flies should be made while the garment is in position 1 or 3.

PINNING OUT MAN'S WAISTCOAT.

1. Lay vest face upwards on the board, with fronts placed edge to edge, so that the centre-line of the vest lies along the centre-line of the board : fix by four pins, one at each shoulder, and one at each bottom corner of the vest. Mark the position of the pins with silk knots, and note the squares in which the pins are placed. This position enables the whole of the front of the vest to be searched.

2. Open out the fronts of the vest so that the whole of the lining of the vest is exposed for searching.

3. Fold in again the fronts of the vest, remove the pins and reverse the vest on the board so that it is now face downwards. The symmetry of this garment enables the pins to be placed in the same positions as in stage 1. The back of the vest is thus exposed.

PINNING OUT WOMAN'S SKIRT.

1. The skirt is placed on the board face upwards, with the centre-line of the skirt along the centre-line of the board :

the opening of the skirt will then normally be on the right-hand side of the board : four pins, one at each corner of the skirt, will be sufficient to secure it.

2. After searching the front of the skirt it should be reversed, its symmetry enabling the positions of the pins in stage 1 to be used again.

3 and 4. In most cases in which sexual assault is concerned it is necessary to turn the skirt inside out and to make a search of the lining. This can be done by pinning out the skirt, now reversed, on positions analogous to 1 and 2.

The conventions to be used in the pinning out of the four garments above may be taken as typical examples. Appropriate conventions may be devised for any other garments encountered : in such cases it may again be emphasized that when such conventions have been decided upon they should be strictly adhered to in the subsequent searching of similar garments. It is also imperative that the conventions adopted should be clearly indicated in the notes reporting the search. A suitable method of doing this is suggested later.

REMOVAL OF 'TRACES' FROM GARMENTS.

The chief object of the search of garments in the preliminary stages of an investigation is to remove any 'trace' which is likely to be damaged, lost, or moved during transit of the garment to the laboratory. The discretion of the officer making the search must be exercised at this stage. His aim should be to note as much as possible during his search, but to remove only such 'traces' as his discretion suggests it is advisable to remove. In general, stains, smears, encrustations, particles of strongly adherent matter such as candle-wax, sealing-wax, metal splashes, and sticky soils should not be removed : their presence should be noted, and, if necessary, their position may be marked.

On the other hand, it is usually advisable that such loosely adhering materials as hairs or fibres, vegetable matter,

metal filings, and wood splinters should be removed, provided that careful note is made at the time of the position in which they were found, and that adequate methods of preserving them are adopted.

MARKING OF POSITIONS ON GARMENTS.

As has been pointed out above, the searching-board gives a means of indicating, by suitable symbols, the position of any point on a garment: with a little practice the co-ordinates, e.g. F 6, of a position on a garment may be read off without any artificial aids; but in the early stages of using the board it is helpful to rely on the aid of a pair of straight laths or rods, slightly longer than the dimensions of the board, in fixing the location of a point in terms of its square symbols.

However, it is frequently more convenient to place some permanent mark on a garment in the place from which some 'trace' has been removed.

Several methods are then available: small pieces of paper bearing the number given to the exhibit removed may be pinned on the garment. These are rather easily torn off during handling or packing the garment, and a better plan is to use the small labels of tape or card, such as are used by laundries, which are affixed by little metal hooks. The exhibit number should be written on these with Indian or marking ink. To indicate large stains or encrustations the areas occupied by them may be outlined by coloured silk, as, for example, on the jacket in Fig. 1. Where the 'trace' removed is small, a knot of silk made in the garment is sufficient to indicate its locality. In serious cases it is well to photograph any 'traces' which seem likely to be of importance while the garment is still on the searching-board. Alternatively, rough sketches should be incorporated in the notes of the search to indicate the position of 'traces'.

Occasionally it is desirable that patches of material, e.g. crumbly soil or dried blood, which it has been decided

should not be removed during the search, should nevertheless be protected during transit to the laboratory: a suitable procedure in such cases is to cover the deposit with a piece of transparent cellophane, which is stitched round the deposit with silk or cotton.

MOUNTING OF 'TRACES'.

As soon as any 'trace' is removed from a garment it should be immediately packed and labelled in such a way that it is safeguarded against loss, and its origin clearly indicated. Small glass tubes, metal boxes, or suitable envelopes, transparent or opaque, may be used. The method, however, which experience has shown to be the simplest and most suitable is to mount the 'traces' on cards under a covering of cellophane. Three methods of doing this are shown in Fig. 3. White cards, $3\frac{1}{2}$ by $4\frac{1}{2}$ inches, were used in these examples.

In Fig. 3 (I), a circle of adhesive was squeezed from a tube on to the card, the exhibit placed in the centre of the circle, and a piece of cellophane 3 inches square pressed down on to the gum circle. After a few minutes the surplus cellophane outside the circle was trimmed off with a sharp knife. For this method, any adhesive of the 'Seccotine' type is suitable, and the only precaution necessary is to see that the adhesive circle is continuous. Ample room should be left, as shown in the example, to write on the card the necessary particulars of the exhibit.

In Fig. 3 (II), a square-shaped line of ordinary gum arabic solution was drawn on the card and allowed to dry: this gum was then moistened, the exhibit placed in the centre, and a square of cellophane pressed down on the moistened gum. In this method excess of moisture on the gum must be avoided, since the cellophane crinkles when moistened and later dried. The chief advantages of this method are that a series of gummed cards may be prepared

ready for use at any later time, and that the need of carrying a tube of adhesive is obviated.

In Fig. 3 (III), use was made of a card which had been previously prepared with a piece of cellophane gummed along two sides. The dust exhibit was then slipped into the pocket so formed, and the two free edges of the cellophane stuck down to the card by lengths of the self-adhering cellophane tape of the 'Nadir' or 'Oxonium' type. On the whole, this method seems more convenient than the other two, since a supply of the cards with cellophane gummed on may be prepared, and these, together with a small roll of the adhesive tape are all that are needed for work either at the scene of a crime, or when searching garments by the help of the searching-board.

In passing it may be mentioned that in packing specimens of dust it is a good plan first to wrap the specimen in a folded piece of cellophane, and then to mount this package under a separate piece of cellophane, instead of having, as in Fig. 3 (III), the dust loose under a single covering. This procedure is essential if the dust is suspected of containing sharp particles of metal or sand which might perforate a single covering.

METHOD OF MAKING NOTES OF A SEARCH.

Before beginning a search a clear description of, *e.g.*, the garment should be made, the circumstances of its collection described, and a provisional exhibit-number given to it. These particulars should be recorded both in the notes, and on a label which is firmly secured to the garment. After pinning out the garment an entry should be made indicating how that pinning out was done, and, if conventions have been adopted for this particular type of garment, exactly what they were. The exposed surface of the garment should then be methodically covered by the search, notes being made of anything of significance found, and a record made of any 'traces' removed and mounted: such traces should

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be given an exhibit-number which includes the exhibit-number of the garment. Thus, in an investigation, the third garment seized and searched by Detective Sergeant P. Q. would be given the exhibit-number P.Q.3; the first 'trace' removed and mounted by him during the search of this garment would receive the exhibit number P.Q.3/1. 'Traces' noted but not removed would be recorded in the notes, but would not be given exhibit-numbers.

As an example, part of the notes made by an officer during a search are included here.

EXHIBIT P.X.1

Prisoner John Jones.

Article Brown leather motor coat, taken from prisoner on arrest.

Offence Factory- and safe-breaking at 71 Tenby Street, Brigwell.

Garment pinned on board (first position): pins at A 3, A 8, K 1, K 10. Position of pins marked by yellow silk.

At K 5 Oval white stain, ? paint, outlined in yellow silk.

At J 8 Several small spots of white material of which two which were loose were removed and mounted. *Exhibit P.X.1/1.*

Flaps of coat turned out: (position 2).

At G 8 Dark brown encrustation: covered with cellophane.

At M 10 Grease stain to which a number of metal filings was adhering: these were removed and mounted. *Exhibit P.X. 1/2.* Position of stain marked by red silk.

Coat reversed: pins in original positions (position 3).

On back of right shoulder: numerous scratches to which some red and white dust was adhering: this was removed and mounted. *Exhibit P.X. 1/3.* The scratches were then covered with cellophane.

At the conclusion of the search a check should be made of the number of subsidiary exhibits recorded in the notes against the number of mounted exhibits.

It is not suggested that it is necessary in every case to go through the full process of pinning out a garment on the

board : in the majority of cases it is sufficient to lay out the garment in the appropriate position on the board whilst making the search : only if the search begins to yield positive results is it then desirable to use some system such as that described for recording and locating what has been found. Moreover, it usually happens that the search is being made, not as a 'blind' search, but in order to discover whether there are on the garment any 'traces' which the application of the 'exchange principle' [Part II] to the reconstruction of the case suggests as probable.

SEARCHING OF POCKETS AND OF TROUSERS TURN-UPS.

If a preliminary search of a garment has given such evidence of the existence on it of 'traces' that the decision to send it to a laboratory for expert treatment seems certain it is preferable to leave the task of searching the pockets for minor traces to the expert : but if the preliminary search is fruitless, then it may properly be the duty of the officer to examine the pockets for traces of significant material. The simplest procedure is then to turn out the lining of the pockets, one by one, over a piece of white glazed paper or over a large enamel photographic dish : special care should be taken to dislodge all the debris which usually clings tenaciously in the extreme corners of the pockets. It is of the utmost importance that the debris from each pocket shall be collected and packed separately : if the amount is not too large it can well be mounted on a card under cellophane : if, as sometimes happens, there is a considerable amount of loose tobacco, cigarette ends, etc., the material should be packed in a small cardboard or metal box. No attempt should be made at this stage to remove the extremely fine dust which can be extracted only by beating or suction.

Usually considerable amounts of debris collect in the turn-ups of trousers. In the majority of cases it is safe for the officer to remove this : in cases involving bloodshed, however, in which there is the possibility of blood splashes having

been caught in the turn-ups it is best to leave the removal of the debris to the laboratory worker. Where the removal is undertaken the stitches holding the turn-ups at the sides of the trouser leg should be cut, and the complete fold turned down while the trousers are held over a piece of glazed paper. If the debris is of long standing scraping with a knife may be necessary to obtain complete removal.

Needless to say the debris from each trouser leg should be separately packed : indeed, circumstances may arise when the officer's judgment should lead him to pack separately the debris from the inside and outside aspects of the turn-up of each trouser leg.

SEARCHING OF FOOTWEAR.

The searching of footwear may be undertaken by an officer with the object firstly of determining whether there are present any significant 'traces', and secondly with the purpose of removing and packing any loose material which, it is considered, may become detached during transit.

Each item of footwear should be searched separately while held over a clean sheet of glazed paper. Mud that is firmly attached should not be removed : if, however, a cake of mud is loosely attached by one edge it should be removed and mounted, special care being taken to record, before actual removal, which face of the cake was in original contact with the leather of the shoe : thus, the cake may be mounted under cellophane, or stuck on to a small wad of plasticine in a shallow box, with the note that "the face now uppermost was originally in contact with the sole". This will secure the possibility, if examination shows that the mud occurs in layers of different kinds, of correlating these layers with the possible track of a suspect.

Considerable difficulty may arise if attempts are made to describe in words the position of 'traces' on footwear : this is caused chiefly by the ambiguity in the use of the terms 'inside' and 'outside' with reference to footwear.

It is suggested therefore that the freest use should be made of rough sketches in reporting on the examination of these articles. An example is given in Fig. 4. Any material removed from the article and mounted will, of course, receive its own exhibit-number, and must have its position recorded in a sketch.

In minor cases in which laboratory assistance is not immediately available the officer may, in his discretion, decide himself to examine mud on footwear for evidence of layering. In such a case the article should be held over a piece of glazed paper and the deposit gently scraped with a knife or razor-blade. As soon as the scraped surface shows any sign of a change in colour scraping should be stopped and the scrapings collected on the glazed paper mounted. Scraping should be continued then over a fresh piece of paper and any second layer which appears should be separately collected: each successive layer in such a case must be separately collected. An operation of this type should, however, be avoided by the officer if possible.

If the footwear are wet or damp when collected they should be allowed to dry before examination: drying should not be carried out by direct heat, but, if possible, in a draught of warmed air.

PRESERVATION OF THE INTEGRITY OF EXHIBITS.

From the time of its discovery until its final appearance in a court of law an exhibit may pass through a number of hands: and it is, of course, essential to be able to prove the continuity of handling of the exhibit. Thus the fewer persons handling the exhibit the better. In any case, it is preferable to have attached to the exhibit a record of the persons who have handled it in any capacity since its first seizure. Suggestions have been made in the pamphlet on "Scientific Aids in Detection" for a suitable label for attachment to exhibits, on the back of which space is provided for the signature or initials of all persons handling

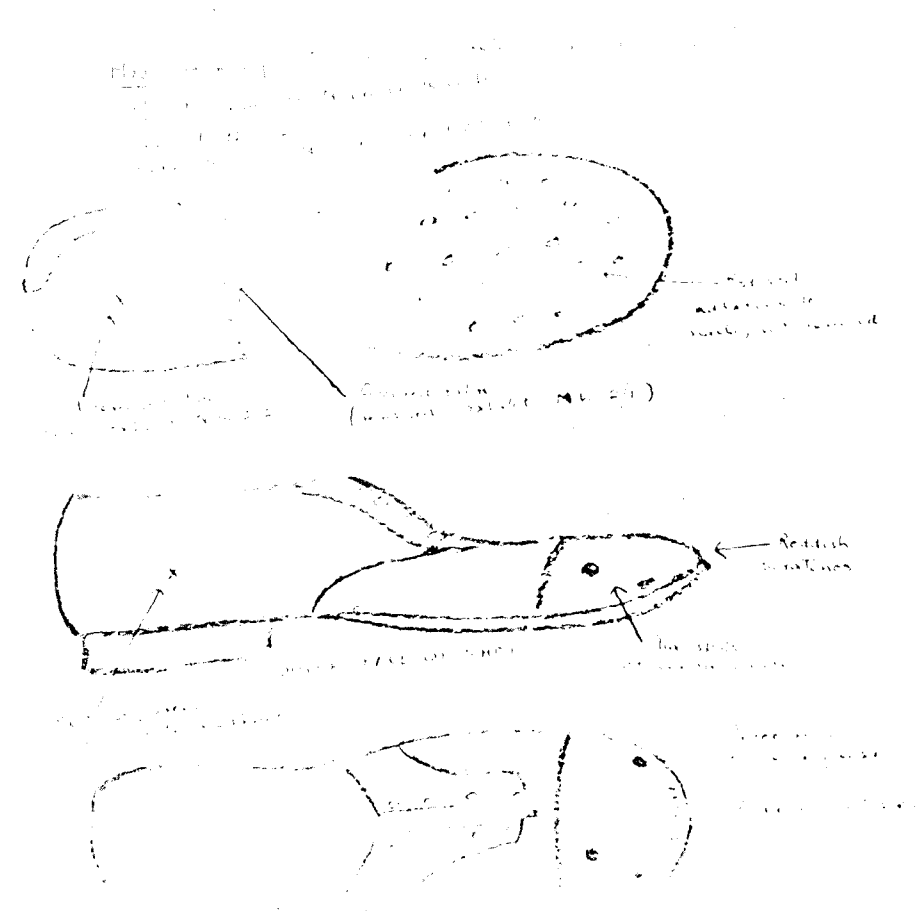


FIG. 4.—THE SEARCHING OF FOOTWEAR

the exhibit to which it is fastened. This device will enable a check to be made at any time of the "integrity" of an exhibit in the sense of continuity in its handling: the "integrity" of an exhibit in the sense of its safeguarding from loss, damage, and contamination must equally be secured. This may be done by adopting adequate methods of handling and of packing for transit. This subject has previously been dealt with in this Journal ("The Packing of Exhibits": THE POLICE JOURNAL, Vol. VIII (1935), p. 19), and reference should be made to that article for details.

The next article will deal with the significance of dust in crime investigation.

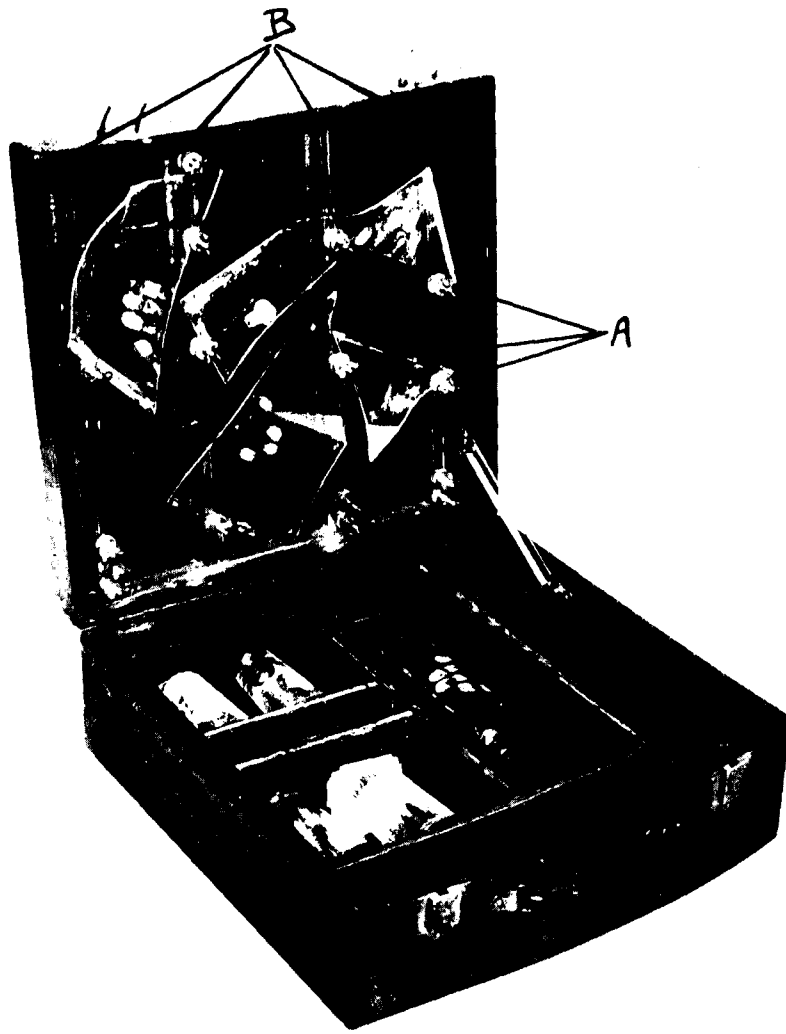


FIG. 1. —A CASE FOR CONVEYING ARTICLES FROM SCENES OF CRIME
(See 'All About Finger-prints', page 319)

All about Finger-prints

By SUPT. H. BATTLE

Officer-in-Charge, Finger-print Branch and Criminal Record Office,
New Scotland Yard

III

IN my last article I dealt with the processes, etc., used for the development of imprints, and points to be observed in the investigation of any crime in connexion with which imprints are discovered.

This article contains hints which will be found useful in the packing of articles bearing or believed to bear finger- or palm-prints, how identity of an imprint is established, etc.

PACKING OF ARTICLES

Much space could be devoted to discussing the points to be observed in the packing of articles for dispatch for examination to the Finger-print Branch. Instructions for carrying out this duty, together with many useful illustrations, are set out in detail in *Finger Print Clues*, which was compiled in 1924 by Mr. Charles S. Collins, then Superintendent of the Finger-print Branch, New Scotland Yard, and has since been revised. This booklet is obtainable from H.M. Stationery Office, Adastral House, Kingsway, London, W.C. 2, price 2d.

No hard and fast rules can be laid down, but if all officers responsible for the packing of articles bearing or believed to bear finger- and palm-prints will keep in mind two essential points, I do not think any mishaps will occur.

The first is to ensure that no portion of the article where imprints may be found comes into contact with anything else. If it does, then there arises the danger of the imprints being partially obliterated or destroyed.

ALL ABOUT FINGER-PRINTS

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The second is to see that the article is securely packed in a suitable container. Fragile articles have been received by post broken, through faulty packing, into several pieces and fragments, whilst in other cases, a bottle or similar article has been received in a box and the bottle has not been secured in any way so as to render it immovable in the container during transit.

In such cases it is generally found that the article or the pieces of it bear no useful impressions. It is quite possible that in a number of cases such damaged exhibits might have borne the identity of the perpetrator(s) of the offence in question.

Nails should never be used to secure articles—screws are far more satisfactory.

Fig. 1 is a photograph of a specially constructed case which will be found to be very useful for the safe conveyance of various articles from scenes of crime. The case was constructed here from a model used by the French Police.

As will be seen in Fig. 1, the glass is held securely by means of wing nuts and two thick washers (shown 'A' in the illustration) which are covered with leather to afford protection to the glass when screwed in position. The nuts and washers can be adjusted to any position on the fixed strips of metal (shown 'B').

In all cases where articles for examination are sent to New Scotland Yard, an explanatory letter should be forwarded under separate cover. Each article submitted should be suitably and securely labelled either with a stick-on or tie-on label quoting a reference to the offence in connexion with which the article is submitted, particulars of the Force concerned, and any other useful information.

It is not recommended that either a tie-on or stick-on label should be affixed to any articles which have not been examined for possible imprints, or where the imprints are not visible. In these cases, the label which would ordinarily be affixed to the article should be secured on the inside of the package in such a way that it does not come into contact

with any portion of the article and where it can easily be seen.

The correct labelling of articles will prevent any misunderstanding that may arise with regard to the offence, address, etc., from which the articles were taken and is of importance as, in the event of any imprints which are filed in the Scenes of Crime Collection being subsequently identified as those of a particular person, it can be stated with certainty that the person in question has been identified for a particular offence committed at a certain address.

To illustrate the point, assume that two shops (numbered 56 and 57) in a certain street are broken into one night. Articles from both shops are sent to the Finger-print Branch, imprints thereon are developed, photographed, etc., and are eventually filed in the Scenes of Crime Collection. The imprints found at *one* of the shops, *i.e.* No. 56, are subsequently identified as being those of a person who is in custody for another offence. There is no evidence apart from that of the finger-prints found to connect this person with the offence at No. 56.

Before the person is charged with committing the offence at No. 56, it is discovered that the articles which bore his finger-prints were taken from No. 57 and not from No. 56 as was originally reported by the Force concerned.

Cases of this nature have occurred and it is needless for me to emphasize the importance of reporting correctly the address, etc., from which articles bearing imprints are taken.

When an identification results it is the practice to produce in Court the article bearing the imprints, whenever possible, in the container in which it was forwarded to the Finger-print Branch.

HOW IDENTITY IS ESTABLISHED

Those of you who know little or nothing of the science of identification by means of finger- or palm-prints will no

doubt be interested to learn how the identity of an imprint is established.

As previously stated, identity of an imprint is determined by the coincident sequence of the ridge characteristics in the impressions under review. Identification of imprints must of necessity be absolute. If a sufficient number of ridge characteristics are in complete coincident agreement in two impressions, then it can be said definitely that the impressions were made by the same portion of the palmar surface of the hand—whether it be a digit or a portion of the palm.

It should be borne in mind, however, that to determine identity, the ridge characteristics in the one impression should be clearly seen in the other. There should be nothing added or nothing missing in either imprint. One dissimilarity is sufficient to decide definitely that the imprints are "not identical". By "dissimilarity" is meant where a clearly defined ridge characteristic can be seen in one impression and is non-existent or is not in proper sequence in the other imprint.

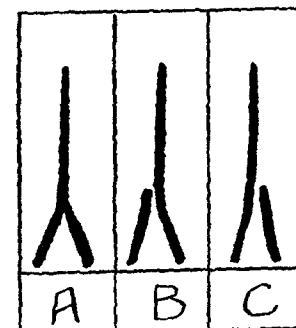


FIG. 2.

It occasionally happens that, owing to varying degrees of pressure, a particular characteristic such as a bifurcation or forking of a ridge may appear as a ridge termination alongside another ridge. The bifurcation shown in Fig. 2 (A) can, and does in many cases, present the appearance shown in

Figs. 2 (b) and (c). This is due to the fact that the papillary ridges are, as the reader will appreciate, pliable and can become more or less flattened by varying degrees of pressure.

To illustrate this point more clearly, should an article be but lightly touched, only the extreme elevations or the crests of the papillary ridges would come into contact with it. As the amount of pressure applied is increased, so will the number of ridges that come into contact with the article be spread over a larger surface and the ridges themselves present a coarser or thicker appearance. Should sufficient pressure be applied, the papillary ridges would be flattened to such an extent that the resultant impression would disclose no characteristic data, and would be nothing but an indecipherable smudge.

Therefore, it will be understood that these ridges may, according to the manner in which any article is handled or gripped, present a slightly different appearance. Difference in the "appearance" of two impressions does not imply that they are not identical. Identity is not established upon the appearance of two impressions, and "differences in appearance" should not be confused with "dissimilarities". This seemingly difficult point can always be explained satisfactorily by a finger-print expert.

Consult Fig. 3. The illustration "A" shows an enlargement of an imprint left on a cash box at the scene of a crime, and was later identified as the left middle finger impression of a certain individual (see illustration "B").

Sixteen ridge characteristics, which are in coincident agreement in both impressions, have been marked on the enlargements. If these impressions did not agree in the sequence of their ridge characteristics, they would not be identical.

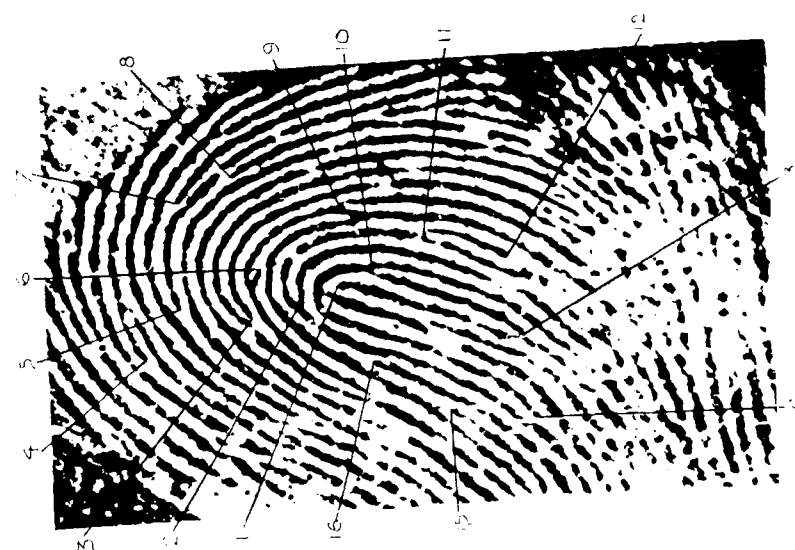
Scrutinize the characteristics which have been marked and numbered '1' to '16' in both impressions.

No. 1 is a ridge terminating in an upward direction.

No. 2 is a ridge bifurcating or forking in an upward direction and to the right.



B



A

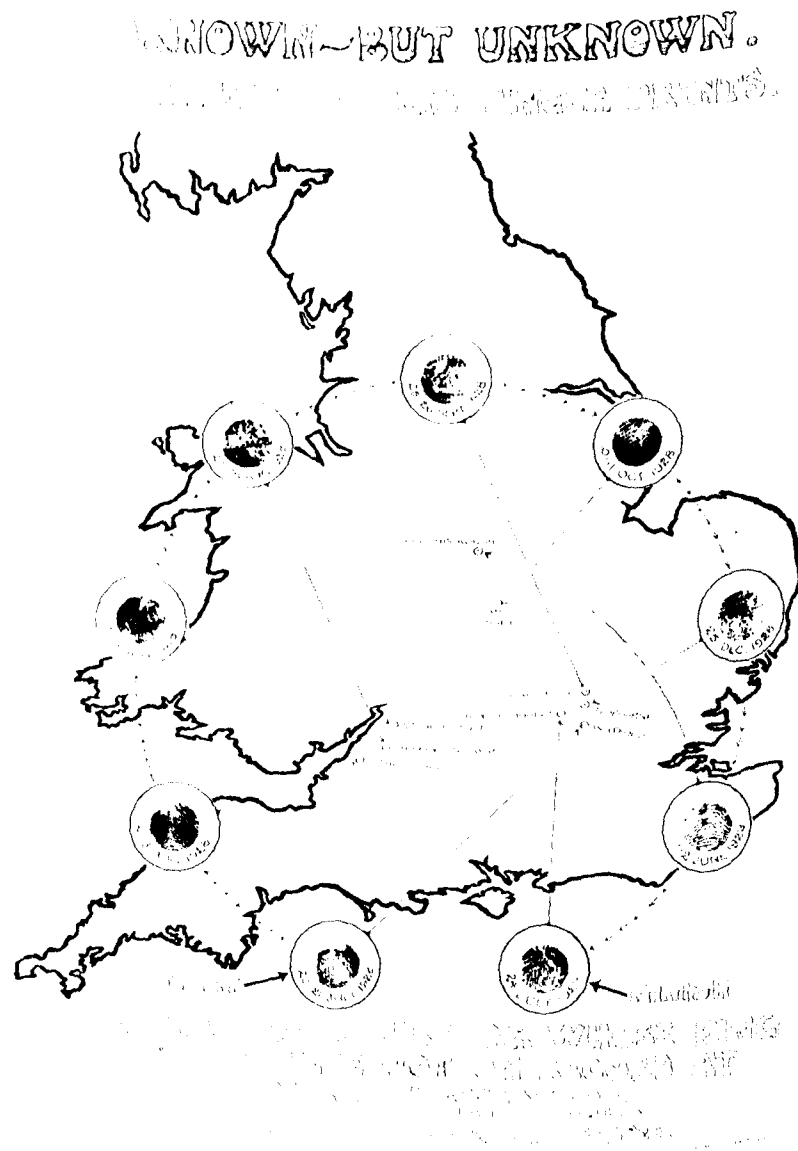


FIG. 4

Two ridges intervene between characteristics Nos. 1 and 2 in both impressions. If there were 1, 3, or more ridges intervening between these points in the illustration 'A' and only two intervening between these particular points in the illustration 'B', then the imprints would not be identical.

No. 3 is another ridge bifurcating in an upward direction and to the right. If slightly less pressure had been applied, this characteristic might have appeared as a ridge terminating in a downward direction and to the left.

Two ridges intervene between points Nos. 2 and 3 in both impressions. If the number of ridges intervening between these points in one impression differed from the number of ridges intervening between the same points in the other impression, then again the impressions could not possibly be identical.

No. 4 is a ridge terminating in a downward direction and to the left, with exactly five ridges intervening between this point and point No. 3 in both enlargements.

No. 5 is a ridge ending in a downward direction and to the left, 3 ridges intervening between points Nos. 4 and 5 in both impressions.

No. 6 is a short ridge ending in a downward direction to the right, and is the lower limb of a bifurcation a little to the left of this point. Five ridges intervene in both impressions between points Nos. 5 and 6.

No. 7 is a ridge ending in an upward direction, with six ridges between it and point No. 6 in both impressions.

No. 8 is another ridge ending in an upward direction, one ridge only intervening between points Nos. 7 and 8.

No. 9 is a ridge bifurcating in a downward direction, four ridges intervening between points Nos. 8 and 9.

No. 10 is another ridge bifurcating in a downward direction, three ridges intervening between points Nos. 9 and 10.

No. 11 is yet another ridge bifurcating in a downward direction, one ridge intervening between points Nos. 10 and 11.

No. 12 is a ridge ending in a downward direction and is the termination of the right-hand limb of the bifurcation at point *No. 11*.

No. 13 is a ridge bifurcating in an upward direction, two ridges intervening between points *Nos. 12* and *13*.

No. 14 is a ridge ending in a downward direction, two ridges intervening between points *Nos. 13* and *14*.

No. 15 is a ridge ending in an upward direction, two ridges intervening between points *Nos. 14* and *15*.

No. 16 is a ridge ending in an upward direction, and is the next ridge on the right of point *No. 15*.

Three ridges intervene between points *Nos. 1* and *16* in both impressions.

It will be seen that the characteristics which have been marked appear in coincident sequence.

There are numerous other ridge characteristics which are in agreement in both impressions. These have not been marked, as *Fig. 3* represents exactly how a photographic enlargement is produced in Court with the exception that, for production in Court, the exhibit is enlarged to approximately six diameters.

NUMBER OF RIDGE CHARACTERISTICS IN AGREEMENT NECESSARY TO ESTABLISH IDENTITY

I am constantly being approached by Officers with the question, "How many characteristics do you need before you decide that two finger-impressions are identical?" The reply is invariably, "It depends entirely upon the nature of the print and the detail of the characteristics."

No definite rule can be laid down. Although there are but four main types of pattern, these vary in themselves, and some ridge characteristics occur with far less frequency than others.

For example, with certain unusual peculiarities I should be perfectly satisfied with four or five points in agreement in two impressions. On the other hand, in some cases I should

not be satisfied with double that number of the more common characteristics.

A great deal could be written on the subject of identification of any imprint. All the finger-prints in the world, of course, have not been examined, but the law of probability is taken into account and it is the practice at New Scotland Yard, as a general rule, to mark up *at least* sixteen clearly defined ridge characteristics in agreement in both impressions as shown in *Fig. 3* for production in Court in finger-print cases. This is fundamentally sound, and I might add that the probability of finding impressions taken from different fingers to agree in the sequence of the ridge characteristics to the number of sixteen is many times more than the estimated population of the world.

I cannot over-estimate the real danger that exists when inexperienced persons assume identity of an imprint of a common type with a lesser number of ridge characteristics in agreement, or with indifferent impressions. Any mistake, wherever it is made, would cause incalculable harm to the finger-print system of identification.

PARTIAL IDENTIFICATIONS

In addition to positive identifications of imprints left at scenes of crime, mention must be made of what are known in the Finger-print Branch as "partial identifications". These are actually identifications effected from the finger-print expert's point of view, but with regard to which evidence is not tendered in Courts.

Whilst the majority of imprints left at scenes of crime are not by any means perfect or clear, some of them are found subsequently to disclose an insufficient number of the ridge characteristics of the actual digit or portion of the palm that made the particular impressions. In these cases the Force concerned is informed that a suspicion or a strong suspicion (according to the number of ridge characteristics available for comparison in the imprint) exists that the

imprint is identical with some particular person's digital or portion of his palmar impression, but that a finger-print expert is not able to express a more definite opinion as to the identity.

This information, whilst not enabling the Force concerned to rely on finger-print evidence subsequently being available, is of great value where the identity of the perpetrator(s) of any particular offence is unknown. The person can, on such information being received by the Force, be tactfully interrogated and will probably admit committing the offence. In any event, the inquiries of the investigating officer in connexion with the offence are considerably lessened.

As I have previously emphasized, identity of an imprint must be definite and conclusive, *i.e.* an impression is either definitely "identical" or "not identical" with another impression so far as Courts of Law are concerned. A finger-print expert may, in his own mind, be perfectly satisfied that a certain impression in connexion with which only a partial identification has been effected, belongs to a particular person, but if he were to give evidence and produce photographic enlargements of the imprint discovered at the scene of the crime and the impression of the digit or portion of the palm, as the case may be, with a much less number of ridge characteristics marked in agreement than is shown in Fig. 3, a Judge and Jury, with no knowledge of the science of finger-print identification, might need a deal of convincing, when considering such exhibits, that the marks were in fact identical.

Moreover, it would be disastrous if any Officer giving evidence in a case in which only a partial identification of an imprint was established, had to admit under cross-examination that only a suspicion or strong suspicion existed that two prints were identical. A grave doubt that would do infinite harm to the system would immediately arise in the minds of the general public should such a statement be made.

In brief, it would not be safe to give such evidence. It is far better to keep well within the margin of safety than possibly to jeopardize the finger-print system of identification.

To give you some idea of what happens at New Scotland Yard with regard to imprints left at scenes of crime, we will assume that two articles taken from the scene of a case of burglary have been received at the Finger-print Branch. Imprints on the articles have been developed, and are decipherable. The Officer who took possession of the articles at the scene of the crime evidently is aware of the requirements of the Finger-print Branch for he has brought with him the finger-impressions of all persons who had legitimate access to the articles. No person is suspected of being implicated in the offence.

The marks are sufficiently clear to enable them to be compared forthwith with the finger-impressions of the persons who had legitimate access to the articles. All the imprints on one of the articles, which we will assume is a bottle, are identical with certain of the finger-impressions of one of the residents at the premises in question. The imprints on the other article, which we will imagine is a tumbler, are not identical with any of the finger-impressions of the persons who might have legitimately handled it. The bottle is returned to the Officer and he is informed of the identity of the marks thereon.

The imprints on the tumbler are of an unusual type, and, before the Officer leaves the Finger-print Branch, a quick search is made with these marks in the Single Finger-print Collection, but with a negative result. The Officer is informed that a communication will be addressed to his Chief Constable or Superintendent, as the case may be, with regard to the action taken or to be taken.

The imprints on the tumbler are then photographed, and when the photographs are received from the Photographic Section, a thorough and exhaustive search is made with the marks in the Single Finger-print Collection. If

the marks are not identified, they are filed in the Scenes of Crime Collection for future reference.

In certain cases, however, finger-marks found at scenes of crime which give a definite sequence such as left fore-finger, left middle finger, left ring finger, and left little finger, or similarly fingers of the right hand in correct sequence, are searched with in the Main Finger-print Collection, should no identification be effected as a result of search in the Single Finger-print Collection. These cases, however, are few and far between.

Cases have occurred where Officers of the Finger-print Branch have been deputed to examine scenes of crime, and an imprint of an unusual pattern, which is not identical with any of those of the persons who had legitimate access to the premises, has been discovered on a non-portable article. The Finger-print Officer has made a sketch in his pocket-book of the imprint, and, before the photographs of the mark have been received, has searched with and identified the person responsible for the mark. Whilst such identifications are creditable achievements, they do not occur very frequently.

It may be that imprints being examined are recognized by an Officer of the Finger-print Branch as being identical with others which have not been identified and which are filed in the Scenes of Crime Collection. This information, it is admitted, does not reveal the identity of the perpetrator of the offence but it has proved to be of considerable assistance to Forces.

For instance, imprints may be discovered at the scene of a crime committed at Dover on 2nd November, 1935. Imprints are later discovered at the scene of a crime committed at Folkestone on 3rd November, 1935, and are subsequently found to be identical with those discovered at Dover. Imprints may then be left at the scene of a crime committed at Hastings on 4th November, 1935, and these are found to be identical with those left at Dover and Folkestone, and so one may go on. The identity of the criminal is not known but what is useful to the Forces concerned is that it is established that the same

person was implicated in the offences at Dover, Folkestone, and Hastings, that he is a travelling criminal—probably in possession of a motor-car—and that it would appear that he is travelling along the south coast from east to west committing crime.

Fig. 4 is a record of crime committed by a person who was not registered at New Scotland Yard but whose finger-impressions, left at various scenes of crime committed over a period of a year, were filed in the Scenes of Crime Collection. As shown, he was finally arrested at Hitchin on 27th August, 1929, his finger-prints were taken and sent to New Scotland Yard, where they were at once identified with those left at the scenes of crime shown on the map.

It is interesting to note that when his finger-prints were being taken by the Hertfordshire Police, the prisoner remarked that it was the first occasion that this had been done. This statement was correct, but unfortunately for him, he had left his finger-prints at the scenes of his criminal exploits on nine previous occasions and had unwittingly provided the Finger-print Branch with a record of his depredations.

At his trial he admitted committing all the offences at the places shown on the map, and they were taken into consideration when sentence was passed.

Another remarkable case, in which persons who were not registered in the Main Finger-print Collection at New Scotland Yard were identified for a series of offences, occurred recently. Finger-impressions relating to two persons were left over a period of two years at various scenes of crime in a certain district. The identity of the criminals was unknown. Copies of the imprints were filed in the Scenes of Crime Collection and, after a period, from a careful study of the addresses where the offences were committed, it was suggested by the Finger-print Branch that the persons responsible for the offences possibly resided in a certain area.

Identical imprints with those already filed in these cases were later discovered at the scene of a crime committed

in a different district. The information that the marks were identical with those already filed in connexion with various offences was given to the investigating officer and additional steps were taken to apprehend these particular offenders by posting extra officers on observation duty.

Subsequently two persons were arrested, their finger-prints were taken in the ordinary way and sent for search to the Finger-print Branch. Both of them were identified by means of the imprints left at the scenes of crime referred to above to the number of twenty-six, and altogether they admitted committing nearly 100 offences. These persons had not been previously convicted for any offence, and they did in fact reside in the district suggested by the Finger-print Branch.

My next article will deal with the Single Finger-print Collection, the Scenes of Crime Collection, apparatus and evidence in finger-print cases, etc.

Simple Photography for Policemen

By DETECTIVE-INSPECTOR J. O'BRIEN

Metropolitan Police

III

THE task of making portraits of criminals is, I think, one of the most important branches of photography in its application to the suppression of crime. In a great number of instances the first and very often only link between a criminal and his crime is his portrait.

When we consider this, the importance of securing a good likeness when taking these pictures cannot be over-estimated. There seems, just now, to be a tendency among police photographers to produce something different rather than something better in this particular branch of their work.

The standard laid down in this country is that prisoners should be photographed in two positions, profile showing the right-hand side of the face, and full face, each one-seventh actual size, and side by side on a quarter-plate.

In the profile picture the subject should be shown wearing a hat, if that is his normal way of dressing. I do not think that the full length photograph has, in the majority of cases, any outstanding advantages which make it a better aid to identification than one showing only the head and shoulders. I suppose that about 90 per cent of the people who come into the hands of police are of average height and build, and have nothing distinctive about their build which would be readily identifiable in a photograph, so that in these cases we have only a picture of a suit of clothes in addition to the portrait of the features. It is very often forgotten that the first business of any criminal of any distinction is

to deceive, and it is, in practice, impossible to prevent a clever criminal from making sure that he does not look his ordinary self when posing for a full-length photograph.

If ever we reach the stage when cinematography takes the place of still photographs for record purposes, and it is possible to reproduce a person's gait, stance, and mannerisms, the full length picture will come into its own, but until that day arrives I do not think that we can look to that type of picture for a great deal of help.

Now a word or two as to the actual taking of these portraits.

The circumstances under which prisoners are photographed by police are about as bad as they can be for getting a really good likeness. Unless he is an old hand, the prisoner is generally nervous and jumpy, or else sulky—neither of which moods makes it easy for the photographer to get a good result. However, with a little tact and patience we should be able to get a portrait of the man as he appears normally.

The great asset in this direction is the facility to be able to make a rapid exposure. A fast lens, abundant lighting, and rapid plates will make this possible.

I will discuss these later on when we deal with apparatus, but for the moment let us suppose that we can work at about one-fiftieth of a second. Do not be in a hurry to take your photograph; chat with your man and try to put him as much as possible at his ease. Study him while you converse and notice his expression when he has, for the moment, forgotten that he is under arrest. That is the expression you must endeavour to obtain when he is before the camera, because it is what he looks like normally, and is how witnesses, who at some later date have to identify his photograph, will remember him.

If the prisoner is allowed to dwell on his position, with no distractions, before his portrait is taken, the result will be a wooden, inanimate affair, and lacking in that vital appearance which is so characteristic of a good portrait.

Keep his mind occupied by talking right up to the

time of making the exposure, but keep the conversation away from his own particular trouble.

A good subject to start on is photography (except of course in the case of a forger!). If he is interested you are on common ground right away, and if he is not, you can tell him what an interesting hobby he is missing, and so on.

In any case, it will serve its purpose if it keeps his mind off his position long enough for you to make your exposure. But remember, the expression you are looking for may be only fleeting, and the exposure must be quick enough for you to catch it.

Now for a word or two about equipment.

It is a well-known but inexplicable fact that whilst most police authorities will cheerfully move heaven and earth to get authority to spend £500 or £600 on a motor-car, the suggestion that they should spend about £100 on photographic equipment is regarded as a joke in not the best taste. That the photographic equipment will outlast half a dozen cars, and if put to constant and intelligent use prove of more value in the suppression of crime than any car turned out of the workshops, is a point that is inclined to be overlooked.

The extent to which a police headquarters should be equipped with photographic apparatus must of necessity be governed by the size of the Force and the extent of the activities of its photographic department.

For the purpose of this article, I propose to discuss equipment suitable for the forces where a large amount of work is turned out, and where the apparatus is in constant use, and that which should meet the requirements of the smaller force where the work is more or less spasmodic and the need for a lot of heavy equipment unnecessary.

Let me say at the outset that to purchase shoddy apparatus is a waste of money. A good camera will, with reasonable care, last a lifetime, and a good lens if carefully looked after is practically indestructible.

In a large photographic section, a great deal of work consists of copying photographs for records, and other purposes. To deal effectively with this class of work a copying camera is necessary. A convenient size is one that will accommodate a plate 15 by 12 inches, for although it is seldom necessary to take a direct photograph of this size, when the occasion does arise it is essential that the equipment is there to deal with it. The greater part of the work undertaken with this camera will be in the smaller sizes—from quarter plate up to whole plate: and to avoid having to use a heavy 15 by 12 in. slide to carry a small plate, it is a good plan to have a supplementary back to the camera, and an additional slide carrying a plate up to $8\frac{1}{2}$ by $6\frac{1}{2}$ inches. This is a convenient way of working and saves wear and tear of the large slide.

With a camera of this size, I would suggest a lens of at least 18 inches focal length, which will allow plenty of room in front of the lens to permit the operator to adjust his lights and to arrange subjects which are being copied.

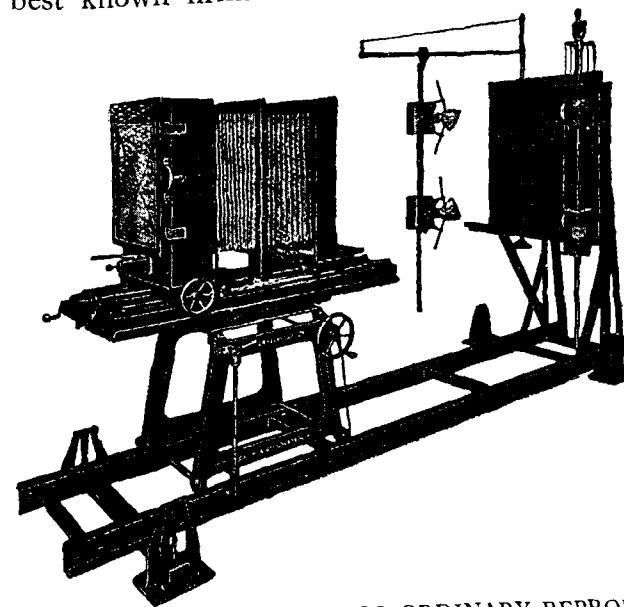
The standard type of lighting with this camera is the carbon arc-lamp, but whilst this gives a very intense white light and is ideal for ordinary black and white copying, it is not very suitable for panchromatic work with filters, and I would suggest a secondary system of half-watt lighting. This can be quite simply arranged with two 500 watt frosted bulbs with reflectors behind them. A convenient method is to have the half-watt units constructed in such a way that they can be connected to a plug point when in use, and stored away in a cupboard when not required.

If an extension cone is used with this camera in conjunction with a very short focus lens, say a $4\frac{1}{2}$ inch, it is possible to get direct enlargements up to about twelve diameters, or by using a 2 in. objective from a low power microscope enlargements up to thirty or more diameters can be obtained. If this class of work is undertaken, however, it is advisable to tackle it during the night when all traffic is stopped, as the slightest vibration is fatal.

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A properly constructed copying camera is made so that it can be swung at right angles to the object to be copied to enable a prism to be used. By fitting a prism to the lens and swinging the camera, it is a simple matter to photograph finger-prints which have been developed with white powder, direct on to bromide paper without using any plates at all.

A complete outfit of this kind costs about £130, and one of the best known firms of manufacturers of this class of



A 15" x 12" COPYING CAMERA SET FOR ORDINARY REPRODUCTION WORK.

camera is Hunter Penrose, Ltd., 109 Farringdon Road, London, E.C. 1.

Another piece of apparatus which will prove its worth in a busy department is a Reflex Pneumatic pressure printing frame. This is used for making negatives direct on to negative paper without the necessity of using a camera. It is principally used for copying documents and surprisingly good results can be quickly and economically obtained by this method.

The apparatus consists of a box-like structure about

3 feet high and 18 inches square, or it can be constructed to any other dimensions desired. Inside are fitted white and yellow lights for printing. The top is a thick piece of plate glass. A hinged lid fitted with a rubber blanket and an exhausting pump closes down on to the glass plate.

The method of using the frame is as follows:—

A piece of negative paper is laid on the plate glass top FACE UPWARDS with the document to be copied in contact with the sensitive side. The frame is closed and the air pumped out from between the rubber blanket and the glass: this creates a vacuum which exerts tremendous pressure on the document being copied and the negative paper. No matter how creased a document is it will be pressed out quite flat and in perfect contact by this method.

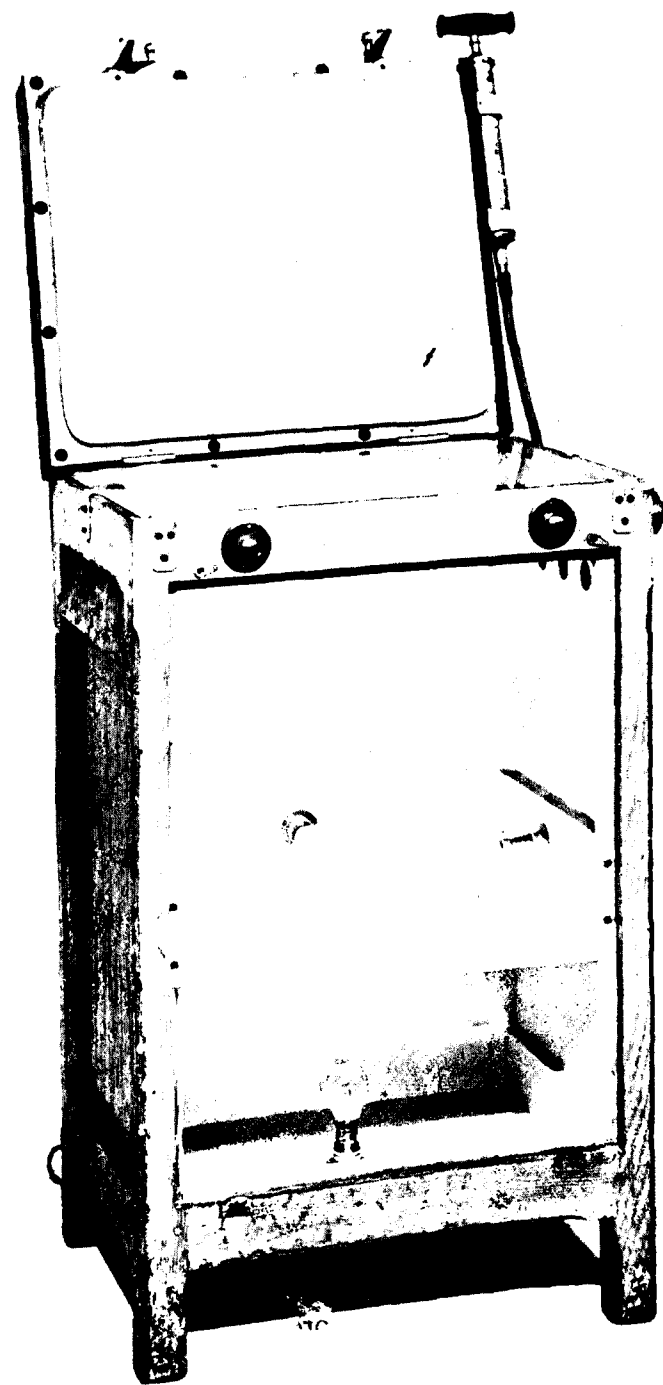
When sufficient pressure has been obtained a brief exposure is made with the yellow light, and the negative paper developed in the same way as a plate is.

When this has been washed and dried it can be printed as an ordinary negative, although it is better to print it in the pressure frame, as a paper negative is apt to lose contact in an ordinary printing frame. When using the pressure frame for printing, the negative and sensitive paper are placed the same way as in an ordinary printing frame, and the white light used for making the exposure.

This is a simple process and effects a considerable saving in plates when documents are being copied in any numbers.

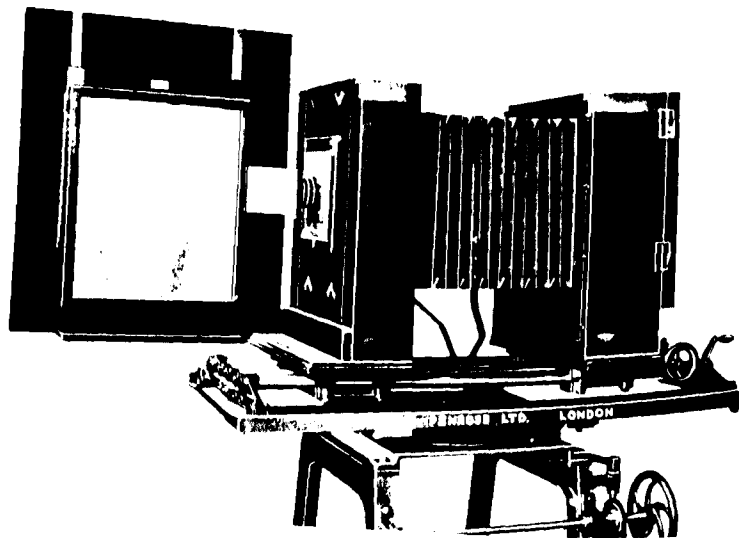
Of course one or more field cameras are necessary. Half-plate ($6\frac{1}{2}$ by $4\frac{3}{4}$ inches) is the most popular size. It is large enough for the operator to see on the ground glass screen exactly the area covered by the lens, and, at the same time, is not too cumbersome for easy transport.

There are many types of this class of camera on the market to choose from, and provided that one with a triple extension is selected, there is not a great deal of difference between them. What is of more importance is the choice of lenses. The general rule is that the focal length of the

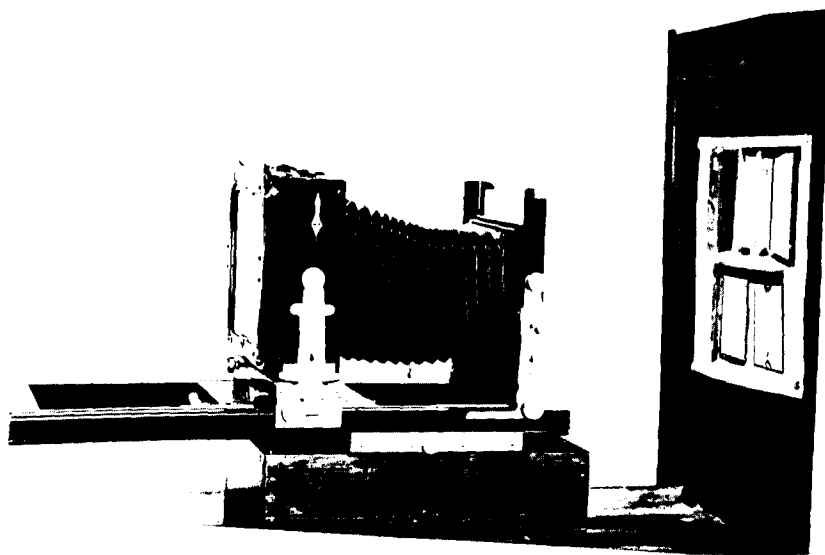


A REFLEX PNEUMATIC PRESSURE PRINTING FRAME

(face p. 336)



A COPYING CAMERA SWUNG AT RIGHT ANGLES TO THE COPY-BOARD, TO ENABLE A PRISM TO BE USED



THE CAMERA FITTED TO A BENCH AND USED AS A COPYING CAMERA

lens should equal the diagonal of the plate, so that with a half-plate camera an 8-inch lens should be used. This rule meets the case on most ordinary occasions when taking outside pictures, but there are many instances where lenses of other focal lengths are necessary. I think that every camera should have at least three lenses, a 10 or 11 inch for portraiture. This permits the operator to stand well away from the sitter, and not embarrass him by having the camera right on top of him.

Better perspective is also obtained with a lens which has plenty of focal length. This is very necessary when taking a portrait or when photographing small objects. In the latter case the use of a short focus lens gives rise to the danger of distortion.

The 8 in. lens to which I have already referred and which might be termed "the general purposes lens" will be the one most often used.

Another lens which is of vital importance to a police photograph is a wide angle lens, for without one it is almost impossible to obtain a good reproduction of the interior of any room other than a very large one.

The focal length of a wide angle lens suitable for a half-plate camera is $4\frac{1}{2}$ inches, and with a good lens of this type no difficulty should be experienced in covering the whole of an average size room in three pictures. The longer the focal length of the lens the narrower is the angle it covers, and so it follows that a greater number of photographs must be taken to cover a given area. A good wide angle lens should cover an angle of 100 degrees.

Now a word about selecting a lens. Buy the best that you can possibly afford, and from the maker direct. It is false economy to buy a poor quality lens, and unless you are experienced it is a risky business to buy one second-hand.

If you are purchasing a new lens from a reputable maker you may leave yourself in his hands. His reputation is more to him than a few pounds obtained by sharp practice.

If you are buying one second-hand, insist on having it

on approval for at least fourteen days and give it a good try-out. Set it up on a camera, and focus it at infinity, then take a focusing magnifier and make sure that the image is critically sharp all over, especially in the corners. Next focus it on a page of good quality fine print, setting the camera to give a reproduction of the same size as the original, and test for sharpness. Now examine the edges of the components to see that the cement is not flaking away from the edges, and lastly make sure that the stops are working correctly and that the vanes are not bent or unpinned. If after these tests you are not sure of the quality of the lens, take it to a good optician and get him to test it for you. It is worth a little trouble in the first instance to make sure that you are getting something that will be of service to you, rather than a lens which will be a source of trouble all the time you have it.

For the first two lenses I have mentioned above, an aperture of 4.5 is fast enough, but if funds will run to it a faster one is an advantage, for a fast lens can always be slowed down, whereas it is impossible to speed up a slow one.

It is a good practice, when buying a camera, to buy at the same time a few extra lens panels and when buying a lens to get as many flanges as you have cameras so that you have a lens panel capable of carrying each lens with every camera. This ensures a rapid exchange of lenses and does away with the necessity of unscrewing a flange every time a change of lenses is required.

The fixed focus finger-print camera is an instrument which will find a place in any well-equipped police department. The Folmer camera, marketed by the Kodak Company, has been available for a number of years and has proved its worth without question.

A new type of finger-print camera has recently been introduced by the Thornton Pickard Company, Altrincham. I have not yet seen a model, but from the literature dealing with it, it seems to have many distinctive features which put it in a class by itself. The attachment which permits

it to be plugged into the ordinary electric mains is a great advantage, so also is the choice of two lenses. I think that the slight extra cost of fitting the Zeiss Tessar 4.5 lens is one which will amply repay the increased outlay.

Now for a word or two about dark-rooms.

Wherever it is possible, two dark-rooms should be provided, or if this is impracticable, a changing cupboard should take the place of the second dark-room. It is not possible to work plates and printing paper in the same dark-room at the same time, and a great deal of time is wasted, and inconvenience caused, by one operator having to wait on another for the use of the dark-room.

Where two dark-rooms are available, one should be devoted entirely to developing plates and making paper negatives on the pressure frame.

Care should be taken to ensure that this room is absolutely free from white light when plates are being developed. We must remember that the high speed and panchromatic plates now available are sensitive to the least suspicion of actinic light, and should take care that none creeps under the dark-room door or through the key-hole, both of which have spelled disaster before now.

See that your red and green safelights are really safe; when buying them pay the little extra that good quality ones cost, and you will be more than repaid by the quality of your negatives, and plates saved from fogging.

The benches and sinks in a dark-room on which chemicals are used, should be lead-covered. This will not become corroded or eaten away by hypo, and is easily kept clean. Plain wood or linoleum are not desirable as they absorb chemicals, which, when dry, float in the air, eventually settle on plates which are being unpacked, and cause pin-holes. Iron, unless it has been galvanized, should be excluded from the dark-room for the slightest speck of rust is a sure forerunner of trouble.

The second dark-room, if we have one, might be devoted entirely to printing and enlarging. Here the light

restrictions need not be quite so stringent, but, at the same time, reasonable care must be taken to keep out unwanted light. The same care must, however, be taken with regard to safelights, otherwise your prints will be flat and lifeless. This is due to slight fog which is caused by white light leaking from the lamp or some other source.

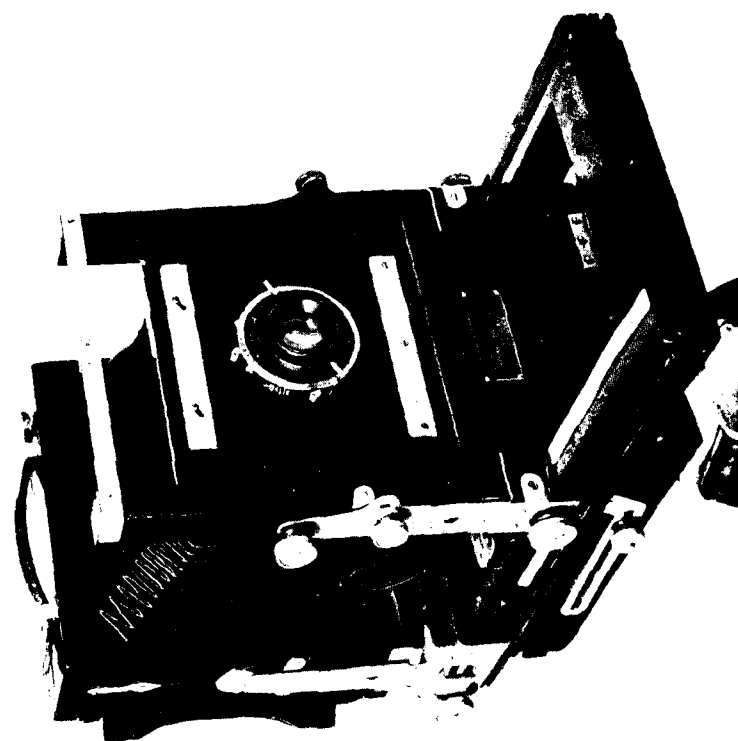
The choice of the type of enlarger installed must be governed by local conditions.

The vertical type is economical with floor space, but is limited in the degree of enlargement which can be obtained.

The horizontal enlarger takes up quite a lot of room compared with the vertical model, but the degree of enlargement which can be produced is within reason unlimited.

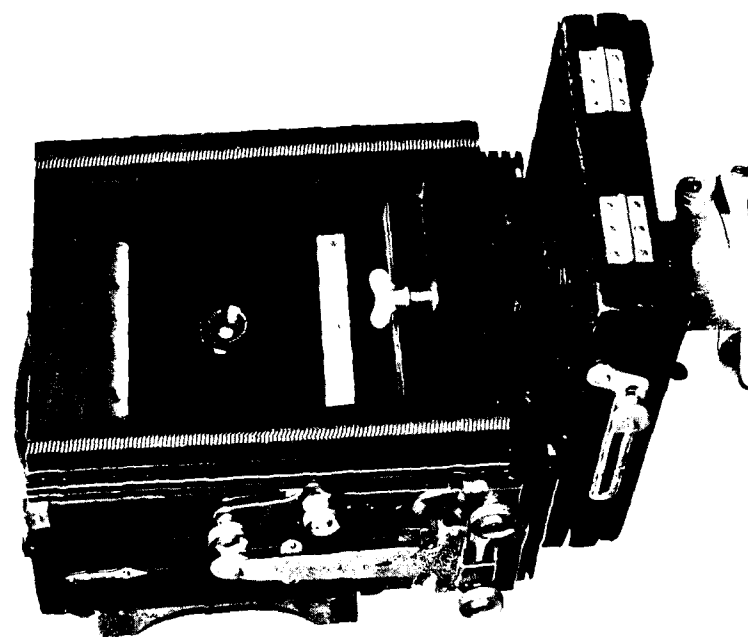
With many of the smaller forces, equipment of the kind I have outlined above is unnecessary, but I think that every police department should be able to take its own photographs and not have to call in the services of an outside photographer on every occasion on which photographs are necessary. The difficulty in the past has been that the small force might at any moment be called upon to undertake any of the photographic tasks that a large force is called upon to do, and to install expensive plant that would be only used infrequently has stood in the way of the development of this branch of detective work. This difficulty has to a large extent been overcome by a piece of equipment which has recently been placed on the market by the Kodak Company, and which is specially designed to meet the needs of the small force where only one job is undertaken at a time, and where the outlay is of prime consideration. This piece of apparatus has been built up from the standard half-plate view camera sold by that firm.

To make this instrument particularly suitable for police work, the following improvements have been incorporated in the design. The baseboard of the camera has been fitted with a scale by the use of which the camera can be set to give a reproduction exactly the same size as the original, or half, quarter, or one-seventh actual size.

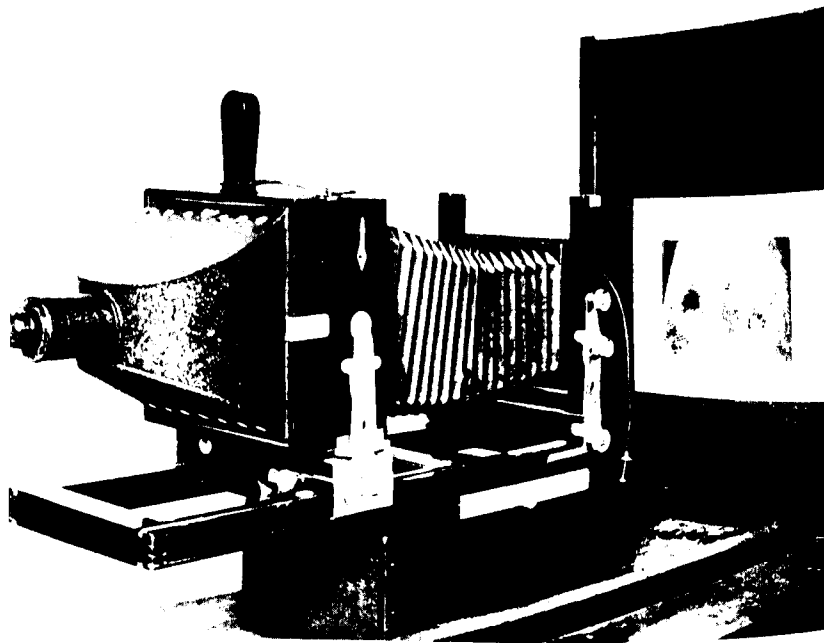


AS AN ORDINARY FIELD CAMERA, SHOWING THE SCALE WHICH ENABLES ACTUAL SIZE AND CORRECT DEGREES OF REDUCTION TO BE SIMPLY AND ACCURATELY MADE

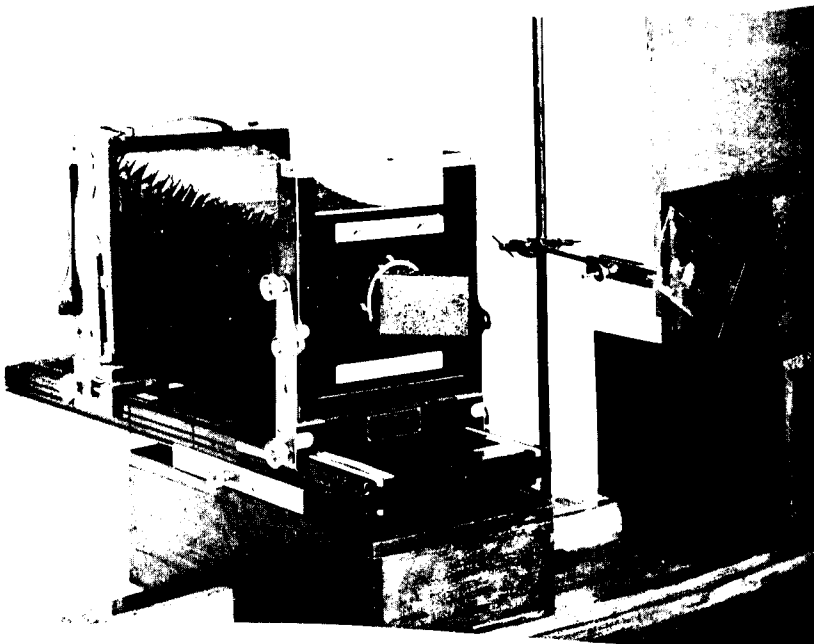
(face p. 340)



THE CAMERA FITTED WITH A WIDE ANGLE LENS FOR WORK ON INTERIORS AND WHERE SPACE IS LIMITED. THE TILTING HEAD TO THE STAND PERMITS THE CAMERA BEING USED AT ANY ANGLE BETWEEN VERTICAL AND HORIZONTAL



THE LAMPHOUSE FITTED TO THE BACK TURNS THE CAMERA INTO AN EFFICIENT ENLARGER



THIS SHOWS THE CAMERA WITH A PRISM FITTED TO THE LENS FOR FINGER-PRINT WORK

To simplify the focusing when the camera is set for a particular size, it is fitted with a special base, the use of which allows the camera to be moved backwards and forwards on the tripod head with a rack and pinion to bring it into focus without having to alter the bellows extension. A supplementary back extension is provided, which is a valuable asset when working with a long bellows extension as it allows the camera to be evenly balanced on the stand instead of having the whole of the extension on the front, with its attendant risk of movement.

Another component of this camera is the repeating back for taking photographs of prisoners. This can be supplied to local requirements and constructed to take two or three positions on any size of plate up to the limit of the camera.

With this camera and one or two good lenses it is a reasonably easy matter to take every class of photograph that is likely to come within the sphere of the police photographer. When used in the police headquarters for copying purposes, it is best to work with the camera on a bench, and this with the extension set for actual size reproduction becomes an almost mechanical job.

If a prism is fitted to the lens this camera is every bit as good as a large copying camera for finger-print work direct on to paper.

The greatest advantage to my mind of this piece of equipment is that when it has served all the purposes which a camera can possibly serve, by removing the back and fitting a specially designed lamphouse, it can be converted into a very efficient enlarger.

This apparatus, which complete costs about £50, is supplied with a prism and two lenses, one a Cooke wide angle and the other a Kodak Arastigmat working at F 7·7. Whilst these are both good lenses, the one working at 7·7 is on the slow side and if funds will permit, a faster one will prove of advantage.

I have in mind another piece of equipment which is not strictly photographic, and which, whilst I do not think it

will be of interest to police forces in populous districts, may prove useful to colonial officers whose duties take them up country, and whose only resources are those they carry with them. This is the Tilley series of portable lamps. These lamps are made both as searchlights and as floodlights. They are fitted with a silk mantle and burn ordinary paraffin.

The smallest type which costs 70s. gives a good quality light over a circle of 25 yards, radius and has a candle power of 300, whilst the largest searchlight which gives 20,000 candle power costs about 10 guineas, and of course there are other models between. Apart from being of great assistance for camera work where no other means of light are obtainable, I should think that this type of lamp could be put to many uses by colonial officers. They are extremely robust and I have seen one deliberately kicked over, and the lamp remained burning, without the slightest damage to either the lamp or the mantle. These lamps can be obtained from I.R.S., Ltd., 10 Ashley Place, London, S.W.1.

This is the last article of this series, but in the next issue of THE POLICE JOURNAL I hope to contribute something which will be of equal interest.

Reports

By DETECTIVE-SERGEANT ARTHUR CAIN

Special Branch, Metropolitan Police

A REPORT, to have any value, must be written so that the reader apprehends the full significance of its contents, is convinced of its truthfulness, and is satisfied to take action on it.

If it fails to interest or fails to convince the reader it is almost useless and certainly a waste of time and material.

Everything contained in the report must be pertinent to its subject, and the report must be unified, *i.e.* it must have a beginning, a middle, and an end. In securing unity you will also secure completeness.

Clearness is another important quality in reports. You can obtain it by organizing all the subject-matter in good order—the order may be logical in sequence of events, or otherwise. A logical sequence of events is the usual order of Police reports. But a report can be arranged in order of familiarity, interest, and importance, so far as the reader of the report is concerned.

Clearness is also secured by good planning, which is something more than good order. Good planning means that you must value the facts correctly and only give them the amount of emphasis that their position in the whole order of events merits.

At the beginning of your reports and right to the end—be accurate and precise. Accurate in your facts and precise in the presentation of those facts.

Your reports will reflect your powers of judgment—and, apart from experience and knowledge, judgment is a matter of primary importance in Police work. It can only be acquired by painstaking care, with a detailed and clear-sighted handling of facts and conditions surrounding facts.

If you are thorough, clear, logical, and analytical in what you think of facts before you report them, your reports will reflect your considered judgment.

In the tone of your reports be fair and dignified, and, as far as it is possible, be strictly impersonal. If you need an example of impersonal reporting you cannot do better than read the news reports in *The Times*. It often saves a lot of further reporting and frequently avoids dirty backwash, if Police officers adopt a modest straightforward manner of reporting. If you have time to draft reports read through your drafts and strike out the over-used personal pronoun "I" as often as you can. It will improve your reports.

Use simple words whenever possible, preferably words of one syllable. Avoid trite phrases, avoid superlatives, and use 'very' only on rare occasions.

Use slang terms only when they convey an idea better than the generally accepted word. With one noun use only one adjective and one verb, unless you are a well-practised writer. It takes time and study to find the correct word for each case, but dictionaries are interesting and cheap enough for all of us to make frequent use of them.

The English language is not rich in words to describe the sensations derived from touching or tasting things; and the language is actually lacking words to represent odours. On the other hand, English is particularly rich in number and variety of words for describing actions. To confirm this I suggest that you look at Roget's *Thesaurus of English Words and Phrases* and note the collection of words dealing with MOTION—it embraces sections 264 to 315 of that valuable book. This is significant for Police officers, because Police reports are so much concerned with describing the action of persons and you should know the variety of words which convey the various degrees of human action.

After deciding on your choice of words you will naturally consider sentences which are said to contain all of one thought. Avoid choppy, disconnected sentences; but remember that it needs a skilled writer to use long sentences correctly. So generally speaking, use short sentences.

Think out your sentences in the following terms: Subject, Verb, Object. That can be put in another form: Who or What; How; Why. Or even another way: First, the person of whom you are writing; Secondly, what he did; Thirdly, to whom he did it.

Sentences grouped together make a paragraph. A good length for paragraphs in Police reports is 100 to 150 words. You will also be able to include excellent paragraphs from 50 to 80 words in length. Put something important at the beginning of the first sentence of each paragraph, and keep something strong for the end of the last sentence. If the middle of your paragraphs contain the most important part of your reports there is something wrong with your paragraphing. But never begin a sentence or a paragraph with figures. If you want to place a number at the beginning of a sentence you should write the number in the form of words. As a general rule you will find it worth while always to use words to define numbers up to and including ten; after that you can use figures with safety. Don't begin successive sentences or successive paragraphs with the same word or phrase.

If you submit a Question-Answer form of report as is often necessary in criminal investigation, begin each question as a new paragraph, and arrange each answer so that it is intimately related to its question. That is the usual style of the evening newspapers when they report sensational cross-examinations of witnesses in important trials. It facilitates reading.

It is worth while to consider reports under two headings:

(1) *Contents*, (2) *Arrangement*.

To decide upon the content and arrangement of your reports just ask yourself the following questions: "What's the object of this report? Who's going to read it, and why? What use will the reader make of it?"

Your reports will then indicate the *Purpose*, *Scope*, *Method*, and *Result* of your inquiries.

Get all your terms correct. By that I mean use the same word for the same thing throughout the whole of your report.

Interview all the witnesses and your reports should indicate that the questions you asked those witnesses were impartial. Get enough material to clear up all the points in the inquiry, and see that your information is correct and obtained from authentic sources. You need never be too secretive concerning your sources, because in Police reports the word "Informant" is often over-emphasized. Try to maintain an open mind in your selection of material to report. If you have a definite opinion on any matter and set out to prove it the person who reads your report will usually devalue your facts. To overcome the personal opinion attitude train yourself to present your information in a usable form, that is to say, present it so that it can be used as evidence. If you obtain some information on a Monday and obtain some further information on Friday, revise what you learned early in the week by comparing it with what you learned at the end of the week. If you fail in that your reports will often be contradictory, and always remember that your reports must be presented in a form fit for your senior officer to read.

In describing anything, you need to look for and find: the name, the size, the shape, the material of which it is made, the finish and style of manufacture, its connexions and relationships, and its purpose.

You will also convey an excellent impression of a person if you give his name, address, date and place of birth, his build and dress, and his parents; follow that with the person's education, his work, his leisure interests, his companions, responsibilities, and political interests; how much money he has and how he obtained it. If you can get all those details in your reports the officer who has to read your reports will know a good deal of the subject of your inquiry.

A good general plan for Police reports is: (1) State the problem, (2) present the result of your inquiries, (3) draw conclusions and make recommendations.

In reporting crimes you can arrange your material as follows, but there is no hard and fast rule on this matter of arrangement:—

Begin with a statement of the crime, then show the cause or motive, which will lead to the method and the persons concerned. The next detail is the amount and character of the loss, as well as the name of the victim. Then you will probably deal with the persons suspected and relate the clues to the identity of the criminals. You may get a confession and a statement of a witness. Finally there may be unusual circumstances in the case; if there are report them.

So far as the reader of your report is concerned you will persuade him by your facts and your fairness in presenting them, as well as the sincerity in the tone of your report. Always be tactful in handling any strange or disagreeable material; and it is worth while to indicate that you have covered the whole field of the inquiry when the result of your inquiry is negative.

At this stage we can sum up and say: "A Report must be accurate in fact, and sound in its conclusions. It must be prepared for the reader and it must contain only those matters which are pertinent. It must be carefully divided into parts and the parts must be logically arranged. It must be long enough to cover the whole subject, and to cover it completely; but not long enough to be tedious. It must be interesting in style, easy to read, clear in statement, concrete in its illustrations, and attractive in appearance."

Whenever possible be positive in your reports and get the action running on. Be especially careful concerning names, initials, addresses, and figures.

Don't try to be clever in your reports and never be funny. Don't fake or lie. If you make a mistake acknowledge it. Don't blame anybody else for it.

When you are engaged in taking statements don't misrepresent a person by taking a short statement from its context so that it gives a false impression of the whole statement. That is the work of the Fleet Street peep-hole reporters. If you do report a part of a statement report it so that your reader can see at a glance that your quotation is an 'interpretation' of the whole statement.

Although you may learn to work rapidly don't confuse mere speed of working with efficiency ; although you should constantly cultivate a rapid manner of working. Nevertheless, don't excuse your mistakes by saying you were in a hurry. In Police matters there is always time to be careful, always time to make sure of your facts if you are going to present them as facts, and always time to present a full report if a full report is required. If you don't make sure of your facts you are really neglecting your duty, and here I will again emphasize that inaccuracies are a waste of your time and the time of the men who read your reports.

Often reports have to be re-typed. That is not to say that the original report was false or below standard. It is often caused by the necessity of fitting the report into the general policy of the department. It is chastening to remember that the individual Police officer as such counts for little ; as part of the Police machine he is important to the Police machine and the community ; but no Police officer is so clever that he cannot be replaced by somebody else. Therefore anything flashy or egotistic in a Police officer's reports should be smoothed out.

Assuming that you have all the facts of a case, you may have to change a report or direct another officer to change a report. In such circumstances the change should always be directed to making the report a better job of work. By that I mean relating the report to the general procedure and policy of the department from which it emanates or to where it must be sent.

When you come to the business of checking reports—and that will no doubt be your job some day—make a test on the following lines :—

- (1) Determine whether the purported facts are facts. Weed out misstatements, contradictions, and exaggerations.
- (2) See that everything important has been obtained. If it hasn't, advise your subordinate how and where to obtain the required additional material.
- (3) Delete unimportant and irrelevant material.

(4) Safeguard against any backwash from action taken on the strength of the report.

(5) Remove or smooth out of the report any personal bias or strong expression of the writer's opinion.

(6) See that the report is well written—for grammar and style.

It may surprise you to know that seventy per cent accuracy in matter reported—not counting omissions—is a high standard ; but there is nothing to prevent your trying to make your reports one hundred per cent accurate in all respects.

In a report you can be absolutely positive, very certain, fairly certain, convinced, doubtful, or you can just make a guess and hope it will get through. In each case you *may* be correct ; but you are more likely to be wrong.

It is a rare thing to find a report that is complete and accurate.

Even if you are not certain of a thing you can still include it in your report ; but when you do so choose your words carefully, and generally qualify the whole statement by writing : “ I am led to believe,” “ It appears,” “ Apparently,” or “ It would seem ”. But do not use those phrases merely as a means of avoiding accuracy or the responsibility that rests on those who are called to submit reports.

When you interview a number of persons and report the information in a general form where the persons were in agreement on facts, then you can generally accept those facts as correct—provided there has been no conscious collusion. But when a number of persons agree concerning minor details, then there is a strong probability of collusion ; so that when you report the material it is worth while to reduce the detail and report the general facts ; for the detail in Police reports is better understated than overstated.

When information has been obtained by one person and it is communicated to another there is a certain inadequacy invariably introduced by the process of communication. This fact is not due to faulty sense organs, and the omissions,

additions, substitutions, and transpositions are not here considered; the difficulty lies in 'translating' the perceived objects or events into words. Another factor to be considered is contained in the question you can put to yourself: "Am I telling somebody what took place or am I submitting a report?"

Only a few people can accurately describe an event by means of speech. Fewer can convey a reasonably complete impression by means of a report.

The quality of a report, whether it is spoken or written, is to be judged according to whether the report "just lists the events", "lists the events and relates them to each other", or "records the related events and shows the full significance of the parts to the whole". The last standard of those three is the end to aim at in your reports.

The range and accuracy of an observer's report will depend on the form of the report to a considerable extent. The report may be a free style narrative or it may be a series of answers to a series of questions; it may be a verbatim record or a comprehensive summary combining the direct and indirect style of speech reporting.

Each form of report has its advantages and its disadvantages. The free style narrative report is spontaneous and can be interestingly fresh; the difficulty is that the observer follows his own trend of ideas and is not bound by the actual series of events. Moreover, the free style narrative often fails to bring out as much information as the answer-to-a-series-of-questions style of report; although the questions as a rule only permit limited answers.

Where possible it is advisable to get an observer to present a free style narrative report and then ask him questions to bring out the significance of the report, finally embodying the answers to the questions in a re-type of the report, and making the whole thing new and fresh in its combined form.

Thinking as the observer who has to submit the report it is worth while to draft the free style narrative, either in writing or in thought, and almost simultaneously put the

questions to yourself to bring out the answers which will bring out the full significance of the events you have seen and which it is your work to record. The answers to the questions, although not included in the first draft of your free style narrative report, are often much more accurate than the items you first mention. You will also find, if you adopt this method, that the questions you put to yourself frequently suggest other matters which had slipped from your memory. On the other hand, the accuracy and completeness of the strictly question-and-answer form of report depend to a great extent on the skill of the person who frames the questions.

Further, nobody can teach you to write reports. It is something that you can only learn by practice, although it is possible to suggest ideas and principles to you which you in your turn must develop. Report writing is not an easy thing to practise, because you need facts to handle, and you need somebody who will criticize your reports. A great help in this matter is to be found in literature. Whenever you read a book, whenever you read a short story or editorials of responsible newspapers like *The Times* and *The Daily Telegraph*, notice how the writers secure their effects. Notice how much importance is placed in dialogue on literary characterization, notice the difference between descriptive writing, narrative writing, and expository writing. If you will do this daily you will find that your reading becomes much more pleasurable, much more interesting, much more worth while; it will also develop your critical powers.

In the two previous numbers of *The Police Journal* I dealt with "Obtaining Information" and "Interviewing". These three articles were designed to suggest ways and means by which the individual officer can develop the art of policing. There is enough variety, enough interest, and illimitable opportunity for all to take up some idea and become a specialist. Perhaps you are more interested in the confidence tricks, in commercial frauds, blackmail, crimes of violence, or even sexual crimes; whatever holds your attention is worth while, because there is an incessant

demand for Police officers who know their work and can do it without too much noise or fuss.

Finally, try to think of Policemanship as an artist thinks of painting, as a sculptor thinks of stone, as a writer thinks of words. Not only *think* but also *feel* about the work; then from within yourselves you will feel something grow that makes it necessary for you to develop the art of Policemanship. It is something that must spring from the man himself, and he in his turn will hand it on to those who serve with him. Our work as Police officers and our lives as Men will have been worth while if we can accomplish that.

In the next issue of THE POLICE JOURNAL I shall deal with 'Evidence'.

Police Pocket Wireless

By INSPECTOR CHARLES JAMES FORWARD

Chief Clerk, County Borough of Brighton Police

RECENT years have witnessed greater interest in, and application of, scientific aids to the performance of police work, resulting not only in the increased efficiency of particular Forces, but in their more effective co-operation with those of other areas. Photographic departments provide the means of making records of the scenes of crimes and accidents, the recording of finger-prints, the taking of prisoners' photographs, and the copying of those of criminals for circulation to members of the Force. Finger-print bureaux have been installed, in conjunction with the introduction of the *modus operandi* system of classification, whilst advantage has been taken of the resources of the pathological laboratory. Increased use is made of the telephone, and the teleprinter has been adopted to some extent. There is no doubt, however, that for effecting the closer co-operation between Police Forces—so desirable in the interests of the Service—the development of radio communication will prove to be one of the most valuable agencies. Some forces have been using wireless for a number of years, and experiments have been conducted by others.

THE BRIGHTON SCHEME

In Brighton the inception of the pocket system was due to the initiative of Mr. Charles Griffin, then Chief Constable of the Borough. It was whilst receiving the wireless programme, as he carried his set from one room to another, that he realized the advantage which must accrue to a Police Force if the constable performing ordinary patrol duty could receive from Headquarters wireless messages by means of

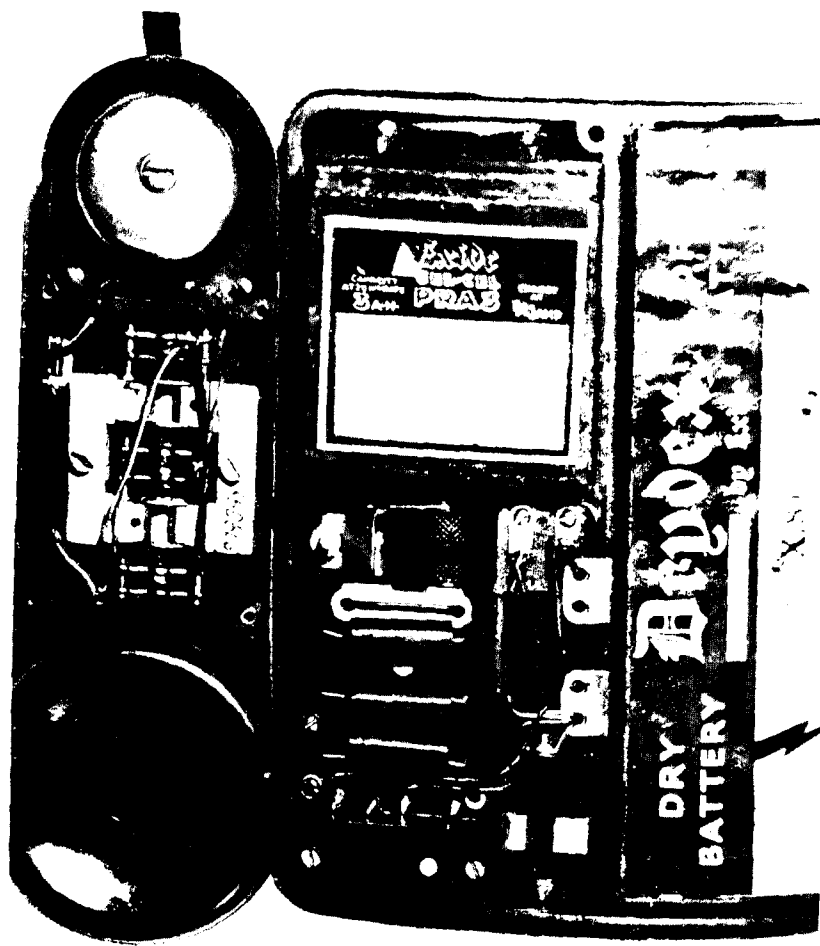
an instrument, so light in weight and so small in size, as to permit of its being carried in the breast pocket of the constable's patrol jacket. Moreover Mr. Griffin was not unmindful of the possibilities of such a system in relation to the greater measure of assistance which the local Force would be able to give to others. For instance, if another Force desired the detention of the occupants of a certain motor-car, this information could be given immediately to every constable on duty in the streets of Brighton. Thus there were two reasons why pocket wireless was desirable, and the experimental work was commenced.

Several years elapsed before a suitable instrument could be designed, for not only had it to be constructed with due consideration for size and weight, but it was necessary that it should have an effective calling device. At length difficulties were overcome and four sets were made for testing purposes, the tests extending over many weeks. The Chief Constable received every assistance from the Police Authority and there followed consultations with high officials at the Home Office. Demonstrations were given to members of the Watch Committee and, with the further encouragement and approval of the Home Office, as well as that of the Police Authority, it was decided to order the necessary equipment.

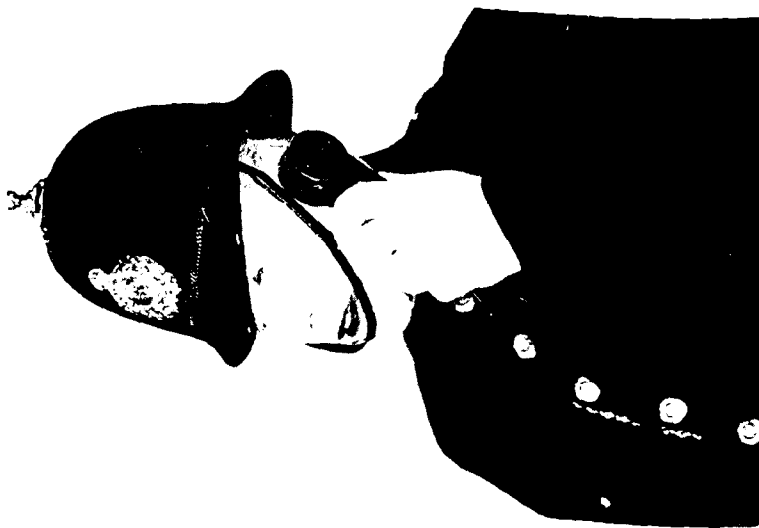
In the meantime a scheme for the operation of the system was prepared and, in his general order on the subject, the Chief Constable, emphasizing that the modern type of criminal, with the many mechanical aids to his practices, needed to be met with similarly advanced methods of detection, placed the experiment in the hands of the members of the Force, confident that he would receive the enthusiastic and loyal co-operation of every man. A copy of the scheme was issued to each officer and constable, and two lectures were given for the purpose of explaining it in detail. The order for the pocket sets, transmitter and the necessary spare equipment was placed with the Wireless Telephone Company, Limited, 42 Old Broad Street, London, E.C. 2, and the scheme was brought into operation on 14th September, 1933.



A POCKET WIRELESS SET



SHOWING THE INSIDE OF THE RECEIVER AND THE INSIDE OF THE
COMBINED CALLING DEVICE AND EARPIECE



A CONSTABLE RECEIVING A WIRELESS
MESSAGE

It is not inappropriate to mention here the keenness of the Wireless Telephone Company in their efforts to give satisfactory service; the valuable experimental work conducted by Constable H. J. Redgrave (now a member of the Derbyshire Constabulary) and by Mr. C. L. P. Dean; and the assistance of Superintendent Gerald E. Crouch in working out the details of organization.

The pocket set is of the one-valve type, consisting of two pieces of apparatus—the receiver proper and the earphone. The former contains the dry battery (high-tension) and the accumulator (low-tension), whilst the latter incorporates the calling device. The measurements of the receiver are length, 6 inches; width, $4\frac{3}{4}$ inches; and thickness, $1\frac{1}{8}$ inches, the weight being less than 2 lb. It has a screw-driver adjustment for tuning purposes. A plug, to which is attached a length of cable, connects the earphone with the receiver. The bell on the earphone rings when the transmitter is switched on, and, taking the earphone from the pocket, the constable presses a small knob at the side and listens for the voice of the operator. The sets are capable of receiving messages at a distance of about six to seven miles from headquarters.

The breast pockets of the constable's jacket are made so that the set can be placed therein from the inside of the garment, the receiver being carried in one pocket and the earphone in the other, the cable falling across the chest. To receive a message the earphone is removed by inserting the hand from the outside, the receiver remaining in its pocket until the constable completes his tour of duty, when he hands the set to his relief. This method of carrying the instrument makes no appreciable difference to the appearance of the pockets, but, as an alternative, the receiver may be carried in a cloth satchel worn underneath the jacket and suspended from the shoulder by a band so that it rests on the opposite hip.

In the motor-car and the van the pocket sets are carried in wooden containers, so fixed as to be readily accessible to the occupants. When the vehicle is in motion reception

is not so good as in the case of the sets used by patrol constables, but the ringing of the bell can be heard just as distinctly, and the driver has only to stop his vehicle for a few moments in order to receive the message equally as clearly as his colleague on beat patrol.

ORGANIZATION

The wireless room on the top floor of the Town Hall is connected by telephone to the switchboard in the Police Station on the ground floor. Besides the transmitter, it contains the means for reception of wireless signals, testing apparatus, accumulator charging boards, bench for repair work, record books and card indices, and cupboards for storing equipment.

The operating staff consists of three constables and the station is manned day and night, the men working in eight-hour reliefs, *viz.* from 6 a.m. to 2 p.m., 2 p.m. to 10 p.m., and 10 p.m. to 6 a.m. They are supervised by one of the station sergeants, who is a qualified man, and in addition to these several members of the Force have passed the Post Office test. The department is under the control of the Chief Clerk. The operators' duties include the proper care of the transmitter, the adjustment and repair of pocket sets, recharging and despatch of accumulators to the police telephone boxes at the specified times, the recording and filing of messages, together with the results thereof, and the noting of repairs effected.

Thirty pocket sets are allocated as follows : To constables on beat patrol, 24 ; section sergeant, 1 ; motor-cycle patrols, 2 ; motor-car and van, 2 ; spare, 1. When formulating the scheme it was decided that the guiding principle must be the issue of sets to the beats so as to give priority to those farthest from Headquarters, and to those in which the main thoroughfares, especially the roads on the Borough boundaries, are situated. The same idea governed the supplying of sets to the remaining beats, the last to be considered

being that nearest Headquarters. One reason for this plan is that the more distant constable has a better opportunity of arresting persons endeavouring to escape by means of motor vehicles after the commission of a crime.

During the first half-hour of each tour of duty of the Uniform Patrol Branch a test transmission is made, and, if he fails to receive this satisfactorily, the constable communicates with the wireless operator from a police telephone box and, if necessary, arrangements are made for the set to be brought to Headquarters by a motor vehicle. In cases where the fault cannot be remedied immediately or the repairs effected quickly the constable is supplied with another set. Sometimes he is able to adjust the instrument under the guidance of the wireless operator ; otherwise he is not allowed to interfere with it, except for the purpose of changing the accumulator. When the earphone and receiver are connected in the manner already explained the bell rings for a short time, and, upon placing the earphone to the ear, a rushing noise can be heard. Generally this indicates that the set will function correctly upon the transmission of a message, when the rushing noise will cease.

In the principal telephone boxes (known as " beat boxes ") there are compartments for holding charged and discharged accumulators. At 12 noon every day the driver of a police motor vehicle commences his deliveries of orders and informations and, as he visits each beat box, he leaves a charged accumulator (sometimes two), the collection of the discharged cell, or cells, being made at the same time. For some months the accumulators give twenty-four hours' service and are marked " A " ; in due course they come within the category " B " (those capable of giving more than twelve but less than twenty-four hours' service). The changing of the cells in the sets is carried out at 2 p.m. daily, but, in order to take the utmost advantage of the use of " B " accumulators, the operation is also effected at 2 a.m. on certain days. " C " accumulators (giving less than twelve hours' service) are used at the discretion of the wireless operator.

A message is transmitted under the authority of the officer in charge of the department concerned, but in his absence it is authorized by the senior officer on duty in that department. For instance, if the Detective Inspector is not at Headquarters the senior detective officer may take the initial step. Similarly, the Station Sergeant sometimes finds it necessary to assume responsibility for action in the absence of the Chief Clerk, or of the officers of the Criminal Investigation Department, or of the Superintendent or patrol inspectors. A special form is used for the purpose, and space is provided for the time at which the message is handed to the wireless operator, the time of transmission, and the signatures of the authorizing officer and the operator. The message is written in duplicate, one copy being handed to the wireless operator and the other to the telephone operator, who has it available for reference in the event of the patrol constable telephoning for confirmation of any of the particulars therein.

There are occasions, however, when, in order to save time, it is desirable for the officer originating the message to telephone it to the wireless room, in which case the form is sent to the operator at the earliest possible moment. On receiving the message, either on the prescribed form or by telephone, the operator immediately switches on the transmitter, and after allowing sufficient time for the ringing of the bell on each pocket set, he gives the message, preceded by the call sign, reading it slowly and deliberately four times. When the patrol constable has taken all immediate steps to deal with the matter he enters the message in the diary kept in the telephone box. On the next occasion of their periodic telephone call to Headquarters the patrol constables are asked whether they received the message. In due course the wireless operator is informed accordingly and particulars are entered on the reverse of the form, together with a note of any action taken to give effect to the message.

Messages are worded as concisely as possible, and a code is available for use in case of necessity, a copy being

carried by every member of the Force. If the message is a lengthy one, and time permits, constables may be instructed, by wireless, to go to the nearest box and telephone to Headquarters, where the telephone operator is ready to give it. The cancellation is treated as seriously as the message itself, in order that the time of the police may not be wasted and so as to prevent inconvenience to other persons. The same kind of form is used both for circulations and cancellations, and the procedure is similar in each case.

OBJECT OF THE SCHEME

(a) *Local*

The pocket sets are not intended for use solely in cases where the holder is required to go to the scene of a serious crime, or to stop a criminal travelling by motor vehicle. They are available for all occasions when officers at Headquarters find it necessary to communicate with patrol constables on any matter of police duty. The man on the beat may be instructed to proceed to the scene of an accident, or to deal with a disturbance in the street. Members of the Force are able to render prompt assistance to the Fire Brigade; for immediately the alarm is given to the Brigade, the Station Sergeant is notified by telephone from Brigade Headquarters, a message is sent by wireless, and one or more constables arrive at the burning premises as quickly as possible, in order to control the crowd and the traffic. The system also affords the means of rapid concentration of police at any part of the Borough.

It is interesting to compare the present-day position with that of a few years ago. Before 1928, in which year the Police Box System was brought into operation in Brighton, a constable was generally out of touch with his station from the time he marched out on to his beat until his return. If he performed duty on the "station beat", or on the one adjoining that beat, he visited the station at certain intervals, but the majority of his comrades did not return until the short interval

for meals, or until the time for going off duty. If they wished to communicate with the station in the course of patrolling their beats they were obliged to telephone from the street fire alarm pillars, from business premises or from shops, whilst at night time still fewer facilities existed.

The Police Box System enabled a constable to telephone to Headquarters whenever he desired, and under more favourable circumstances. This aspect of the system alone marked a distinct advance from the former conditions of working, but, as a general rule, an officer at Headquarters was unable to communicate with the beat constable except at the scheduled "ringing-in" times. Between those times his only opportunity occurred when the man made an extra telephone call. Flashing lights, if they are within sight, are an excellent means of indicating to a policeman that he is wanted at his telephone box, but in practice they cannot be compared with a direct call to the constable. Now, with the aid of pocket wireless, information may be given to every constable at any part of his beat during any hour of the day or night.

(b) Co-operation with other Forces

In these days when improved facilities for travelling enable a criminal quickly to move from place to place, the boundaries of police districts virtually disappear, and frequently a number of Forces engage in concerted action with the object of arriving at a satisfactory conclusion when a crime has been committed. In such circumstances rapidity of action is of paramount importance, and its effectiveness depends upon the extent to which it is possible to convey necessary information to individual members of the Forces concerned. In so far as delay occurs in notifying *every policeman* when an urgent message is received from another Force, just so will co-operation be impaired. It will be appreciated, therefore, that the pocket sets serve a very useful purpose in effecting closer co-operation with another Force.

In Brighton arrangements are made to ensure that the



MAP OF BRIGHTON, SHOWING THE DISPOSITION OF POLICE POCKET WIRELESS SETS

Legend:
 Cars ■
 Motor-cycles ▲
 Beat Patrols ●

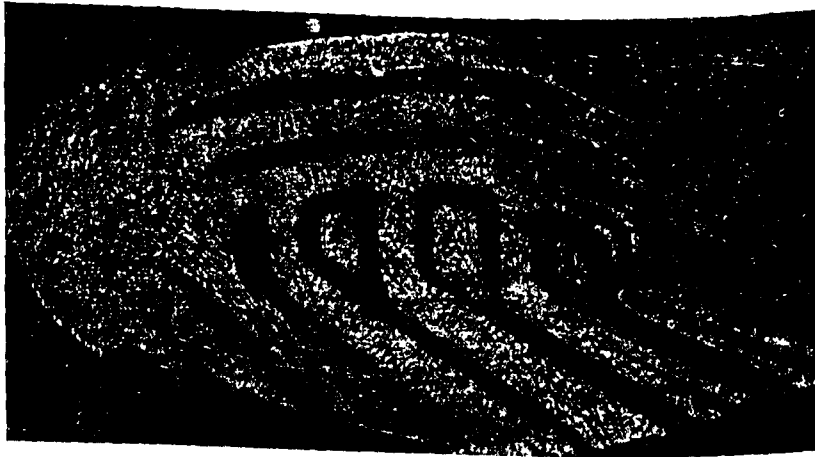
contents of an express message are communicated to every member of the Force immediately. The transmitter is brought into action and patrols are instructed at once to acknowledge the wireless message. Where a constable has not done so within a given period the message is sent to him by one of the police motor patrols. A file is kept for each express message, in addition to which it contains a report as to the action taken, and a copy of the wireless version.

Again, it is interesting to make a comparison—this time between the Police Box System before the existence of the Wireless Scheme and the same system operating in conjunction with the latter scheme. Whereas under the former conditions an hour or more elapsed before the message could be given to all constables, they are now in possession of it a few minutes after its receipt from another Force.

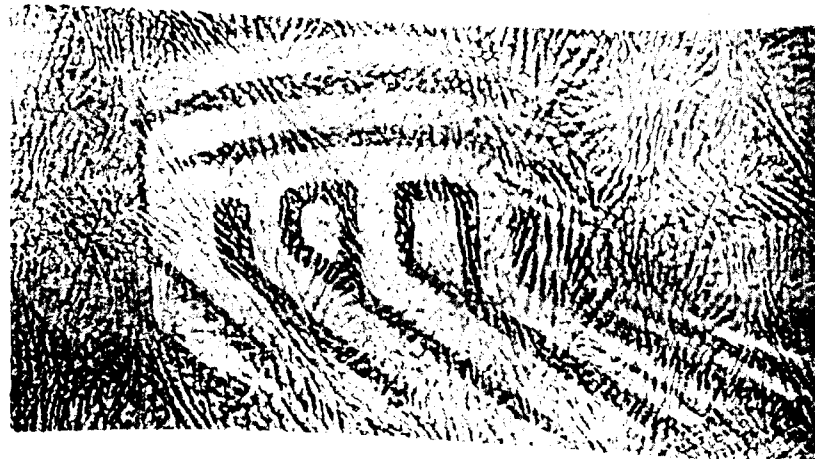
EXPERIENCE GAINED IN THE OPERATION OF THE SCHEME

As the result of nearly three years' working, much useful experience has been gained, and the confidence placed in the scheme at its inception has been amply justified. Having regard to the size of the pocket set, the tiny aerial to pick up the signals, and the unfavourable conditions which sometimes arise through "screening", it is remarkable that it has attained such a high degree of efficiency. It must be remembered that the scheme is yet in its infancy, and it is not suggested that the instrument is incapable of improvement. Experience in operation, however, has made it possible to indicate certain alterations which could be effected in the manufacture of further sets. Already an improved type of accumulator has been introduced, whilst a more suitable cable has been used to connect the receiver with the earpiece.

The initial cost of installation, including the transmitter, pocket sets and spare equipment, was approximately £800, and annual expenditure upon maintenance of the sets is about 50s. per set; this includes the licence fee.



Photograph of Transfer on photographic film
FOOTPRINT IN DUST ON REXINE CLOTH (see p. 366)



Direct photograph of footprint on cloth
FOOTPRINT IN DUST ON REXINE CLOTH (see p. 366)

WHAT HAS BEEN ACCOMPLISHED THROUGH THE USE OF POCKET SETS

Members of the Force have responded well to the demand for their co-operation in making the scheme a success, and the following instances are typical of many in which the pocket sets have been used with distinct advantage:—

(1) At 12.45 a.m. a householder found a man in his study. The man escaped and the householder telephoned to Headquarters from a Police telephone-box. At 1.5 a.m. a wireless message, giving a brief description of the wanted man, was transmitted. This message was also received and acted upon by two police vehicles carrying pocket sets. Shortly after receiving the message a patrol constable notified Headquarters that he had previously seen the man going southwards. This information was transmitted and at 1.15 a.m. a constable arrested the man in possession of the stolen property.

That morning he was brought before the Justices, committed for trial, and later in the day appeared at the Quarter Sessions and was sentenced to three years' penal servitude. The Learned Recorder (J. D. Cassels, Esq., K.C.), in commending the officers concerned, said:—

"Now I wish to say . . . what an excellent tribute this case is to the installation of the wireless system for the detection of crime, and how rapidly a man can be caught and brought to justice and dealt with in Brighton."

This case is interesting from a point of view of speedy justice, and a perusal of the Police reports shows that there was good team work; incidentally it illustrates that the householder realized the facilities provided by the Police telephone-box, and the importance of communicating with the Police immediately.

(2) The taking and driving away of a motor-cycle from another Police district without the owner's consent, was the subject of a wireless message transmitted at 3.25 p.m. At 4.15 p.m. a constable saw the machine, but, as he was not in a position to stop the driver he notified Headquarters, and the

information was passed to patrols on the route which the motor cycle was likely to take, with the result that at 4.20 p.m. an officer saw the motor-cycle being driven near the Aquarium and took the driver into custody.

(3) Five men in a motor-car obtained petrol at a garage in the northern part of the Borough and left without paying. The proprietor telephoned to the police immediately, and a description of the car was circulated by wireless. The vehicle was intercepted by a motor-cycle patrol and the occupants detained. A letter of appreciation from the owner of the garage contained the following: "Information 'phoned, received, wirelessly, intercepted and acted upon whilst a Chrysler car, bound for the races, travels less than three miles, would appear to me to be a record."

(4) The circulation of a wireless message, giving the description of a pedal cycle stolen in the area of the County Force about half an hour previously, was received by a patrol constable, and five minutes later he arrested a man in possession of the stolen machine.

(5) Following the receipt of a report respecting the theft of an overcoat from a doorway in a main street, a description of the suspect was circulated by wireless, and fifteen minutes later a patrol constable arrested the thief in possession of the stolen property.

(6) A patrol constable received by wireless the description of a man wanted for larceny. Twenty minutes later he arrested the man, who was charged with the crime and sentenced to two months' hard labour.

(7) A serious fire occurred in a main thoroughfare, and a wireless message directed a number of constables to proceed to the scene, with the result that they were on the spot quickly and dealt with the crowds and traffic congestion.

(8) A telephone message to Headquarters stated that an accident had occurred on the main road near the northern boundary of the Borough. A motor-car had overturned and there was no policeman in attendance. The ambulance was despatched at once, and a wireless message instructed a

motor-cycle patrol (he was actually about two miles from the scene) and the beat constable on pedal cycle to render assistance. The patrol sergeant on the section also picked up the message, boarded a passing motor-car, and arrived at the scene of the accident almost at the same time as the ambulance, motor-cyclist, and beat constable—in about five minutes of the original call.

Inquiries respecting the pocket sets have been received from all parts of the world, whilst representatives from a number of Forces at home and abroad, as far apart as the Leeward Islands and Ceylon, who have visited Brighton for the purpose of witnessing demonstrations of the system, have expressed surprise at the clearness of reception of messages.

THE DEVELOPMENT OF WIRELESS FOR POLICE PURPOSES

There are indications that the value of wireless to the Police Service is becoming appreciated to a greater extent, but it would appear that, generally, its use may be confined to motor vehicles fitted with the two-way system, enabling the occupants to send messages to the transmitting station whilst the vehicle is in motion. Progress along these lines will go far towards the promotion of better co-operation between the Forces, but to utilize wireless only in this manner is to restrict its usefulness. Whilst wireless-equipped cars can operate over a large area, the number of such vehicles is limited. If an extra car is required there is additional expenditure, not only upon the car set but, what is more important from a financial standpoint, upon the vehicle itself. In the case of pocket sets the medium for carrying them is already in existence—the constable on beat patrol. If wireless is used in all the cars available, and if every constable is supplied with a pocket set, then everything is done to ensure effective action when a message is transmitted. There is a greater possibility of securing the arrest of a criminal if information can be given both to policemen in cars and constables on beat patrol than if a wireless message can be received only by those in motor vehicles. In Brighton

the use of the pocket sets in the hands of the patrol constables has given a better return than in the case of those in the motor vehicles. There is no reason why continued experiments with the pocket sets should not result in the provision of a smaller and lighter instrument capable of reception at a greater range, whilst an increased demand for them would lead to a lowering of the cost of manufacture.

Any scheme which does not ultimately take into account the constable on foot will fail to result in the highest degree of efficiency, since every beat constable is a potential agent for giving effect to a wireless message. There is a question as to which is the more suitable medium for transmission—telegraphy in Morse, or telephony; both systems have their advantages and disadvantages. There may be difficulties in producing the ideal scheme in which every member of the Service can participate; but, given the necessary enthusiasm and determination, obstacles should be surmounted as time goes on, so that in the not distant future the Service may make the utmost use of an invention which science has placed at its disposal.

A Method of Reproducing Footmarks, etc., from Certain Objects

SEVERAL means have been suggested for obtaining satisfactory reproductions of footprints, etc., from linoleum, rexine cloth, and similar surfaces, which, because of the underlying pattern or immovability of the article, are impossible to produce by direct photography.

Such reproductions can be perfectly made with a piece of photographic film of suitable size, and the operation is so simple and safe that any officer can do it. Other advantages of the method are the portability of the film compared with other substances recommended for the purpose, and the entire absence of shrinkage.

In order that pieces of film large enough to obtain complete footprints are available, a "Circut" film, 5 inches wide and 20 inches or more long, is recommended for the purpose; the metal container in which the film is supplied is very convenient for storage and carriage.

Without exposure the film is fixed, washed, and dried in the ordinary way; it can then be wrapped on the spool and put back in the container until required for use.

To pick up an impression a suitable length of film is cut off, placed on a flat surface, and moistened with clean water on the side to which it curls. The moistening can best be done with a piece of cotton-wool or soft cloth (without lint). The film should not be made wet, and surplus moisture should be prevented from wetting the other side of the film. After moistening, hold flat for a few moments until the surface moisture has been absorbed or evaporated, leaving the surface 'tacky'. The damp surface is then placed in contact with the footprint and the back of the film smoothed over

METHOD OF REPRODUCING FOOTMARKS 367

with the hand to ensure even contact all over the impression. The film is peeled off and allowed to dry by pinning it to a shelf or placing it flat (tacky side upwards) with a weight on each end to restrain the tendency to curl. The dust from the impression dries in the emulsion on the film, and when completely dry the film can be handled ordinarily. It can be packed between smooth paper or glass to prevent scratching in transit.

If there is sufficient dust on the impression to give density to the film it may be printed from as an ordinary negative, but better results will usually be obtained by photographing the impression in front of a black box, with oblique lighting in the way that a finger-print on glass is photographed. If it is to be photographed, the film should be pinned across a frame or placed between pieces of glass to ensure perfect flatness, and a measure should be placed beside the impression so that the exact size can be obtained in the positive.

The illustration facing p. 361 is of a direct photograph of a mark on rexine cloth and a photograph of a transfer of the same mark picked up with film. The direct photograph was taken with studio lighting—it would have been very difficult, if not impossible, to obtain it at the scene of a crime if the rexine had been fixed to an immovable object, such as the seating in a club or public house.

It is seldom necessary to resort to any 'lifting' method with finger-prints, but should there be no alternative they can, after being dusted with ordinary grey powder, be lifted on film in exactly the same way as a footprint. The use of 'folien' for this purpose is undesirable, because a finger-print lifted by that means can be put down again elsewhere. The same objection cannot be taken to the use of film because the dust dries into the coating of the film, and at no time in the process is it possible to transfer it. The film has the additional advantage that it can be immediately used (over a light box) as a positive for comparison purposes.

With the appliances now available for photographing

impressions, there is little excuse for 'lifting' them by any means, and the foregoing method seems to be the least objectionable one for use as a last resort. A finger-print camera, with self-contained lighting, for photographing marks on immovable objects is not difficult to make, and impressions on multi-coloured objects can be photographed perfectly under ultra-violet light when dusted with anthracene powder.

The Black Beaver Hat

A FAMOUS TRAIN MURDER

By JOHN VIBART

IT is often said that the criminal to-day is reaping a rich harvest from the latest scientific discoveries, by employing them in his ceaseless war against law and order. To a very small extent this may be true, but for obvious reasons it is unlikely that the full resources of modern scientific invention will ever come within reach of the criminal classes.

Although the science of criminal investigation has now reached a high peak of perfection, and the law-breaker is finding it more and more difficult to escape the long arm of justice, there was a time not so very long ago when the detective in tracking down the criminal had to play a lone hand and pit his wits against the natural cunning and skill of the murderer and forger. Science could not aid him, and even the finger-print system was not clearly understood at the time of which I speak, or was viewed with suspicion by those in high places, while the power of the Press as a crime-detection agency was but a pigmy affair compared with the mammoth organization it is to-day.

One's admiration, therefore, must go out to the detective of the past who, thus improperly equipped for his task, none the less trailed his man and rarely failed to bring him to justice. Such was the position of Detective-Inspector Tanner many years ago, when he was called upon to find the murderer of Mr. John Briggs, the seventy-year-old clerk of a famous banking house.

The history of the crime, told in a few lines, is as follows. At about ten o'clock one dark night, the body of an elderly man was found huddled against the railway arch that runs through the Victoria Park, North London. He had received

extensive injuries, and though alive when discovered, he was unconscious and remained so until he died a few hours afterwards in the hospital.

The affair was at once reported to Detective-Inspector Tanner, who had already made a name for himself throughout the country by his successful solution of the Stepney murder mystery, and his efficient method and patient industry in clearing up this latest crime—if crime it were—was to send his name ringing through two continents.

Tanner and his associates at first decided that this was an accident or a case of suicide—that the elderly gentleman had either fallen or had deliberately thrown himself from a passing train. Both of these theories would account for the terrible injuries which he had sustained. In a pocket were found a packet of letters and papers, apparently intact, which ultimately identified the owner to be one John Briggs, aged 70 years, chief clerk in a famous firm of bankers, who lived in the neighbourhood of Hackney. A button-hole of his waistcoat had been violently torn, and the tear was of recent date. But this, Tanner argued, might have been caused by the fall from the train. In an inner pocket was found a five-pound note.

The theory of suicide, however, was not advanced by the fact that Mr. Briggs's affairs were found to be in a flourishing condition. He was highly respected by his employers, with whom he had worked for many years, he was happy in his home, and was known to a large circle of friends as a lovable and generous man. The detectives, therefore, had arrived at the conclusion that a regrettable accident had taken place when something intervened which placed the matter on a far more serious footing and gave it a grim and sinister aspect.

A few days after the discovery of the body, a carriage-cleaner at Hackney station reported that he had come upon heavy blood-stains in a first-class compartment of a train running between Fenchurch Street and Hackney stations. The extraordinary delay in imparting this new and vital

information was caused, it appeared, by the fact that the train had been shunted on to a siding directly after its arrival at Hackney and before the cleaners had got to work upon it.

Inspector Tanner and his colleagues examined the compartment and at once realized that a terrible crime had been committed, though whether it had any connexion with the death of Mr. Briggs remained uncertain. There were all the signs of a desperate struggle. Splashes of blood were found on the woodwork, dark stains on the cushions and matting, a window had been cracked and, finally, the distinct blood-stained imprint of a man's hand was to be seen on the door and handle. Had the finger-print system been better understood, this last bit of evidence would have simplified Tanner's task in a marked degree. But, as I have already said, this famous method of identification was in its infancy and quite unreliable in those early days. Tanner, therefore, had to look for another link which would help him to solve the mystery.

The booking-clerks and ticket-collectors at Fenchurch Street and Hackney stations had known Mr. Briggs by sight for many years and affirmed that he always travelled in a first-class compartment between these two stations, starting from Hackney at about nine in the morning and returning by the 6.30 p.m. from Fenchurch Street. It was to this train that the blood-stained compartment had been attached. Along the line were found a gold-headed walking-stick and a black bag, both of which were identified as the dead man's property. It was also reported to the detectives that Mr. Briggs's gold-rimmed spectacles, a massive gold watch and chain, and his hat, were missing.

Lastly, under the seat of the compartment Inspector Tanner came upon a most important clue and one, indeed, that was to put him on the trail of the murderer. It was a black beaver hat, not unlike the tall silk hat of to-day but cut much lower in the crown, and with wide brims curled up in an unusual manner. That the hat had not been worn by Mr. Briggs was proved by the fact that it was two sizes too

small, and the dead man had been in the habit of wearing a very different shape of head-gear.

With all this accumulating evidence to hand, Tanner was now satisfied that so far from having fallen or thrown himself from the train, the unfortunate clerk had been suddenly attacked and, after a desperate struggle, had been bludgeoned to death and his body thrown from the window of the compartment. But what was the motive? If it was robbery, why had the five-pound note been left undisturbed and why were the contents of the bag intact? Of enemies, the murdered man had none, as was amply proved; therefore revenge as a motive could be ruled out. A madman it might have been, in which case he would give himself away sooner or later. Thus argued Inspector Tanner, who realized that through the black beaver hat, which had evidently been worn by the murderer, lay his one chance of making an arrest, and upon this the detectives concentrated all their energies.

In the lining of the hat was stamped the name of a firm in Marylebone, who, in reply to his inquiries, informed Inspector Tanner that though they recognized the hat as one of their own make they were unable to give the name of the purchaser, since they had sold a large number within the last six months. The size and shape, they said, indicated a man with a small round head, while the brims had been curled up far more than was usual with this shape of hat. At this moment an assistant volunteered the information that he had a vague recollection of being asked to make this alteration. The request was an unusual one and had left an impression on his mind. He was, however, unable to describe the purchaser or give any further information on the matter.

Unsatisfactory as this interview had been, Inspector Tanner still pinned his faith to the black beaver hat. Find the purchaser, and he believed that he would be face to face with the murderer of John Briggs. In which belief, as will be shown later on, Tanner was both right and wrong.

Putting aside the clue of the hat for the moment, the detectives decided to concentrate on the gold watch and chain,

which Mr. Briggs was certainly wearing on the day of his death and were now missing. A detailed description of the two articles was distributed to every pawnbroker and jeweller in the London area—a lengthy process in those days, and for a time there was no response.

Then a jeweller, with the not inappropriate name of Death, who owned a shop in Cheapside, informed the police that he had in his possession a chain very much like the one they were seeking. Tanner interviewed Mr. Death, who told him that a short while ago a pale, cadaverous-looking man had brought him the chain. The man had spoken in a foreign accent and had asserted that he had found the chain on a patch of land in the neighbourhood of Victoria Park. The chain, Mr. Death went on to say, was a valuable one, and though he suspected him, he did not question the man as to the truth of his story. In exchange he gave him another chain of different design and a plain gold signet ring of no great value.

In reply to the Inspector's questions, Mr. Death said that he imagined the man to be a German or a Dutchman. He was of average height, thin, and sallow. He was unable to say what sort of hat he was wearing. He had arrived late one evening and appeared to be in a hurry. Mr. Death had seen nothing of the missing watch.

It was a few days afterwards that information regarding the watch reached the detectives. A pawnbroker, in the North of London, reported to the local police station that he had recently bought a watch which appeared identical with the one for which the police were searching. The pawnbroker told much the same story as Mr. Death. He spoke of a "pale-faced foreigner" who offered to sell him a gold watch. The watch was worth a good deal and he had bought it without asking any questions. The pawnbroker swore to Inspector Tanner that he had not heard of the crime at the time. Both these articles were speedily recognized as being the property of the dead man.

Inspector Tanner and his colleagues had now made a considerable advance in the solution of the mystery. The stolen

jewellery had been traced and recovered, and they had obtained a description, slight though it was, of the wanted man—or his accomplice—from two independent sources which tallied in every respect. Yet, in spite of this and the assurance that he was on the right track, Tanner realized that the trail was a faint one—so faint indeed that it appeared either to be fading out altogether or leading him into an impenetrable jungle of conjecture in which he would be hopelessly lost.

The district was combed and every foreigner questioned. But not one of them answered to the description of the wanted man nor could be identified by jeweller or pawnbroker. Furthermore, all of them made satisfactory statements as to their movements on the night of the crime. Inspector Tanner was in a quandary, and thus matters remained for the next few days, when suddenly the darkness began to lighten and the trail he was following appeared clearer and broader.

By this time all London was humming with the news of the murder. Men and women were eagerly discussing the details and arguing upon points of which they could know little or nothing, and among these was Harry Mathews, a cabman. Mathews, who rarely if ever opened a newspaper, was none the less interested in the affair and quite prepared to criticize with others the failure of the police authorities to secure an arrest. But when he heard a friend mention the name of Death, the jeweller, he became silent and thoughtful. Eventually he went to Inspector Tanner with the following story.

He said that he had seen in his home a cardboard box with the name of Death, the jeweller, upon it. It was an ordinary jewel-box and he believed it belonged to his daughter, who was now "in service" in the country. Mathews had noticed the box a week or two ago. He had not seen it since.

Tanner was not impressed by this story, which was told in a jerky, nervous manner. There were probably hundreds of such boxes to be found, and Mathews' daughter herself may have patronized the jeweller in Cheapside. Far more interested was the detective in the black beaver hat that

THE BLACK BEAVER HAT

the cabman was wearing, with its curiously turned-up brims, and when in comparison it was found to be identical in shape and size with the one discovered in the railway compartment, Tanner's interest almost amounted to suspicion.

"Where did you buy that hat, Mathews?" the detective asked.

Mathews gave the address of the firm in Marylebone.

"When did you buy it?"

"About twelve months ago."

"Did you ever buy another hat like the one you are wearing?"

"Yes."

"Where is it now?"

"I bought it for a friend."

"What was his name?"

"Muller—Franz Muller, a German tailor."

"Where is Muller?"

"Gone back to Germany."

"When did he go?"

"I don't know."

"When did you last see Muller?"

"About a week ago."

"After you had discovered the jewel-box in your home, or before?"

"I cannot remember."

"Try to remember."

"I think it was before I saw the box."

"So you bought a hat exactly like the one you are wearing for your friend Muller. Very generous of you, Mathews, wasn't it?"

"He paid me for it."

"Why did he not buy one for himself?"

"He liked mine so much. He asked me to get one just like it."

Tanner took the man along to the hatters in Marylebone, where he was recognized as a customer who had purchased a hat some months ago.

The detective was puzzled. If Mathews had any connexion with the murder, why had he come to him with a story of a jewel-box and thus attracted the attention of the police to himself? Was he trying to draw a red herring across his trail—to put the police on a false scent? If so, Tanner thought, the cabman was playing a terribly dangerous game. And yet, Mathews seemed honest and appeared to be speaking the truth.

Arguing thus, the detective made his way with Mathews to the shop of Mr. Death in Cheapside. The jeweller, however, was unable to identify the man and indeed affirmed that he had never seen him before, as did the pawnbroker who had bought the gold watch. A visit to the German shipping agencies was of no avail, and inquiries at the various English and German seaports yielded no results. This, however, in no way damped Tanner's ardour, since, if Mathews' story was true, Muller had probably sailed under an assumed name.

Inspector Tanner now visited Mathews' home and interviewed the cabman's daughter, who had been brought to London for the purpose. As a result of what she told him the detective realized that he was indeed on a blazing hot trail and hard on the heels of the murderer of Mr. John Briggs.

The girl informed Inspector Tanner that she had known Franz Muller for some time, and during the last few months had "kept company" with him. Muller had asked her to marry him, but she had refused. She had not mentioned the matter to her father. Muller, from time to time, had given her presents, the girl said, in reply to the detective's questioning. The last gift from him had been a gold chain. Tanner took the chain to Mr. Death, who at once recognized it as the one he had given in exchange. Finally Miss Mathews said that since she would not marry him, Muller, apparently broken-hearted, had decided to leave England and make his home in America. He had embarked in the sailing-vessel *Victoria* for New York a week ago.

Had wireless science been known at this time, Inspector Tanner's task of proving the truth of the girl's story would have been as simple as was Chief Detective-Inspector Dew's when he apprehended Crippen on board the *Montrose* in the year 1910. But many years were to pass before Marconi's invention was to come to the aid of the police.

Tanner, however, was not the man to allow time to grow idle on his hands. Within forty-eight hours, accompanied by two other detectives, as well as by Death and Mathews—the last two for purposes of identification—he had boarded a fast steamship at Liverpool, which rapidly overhauled the slow sailing-vessel, and by the time the *Victoria* cast anchor in New York harbour, the English detectives were awaiting her arrival on the quay.

Inspector Tanner was relying entirely upon the evidence of the girl Mathews. It was by no means certain that Muller was on board the *Victoria*. The man might have given a false plan of his movements in order to deceive the authorities, or the girl might have told her story with the one idea of saving her lover. Tanner was gambling on an uncertainty that would not have existed in these days; but his luck held good.

It was nearly six weeks before the *Victoria* reached her destination, and by that time the rumour had spread that the English detectives were there to arrest Muller, and a large crowd had gathered on the quay. As the ship slowly made her way to her anchorage a sullen shout went up: "Muller, the murderer; let's lynch him!" Tanner was nervous lest the cry should warn the man he wished to interview, with a result that he might attempt to evade the hand of justice, if indeed he was on board the ship. Fortunately Muller was below in his cabin, making his preparations for landing.

After the English party, accompanied by a New York detective, had boarded the *Victoria* all the steerage passengers were mustered aft for medical inspection, and it was then that Death recognized Muller. Tanner went up to him and took him by the arm, while the American detective began: "We are police officers. You are wanted—" He got no further.

With a cry Muller wrenched himself free and made for the ship's side. He was speedily secured and taken to his cabin, protesting his innocence. Among his baggage were found the murdered man's spectacles and the missing hat, the crown of which had been cut down considerably and then sewn together again. It is interesting to note, in passing, that this new shape in top hats soon became the fashion and for many years was known as the "Muller Cut-down!" Muller asserted that the hat was his own property; but if this was the case, it is strange that it did not fit him.

Every obstacle was placed in the way of extradition. But the British case was too strong, and Muller was handed over to Inspector Tanner. The voyage home was uneventful, but the remarkable scenes at Liverpool, and afterwards at Euston Station, London, where violent demonstrations by hostile crowds took place, were not easily forgotten.

Relieved of his prisoner, who was now lodged in Bow Street, Inspector Tanner had time to complete his case and fill in the gaps. He did not believe that the killing of Mr. Briggs had been premeditated. He had discovered that Muller was living, at the time of the murder, in one room near Victoria Park. He was out of work, penniless, and owing his rent. In the detective's view, Muller one evening found himself by chance seated alone in the railway carriage with the sleeping bank clerk. The starving, desperate man saw with greedy eyes the massive gold watch-chain, the gold-headed walking-stick, and the valuable looking leather bag. An insane desire to possess these things and obtain the badly needed money for them overcame him. A handy weapon, the walking-stick, was near, and on the spur of the moment he attacked the sleeping man, killed, and then robbed him. The fact that he afterwards threw the body from the window showed, the detective thought, that the man was not responsible for his actions.

If this theory of Tanner's is correct, it would be pertinent to ask, in the first place, how it was that a penniless man came to be travelling in a first-class compartment, as he must have

been, if the crime was unpremeditated. Secondly, the act of throwing the body from the window reveals a certain subtlety and cunning on the murderer's part, since it nearly succeeded in deceiving the detectives themselves, as has been shown. It would be nearer the truth, I suggest, to assume that this was a deliberately planned murder, and that Muller had been shadowing *his victim for some considerable time before* an opportunity arrived which enabled him to put his plan into effect.

As the date of the trial drew near astonishing interest and even excitement were shown by wealthy, influential Germans residing here and in their own country. A large sum of money was subscribed, and the ablest Counsel at the Criminal Bar of England were briefed for the defence. The King of Prussia himself approached Queen Victoria, with a request that her Majesty should intervene on Muller's behalf. A monster petition was presented to the Home Secretary by Germans in England and other countries, and finally the German press did not hesitate to express their belief that the arrest and trial were nothing but "political jobbery" and "a venting of petty spite against the great German nation".

All these efforts, of course, were of no avail. The scales of British justice were evenly balanced, and it was Franz Muller, the little German tailor, who was found wanting and sentenced to death.

The following remarks made by the Judge at the trial are interesting:—

"One may describe circumstantial evidence as a network of facts cast around the accused man. That network may be a mere gossamer thread, as light and unsubstantial as the air itself, which would vanish at a touch. It may be strong in parts, but leave great gaps and rents through which the accused is entitled to pass with safety. It may be so close, so stringent, so coherent in its texture, that no efforts on the part of the accused could break it."

On the very scaffold itself the German minister in attendance did not cease from urging the condemned man to make

a confession. "Muller," he exhorted, "in a few moments you will stand before your God. I ask you again for the last time; are you guilty of this terrible crime?"

"Not guilty," replied Muller.

"You say that you are not guilty?"

"God knows what I have done."

"Yes, God knows what you have done. He knows whether you are guilty or not guilty. Speak the truth."

"Yes, I have done it." (*Ja, ich habe es gethan.*)

Considerable doubt was expressed for a long time as to the genuineness of this confession. But from records and other evidence it was proved that Muller did indeed admit his guilt at the last.

NOTES FROM THE FORCES

HAIRS AND FIBRES AS VALUABLE EVIDENCE

THE importance of scientific aid in police work was strikingly illustrated in a case at Chesterfield recently when the case for the prosecution depended largely on the evidence of Police Laboratory experts as to comparisons of hairs and fibres, and in fact could not otherwise have been proved.

On 28th September, 1935, about 10.15 p.m., a man was walking down the main Derby Road, in company with his wife and a man friend, when he was knocked down from behind by a vehicle. It was raining at the time. Neither the victim of the accident nor those who accompanied him could say what type of vehicle caused the accident. The vehicle did not stop, but continued on towards the centre of the town.

Other witnesses of the occurrence were only able to say that the vehicle was a motor-cycle combination, that the driver was an old man wearing a cap, and that he had a woman, wearing a black hat, in the side-car.

The police were informed, from a police box, within a few minutes and police cars were turned out to intercept the motor-cycle coming into the town. The vehicle was not encountered, and, although an extensive search was made, no trace of it could be found. It was assumed that the machine had turned off into some side street and that possibly the driver lived in that neighbourhood.

The injured man was taken to hospital where he was found to be suffering from a fractured skull and a fractured leg.

Two days later a detective officer engaged on the inquiry visited an elderly man, 57 years of age, who kept a motor-cycle combination in a side street off the main road in that district. It had been ascertained that this man, driving a motor-cycle combination, left a public-house on the main Derby Road shortly after 10 p.m. on the night of the occurrence, and passed the scene of the accident about the time that it happened. It was also learned that a woman was in the side-car.

The owner of the machine admitted that he drove it past the scene of the accident about the time stated, but denied all knowledge of an accident.

The officer examined the motor-cycle and side-car and noticed that there were several freshly made indentations on the side-car. In front of the wind screen of the side-car two hairs were found. The side-car and two hairs, together with the victim's clothing and hairs taken from the injured part of his head, were taken to the Police Laboratory at Nottingham for examination. On the victim's jacket sleeve was found a minute piece of fibrous material which was compared with fibres taken from the cane front of the side-car.

Microphotographs were taken of portions of the hair taken from the side-car and from the head of the injured man. Microphotographs were also taken of the fibrous material found on the victim's sleeve and of portions of cane taken from the side-car.

A microscopical examination was made of the exhibits and revealed that the hairs found on the side-car were the same in characteristics as those taken from the injured man. In addition, one of the hairs taken from the side-car was complete with bulb and sheath, and it was possible to say that it had been removed from the scalp by force. It was also found that the fibrous material taken from the victim's clothing was cane and was structurally identical with the piece of cane taken from the side-car.

The owner of the motor-cycle was charged with dangerous driving, driving without due care and attention, failing to stop after an accident, and failing to report an accident within twenty-four hours of its occurrence.

He was convicted on the latter two charges and was fined £1 for failing to stop and £1, and £13 19s. 6d. costs for failing to report the accident.

THE COLONIAL POLICE

The following appointments are announced by the Colonial Office:—

BAYLY, G. E. W. W.	Superintendent of Prisons, Malaya.
BLACKWELL, H. (Assistant Inspector of Police)	Inspector of Police, Uganda.
BROWN, J. A.	Assistant Superintendent of Prisons, Nigeria.
BROWN, W. A.	Assistant Superintendent of Prisons, Uganda.
CARRUTHERS, D. G. (Assistant Inspector of Police, Guiana)	Assistant Commissioner of Police, Gold Coast.
DRYDEN, A. H. M. (Inspector of Police, Tanganyika)	Chief Inspector of Police, Zanzibar.
FOSTER, A. R.	Junior Inspector of Police, Barbados.
FOUNTAIN, D. S. (Constable, British Section, Palestine Police)	Assistant Commissioner of Police, Nigeria.
HADOW, N. P.	Police Probationer, Ceylon.
HILL, E. J. J. (Assistant Superintendent of Prisons, Grade II)	Superintendent of Prisons, Nigeria.
MONEY, H. C. (Inspector of Police)	Assistant Superintendent of Police, Uganda.
ONRAET, R. H. de S. (Superintendent of Police, Singapore)	Inspector General of Police, Straits Settlement.
OTWAY, J. E.	Inspector of Police, Grenada.
SANDARS, Major G. E. D. (Sub-Inspector of Constabulary)	District Officer, British Solomon Islands Protectorate.
YOUNGER, W., O.B.E., (Superintendent of Police, Uganda)	Inspector in Charge of Criminal Investigation Dept., Jamaica.

OUR CONTEMPORARIES

The Analyst, vol. 61, No. 719, February, 1936. Davis and Maltby (p. 96) point out the errors which may arise in the estimation of arsenic in organic and other material, when it is present as arsenic acid or arsenate, if the ordinary methods of estimation are used, and suggest preliminary reduction with sulphurous acid and a temperature of 40 to 60 degrees Centigrade for carrying out the Gutzeit reaction. Raymond (p. 100) contributes an article on the composition and examination of Tanganyika arrow poisons.

Revue Internationale de Criminalistique, vol. 7, 1935, No. 6. This contains an article by Sava (Bucharest) (p. 352) describing a case where it was possible to identify 127 days after burial a body which had not been embalmed, by means of the finger-print of the left index finger, which alone of the fingers remained undecayed, although the skin was in a very fragile condition. No. 7. Stahl (Roumania) (p. 390) contributes an article on methods of restoring writing which has been rendered illegible by various means, such as bleaching, overwriting, and mechanical erasure, using three cases in illustration. In the third case erasure had removed all except small separated traces of the original writing, but by deduction after measurement it was possible to reconstruct the whole of the missing writing. Wedderburn (Kenya) (p. 399) describes a numerical code for single finger-prints and gives statistical results for Kenya as compared with those at Scotland Yard. Söderman (Stockholm) (p. 416) deals with breaking and entering, and suggests certain procedure for training in the detection of such crimes. No. 8. Crema (Modena) (p. 454) gives an article on bullet wounds in the skull, with illustrations. Chavigny (Strasbourg) (p. 473) writes on mistakes made by reputable witnesses with regard to the chronological sequence of events. Gylden (p. 481) describes the method used in deciphering a cryptogram which contained groups of numerals as well as letters.

Police "13-13", Chicago. The number for February, 1936, contains an account of an interesting application of science to the solution of a Chicago case, where murder was suspected. The driver of a van started out from his home one morning under normal conditions. About an hour later his dead body was found in the driver's seat, shot through the heart; a revolver was found near him with one fired case in it. His wife scouted the idea of suicide and many inquiries were set on foot. It was found that he had bought a revolver the previous day. Then his hands were examined, using the Lunge method with paraffin wax and diphenylamine solution. On the basal portions of the back of the thumb and index finger of the right hand were found a number of nitrate marks, such as would have been produced by the firing of the revolver by this hand. Hence suicide or accidental death was indicated, the latter being the verdict brought in owing to the complete absence of any known motive for suicide.

In the number for April, 1936, Glen Reilly writes about Crime and the Younger Generation, of which he draws a very black picture: "The

prospect of dying in the electric chair is not a deterrent to young criminals. Young men living by the gun expect to be 'picked off' while trading shots with the cops"; "the toys of the rising generation—a high-powered car and a double-barrelled gun"; "If no substitute is found for criminal activities, it would be a rather shrewd guess that the youths in a few years will be roaring along the road to destruction in their stolen automobiles with the throttles pushed to the footboards, uncaring and uncared for, a human sacrifice, not to Mammon as it was not long ago, but to the blindness of their elders." In the same number Edward Dieckman describes a case in which an apparently harmless old person, who appeared to have been pushed by a rowdy into the window of a jeweller's shop, breaking it, and who after protest tendered a large note in payment for the damage, was not so innocent as he looked, because the note was counterfeit and by the time this was discovered he had got away with the change. Francis J. Connor suggests an index of the nicknames of criminals. Illustrations are given of the trailer fitted up as an office with wireless, etc., used by the mobile units of the Homicide Bureau of Nassau County, New York. Harper describes a new finger-print magnifier to take the place of an epidiascope and Calvin Goddard concludes his series of articles on Fire-arms Identification.

Journal of Criminal Law and Criminology (Chicago), vol. xxvi, No. 4, November, 1935. Osborn (New York) (p. 587) gives an interesting article on Proof of Finger-prints, advocating the use of ruled squares for comparison purposes; these, however, have a disadvantage when the prints are at all distorted. Maliniak (New York) (p. 594) discusses plastic surgery in connexion with crime, showing that much can be done by the surgeon to alter the appearance of an individual, as illustrated by the case of Dillinger who had had very characteristic dimples and furrows in his face eradicated. Identification by means of the blood vessels in the eye is discussed in a note, and another note deals with the scientific evidence in the Hauptman case. Vol. xxvi, No. 5, January-February, 1936. Notes deal with further developments in identification by means of eye blood vessels and hair as an indication of age, in the latter case pointing out the unreliability of certain "experts" who claim to have discovered exact methods of determining age from hairs.

POLICE GOLD MEDAL ESSAY COMPETITION

Subject of the Essay for 1936

"What steps can be taken either by Legislation or by Police Action towards Improving the Circulation of Traffic and the Reduction of Accidents."

Essays must be submitted on or before 1st November, 1936, to:—
THE SECRETARY OF THE COUNCIL OF THE POLICE GOLD MEDAL ESSAY
COMPETITION, HOME OFFICE, WHITEHALL, LONDON, S.W. 1.

Essays must be the original work of the competitor, 7,000 to 11,000 words in length, typewritten and submitted in triplicate and anonymously. A sealed envelope bearing on outside a *nom de plume* or motto, and containing the competitor's name and address, must accompany the essay. (For full conditions see THE POLICE JOURNAL, April number, p. 256.)

THE POLICE JOURNAL

*A Quarterly Review for the Police Forces
of the Empire*

ISSUED UNDER OFFICIAL PATRONAGE



NOTICE TO CONTRIBUTORS

THE POLICE JOURNAL is published on the first day of January, April, July, and October.

The Editor will be happy to consider articles suitable for publication in THE POLICE JOURNAL. Contributions should be typewritten (double spacing) and *must* bear the name and address of the sender on the first page. Articles can be signed with a *nom de plume* if desired. All contributions should be addressed to "The Editor of THE POLICE JOURNAL, 69 Great Russell Street, London, W.C. 1." A covering letter is desirable.

Unaccepted contributions will be returned if accompanied by an addressed envelope and stamps. All reasonable care is taken of MSS. photographs and other material submitted; but the Editor cannot hold himself responsible for any loss or damage.

Publishers and Distributing Agents:

PHILIP ALLAN & CO., LTD.

69 GREAT RUSSELL STREET, LONDON, W.C. 1

Telegrams and Cables—"AQUALICOR, WESTCENT., LONDON"
Telephone—HOLBORN 3391 (2 lines)

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THE POLICE JOURNAL

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Notes on Recent Crime

TWO recent cases, with their resultant sentences, should act as a strong deterrent to the respective classes of humanity to which they apply.

The exemplary sentences passed in the "race-gang" case at the last Lewes Assizes clearly proved, if proof was needed, that the Bench will not tolerate any introduction of American gangster methods in this country. It was not the first case of its kind, but should be one of the last.

In the other case, which became known as "the girl in the car case", at Brighton, four young men suffered imprisonment for taking out a young girl for what was very definitely the reverse of a "joy-ride" for the girl.

One wonders how many other young women nowadays suffer for their audacity in venturing into the cars of strangers, and how many offenders go unpunished, through their victims failing to come forward.

A girl, however, did come forward last Session at the Old Bailey, testifying on oath how an acquaintance of hers had boasted to her in a car of his responsibility for a "smash and grab" raid after some furs at Whiteley's Stores.

Her evidence was that he showed her a copy of an evening paper for that day, in which the raid was reported. But the significant thing about her evidence was, that the girl showed an intimate knowledge of the details of the offence, which a study of the evening paper in question failed to reveal. In other words, as there was no suggestion of complicity against the girl herself, she knew things, the

knowledge of which could only have been gained from the man charged.

The jury accepted her evidence, the man was convicted, and the girl afforded police protection thereafter.

The credulity of human nature has been alluded to in these columns on a previous occasion. Once more, in the West Country, has it been imposed upon.

Two respectable and aged maiden ladies, living in Devonshire, in 1927 became acquainted with a man, who by 1936 had misappropriated all their moneys. Once worth several thousand pounds apiece, they were left living upon the charity of their friends.

The extraordinary feature of the case was, that with only a very slight "return" for their money, from time to time, to keep them quiet, the old dears continued regularly to part with vast sums to the man whom they had first encountered over the sale of an 'Electrolux'. As in the case of Major Impey, referred to in a previous number, the victims believed in their swindler right up to the moment of his conviction.

At Winchester Assizes last July the always interesting question of the admission of evidence of past similar acts was raised. Two women, one of whom was acquitted, were charged with the manslaughter by abortion of another woman at a hotel in Southampton.

Evidence was given of the previous visits of other women to the hotel, for the performance of similar acts upon them at the hands of the same woman, who was later convicted. Any evidence relevant to the issue is admissible, and there was a clear issue here for the jury to determine, namely 'why did the deceased woman ever visit the hotel?'

It is often thought that such evidence can only be allowed under two famous cases upon the point, for the purpose of negating the raised defence of 'innocent purpose or mistake'.

But it must not be overlooked that in an old case of abortion by a catheter, where the defence raised was not that the same had been used for an innocent purpose, *e.g.* the opening of an abscess, but was the complete denial of any visit to the house at all, evidence of previous visits was then admitted.

When for two years no arrest had been made in connection with the theft of a large sum of money from a safe in the City, it seemed that the perfect crime had at last occurred. But it then became another crime of the "almost perfect" category, like the Highgate arson some years ago.

There were no signs of forcible entry, and the police found an employee in possession of sums of money far in excess of his known salary and means or possible savings. This money, although two years had elapsed, he was unable to account for, and later, at the trial, he admitted his share in the proceeds of the theft.

Recent Judicial Decisions

IRREGULAR METHOD OF TAKING DEPOSITIONS

R. v. Gee, Bibby and Dunscombe
(Reported on page 198 of 25 Criminal Appeal Reports)

THE appellants in this case were convicted at Quarter Sessions of shopbreaking. According to a practice which had prevailed for some time at the local Police Court, the Chief Constable examined the witnesses from prepared typed statements. A copy of each statement was handed to the Magistrates and their clerk. Nothing was taken down by the Magistrates or their clerk in writing but each statement was checked by the clerk and ultimately signed by the witness. When committed to Quarter Sessions objection was raised on behalf of the prisoners to the manner in which the depositions had been taken at the local Police Court, but the Recorder held that he was bound to try the indictment.

The judgment of the Court of Criminal Appeal delivered by Goddard J., is interesting. He said :—

“The serious ground of appeal is that the appellants were never lawfully before the Court of Quarter Sessions, because there had been no committal for trial within the meaning of Section 2 (2) of the Administration of Justice (Miscellaneous Provisions) Act, 1933, and, therefore, there was no indictment before the Court. That question depends on whether the magistrates lawfully committed the appellants for trial. The facts relating to the hearing before the magistrates are the important matter in the case, and they are, in substance, beyond dispute. It appears that for many years a practice has prevailed at this Police Court under which, when an indictable offence is being investigated, the Chief Constable first interviews the witnesses, as he is

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entitled to do, and takes statements from them. Those statements are then typed out in narrative form, and when the prisoner is brought before the magistrates the typed statements are handed to the magistrates. It is not clear exactly what kind of examination takes place in the presence of the prisoner, but it is clear that the provisions of Section 17 of the Indictable Offences Act, 1848, were not complied with. That Act was passed, among other reasons, to introduce uniformity into the practice of magistrates dealing with indictable offences preliminary to committal for trial. Before 1848 the practice of different magistrates varied and no uniform principles were applied to the taking of depositions, and it was not possible for a prisoner to obtain a copy of the depositions before trial. One of the objects of the Act of 1848 was to standardize the procedure, and it is of the utmost importance that magistrates should understand that there should be strict compliance with the provisions of the Act.”

Section 17 of the Indictable Offences Act, 1848, requires “Magistrates, when any person shall appear before them charged with an indictable offence, to take the statements of witnesses on oath or affirmation and to ‘put the same into writing, and such depositions shall be read over to and signed respectively by the witnesses who shall have been so examined, and shall be signed also by the justice or justices taking the same . . .’”

The Judge continued :—

“It is common ground that the proceedings before the magistrates in the present case were not in accordance with the above Act. What is the effect of this ?”

(Section 2 of the Administration of Justice (Miscellaneous Provisions) Act, 1933, s. 2 (2) reads :—‘No bill of indictment charging any person with an indictable offence shall be preferred unless either (a) the person charged has been committed for trial for the offence ; or (b) the bill is preferred by the direction or with the consent of a judge of the High Court or pursuant to an order made under Section 9 of the Perjury Act, 1911.’)

His Lordship said :—

“The question here is whether the persons charged have been legally committed for trial. ‘Committed for trial’ is defined in Section 27 of the Interpretation Act, 1889. ‘The expression “committed for trial” used in relation to any person shall, unless the contrary intention appears, mean . . . committed to prison with the view of being tried before a judge and jury . . . and shall include a person who is admitted to bail upon a recognizance to appear and take his trial before a judge and jury.’ The magistrates purported to commit the appellants for trial by remanding them in custody until trial. It appears to the Court that these proceedings were so defective that there was no lawful committal for trial, and consequently the provisions of Section 2 (2) of the Act of 1933 were not complied with and no bill of indictment could be preferred against the appellants. The document purporting to be an indictment which was produced before the Recorder was not an indictment and the appellants could not be tried on it.

“The point was taken before the Recorder on 7th January, and he expressed some doubt whether he was not bound to try the indictment placed before him, but he remanded the appellants on bail and gave them the opportunity of moving by certiorari to quash the indictment. They did not take that course, and at the next sessions the same objection was taken before the Recorder. He thought that he could not give effect to it and that he was bound to try the indictment. In the opinion of the Court that was wrong. Though the appellants might have moved by certiorari to quash the indictment, the fact that they did not do so did not make a bad indictment a good one. The Court is of opinion that the objection taken on behalf of the appellants was valid.

“The result is that there has been what is sometimes called a mis-trial, though it would be more accurate to say that there had been no trial at all. Under the decision in *Crane v. Director of Public Prosecutions* (15 Cr. App. R. 183

(1921) 2 A.C. 299) this Court has power to order that a proper trial should take place, and in that case the proceedings would recommence from the point where they broke down. This Court also has power in such circumstances, and has acted on it on several occasions in cases where it was held that the interests of justice so required, to quash the conviction and allow an appellant to be discharged. In all the circumstances of the present case the Court is of opinion that that is the proper order to make. The appellants have been in custody for about three months before trial; they were then held to bail for three months, and have been nearly two months more in custody since conviction. If the Court were to order that the proceedings should begin *de novo*, the appellants would have to go back before the magistrates, and be committed again to quarter sessions, which may not be held for some time, and that would be, in the circumstances, oppressive.

“For the above reasons the Court has come to the conclusion that the proper order to be made is that the convictions should be quashed and the appellants discharged.

“The Court expresses the hope that magistrates in this and any other Court where a similar practice may have prevailed will in future comply strictly with the provisions of the Indictable Offences Act, 1848. Considering that since 1933 a committal by magistrates is substituted for a presentment by a grand jury, it is of the greatest importance that there should be no deviation from the requirements of the statute.

“Convictions quashed.”

The decision in this case does away with a practice which must have been a great boon to many Magistrates and their clerks and it is very difficult to see what real objection there can be to the use of typed depositions, provided that they are amended as necessary when being read over to the witness and signed by the witness as correct after they have been so amended, and it is rather pathetic to think that had the Clerk to the Justices in these cases copied

down the original type-written statements in his own hand, read them over to the witnesses and had them signed as correct, no objection could apparently have been taken. It seems a pity that the adoption of this course of procedure as distinguished from the amendment of the original type-written document should mean the difference between a proper trial and a nullity.

UNDESIRABILITY OF UNDUE CROSS-EXAMINATION BY A JUDGE

R. v. Cain

(Reported on page 204, 25 Criminal Appeal Reports)

The appellant was sentenced to 18 months imprisonment at the Central Criminal Court for conspiracy to defraud by obtaining property by false pretences. He appealed upon the ground that the trial was conducted in an irregular manner, and whilst the Court of Criminal Appeal refused the application for leave to appeal, Mr. Justice du Parcq, in delivering their judgment, made it clear that in English Courts it is important 'not only that justice should be done but that justice should appear to be done'. In the course of his judgment he said:—"When Chatt was in the witness-box giving evidence-in-chief he was subjected to what Mr. Kelly has called severe cross-examination. The Judge began by doing something of which no one could complain. It was a long case, and he had taken a careful note, and it was quite right, so long as counsel for the defence had no objection, that the Judge should put to the defendant when giving evidence the various allegations of the witnesses for the prosecution, in order that he might deal with them. So long as they were put colourlessly, no one could object. Indeed counsel for the defence might have thought it assisted him in his task. There is no reason why the Judge should not from time to time interpose such questions as seem to him fair and proper.

It was, however, undesirable in this case that, beginning in the way which I have described, the Judge should proceed, without giving much opportunity to counsel for the defence to interpose, and long before the time had arrived for cross-examination, to cross-examine Chatt with some severity. The Court agrees with the contention that that was an unfortunate method of conducting the case. It is undesirable that during an examination-in-chief the Judge should appear to be not so much assisting the defence as throwing his weight on the side of the prosecution by cross-examining a prisoner. It is obviously undesirable that the examination by his counsel of a witness who is himself accused should be constantly interrupted by cross-examination from the Bench. Cross-examination in cases of this kind is usually quite efficiently conducted by counsel for the Crown. At the same time, although it is quite right that this criticism should have been made in this case, we cannot find the slightest reason for thinking that the result would have been otherwise if this course had not been taken by the Common Serjeant."

AUTREFOIS CONVICT

*R. v. Sheridan*¹

(Reported in the Times Law Reports, Vol. 52, No. 32 on page 626)

This case was heard in the Court of Criminal Appeal on 29th June, 1936. The decision is of the greatest possible importance and has already been commented upon by several Magistrates.

It shows how vitally important it is at Courts of First Instance to avoid allowing a prisoner to 'plead' to a charge before the Court has decided whether to deal with the case summarily or not. The reserved judgment of the Court which was delivered by Mr. Justice Humphreys is reproduced in full. He said:—

"The objection raised to the conviction on the second

¹ We deal further with this case on p. 399.

count was of a different character. At the trial Mr. Gunning, for the appellant, raised a plea of autrefois convict which was overruled by the Recorder.

The appellant was originally charged at the petty sessional Court at Southend with one offence only—namely, that of obtaining credit from Mrs. Patten contrary to Section 13 of the Debtors Act, 1869. That offence being one of those specified in the Second Schedule to the Criminal Justice Act, 1925, the appellant was addressed by the Court in terms of Section 24 (2) of that Act, and thereupon consented to be dealt with summarily.

“He pleaded not guilty. Evidence was called for the police, who were the prosecutors, and the appellant gave evidence on his own behalf. At the close of the case the justices conferred and then announced that they found the appellant guilty. To assist the Court on the question of sentence, the only matter remaining to be dealt with, a police officer then proved certain previous convictions against the appellant, whereupon the magistrates announced that they would not deal with the case but would commit the appellant for trial at quarter sessions and remanded him for a week. On the remand the charge of obtaining goods by false pretences from Mrs. Tredgett was added, and the appellant was committed for trial on both charges.

“On those facts it would seem to be a plain case of autrefois convict.

“The appellant was convicted at Southend Petty Sessions by a Court of competent jurisdiction of precisely the same offence and on precisely the same facts as were relied on in support of the second count of the indictment.

“Mr. Fulton had argued that there could be no conviction such as would support a plea of autrefois convict unless there was also a sentence. In the judgment of the Court that was not the law. In *Reg. v. Blaby* (10 *The Times L.R.* 431; (1894) 2 Q.B. 170) the question to be decided was the meaning to be given to the word ‘conviction’ in a statute which provided that certain consequences should ensue

on a conviction for a misdemeanour following on a previous conviction for a similar offence. It appeared from a certificate produced in that case that the prisoner had been convicted on a previous occasion but that no judgment had been pronounced. It was argued for the prisoner that conviction must include judgment or sentence, but a very strong Court for Crown Cases Reserved held that the word ‘conviction’ in such a connexion merely referred to a plea of guilty by the accused or the finding of a verdict of guilty by a jury, and Mr. Justice Hawkins, in delivering the judgment of the Court (observed, (1894) 2 Q.B. at p. 172) that ‘the intention of the Legislature in this section was that the finding of the jury that the accused was guilty should be treated as a conviction; “convicted” meant “found guilty”, and the sentence was to follow on the conviction’. That decision, in the judgment of the Court, was in point in the present case, as were the judgments to the same effect in *Reg. v. Miles* (6 *The Times L.R.* 186; 24 Q.B.D. 423), and in particular the judgment of Mr. Justice Charles. Their attention had also been directed to *Rex v. Hertfordshire Justices* (27 *The Times L.R.* 156; (1911) 1 K.B. 612). In that case a defendant charged with an indictable offence having consented to the charge being dealt with summarily, it appeared to the justices at the close of the evidence that the case had assumed such a serious aspect by reason of a conflict of evidence as to an alibi that it would not be right for them to deal with it, and they accordingly committed the defendant for trial. It was held, *inter alia*, by a Divisional Court that the justices, by embarking upon a summary trial of the charge, were not thereby deprived of their right to commit the defendant for trial. The present Court entertained no doubt at all that the case was rightly decided, but it was to be observed that there was in that case no adjudication on the charge by the justices, and in the course of his judgment Mr. Justice Pickford put the present case when he observed as follows ((1911) 1 K.B. at p. 622): ‘Undoubtedly if the justices had proceeded to adjudicate on the case either by convicting or by acquitting

the defendant, that would have afforded ground for a good plea to the indictment.'

"In the opinion of the Court the present was a case where the justices had proceeded to adjudicate by convicting the defendant and accordingly the plea of *autrefois* convict was established.

"Some comment was made in the course of the argument on the dicta of Mr. Justice Avory in the Hertfordshire Justices' case ((1911) 1 K.B. at p. 624) as to the right of justices to inquire into the character and antecedents of a person charged before deciding to convict. The language of Section 12 of the Summary Jurisdiction Act, 1879, the statute then in force, was somewhat different from that used in Section 24 of the Criminal Justice Act, 1925. A consideration of subsection (1) of the latter section made it plain, in the view of the Court, that justices were now required as a preliminary to dealing summarily with indictable offences to hear and to take into consideration certain matters specified in the section, one of them being the character and antecedents of the accused, to enable them to decide whether they ought to deal with the case summarily. Such a course did not appear to involve any unfairness to the accused. Presumably, if the character of the accused as stated to them appeared to be bad, the justices would refuse to deal with the case summarily, would proceed to take depositions and, if a *prima facie* case was proved, to commit the accused for trial. On the other hand, if the character given to the accused was a good one, no harm would be done by the justices having heard that fact stated early in the proceedings."

Court of Criminal Appeal

INCORRIGIBLE ROGUES

THERE have been recent instances of the difficulties met with in connexion with the conviction, at Petty Sessions, of a person as an incorrigible rogue and the sentencing of him at Quarter Sessions, and, as mistakes not infrequently arise, it may be well to indicate the attitude of the Court of Criminal Appeal in the matter as illustrated by cases in which it has given judgment.

First, it must be borne in mind that no appeal lies to the Court of Criminal Appeal against a conviction as an incorrigible rogue. That appeal lies to Quarter Sessions. But the Criminal Appeal Act contains a provision that the Act is to apply in cases where a person is dealt with by a Court of Quarter Sessions as an incorrigible rogue under the Vagrancy Act, 1924, as it applies in the case of convictions on indictment. And the Court has interpreted this provision in such a way that though, strictly speaking, there is no appeal to it against the conviction, yet it can examine into all the circumstances of the particular cases coming before it, just as it is the statutory duty of Quarter Sessions so to do; and, if it finds that, in fact, there has not been a conviction in law by Petty Sessions, or the proceedings at Quarter Sessions have been faulty or irregular in a material matter, it can and will quash the sentence without passing any other, though it cannot quash the conviction.

The court from time to time has acted in this way when it came to the conclusion that the action of the police in making use of the Vagrancy Act was unjustifiable, in that they had resorted to its provisions where the proper charge was an indictable offence which would have given the accused the

right of trial with a jury. A case occurred quite recently where the evidence disclosed an attempt to steal from unattended motor-cars. The Court has set its face against any attempt on the part of those responsible for prosecutions to make use of the provisions of the Vagrancy Act in cases where the evidence available points to an indictable offence merely because it may be easier to secure a conviction under the provisions of that Act.

Another cause of the quashing of several sentences passed on incorrigible rogues has been the failure on the part of the Chairman or Recorder at Quarter Sessions to carry out properly his statutory duty of examining into the circumstances of the case in order to ascertain what is the proper punishment to be inflicted. As a rule the fault in these cases does not rest with the police but with the court; nevertheless, it is very important that it should be known that there must be evidence as to the conviction at Petty Sessions as an incorrigible rogue, as to the identity of the person in the dock with the person so convicted, and as to the circumstances and acts of the accused which led to his conviction. And, though the prisoner cannot question the correctness of the conviction, the court must give him the opportunity of dealing with those circumstances if he so desires, so far as they affect the question of the quantum of sentence to be passed. The failure to comply with these requirements happens not infrequently and has happened quite recently with the result that the sentence passed was quashed.

‘OTHER OFFENCES’

Attention has been called lately to the absolute necessity of those responsible for prosecutions making up their minds at once whether they intend to take steps to prosecute a person charged with one offence for other offences alleged to have been committed by him, so as not to leave a prisoner sentenced for one offence to serve his term and after his release commence proceedings against him for an offence committed before the term began. Happily, occasions where

this has been done are very rare now, though attention was called to one in a recent case. Such a practice cannot be too strongly condemned.

Another case afforded an example of the difficulty police witnesses are often in when giving evidence for the prosecution where the accused is indicted for one offence and is alleged to have committed other offences not included in the indictment. It not infrequently happens that, either by the unskilfulness of counsel in framing questions or the lack of discrimination by the police witness, statements as to the other offences slip out and the mischief of letting the jury know something they ought not to know is done. This, if serious, may lead to the quashing of a conviction, but even if that is not the result the need for the exercise of great care in such cases cannot be over-emphasized. A recent case illustrates this.

POLICE EVIDENCE

Very much is expected of police witnesses and, to one familiar with many trials, it is comforting to know that, as a rule, the expectation is lived up to. But occasionally (and again there has been a recent instance) the witness through lack of care and thought gives his evidence so confusedly, even though he has a good note in his book, as to call for criticism on the part of the judge.

The habit of police witnesses in giving evidence after conviction relating to the prisoner to begin when he first went to school and to include matters not very relevant or helpful to the presiding judge as to the proper punishment to be inflicted sometimes calls forth criticism, and there is room for revision and curtailment of this practice. The comparatively recent matters are the only relevant or helpful ones as a rule.

AUTREFOIS CONVICT

It is not often that the Court of Criminal Appeal has to do with cases involving pleas of *autrefois convict* or *autrefois acquit*. Indeed, cases of trials of these pleas, with

all their attendant formalities, are very rare. But, oddly enough, within a month of each other, two cases, strangely similar but having distinctive features, have come before the court with the results that the convictions were quashed in both cases.

In the first case the Appellant was convicted at the Southend Borough Sessions on two counts of an indictment, the first of which charged him with obtaining goods by false pretences and the second with obtaining credit, from a different person, under false pretences or by means of other fraud. With regard to this count counsel appearing for him at the trial raised the plea of *autrefois convict*, but the plea was overruled. On appeal the Court of Criminal Appeal came to the conclusions that, as to the first count, there had been misdirection in law and, as to the second, the plea of *autrefois convict* was well-founded. The circumstances with regard to this second count are well worthy of consideration.

The accused had been charged at the Petty Sessional Court at Southend with one offence only—*viz.* that embodied afterwards in the second count of the indictment. It was within his power to consent to be dealt with summarily on being addressed by the court in the terms of S. 24 (2) of the Criminal Justice Act, 1925. He was so addressed and he so chose. He then pleaded not guilty, evidence was called for the prosecution and the accused gave evidence himself. The justices conferred and announced that they found the accused guilty. The only remaining matter was the question of sentence. A police officer was called and gave evidence of several previous convictions. Thereupon the magistrates decided that they would not deal with the case themselves and committed the accused for trial. The charge of obtaining goods by false pretences was added and the accused committed for trial on that also.

A simple reading of these facts seems to point quite clearly to the soundness of a plea of *autrefois convict* as to the second count. On appeal it was contended by counsel for the Crown that in order to establish a plea of *autrefois convict* the conviction must have been followed by sentence. In

other words "*convict*" in the plea implies not only a finding of guilt but punishment also. The Court held that this was not sound and that though, of course, it was open to Justices at Petty Sessions to commit an accused person for trial after they had embarked upon a summary trial, yet once they had adjudicated on the case, either by convicting or acquitting, there would be ground for a good plea of *autrefois convict* or *acquit*, if, subsequently, proceedings were taken with regard to the same offence.

The second case had two remarkable features differing from the first. The Appellant was charged at a London Police Court with larceny, an offence, of course, *prima facie* indictable, but capable of being dealt with summarily. The magistrate complied with the requirements in the statute, the accused elected to be dealt with summarily and pleaded guilty. The magistrate then remanded him for sentence with a view to certain inquiries being made. Later, possibly as the result of these inquiries or for other reasons, the magistrate changed his mind and sent the accused for trial at the London County Sessions.

At the trial the accused was not represented by counsel and took no active part in the trial, asking no questions of the witnesses for the prosecution and, when called upon to give evidence, contenting himself by saying he had not had a fair trial because the magistrate had told him he would give him six months hard labour, then later had changed his mind and committed him for trial. This certainly did not comply with the formalities essential to a plea of *autrefois convict* and the presiding judge took no more notice of it than to say to the jury that the accused seemed to have some grievance but that had nothing to do with them, though in fact the magistrate had written to the court informing it what had happened before him.

The accused was found guilty by the jury and sentenced to twenty-one months hard labour. He was, doubtless, wrong in his contention that the police magistrate had said he would give him six months, but having had other experiences of the

criminal courts he well knew he could get a much heavier sentence if he were sent to Quarter Sessions.

On applying for leave to appeal to the Court of Criminal Appeal the Appellant complained of the sentence only, but the papers before the court disclosing what had happened at Petty Sessions and Quarter Sessions the Court gave leave to appeal against conviction and granted counsel. At the hearing of the appeal it was admitted by counsel for the Crown that a plea of guilty amounted to a "conviction" and that the case could not really be distinguished from the one decided by the court recently. In the result the conviction was quashed, the court holding that the judge at Quarter Sessions ought either to have taken notice of what the accused was trying to raise and there and then discharged the jury, directing the Clerk of the Peace to see that a proper plea of *autrefois convict* was filed to be subsequently tried with a jury, or, without insisting on the filing of a proper plea, inquired into the matter there and then and properly directed the jury as to that issue.

A strange case, but a striking illustration of the care of the Court of Criminal Appeal!

Scientific Aids in Criminal Investigation

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PART IV

DUST

AMONG the 'traces' which may yield useful evidence when found at the scene of a crime or on the garments or footwear of a suspect, dust occupies a prominent place. The present article is intended to give a survey of the different types of dust which may occur, and the information which examination of them may yield.

It is the state of fine division and of dryness which constitute 'dust'; but if this dry material is mixed with water we have a product which is reconverted into dust when the water is removed; this mixture of dust and water is, of course, what we normally speak of as 'mud'. A special term—'gome'—has been coined to indicate the greasy, oily mixture which is made when dust is contaminated with oil or grease. 'Grime' may be regarded as dust mixed with perspiration. Just as mud is converted back into dust when the water is removed by drying, so if we extract the oil or grease from gome by means of a solvent such as benzene or chloroform we are left with a residue of dust. By analogous methods dried perspiration may be removed from grime, again giving a residue which is dust. We see, therefore, that dust investigation arises in the case of substances other than what we generally term 'dust.'

It is impossible to catalogue the constituents which may be found in a dust. Any material whatsoever, when reduced to a fine state of subdivision, may be present in dust. In a generalized treatment it is convenient to divide the possible

constituents of dust into two classes. Firstly there are 'structural constituents' which consist principally of the remains and debris of animal and vegetable matter. Secondly, we recognize 'non-structural constituents' which include broken-down, powdered, mineral matter. This distinction is useful because the identification of the structural constituents is essentially a matter of microscopic examination; it calls most often for the services of a botanist when vegetable matter or wood-dust is concerned, or for those of a zoologist when such constituents as insect-debris are being examined. The identification of the non-structural constituents is generally obtained through chemical analysis, although in this work microscopic examination frequently helps.

PRINCIPAL TYPES OF DUST

1. *Road Dust and Soils.*—When the rocks composing the earth's surface or the materials used in road-surfacing gradually break down, the final products are dust. In the case of rocks the softer constituents are worn away under the action of the weather, and the more soluble portions are washed away by rain and rivers; in consequence the more resistant constituents such as sand, mica, and limestone are left, often reduced to a state of fine division. The fine particles carried away in suspension by rivers are deposited when the rate of flow of the river slows down, and form alluvial soils. A similar process of breakdown takes place on a smaller scale in consequence of the wear of road surfaces; here again the soluble constituents may be washed away, leaving a dust of the harder and less soluble components. A certain amount of chemical action takes place during these processes, but the products are essentially the individual constituents which existed in the original rock. Thus, for example, the mineral granite which consists essentially of a mixture of felspar, mica, and quartz (sand), on breakdown yields a dust containing its three products; although quartz is made up chemically of silicon and oxygen, breakdown does not occur in these two elements. In the same way, once the mica has been set

free from the granite no further decomposition occurs. The nature of mica, quartz, and felspar can be determined by chemical analysis, and the finding together in a dust of these three constituents would immediately suggest that the dust originated from granite.

Soils, in addition to containing the residues from rock erosion, contain varying quantities of vegetable or organic matter which are collectively termed 'humus'. The composition of soils varies according to their geological origin, and to a less extent according to their agricultural treatment; thus, although the presence of phosphates in a soil is essential for vegetable growth, the soil of a field which has recently been fertilized by a 'super-phosphate' manure is richer in phosphates than a soil which has been exhausted by cropping. Chemical analysis would differentiate between these two soils in terms of phosphate content.

Although in many places the change in the nature of the soil is gradual, it sometimes happens that abrupt differences in soil-nature may occur within a limited area. Knowledge of these changes may be useful when it is applied to the examination, for example, of soil found on a suspect's shoes. Cases are on record in which the track of a prisoner has been accurately deduced by an examination of the successive layers of soil found in the mud on his shoes. In a number of countries surveys of soil variations from district to district and parish to parish have been made, thus building up an accumulation of data which may form a valuable reference store in such investigations.

It is clearly in rural districts that the importance of soil-nature is greatest. The suggestion may therefore be made that country officers might well take the opportunity in the course of their duties of familiarizing themselves with any notable and obvious changes from place to place in the soil of their district; small samples of different soils may be taken and filed for reference, so that they are available for examination should it seem likely that a knowledge of their differences would be of assistance in any particular investigation.

The composition of road dusts is determined partly by the surroundings and partly by the nature of the road material. With the widespread use of tar macadam and of bitumen-treated roads the prevalence of road dust has been greatly reduced, and such dust as is found at the sides of arterial roads tends to approximate more and more to the composition of the surrounding soils. Such dust is frequently contaminated by gome formed partly from the escape of oil from motor traffic, and partly from the oily matter which exudes from a tar-spread surface. In addition to the normal dust of the road traces of rubber are to be recognized in this gome.

Road dust and soils are encountered in vehicles of all sorts, imbedded in tyres, on footwear, and on the clothes of every one of us. With the exception of soils found on footwear, these dusts are important only when they contain uncommon material, or are foreign to the district in which they are found.

2. *Dust Deposited from the Air.*—Very fine dust is always present in the air even in country districts remote from industrial centres. This dust is made evident every time a beam of bright light passes through a room and we see the 'mote in the sunbeam'. This dust gradually settles and is deposited on every surface. It is extremely finely divided and contains such things as salt, which is blown very long distances inland from sea spray, fluff of all sorts, pollen grains and many other tiny specks of animal or vegetable origin.

This dust is not of great significance in police work except in so far as it (a) receives imprints, and (b) denotes by its thickness lapses of time. Imprints in this fine dust include finger-prints, palm-prints, foot-prints, prints made by the surface of clothing, and impressions left by articles put down on dusty surfaces. Finger-prints and foot-prints are rather difficult to deal with when they occur in very fine layers of light dust, and frequently are almost impossible to photograph. It has recently been found that useful information can be obtained from such faint impressions if they are

sprayed with a 4 per cent solution of cellulose acetate in acetone. If an ordinary horticultural spray is used this solution dries as fast as it falls on the surface, giving a fine, almost transparent film which can readily be removed; this film carries with it the dust layer, and reproduces therefore any pattern which has been imprinted in the dust. The film should immediately be used as a photographic negative in order to obtain a positive bromide print from the impression. Experience has shown that not only records of finger-prints, but also those of ridge impressions of cloth surfaces may adequately be obtained by this method.

In certain cases the examination of dust films on surfaces may yield information as to the time of committal of an offence. This may happen, for example, when premises which have been shut up for some time have been entered and some articles moved or stolen. At the time of the offence the places underneath such articles may be taken as being free from dust. If some time elapses between the offence and its discovery a fresh layer of dust will have formed on these clear spots, whilst the dust layer on undisturbed places will have thickened somewhat. A comparison of the thickness of the dust in two such places may help to indicate roughly the time lapse between the committal of the offence and its discovery.

3. *Dusts arising from Industries.*—Many industries involve processes of grinding or pulverization and so give rise to material in a state of fine division. There is usually some escape of these materials either through carelessness or through the action of wind. These dusts therefore are spread fairly widely round the centres of the industry, and so may characterize a district. For example, the seed-crushing industry gives rise to particles of seed husks; the cement industry to a fine white dust containing much cement; the spice-grinding industry to particles of bark, roots, and leaves, and an industry such as the manufacture of washing blue may give a characteristic blue tint to the dust for some distance round the works. Such dusts will be present superimposed on the basic road and soil dusts of the areas in which these industries occur.

The principal value of such contamination lies in the tracing of suspects and in the checking of alibis. A road dust 'ear-marked' by the inclusion of a specific 'industrial' dust becomes of much greater importance than a normal soil or road dust.

4. *Professional Dusts.*—Professional dusts may be defined as those arising from different occupations and occurring in the clothes, ears, finger-nails, and footwear of the workers. They have been investigated mainly by Locard, of the Police Laboratory at Lyons. From analyses of the clothes of a number of workers in a particular industry he has been able to strike an average and to say that such and such materials may be expected to occur in the clothes of a worker of that particular industry. Thus the clothes of a sweep will contain soot, coal, brick dust, and so on; the clothes of a librarian may be expected to contain fibres of many sorts of paper and particles of leather dust; in a baker's clothes we should expect to find particles of flour containing starches of many varieties, dried paste, sugar, and fragments from the skin of various dried fruits; and in a hairdresser's clothes tiny particles of human hair of many varieties, talcum powder and soap dust might normally be expected. The most likely application of knowledge of this type is in problems of identification. The accumulation of such data is extremely useful and, on the whole, may be transferred from one country to another without the prospect of serious error. It is fortunate that there is available this large mass of data which has been obtained by Locard and which may prove useful in problems of the type mentioned.

5. *Dusts or Debris characterizing Localities.*—The growth of rare plants or the occurrence of uncommon forms of animal life in a locality may result in the dust of that place containing uncommon material that can be recognized by a botanist or a zoologist as having come from the rare plants or animals concerned. Work of this type presupposes a detailed knowledge of the distribution of the species concerned and is of value only in so far as this knowledge is available.

When a leaf or flower dies and decays the softer portions are rapidly decomposed by bacterial action and chemical decay, leaving the harder and more resistant portions less altered; similarly when an insect dies the softer portions, such as the brain and intestines, quickly decay, leaving as a hollow shell the chitinous portions of the insect structure. In both cases even slight pressure may reduce the residue to a state of fine division. But although the fragments may be small it may happen that, from some peculiarity of their structure, a biologist may be able to assign them to their origin in a particular plant or insect. Cases are on record in which a fortunate discovery of a rare species of plant or insect in the clothes of a suspect, and the still more fortunate availability of expert knowledge of the distribution of the species, have combined to link up a suspect with a particular restricted locality. It must be emphasized, however, that before such cases become at all frequent a vast amount of data must be accumulated of which much must lie dormant and may appear to be of little value for long periods.

APPLICATION OF DUST EXAMINATION IN POLICE WORK

From a theoretical standpoint the examination of the dust found on a suspect's clothes may help to trace his movements, provided a detailed knowledge of the regions of occurrence of the components of that dust is available; in addition such an examination may be used to check a prisoner's statement as to his own movements. The latter application is sometimes possible, but the former, in this country at any rate, is seldom likely to be helpful. It will be realized that a great amount of data must be available before any inferences can be drawn from the complex constituents of such a dust. In countries where the onus is on the prisoner of proving his innocence it may be possible to build up a hypothetical case from the analysis of such a dust and to invite the prisoner to refute it; such methods, of course, are not possible or desirable in this country. Where a prisoner has made a statement as to his movements it is sometimes possible to confirm

or refute this statement by the presence or absence of particular constituents in the dust of his clothes.

From the practical standpoint the use of dust investigations is largely limited to the confirming of suspicions based on independent police evidence of the normal type. Uncommon materials found in dusts figure chiefly in this connexion. The general procedure is to consider, on the basis of the 'exchange principle', what is likely to be present in the dust of a suspect's clothes or in the mud on his footwear on the basis of the reconstruction of his action at the scene of the crime. Careful search is then made for this material. An examination of this type usually involves 'comparison' rather than independent identification of material.

Procedure in Examination of Dusts.—Where a considerable quantity of dust is available a rough separation of the constituents of different sizes may be obtained by sieving through a series of sieves of different sized meshes. In certain cases useful information of a quantitative nature can be obtained by this process. In such cases a known weight of the material is sieved and the various quantities retained by sieves of different mesh are carefully weighed and expressed as a percentage of the total weight. By plotting on a graph these percentages against the mesh-size of the sieves a curve of distribution of particle-size is obtained. If two samples of dust so treated give exactly the same distribution curve and it is shown also that their constituents are identical, an additional argument is obtained in favour of the identity of origin of the samples.

A case in which this procedure was of value concerned the larceny of pig-meal. Three samples of pig-meal were examined of which two were suspected of having a common origin. All three samples consisted of crushed wheat and no distinctions among them were found either by microscopic examination or by chemical analysis of their ashes; but when the distribution curves of particle-size were determined for the three samples it was found that those of two samples coincided and were quite distinct from that of the third.

Another case was in the examination of a safe ballast which consisted of the two very common constituents, sand and pine sawdust. Here again the comparison of a sample from the safe with one found on the premises of the suspect showed that the curves of distribution of particle-size were identical.

Where small amounts only of the dust specimen are available this sorting out of particles of different size must be done under a hand lens or low-powered microscope, the individual particles being removed to a microscope slide by means of a fine needle which has been very lightly moistened with glycerine.

After a preliminary sorting of this type structural particles are identified by microscopic examination and non-structural ones by chemical analysis; since the amounts available are generally very small the analysis has to be made either by micro-chemical methods or by spectroscopic analysis.

ANALYSIS OF SMALL AMOUNTS OF MATERIAL

1. *By Micro-Chemical Methods.*—In recent years the amounts of material necessary for chemical analysis have been very greatly reduced. This reduction has been brought about on the one hand by the introduction of new techniques employing small-scale apparatus, and on the other by the introduction of very sensitive and much more specific reagents. A chemical reagent becomes specific when it can be used to identify a given element in admixture with foreign elements. The older types of test employed necessitated a complete separation of the components of a mixture before they could be applied; it was in this separation that both the time and skill of an analysis lay. By the use of the modern reagents the tedium of preliminary separations is very greatly reduced. At the same time the amounts of an element which must be present in order to be identified have been vastly reduced by the enhanced sensitivity of the modern reagents.

2. *By Spectroscopic Analysis.*—When substances are heated to the very high temperature of the electric arc or

spark they give out light which is characteristic of the elements present; this light consists of a number of individual lines in different parts of the spectrum, and can be analysed by means of a spectrograph and the results recorded photographically. A preparation known as R.U. Powder contains 54 elements in quantities such that each element gives rise to its seven or eight most prominent spectral lines alone when a tiny amount of the powder is placed in an electric arc. Thus the significance of each line in the complex spectrum of this powder is known. By taking a spectrograph of a tiny particle of paint or metal and comparing the lines in this spectrum with the lines in the spectrum of R.U. Powder the elements present in the exhibit may be quickly determined. A comparison of material less than a pin's head in size suffices for this determination, and this method thus represents a great saving in both material and time. It may therefore again be emphasized that no material should be considered as too small or insufficient for examination when it is found at a scene of crime and there is reason to suppose that its presence may be significant.

The next article will deal with the methods of making casts and replicas of marks and impressions likely to provide useful evidence in criminal investigations.

Legal Points for Constables

By C. C. H. MORIARTY

Chief Constable of Birmingham City Police

THE Editor of THE POLICE JOURNAL has asked me to write a short article on the general points of law which a Constable ought to know. The answer to this request is contained in Stone's *Justices' Manual*, Archbalds' *Criminal Pleading, Evidence and Practice*, and a few other law books, as a policeman is expected to be fully acquainted with the law and with all the points which may arise out of the practice and interpretation of the law.

However, the request has suggested that it might be useful to mention a few of the legal points which a Constable ought to have some knowledge of lest he should be tripped up in the administration of the law.

As this note is meant to be informative and not discursive, these few points are set out very briefly as follows:—

1. A person found drunk in any highway or other public place, whether a building or not, or on any licensed premises, commits an offence (S. 12, Licensing Act, 1872), but it must be noted that the Section does not give power of arrest without warrant for this offence. If, however, such person is apparently incapable of taking care of himself he may be arrested (S. 1, Licensing Act, 1902).

2. The many nuisances mentioned in Section 28 of the Town Police Clauses Act, 1847, such as obstruction, discharging firearms, ringing door bells, putting out lamps, etc., to constitute offences under the Act, must have been committed to the obstruction, annoyance or danger of the residents or passengers.

3. If a person who has assaulted a police officer is charged with unlawful assault under Section 42 of the Offences against the Person Act, 1861, and is convicted, he is by Section 45 of the same Act released from all further or other proceedings for the same cause, and therefore no civil action for compensation for injuries given can be taken against him. This bar against further proceedings imposed by Section 45 applies only to proceedings under SS. 42, 43, and 44 of the Act.

Therefore when a police officer acting in the execution of his duty has been assaulted it is preferable to charge his assailant with assault on a Constable when in the execution of his duty, under S. 12 of the Prevention of Crimes Act, 1871.

If the Officer has sustained serious injury the assailant may be charged with assault occasioning actual bodily harm, under S. 47 of the Offences against the Person Act, 1861, as conviction under this section will not prevent future civil proceedings for compensation.

4. Section 21 of the Road Traffic Act, 1930, requires that before a person can be convicted of exceeding the speed limit or of dangerous or reckless driving, or of careless driving, he must have been warned at the time of the offence that prosecution would be considered, or the summons must have been served on him within fourteen days of the offence, or a notice of intended prosecution specifying the offence must have been served on him within fourteen days of the offence.

5. Much is heard of the *Highway Code* and it is a book of guidance for all users of the road, not for motorists alone. Disobedience of any of the directions of the Code is not an offence (unless it is an offence under some Act or Byelaw), but the fact of such disobedience may be used in any legal proceedings which may arise out of the occurrence in which any such direction was disobeyed (S. 45, Road Traffic Act, 1930).

6. Limitation of proceedings. In some offences, the time within which prosecution may be taken is limited.

There is no general limitation in the case of indictable offences, but it should be noted that a time limit is imposed by statute in some indictable offences, for example, twelve months in the case of defilement of a girl between thirteen and sixteen (Criminal Law Amendment Act, 1928), and six months in the case of the indictable offences against children and young persons given in the First Schedule to the Children and Young Persons Act, 1933.

There is a general time limit of six months in the case of summary offences; but there are exceptions to this rule, for example, the limit in the case of assault on a special constable is two months, and in the case of summary prosecution for making certain false statements (Perjury Act, 1911, SS. 3 and 4) the time limit is twelve months (Criminal Justice Act, 1925, S. 28 (3)).

7. As regards incest; no prosecution on a charge of incest should be commenced without the previous authority of the Director of Public Prosecutions or of the Attorney General (S. 6, Punishment of Incest Act, 1908).

8. Under S. 2 of the Prevention of Corruption Act, 1906, a prosecution under the Act for the offence of bribery of or attempting to bribe a police officer should not be instituted without the consent of the Attorney General or Solicitor General.

9. Under S. 7 of the Explosives Substances Act, 1883, a person under arrest for an offence against the Act may be remanded, but no further proceedings should be taken against him without the consent of the Attorney General.

10. Before a charge of sacrilege is brought, there should be evidence that a felony has been committed in the place of divine worship. The general term "sacrilege" should not be confused with sacrilege used in the legal sense.

11. In an alleged case of false pretences the essentials of the offence as required by law must be considered before a police officer charges a person with having committed this offence. For example, the pretence on which the offence depends must not be a promise to do something in the

future, as the false representation must refer to some existing fact or to some fact that has existed.

12. If a prosecution for perjury is considered it should be remembered that evidence is required that the witness knew what he said was false or did not believe it to be true and that his alleged perjured statement was material to the case. (See S. 1 of Perjury Act, 1911.)

13. As regards the powers of arrest which a police officer has, it is pointed out that in many cases where power of arrest without warrant is given by Statute there is some limitation accompanying the grant. For example, attention may be directed to the powers of arrest conferred by the Diseases of Animals Act, 1894, the Protection of Animals Act, 1911, the Firearms Act, 1920, and the Gun Licence Act, 1870.

It is unsafe therefore to assume that, when a Statute gives the power of arrest, it is a complete and unlimited power of arrest; the provisions of the section which gives the power must therefore be borne in mind.

All About Finger-prints

BY SUPT. H. BATTLE

Officer-in-Charge, Finger-print Branch and Criminal Record Office,
New Scotland Yard

IV

IN my previous articles I have referred to the Single Finger-print Collection and the Scenes of Crime Collection, and as many of you will not know what these are, I will explain the purpose each serves.

SINGLE FINGER-PRINT COLLECTION

Although spoken of in the singular, the Single Finger-print Collection at New Scotland Yard actually consists of ten separate collections numbered '1' to '10', and contains the finger impressions of persons who have been convicted of any form of "breaking and entering", or who are potential "breakers". It was commenced in 1930 and is being built up as rapidly as circumstances will permit. In time I am hoping that the finger-prints of all "breakers" will be filed therein. It should be borne in mind, however, that the finger impressions of a person may be on record in the Main Finger-print Collection, but not filed in the Single Finger-print Collection.

No. 1 Collection contains all right thumb impressions.

No. 2 Collection contains all right forefinger impressions.

No. 3 Collection contains all right middle finger impressions.

No. 4 Collection contains all right ring finger impressions.

No. 5 Collection contains all right little finger impressions.

No. 6 Collection contains all left thumb impressions.

No. 7 Collection contains all left forefinger impressions.

No. 8 Collection contains all left middle finger impressions.

No. 9 Collection contains all left ring finger impressions.

No. 10 Collection contains all left little finger impressions.

In addition, there is a card index to the whole Collection.

In each of the separate collections the single prints are mounted on cards as shown in Fig. 5. I do not propose to go into the method of classifying and filing single finger impressions as this is set out in detail in my book *Single Finger Prints*.¹

Search is made in the Single Finger-print Collection with all imprints discovered at scenes of crime. Should no identification result, copies of the marks are filed in the Scenes of Crime Collection.

SCENES OF CRIME COLLECTION

This Collection contains photographic copies of finger marks and fragments of finger marks left at scenes of crime and which have not been identified as a result of search in the Main Finger-print Collection or the Single Finger-print Collection. The marks are mounted on cards as shown in Fig. 6.

Copies of the imprints are filed in this Collection in accordance, as far as possible, with the Single Finger-print system, so as to be readily available for comparison with other finger marks found at scenes of crime or with the finger impressions of any particular persons.

Search is made in this Collection daily with the finger impressions of all persons arrested for offences similar to those to which any unidentified finger marks relate.

Copies of imprints remain filed in the Scenes of Crime Collection for a period of two years after which time, except

¹ *Single Finger Prints*, by H. Battley, published by H. M. Stationery Office, Adastral House, Kingsway, W.C. 2. Price 7s. 6d. net.

in extraordinary circumstances, should no identification result, the case is closed as far as the Finger-print Branch is concerned.

Whilst on the subject of the Scenes of Crime Collection, I would like to impress upon all that it would materially assist the work of the Finger-print Branch if, in all cases where copies of imprints are filed in this Collection, the Branch could be informed immediately of all cases in which a person responsible for the particular offence in connection with which marks are filed, is convicted for that offence, and, as a result, no further action is desired by the Force concerned in connection with the imprints filed. Many such cases have arisen where comparison has been requested with the marks and the finger-prints of a person. Comparison has been made and the marks are found to be not identical. This person has subsequently admitted or been found guilty of the offence, and so far as the Force is concerned no further action is desired in connection with the imprints filed, but no notification to that effect is sent to the Finger-print Branch, until the information is solicited by the Branch some time later. A reply is usually received that the person responsible admitted committing the offence and was sentenced for it some time ago, and as a result no further action was desired.

The result of this negligence on the part of the Force concerned is that the imprints filed have been needlessly scrutinized day after day with the finger-prints of other persons. In cases of this description it is obvious that the marks were those of some resident on the premises in question or of a Police Officer subsequently present at the scene of the crime, and were not those of the criminal.

I am sure you will appreciate the amount of time which is wasted in these cases which could profitably be utilized in other directions to the benefit of all concerned, to say nothing of the unnecessary eye strain imposed on the Officers of the Finger-print Branch.

Before describing some of the apparatus used in connection with this branch of finger-print work, I should like to explain

one point upon which some Forces are not quite clear. Many cases are encountered in which imprints left at scenes of crime disclose very few clearly defined ridge characteristic data, and insufficient for purposes of search in the Single Finger-print Collection or for *establishing identity*, but it is often possible to state with certainty that the marks are *not* those of any persons suspected in connection with the offence or of any persons who had legitimate access to the article upon which the marks were discovered. In these cases it is possible definitely to establish non-identity often on the type of pattern alone.

APPARATUS

There are two types of magnifying glasses used in the Finger-print Branch at New Scotland Yard. One is the ordinary reading glass, linen testing type (Fig. 7), and is supplied by H. H. Sharland, Optician and Scientific Instrument Manufacturer, 9-10 Thavies Inn, Holborn Circus, London, E.C. 1, at a cost of 12s. 6d.

The other type of glass is a specially designed glass for use in connection with single finger-prints (Fig. 8). This glass ('A' in the illustration) has a fixed focus and a window ('B' in the illustration) at the base. The centre of this window or lined glass is marked with a spot about which are inscribed seven concentric circles of 3 mm., 5 mm., 7 mm., 9 mm., 11 mm., 13 mm., and 15 mm., radius, respectively. The centre spot and the circles are marked very finely on the under side of the glass so that when the glass is placed on the print to be examined, the markings on the glass come directly into contact with the print.

For purposes of sub-classification, the area within the innermost circle is denoted by the letter 'A', and the areas between the successive circles by 'B', 'C', 'D', 'E', 'F', and 'G', respectively. The area outside 'G' is denoted by the letter 'H', and anything that does not come in 'A', 'B', 'C', 'D', 'E', 'F', or 'G' is regarded as falling in the area 'H'.

This lettering is shown in the illustration 'B' as a guide, but, of course, the actual glass to be used should only have the spot and circle lines without any letters marked on it.

This special glass also is supplied by H. H. Sharland referred to above. The price is £1 17s. 6d. (£1 5s. to Police Officers).

A type of magnifier has been taken into use recently by the Finger-print Branch, New Scotland Yard, and has proved to be most useful when examining scenes of crime for possible finger marks where the light is extremely poor or where no light is available. This magnifier is known as the "Everlux Illuminated Magnifying Lens", and is supplied by Dr. Max Schlamm, Finsbury Court, Finsbury Pavement, London, E.C. 2, at a cost of £1. It consists of a magnifying lens with two adaptable holders, one for use when only the magnifying lens is required (please see Fig. 9 'A'), and the other for use when a luminant is required in addition to the magnifier (please see Fig. 9 'B'). The holder used in the latter case has a small bulb fixed at the end nearest the lens and connected by a good length of flex which runs through the centre of the holder to an ordinary flashlamp battery which can be carried in the coat or waistcoat pocket. Fig. 9 'C' shows the apparatus with the holder containing the small bulb disconnected from the magnifying lens.

The usefulness of this illuminated magnifier is appreciated at those scenes of crime where, as stated above, no artificial light is available, or where the light is very poor. By its means it is possible for the Officer examining such premises, etc., to hold in one hand the magnifier which also supplies sufficient illumination for the purpose of examination, and at the same time leaves his other hand free to develop with the aid of brush and powder any imprints which may be discovered by him.

An instrument which has proved invaluable to the Finger-print Branch at New Scotland Yard is the "Zeiss Ikon Famulus Epidiascope", which was supplied by H. H. Sharland, 9-10 Thavies Inn, E.C. 1, and is shown in Fig. 10.

Before the installation of this machine, it was necessary in many cases to prepare photographic enlargements of imprints for comparison purposes before the identity of the impressions could be established definitely. With the aid of the Epidiascope it can be decided immediately whether or not impressions are identical, thus obviating a deal of photography and resulting in a great saving of time, labour, and cost.

At New Scotland Yard, the Epidiascope is principally employed for enlarging finger- or palm-prints directly on to a frosted glass screen, but it can be utilized to produce enlargements—in natural colours—of any articles of suitable size, such as Treasury or Bank of England Notes, bottles, tumblers, revolvers, etc. An electric cooling fan is fitted which prevents exhibits from being harmed by any heat which may be created. By the movement of a handle, the instrument can be transformed into a lantern for slide projection.

Recently, however, another model known as the "Zeiss Ikon Famulus II Epidiascope" has been marketed by the same firm that produced the instrument described in the preceding paragraphs. The new Famulus II Epidiascope is very similar and can be used for exactly the same purposes as the old Famulus Epidiascope, but is a great improvement on the latter.

The new model has been demonstrated to me and I have used the instrument to carry out certain tests of my own with very indifferent exhibits. The results achieved with the new Famulus II were surprising.

One of the most outstanding feature of the new model is the intensity of the illumination. This improvement, it is understood, has been achieved by scientific modifications in the optical construction.

The new model also is supplied by H. H. Sharland, 9-10 Thavies Inn, E.C. 1.

EVIDENCE

When given by recognized finger-print experts, evidence as to the identification of persons by means of imprints

TYPE.	CORE.	
W	A.4	D
		I
1362/15		E
		13
		16

2.—R. Fore Finger.



S. 26671-31

FIG. 5

TYPE	CORE	
W	C	7
	FINGER	
	R. RING	C
75/UNC/4632		
METRO ("C" D.V.D.)		
DATE 7-4-36		
OTHER CARDS (5 counts)		
DATE FILED 7-4-36		
S. 38485-34		

FIG. 6

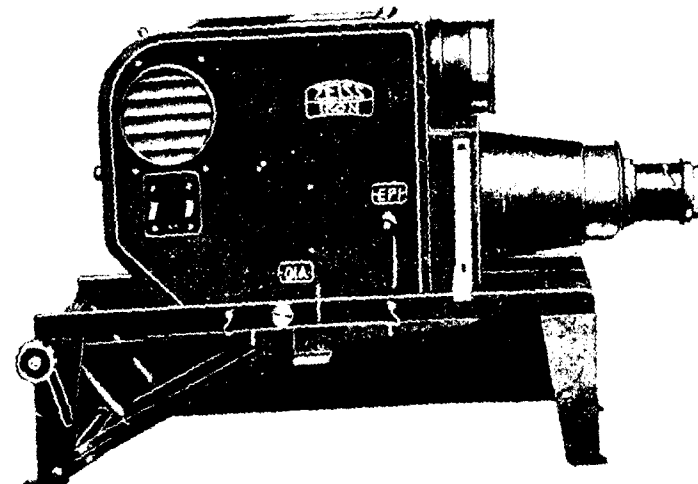


FIG. 10

(face p. 422)

left at scenes of crime is accepted in our Criminal Courts of Justice, unsupported by any other evidence, in the absence of a reasonable explanation by the accused as to how his finger-prints came to be found at the scene of the crime. Convictions so obtained have been upheld by the Court of Criminal Appeal.

A great deal of uncertainty still appears to exist, however, regarding the Court procedure to be adopted in finger-print cases. This is the order in which a finger-print case should be presented :—

1. It is first necessary to prove the offence in the usual manner.

2. Evidence must then be given of the discovery of the impression(s) at the scene of the crime and the forwarding of the article(s) or, if photographs of the marks were taken, the photographs to the Finger-print Branch.

The essential point here is that if an article is involved, the article should be linked up definitely from the time it leaves the scene of the crime until it is produced in Court. Should the article in question be brought from the scene of the crime by one Officer, handed to another and possibly yet another Officer before it is received at the Finger-print Branch, it will be necessary to call all those Officers as witnesses to prove the transit of the article. Should the article be posted, proof of posting is invariably accepted on production of the wrapper which is always preserved.

3. The finger-prints of the accused person must be produced and it must be proved that they are the finger-prints of the prisoner and the forwarding of them to the Finger-print Branch. This is done by the Police Officer who took the prints, or, if a prison set of prints is being used, the Prison Officer deputed to that duty.

4. Next comes the evidence of the finger-print expert who will prove the receipt of the finger-prints of the accused, also the article or photographs, as the case may be. This Officer will also prove the identity of the prints.

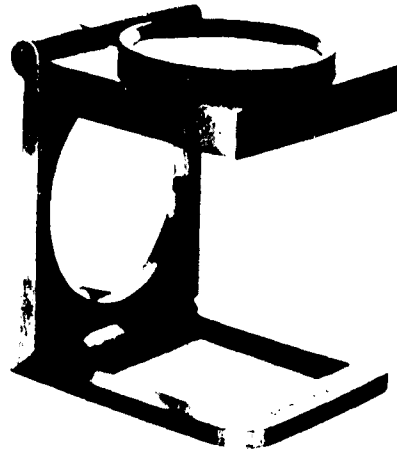


FIG. 7

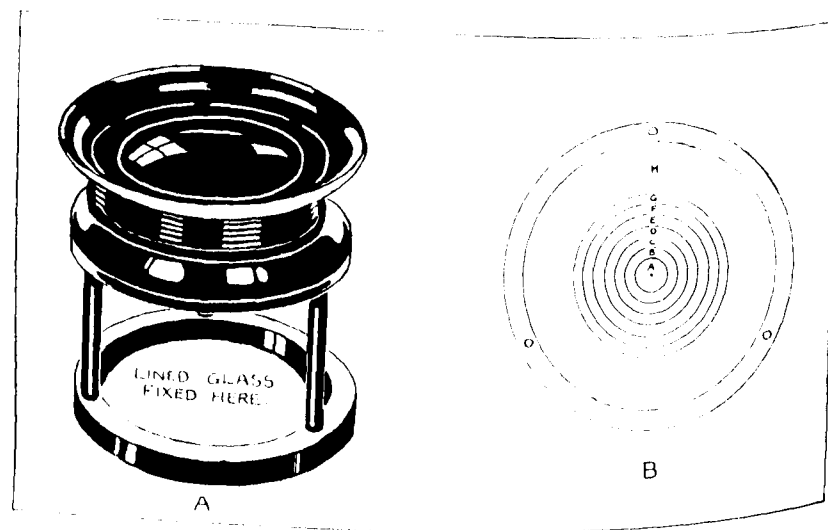


FIG. 8

A word of warning is necessary with regard to the finger-prints of the prisoner.

Many Forces are still under the impression that any set of finger-prints of a person identified can be used in connection with finger-print evidence. When a person in custody has been identified by means of his finger-prints left at the scene of a previous crime, another set of his finger-prints should be taken and forwarded to the Finger-print Branch, in the event of finger-print evidence subsequently being required. It is important that these prints should be taken *after* the prisoner has been charged with the offence in question, in order that it shall not be implied or divulged to the Court that the prisoner was identified by means of finger-prints *before* being charged with that particular offence, or that he has a previous criminal record.

There is one other point which should be specially mentioned. Assume that an offence is committed at a certain address. Imprints are discovered on a fanlight at the scene of the crime, and photographic copies of the marks are sent to the Finger-print Branch. These imprints are identified later as being those of a person who had previously been employed on the premises. Evidence with regard to the finger marks identified has been requested by the Force concerned, and subsequently at Court the prisoner admits that the marks are his, but were impressed by him legitimately during the time he was employed on the premises.

In such cases, it will be appreciated that if no other evidence is forthcoming, and, bearing in mind what has been previously stated that no finger-print expert can determine definitely the age of an imprint, the case against that person will be rejected.

In cases of this nature, before proceeding with the charge, the Force concerned should endeavour to obtain other evidence to strengthen that of the finger-prints identified, in order to be in a position to rebut any such defence which may be put forward by the prisoner.

For instance, the prisoner may state that the fanlight

was cleaned by him during his employment on the premises, and the imprints thereon must have been impressed at that time. If it can be proved that the fanlight had been cleaned since then by another employee, the prisoner's statement would be likely to be disbelieved.

In certain cases, a careful note by the Investigating Officer of the position of the marks on the article might prove that the imprints could not possibly have been made in the manner claimed by the prisoner.

Failure to observe these points may make all the difference between conviction and acquittal.

It would materially assist the Finger-print Branch if, in all cases where finger-print evidence is required, the Force concerned could give the Branch *at least* 48 hours' notice, in order that arrangements can be made for an Officer to attend, and the necessary exhibits prepared.

Without wishing in any way to be dogmatic, I cannot emphasize too strongly that in using finger-prints found at the same scene of a crime as evidence of the identity of the criminal, the utmost care should be used and this expert work should be entrusted only to those Officers who have had careful training and long experience with a large collection of finger-prints. The finger-print system of identification is world-wide and, should a mistake occur, it matters not whether it is at Timbuctoo or the Fiji Islands, the result will be that the system will be discredited at once.

Decisions have been made by Officers with little or no finger-print experience and, judging by some of the cases which have been brought to my notice, a grave danger exists in allowing other than competent Officers to express definite opinions on finger marks left at scenes of crime. Marks on articles have been incorrectly stated to be those of persons who had legitimate access to the articles. Identity has been assumed with marks that are absolutely useless for purposes of identification.

On the other hand it has occurred that marks left by criminals at scenes of crime have been compared and rejected

by local Police as being not identical with finger-prints of persons with whose impressions they have, without doubt, been identical. Thus we have the two extremes.

The Finger-print Branch, New Scotland Yard, is only too anxious to render all possible assistance, but at the same time it is earnestly desired that time which could be more profitably expended should not be wasted. I am quite sure that if Forces generally would bear in mind certain little points which are ignored at present, time which is now more or less wasted in entering into unnecessary detail, explanation, and correspondence, could be usefully employed in other directions to the benefit of all concerned.

Finally I cannot stress too greatly the danger of the inexperienced dabbling with what in expert hands may justly be described as one of the most deadly weapons Police have ever possessed, and hope that the hints and advice contained in these articles will be borne in mind by all so that the Finger-print Branch and Forces generally will achieve still greater success in their unceasing fight against the criminal.

This concludes my articles on that part of finger-print work which deals with scenes of crime. In my next article I shall deal with the other and older branch of this work and that is the "Henry" or Main Finger-print Collection including the registration of persons by means of finger-prints, which was the reason for which the Finger-print Branch was formed in 1901.



FIG. 9A

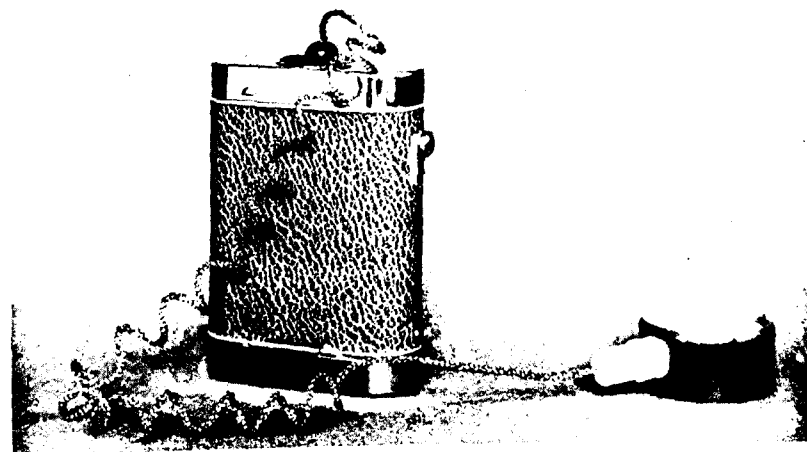


FIG. 9B

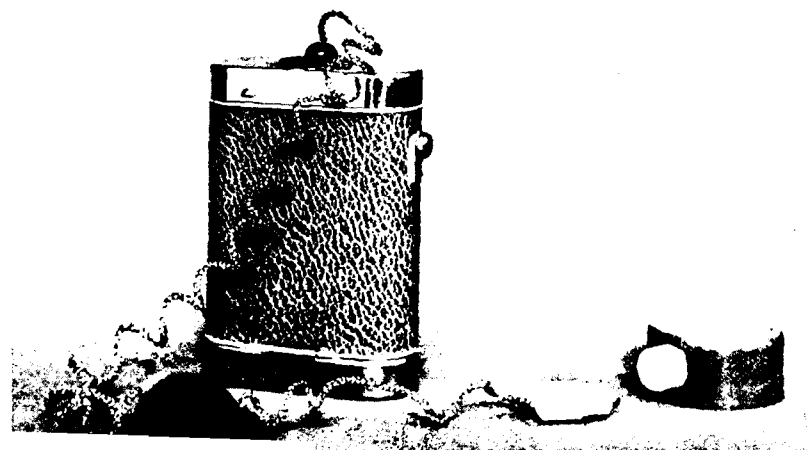
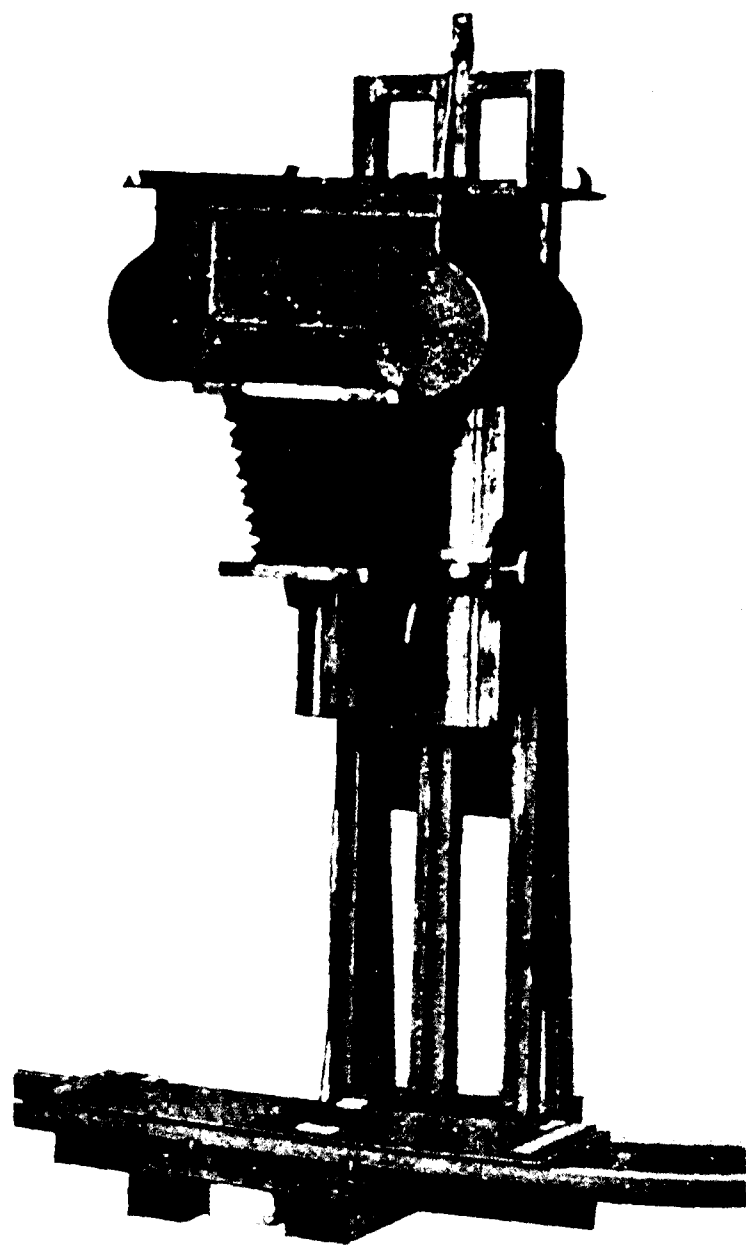


FIG. 9C



CAMERA ADAPTED FOR THE CARD NEGATIVE PROCESS

The Card Negative Process

By SERGEANT C. E. BOLT

Plymouth City Police

MUCH has been written from time to time regarding photography as an aid to crime detection, and various articles have been published respecting work which is being done in large centres with well and expensively equipped studios. The smaller provincial areas are not, however, lacking in enterprise, and it is felt that this article might be of some interest to those whose misfortune it is to engage in crime detection without the aid of photographic equipment, and of practical assistance to those whose equipment is small but capable of being adapted in a simple manner to meet present-day needs—needs which call again and again for speedy results ; also as a guide to the many who, at some time or another, have been faced with the dilemma of having to copy a photograph, document, or similar object at very short notice.

It is not claimed that the following suggestions are original, but the principle underlying them is not so widely known as is deserved, having regard to the speed, efficiency, and cheapness with which it enables work to be done.

Whilst many devices are sold which embody an identical process, the object of this article is to stress its value for Police purposes. In effect it is photography by reflected light in a dark room, and its economy lies in the fact that neither plates nor films are used.

Any reader who has sufficient ability as a handyman to adapt an old half-plate camera to this use will be amply repaid

the cost of his labour whilst photographic costs will be substantially reduced. An illustration of the apparatus in use in this studio is shown facing the previous page.

In the upper part of the camera are enclosed two 200-watt lamps, the light from which is thrown up on to an object-carrier and reflected from any article placed over the opening therein, downwards through the lens on to the focussing and printing screen.

Assuming that it is desired to copy a photograph from *The Police Gazette*, a newspaper, or a group, all that is necessary is to place the original face downwards over the opening in the object-carrier and to switch on the lamps. The original is then reflected on to the focussing and printing screen as a negative and, after focussing, all is ready. Using soft, medium, or contrasty bromide paper (according to the quality of the photograph to be copied) an exposure of a few seconds produces a paper negative. This, after development, fixing, and washing, does not need to be dried before being placed on the object-carrier when, from it, positive copies are rapidly and easily obtained.

The whole process of producing a copy can be done within five minutes, although, of course, where the permanency of the negative and copy is desired, the usual precautions regarding fixing and washing have to be observed.

Speed and economy are obvious advantages of this method as opposed to the use of a plate or film, and the negative is less liable to be damaged by reason of haste, or by subsequent filing.

Focussing is adaptable as to the size of the reproduction required, whilst the usual advantages regarding definition can be gained by "stopping down" the lens after focussing and before an exposure is made.

It follows that anything capable of being placed over the opening in the object carrier can be copied, whether it be a coin, a forged note, a signature, or a bunch of keys.

With prisoners' photographs the apparatus has been found an immense economy, using bromide card negatives

as opposed to films or plates. It may be thought that there is difficulty in obtaining sufficient definition on a paper negative or criminal portraiture, but experience has shown that an exposure of one-fifth of a second with ordinary studio lighting gives an excellent negative from which, as already explained, bromide positives are printed, a practice which has long been in use by commercial portrait photographers.

The rapid reproduction of finger impressions is always engaging the attention of Police photographers, but has been difficult in inexpensively equipped studios. With the apparatus described impressions can be very successfully and easily reproduced, whether on flat or rounded objects, provided they are capable of being placed on the object-carrier.

If the impressions have been developed with light powder on a dark ground, direct positives are obtained with the aid of a reversing prism. Where a prism is out of the question, on account of cost, the process is possible by reflecting the impression through the lens of the apparatus with the aid of a mirror.

If, on the other hand, the impressions are developed with a dark powder on a light ground, a direct negative must first be made and a positive reproduction obtained from it.

Experience with the apparatus will show that it has almost unlimited possibilities of application to the purposes of a Police studio, from everyday copying to critical enlarging, but one query is sure to arise, *i.e.* what happens when the object is too large to place over the opening on the object-carrier?

The writer met with the difficulty, but overcame it by placing the object on the focussing and printing screen, illuminating it from outside the apparatus, and then focussing and copying through the opening in the object-carrier. In this way it was found possible to copy as many as twelve photographs at once on to a postcard size sheet of bromide paper with sufficient detail to allow of normal single reproduction from the bromide negative.

This is, of course, all normal photographic practice,

with the exception that no plates or films are used, but the principle may be of some interest and will doubtless suggest to the experienced photographer other uses, from the production of half-tone negatives for stencils (or other reproduction), to the taking of filtered ultra-violet and infra-red ray photographs.

American Police Methods

By SIR HERBERT DOWBIGGIN, C.M.G.

A RECENT visit to the United States, where I had the opportunity of examining the latest methods adopted at various police centres, has provided me with much useful information, some of which may be of interest to readers of THE POLICE JOURNAL. The purpose of this article is not to supply a descriptive account of my tour, but to describe some of those methods which most impressed me and which may be worth consideration by Police Forces elsewhere.

Difficulties of the American Police

First of all, I want to point out some of the peculiar difficulties under which the Police Forces in the United States are working. There are now 115 million people in the States, and the proportion of foreign-born citizens is high: in New York it was (in 1929) 41 per cent, in Chicago 29 per cent.

The office of Chief of Police is insecure, and he is subject to control by politicians in the discharge of his duties. Chicago has had eleven Chiefs of Police in twenty years, and Detroit four in one year. The average length of tenure is less than five years. In one city the mayor appointed as Chief of Police a man who had been his tailor for twenty years; that was his qualification.

The judicial bench is also much exposed to political influence. Judges are elected by popular vote for six years or less; they have to conduct themselves in a way which will be likely to secure their re-election and not to take an unpopular line. Juries are moved far too much by emotion. The newspapers report and dramatize every detail of crime and every 'hold-up'. They make criminal activities look like easy money, with a minimum of risk. As a result of this, my own impression

is that the American popular attitude towards crime and criminals is far too sentimental.

Political influences also too often determine the release of prisoners. The prisons are under four separate authorities, State, County, Municipal, and Federal. There are 3,000 different prison authorities in the U.S.A. Similarly, there is far too little uniform control over the police. There are 1,799 Police Forces, and no central control whatever. A Committee, appointed by the President, recently sent out a questionnaire affecting the police to 754 cities. Only 104 replied.

Two other criticisms: In homicide cases punishment is slower and more uncertain than for any other form of crime. In Los Angeles, 1933-4, 87 homicides were investigated, 20 proving to be cases of suicide: out of the remaining 67, in 12 there was no clue. Too many criminals escape arrest, and too many who are arrested do not appear promptly to be brought to trial. On the other hand, there seem to be far too many unnecessary arrests. A summons is never obtained in the first instance. In Los Angeles, out of 305,661 persons arrested only 8,875 cases resulted.

Secondly, there seems to be little communal life in any of the Police Forces. Except at Los Angeles and Detroit, I did not find that any outdoor or indoor recreation was provided for the police in the cities which I visited. Members of the Force do not appear to meet except in the course of their work. No member, married or single, lives in police quarters.

Berkeley, California: The Use of Wireless

Now, to turn to the other side of the picture. In the Berkeley Police they have got the speech broadcast wireless both ways in three cars, but still regard it as being in an experimental stage as regards both ways wireless. They have got speech broadcast one way in forty-nine cars. The transmitting set at police headquarters (500 watts) serves forty-nine

vehicles receiving the broadcast in Berkeley, and 208 vehicles in the two adjoining counties. It has a 40-50 mile radius. A receiving set which will receive a message in a car on the move costs £10. A transmitting set to send out from a car on the move in a 5 mile radius also costs £10. The transmitting set is of the same weight as the receiving set—15 lb. The transmitting apparatus at police headquarters costs £600.

In the police station at headquarters, the telephone switchboard and the radio broadcasting microphone are fixed by the desk sergeant's table. When the desk sergeant receives a complaint over the telephone, by letter, or in prison at the station, he speaks by wireless to a car with a receiving set on the beat concerned. The patrol man who has wireless in his car picks up the message on his receiving set, attends to the complaint, and telephones back to headquarters from the nearest telephone box as to what he has done.

The wireless receiving cars patrol the whole of the residential area. In the crowded business area there are police on duty on foot. If there is no wireless receiving car on a beat, the desk sergeant operates the light flashing system, on which, the nearest police officer on foot, seeing the light, goes to the nearest police telephone box, receives the message, attends to the duty, and telephones back. There are sixty-six police telephone boxes on pedestals in the streets of the city, and forty-three flashing light signals to call the police. (If the pocket wireless receiving set is developed, the flashing light can be eliminated.)

By this system it is never necessary to send a police officer out from the station on receiving a complaint of a crime, accident, or other matter requiring police action. All the desk sergeant has to do is to communicate by wireless or flashlight with the police officer nearest to the scene. Banks and big business houses are connected direct with police headquarters at the expense of the bank, etc.

At headquarters there is a map in the desk sergeant's desk on which the position of every police car is fixed. In the

event of any complaint, the desk sergeant knows at once to whom to speak.

The radio branch of the Force are experimenting with a wireless dictaphone receiving set by which a conversation in a room two blocks of buildings away will be automatically recorded as the conversation in the room is received. This will obviate the necessity of police remaining on the premises where the conversation is to take place. Nor will it be necessary for the police at the other end to stand by to hear the conversation. The conversation will be automatically recorded on a wax cylinder.

The Gas Gun

Gas Guns are used in dealing with a criminal in a house or room who is holding up the police by means of a pistol or revolver.

These gas guns can be seen in every police Force in the U.S.A., and the use of a gas gun in dealing with an armed criminal defying arrest has just been sanctioned by our own Secretary of State for use in the Ceylon Police. The gas gun fires a cartridge containing tear gas which carries 350 feet against a cross-wind. No permanent damage is done to the criminal, but he is placed out of action for the time being.

Los Angeles : Detective Work

The detective branch of the Los Angeles police is split up into several divisions, which deal with, for example :—

- (1) Pawnshops and burglary.
- (2) Forgery.
- (3) Robbery and narcotics.
- (4) Thefts of motor-cars.
- (5) Pickpocketing.

It has been found necessary that the police who deal with burglary should be in close touch with pawnbrokers, so burglary and pawnshops go together.

Similarly, it is found that drug addicts commit theft or robbery to get narcotics, so robbery and narcotics go

together. There is a homicide squad which goes to the scene of every fatal motor-car accident, as well as to the scene of every murder.

There are three different bodies in Los Angeles which deal separately with narcotics (and this I found to be the case in every city) : The Government Federal Narcotic Squad (headquarters at San Francisco), the State Squad at San Francisco, and the Los Angeles City Police Squad, which consists of fourteen men. There is no co-ordinating head. Each squad gets its own information and acts independently on it. They deal with morphine, cocaine, marawana (corresponding to ganja in Ceylon, it grows in California), and opium. The Japanese are the principal traffickers in drugs.

Japanese have been found with 12 oz. and 20 oz. of morphine. It is sometimes brought in oil tankers. A Japanese naval officer was found to be dealing in drugs.

Police cars fitted with wireless speech broadcast receivers chase cars of persons dealing in drugs, and cars ahead of the car being chased close in on the car and make it stop. In one case drugs were found carried under the skin in the arm in a rubber finger stall.

Forged notes and coins are not dealt with by the police, but by a separate Federal Currency Department.

Crime Investigation Laboratory

In this laboratory handwriting, ballistics, finger-prints, photography, chemical analysis, and map drawing are dealt with. All these different branches are under one roof. The astonishing thing is that the chemist (a fully qualified man) is paid less than a sergeant of police. The chemist starts at £504 a year and rises to £560. The sergeant draws £540 a year.

As regards apparatus—(1) a spectrograph has not yet been obtained, but is borrowed when required ; (2) a Zeiss epi-reflector microscope is used. If a knife used in a case of murder or stabbing is washed, corpuscles can be traced

in the pores, etc., of the steel by use of this microscope. A Leitz ultropaque microscope gives the same results.

In their ballistic investigations they fire into waste cotton so as not to damage the cartridge. They claim that this is better than firing into paraffin wax, as is done in San Francisco. They say that the best substance of all to fire into is Kapok.

The occupation of each policeman before joining the Force is carefully recorded in a card index, so that whenever a police officer is wanted for some particular job in the detective or other line, in which previous experience would be useful, the man who has these qualifications can be traced.

As regards types of crime in which finger-prints were found on the scene or on articles traced and identified, they keep a record of these and quote them in their annual report, *e.g.* :—

Burglary	.	.	.	105
Robbery	.	.	.	10
Murder	.	.	.	3
Forgery	.	.	.	3
Manslaughter	.	.	.	1
Receiving stolen property	.	.	.	1
Theft	.	.	.	7
Counterfeiting	.	.	.	1

At present many Forces in England only show the total number of cases in which finger-prints were found and identified.

Glazed chemical paper is used for packing blood-stains, powders, dust, mud, etc. White paper is used for blood and dark articles, and black paper for light articles.

All records and information are obtained by use of the Hollerith Machine. The Hollerith Machine is hired at £21 a month. It saves three clerks who would have to be paid £28 a month each. 50,000 cards a month (crime and traffic) go through the machine. The total staff in the record department is one principal, one secretary, and six women dealing with the reports. Each girl can stamp out 300 cards a day.

The record department turns out monthly and weekly

reports showing the positions as regards crime and traffic accidents.

Outside inquiries for information and returns which are dealt with by the Hollerith Machine number about ten a day. Departmental inquiries average three or four a day.

The weekly return of crime shows burglary over £10 in value and under £10, thefts of motor-cars, thefts over £40 in value, and thefts under £40, false pretences, worthless cheques, thefts from the person, traffic accidents, traffic injuries, homicide, assault with deadly weapons, traffic deaths.

The monthly return of crime shows—

- (1) total for the month under each of the heads quoted above,
- (2) total for the last month,
- (3) total for the corresponding month in the previous year,
- (4) total to date this year,
- (5) total to date last year,
- (6) percentage of increase or decrease.

Havana : Laboratory Work

All laboratory work for the police is done at a Central Government Laboratory. The director in charge is Dr. Israel Castellanos. Under Dr. Castellanos there are two experts. One deals with handwriting, forgery, stamps, and documents of all kinds: the other deals with blood-stains, chemical analysis, etc. The Central Laboratory does the work for all the Government Departments, and is entirely independent of, and away from, Police Headquarters. Dr. Castellanos is also responsible for the Central Finger-print Bureau of Havana, which is under the same roof. There are twenty-six employees dealing with finger-prints, helping in the laboratory, and dealing with correspondence. In the finger-print collection, which has been going for fifteen years, there are half a million cards. They get about 100 cards a day, and fourteen clerks deal with these. Dr. Castellanos has the following apparatus, all very well kept :—

(1) A Spencer comparative lamp for examination of finger-prints, blood-stains, blood drops.

(2) Rayos (French) ultra-violet ray lamp. This appears to be a bigger and stronger light than the Woods.

(3) A micro-photograph machine.

(4) A comparison microscope for the examination of typewriting, only made by Osborne, in New York.

(5) A comparison microscope for dealing with handwriting and stamps.

(6) A comparative microscope for examination of bullets and cartridge cases.

(7) A Lewis helixometer for examining barrels of guns.

(8) A micro-photograph with a strong light under blue glass for examination and photography of alterations in handwriting, etc.

Blood grouping and tests for human blood are carried out in the same laboratory, in a portion screened off by glass.

New York : Wireless Speech Broadcast

Three hundred and sixty-six cars in New York are supplied with radio broadcast receivers. Up to date they have only got wireless broadcast one way. They say that two way wireless speech has not been sufficiently perfected for general use. The public telephone to headquarters when any offence has been committed and police headquarters wireless the news to cars operating in that area. These cars pick up the message and go to the spot. They telephone what they have done from the nearest telephone—in the street, private house, shop, or police station. They admit that wireless broadcast both ways is the ideal system to aim at. Transmitting is done from three stations (450-500 watts) which cover the whole city, and the transmitter states the number of car he is calling up.

The light radio cars are two-seater Fords, and the wireless receiver equipment weighs 25 lb. There are four motor repair shops, one in each division, in which repairs

are attended to, tyres issued, and cars greased and overhauled. One big central shop at which big repairs are carried out. The radio system is a short wave, and the police are given their own wave-length. One car on patrol has done 177,000 miles. Tyres do 40,000 miles.

I patrolled in one car fitted with wireless from 10.30 p.m. to 1 a.m. We got a call at 11.24 that a "hold-up" in a shop had been reported in a street about a mile from where we were. The syren was used to clear the road (syren only used by fire brigade, ambulance, and police in an emergency) and we were at the spot at 11.26. Two other wireless equipped cars had already arrived at the spot, and we passed the patrol man on foot running to the scene. The "hold-up" had occurred at 11.22 p.m. and had been reported by telephone immediately to police headquarters by the assistant in the shop immediately after the robbers had left.

It is often found that "hold-ups" in shops are carried out when the cash is being checked to be put away for the night. The advice which the police give to all jewellers and shopkeepers is to keep the door of the shop locked while they are taking out jewellery from a safe or show-case, or when counting or checking money before closing.

The Teleprinter

This is used as well as wireless. New York is connected by teleprinter with the adjoining States, and they dispatch messages by teleprinter for a distance of 800 miles. They dispatch to forty different centres. A green light on the switch-board indicates whether each of these forty points are receiving the message. This is a good contrivance, as there is then no doubt as to whether each station is receiving the message.

New York City is divided into four divisions: (a) Manhattan; (b) Bronx; (c) Brooklyn and Richmond; (d) Queens.

Each of these four divisions has a teleprinter for passing on and communicating teleprinter messages to their stations. They can also send messages by teleprinter to headquarters.

The use of the teleprinter both ways is ideal. All teleprinter messages machines are rented. The both ways machine is rented at £1 a month.

Mounting Photographs

Paste, which damages photos, is eliminated by placing a tissue paper (specially prepared) at the back of photographs. The photograph with the tissue paper is then put in an electric heater like a flat iron. This melts the tissue paper, which sticks to the mount.

New Preparation for taking Finger-prints

The "Farout" preparation has been put on the market. It does not stain or mark the fingers as black ink does, and impressions show up well on sensitized paper, but there is doubt as to its lasting.

Washington Federal Bureau of Investigation

I had always heard of the Finger-print Bureau of Washington, which serves the whole of the U.S.A. and gets finger-prints from all parts of the world, but till I visited the Bureau I had no idea that an organization had been established which provided for the investigation of all matters affecting the Federal Government in all parts of the U.S.A. It has been built up by Mr. J. Edgar Hoover, the director, and is a masterly piece of organization.

Under Mr. Hoover there are four assistant directors, who deal with:—

- (1) Investigations.
- (2) Administration and personnel.
- (3) Technical work, finger-prints, chemical laboratory.
- (4) Training.

The field staff (investigation) which is spread over the U.S.A. consists of—

(a) Four to six inspectors, who are always on the move going round and visiting the different special agents.

(b) Thirty-five special agents in charge of the different field offices in the U.S.A.

(c) Six hundred agents working under the special aids. The agent is the lowest rank of field officer.

The rest of the staff of the Bureau are employed on clerical work, in the Finger-print Bureau, and in the Laboratory. The total staff at headquarters and in the field is 2,000.

The agents must be between 25 and 35 years of age on joining. They must be either duly qualified graduates of a recognized law school or expert accountants with practical experience, or must have had previous experience in investigation. With this minimum standard they are getting a very intelligent and good body of men. The necessity for having a number of expert accountants is because the Federal Bureau investigates bankruptcy frauds, and a lot of cases of fraud are reported. The pay of an agent is £580 a year, of the special agent in charge £1,200, of the director £1,800. All agents and staff wear plain clothes. When on the move they get £1 a day, plus train and taxi fares.

Other than this permanent staff of agents they do not keep or subsidize any other agents for getting information. If necessary they pay for information by results.

The original course of training for agents lasts three months. The classrooms are under the same roof as the rest of the Bureau. The classrooms are particularly good, and the ceilings of all the rooms are covered with a special acoustic preparation to improve the acoustics, as is done in broadcast rooms. It is called "Acoustex". The hours for lectures are 9 a.m. to 5 p.m. with a break for lunch. There are five lecturers, all of whom are agents who are changed from time to time. The work is divided as follows:—

- (a) Lectures on raids and arrests.
- (b) and (c) Lectures on the administrative side, reports, organization, discipline, etc.
- (d) Police work.
- (e) Laboratory and scientific work.

In addition to these regular lecturers there are special departmental lectures by experts on the staff and by outside experts. No payment is made to any of the outside lecturers. As an example of departmental lectures, the member of the staff who deals with bankruptcy frauds lectures on this subject, every case goes up to him and he is able to illustrate his lecture by quoting from recent cases. They specialize in training agents as to how to carry out a raid in such a way as to prevent any person escaping from the premises to be raided, while avoiding exposure of agents carrying out this raid to unnecessary danger. A regular technique for this has been established.

As regards searches, they train agents in the different methods to be adopted when searching different classes of premises. For example, a lawyer's office compared with a chemist's shop. There is good sense in this.

A description is given of a house 10 miles out of Washington. Members of the class are sent out to find it.

As the class assembles for work, and without any previous warning, or without special attention being drawn to the fact that something out of the ordinary is happening, some incident is staged in view of the class. On completion the class are told to record exactly what they saw. The difference in what they observe is found to be remarkable.

In the middle of the class a terrific crash will be heard in an adjoining room. In half a minute, another crash. A minute later a third crash. After the third crash the class are directed to write a report describing the noises heard, with special reference to the time elapsing between each crash.

Finger-prints

There are five million prints in the Identification Division of the Bureau, and three thousand are received daily. The searching is done by men. One hundred and ten men on finger-prints deal with about forty searches a day. Correspondence, etc., is dealt with by another staff of women. Total staff 400.

The Hollerith Machine is used for the ten loops searching and could be used for whorls and any finger prints in which ridges are counted. There are a quarter a million ulner loops and 60,000 whorls in the Washington Bureau. Arches are sub-classified by year of birth. The Hollerith machine with cards printed to meet the needs the Bureau is rented at £26 a month. Six hundred cards a minute can be searched for. Mr. Schilder, who is in charge of this division, considers that loops and trace whorls should be counted in every case, even if not used in immediate classification. It would be useful in case it is ever required in the future when instituting the Hollerith system.

Museum for the Public

The Federal Bureau encourage the public to visit the headquarters and provide at certain fixed hours a guide (an agent) to show them objects of interest in the fingerprint bureau, crime laboratory, etc.

The museum is always open to view by the public in office hours. Any parties that have collected at certain hours are taken through the building. They do not disturb the people at work: the officer taking them round does the explaining.

A lot of literature about the working of the Bureau is placed in the museum, and the public can take copies away. The idea is to get the public interested, and to make them realize how they can help the police by reporting crime and preserving matter found on the scene.

Chicago

All the scientific laboratory work for the Chicago police is done in the North-Western School of Law University at Chicago, where there is a special scientific crime detection laboratory staff of seven officers. In practice, one of the staff does explosives, toxicology, blood grouping, and blood testing. Two are employed on testing personnel for Government Departments and banks and other offices, and in testing

the veracity of witnesses by use of the Keeler Polygraph or "lie detector"; one is responsible for fire-arms, identification, forces, and stresses; one does handwriting and questioned documents; one is the biologist and does the microscopic work.

The staff work for twenty-two different Forces, and not only for the Chicago police. They work also for, and are made use of direct by, banks, Government offices, business houses, insurance companies, etc. The Laboratory was started in 1929 after the "Saint Valentine's Day Massacre" in Chicago when seven members of one gang were shot in a garage by another gang. In this case an expert from New York (Goddard) had to be brought in to trace the offenders by the examination of the bullets. It was then realized that Chicago needed a scientific staff of this kind.

There are also two associate members of the staff who can be called in for special jobs.

Moulage and Plaster Work

They call it moulage and pasmoulage. I saw a cast of a hand. It was the most lifelike and perfect thing of its kind that I have ever seen. It was hard to believe that the hand was not real. They use the following for moulage work:—

(a) Plastico, made by the California Arts Supply Co Palo Alto, California.

(b) Hominit Masse Positive (Dr. Pollmer).

(c) Apotala Sa Zurich.

Polygraph or "Lie Detector"

I saw this machine in use. It is employed constantly not only in testing the veracity of witnesses, but in examining applicants for posts in banks, business houses, etc. I should say the principal value of the machine lies in the moral effect. The person seeing this rather complicated machine being strapped on him and brought into action is afraid to lie, and speaks the truth.

A tube is placed in position round a person's chest (this records respiration); a blood pressure testing strap is put on the arm. Both respiration and blood pressure are recorded on a graph in ink, just like a weather-chart. Before any questions are asked, respiration and blood pressure are allowed to run normally for some minutes so that normal breathing and blood pressure are first recorded. The investigator then asks certain questions of no consequence. The investigator writes on a piece of paper questions in regard to the matter under investigation, and numbers them 1, 2, 3, 4, etc. As he is putting one of these questions, he makes a mark 1, 2, 3, 4, etc., on the graph besides which he sits. The movement of respiration and blood pressure is thus obtained on the graph opposite each question, and you can see the reaction of each different question. The Polygraph can be kept on a person for 10 to 15 minutes. The important point is that it cannot be handled by anyone. It must be used by a trained observer who is always working at the Polygraph. The Polygraph costs £90.

Apart from the material effect created by strapping the machine on to the person, I should say that the ordinary investigator could tell almost as well by watching the person making the statement whether he is lying or not, and judge his reaction to certain questions by movement of face, eyes, mouth, feet, body, hands, colour of face, etc. The Polygraph machine, however, puts this in record. The Americans are immensely imaginative and ingenious in the matter of machinery and mechanical appliances. This is where they are most ahead of us. The type of brain of Edison and Ford is the type of genius the U.S.A. produces.

The cleverest thing I saw in a room where the Polygraph is used was the way in which the person under investigation could be observed from outside the room without his knowledge. What appears to be a mirror is placed in the middle of the wall opposite the chair in which the person under investigation sits. The "mirror" is only a piece of plate

glass very thinly silvered on one side. The person in the room thinks he is looking into a mirror, whilst the person on the outside can see quite plainly through the glass. The person in the room has no suspicion that he (or she) is being observed by anybody from outside.

The room in which the Polygraph is fixed is a small room lined with "acoustic celox", which deadens all outside noise.

Evanston : The Accident Squad

At Evanston, which is 10 miles from Chicago, there is a very good accident squad. It consists of six men doing duty in three reliefs, so there are always two men on duty at a time with cars patrolling the streets and available to go to the scene of any accident. They are communicated with by wireless when an accident is reported. If more than two accidents are reported at a time, there are three men at headquarters who can go out. These three men at headquarters are employed in the ordinary course in the wireless room and on traffic statistical work. Each accident squad car has a 4 × 5 camera, steel tape, first aid outfit, and brake testing machine (Decelerometer).

The Evanston police make a great deal of use of a safety cruiser car fitted with a loud speaker. On the outside of the car "Safety cruiser police" is painted, and "Safety" is painted all over the sides and back. The car is fitted with all necessary appliances for dealing with accidents, and patrols the streets for the education of the public, as well as for taking up cases and investigating accidents. A first class man is picked for this duty, and when he sees a driver of a car or a pedestrian doing anything foolish, he speaks to him on the loud speaker, which is reported to carry three-quarters of a mile. This form of warning is found to have great effect, in that the offender is warned out of the blue in the very act of committing an offence. There are two men in the car—the driver and the officer operating the loud speaker.

The Evanston police do a lot in the way of the education

of children and of the public in safety first methods in the following manner :—

1. *Child Safety.*

- (a) Co-operation of the schools.
- (b) Schoolboy patrols at junctions when children are going to, and leaving, school.
- (c) Letters to schools and newspaper talks.
- (d) "Safety" essay competitions for school children.

2. *Safety Education of the Public.*

- (a) By newspapers.
- (b) By posters.
- (c) By talks and safety films.
- (d) By voluntary inspection of private, or any, vehicle as to its fitness for use on the road, and by issuing a certificate which is gummed on the windscreen.
- (e) Holding a safety month. Warning cards are issued to jay walkers. Safety films are shown in the theatres. Boy scouts co-operate with the junior traffic patrol police.
- (f) Public meetings for instruction of drivers.
- (g) Competition in safe driving by lorry companies : one fleet of lorries travelled 284,234 miles without an accident in 1934.
- (h) Traffic safety exhibits at exhibitions.

Detroit : Wireless Work

Detroit is the home of police wireless. It was Detroit that originated the use of wireless between headquarters and police cars in 1928. They have seventy-four small cars receiving wireless speech, and twelve big cars with wireless. All police cars are marked "Police". When patrolling this has a moral effect. The public do not see so many police in uniform in the streets on account of most of the traffic regulation being done by traffic lights. It is a good point, therefore, that the public should see police cars so marked, so that they know that there is someone on the move to whom they can appeal.

One motor launch and four cars are fitted with wireless speech both ways. They regard their two ways wireless speech as still in the experimental stage, but as the ideal to be aimed at. If the use of two ways wireless from cars is extended, it would be impossible for one central transmitting and receiving station to deal with all messages being sent in from wireless cars. What they would have to do is to have a large number of receiving stations in different parts of the city (about twenty-five) so that each sub-receiving station would receive messages from six to seven cars on the move. These sub-stations would in turn pass on the messages received to the central station, which would broadcast any action required to all cars. The two ways wireless speech set weighs 25 lb. and messages can be dispatched from cars up to a distance of six to seven miles.

In Detroit there are two transmitting sets, a 500 watt transmitter on the west side of the city and on the east side another 400 watt wireless transmitter. In the broadcast room the broadcaster sits next to the officer receiving messages from cars or by telephone, so that any message received can be immediately broadcast.

I went out in a car fitted with two ways wireless and also in the launch. Headquarters reported that our messages were clearly received, and were particularly clear from the launch on the lake. In the case of the car, when we had a wood between us and headquarters, we faded out. They hope to put this right; as noted above, they are still experimenting.

When the car fitted with wireless is dispatching messages to headquarters, it is necessary to put out antennæ on the car with a copper plate supported under the car. In the small scout cars there are two men in uniform; in the big cruiser cars there are four men, two plain clothes patrol men, one detective in plain clothes, and one driver in uniform.

The wireless receivers in the cars are all made by the Detroit police. They use a 5-valve receiver, the range of which is ten to twenty miles.

Every officer at headquarters has a *code calling number*.

If an officer working at headquarters is on the move in the building and is urgently wanted on the telephone but is out of his room, a bell in each corridor rings his number, e.g. Inspector Rhodes's number is 61. If he is wanted, the electric bell strikes six times. There is then a pause, and it then strikes once. Inspector Rhodes knows that he is wanted and goes into the nearest room and speaks on the telephone.

Shanghai: Revolver Identification

Though it is outside the U.S.A. I may mention that at Shanghai there is probably the most complete revolver and pistol identification bureau in existence, in that two bullets and two empty cases fired from every pistol and revolver known to be in Shanghai are kept by the police and classified in exactly the same way as finger-prints are recorded and classified. When any shooting is done, if a licensed revolver or pistol has been used, the police can say from which pistol the bullet was fired.

A Simple Method of Taking Footprints

By F. W. MARTIN, M.D.

Medico-Legal Department, Glasgow University; Late Divisional Surgeon, City of Glasgow Police

ONE of the greatest attributes of a detective is his ability to take in everything in his preliminary examination of the locus of a crime.

In many cases his most formidable obstacle is the difficulty in identifying the culprit. Hence, every little detail which will help in such identification must be carefully looked for, and just as carefully noted.

On the Continent there is a superstition, that if a criminal leaves something personal behind him he will escape discovery. Whether this superstition holds good in Britain or not I am unable to say, but much useful knowledge may be gleaned by the police authorities if it is a footprint which is left behind.

It is unfortunately only too true that footprints are usually absent where they would be of great value, and that when they are present they are often patchy and incomplete. They must not, however, on that account alone be considered valueless. Their value in identification has been proved in many instances, and Glaister records numerous cases where this means of identification played no small part in bringing home the guilt to the suspected persons.

Various methods have from time to time been advocated for taking impressions of footprints. Some are of mere historical or academic interest. Hodann, for example, recommended a mixture of equal parts of fine sand and plaster.

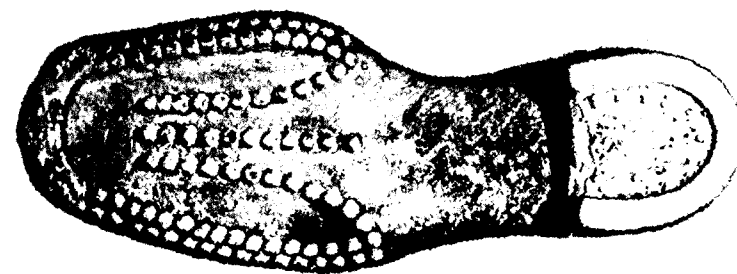


Fig. X.
Original boot.
(face p. 150)

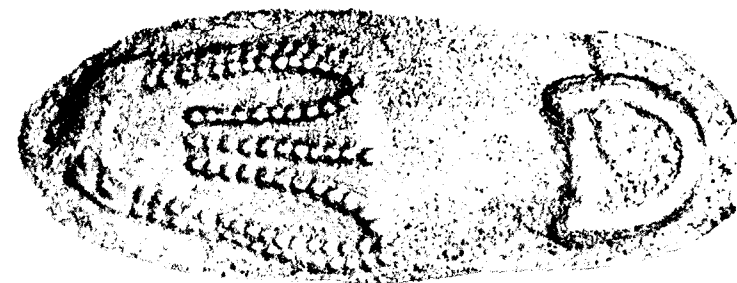


Fig. 3.
Impression in sand.

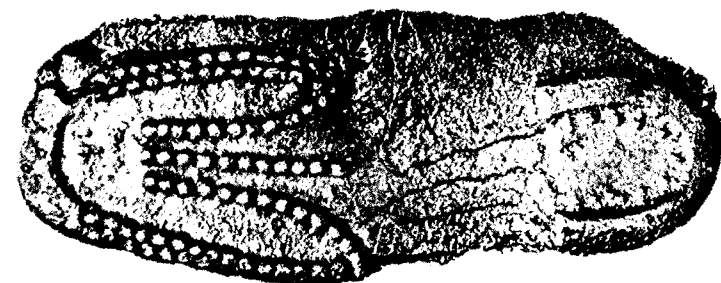


Fig. 2.
Impression in dry earth.

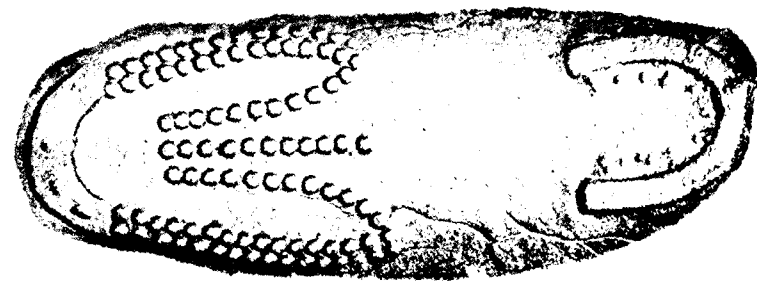


Fig. 1.
Impression in Clay.

He advised that the footprint should be carried away, but this is obviously impracticable if the footprint be in dry earth or in sand.

Hugoulin's method was to place on the footprint a kind of grill, whereon a sheet of tin was placed. Upon this live coals were deposited, so as to heat the entire impression. The grill, tin, and coals were then lifted up, and as much fine, pulverized stearic acid was spread on the footprint as the heated soil upon which the impression lay could absorb. But this method has one great drawback, namely, the difficulty in carrying it out.

Methods involving the use of mixtures of plaster and cement are useless, since the presence of plaster impedes the solidification of the cement. Satisfactory casts may be obtained with plaster of paris, and also with melted wax, and an excellent description of the technique is to be found in the small manual of Glaister. Where the impression is in clay a perfect reproduction can be obtained by almost any method. When, however, the footprint is on dry earth—more or less dust—or on sand, difficulties arise.

The writer believes the following method to be simple and rapid in execution, and most accurate in its results. The necessities are a spirit lamp, or other means of heat, a roll of plasticine, and a supply of modelling wax, such as that of Dr. Poller, known as "Hominit" or "Celerit". The impression should be walled off with a rampart of plasticine as described by Glaister, Jun.

It is essential that the modelling wax be melted slowly. The wax should not exceed a temperature of 65 degrees centigrade. When completely melted the wax is spread uniformly over the footprint.

After an interval of five minutes, to allow for cooling, the cast is raised from the footprint, and the adherent earth or sand washed off in water.

Numbers 1, 2, and 3 are photographs of impressions in clay, dry earth, and sand respectively from the boot shown in Number X.

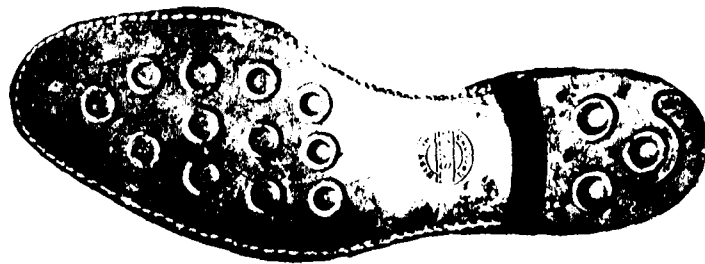


FIG. Z.
Original boot.

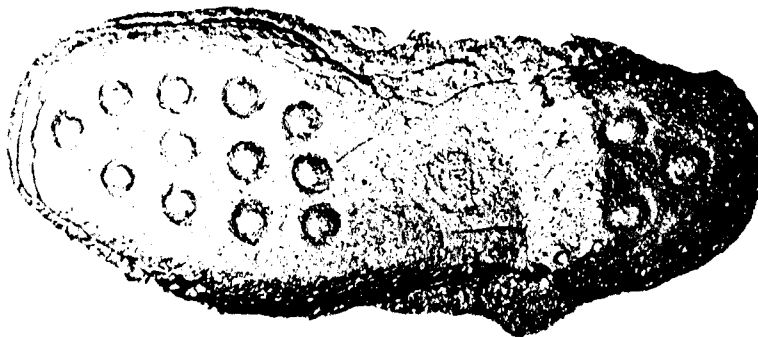


FIG. 5.
Impression in dry sand.

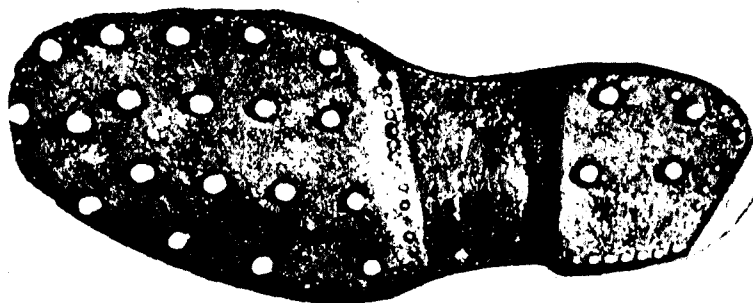


FIG. X.
Original boot.



FIG. 4.
Impression in dry earth.

Number 4 is a photograph of an impression in dry earth of the boot Number Y.

Number 5 is a photograph of an impression in dry sand of the boot shown in Number Z.

I am indebted to Professor Glaister, Forensic Medicine Department, Glasgow University, for his valuable help, and to Mr. Thos. Newton for the photographs.

REFERENCES

- (1) HANS GROS, *Criminal Investigation*, 1934, 360.
- (2) GLAISTER, *Medical Jurisprudence*, 5th edition, 1935, 117.
- (3) *La Police et L'Enquete Judiciaire Scientifique*, 91.
- (4) *La Police et L'Enquete Judiciaire Scientifique*, 91.
- (5) GLAISTER, Jun., *Legal Medicine*, 47.
- (6) GLAISTER, Jun., *Legal Medicine*, 49.

Restrictions on Prosecutions under the Road Traffic Acts

By A. F. S. COTTON

Clerk to the Justices, Epsom

ON page 23 of THE POLICE JOURNAL for January-March, 1936, there appeared a brief statement on the service of notices in motoring cases, and in this article it is proposed to deal with this subject in a more detailed manner.

Section 21 of the Road Traffic Act, 1930, contains certain restrictions on prosecutions under any of the provisions of that Act relating to the maximum speed at which motor vehicles may be driven, to reckless or dangerous driving and to careless driving. In any of these cases the defendant cannot be convicted unless one of three alternative requirements is complied with. Either (a) he must be warned at the time the offence was committed that the question of prosecuting him for an offence under one or other of the above provisions would be taken into consideration, or (b) a summons for the offence must be served upon him within fourteen days of its commission, or (c) within the fourteen days a notice containing the prescribed particulars must be served on or sent by registered post to (i) the defendant, or (ii) the registered owner of the vehicle.

Since the requirement of the section is in every case to be deemed to have been complied with unless and until the contrary is proved, the onus is on the defence to prove that none of the alternatives has been carried out, and if the defendant can do this successfully he cannot be convicted in the case of the offences above mentioned.

There is, however, an important proviso that failure to

comply with the requirement is not a bar to conviction in any case where the court is satisfied that neither the name and address of the accused, nor of the registered owner, could with reasonable diligence have been ascertained in time for a summons or a notice to be served, or the accused by his own conduct contributed to the failure.

If the defence has established the fact that the requirement has not been complied with, it is still open to the prosecution to prove to the Court that with reasonable diligence they could not have obtained the necessary information, or that the defendant contributed to the failure, e.g. the defendant being the registered owner of the car, and driving it, did not stop at the time of the occurrence and went abroad immediately and remained there for more than fourteen days.

It was decided by the Court of Criminal Appeal in *Rex v. Bolkis* (1933), W.N. 13; 97 J.P. 10, that the words in the proviso "the Court is satisfied" refer to the Judge and not the jury and that the "reasonable diligence" also mentioned in the proviso is diligence of the officer in charge of the prosecution, in Bolkis's case the Chief Constable of the county. This case emphasizes the fact that where the name and address of the driver cannot, with reasonable diligence, be ascertained in time, the police may still serve on, or send by registered post to, the registered owner of the vehicle a notice of the intended prosecution, where this information is available within the statutory time limit.

It was no doubt the intention of the legislature to secure that there should be a warning in the appropriate form before a prosecution took place in respect of alleged offences under sections 10, 11, and 12 of the Act, and it is a pity that this was not clearly stated in the Statute.

The Road Traffic Act of 1934 has made two exceptions to the giving of these notices or service of the summons within the fourteen days. By section 34 of the 1934 Act, where a person is indicted for manslaughter in connection with his driving of a motor vehicle, the jury may find him guilty of

reckless or dangerous driving whether or not the requirements of section 21 of the 1930 Act have been satisfied as respects that offence. Again, by section 35 (1) of the 1934 Act the Justices in Petty Sessions have certain powers to proceed on a charge for careless driving on the hearing of a charge for reckless or dangerous driving. Where the Justices adopt this course then, if the requirements of section 21 have been satisfied, or do not apply as respects the alleged offence under section 11, the defendant may be convicted on a charge preferred under section 35 (1), notwithstanding that those requirements have not been satisfied as respects the alleged offence under section 12 of the 1930 Act. For example, if the defendant has been summoned for dangerous driving and the Justices are of opinion that the offence is not proved, they may at any time during the hearing or immediately thereafter direct a prosecution for driving without due care and attention to be preferred forthwith against him. In such a case a charge for careless driving can be proceeded with, although the defendant did not receive a notice or summons relating to careless driving within the fourteen days, provided that a notice or a summons relating to the dangerous driving charge was served within the fourteen days.

With regard to the warning "at the time the offence was committed", these words have received judicial interpretation by a Divisional Court in the case of *Jeffs v. Wells*, heard on the 29th May, 1935. In that case an accident had happened and there was no policeman present at the time. The policeman arrived after an interval of about half an hour, and after inspecting the vehicles and the scene of the collision, and interviewing the witnesses, he gave one of the drivers the warning formula of intended prosecution. The Justices decided, on the submission of the defence, that this was not a warning "at the time the offence was committed". The Police appealed to the Divisional Court, and that Court decided that the Justices were wrong and that a warning given in those circumstances complied with the Statute.

The Lord Chief Justice said: "It is impossible for the

words of the Statute to mean that the warning shall be given at the very moment of the collision, or at the next moment after it." The late Mr. Justice Avory said: "I am not sure whether the Justices, although I am anxious to do justice to their view, thought that in this particular case 35 minutes was too long after the offence was committed; in my view it seems that the notice was given at the earliest time reasonably possible after the arrival of the Police, and while the parties were still at the scene of the accident."

As regards the wording of the notice which may be given when the defendant is not warned at the time of his alleged offence, the section directs that it shall specify the nature of the alleged offence and the time and place where it is alleged to have been committed. It was held in *Milner v. Allen* (1933) 1 K.B. 698; 97 J.P. 111, that a notice in the following form was sufficient:—

"Sir,—In accordance with the provisions of the Road Traffic Act, 1930, s. 21, I have to give you notice that you have been reported for the question of prosecution to be considered in respect of your having driven a motor-car in a manner dangerous to the public in High Street, Rochester, at 9.45 a.m. on Monday, 2nd May, 1932, by overtaking a horse-drawn vehicle and cutting in between same and motor omnibus proceeding in the opposite direction."

The section requires notice to be given specifying the "nature of" the offence, not "the particular offence". It is not necessary that at the date of the notice the police should have definitely made up their minds to prosecute.

It will be observed that the statute says that as regards service of the notice it is sufficient if within fourteen days of the commission of the offence it is served on, or sent by registered post to, the defendant or the person registered as the owner of the vehicle at the time of the commission of the offence. In *Retail Dairy Company Limited v. Clarke* (1912), 2 K.B. 388; 76 J.P. 282, it was held that where a Statute merely directs a document to be "sent" within a prescribed period, it is a sufficient compliance to post the document

within the prescribed number of days, and it is not necessary it should be received, or be posted in time to be received, by the addressee within that period. Mr. Justice Ridley said in that case: "The section in question contains no other words which have application to despatch, and from which it could be inferred that by 'sending' is meant delivery. Sending is in the ordinary sense merely despatch. The word 'send' may, however, be used in connection with other words which indicate that by 'sending' is meant 'delivery' or such a sending that the thing has passed into the hands of the proper recipient. If the section contained words to that effect it would be necessary to follow the decision in *Browne v. Black* (1911) [1912] 1 K.B. 316." In that case it was held that under section 37 of the Solicitors Act, 1843, it is necessary that a solicitor's bill should not merely have been posted but have reached the client's hands one month before an action can be brought upon it, but the reason for that decision was, no doubt, that in section 37 the word "send" is preceded by the word "delivered" and is followed by the word "left". In section 21 of the Road Traffic Act the words used are "served on or sent by registered post".

Section 26 of the Interpretation Act, 1889, provides that where an Act authorizes or requires any document to be served by post, whether the expressions "serve", "give," or "send" or any other expression is used, then, unless the contrary intention appears, the service shall be deemed to be effected by properly addressing, pre-paying, and posting a letter containing the document, and unless the contrary is proved, to have been effected at the time at which the letter would be delivered in the ordinary course of post.

It may, therefore, be that in view of the words of Mr. Justice Ridley, the Court will hold that such a notice under the Road Traffic Act is not valid as regards service unless (i) it was served on the person concerned within the fourteen days, or (ii) it was sent by registered post to him so that in the ordinary course of post it would be received by him within the fourteen days. The moral is, of course, to

serve the notice or to post it, by registered post, well within the prescribed period. If the notice is properly sent by registered post within that period and the defendant or registered owner refuses to accept delivery, it seems, in view of the decision of the Court of Appeal in *Van Grutten v. Trevenen* (1902) 2 K.B. 82, that on proof that the letter was properly addressed and posted, and that it contained the requisite notice the Court would hold that the requirements of the section had been complied with as regards service.

Graphology, Criminal Investigation, and Legal Proof

BY ALBERT S. OSBORN

Author of *Questioned Documents* and *The Problem of Proof*

FOR some unknown reason the big word *graphology* has been restricted in its meaning in England and the United States of America to the delineating of character from handwriting, while on the Continent of Europe, and especially in France and Germany, graphology is understood, in a wider sense, as including the whole knowledge of handwriting, including the delineating of character as a phase of the general subject. There is a common misunderstanding on the subject because one described in France and Germany in reports of trials as a "graphologist" may not be, and probably is not, a delineator of character but what in the United States and England is described as a document or handwriting expert.

Police departments and investigation bureaus would be aided in discovering the writers of anonymous blackhand threats, kidnapping demands and extortion, and abusive letters, if the graphologists could do correctly what they undertake to do. If the detailed and definite description of the unknown writer of an anonymous letter, furnished by the graphologist, could be depended upon, a suspected writer in many cases could at once be identified in a comparatively small community, or as one of a small group of possible writers. What is still more important, a suspected innocent party could by this means be relieved of unwarranted suspicion.

These "delineators of character" from handwriting, as they describe themselves, severely criticize the students of disputed documents who identify handwriting and undertake

to determine whether or not it is genuine. The qualified handwriting expert makes a thorough technical and historical study of the subject and, from its history, its system qualities, the methods of teaching as shown in the writing, and the combination of all the great variety of developed features and delicate characteristics, undertakes to identify a writing as of a particular writer, adequate specimens of whose writing are in hand for comparison. He does not, however, attempt to attach a character value to these identifying qualities.

A complete and mature handwriting like, for example, the many specimens of writing in the incriminating ransom notes in the famous Hauptmann trial, is a combination of hundreds of common, uncommon, and rare characteristics. The principle underlying the act of identification is the combination of characteristics which in quality, kind, and number confirm each other as identifying qualities. These many qualities, features, and characteristics in sufficient number and combination in a disputed writing and a standard writing identify the writer with absolute certainty, but do not show whether or not he is honest and industrious.

should of course be applauded and encouraged, and their methods should be adopted.

The literature of the subject of character delineating from handwriting is quite extended. The subject is much more popular in France and Germany than in America, and graphologists testify in certain courts in those two countries. As a rule, graphologists are not permitted to testify in court in Great Britain and in the United States. If they do testify they conceal the fact that they are graphologists and do not disclose that they base their opinions on graphology. At the recent famous Hauptmann trial in Flemington, New Jersey, a group of six or eight American and German graphologists sat at the defence table for nearly three weeks, but not one of them testified.

The graphologist generally admits, in his reports and his books, that he knows nothing about handwriting history and systems and their direct effect on handwriting. He goes so far as to say that this knowledge is not necessary for his use as a graphologist. He apparently is wholly ignorant of the fact that there have been several handwriting revolutions in America and that the development of the forearm, or so-called muscular movement, in writing in this country was in effect a handwriting revolution and has fundamentally changed the handwriting of millions of writers. The history and characteristics of the Muscular Movement Hand, Vertical Hand, Angular Hand, Round Hand, the early and late Spencerian, the Civil Service Hand, and the many foreign styles of script, have little if any significance to him. These many varying systems all affect handwriting in a great number of peculiar and fundamental ways and aid in its identification, but the graphologist sees only the effects without considering the causes. The true scientist is first interested in causes, and then in effects.

It should be said that some of these occult performers intimate that their findings are not based upon reason, or study, or comparison, but upon some kind of occult ability or inspiration. In order to emphasize his special gift the

graphologist boasts that he has not studied handwriting technically except to attempt to connect certain kinks, twists, connections, slants, forms, and qualities in writing with the intimate, personal character qualities of an individual. It must be said that the boast of his technical ignorance in most cases is a statement of fact. The graphologist refers, in a slighting manner, to this technical study of the history and systems of handwriting as the crude mechanics of the subject of handwriting interpretation.

Graphology appears to be a ridiculous extension and exaggeration of the well-known fact that handwriting does show certain personal qualities of an individual; but they are not the qualities described in the reports and the books of the graphologist. As is true of sewing, carpentry, housework, gardening, or anything done with the human hands, handwriting in sufficient quantity does show to some extent the manual skill, care, neatness, and artistic ability of the writer. Even these qualities, however, are modified and permanently affected by surroundings, by example, by rivalry, and especially by the ability and permanent influence of the instructor of carpentry, or sewing, or handwriting. The later varying and accidental or business requirements made on a particular individual also greatly influence the final result. A clerk who is told that he is in danger of losing his position if he does not acquire a better handwriting may, in a few months, revolutionize his hand, which otherwise would have remained the same. In the meantime his character has not changed.

In Washington's day in America a good handwriting was one of the expected accomplishments of a cultured gentleman. Not alone was John Hancock a fine penman of his period, but Washington, Jefferson, Hamilton, Franklin, Peter Faneuil, Patrick Henry, Aaron Burr, and many other men of the revolutionary period wrote exceptionally fine hands. They responded to the expectations of their day and generation. This is an illustration of one of the outside influences that may modify handwriting.

The fundamental defect in graphology, that makes it unscientific, is this fact that handwriting, to a large extent, is an accomplishment acquired by imitation that is affected, not only by the models upon which it is based but by many differing physical abilities of the particular individuals, and by many of these other varying and unknown outside influences. A handwriting may be radically changed through the example and influence of one admired correspondent. Qualified technical students of the subject also know that even an adult writer, in a few months, can be taught a new and entirely different style and quality of handwriting. This changed handwriting will be new in just those particular qualities and characteristics described in the books and depended upon by the graphologists. Changing characteristics of this kind cannot be reliable indexes of character. Because of poor teaching alone a writer may, in effect, be a handwriting cripple throughout a whole lifetime.

Now let us consider just what graphology is. The truth is that nine-tenths or more of it, at least as practised, is in effect a sort of fortune-telling and, like other fortune-telling, even if true, except as a kind of effeminate parlour entertainment, seems like wasted effort. The great mass of it is poor, petty, childish piffle and wholly unimportant. The graphologist will admit that this uncomplimentary description is quite true of numerology—by the way the most popular fortune-telling system of the present day in America—and the astrologer will speak very critically of the assumptions of the palmist and the physiognomist.

The study of graphology, as is true of many cults, undoubtedly develops a tendency to draw inferences from mere shreds of evidence and promotes a childish credulity, often combined with a confident assurance, that is the opposite of scientific. Unless the graphologists are misrepresented by their own printed discussions, the study tends to disqualify a student of the subject for real scientific handwriting identification and analysis based upon scientific comparison, study, and reasoning. Many actual handwriting problems

are of great importance, involving property, liberty, and even life, and of course deserve the most serious attention. Their solution should not depend upon any unproved method or system.

It is true that there is now much interest in many kinds of fortune-telling, including graphology. It was thought when printing was invented and the methods of science were developed, that much of the ignorance and many of the ancient, fantastic fads and practices would end, but unfortunately this is not the fact. Hundreds of thousands of dollars are paid every year to fortune-tellers, ranging all the way from wandering gypsies up to the pretentious performers who reap princely incomes from the credulity, the ignorance, and the sorrow of the human family. Ancient literature contains many references to divination, and kings and princes consulted the oracles, although, even in those days, there was a prevalent suspicion that the soothsayers "laughed in their sleeves".

The technique and procedure of the various kinds of fortune-tellers are much the same, no matter what particular method is employed, nor what the alleged basis may be for the expressed opinion. The fortune read out of the arrangement of the tea grounds in the bottom of a tea-cup is no doubt as reliable as the product of the more elaborate systems. If accurate verbatim reports are made of the wordy statements of the various fortune-tellers it will be found that the palmist, numerologist, phrenologist, astrologer, and graphologist use much the same language and their reports are remarkably similar.

Experiences of members of the human family are necessarily duplicated in many ways, and what are described as "perfectly wonderful" statements of the fortune-teller often are shrewd and skilful descriptions of common notions, ambitions, prejudices, and experiences that are, however, skilfully put in vague but suggestive language. A dark cave is the ideal location for a fortune-teller, but dull light and appropriate hangings, and especially a certain kind of low,

distant music, are appropriate accompaniments. An East Indian, red turban also adds to the total effect and helps raise the "goose-flesh" on the credulous listener. Trusting patrons as a rule are not competent critics, and the skilful performer tells them many things, most of them untrue and incorrect, but with a few correct guesses included, and these are the ones that the trusting patron grasps and remembers. The errors are forgotten and the "sitter" comes again for more occult information.

There are many people who have their fortune told every year. It is related that within recent years an astrologer in America received an annual income of more than fifty thousand dollars from trusting patrons. It would thus seem that the "expanding universe" has but little meaning to many members of the human family and for them Galileo lived in vain.

Books on graphology and these various other fortune-telling subjects of all kinds are much alike; there is more than a suspicion that they are not written to be understood. As the excerpts printed herewith show, they have many big words and many long, involved sentences stating in most positive and solemn ways the most presumptuous guesses and the most evident platitudes. Much of this matter has no intellectual value whatever and is a sort of "fe-fi-fo-fum" performance conducted in a slow and solemn manner. It is obvious that fortune-telling language is not intended to convey ideas, but simply to impress the hearer and produce a kind of hypnotic effect.

The frail basis of this so-called science of graphology is most effectively shown by the books on the subject that aim to give the principles upon which the most positive conclusions are based. Even the latest works, purporting to be ultra-scientific, when analysed and correctly quoted, show gross assumption and pitiful credulity. They analyse the handwriting of Washington and Napoleon, and tell us that they were great soldiers.

No criticism of graphology can be more damaging to its

pretensions as a science than actual quotations from these leading books on the subject. When these definite statements are separated from the embroidery of big words surrounding them, the frailty of the reasons for the most positive pronouncements is apparent. As with all classes of fortune-tellers, the sense of the ridiculous seems to be dulled or lost altogether. These quotations show clearly why graphologists should not be asked to assist in the administration of justice.

A few examples of graphological readings are given below. If anyone who possesses a fairly logical and scientific mind, as well as a slight sense of humour, will carefully read these findings, he will probably agree that graphology is not yet an established science. These quotations are taken from the latest, and what is admittedly the leading, work on the subject, *The Psychology of Handwriting*, by Robert Saudek.¹

"... that upright writing is indicative of a reserved proud character, subject to the sway of self-control..." p. 189.

"(just as open 'a's' and 'o's' and the garland forms will supply evidence of the harmlessness of his intentions.)" p. 194.

"A pasty writing (*écriture pâteuse*) is always indicative of pronounced prevalence of sensual traits." p. 42.

"Wide writing is always an indication of assiduity, frankness, impetuosity and impatience, whereas narrow writing points to self-restraint and reserve." p. 35.

"Coupled with pronounced initial emphasis, which invariably betrays a person who attaches great importance to creating an impression..." p. 106.

"Thread-like style (hence hysteria), spacing entirely lacking in significance, expresses obtrusive arrogance, coupled with internal emptiness, and suggests a very low standard." p. 159.

"The converging lines and the lack of separation of the words point to a lack of clearness of mind, the arcade style and the wavy line are indicative of pronounced mendacity." p. 164.

"Physical indolence is shown by the uncompleted forms of letters in which generally the last down stroke is broken off half-way down..." p. 183.

"This schematic attitude in his mental life progresses (the

¹ Published by George Allen & Unwin, Ltd. The author has died since this article was written.

continuity grows visibly), and the impulse to greater lucidity of thought becomes more and more intense. This internal mutation has been accomplished consciously, and not without internal conflict." p. 279.

"But the differences of disposition, neatness, pedantry, superficiality, veracity, mendacity, selfishness and altruism, modesty, ambition, vanity, are all revealed in the handwriting of children in no less a degree than in that of adults." p. 6.

"To insert high 'i' dots, a stretching movement of the hand is required, a centrifugal movement. To perform such a movement with a hand which for physical reasons is so prone to a closing movement, as is displayed in the bent forms of the above-mentioned amplifications, there must have been an extraordinarily strong impulse to centrifugality (that is, to self-denial, to self-negation, to altruism, and to enthusiasm)." p. 211.

and if he passes that satisfactorily, his appointment is confirmed, and he takes his place as a permanent member of the staff.

It has sometimes been argued that a course of instruction in detective work is unnecessary to an officer who is to be engaged solely upon photography; with this theory I am entirely in disagreement, for whatever branch of the service a man is employed in he is a policeman, and as such he cannot know too much about his job.

The police photographer is constantly called upon to go into the witness box, and must be conversant with the laws of evidence.

There are very few important cases in the metropolis that one or other of the photographic officers does not have a hand in, in one way or another, and he has the opportunity of observing at first hand the methods employed by the officer in charge of the inquiry.

In this way, by keeping his eyes and ears open he accumulates a store of information on criminal investigation which will serve him in good stead, if he ever leaves the photographic branch for ordinary C.I.D. duties, and often enables him to suggest a helpful line of action in the conduct of a case.

During my term at Scotland Yard I have witnessed an enormous growth in its photographic activities. My first recollection is of a fair-sized room with a piece partitioned off on one side for a dark-room, and the consumption of developer was about 240 oz. per week, now, including the three dark-rooms, there are ten rooms of various sizes in occupation and the amount of developer used is a little less than 4,000 oz. weekly.

The Photographic Section at the Yard is very much like the photographic side of a newspaper, inasmuch as that there is a constant cry for speed, and yet more speed.

In a goodly number of cases the facility to produce a result rapidly, decides whether a person who is detained by the police shall be charged or released.



WASHING, DRYING, AND SORTING ROOM

Simple Photography for Policemen

By DETECTIVE-INSPECTOR J. O'BRIEN

Metropolitan Police

IV

I SOMETIMES read articles in our newspapers and periodicals dealing with the internal organization of Scotland Yard.

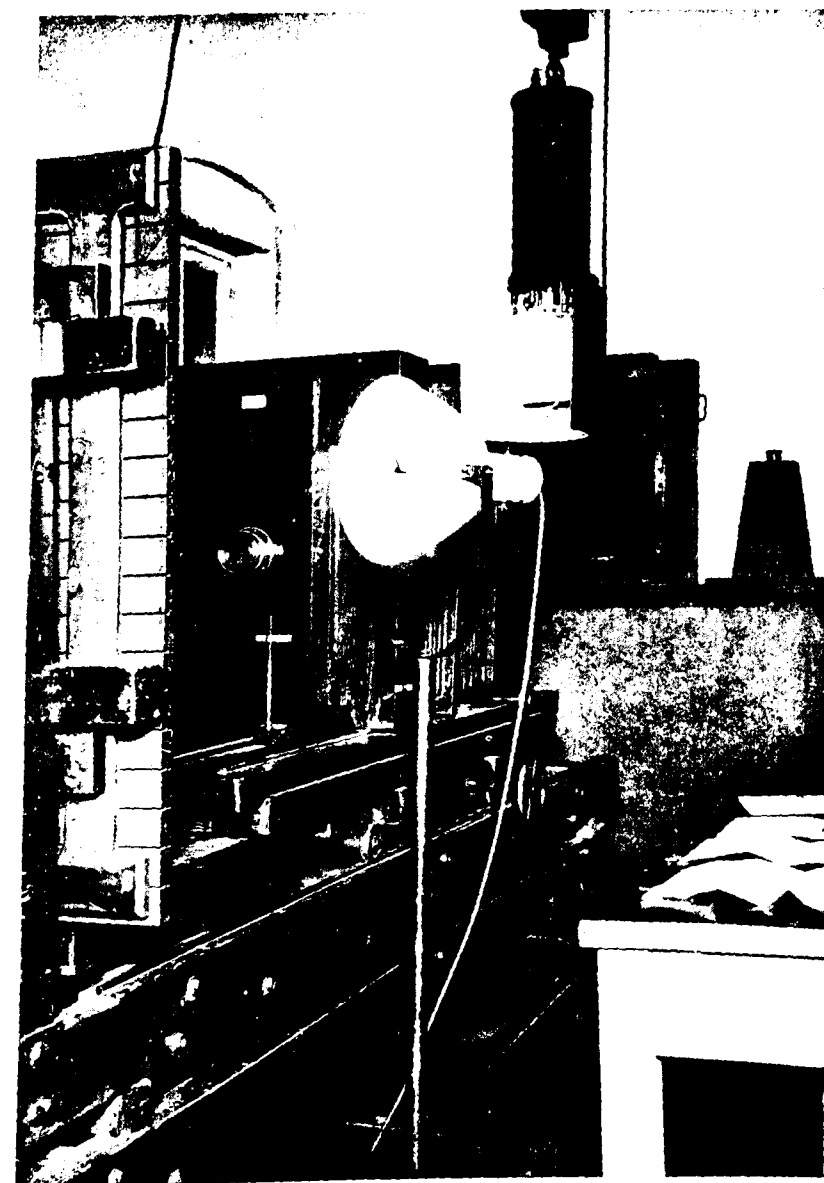
The descriptions vary from time to time, according to whether we happen to be in favour or not, at the particular moment that the article is written, and the staff are accordingly represented as anything from supermen who only have to appear out of doors to make the whole world tremble, to myopic old gentlemen groping their way through a maze of cobwebs. There are many people more competent than I am to describe the main part of the Yard; but let me try to give you some idea of the work of the Photographic Section.

The staff consists of seven officers who are all expert photographers and are capable of undertaking anything that can be accomplished with an ordinary camera.

When a recruit joins the Metropolitan Police, and claims to have photographic experience he is interviewed by one of the staff of the Photographic Section, and if he is found suitable, his name and particulars are noted and added to a list of applicants for transfer to that section when a vacancy occurs.

If a man is required, three or four of the most likely applicants are directed to attend the Yard for a practical test, and on this the final selection is made.

The successful applicant is then transferred to the Criminal Investigation Department as a probationer for twelve months. During two of the months of the probation period, he has to undergo a course of instruction in the theory and practice of Criminal Law, in common with other embryo detectives. At the end of the course he sits for an examination



PROCESS COPYING CAMERA

Showing carbon arc and half-watt Lighting systems, which are interchangeable.

(face p. 468)

This sentence looks somewhat involved to me, so perhaps I had better try to make my meaning clearer.

Now, it very often happens that a person is detained on suspicion of being in possession of a forged document—usually a passport or an excise licence on a motor-car.

Perhaps the best way of deciding whether the document is genuine or not, is to photograph it with the ultra violet or infra red rays.

This is very quickly done, and as soon as the plate is developed the forgery, if such is the case, is revealed, and the evidence on which to base a charge is ready to hand.

In this direction it is a rather interesting fact that although we have had quite a number of these cases during the present year, not in one instance has it been necessary to prove the photographs in the witness box. In every case as soon as the prisoner has seen the photograph he has pleaded guilty.

It is satisfying to know that with every "faked" passport so detected, another alien departs for his homeland.

There are many other instances in which it is necessary to produce prints as rapidly as possible, such as circulating a photograph to the ports, to prevent a person who is wanted from leaving the country; to catch the Air Mail, and so on.

Cases of real urgency are naturally given precedence over the ordinary work, and other matters are put aside until they are disposed of, but there is the type of person, fortunately not very common, who thinks that all other work should be stopped every time he wants something done, and does not realize that by holding up the routine of the department everything is thrown out of gear for the time being.

Although a great part of the work of the Photographic Section is reproducing copies of photographs of prisoners for record and identification purposes, and is actually carried out at the Yard, the calls for officers to attend places where crimes have been committed run into hundreds in the course of a year.

The time thus spent, in addition to that spent at courts, makes a serious inroad into the working hours of the day.



THE PHOTOSTAT ROOM

(face p. 470.)

Indeed it is an event to have the whole of the staff present for a complete day.

This seems to prove, however, that we are pulling our weight, and as far as I can remember have never yet turned a job down as being impossible. In some cases especially, when photographing finger-prints, some little ingenuity is required to get a satisfactory result. Two instances of how awkward conditions have been overcome will serve to illustrate my meaning.

Some few years ago we were asked to photograph a finger-print on the outside edge of a window sill about 40 feet above the ground. At first glance there appeared no way of getting the camera into position, short of erecting some sort of staging to stand it on.

This would have been out of all proportion to any value the print may have had.

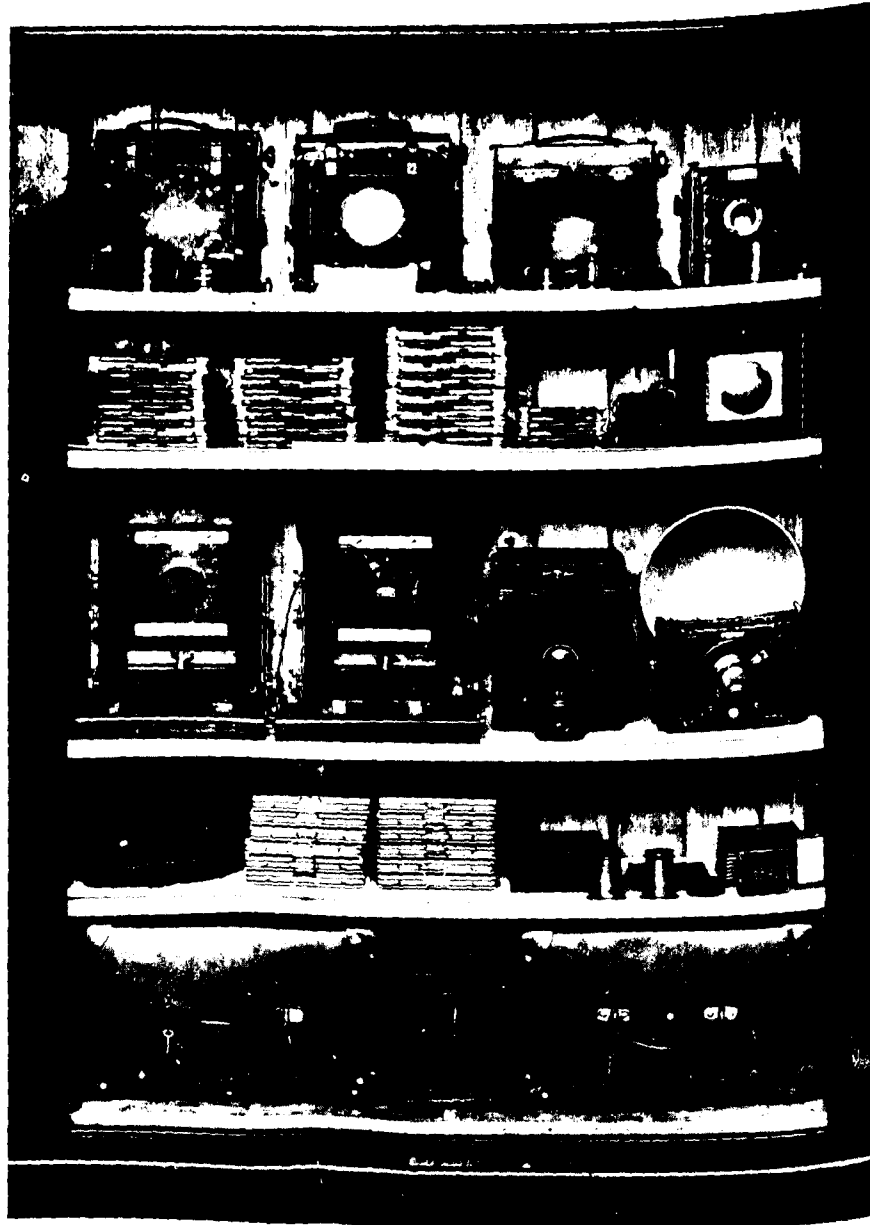
The photographer got over this difficulty by borrowing a hand-mirror from the lady of the house, tying it to the end of a piece of stick and fixing it over the edge of the sill, in such a way as to reflect the finger-print. He then photographed the image in the mirror, and got quite a good result.

On another occasion a finger-print was found in a small store-room at a suburban railway station. There was no artificial light in the room, and although the sun was shining brightly outside, so little daylight penetrated the room that the chances of getting a decent photograph were pretty remote.

This officer also had recourse to a mirror, he used it to reflect a beam of sunlight through the door on to the finger-print, thus illuminating it well enough for him to get a good picture.

Continually attending, as we do, scenes of violence and sudden death, it would be strange if now and again we did not meet with an untoward experience.

One such incident occurred to me a few years ago. I had been called during the very early hours of the morning to a house in which a man had been found lying dead with a bullet through his head.



ONE OF THE EQUIPMENT LOCKERS

Try to imagine the scene. Day was just beginning to break and only sufficient light percolated through the drawn blind to enable one to discern the outline of the contents of the room as I entered it.

The dead man was lying flat on his back on the floor, in a narrow space between the foot of the bed and a large wardrobe. Both arms were bent at the elbows, with the hands palms upwards, roughly in a line with the shoulders. The fingers were half-clenched and quite stiff with *rigor mortis*. As I stepped over the body to draw up the blind the loop of my shoe-lace became entangled in his fingers, so that when I lifted my foot I felt a tug, and for an instant thought that the dead man had caught hold of my foot. You can imagine the unpleasant sensation I felt, for the few seconds it took me to disengage my shoe-lace. Some few years ago one of my colleagues actually arrested a man for a murder whilst taking the photographs of the victim.

It happened this way. A girl had been strangled in a house in a back street in the West End, and a photographer had been taken to the house and left alone to get on with his work. Whilst he was there he heard the letter-box rattle. Going into the hall he found a note on the mat addressed to another inmate of the house. The contents showed him that the writer knew more about the murder than an innocent person should.

He quietly opened the door and saw a man, who was the only occupant of the street, hurrying away. The officer quickly caught the man up, and after a few questions took him to the police station where he was subsequently charged with the murder. The photographer then went back and finished taking his pictures.

Just a case of quick thinking and knowing how to act in an emergency as well as knowing how to take photographs.

Well, a photographer's life at the Yard is a pretty full one, and he has not much time for theorizing. Something fresh crops up nearly every day, and new processes are continually arising. There is always something fresh to learn and will be, I suppose, in a hundred years time.

The Betting Dilemma

By CONSTABLE T. E. H. JERVIS

Liverpool City Police

POLICE Officers are admittedly not the most competent judges of that highly controversial subject—the legislation of ready money betting. They are too well acquainted with the street bookmaker and know too much of the clandestine methods used to obtain evidence to remain wholly impartial on the subject. For this reason, therefore, the recent decision of the Salford Watch Committee, made as a result of the Chief Constable's report, to recommend the legislation of ready money betting will receive, no doubt, an enthusiastic welcome.

For many years the general public has been puzzled by the attitude of the official mind towards a pastime which has been made criminal for some and legal for others. The inequality of the law has in fact produced a strong feeling of resentment among the poorer classes—particularly in those districts where street betting is common. The Police in their efforts to curtail it have necessarily jeopardized their relations with the public and a consequent lack of efficiency in dealing with other forms of crime has been inevitable.

How then did this inequality arise? The issues which have led to the present distinction between credit and ready money betting were created by the desire of well-meaning people to prevent the poor man from wasting his money. These people, who were representatives of various religious bodies, were able by the influence they exerted in the nineteenth century to prevail upon members of Parliament to introduce legislation which has proved a bone of contention

ever since. Instead of a religious or moral question it became a political one. For whilst on the one hand it was agreed that betting was essential to the horse-breeding industry, since horse-racing had become a form of public entertainment, on the other hand it was held that betting was morally wrong particularly for the working man, who should be prevented at all costs from squandering his hard-earned wages.

Such then was the state of political opinion existing in 1853, when great anxiety was caused by the alarming increase in the number of betting houses of ill repute. Eight years had elapsed since a half-hearted attempt had been made to deal with this question; for by the Gaming Act, 1845, all contracts or agreements by way of gaming or wagering had been rendered null and void. Instead of abating the desire to bet, it had however increased it, for a certain class of persons appeared—the predecessors of our present-day bookmakers. They established themselves in offices and offered to bet with all and sundry, and collected a number of idle and worthless men who were nothing more than a public nuisance.

The Betting Houses Act of 1853 was intended to abolish this nuisance once and for all. 'It had been suggested,' said Viscount Palmerston when introducing the bill, 'that a more effectual course would be to license these houses; but for his own part that would be discreditable to the government and would tend to increase the mischief instead of preventing it.' Could the worthy Viscount but have foreseen the complications, hypocrisy, and ill-feeling that his bill was to cause, he would no doubt have made the same recommendation as the Chief Constable of Salford. As it was, the bill passed through both Houses without debate and was made law a month after its introduction.

The inevitable result was the beginning of our pernicious system of credit betting. Bookmakers set up in business as respectable business men. They employed touts; they advertised; they gloried in the clause of the Act which defined betting houses as places which were "resorted thereto"; and assisted by the government through the

innovation of the telegraph and later the telephone, willingly offered terms of credit to all their wealthy clients. Everyone, leading in fact, was catered for except the working man, who was driven to nominate his own agent in the form of the "street bookmaker".

Fifty years later on we find the government again becoming anxious about the betting problem. In 1892 they had passed the Betting and Loans Infants Act which imposed heavy penalties on persons convicted of sending documents to persons under twenty-one inducing them to bet, and now a Select Committee of the House of Lords was appointed to inquire into the increase of public betting amongst all classes, and whether any legislative measures "are possible and expedient for checking the abuse occasioned thereby".

In its report the Committee were convinced that it was impossible altogether to suppress betting, but they believed that the best methods of reducing the practice was to localize it as far as possible on race courses and other places where sport was carried on. Although the suggestion was again made for allowing the establishment of betting houses under state control, the Committee rejected the idea and suggested instead the imposition of heavier penalties for those engaged in street betting.

The outcome of this report was the Street Betting Act, 1906, and many interesting and heated discussions ensued before it was finally made law. Mr. Bottomley—a keen opponent of the bill—condemned it "as a blind act of surrender to Nonconformist and other ecclesiastical influences which told them they had to put on the statute book a lot of puritanical social legislation of this character". Sir Edward Carson took strong exception to the government permitting the use of the telegraph and telephone. Numerous other objections were made, Police opposition being quoted again and again; but, to use Mr. Bottomley's words, "the blind act of surrender" went forward and a second attempt was made to persecute the poor for a pastime which was legal for the rich.

Nothing of importance followed this Act until 1923, when a Select Committee was appointed to inquire into the practicability of imposing a betting tax. The government, recognizing the failure of their previous attempts, were driven to extorting revenue from the very people who encouraged the betting practice. Apart from the fact that this Committee was compelled, owing to the dissolution of Parliament, to send an incomplete report which suggested that the betting duty was practicable but not desirable, some interesting facts were brought to light by Police witnesses which are as true to-day as they were then. It was disclosed that "in street betting cases, alone among crimes, the sympathy and active assistance of the general public in the neighbourhood is with the bettor, whether bookmaker or backer, and against the Police. Not only is no assistance given to the Police: on the contrary, 'obstacles are put in their way and every assistance and particularly warning of the presence of the Police is given to the bettor by all who happen to be present in the street' ". Yet, in spite of this evidence, nothing was done except to aggravate a position which was rapidly becoming a farce. The betting tax was made law. Bookmakers were now compelled to pay tax for their livelihood, although they were still prohibited from recovering their debts through a Court of Law; whilst the Police were invited to continue to enforce a law which not only had outlived its efficiency but was proving a serious obstacle in overcoming the more serious forms of crime.

The Royal Commission on Police Powers in 1929—the next public body to consider the question—did however have some sympathy for the Police. They recognized that street betting presented an insoluble problem for the Police, particularly in its present state, which they described as class legislation. But they made no recommendations: it was left to another body—the Royal Commission on Betting and Lotteries—in 1932, to begin the whole dreary business over again. Police evidence was again called and was unanimous in condemning the system of street betting. 'In no branch

of legislation,' it was said, 'has the claim that there is one law for the rich and one for the poor so much colour as in connexion with street betting, as the man whose position justifies credit betting can do so without committing any offence, whereas the artisan and the labourer can enjoy all the excitement of a wager only by entering into conflict with the law.' Three important recommendations were in fact made by the County Chief Constables Association:—

1. All bookmakers should be registered.
2. Premises for ready money betting should be licensed.
3. No person below the age of eighteen should be allowed for any purpose on premises licensed for ready money betting.

Four years later, however, we find this evidence and recommendations still disregarded, the public remaining as much at sea over betting as they were when the 1853 Act was introduced.

The government, in disregarding the evidence of the Police—whom we will call the expert witness—passed a bill with the sole object of curtailing still further the opportunities for betting.

The Betting and Lotteries Act, 1934, not only limited the number of days for greyhound racing—again the poor man's sport—but also prohibited any person from taking part in a public lottery either in this country or abroad.

But, as is always the case when a law does not find general acceptance, the public have solved the problem themselves by pool betting. Over 10,000,000 people now have their weekly flutter on the pools, and, because they see nothing wrong in it, they are prepared to defend their rights by boycotting football matches, if the necessity should arise. Once again the mistakes of our legislators become more apparent than ever. Had ready money betting been legalized in the first instance and the Gaming Act of 1845 been repealed, insofar as it relates to rendering all betting contracts null and void, the present controversy over pool betting would have been avoided. If pool betting had been placed

on a proper business footing, this would have saved all the existing unpleasantness between the Police and the public: moreover, there would not be the present temptation to bet—knowing full well that failure to pay cannot be remedied through the Courts. The result of our policy has been to ensure that pool betting shall afford vast opportunity for corruption.

As matters stand, the government neither discourages nor encourages betting. It reaps a substantial income from the bookmakers, totalizators, the sale of postal orders and postage stamps, and gives a sympathetic ear to any religious deputation asking for pool betting to be abolished. Sooner or later the real facts will have to be faced, and it is hoped that the exaggerated conception of betting as a deadly sin will be succeeded by one which regards it as a diversion providing an outlet for the monotony of everyday life, a diversion which, in the interests of the community, needs to be safeguarded and controlled, but which is not in itself essentially evil.

A Common Law Conspiracy

By CONSTABLE F. ELMES

Dorsetshire Constabulary

STATUTE Law has increased to such an extent during the past two or three decades that our Common Law has largely fallen into disuse. The time may come when it will be dispensed with entirely, but, at present, there are still occasions when it can be used as the most convenient vehicle for Justice. One great advantage it has over Statute Law, inasmuch as the circumstances in the case of Statute Law offences have to square with the wording and meaning of the Statute; whereas in Common Law offences the charge can, to a certain extent, be made to square with the circumstances.

An outstanding example of the value of Common Law in unusual circumstances can be found in the "public mischief" charges which, during the past few years, have proved so effective in checking the epidemic of bogus complaints of assault, robbery, and other crime.

An interesting case in which resort was had most successfully to Common Law occurred at Dorchester early in 1934. In itself the actual offence was not unusual, consisting as it did of the very common fraud of inducing members of the public to purchase an inferior article at a superior price on the promise of reward through a "free gift" or "bonus" scheme.

Early in January a team of canvassers, about six in number, descended upon Dorchester and made practically house to house calls. They were offering for sale tea which they described as of the finest quality, with various other appellations such as "Choice Blended" and "Golden Tips", at

3s. per lb. Their firm, they said, had decided to advertise their goods in Dorchester by offering under a "free gift" scheme £3 to each of a limited number of persons who would buy one pound of tea for four weeks, or, alternatively, 30s. to those buying a half-pound each week for four weeks.

Many people were persuaded to buy tea as a result of the strong inducement, although all of them described it as very poor stuff indeed. One valiant old lady, an old age pensioner, declared in the witness box that she "would not disgrace her tea-pot with it"!

The canvassers were seen at work by the police and one or two more or less desultory inquiries soon elicited the fact that, although the canvassers were telling customers that a limited number of persons only were to receive the £3, each purchaser was being told that she or he were amongst those who had been selected to receive the gift. As the number of purchasers was known to greatly exceed the "limited number", which was generally set at twelve, the matter was at once taken up seriously, and a thorough investigation made it obvious that the whole thing was a ramp.

The tea was examined by experts who pronounced it to be worthless or very inferior; inquiries revealed that the "office" of the firm at Southampton was nothing but a small room, containing a borrowed table and chair and which, in any case, was never used. It was also found that the name of the firm varied from time to time.

Sufficient evidence was soon forthcoming to justify charges of "obtaining money by false pretences" being preferred against the canvassers, the quality of the tea being brought into question on the one hand and the obviously bogus promise of £3 each to a large number of purchasers of 4 lbs. of tea on the other. Printed handbills came into the possession of the police on which details of the "gift" scheme were set out and names and addresses of persons alleged to have received the gift in other parts of the country appeared on the back. Inquiries revealed that several of these addresses were of houses where canvassers had lodged and, in these

cases, gifts had actually been received, although not all of the persons concerned had been given the full amount of £3. The rest of the addresses were either fictitious or, somewhat ironically, of persons who had been induced to purchase tea but had never received the gift promised.

Although, as has been said, evidence was forthcoming to justify charges being made against the canvassers, it was thought that the matter could scarcely be said to have been brought to a successful conclusion if the principal was allowed to go scot-free. Accordingly counsel's opinion was obtained and, on his advice, three charges of conspiracy to defraud were framed against the principal and the canvassers.

The first count was that the defendants "on divers days between the 13th day of January, 1934, and the 6th day of February, 1934, conspired together and with other persons unknown to defraud . . . the persons offended against . . . and such other persons as could be induced to part with money to the said . . . defendants . . . by false representations that certain tea offered for sale by them being Java tea was Choice Blended or Indian or Ceylon or Golden Tips or Digestive tea".

The second count was similar: "by false representations that the said . . . persons offended against . . . were each of them selected as one of twelve persons in the Dorchester district to receive the sum of £3 each as a gift conditional upon the purchase by each of such selected persons of a pound of tea for four weeks".

The third count, which was "deliberately vague", illustrates the plasticity of Common Law indictments.

The defendants were charged that they "conspired together with divers other persons unknown to defraud . . . persons offended against . . . and such other persons as should be induced to part with money to them BY DIVERS FALSE PRETENCES AND INDIRECT MEANS of their said monies".

It was thought possible that in the course of the trial the defence would reveal other and "bigger brains" behind the conspiracy, but this possibility failed to materialize.

The cases were heard at the Dorset Quarter Sessions and took considerable time, owing to the nature of the charges and the consequent necessity of calling a large number of witnesses. Each defendant was convicted on the second and third counts; the principal and one canvasser were each sentenced to three months imprisonment, a woman canvasser who had a previous conviction for false pretences under similar circumstances was fined, whilst the others were bound over in the sum of £20 each for twelve months.

Inquiries had to be made over a large area and the case evoked much interest amongst the various police forces who assisted. A number of letters were received from all parts of the country complaining of similar types of victimization, and there is no doubt that the case, to use a phrase of the Director of Public Prosecutions who was advised of the proceedings, "will have a very salutary effect upon those engaged in other parts of the country upon a similar type of fraud."

The Money-car Murders

By EDWARD A. DIECKMANN

San Diego Police Department, U.S.A.

AT the time of the startling series of events described in this article, the United States of America was suffering from the drought. It was the era of Prohibition.

The Hotel Agua Caliente, owned and operated by Americans, is situated 4 miles south of the International border in the Republic of Mexico. It is one of the world's most famous resorts where one may indulge in any of the games of chance; watch horses from all over the world compete on the fastest track in North America, or dance to the exotic strains of the Caliente Marimba Band.

The amount of money that flows into the coffers of the Hotel is truly enormous, so every day, except Sundays and holidays, the greater portion of this money is transported to the city of San Diego, California, where it is banked.

At about ten o'clock on the morning of 20th May, 1929, a Cadillac car left the Hotel with over \$85,000 in gold, currency, and cheques. This car was in charge of two Mexican Federal Officers, who acted as guards for the money and as agents of the Agua Caliente Company.

The car crossed the International border, the two popular Mexican officers waving to the American customs officers to whom they were well known, and began the 16 miles drive to San Diego.

On a stretch of road, known as the National City Dyke, between the little town of National City and San Diego, the Cadillac was overtaken by a Ford touring car containing two men dressed in blue overalls.

When the Ford car came up alongside the Cadillac the

man seated alongside the driver of the Ford began firing at the other car with what was afterwards described as a Thompson machine-gun. The first burst of firing actually blew the left rear tyre from the money-car, halting it at the side of the road. Then the machine-gunner turned his attention to the occupants of the halted car.

The road was a well-used one, and at this time of the day was crowded with other cars.

Directly behind the Cadillac was a car driven by a lady, Mrs. D. C. Handley. With her in the car was another lady, Mrs. John Stanley. These two women had what might be termed a grand-stand seat from which to view the terrible tragedy being unfolded before them.

"The Ford was making terrific speed," related Mrs. Handley, "when it overtook the Cadillac. After the cars stopped the two overall clad men jumped from their car, one running round to the opposite side of the larger car. Both men had guns in their hands and were firing into the passenger compartment of the stalled car. Only one shot was fired by the occupants of the other car. The firing ceased as suddenly as it began. Then one of the bandits lifted a large satchel from the Cadillac, threw it into the Ford; jumped in himself, to be followed by his partner. The Ford shot away in the direction of San Diego."

Mrs. Handley, with that rare presence of mind and utter disregard for personal safety so often displayed by the so-called weaker sex in times of stress, slammed her car into gear and followed the escaping killers.

At first she gained on the fleeing car. Then in a blur of dust the Ford swung round a corner into an unpaved street. As the bandit car made the turn, Mrs. Handley saw one of the men glaring at her through the rear window of the car as he raised the machine-gun. She prudently gave up the chase at this point.

Another car, driven by Mr. R. W. Smith, of 3639 Bancroft Street, San Diego, was coming south along the Dyke and was but a scant 50 feet away when the firing began.

As the bandit car sped away, Smith obtained the registration number. It was California—5 E 41 32.

The first officers to arrive found that both the money-car guards were dead, riddled with bullets, and that the money was gone.

The excitement was intense. Such a bold crime, committed in broad daylight on a busy highway, was more than sufficient to cause the gathering citizens to display all the symptoms of hysterical frenzy.

The Chief of Detectives, Paul J. Hayes, of the San Diego Police, kept his head, however, and began a systematic search for the killers. He dispatched two officers to take up the trail of the bandits' car, sent officers to cover all the roads leaving the city, and broadcast the registration number of the Ford car throughout the State of California. He also sent a telegram to the State Bureau of Automobile Registration requesting full information on the registration number, 5 E 41 32.

The two detectives detailed to trail the car had little difficulty in following its course. It had travelled at terrific speed along unpaved streets, and the pronounced skid marks, made when the car turned, acted as guiding stars. They located the car in less than a half-hour after the hold-up!

While one of the officers examined the car, his colleague, after telephoning headquarters, questioned a man who was engaged in mowing his lawn across the street opposite where the bandits' car was found. This man saw the car drive up, he said, and saw two men get out of it and drive away in another car. He thought nothing of it at the time, and would not have paid any attention to the episode if it had not been for the fact that one of the men took off a pair of overalls and threw them into the car. He did not know the make, or type, of the car into which the men had transferred, nor could he give a description of the two men. It looked like a dead end.

The Ford car was interesting. The wind-screen had been removed, as had the glass in the rear window. This, of course, was to facilitate the use of a machine-gun. The car

had been roughly daubed with black paint under which the officers discovered clean grey paint. Inside the car was found a discarded pair of old overalls and two pairs of dark sun-glasses. These were in the rear compartment. In the driver's compartment was found an old grey cap; a .45 calibre automatic pistol cartridge case, which had been fired, and a bag containing a quantity of red pepper. All of these articles were allowed to remain as found, pending the arrival of identification experts from headquarters.

Fifty feet from the bandits' car, and buried in the soft dust of the street, was found a key bearing the number A-935. This key fitted the ignition lock of the Ford car.

The clues were few, and misleading. The description of the bandits, furnished by the various witnesses, might fit any one of a thousand men.

The Ford car proved to have been stolen from a local garage twelve days prior to the hold-up. It had been repainted.

The licence plates proved to be ones stolen from a parked car, in a city 900 miles to the northward, the owner of which was a reputable citizen who easily proved that he had no connection with the crime.

True, the sun-glasses bore excellent single fingerprints. This, however, was of little use. Single finger-print classification, and identification, was in its infancy in our department in 1929.

There was nothing about the old grey cap to distinguish it from thousands of others, and owing to the fact that both the bandits wore gloves no identifiable latent prints were found anywhere on the surface of the car.

The latent prints on the sun-glasses, left there in an unguarded moment, were the only clues worth mentioning. That, and the established fact that a machine-gun had been used.

It was most evident that the hold-up was a well-planned one, and carried out with a maximum of efficiency. On this very fact Chief of Detectives Hayes based his hopes of

capturing the criminals. "From the facts," he said, "that this crime was evidently planned a long time in advance; that it is undoubtedly the work of a more or less well-organized gang; that at least four people took part in the perpetration of it" (there was a driver of the get-away car which took the actual hold-up men from the point where they abandoned their Ford, and a car was observed to cut in ahead of the Cadillac to slow it down just before the shooting began), "I am firmly of the opinion that someone of the gang has made some serious blunder which we shall discover, and which will lead to their apprehension."

But it began to appear that Hayes was a bit too optimistic. In spite of the fact that as many of the numbers of the stolen bills as was available had been broadcast throughout every State west of the Mississippi River, together with as complete a description of the bandits as was possible, and that the President of the Agua Caliente Company had posted a reward of \$5,000 for information leading to the arrest and conviction of the murderers, nothing developed for several days subsequent to this brutal crime.

It is true that the police received many 'tips' from well-meaning citizens who believed that they had some valuable information relative to the case. All of these required careful investigation and kept a squad of officers busy day and night. It remained, however, for a little girl, nine years of age, to furnish the first definite clue to the criminals.

On the third day following the crime, a milk-cart driver stopped in front of a house in one of San Diego's exclusive residential districts to check over his daily receipts. As this was his district he was well known to all the residents, and therefore it was not surprising when a little girl came up to him and showed him a key that she said she had discovered on a piece of waste ground near-by. The milk-cart driver examined the key and saw that it was an ignition-lock key for a Ford car. It had all the appearance of being a new one, so the driver suggested to the child that he should hand it

to the police in order that it might be returned to the owner. The milkman's brother was a member of the San Diego Police Department, so it was to him that the key was given later that day.

The number of the key was A-935! It was the duplicate of the key for the Ford touring car used by the motor-bandits. How had it reached the grass-grown vacant plot in the exclusive residential district?

Hayes did not ponder over that question; he dispatched a squad of detectives to the vicinity and a house-to-house canvas was begun. The officers had something to get their teeth into at last.

While these officers were engaged in questioning householders, another bit of information trickled in to the Chief of Detectives' office via a newspaper reporter who handled the shipping news of the city. It appears that he overheard two water-front characters conversing about the robbery and murders. One of these men made the remark that 'Captain Jerry' was said to have a machine-gun.

The name, 'Captain Jerry,' meant nothing to the newspaper man, but it did to the police. As I stated, in the first paragraph of this article, Prohibition was in force in the United States. Such being the case the country was overrun with bootleggers, and 'Captain Jerry' was notorious for his activities in that line. He had received the title of 'Captain' owing to the fact that he owned a petrol-engine boat, ostensibly to ferry enlisted men of the Navy to and from their ships, and was strongly suspected of smuggling contraband liquor from the rum-ships which were always hovering off the California coast. But the 'Captain's' physical proportions eliminated him altogether from any active part in the crime, and the report that he owned a machine-gun was also discounted by the officers. He was far from being the violent type of law-breaker.

Liquor enforcement officers supplied the fat captain's address. When this was learned it had the effect of a bomb-shell. For he was living at 3559 Villa Terrace, and his home

adjoined the vacant plot where the duplicate key, A-935, had been found!

The detectives who were conducting the investigation in that neighbourhood had also obtained some startling information. From a resident they learned that a Ford touring car had been painted in a driveway at 3403 31st Street at 11.30 p.m. several days prior to the crime; from other tenants near-by they obtained the information that on the afternoon of the murders two men and a woman had left this house carrying handbags, and had driven away in a small car. The registration number of this car was not obtained.

The house in 3403 31st Street was a considerable distance from the home of 'Captain Jerry', and the connection appeared rather vague. When the 31st Street house was searched the only article of interest found was a .38 calibre revolver—a Smith & Wesson pistol, loaded with Western cartridges. In the adjoining garage was found an empty tin which had contained quick-drying black paint. A cheque at the gas and light company revealed that the house had been rented a month prior to the murders by a couple giving the name of Mr. and Mrs. R. K. Jamison.

Clues were piling up fast now. Hayes detailed officers to try to learn where the tin of paint had been purchased, and began a countrywide search for the dealer who had sold the pistol, using the serial numbers of the weapon as a guide.

It was decided to pay a visit to the home of 'Captain Jerry'. It would be necessary first of all to obtain a search-warrant, and here the officers struck a snag. For there was nothing definite upon which to apply for such a warrant, and therefore no magistrate would issue it! But Hayes quickly overcome that difficulty. He called in Mr. William Luckenback, representative of the California State Board of Pharmacy for the Southern California District, and put the problem up to him.

Since the city of San Diego is but 16 miles north of the Mexican border, from where a large quantity of dangerous drugs are smuggled, the State Pharmacy Board maintains

two officials in San Diego at all times. These men, chosen most carefully for their integrity, have most unusual powers. They have the authority to issue their own search-warrants in order to carry out their investigations.

When the circumstances were fully explained to Mr. Luckenback he readily agreed to assist the police in every way, and an hour later four detectives, accompanied by the two State Pharmacy men, approached the home of 'Captain Jerry'.

It was a ticklish situation. If the hold-up men were there the officers were sure of a warm reception from machine-guns in the hands of desperate criminals, so every precaution was taken to surprise the residents of the house.

Luckenback and two other officers proceeded to the front door; two other officers proceeded to the rear of the house, while the remaining two covered either side of the dwelling.

The two officers detailed to the back door found that the outer screen-door was hooked from within. One of the men knocked sharply. There was no response at first, and the officers could hear the peal of the bell as Luckenback pressed it at the front door. Then the inner door was opened by a woman.

"What do you want?" she demanded.

"We are police officers," one of the men replied, "open this door."

"Have you a search-warrant?" the woman queried. She had paled at the words "police officers".

Without further ado the two officers tore the screen door away and pushed past her into the house, one of them rushing to the front door to admit the other officers, the other running into one of the bedrooms.

This last officer's guardian angel was watching over him that day. For as he ran into the room he was just in time to throw himself upon the figure of a man in the bed. This man was in the act of taking a .38 calibre revolver from the drawer of a bedside table.

There was no one else in the house other than the woman and the man, and the man had a bullet wound in the left shoulder. The man refused to talk, and it was a month before he opened his lips. But the woman, 'Captain Jerry's' wife, sobbed out a story that made the officers wonder.

The man in the bed, she said, was Martin Colson. He had been brought to her house on the afternoon of 20th May by a man known to both her husband and herself as Lee Cochran, and a red-headed girl named Jean Lee. Cochran had informed 'Captain Jerry' that Colson had received his wound while engaged in 'hi-jacking' a truckload of liquor up the coast. Cochran was a friend of her husband, she continued, but she had never laid eyes on Colson before. When asked where her husband was, she stated that he and Cochran had gone to the city of Long Beach, 121 miles to the northward.

"Why did you take in a wounded man?" she was asked.

"Because Cochran told my husband that if he did not hide the man he, my husband, would be sorry. He threatened us," the woman answered.

The wounded man was taken to police headquarters in the police ambulance. No sooner had the vehicle stopped in the jail driveway than a man from the Identification Bureau jumped in and took the impression of Colson's fingerprints. These were compared with the latent single prints on the sun-glasses found in the abandoned car and were found to correspond in every particular.

In spite of the woman's denial that Colson had received medical treatment it was soon ascertained that he had. The doctor who had treated him was found, and this man handed over to the police the .38 calibre revolver bullet which he had removed from the injured man's shoulder.

This fact, that it was a revolver bullet, was odd. Both the money-car guards had been armed with automatic pistols. There is every difference in the world between the two types of bullet.

An attempt was made to question Colson, but in spite

of the report of the police doctor that the man was perfectly able to talk if he so desired, he refused to talk. The fingerprint, on the sun-glasses, put him into the murder picture, and that was not all.

The officers detailed on the search for the seller of the black paint, working with bulldog tenacity, made the rounds of the city's paint shops. It was a tedious job, but one that proved productive. After a search of almost two days they found the dealer who sold the paint. This man identified Colson as the buyer.

Then Lee Cochran's car was found in a garage at 3362 Grim Street, a few blocks from the place where the empty paint tin had been found. This house, the officer learned, had been leased to a man giving the name Joseph Renault. Cochran's Long Beach address was found on the registration certificate in the car.

Cochran had a long criminal record, so his photograph was available. This photograph, together with six others of similar likeness, was shown to neighbours in the vicinity and several of these people identified it as being the likeness of the man seen with Colson whom they had already identified. The net was closing in.

The police in the cities of Long Beach and Los Angeles were requested to be on the watch for both 'Captain Jerry' and Lee Cochran. Both men were well known to both departments.

On 24th May, 1929, the Long Beach police notified us that 'Captain Jerry' was under arrest in that city. San Diego officers, both from the Police Department and the Sheriff's Office, were sent north to assist the Long Beach and Los Angeles officers, and to return 'Captain Jerry'.

On the same evening upon which they arrived in Los Angeles, Lee Cochran was arrested under dramatic circumstances by San Diego and Los Angeles officers. From information received, Cochran was located in a hotel in Los Angeles. Following the arrival of the San Diego officers, the place was surrounded and a San Diego officer, accompanied

by two Los Angeles officers, approached the door of the wanted man's room. They were dealing with a desperate man; one with the reputation of a killer; so no chances were taken. The San Diego officer softly fingered the door-knob and discovered that the door was locked. The three officers retreated across the hotel hall-way, to gather momentum, and then hurled their combined weight against the locked door. It crashed inwards. The officers, scrambling over the wreckage with drawn pistols, covered the startled man who was sitting upright in the bed, his right hand hidden from view beneath his pillow.

"Put those arms up, Cochran," the San Diego officer barked, "One move otherwise and I'll let you have it!"

Cochran glanced round at the circle of revolver barrels, and lifted empty hands into the air, smiling as he did so.

"O.K., boys, I'll be good," he said.

A fully loaded Mauser automatic pistol was found underneath his pillow. There is no question but that if the officers had not crashed the door he would have fought to the last.

The testimony of 'Captain Jerry' clinched the case against both Cochran and Colson. He admitted that he had accompanied Cochran to Long Beach where the guns used in the crime had been sunk in the ocean off that city; he admitted that he had helped Cochran burn the cheques stolen in the robbery, but insisted that he had been forced to help the murderers for fear of his own life and that of his wife.

This testimony, together with the physical evidence and the testimony of other witnesses, appeared to make an iron-clad case against the two men, neither one of whom could be induced to talk about the crimes.

The revolver found in the possession of Colson at the time of his arrest; the revolver found in the house where the empty tin that had contained the black paint was found; the bullets extracted from the bodies of the slain money-car guards, and the bullet extracted from the shoulder of the wounded bandit, were delivered to Captain Edward C. Crossman, an internationally known ballistic expert, at

Brentwood Heights, near Los Angeles. His report was damning to the interests of the accused men.

The attitude of Colson was peculiar. He maintained his silence during the three months preceding his trial. When he wanted anything he would draw a picture of it; an orange tree, when he wanted an orange; a cow, when he desired a glass of milk. He made a feeble attempt at suicide, slashing his wrist with a safety-razor blade. In view of his actions it was the opinion of the District Attorney that the man intended to enter a plea of "not guilty by reason of insanity", so an officer was sent to Los Angeles to make a careful investigation regarding the man's activities there. Nothing was found that would indicate that the silent man was other than perfectly sane.

On 5th August, 1929, Lee Cochran and Martin Colson faced Judge C. N. Andrews in the Superior Court of the State of California for a hearing to determine the degree of their crime. Both men had pleaded guilty to murder and robbery.

It was on this day that Martin Colson broke his long silence. He made an impassioned plea on behalf of Lee Cochran!

In spite of everything that the attorneys for the defence could do, both men were sentenced to life imprisonment. Cochran was sent to San Quinten Prison, while Colson's place of expatriation was Folsom Penitentiary.

It is far from being my province to make any comment on the sentence given to these two men; the Honourable Judge probably had the best reasons in the world for what he did. All that I can say is that these two murderers were lucky.

Four other arrests were made in connection with this crime. Three of these persons were dismissed for reasons of insufficient evidence. 'Captain Jerry' received a severe jail sentence for the part he played, in spite of his protestations that it was done by duress.

There is an interesting sequel to this article.

Cochran, from the time he entered San Quinten Prison to this day, has remained a model prisoner.

Colson, however, was of a different type. He was a trouble-maker from the very instant that the gates of Folsom clanged shut behind him. Three times he made desperate efforts to escape, and he spent the greater part of his time in the special punishment cells for infractions of the prison regulations.

Then, one day in February, 1933, came the grand finale. Colson had crept into a cell of embittered hate. He was young, twenty-four years of age to be exact, and the prison walls held no sunshine for him. His prison record precluded any chance of remission; but his mind was far beyond the sun-baked walls of the grim prison. He thought out another plan.

On 11th February, 1933, Colson and another prisoner reported sick and were sent to the prison hospital on the third floor of the Administration Building. As they entered the quiet ward both convicts suddenly whipped out strange looking weapons and levelled them at their guard.

"Come on you," snarled Colson, "you're going down to the first floor with us."

Briskly the guard stepped out ahead. The prison guards carry no arms, so he submitted gracefully. On the way the men encountered another guard, and he too was threatened with death if he made an outcry. Straight to the prison telephone exchange room the two convicts marched their prisoners.

Again it was Colson who spoke up.

"Get the Warden on the 'phone," he barked at the operator, "and tell him to come over here right away."

The operator, with a revolver at his head, plugged in the call. But he kept his wits about him.

"Hello, Warden," he said, "come over to the office right away. It's very important."

Warden Court-Smith, at the other end of the wire, knew

that there was serious trouble. The words of the telephone operator meant that, for they were a pre-arranged signal. Instead of hurrying to his office, therefore, Smith pressed a wall button and the entire prison echoed to the scream of the warning siren.

Colson and his fellow-convict heard the sound with sinking hearts. Their well thought-out plan of using the Warden as a hostage to gain their escape had vanished.

Then came the footsteps of approaching guards.

The other convict turned to Colson.

"Well, Marty, it's all up, I guess. We've lost the million-to-one chance. I'm going to give up."

But Colson was of a different mind.

"So long," he said, "I'm staying here."

As the guards rushed into the office they heard the sound of a gun-shot. Colson had committed suicide rather than surrender. He was found face down, his peculiar revolver bent, a gaping hole through his skull.

Subsequent investigation revealed that the two convicts had fashioned the crude guns inside the prison. The barrels were made from a hollowed drill, fitted with pipe handles. With unbelievable ingenuity they had built a trigger and hammer from odds and ends of steel, and tiny bits of spring.

Colson made the bullets, using pieces of tin cans for shells, stuffing them with crushed match-heads and fitting carved bullets. Detonating caps, stolen from the prison rock quarry, completed the queer weapons.

It took them a year to make the guns with which they intended to force the Warden to act as a shield in order to escape.

This crime was a well-planned one. Its ending, however, brings to my mind the words of one of the greatest of Scotland Yard's detectives (Chief Inspector James Berrett), when speaking of the capture of Browne and Kennedy who murdered Constable Gutteridge in Essex in 1927.

"Criminals forget that they are not engaging in a personal conflict with one, or two, investigating officers. They are

fighting ten, twenty, thirty thousand police officers in every corner of the Kingdom—if necessary, in every civilized country in the world. They are fighting an army from whose presence they cannot escape. A trained army too."

NOTE.—It has never been satisfactorily explained how Colson incurred the wound from which he was suffering at the time of his arrest. Neither he nor Cochran ever tried to give any explanation. It is believed, however, that he was shot accidentally by Cochran during the hold-up. This is probably the true state of affairs. It was a revolver bullet that did the damage. Both money-car guards were armed with automatics.

THE COLONIAL POLICE

RECENT APPOINTMENTS AND PROMOTIONS

ACKRILL, R. (Insp. of Police)	Asst. Commissioner of Police, Malaya.
BURNS, J. D. (Assistant Superintendent of Police)	Deputy Supt. of Police, Palestine.
BUTTOLPH, W. G. (Assistant Superintendent of Police)	Deputy Supt. of Police, Palestine.
COCKLE, A. V. (Chief Inspector of Police)	Asst. Supt. of Police, Straits Settlements.
DONALDSON, H. B. J. (Insp. of Police)	Asst. Commissioner of Police, Malaya.
DRAKE, T. N. (Third Class Inspector of Police)	Second Class Inspector of Police, Jamaica.
FITZGERALD, M., M.C. (Deputy Superintendent of Police)	District Supt. of Police, Palestine.
HALL, C. W. D. (Assistant Commissioner of Police)	Deputy Commissioner of Police, Malaya.
JAMES, E. M. V. (Assistant Superintendent of Police)	Deputy Supt. of Police, Palestine.
KYLES, J. M. (Assistant Superintendent of Police)	Deputy Supt. of Police, Palestine.
MACMILLAN, D. D. (Assistant Inspector of Police, Kenya)	Asst. Insp. of Police, Tanganyika.
NEISH, D. G. (Sub-Inspector of Police)	Third Class Inspector of Police, Jamaica.
O'CONNELL, B. M. B. (Assistant Commissioner of Police)	Deputy Commissioner of Police, Malaya.
VIAL, E. O. (Constable, Palestine Police)	Asst. Insp. of Police, Tanganyika.
WIDDUP, F. D.	Sub-Insp. of Police, British Guiana.

NOTES FROM THE FORCES

FIRE HYDRANT LEVERS AND BARS

IN many of the towns and districts of Great Britain, the street fire-hydrants are still of the ball pattern, and the cover may be a round, oval, or square-fitting iron casting which should lie snugly on the outer casing.

The ball type of hydrant has been mentioned because it is more susceptible to the intrusion of dirt, but as the purpose of this article is to show the need for a new means of lifting fire-hydrant covers, the following observations will apply to all types of street fire-hydrants in use at the present time.

Some hydrant covers have holes in the centre, some near the edge of each end, and others simply notches into which the key or chisel-ended bar must be inserted to lift them.

There is no need to point out to anyone interested in Fire Brigade work how essential it is that instant access should be had to the water supply immediately on arrival at the fire. Of what use is it to save valuable seconds en route by furious driving if it be wasted by picking away ineffectually at a stubborn hydrant lid which is surrounded with a firm coating of tar macadam? In country districts it is not unknown for them to have been covered up altogether by energetic road-menders, and even in cities there are hydrant lids which are in a similar condition, having been overlooked during the regular inspection. Many Waterworks Departments are quite willing to deal with a neglected hydrant when the matter is brought to their notice, but are not willing to keep men employed making tours of inspection of this nature, and many brigades cannot afford to have members of their staff similarly engaged. In many towns this matter has long been a bone of contention between the Fire Chief and the Waterworks Department, and would not the former be relieved of some measure of anxiety on this score if he knew that the standard hydrant bar possessed an emergency means of effecting instantaneous removal of the most adamant cover which he might have to deal with?

If the district is one fitted with covers with a hole or slot extending through the top, trouble is not likely to be experienced in removal for a reason which is in itself an argument against the use of this type of lid; all kinds of road material being free to drop down on the valve.

Where the means of removal is provided by a notch or clearance at the edge of the lid, there is no direct passage for dirt on to the valve, but there is an excellent opportunity for it to collect in this recess, thus rendering insertion of the chisel-ended bar difficult or impossible.

Now, supposing the water-man is faced with the task of removing a hydrant lid of the type last mentioned, and he is equipped with the standard bar supplied by waterworks and fire engineers. The notch is filled with



A NEW TYPE OF FIRE HYDRANT BAR

(face p. 498)

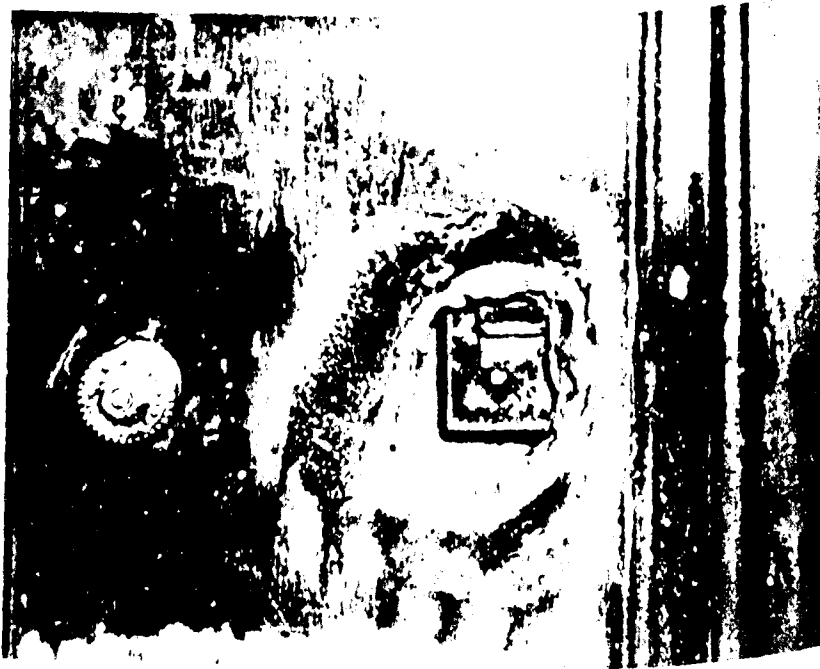


FIG. 1

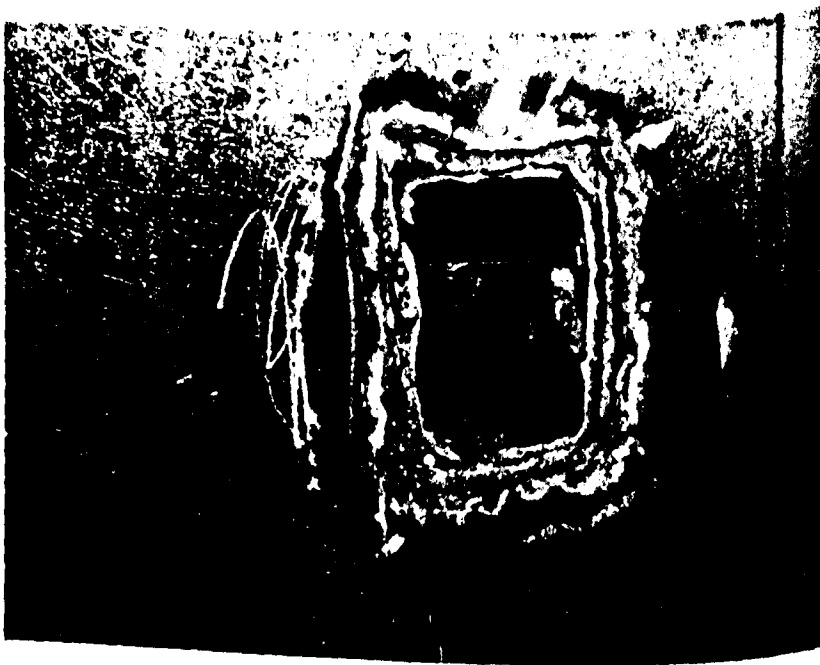


FIG. 2

a deposit of hard packed road material. He cannot lift the lid until he gets the chisel end of the bar under the lip of the casting, and if he tries to force it through the material by repeated downward blows, he probably hits the very small target once in every third attempt. He may reverse the bar and hammer the edge of the cover in an endeavour to slacken the top sufficiently to allow insertion of the chisel, but valuable seconds are being wasted.

With a new type of fire hydrant bar now being marketed, the chisel end is not lifted off the cover from the moment of application until the lid is lifted, which operation should not take more than a second.

The chisel end of the bar is simply placed on the edge of the cover; one hand operates a finger release and the other lifts a heavy impact bar slidably mounted inside the outer casing. One blow with this drives the chisel end through the offending material. The lever is then forced down to complete the operation, whilst the internal bar is automatically re-locked.

It is impossible to withdraw the impact bar completely out of the tube because of a pawl locking arrangement which limits its travel.

This tool can be used as an ordinary lever for clean hydrant covers.

Another valuable use to which this tool can be put is where wooden flooring has to be rapidly lifted to gain access to burning beams. Here again it is used in exactly the same manner as before, the chisel end being placed on the clearance between the boards. One powerful blow then drives it through the tongues, the lever action then being used to force the board up. It is the quickest means known of lifting floor-boards, and even pavements, and road setts.

The tool is simple in design and positive in action, and is being marketed by Messrs. John Morris & Sons, Ltd., Salford Fire Engine Works, Salford, Manchester.

It has been suggested that a too effective use of this tool might be made by unscrupulous persons owing to the muffled hammer action rendering forcible insertion of the chisel dangerously easy where silence is imperative.

Messrs. John Morris & Sons have, however, undertaken to prevent as far as possible this unintended addition to the kit-bag of the modern Bill Sikes.

A BURGLARY IN DENMARK

A BURGLARY which took place in a cigar factory in Copenhagen, two years ago, is of particular interest because the thieves on this occasion opened two safes by means of an oxy-acetylene pipe. This work was carried out with extreme efficiency. In order to prevent the melted metal running into the locks and bolts, each plate was cut out separately (see Figs. 1 and 2). The big acetylene and oxygen cylinders were stolen from a motor-repair shop in the same building.

The lock on the front door was of the Yale type. This had been opened by drilling a tiny hole in the door-frame opposite the lock, and by aid of a piece of curved wire the lock had been pushed back. The hole in the frame was so small that the watchman did not notice it, although he passed the door three times that night.

In order to conceal the light caused by the cylinders the thieves covered the windows with curtains and torn-up wooden cases. These cases had been

torn up by a screwdriver, and some of the traces left by their screwdriver showed that as a result of its contacts with the nails it had several hacks on its edge.

Evidently the thieves had been planning their burglary for a long time. Drawers of writing desks were discovered in the morning to have been opened and relocked. The night watchman who had the supervision of the yard outside the premises had seen lights in the cigar factory, but it was not his business to interfere. On the night of the burglary he heard the sound of hammering on wooden cases, but thought the staff were working overtime.

Two German brothers of the name of Sass were subsequently found to be in possession of a screwdriver which was scarred with hacks corresponding to the traces left at the scene of the crime. In view of other evidence against them, they were arrested and subsequently convicted.

Meanwhile, the lock of a new show-room in another building was found to have been destroyed. All but one of the jags of the levers had been filed off, so that the lock could be opened with an ordinary flat-key or a picklock. Nothing would be noticed if the right key was used. This building had not yet been opened, and the discovery of the mutilation of the lock was accidental. Certain alterations in the safe-door which had been decided upon necessitated removing the ash-pan at the back of the door. A big hole in the front plate of the door was then seen to have been sawn out. Had the criminals, who were evidently, once again, the Brothers Sass, performed their task a little more carefully, the damage done to the safe would not have been noticed.

The Berlin police, at the request of the Copenhagen police, made a search of the rooms occupied by these two men in Berlin, and found some Danish notes under the floor-boards.

Behind a panel in the room they had occupied in Copenhagen the Danish police discovered some drawings. These drawings were concealed in a tube of tooth-paste. One was a drawing of the deposit safe installation in the strong-room of a bank which the brothers had evidently planned to rob. The three screws by which the larger doors are fixed were indicated, as also the screws for the smaller doors. Another drawing pictured the premises of the bank, showing which keys would have to be used. It is a curious fact that, until they saw this drawing, none of the bank staff knew that one key could open more than one door.

A third drawing showed one of the doors with locks and emergency locks. These locks were fixed only on the day before the branch was opened.

The two men had unscrewed six of the eight screws on an iron door inside one of the strong-rooms, and had filed off the windings. Thus the screws, being only on one winding, could yield to slight outside pressure. One of the drawings showed the details of this lock.

The brothers had planned to enter this bank and their careful planning ought to have led to successful results. Unfortunately for them, they were arrested before the actual entry was made.

It is believed that these brothers were the perpetrators of a burglary on a Berlin bank, entry to which was made by a tunnel which they dug under the street pavement.

CORRESPONDENCE

GENERAL ORDERS

To the Editor of THE POLICE JOURNAL.

SIR,

Of all the reforms introduced into Metropolitan Police organization during Lord Trenchard's four years' tenure of the Commissionership none has received so little notice, even in police circles, as the introduction into Scotland Yard's Organization Department of an entirely new Branch for the purpose of supervising the various publications which go to make up the standing orders of the Force.

The third Branch of "D" Department to be formed, it is designated "D-3", at present consists of one Higher Executive Officer, with a clerical officer as assistant. General control is in the hands of one of the Deputy Assistant Commissioners of "D" Department. The Secretary of the Commissioner's Office holds a watching brief in many of the questions dealt with by the Branch.

Pre-eminent among the publications which contain the standing instructions of the Force was, is, and will of course always be that *vade mecum* of all Metropolitan Police officers of and above the rank of Sergeant, General Orders.

The ideal textbook is one of which it can be said that it were written by wise men for fools. It would be overstepping the bounds of both truth and propriety to suggest that the reverse is true of the 1932 edition of *General Orders*, but although the book could for obvious reasons never be fashioned solely for the student, it is not too much to say that there is very much that could be done to make the volume more useful in the classroom and study.

That no word of criticism of the book has hitherto ever appeared in this or any other police publication demonstrates what can only be described as its transcending sacrosanctity to Metropolitan Police Officers of every rank. The writer would here add that this letter is written in the moderate security afforded by the circumstance that many of the weaknesses implied have been recognized and are in fact in course of being remedied. So much will be obvious to those who have compared the recently issued (1936) loose-leaf revised edition of the Crime, Courts, etc., and Finance and Supplies sections with the corresponding sections in the 1932 edition.

The drastic changes which have taken place in the Metropolitan Police promotion examinations system during the past year or two have brought with them an almost complete reversal of the long-established practice of basing all Uniform Branch examinations almost entirely upon General Orders, and this must have the effect of lessening to some extent the reverential awe with which the tome has hitherto been regarded. The merits of the new examination system are not for discussion here, and it may be that the pendulum has over-swung. If that be so then at least some blame

must be laid at the door of the last two editions of the volume. How entirely out of touch with modern conditions were some parts of both editions is palpable.

This indictment is levelled at no particular person, however, for the simple reason that until the advent of "D-3" Branch no particular individual was editorially responsible for the volume. Each Department at Scotland Yard was supposed to supervise certain parts of the book, but there was little or no co-ordination, and the marvel is rather that the faults were not greater. How faulty was the organization is illustrated by the now somewhat open secret that although the 1932 edition was issued some months after Lord Trenchard's arrival at Scotland Yard, he was not informed of the proposal to issue the new edition until the order for the printing had been placed; too late for anything to be done! It is not too much to suggest that had he been informed sooner the edition would not have gone out as it did.

Detailed criticism of the 1932 edition is beyond the range of this letter, but to instance an obvious lack of planning, consider the order in which three of the most important sections were given; a child would appreciate the absurdity of placing "Courts" before "Prisoners" and "Prisoners" before "Crime". The point may be of small practical importance, but it is less negligible when one considers the lack of faith in the book as a whole, which must be engendered by such weaknesses. It seems hardly necessary to point out that this mistake has not been made in the 1936 edition.

There must be few who will fail to applaud the decision to issue the 1936 edition in loose-leaf binder form. Amendments to General Orders have always to be seen by the Secretary of the Commissioner's Office and approved by the Commissioner or an Assistant Commissioner personally, and it follows, therefore, that they are never issued lightly, but with legislation—whether by Statute or by Regulation—increasing almost daily as it has in the past several years, it is manifest that the old system could not have long continued. Many hold the view that the reform was overdue.

"113585."

POLICE GOLD MEDAL ESSAY COMPETITION

Subject of the Essay for 1936

"What steps can be taken either by Legislation or by Police Action towards Improving the Circulation of Traffic and the Reduction of Accidents."

Essays must be submitted on or before 1st November, 1936, to:—

THE SECRETARY OF THE COUNCIL OF THE POLICE GOLD MEDAL ESSAY COMPETITION, HOME OFFICE, WHITEHALL, LONDON, S.W. 1.

Essays must be the original work of the competitor, 7,000 to 11,000 words in length, typewritten and submitted in triplicate and anonymously. A sealed envelope bearing on outside a *nom de plume* or motto, and containing the competitor's name and address, must accompany the essay. (For full conditions see THE POLICE JOURNAL, April number, p. 256.)

POLICE BOOKS OF THE YEAR

POLICE AND PUBLIC. BY MAJOR MAURICE TOMLIN. (John Long.) 18s. net.

"WHO was the first policeman?" Undoubtedly the angel with the drawn sword who gave the signal "Road closed" to our first recorded ancestors; the "By-pass Road" to which he seems to have directed them has led us into many disasters.

This somewhat original opening paragraph of Major Maurice Tomlin's book *Police and Public* is the forerunner of many sage remarks and a mass of information, spiced with anecdotes, concerning police duty generally and that of the Metropolitan Police in particular. Obviously the author has given much time and thought to his task and, whether he is dealing with the old days and questionable methods of the Bow Street Runners or with recent efforts to detect and combat crime, there is a refreshing and common-sense theme permeating the whole of his remarks which make the work highly interesting and appreciative from the reader's point of view.

Until recently an Assistant Commissioner of the Metropolitan Police and an officer with many years' experience in police matters, the author writes from a practical standpoint and conveys more than an impression that police duty and supervision is essentially the policeman's job, remarks with which the majority will agree.

There is a frank and healthy criticism of the appointments and policies of some half-dozen Commissioners of Police of the Metropolis—the appointments being too frequent and the policies too varied for the general welfare of the Force and its public—although he commends highly the splendid work done by at least two in the persons of Sir Edward Henry and the late Lord Byng of Vimy.

The Police College and the short service—ten year—system has yet to prove its worth having regard to the amount of money spent on the former and the uncertainty of the latter. In fact, the success of the short service plan is highly problematical and reasons for this are given in a characteristically candid and lucid manner, as are all the matters introduced by the author in a work which should be read by all classes of the community and every serving police officer above the rank of Inspector and by those subordinates who can afford it.

A POLICE CONSTABLE'S GUIDE TO HIS DAILY WORK. BY B. M. GREGG AND C. P. BRUTTON. (7th Edition, Pitman.) 6s.

THE first edition of this book was published as long ago as 1912: the present edition—the seventh—in 1934. That a book of this kind should be in continuous demand over so long a period is sufficient guarantee of its usefulness to police officers.

The book has over 500 closely-packed pages of information on criminal law, and police practice in relation to it, including much useful advice on the problems which are so often cropping up in the daily work of a policeman.

Not the least valuable feature, particularly from the young officer's point of view, is the clear indication given with each offence as to whether the officer may arrest, or proceed by summons or warrant.

The various Acts which have been passed since the issue of this edition are not, of course, included in the book. Apart from this the book definitely lives up to its title.

POLICE LAW. An arrangement of Law and Regulations for the use of Police Officers. BY C. G. H. MORIARTY, O.B.E., LL.D. (4th Edition, Butterworth.) 5s.

MORIARTY'S *Police Law* has attained a recognized status as one of the really worth-while reference books for police officers of all ranks.

The book gives in a concise manner an astonishing amount of information on the laws which police have to enforce, and is an excellent substitute for the more expensive works which ordinary police officers can seldom afford.

This edition was published in 1935 and, among other additions, includes the Betting and Lotteries Act, 1934. A very complete index is provided.

DETECTIVE NO. 1. The Case Histories of ELLIS PARKER, American Detective. Told by FLETCHER PRATT. (Methuen.) 7s. 6d.

THE central figure of this book—Ellis Parker, County Detective of Mount Holly, New Jersey, U.S.A., received a good deal of publicity—in English newspapers as well as American—during the recent Hauptmann trial, by declaring his belief that Hauptmann was innocent of the murder of the Lindbergh baby; his detective reputation in America being sufficient to add considerable weight to his opinion.

The book gives us the histories of twelve of the most interesting cases handled by Ellis Parker during his forty-two years as a detective in Burlington County, and they are related in a style which makes the volume far more readable than many a 'thriller'.

Parker is described in a foreword as probably the best detective in America, if not in the world, and while the comparison need not be taken too literally he is undoubtedly an unusually shrewd and observant police officer with a flair for asking questions and connecting up the answers, which, incidentally, he declares forms 90 per cent of all detective work.

The cases described are mostly murders, but they vary widely in circumstance; their lucid arrangement in the book enables the reader to follow the police inquiry step by step until each problem is solved. No young detective officer should miss studying this book.

As each case is unfolded we come to have a great respect for Ellis Parker, and a further selection of his cases will be awaited with interest.

LA MALLE SANGLANTE DE MILLERY. BY E. LOCARD.
(Gallimard, Paris.)

DR. LOCARD, of Lyons, is very well known as a versatile worker in the fields of forensic science; here he is to be seen in a somewhat different atmosphere. Instead of the hard facts of methods and results, he is found dealing with the details of one particular case, as indicated in the sub-title the "Affaire Gabrielle Bompard-Eyraud", and putting it in the form of a narrative. It was not a case he had to deal with himself, but one which was investigated by Professor A. Lacassagne, from whom Dr. Locard says that he himself learnt so much of the correct method of dealing with such work. The scene of the discovery of the blood-stained trunk is a village in France in the year 1889, and the author has woven the facts which he has culled from the original documents into a very interesting account of a somewhat gruesome case of murder. The narrative takes us far beyond the limits of the village; in fact the trail stretched as far as America, but the threads are kept well together, weaving a pattern leading to inevitable conviction. Perhaps for modern detective fiction the tale is over-filled with detail in certain parts, but it is certainly an interesting yarn, stressing the manner in which identity can be established from the slightest traces, and is thus somewhat reminiscent of the Ruxton case.

THE ENGLISH POLICEMAN, 871-1935. BY ALWYN SOLMES.
(George Allen & Unwin, Ltd.) Cloth, 7s. 6d.; paper, 5s. net.

THE author has condensed into this book a brief account of the gradual development of the Police system from the earliest days. The chapter on the Fieldings and the account of crime and Police in the early nineteenth century give interesting glimpses of London at that period. The history of the Metropolitan Police includes accounts of forgotten incidents of street riots and strikes, and many of the minor duties which fall to the lot of the modern Policeman.

QUESTIONS AND ANSWERS ON POLICE DUTIES. BY C. C. H. MORIARTY. (Butterworth.) 2s. 6d.

MR. MORIARTY'S useful little book should be of great value to all candidates who are preparing for Police technical examinations. Particularly valuable is the introduction explaining how candidates should answer questions. This book is also of considerable help to those who have to set examinations.

FLUORESCENCE ANALYSIS. BY J. A. RADLEY, B.Sc., F.I.C., AND JULIUS GRANT, Ph.D., M.Sc., F.I.C. (Chapman & Hall.) 21s.

THERE have been so many developments in the application of the fluorescence produced by ultra-violet rays in many branches of work that it is not surprising to see a second edition of this useful and comprehensive book appearing only two years after the original publication in 1933. Even on the forensic side with which we are most concerned the writers of this book record the appearance of twenty-nine books or articles referring in

some way to this branch of the work in this short period. This is evidence of the great importance of these rays (Wood's light) in police work, and it is to be expected that even further developments will take place.

The scope of this book embraces every phase of the subject given in the title, theoretical and practical. The first part is devoted to the theory and technique of fluorescence analysis, dealing with the various sources of U.V. rays, filters for transmitting only the U.V. radiations from such sources, the measurement of the intensity of the radiations, and the methods and technique employed in making use of the rays for analytical purposes, including photographic methods.

Here we may point out that it does not appear to be quite clear from the literature which wave-lengths in the ultra-violet region are most useful for differential purposes. Those which are most beneficial therapeutically are known, but in police work we are concerned more with differences and degrees of fluorescence and their diagnostic value, and it does appear to be of importance that we should know that we are using those wave lengths which are of the greatest diagnostic value.

The second part of the book is divided into nineteen chapters, each dealing with one branch of work to which U.V. analysis has been applied. A mere list of these will indicate its wide uses: Agriculture, Bacteriology, Botany, Constructional Material and Glass, etc., Drugs, Foods and Food Products, Fuels and Lubricants, Inorganic Chemistry, Leather and Tanning, Legal and Criminological Work, Medical and Biological Science, Minerals and Gems, Museum Work, Organic Chemistry, Paints and Varnishes, Paper, Cellulose and Allied Industries, the Rubber Industry, Textiles, Water and Sewage. Nearly all of these have possible applications to the investigation of crime or fraud, but we are specially concerned with Chapter X which details some of the uses to which U.V. analysis has been put in forensic work. As is well said in the first paragraph of this chapter, "The Simplicity and rapidity with which the examination under the lamp may be made suffice in themselves to give it importance, and this is enhanced by the great sensitiveness of which the method is capable in certain cases." Attention is also drawn to the advantage of the method over chemical methods in that it leaves the article unaltered in any manner which might show that it had been examined.

The sub-heads of this chapter indicate its scope; Customs Examinations, including rubber, sequins, straw, benzol and petrol, stamps and dope; Body Marks, including old scars and erased tattoo marks; Documents, including erasures, forgeries, paper, and watermarks; Inks, Finger-prints and Stains, including the photographing of finger-prints on multi-coloured backgrounds; Seals and Adhesives, including sealing waxes and gums; Examination of Clues, including fragments of glass; and Drugs in Body Fluids. It may be said that the major portion of this forensic work lies in the detection of alterations and differences, e.g. the alteration of a document by the addition of a new piece of paper or by a chemical erasure of writing, or the difference between the original seal and a later one superimposed fraudulently; and for this purpose U.V. rays are ideal for a first rapid examination without any destruction of material and for a photographic record of what is shown up by the lamp.

This well-illustrated book can be thoroughly recommended to all who are interested in the subject and whose work involves the examination of clues; it should open up new fields to them.

FEDERAL BUREAU OF INVESTIGATION LAW ENFORCEMENT BULLETIN, U.S.A. June, 1936.

LAW enforcement, luckily for our police, is a very different matter in England from what it is in the U.S.A. This is shown very clearly in Mr. John Edgar Hoover's address to the annual convention of the Daughters of the American Revolution delivered on 23rd April, 1936, as reported in the *U.S. Federal Bureau of Investigation Law Enforcement Bulletin*, vol. 5, No. 6, June, 1936. In speaking of gang kidnapping and other heinous crimes, he says:—"There can be no weeding out of noxious growths until the roots which feed these growths are torn from the filthy muck which fosters them. Throughout our country Law enforcement has been hampered, hamstrung and strangled by the blood-caked hand of crime-affiliated politics. I know the statement I have just made sounds sensational. It smacks of headlines. But I challenge you to find out for yourselves how really true it is. Political grafters stir uneasily when honourable citizens like yourselves begin to ask questions about the close connexion between violent crime and crooked politics. They do not like honest law enforcement and they do not like the truth, which is that they are the brains behind the Dillingers of this land. This political alliance with crime exists in state after state, municipality after municipality. It halts the policeman; it halts the law enforcement officer, even as he reaches for his gun, and holds him there, a target for the bullets of the coward he has been attempting to arrest. It stalks into our courts, brushing aside indictments, trials and even convictions with a wave of a hand. It enters our penitentiaries, swinging wide the heavy prison gates for men who otherwise would have paid their debt to society in punishment for their crime. It condones non-feasance in office and provides actual malfeasance. It supports bribery, perjury and gangdom, and it has been known to place more than one ex-convict upon the force of a police department. It is firmly entrenched, deeply rooted, and can be torn from its foundations only by the concerted, unswerving, self-sacrificing efforts of such patriotic organizations as the Daughters of the American Revolution."

It is to be hoped that the Federal Bureau of Investigation, of which Mr. Hoover is the director, will be able to reduce the enormous death roll before long, but it must be remembered that his organization is a federal one and that its functions are thus severely limited to certain definite offences which are agreed upon as being federal matters, and that for this reason it cannot tackle the main problem which rests with the separate state legislatures and police forces.

This journal of the F.B.I. contains other matter of interest to the crime investigator in addition to identification details of wanted persons. This particular number has a short note on the restoration of the skin of the fingers for finger-print purposes in a case in which the person had persistently burnt his finger tips to avoid the possibility of giving good prints for classification purposes. Treatment with warm water and soft soap at intervals removed the dead skin and left the fingers printable.

It also contains an interesting illustrated article on motor-car thieves, describing their *modus operandi* and the tools they use. Certainly the States "auto-thief" equips himself well, if we may judge by the details given. There are a number of other articles on lotteries, equipping a small identification bureau, finger-prints, etc., and twenty-three pages are devoted to descriptions and finger-prints of wanted persons.

FORENSIC CHEMISTRY AND SCIENTIFIC CRIMINAL INVESTIGATION. BY A. LUCAS, O.B.E., F.I.C. (Edward Arnold & Co.) 18s.

A WARM welcome must be given to the third edition of this book by all who are interested in the application of science to the investigation of crime. The first edition appeared in the year 1921 and was followed in a much enlarged form by the second ten years later, and now after less than half that interval a third is necessary, certainly necessary on account of the large amount of new work that has been done in this field. It is one of the drawbacks of textbooks that deal with a comparatively new scientific subject or application of science that they become out of date so soon, owing to the discovery of new facts and methods. Thus in some ways annual reports from institutions and other sources and the journals which appear at regular intervals are more useful to the progressive worker. But a summary of progress is essential from time to time, and such is provided by this textbook. It is particularly so for the beginner in such work, but it is also very useful to the busy worker of experience, since it is not feasible for him to be continually referring to journals and abstracts; and here he finds most of what he can need and references to the original sources when he requires them, all under the same cover.

For the police officer the first part of the title may cause a little fear that the contents of this book will be too complicated for him, but this is misleading, for quite a large proportion of the book is devoted to work which is not strictly chemical, and throughout it is most usefully interspersed with accounts of actual cases where the particular method or process under description has been useful. The first chapter will give him some insight into what the expert has to do and what he expects from the officer bringing him material and the subsequent chapters will give him much food for thought in his work and in his investigations and should help him to make the best use of the aids that science can give him in a very large number of cases.

For the laboratory worker the book needs no praise, for it will be well known to him, but it will bring to him also the latest discoveries and processes.

For both of these this book should show the clear distinction between the sphere of the police officer and that of the expert in the laboratory and emphasize the pitfalls that lie in the road of the untrained or semi-trained person who through keenness attempts to carry out the work of the expert and on the other hand the entire dependence of the expert upon the police officer for the general work of investigation and for the preservation of the material and its transport to the laboratory in such a condition that it can be most useful. It is only through the co-ordination of these two branches that good work can result.

FORENSIC MEDICINE. A Textbook for Students and a guide for the Practitioner. BY DOUGLAS J. A. KERR, M.D., F.R.C.P.E., D.P.H. (Lecturer on Forensic Medicine in the Royal Colleges, Edinburgh.) 2nd Edition. Illustrated. (A. and C. Black.) 15s. net.

THIS second edition has been published mainly to bring the legal information as to the Sale of Poisons up to date; and in view of the many changes made by the Poisons Rules issued last December, the author has entirely re-written this important part of his work, and given the form of certificate which may—in certain circumstances—be required of the local police authority under Rule 31.

Moreover, there is a new chapter on Civil Actions, mostly under Workmen's Compensation Acts, with a caution to inexperienced practitioners *re* expressions of opinion which should interest junior Police also.

As regards the mental condition of persons involved in accidents, Dr. Kerr emphasizes the importance of obtaining the fullest possible history in every case, before examination, even though some Police may take another view. With illustrative cases he also shows the importance of carefully preserving for examination all (presumably) human remains, however much damaged by fire or water as it is never too late for a post-mortem examination.

This new edition, so valuable to medical practitioners involved in Medico-Legal inquiries, should also be of considerable interest and service to Police Officers.

THE SHOPS ACTS SIMPLIFIED. A Summary of the Statutory Provisions relating to Shop Hours, Holidays, Early Closing, and other Trade Conditions regulated by the Shops Acts in Scotland. (William Hodge & Co.) 1s. 9d.

ANY attempt to simplify modern legislation is most commendable, and it is to be hoped that the success which this little book should enjoy will encourage others to tackle similar subjects. Were it not for philanthropists like Mr. Hood it is difficult to see how the average shopkeeper would have time to do any shopkeeping so busy would he be trying to master the Acts which control his business. Five Acts in twenty-four years is not bad going even in this era of prolific legislation. This volume gathers together the various sections dealing with the different aspects of shop-management, and where necessary notes are added. May we wonder if the author will tackle the Housing Acts next?

THE LABOUR CORRECTION CODE OF THE RUSSIAN SOCIALIST FEDERATED SOVIET REPUBLIC (PRISONS CODE). Translated by Hsinwoo Chao. (Sweet and Maxwell.) 5s. net.

THOSE who desire to study the Russian Prisons Code will be most grateful to Hsinwoo Chao for having made it so accessible. The code deals with Labour correction work without deprivation of freedom, and then with the various aspects of detention. The underlying principles are (1) to prevent

those who have been sentenced having an opportunity of causing damage to the socialist construction, and (2) the re-education of such people. The reviewer ought to be able to say something about the translation, but in the circumstances he does not feel competent to criticize it.

IMPRISONMENT BY JUSTICES FOR NON-PAYMENT OF MONEY. BY WALLACE THODAY. (Butterworth & Co.) 12s. 6d. net.

THIS is so useful a book that it is a pity that it could not have been produced at less than 12s. 6d., a price which is apt to be regarded as a luxury price. Its introduction which takes up rather less than half of the book deals with the recommendations of the Departmental Committee which had been appointed to review the existing law relating to the enforcement of fines imposed by Courts of summary jurisdiction and to the enforcement of wife maintenance and affiliation orders and of payment of rates. It also criticizes the existing procedure and contains some interesting statistics as to the number of committals for non-payment of fines. A great many otherwise well-informed people think that imprisonment for debt has long since ceased to exist in England, and the number of cases in which it still exists will come as a great surprise to them. It may be that some will think that certain of the suggestions made by the committee tend to be on the humane side and might appear to pander to the lazy and careless debtor. If a man is summoned to Court and fails to turn up and sends no reasonable excuse for his non-appearance it seems rather unnecessary to introduce legislation to ensure that he is not sent to prison without further inquiry when a distress warrant has been returned. Such legislation is playing into the hands of the obstinate procrastinator.

The second half of the book contains many statutory enactments which are useful for reference.

EVIDENCE IN A NUTSHELL. BY MARSTON GARSIA, B.A. 2nd Edition. (Sweet & Maxwell.) 3s. net.

THE ELEMENTS OF CRIMINAL LAW AND PROCEDURE. BY A. M. WILSHIRE, M.A., LL.B. 4th Edition. (Sweet & Maxwell.) 15s. net.

MANUAL OF THE LAW OF EVIDENCE. For the use of Students. By the late SIDNEY L. PHIPSON, M.A. (Cantab.). 5th Edition. By ROLAND BURROWS, K.C. (Sweet & Maxwell.) 12s. 6d. net.

HERE are three old friends who now reach their 2nd, 4th, and 5th Editions respectively. It would be invidious to select one of them as being the best of the bunch, and yet one is tempted by the concise brevity of *Evidence in a Nutshell* to say that it is not the least attractive. It is no doubt quite unfair to compare it with the *Manual of the Law of Evidence*, which has the appearance of a treatise on this most troublesome subject; more than thirty-five pages are filled by the list of cases referred to. And yet the author was modest enough to describe his work as being "for the use of Students". It is probably true to say that we are all "students" of the law, but for the

examinee and for those who wish to have a knowledge of the main principles of the Law of Evidence the smaller volume will probably suffice. On the other hand those who wish to probe more deeply into this subject will find Mr. Burrows's edition a mine of learning, with a full citation of authority and most helpful examples. Of the 4th Edition of Mr. Wilshire's *Elements of Criminal Law and Procedure* let it be said that it more than enhances the reputation of the earlier editions, which are now brought up to date. It is, perhaps, a commentary on the increase in criminal and quasi-criminal legislation that the "Elements" of the criminal law should extend to nearly 400 pages. Yet it is hard to see how he could have covered his subject in a smaller space.

SOCIAL DETERMINANTS IN JUVENILE DELINQUENCY. BY T. EARL SULLENGER, Ph.D., Professor of Sociology in the Municipal University of Omaha. (New York: John Wiley & Sons. London: Chapman & Hall, Ltd.) 17s. 6d.

THIS book is concerned with the causation, prevention, and treatment of juvenile delinquency. Upon any given heredity what is the influence of the environment? *i.e.* of the family, school, play-time, neighbourhood, and occupation; and how may anti-social influences be countered?

In the family, divorce, conflict between old traditions of immigrants and the ideals taught to children in the country of adoption; in school the lack of trained psychiatrists; in play-time the lack of facilities for healthy recreation; density of population with frequent changes of abode; and blind alley occupations, especially newspaper hawking; all these, and many more, prove conducive to delinquency.

So Dr. Sullenger describes at considerable length two main lines of treatment; the employment of highly qualified Police-women, and the institution of Juvenile Courts. The Police-woman must be sympathetic, tactful, and a good listener, able to win the confidence of her 'patients' and to show them how to express their instinctive 'urges' in useful ways. The Court inquiries must be held without publicity, formality, or jury. The mass of detail and copious bibliography in this work should be of great service to all concerned with the prevention of 'crime'.

GETTING RICH QUICK. BY GEORGE DILNOT. (Geoffrey Bles.) 10s. 6d.

HE who is forewarned is forearmed. This book should be made compulsory in all schools or in any event in all Universities. It is a masterly account of the various ways in which the "confidence man" manages to transfer large sums of money from the pockets of his credulous fellow-citizens into his own. It should act as a warning to all potential "dupes", and there is hardly anyone who does not at one time or another think that he has at last found an easy way to make money.

Most of the tricks described are well-known, but some are certainly new. The most incredible is the romance of Madame Humbert who made a fortune out of a sealed safe while many will be intrigued by the ingenuity of the man who laid the foundations of an action of damages for slander at his own instance.

THE POLICE JOURNAL

GUIDE TO POLICE DUTIES. BY A. J. McINTOSH. (Chambers.)

THE Chief Constable of Dumbartonshire has compiled this useful handbook in the form of a catechism. It relates to the main points of criminal and statute law which are likely to be of use to the policeman. The answers are short and concise. The price is not stated.

POLICE DUTIES. (*Police Review*.) 2s. 6d.

TWO hundred legal points are dealt with in this book, and the selection of them was determined by the questions sent up to the Editor of *The Police Review* week by week. As the subjects have been chosen by this process, the subjects should be those about which policemen most want information; the only disadvantage being that nothing like a comprehensive legal summary is attempted. Information as to libel, for instance, is given, but not about slander. The book will be particularly useful to the examination student.

PRISON REFORM IN INDIA. BY LIEUT.-COLONEL P. K. TARAPORE.
(Oxford University Press.) 7s. 6d.

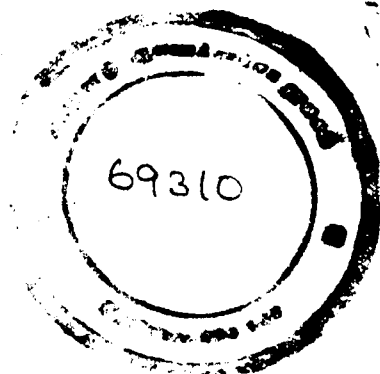
THE author has had ten years' experience of prison administration in Burma and advocates various measures of penal reform. The book contains too much abstract theory, general principles from which few people will dissent. It is sensible rather than sentimental.

THE LAW RELATING TO SUNDAY. BY PHILIP L. SKOTTOWE.
(Butterworth.) 8s. 6d.

A USEFUL legal handbook, including such subjects as Sunday cinemas, trading, public-house hours.

TRIAL OF ROBERT WOOD. Notable British Trials, vol. lxx. Edited by BASIL HOGARTH. (William Hodge.) 10s. 6d.

THE first case of a prisoner giving evidence, as allowed by the Prisoners' Evidence Act. The trial took place in 1907.



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