

People's Health

Feb 1950

val: $\bar{N}$

12 5



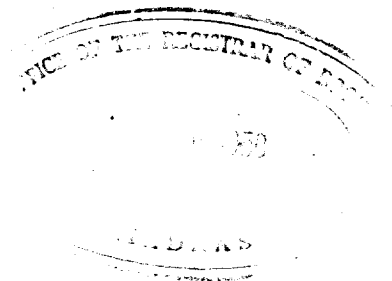
JL
L: SM211, N47 PE.
NSB 4.5
143 234

630

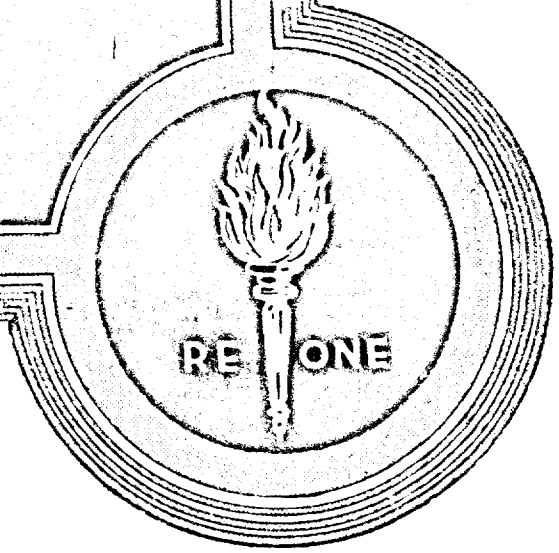
PEOPLE'S HEALTH

(361)

636/50



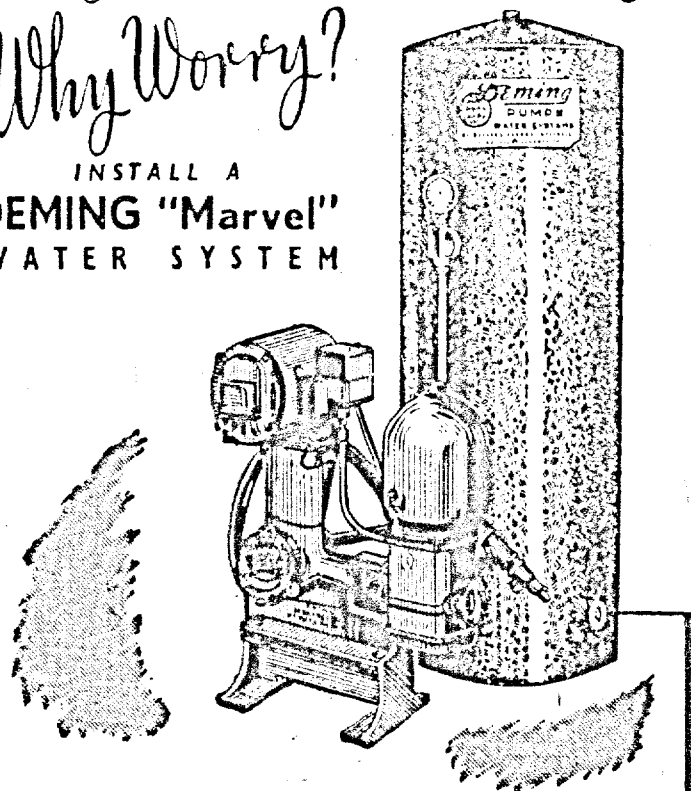
EDITOR
AVRAMAN



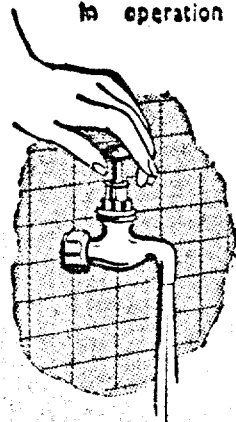
City Water Scarcity

Why Worry?

INSTALL A
DEMING "Marvel"
WATER SYSTEM



These water systems can be installed in your existing wells or tube-wells. Elaborate pipe laying or overhead tanks are not required. They are entirely automatic in operation and give years of satisfactory service.



*get water at the
turn of the tap*

DEMING "Marvel"
WATER SYSTEM

CONSULT:

EASUN ENGINEERING CO., LTD.
5-7, SECOND LINE BEACH, MADRAS 1

COTTON YARNS

5,00,000
Spindles

Put to the Highest Test of
Strength and Reliability

Madura Mills yarns have
proved the best by their
outstanding Quality

Counts
up to 80s

MADURA MILLS COMPANY LTD.

MILLS AT

MATHURAI, TUTICORIN & AMBASAMUDRAM

We supply Grey Yarns of all descriptions for Weaving
and Hosiery Factories. We do no Weaving ourselves

Our Specialities:

SINGLE YARNS — DOUBLE YARNS — CHEESE YARNS — WARP YARNS
CONE YARNS — CORD YARNS — COMBED YARNS, Etc.

Managers:

A. & F. HARVEY LTD.
MATHURAI

Cleanliness is next to Godliness

To-day our Railways are our own property and it is up to us to keep them clean and tidy. Thousands of passengers use Railway premises and Railway carriages every day. It is of paramount importance that the health and well-being of these passengers are safeguarded. You are earnestly requested to cooperate with the Railways in ensuring healthful and hygienic conditions in Railway carriages, platforms, waiting halls, restaurants, etc. The observance of a few simple rules will greatly help.

- * Do not spit indiscriminately on platforms, waiting halls, etc.
- * Do not throw remnants of food, used leaves, plantain peels, cigarette ends, etc., on platforms.
- * Do not smear chunam on walls and carriage panels.
- * Ensure that the sanitary fittings in lavatories are properly used.

(Inserted by the Public Relations Officer, M. S. M. & S. I. Railways.)

PEOPLE'S HEALTH

A Pioneer in the Field of Public Health

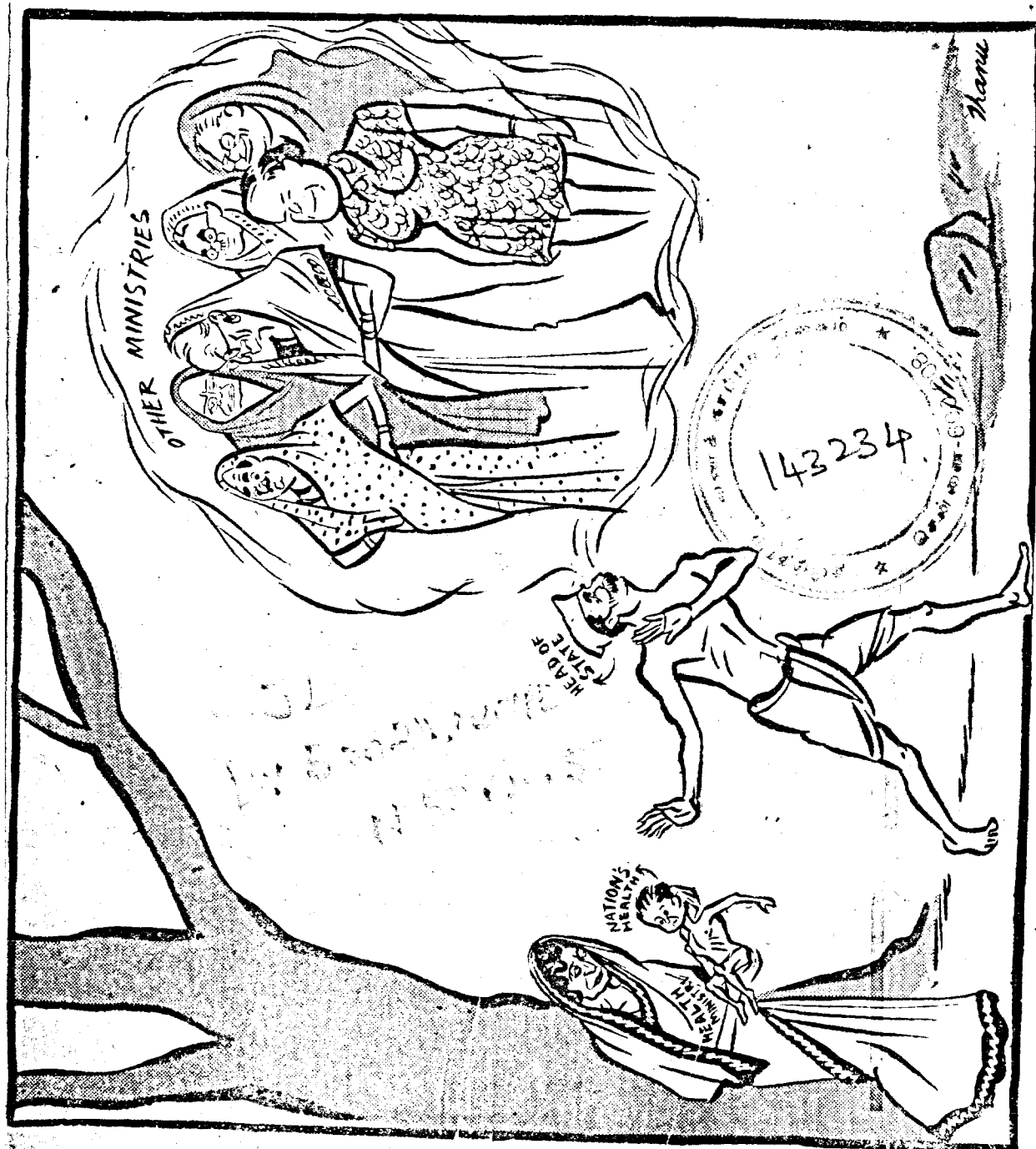
Vol. IV

FEBRUARY, 1950

No. 5

CONTENTS

<i>Subject and Author</i>	<i>PAGE</i>
Cartoon	176
Editorial	177
Commonsense And Nation's Health—By <i>Our Medical Expert</i>	181
Organization of Health Services in Industry— By <i>M. N. Gupta</i>	190
Health and Environment—By <i>Our Study Circle</i> ..	200
Victory Over Malaria In Sight—By <i>Philip Manson-Bahr</i> ..	204
Before the Toothbrush Was Invented—By <i>W. Schweisheimer</i>	207
New Hope For Cancer of the Lung—By <i>Murray Teigh Bloom</i>	209
Do You Know?	212
Wit And Wisdom	214
What Do They Say About It?	260



VOL. IV No. 5

FEBRUARY, 1950

ISSUED MONTHLY

EDITORIAL . . .

*We have left undone those things which we ought to have done ;
And we have done those things which we ought not to have
done ; And there is no health in us.*

—THE BOOK OF COMMON PRAYER.

INDIAN REPUBLIC'S FIRST PRESIDENT'S FIRST ADDRESS TO PARLIAMENT:

The first President of the Indian Republic delivered his first address to the Indian Parliament on 31st January 1950. The address is expected to set out the large policies and programmes of Government in the several fields of their activities. The most striking omission in the address is a reference to the *nation's health*. As Disraeli has put it :

"The health of a people is really the foundation upon which all their happiness and all their powers as a State depend."

Our country has won a notoriety of being the reservoir of all tropical diseases which have for their origin environmental insanitation. We are so notoriously unhealthy and infective that our nationals are not permitted

to enter other countries without protective inoculations and vaccinations. We are looked upon by other nations as veritable infectious diseases !

The Government of India, represented by our so-called *representatives*, have no policy or programme to promote and to protect the nation's health.

THE DEBATE

As usual, the so-called *representatives of the people* in Indian Parliament, spoke irrelevantly and incoherently on all the subjects after their heart without, however, making a study of the subject of their talk. Indeed, some talked through their Khaddhar caps ! Most, Members of Parliament seem absorbed

in securing permits for earning profits, in letting out their official residences for making money, in exercising their brains to draw fat travelling allowances circumventing the rules and regulations, and in acting anti-socially in many other ways.

Having been elected under certain peculiar circumstances as members of the Consambly, they have stuck to their seats shamelessly like leeches without giving an opportunity to the electorate to choose their representatives, soon after the Constitution Act was passed. The people are said to be the masters in Indian Republic. But the masters have been denied the right of choosing their servants. The tail is now wagging the dog!

It is a fraud, pure and simple, on democracy that these Members of Parliament should masquerade as *representatives of the people*.

The farce of a recent bye-election to elect representatives in place of those who are members of the provincial legislatures as well as the Consambly, reveals the fact that, here again, the political bosses who are ever vigilant to protect their interests on power politics, selected such men to go to Delhi whose proper places would have probably been elsewhere. No wonder therefore, that not a soul in Parliament raised even a whisper to demand of the Government to come forward with their national health policy.

HONOURABLE EXCEPTIONS

Fortunately for the country, there are a handful of members in our Parliament who can be expected to take intelligent interest in the national affairs. Even these few very discreetly remained tongue-tied for reasons best known to themselves. Perhaps, their personal interests would have been jeopardised, had they raised this inconvenient issue on the floor of the House. This is most unfortunate.

BCG—CAMPAIGN

Had any Member of Parliament cared to follow the controversy which had been raging throughout the length and breadth of the country over the BCG campaign inaugurated by the Ministry of Health, Government of India, the Minister of Health would have been challenged on the floor of the House to establish the soundness of this policy or its suitability in our country. The Ministry of Health is supposed to be advised by experts who have been following a technique in this matter, which would have put even the notorious Goebbels to shame! The Members of Parliament, who sit in opposition to the present Government, do not seem to have the political sagacity or wisdom to make capital of the situation. They should have charged the Minister of Health for bringing down the great name of

Mahatmaji by resorting to measures to which he was violently opposed. Had Mr. Aneurin Bevan, Minister of Health in democratic Britain, behaved as flippantly and as irresponsibly as our Health Minister and introduced mass vaccination of BCG in his country, he would have done so at the cost of his seat in the Cabinet and even in Parliament, probably culminating in his impeachment at the bar of the house. The truly democratic character of the Mother of Parliaments will never allow the people's representatives to sit quietly in the House when tens of thousands of their young boys and girls, as also children, are being made the victims of an experiment perilous. But, ours is but a perverse manifestation of democratic rule—Sovereign Democratic Republic; hot and cold!

THE CONCEPT OF HEALTH

Even those who are expected to be well informed have a curious conception of the term 'health'. They seem to consider that curing of diseases is the most important item in the promotion of the health of the people. This concept is wholly misconceived.

The Constitution of the WHO states:

"Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."

The Bhole Committee used the term 'Nation's health' to signify the positive

state of well-being in which mind and body are able to function to their fullest capacity. They further state:

"Expenditure of money and effort on improving nation's health is a gilded investment which will yield not deferred dividends to be collected years later, but immediate and steady returns in substantially increased productive capacity."

WHO has expressed its view in these terms:

"No permanent advances in the general health programme can rest upon a substructure of poor sanitation. Any improvement in the disposal of excreta, in the protection of drinking water, in the destruction of the fly and the mosquito brings health and social advantage to man, woman and child."

This is exactly what Mahatmaji was urging all his life. But alas! in vain.

Our leaders very properly appeal to every citizen of our Indian Republic to put forth his best and produce more and more. But the leaders forget the fact that the State is bound to create first an environment which would help the people to put forth their best.

FUNDAMENTAL RIGHTS, FORSOOTH!

The Bhole Committee illustrated their thesis by quoting the following words of Prof. Sigerist, regarding the policy followed by U.S.S.R.:

"Health is one of the goods of life to which man has a right; wherever this concept prevails the logical sequence is to make all measures for the protection and restoration of health accessible to all, free of charge; medicine like education is then

no longer a trade; it becomes a public function of the State."

This conception of health, says the Bhore Committee, as a public function, has resulted in the development of a co-ordinated scheme of preventive and curative health services which exist in no other country and in recognition of the need for improving and providing an environment which would enable the body to remain healthy and to resist disease. For this reason, the control of housing, industrial conditions and other aspects of life come under the care of the people's commissariat of public health. Here, we believe, in so distributing the portfolios among our ministers, that effective coordination is effectively negated!

The first article of the Soviet Constitution of 1921, regulating the commissariat of health, expressly "made it responsible for all matters involving the people's health and for the establishment of all regulations promoting it, *with the aim of improving the health standards of the nation and of abolishing all conditions prejudicial to health.*" "The goal of Soviet medicine" declared Dr. Semashko, (the reason it works not only for the healing but for the prevention of ill-health) *is to create the positive health of the population.*"

The conditions in Czarist Russia were not dissimilar to those which are obtaining in this country today. After the Revolution, the U. S. S. R.

accepted fullest responsibility for creating environmental conditions conducive not only to healthful living, but also to put forth the best efforts in producing the maximum.

But our Constitution Act does not include the right to live and work in healthy environment as one of the fundamental rights. As a Member of Parliament put it, a fundamental right of the citizen of Indian Republic is to get himself imprisoned without trial for a period of not more than three months at a time! The wiseacres who hammered out our Constitution Act did not bestow any thought over this fundamental aspect of our national problem. Among the vast number of people who sat in the Constituent Assembly, there was not a single man who had bestowed any thought over the very foundation upon which all our happiness and all our powers as a State depend. The framers of the Constitution deserve to be condemned for their failure to include among the fundamental rights, *the right to live and to work in a healthy environment.* In these circumstances, is it reasonable to expect people to put forth their best efforts in improving the economic condition of the country? Even if they do make a *bona-fide* attempt can it yield results in the environment in which our people live and work?

The State should learn to put first things first.

COMMONSENSE AND NATION'S HEALTH

by

Our Medical Expert

It is said that commonsense is uncommon. So far as our health administrators are concerned, they seem utterly devoid of that precious commodity. Specialists in brain surgery in this country are but a handful; even the few who are available, would refuse to undertake the impossible task of surgically grafting commonsense into the crania of the guardians of our nation's health!

The health ministries in our Indian Republic are clearly following the footsteps of their foreign predecessors. Their concept of nation's health is not dissimilar to that of their foreign predecessors. 'Prevention is better than cure' has reduced itself to a mere copybook maxim. At best, this old, time-worn adage, like honesty, is praised as a golden policy but despised as a practical proposition.

I am constrained to express my feelings firmly as the health ministries in this country, while attempting to ape their colleagues in the West, do not have the commonsense to understand that in the West, considerable headway had already been made from 1830 onwards to improve the living conditions of the people. And, thereby, the West had practically rooted out the diseases arising from bad environment. They maintain hospitals more to cure *degenerative diseases* rather than *environmental diseases*. The foreigners neglected the living conditions of our people; but, maintained medical institutions to treat mostly the diseases caused by such neglected environmental conditions. Our present health ministries still follow that policy to serve the vested interests, and not the national interests.

WHY OUR HOSPITALS ARE OVERCROWDED?

Dr. John Cumpston, an expert from Australia, whose advice was sought by the Government of Ceylon, has submitted a very valuable report. He has dealt with the many aspects of medical and health problems, which are applicable to our country as well, perhaps with greater force. He has drawn specific reference to the overcrowding in the hospitals. Overcrowding is not peculiar to Ceylon alone. It is a common feature everywhere in our country too. Dr. Cumpston, after a careful analysis of the conditions, attributes the overcrowding at the General Hospital to three factors:

'The existence of widespread preventable intestinal diseases among the population; admission of patients from distant parts, who should have been treated nearer their homes; and the retention of chronic cases in the wards of the General Hospital.'

He has underlined the urgent need for setting up separate institutions to accommodate old and disabled sufferers from chronic complaints. (The retention of these cases in the teaching hospitals is justified on the ground that they are retained for so-called teaching purposes).

Before commenting further, I may straightaway add here one other reason why the City General Hospital is overcrowded. It is also because by some manoeuvre or other the highly qualified men manage to get berths in the General Hospital; whereas their right place is in the district hospitals. If this tendency is checked and some highly qualified men are posted to district hospitals, the overcrowding in the General

Hospital could be minimised to some extent. Teaching institutions should have in them, of course, topping men in each of the branches; but not all along the line from top to bottom.

Perhaps, still another reason may be adduced as to why the City Hospitals get crowded. In the posting of medical officers, adequate care is not generally taken to post a qualified physician as an assistant, when the district officer happens to be a surgeon and *vice versa*. If, in the posting of officers, adequate care is exercised in selecting the district officers and their assistants so as to be complimentary to each other, the rush to the City Hospital from long distances could be avoided.

In this connection, sufficient notice should be taken of the fact that where the top private medical practitioner is a physician or surgeon, the posting of the stipendiary officers should be such as to be complimentary to the services available through private talent.

In our own Province, if any medical or lay administrator had cared to examine the statistical particulars of patients admitted in our General Hospitals or at least to go through even cursorily the list of cases admitted, he would have been undoubtedly struck by the enormous number of patients who are being admitted into them for the treatment of sickness caused by environmental insanitation. Should not commonsense have taught them that the root causes for such environmental diseases should be removed *first* before assessing the requirements of accommodation in hospitals? Further, on the face of it, it is absurd and uneconomical in the long run, to treat environmental diseases in hospitals instead of improving the environment in which the people live. Take, for instance, the treatment of cases of typhoid which is proclaimed to be preventable. It is estimated that to treat a single case of typhoid, the State has to spend approximately Rs. 1,000. The number of cases of typhoid and such other diseases is the yardstick by which the standard

of sanitation of a country is measured. That yardstick was cast away by the foreigners to serve their purpose and our present administrators have lost sight of it.

To treat degenerative diseases is one thing but to cramp the hospitals with patients suffering from 'preventable diseases' caused by unhealthy environment is quite another thing. Even a Muhammad Bin Tughlak would have appreciated the absurdity of the policy followed by our health ministries!

It is sad to reflect that even India's Prime Minister recently referred to 'medical aid' as one of the fundamental requirements of our people. Even his eye does not turn to the more fundamental and perhaps most essential requirement of improving the living conditions *first*, towards promoting the nation's health. The minds of our *educated people* have been so moulded by our long association with the foreign administrators in this country! It is a tremendous task to pull them out of the mould.

As long as the root causes remain untouched, no extension to our hospitals, however gigantic, can possibly meet the ever growing demand of the people. This is again, sheer commonsense.

SOCIAL MEDICINE.

The voluminous report of the Bhore Committee is dotted here and there with remarks which should appeal to commonsense; but to search for them would be like searching for a pin in a hay-stack! The remarks of the committee on *social medicine* are pertinent. The Report says:

"In interpreting health and disease, man must be considered in relation to his social and physical environment. The study of diseases as a community problem demands that the approach should be on a wide basis so as to include social and economic factors, such as, housing, nutrition, poverty and ignorance of the hygienic mode of life. . . . A recognition of these facts has led to the emergence of 'social medicine' which has widened the conception of disease from the narrow view of tissue changes and microbial and other

specific causes by the inclusion of social, economic and environmental factors which play an equally important part in the production of sickness."

The Bhore Committee has quoted Prof. John A. Ryle: 'The socio-medical survey, that is to say, the combined social and clinical study of community health and sickness, often with special nutritional and economic assessments and careful sampling and control' is coming to be accepted as the correct method of approach to study. This wider sphere of 'social medicine' has brought many others among the workers in the field, besides the mere medical men! What is required is *team work*. The team should include many specialists. Without however, bringing into existence a *team* of workers together to understand and to apply social medicine, what is the good of appointing mere medical men as professors of *social medicine* in our medical colleges, as though medical men alone are the custodians of all knowledge of 'social medicine'! I am reminded of a standing joke in the medical colleges where the students define *professors* as those who *profess* to teach a subject on which they keep an open mind! Such appointments, far from rendering useful public purpose, only help to secure sinecure posts to the hot favourites of those in power.

What is the good of upgrading our hospitals without attending to the fundamental needs of our people? Here, again, commonsense has been eclipsed by vested interests which are ever vigilant to safeguard and protect their own.

On the importance of environmental hygiene, it is worth quoting the 'Health Bible': The Bhore Committee Report states:

"But the creation and maintenance of an environment conducive to healthful living may be considered to be of even greater importance, because in the absence of such a provision, the services rendered by the doctor, the nurse and other members of the health organization will largely fail to produce the desired results. In the campaign for improved health, drugs, vaccines and sera can in no way replace such essentials as hygienic home, good food, fresh air and a safe water-supply."

This remark smacks of sheer commonsense; but, without taking note of this fundamental fact, our health ministries are attempting to build more and more massive and imposing hospitals, palaces for nurses and grandiose schemes for producing more and more medical men, on whom largely depends the distribution of drugs to the masses to the advantage of the manufacturing chemists of advanced countries. Here, again, commonsense has deplorably failed our public health ministers and their advisers. Dr. Cumpston has focussed attention on the sense of values and emphasised *how first things should be put first*.

HOSPITAL ADMINISTRATION

"The Colombo General Hospital" says Dr. Cumpston, "as it was at the time of my visits, presented conditions almost incredibly adverse to the interests of the patients for whom the hospital was established: the interests of the nurses, who cannot possibly give proper nursing service or receive training, the interests of the doctors, who should not be expected to examine on the floor patients sufficiently ill to be admitted to hospital and who have an inordinately large number of patients under their individual care and the interests of the medical students. Proper clinical teaching cannot possibly be given under existing conditions."

Some time back, it was brought to public notice how the Kasturba Gandhi Hospital for Women and Children, Triplicane, Madras, was degenerating into a death trap, as it were, on account of disgraceful insanitation prevailing there. The condition of other hospitals in the matter of sanitation is no better.

We are supposed to have sanitation specialists; but they are not made responsible for the sanitary state of our hospitals. Why? again, commonsense has not come to rescue.

We have had instances of tetanus spreading like blazes among surgical cases, resulting from the

dressings getting infected from a nearby cowshed! We have had the instance of kerosene oil being administered to patients, and to three young unsuspecting ones at that; we have had the instance of corrosive sublimate being mistaken for saline and used for giving enema to an unfortunate patient! The last instance was, of course, suppressed and suppressed effectively too. Many other instances of accident—callousness, neglect or whatever it may be called—do not come to light at all! The confederacy of the profession would not admit of unpleasant facts coming to light. No wonder! When hospitals are packed with patients in the manner in which they are being done now, no individual and careful attention is possible. Money spent on the so-called treatment of cases is simply money thrown away. The usual plea of lack of medical personnel, nurses and the like, can always be put forward as plausible excuses. Why crowd our hospitals in this manner at all? That is the question. Commonsense should help our administrators to understand that it is wiser to run an institution efficiently on a limited scale than to run inefficiently one on a grand scale. The present policy only results in inefficiency and wastage allround.

PRIVATE PRACTICE BY GOVERNMENT DOCTORS :

This is a cursed issue. It is not, however, incapable of being solved satisfactorily. What is required is the determination of the administration to face the issue squarely. The British Health Minister, who is well known for his courage and drive, succeeded in nationalising the health services in the face of violent opposition by a powerful organization like the British Medical Association. Here, we have no organization of such power and potency. It should be easy to impose the will of the State on the profession here.

On this subject, Dr. Cumpston is firm in his opinion. He recommends the total prohibition of private practice by medical officers who draw a salary from the State. He says: "Private practice and self-interest are suffocating all impulses towards public service . . . This perhaps might not be so bad if it were not that this self-interest is almost exclusively financial . . . " Dr. Cumpston further adds: "I cannot accept or approve of a system which provides for considerable number of doctors government salary £680—£780 per annum with certain allowances payable in money and a retiring pension; and at the same time allows him to carry on a private practice of the value of between £3,500—£6,500 sterling per annum."

It should be remembered that the system of medical education in this country imposes an expenditure on the State. The State spends perhaps more than what the candidates themselves incur towards their medical education. The State is therefore entitled to demand the services of the medical men for a certain number of years *at least* in any manner which might be determined by the State itself. We know that in practice the medical men draw a salary from the State and treat hospitals in which they serve as their own private nursing homes which are maintained at State expense. This aspect of the question has been brought to light; but no effective steps have been taken to put down this practice. Government servants are full time employees of the State; all the twenty-four hours, their services are expected to be available for the State. Stipendiary medical men are no exception to this rule. If, in the early stages of medical service in this country, a concession had been shown to medical men in public interests when there was a dearth of them, it cannot certainly amount to a legal right. A concession is after all a concession, it does not amount to a legal right, by any amount of legal quibbling, and it can always be withdrawn by the State.

Why should not the Government do it? The Government medical men not only enjoy special privileges and status as medical officers of State but also exercise them to the prejudice of the independent medical profession. Apart from this, they fleece a fee to an unconscionable degree taking advantage of the gravity of the situation in a case and their status in the State hospitals. This aspect has been brought to light recently on the floor of the Madras Legislature. The Minister of Health could put forward only a poor plea in support of the conduct of the Government medical officer. This reform is long overdue and I feel that unless we have a man like Mr. Aneurin Bevan, Minister of Health, England, there is absolutely no hope for such reform being carried out in this country. But a Bevan means character and character is as foreign an element to our politicians, as commonsense!

The members of the Public Health service are also medical men who have a post-graduate degree acquired two years after graduation. They are totally prohibited from having any private practice—which means fifty lucre. The restriction on private practice and the divorce of this service from actual medical work, have made this service most unattractive for medical men. No wonder, it does not attract the best brains. Over a third of the cadre remains unfilled and the post-graduate courses in public health, are often not held for lack of candidates. Unless the temptations on the curative side are suppressed, it will be impossible to get medical men to take up preventive work.

EXPERIENCE AT GOVERNMENT EXPENSE : FOR WHOSE BENEFIT ?

Dr. Cumpston has drawn also attention to another aspect of the question. He says :

"Upon no principle of which I am aware can the Government justify the expenditure of public funds to provide a subsidy to a select group of doctors so that

they may provide a private medical service to that exclusive group in a position to pay (sometimes large) fees. The position is aggravated when the doctor has acquired his specialist knowledge at government expense."

It is not unnatural that the stipendiary medical officers give preference to their private practice over their public duties in State hospitals. Their attendance at the hospitals is invariably irregular. They go round in the mornings visiting their private cases and come to the hospital practically dead tired without any preparation to discharge their public duty. The specialist knowledge they have acquired at State expense and even expensive equipment provided at public cost are being prostituted by them to make more and more money. It is common knowledge that the medical men consider the salary they draw as something like a retainer only. Their main purpose in life is to grab money, more and more, even while on actual duty in State hospitals. This is wholly immoral from any point of view. It is dishonest. If the medical profession is losing its prestige in public eye, it is because the public know that the State medical man's first consideration is money-making. The medical men know in their heart of hearts (if they have a heart in them at all) it is all rank nonsense to talk about the medical profession rendering service to society for relieving the sufferings of the sick. It is something like unscrupulous politicians bringing in the ideals of Mahatmaji as a cloak to cover their own black heart.

In fairness to the medical profession, I must concede that fortunately there are still a few among medical men (women included) both in State service and outside it, who are genuinely fired with a spirit of social service. The prestige of the profession is maintained by them. But one has to observe regretfully the fact that their number is also fast dwindling. The force in environment in which they have to work is tending to have a baneful influence even on them.

It may not, perhaps, be out of place to reveal a case which came to my notice, where a senior medical officer in charge of a specialist department in a State hospital, suggested to a woman to sell her diamond ear-rings to pay him Rs. 500 which he demanded of her to treat her husband, who was suffering from a painful disease, when she pleaded incapacity to pay such a high fee! These instances do not come to light and, indeed, they cannot and even if they do, the State is impotent to deal with them firmly and fearlessly. Considerations of the status of the officer, his pull with the high authorities or even Ministers of State, or even their relationship with them and the like, stand in the way of normal disciplinary proceedings being instituted against them. Such instances, though talked of freely by the people, go unnoticed by the Government with the result that the entire service becomes demoralised and becomes a veritable den for corrupt practices.

CHIT SYSTEM

This notorious practice is tolerated both by the State and the public. This pernicious practice is graver than even corruption, as the term is ordinarily understood. On the *chit* system, Dr. Cumpston has something sharp to say. He says:

"The chit system which now operates has given rise to serious malpractices and cannot be countenanced. The senior medical staff issuing chits would certainly come under the head of 'influential sponsors.'"

He has also drawn attention to the fact that the junior officers admitting patients cannot be reasonably expected to question the *chits* of senior and higher brother officers, *fearing direct or indirect reprisals*. He quotes a circular of the medical superintendent of the Kandy Hospital to make the point that in some cases the rule that 'admission of all cases shall be at the discretion of the admitting medical officers' has been broken.

Dr. Cumpston believes that 'chits' would have no commercial value and even venal doctors (if they exist) would not be asked to issue them if no admissions were made beyond the limits of bed accommodation' and the ministerial order that "all cases considered urgent by the admitting medical officer shall be admitted but non-urgent cases, if accommodation is not available, should be placed on a waiting list and admitted as vacancies occur," was rigidly adhered to.

The chit system is defended by vested interests that they indicate the desire of the patients to make *personal contacts* with their doctors before they were admitted to the hospitals. They contend that the chits were a means of establishing this personal relationship which gave every patient confidence and fortified mind when entering the hospital. Obviously, this argument bears the stamp of self-interest. These contacts are not free. They are paid for. This aspect should not be overlooked. If the patients want to have contacts with their medical officers, why shouldn't they get themselves treated by them in their own private nursing homes or in any of the other existing ones? When a patient enters a State hospital, he has no right to choose his doctor. What the State institution provides should satisfy him. Otherwise, he is free to get himself treated 'elsewhere'. The patient should not have any choice in the matter at all. A medical man should not have a choice of patients in a State hospital.

Again, why should patients who secure *chits* be given preference in the admission to State hospitals than those other desirable and urgent cases, where the patient is too poor to get similar chits? By no argument can this malpractice be justified. It is grossly dishonest and it is opposed to public interests. The administration should stamp it out firmly.

HOSPITAL ADMINISTRATION:

Dr. Cumpston recommends that the administration of the General Hospital should be removed

from the control of the Department of Medical and Sanitary Services and placed under the control of a Board responsible only to the Minister. 'The Chairman of this Board', says Dr. Cumpston, 'should not be Director or any of his officers.' He should have excellent reasons for making this recommendation. For one thing, if the top administrator happens to be a permanent servant, it is inevitable that he should run the risk of alienating the feelings of his colleagues by doing what he thinks right. He would be compelled by circumstances to wink at quite a number of malpractices among his colleagues.

So far as the Madras General Hospital is concerned, the Ministry of Health has recently appointed a full time Dean to be in entire charge of the administration. It is too early to say how far this experiment will prove a success. In any case, the Ministry of Health would be well advised to have a small committee of three select, informed non-officials to assist the Dean in his work and to bring to notice the defects in the working of the hospital from the public point of view. This committee would incidentally strengthen the hands of the Dean to put down the evil propensities which may be prevalent in the institution.

CORRUPTION:

Corruption, corruption and corruption everywhere! Corruption is tolerated and it is accepted both by the State and by the public. The cry to put down corruption on the part of the people is a cry in the wilderness. The pronouncements on the part of the State to put down corruption have not been reflected in firm action. Flies are caught and crushed; hornets are left unscathed!

Dr. Cumpston states: "I have had representations from several quarters concerning straight bribery and corruption in various forms and many representations concerning patronage and influence. I would have normally been very reluctant to have even mentioned this sub-

ject. But there seems to be a very widespread acceptance of these practices as normal aspects of social life." "I cannot of course condone these practices," Dr. Cumpston continues, "in any form or degree; in a medical service, which should be exclusively service of humanity and mercy, such practices are particularly undesirable."

The medical profession owes a duty to itself. The reformation should come from within. If it does not come ere long, the profession will expose itself to contempt and ridicule in the public eye. The profession has no right to cry from housetops that it is one out to render *social service*, while it is in practice engaged in anti-social activities by plundering people taking full advantage of their helplessness.

HEALTH PROPAGANDA:

Here, again, lack of commonsense has let down our health administration. What is the purpose of propaganda without providing services to the people? As *People's Health* put it tersely some time back, tons of propaganda urging the people to use safe water for drinking purposes cannot produce an ounce of that precious gift of God to man! The so-called health propaganda is but an eyewash.

Dr. Cumpston comments that the health propaganda of the Public Health Department over a period of several years in Ceylon has not been successful as judged by the persistence of hookworm, typhoid, dysentery and ascaris, as also the large percentage of sufferers from these diseases seeking admission to the hospitals.

Effective health education should be in the nature of a chat with small groups of people; it should relate to local conditions; what is most important, it should be undertaken only where and when service and relief can be made available. The first aspect is fairly well illustrated in the homely chats on health sometimes put on the Air from Trichy Radio Station as part of its evening village programme. The second aspect

is now looked after by the health workers in the field. The third is completely ignored. The villager hears that he should do this, should not do that, should have this, or should avoid that. He turns round and sees that the environmental conditions leave him no choice, that placed as he is, he has to do what is prohibited and to use what should be avoided. He feels frustrated and regards the health propagandist as an unpractical fool who talks because the authorities pay him for it. Health education is always put forward as one of the items in every health development programme. Rightly so. But what our administrations fail to realise is that it should not be the only item of development and that it should follow other developments in services and relief.

HEALTH ADMINISTRATION :

Any one who had watched carefully the routine work involved in the office of a health officer, district or municipal, would be shocked at the enormous amount of routine work on which technical officers are employed. Seeing that their paper administration is growing like a snowball, the administration has thought fit to appoint assistants to district or municipal health officers, a work which ought to be normally done by a competent headclerk. Is this not sheer waste of technical talent, apart from wastage of public funds?

AMALGAMATION OF CURATIVE AND PREVENTIVE SERVICES :

The Bhoré Committee recommended the amalgamation of the two arms of health services. At the first Conference of Health Ministers, this policy was accepted. Madras and Bombay alone dissented from the majority opinion. Eventually, Bombay has fallen in a line with the rest of the country. Only Madras still stands out. What local conditions justify the maintenance of the two branches of service as two independent entities, are not, however, revealed to the public.

The concept of *social medicine* and the modern trends of public health practice *needs integrated work in cure and prevention at every stage*. The "Basic Doctor" which the Bhoré Committee visualised is based on this thesis. Madras Government is till content to maintain old traditions. Their strong argument—in fact their only argument—in favour of *status quo* is that co-ordination is effected at the highest level by a single minister and at the lowest level in the Primary Health Centre. Ministries concern themselves generally with the formulation of large policies. Their implementation and day to day development lie in the hands of the administrative services. Two water-tight, independent organizations can never carry out effectively a directive which needs unified team work. The argument that unification is effected at the lowest level is not based on facts. The curative side in the Primary Health Centre, works independently of the preventive with diverse interest. It concerns itself little with field conditions; its supervision and development rests with an independent agency. Similarly, the preventive side concerns itself with field work with practically no relation to central institution attending to cure and relief. Madras has gained a reputation of being in the vanguard of public health development in India. She runs the risk of losing that reputation if it does not realise that the services of prevention and cure should be unified and set to work firmly on preventive lines. I am afraid she may even win the notoriety of lagging behind other States.

Incidentally, one would like to ask what the governments and universities have done to produce the 'Basic Doctor'. Madras is in a unique position in having a medical man as its university Vice-Chancellor; a person with vision and a reputation for achieving things, and one who had an effective voice in the production of the Bhoré Committee Report and has a more effective standing in the Indian Medical Councils and

in the World Health Organization. Yet, one hears so much of the development of all kinds of specialities in under-graduate medical education; and a post-graduate council was inaugurated in Madras with all fanfare and trumpets. It is extremely painful and disappointing to see that in all these efforts, preventive medicine has been deliberately ignored. By so ignoring, the traditional vested interests are being served still. Even the attempt to start the teaching of 'Social Medicine' has miserably failed because it started as a disabled limb of clinical teaching; had it been given its proper place in preventive medicine, which is essentially linked up with field work, it might have survived and grown up.

Dr. Cumpston goes a step further and recommends that the Director-General of Health Services should also be the Secretary of the Health Ministry. Indeed, this reform has also been brought into existence in some of our Indian States. For one thing Madras has earned a notoriety, that is for its *conservative* and cautious administration—whatever it may mean. As Mackay put it in his "Twenty-one Days in India," the Madras secretariat is never known to have consumed a subject in its flickering candle light! Madras may claim to have very brainy people; this accounts for ingenious arguments being put forward to maintain *status quo*. Perhaps, the sharpness of intellect keeps the head and heart quite wide apart! The I.C.S. men have had their way in the past. Even now, the I.C.S. men are put in charge of even technical departments, thrusting aside talented technical men. In Madras, the administration of technical branches has reduced itself to mere *administration*, which again means a clerk-ridden administration (I mean no disrespect to this class of hard-working public servants). It is high time that Madras also falls in line with the rest of the country by amalgamating the two branches into one.

Heterogeneity in population torn by castes, sub-castes, sex, creeds, religions and so on and so

forth, had been put forward very effectively in the past by the foreign administrators against any forward step being taken to improve the health of the nation. It is a curse attached to our country. No uniform standard or principle can be observed. The Ministry of Health at the Centre handles health, local administration and town planning. In some Provinces, local administration and health are managed by one and the same Minister. Significantly in Madras alone, there are two Ministers, one in charge of local administration and the other in charge of public health. This is wholly undesirable. No portfolio should be considered as a pawn in the political chessboard. The Minister in charge of local administration has a political pull in the administration of our local bodies. He is not certainly rendering any service to the people. As in England, the Minister of Health should be in charge of both the portfolios, local administration and health. If it is considered that the work would be too much for a Minister, there is nothing to prevent him from having a Deputy Minister or a Minister of State to assist.

CONCLUSION

I have expressed myself freely and frankly perhaps emotionally. I do not at all see any silver lining in the sky. I take a pessimistic view, seeing how our public health administration in the country is being run, even after we have attained our independence.

There would be salvation only when this country produces a man like Aneurin Bevan. This scorched earth cannot possibly give birth to a man of his type; even if it does, the high infantile mortality prevailing in the country would soon carry the child away to the grave! A nation of C3 class of people, is bound to go under. The only course which could save the nation is by giving the *first priority* to improve the living condition of the masses. The State should accept the fullest responsibility therefor.

ORGANISATION OF HEALTH SERVICES IN INDUSTRY

6. ORGANISATION AND ADMINISTRATION OF MEDICAL WORK

by

Dr. M. N. Gupta,
M.B., B.S. (Pb.), D.P.H. (Lond.), D.I.H. (Eng.),
Deputy Chief Adviser, Factories (Medl.), New Delhi.



(NOTE.—The views expressed in the article are personal and not that of the Government.)

"The Industrial Medical Department is the workshop of the physician and should function as a human service department".

—SAPPINGTON.

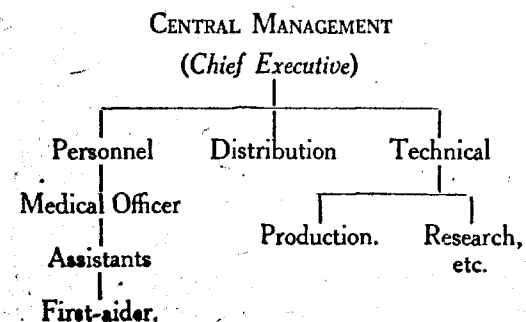
(Essentials of Industrial Health.)

An attempt has been made in the five previous articles in this series to indicate the need for the organisation of Medical Service in industry in the country.

The following lines describe the working principles of industrial medical service and indicate the provisions necessary for the purpose of providing a minimum standard of such service. These are as follows :—

ORGANISATION OF AN INDUSTRIAL HEALTH TEAM IN INDUSTRY

From the stand-point of formal organisation an industry is seen to be made up of units as follows :



Each unit has specialised sections and functions of its own. But all functions are concerned with employees throughout the organisation. Each unit and sub-unit is responsible for the effectiveness of the specialised personnel units. Now it is a recognised principle of organisation that responsibility and authority should correspond. If the medical officer is charged with direct responsibility for the results of his particular unit, it can safely be assumed that he must necessarily enjoy absolute authority in all matters contributing to that result. Of course his discretion will be limited in respect of this or that subject, by reference to a specialised authority (say, the Personnel Management) expressing on that subject the policy of the whole organisation of which his unit is only a part. As such the doctor should accept such limitations to make his knowledge effective in the service of the undertaking. The doctor in industry, however, is placed in a very invidious position. He has to satisfy the needs of three masters—employers, employees and the medical service. There is a proverbial authority for the contention

that "no man can serve two masters". But, in fact, the complexity of modern organisation in industry, means that the doctor must serve many masters.

In order now that such a policy could be worked it is essential to search for a method of integrating "functional" and "line" responsibility and authority. And *mutatis mutandis* a search has to be made to secure co-operation between the units and all other specialised services existing in modern industry.

This can be achieved by the organisation of an "Industrial Health Team" in industry. In medical work in industry there is difficulty in reconciling the authority and responsibility of the doctor with those of the units and sub-units in industry, as there is generally found to be an absence of clear-cut organisation, in spite of the fact that industry in the country has come to realise the value of specialised knowledge of Industrial Hygiene and Industrial Medicine. The method to organise such a team, therefore, is that the doctor in industry should devote some care to the analysis of the various responsibilities, attempt tactful handling when minor rubs occur, and try to secure the goodwill of all units in industry.

The Position of the Medical Officer.—The Medical Officer with his staff should be responsible for his own work to the Personnel Director or the Board of Management. For discipline and day-to-day work he is responsible to the same officer. He has professional disciplinary powers over his staff of assistants, nurses and first-aiders. In his medical relationships he should be a member of the managerial staff and industrial health team or in matters that are purely professional, he is an adviser to management and workers. He should maintain collaboration with other members of his team for the maintenance of the health of the workers.

The Labour Department or the Officer-in-charge of this department should form the link

between doctor and workers as individuals or as groups. Industrial Medicine is group medicine practice. The doctors' advice receives final interpretation in this department. All reports from the doctor on problems of labour fitness have to be sent to this department. Such a Labour Department deals with engagement, selection, placing, transfers, amenities, canteen, welfare, financial assistance, joint consultation between management and workers and other duties.

The Industrial Health Team.—As the major function of such a team is to look after the harmful exposures in the environment of the worker, it draws its members from the following sources :

(a) For prevention of toxic hazards, it requires services of the Work's Chemist and Physicist.

(b) For problems of building, plant, machinery and technical planning, it draws on the services of the Work's Engineer, technical research department officer and other committees.

(c) For problems of accident prevention and protective clothing, it requires collaboration with the Safety Officer and Safety Committees.

(d) For problems of obtaining knowledge of workers' difficulties and opinions, the co-operation of Personnel Officers, Welfare Officers, Supervisors, Foremen, etc., is needed.

Thus it is seen that in organisation of environmental and preventable measures to protect against accident or industrial disease depends upon the services of other professions such as engineers, chemists, management and welfare workers. It is, in fact, usually the duty of the doctor to initiate action in this regard.

It is thus absolutely essential that an Industrial Health Team is organised before the work of provision of health service is embarked upon. An organisation of this kind is applicable to all types of undertakings, large as well as small. The size of an undertaking does not make any

difference to the principles and relationships which govern the correct distribution of personnel, work and responsibility. It is only the method of work that is affected. A large undertaking may have one or more full-time medical officers with necessary assistants. A smaller concern may rely on part-time attendance from a general practitioner. A yet smaller factory may have only an employee trained in first-aid. But every firm or factory should have on an appropriate scale an organised unit to undertake health work.

THE DEVELOPMENT OF HEALTH WORK IN INDUSTRY

The introduction of First-aid kit appears to be the first modest attempt providing a crude form of medical service in industry. Most factories even now do not have a trained first-aid-in-charge of first aid kit and responsible for administering the necessary aid and keep the supplies replenished.

A second attempt appears to be the appointment by the factory of a practising physician on "call", to administer for emergency injuries. But this arrangement has not always been found to be in the interest of the workers. A further stage came when a physician was engaged to spend a number of hours at regularly appointed periods during each week in the factory first-aid room for redressings and advice in sickness problems. More advanced employers engaged a permanent doctor with necessary assistance and have provided something of an ambulance room, where medical service provided is of the dispensary type, while in a handful of factories a large medical staff, with specialists services and indoor accommodation in factory hospital is provided.

In any industrial town in the country, all these stages in the provision of medical service are easily come across.

Nothing is so annoying to the industrial health administrator than to see a score of half-hearted

measures for the provision of industrial health service in the 14,000 factories in the country. It is not the object to lay the blame solely at the door of the management, the medical men in industry have equally to accept responsibility for the existing state of affairs.

For the organisation of an industrial health team, the medical men must start thinking on new lines.

1. The medical men in industry must learn to practise industrial hygiene and industrial welfare and not confine their energies to the art of healing.

2. They must interest themselves in the study of problems of industrial toxicology, industrial physiology, industrial psychology, industrial and occupational illnesses, industrial medical service, industrial fatigue, factory workers, nutrition, etc.

3. They must improve their professional education to fulfil the role of the work's doctor by taking advantage of specialised educational facilities in the subject of industrial hygiene offered by the All-India Institute of Hygiene and Public Health, Calcutta.

4. They must take interest in research problems related to health and welfare of industrial workers, and establish contact with research organisations.

5. They must take increasing interest in the manufacturing operations and make periodic inspections to familiarize themselves with working conditions, with the control of hazards incident to the industry and general health supervision programme in industry.

For the doctor in industry to organise any health work, it is fundamentally important to observe the following:

(i) To secure co-operation from employees, to create an active health interest in them.

(ii) To encourage employees to patronise the Ambulance Room and avail of all opportunities to get well and keep well.

(iii) To encourage the industrial executives, supervisors, managers and foremen to participate in the health service programme.

(iv) In the organisation of staff and work to obtain collaboration of the executives and produce an economically workable health scheme with sound financial basis.

THE EXISTING INDUSTRIAL HEALTH SERVICE

The existing industrial health services are of two kinds: (A) Statutory and (B) Voluntary.

(A) Statutory.—The Statutory Services consist of:

(a) (i) The Chief Adviser-Factories organisation; and.

(ii) The Medical Benefit Council of the Employees' State Insurance Corporation.

Both services are part of the activities of the Ministry of Labour of the Government of India. Both these services are staffed by doctors. The Staff of the Chief Adviser Factories Organisation are not engaged in the day-to-day practice of industrial medicine but act as Inspectors and Advisers.

(b) The Factory Inspectorates of the State Departments of Labour. At present the Factory Inspectorates of Bombay and Travancore, have each a Medical Inspector of Factories attached to the organisation. The other States of the Indian Union have also schemes for the appointment of Medical Inspectors.

(c) The Factory Inspectorates in the States are assisted by Certifying Surgeons who carry out limited duties of examination of young persons and of persons engaged in dangerous trades. These doctors are usually general practitioners or State medical officers and their industrial duties form a very small part of their total work.

(d) In addition, the Union and State Public Health authorities have certain statutory duties in industry.

(B) Voluntary.—These are industrial health services which have been established by some employers. They are staffed by full-time and some by part-time doctors, assisted by compounders. The duties of the medical officers employed by industrial undertakings are the day-to-day medical supervision of workers and work in factory hospitals and ambulance rooms.

The existing industrial health services are very deficient and this applies both to the statutory and the voluntary services. Even the lay inspectors of factories are only able to pay on an average one visit to each industrial establishment in twelve months.

The majority of small factories lack any form of medical supervision, even though the magnitude of some of the problems of occupational health in them demands urgent establishment of some form of medical service in them.

It is therefore necessary that the physician in industry to whom these lines are addressed, should think in terms of expansion of these services in place of his work.

FUNCTIONS OF THE MEDICAL WORKERS IN INDUSTRY

The proper functions and duties of the industrial physician were set out in the fourth article in this series (October 1949 issue of the *People's Health*).

In main, it may be said that the physician in industry practises preventive medicine at the place of work, in such a way as to contribute to the health, welfare and safety of the worker. The physician also specializes in the knowledge of work, worker and his environment by study and observations carried out in the particular industry of work. He works in a team with his other colleagues in industry for the promotion of Industrial Hygiene; thus his work is entirely preventive in character and not mainly curative. Since the physician in industry is available at the place of work, he helps in the saving of

valuable productive man-hours and assists in the quick return to work of those who have been injured.

THE QUALIFICATIONS AND TRAINING OF MEDICAL PERSONNEL IN INDUSTRY

These were set out in the fifth article in this series (November 1949).

While most doctors now working in industry have, in the main acquired their specialised knowledge by working in factories and by private study, it is desirable that all physicians in industry take advantage of post-graduate certificate course in Industrial Hygiene, instituted by the All India Institute of Hygiene and Public Health, Calcutta.

Section 45 of the Factories Act, 1948 also requires the staffing of Ambulance Rooms by prescribed nursing staff, and responsible person "trained in First-aid" in charge of First-aid Boxes or Cupboards. This First-aid staff can be of two types :

(a) Nursing Staff :

(i) A trained nurse (having completed a three years course in recognised training school and obtained the Certificate) who has obtained the St. John Ambulance Association Certificate in First-aid.

(ii) A trained male nurse who is in possession of the Association Certificate in First-aid.

(b) *First-aider* : A first-aider is really on the first line of defence in the field of first-aid in industry, because he must act without a superior or doctor immediately at hand.

All first-aid ambulance workers should be trained in the following first-aid methods :

(a) Methods of prevention of infection of wounds.

(b) Checking of hæmorrhage.

(c) Treatment of shock and asphyxia.

(d) Safe removal of unconscious persons from difficult situations.

(e) Methods of resuscitation by artificial respiration.

(f) Management of fracture cases.

(g) Treatment of burns.

(h) Transport of injured workers.

RELATION BETWEEN MANAGEMENT AND INDUSTRIAL HEALTH SERVICE

The effort of the industrialist in establishing industrial health service entirely at his own expense and sweet will in the past cannot go without recognition. Even the Trade Unions have given their approval and praise to these services. The voluntary services provided by enlightened industrialists are better provided by them than otherwise. A large number of progressive employers have forestalled the introduction of rules and regulations under the new Factories Act and have voluntarily established improved conditions and standards which are required to be set up in their industries and have made their factories a place where a worker can take satisfaction in his job and lead a satisfactory life outside as well.

In any official service on the other hand the tendency must be to demand compliance with the uniform minimum standard than to ask for the best which voluntary effort alone can provide.

RELATION BETWEEN INDUSTRIAL HEALTH SERVICE AND GENERAL HEALTH SERVICE

As has been pointed out above, the fundamental function of an industrial health service is preventive while that of general health service is curative. Where there is overlapping in the functions of the two services, it is mainly in the treatment administered in the Ambulance rooms or dispensaries of the factories. But these treatments are given in the factory only when the worker is capable of work. If he is unfit for work, he is sent to hospital or his private doctor.

SADHANA.

An English monthly devoted to liberal Religion and Social Reform—Published under the auspices of the A. B. S. Asram.

VOL. X. COCANADA—9th July 1944. No. 5.

N. B.—The Paper Control (Economy) Order of the Government of India of 1944, reduces SADHANA to this size. The same will continue till the order is modified or annulled.

PRAYER.

In these days of strain and stress, when human values are so rapidly changing we approach Thee, O Thou Unchangeable One! seeking Thy guidance and Thy blessing, so that, walking under Thy light, we may not get stranded in coursing through this intricate voyage of life. Amidst these varying conditions and vicissitudes, Thy Truth, Love and Justice, which are parts of Thy Eternal Reality, stand forth as beacon-lights, ever exhorting us that only those who are loyal to them in the conduct of their lives will be blessed with that much-valued spiritual power which would enable them to adjust themselves to the changing conditions and yet live this life as Thy true servants, furthering Thy divine purposes. Mayst Thou grant this understanding to all of us and enable us to be faithful to the laws of Truth, Love and Justice in all aspects of our lives, however much the innumerable changes that are coming over us alter the shape of things and unsettle our prior notions in all directions! Mayst Thou bless us!

DEVOUT THOUGHTS.

(Selected.)

Marvellous are the possibilities of human life. Mainly there are three functions of human life, namely—thinking feeling and acting. If we manipulate these functions from your lower nature, they create only discord for yourself and for those round about you, whereas, if they are inspired by your higher divine nature, they make for the attainment of a state of harmony conducive to your own felicity and also for the delight of others.

* * *

The main condition for the revelation of God within you is the elimination of your ego-sense and the complete surrender or dedication of every part of your being to the omnipresent, omnipotent and omniscient God. Instead of the ego, God should hold sway over you. God's light should illumine your mind. God's love should permeate your heart. God's power should control your activities. In short, you should be so fully imbued with the God-consciousness that your life inside and outside is fully divinised.

* * *

All that is good, great and magnificent that you observe in the world have been the creations of human lives in whom God had manifested Himself in all His glory and perfection. Hence human life has a special mission and significance. Every member of the human race can become such a vehicle for God to possess and be a sun of divine love and splendour.

* * *

SADHANA.

9th July 1944.

RADIANCE.

Rev. W. L. Keyser, in his address given at the Conference of the Bengal-Orissa Mission in November 1943, (reproduced on pages 65 to 67 of the April 1944 issue of the Baptist Missionary Review), referred to "The Twenty-six Qualities of a Missionary" given expression to by a speaker at a Foreign Missions meeting held sixteen years previously. While admitting the value of making such lists, though to some they may appear possible to only superhuman beings, Rev. Keyser directed attention to one quality of a true minister. In doing so, he quoted what Baron Von Hugel said to Rufus Jones: "Only a few things are essential. Those who are canonized as saints must have revealed four essential traits (1) They must have been loyal to the faith, (2) They must have been heroic, when tests came to them, (3) They must have shown the power to do what ordinarily would seem to be humanly impossible, and finally (4) They must have been radiant in the midst of the strain and stress of life. Now the Church may conceivably be wrong in insisting on the first three of these conditions, but it is gloriously right about the fourth." Mr.

Keyser believes that this quality called "radiance", which does not seem any too common, is the natural product of a thoroughly Christian life. Obviously it cannot be confined to Christians alone but may be extended to all those who live up to all the implications of a thorough Christian life, though not labelled as such. The true and sincere devotees of God, in whatever way may lie their particular approach to Him, do form a spiritual aristocracy and this quality of radiance is characteristic of at least, some of them. It is not easy to describe what it really is, though it may be said to be a kind of spiritual glow, which suffuses the countenance of some of the spiritually advanced souls, which in the words of Mr. Keyser "seems to be an expression in the face compounded of humour, joy, peace, compassion, innocence and wonder" and he thinks that a true minister of God, ought to have this quality, above all others. But it need not be confined to this class only. It is not a quality that can be cultivated or acquired by strenuous endeavour or *sadhan* but it is so to speak the unconscious resultant of a number of special virtues, among them are those mentioned by Mr. Keyser, characterising an unceasing life in God, through which the votary reflects the Divine light that is lighting his whole life—body and soul. Though this radiance is most marked in the countenance, the marks of it can easily be discerned in every movement of one's physical and

mental frame, when one attains to that level of spiritual development when he is in the position of an instrument through whom God works in every detail of his activity, be it humble or exalted.

Further analysing this quality of radiance Mr. Keyser says that there are at least three things that the radiant lives disclose, namely, "(1) They live at home, (2) They believe in miracles and (3) They like their neighbours." In explaining these things he points out that "they live at home" in the sense that they are at home anywhere in the world, living as they do ceaselessly in God's presence, without being affected by their environment—"living in the world, they are not of it." "To the radiant, home is where they are; for their most congenial environment is where God is." Regarding their "belief in miracles," he says radiant people have a sense of wonder and deep trust and love for God and so they are able not only to believe in miracles but experience them in their own lives when they see that by the wonderful power of God, things thought to be impossible and unattainable are made possible and capable of attainment, especially when they recognise "that the creator can be and does enter every realm of the physical and spiritual, transforming these in response to trust." As for their "liking their neighbours," it is nothing less than caring for people of all kinds and rendering them all the service and help they

have the talent and means for, without drawing any distinctions among them. It is not merely service done as a piece of duty but it is service inspired by love to them, which is the same as love expressing itself in service. As Mr. Keyser puts it! "We have for ever with us the radiance of His presence; and in that presence we live in a different atmosphere. In it we glow and shed some of that glow on others, bringing joy to the sad, removing burdens from the weak, giving hope to the discouraged, bringing sunshine to the stunted and feeding the hungry."

Radiance is the unsought and unconscious expression of an inward light suffusing the countenance (body), mind and soul, which is reflected by those who verily live, move and have their being in God, seeing His presence in everything big or small, and experiencing the workings of the Divine will in all things. Every true son of God who lives up to the stature of his divine origin in all aspects of his life would have this radiance and working up to that level of life by means of strenuous endeavour is not only open to all but it is verily the goal of human life to which all should aspire.

NOTES.

Acharya P. C. Ray : In the passing way of Sir P. C. Ray at the ripe old age of 83, on Friday, the 16th June 1914,

India has lost one of its greatest sons, a tried and seasoned servant of the nation, who had tirelessly laboured for more than half a century for the welfare and glory of the motherland. He has earned world-wide reputation as a scientist of the first rank in the field of Chemistry. His discovery of Mercurious Nitrate which had revolutionised the Scientific world and the History of Hindu Chemistry which has justly earned international fame, not to speak of the Indian School of Chemistry of which he may verily be called the proud progenitor, bear ample testimony to his preeminence in that field. That he was not merely an abstract Scientist but one who had utilized his unbounded enthusiasm for research and scientific advancement in harnessing it for constructive business enterprise is evidenced by the Bengal Chemical and Pharmaceutical Works, one of the biggest concerns of its type in the East, which owes its existence and working to his brilliant genius and masterly guidance. In him, it is not alone his intellectual achievements and the unwearied pursuit of truth that attract us but also his wide and sympathetic heart which overflowed with the milk of human kindness to the poor and needy, irrespective of all distinctions. He was a self-less and life-long bachelor, who had never spent a thought on himself but was always eager to rush to the relief of want pain and distress. His philanthropic labours in times of floods, famines and other disasters have made him a well-

known friend of the poor and his unbounded munificence with the help of which hundreds of students had built up their careers and the scores of institutions—of which a rough list of 45 was given in the Bharat Jyoti of Bombay—which had benefited through it, do stand forth as an enduring monument to the selfless and feeling heart of the Acharya. He was, besides, a great patriot and a constructive nationalist and an out-and-out swadeshi. He busied himself in all those channels of activity which contributed to the well-being and happiness of his countrymen and the greatness and glory of his motherland, besides striving hard to make substantial additions to the sum total of human knowledge. Above all, he had a deeply religious outlook born out of a firm faith in a pure and simple theism which he openly professed and sincerely practised. He came early in life under the influence of Keshub Chander Sen and was drawn towards the liberal religious and social ideals of the Brahmo Samaj. He was a staunch and uncompromising Brahmo and an out-spoken critic of all those who stuck to the irrational rites and ceremonies and traditional usages in religious and social matters, in spite of their attaining intellectual and scientific eminence. He was a prominent member of the Sadharan Brahmo Samaj of which he was for sometime President and to which, in his will, he is said to have bequeathed half of his property. His pious, pure and simple life of many-sided activity, rooted in God, ought to serve as a beacon-light to men and women of all countries and races. He was a great and good man who was a true servant of God. India is blessed in holding up to the world the inspiring example of this worthy son of hers.

Hindu Marriage Nullified : An important judgment bearing on the question whether a Hindu marriage solemnised according to Vedic rights can be declared legally void, was delivered recently by Mr. Justice Edgley of the Calcutta High Court in a novel case which arose among Sikhs, where both the parties professed the Hindu religion and were governed by Hindu Law. The plaintiff was married when she was five years old, in April 1928 and the present suit was instituted in July 1941, for a declaration that her marriage with the defendant was void and inoperative and was therefore a nullity and that she was not the wife of the defendant. The plaintiff's case 'inter alia' was that at the time of the marriage and thereafter the defendant was physically unfit to consummate the marriage and that the marriage had never been consummated. His lordship examined all the available ancient and modern texts and the pronouncements of authoritative Hindu jurists and commentators on Hindu Law and observed "that having regard to the texts which had been cited, it would not appear to be inconsistent with the general principle of Hindu Law to grant a decree for nullity in a case as that with which they were dealing." His lordship eventually held that the plaintiff was entitled to a decree for nullity and that there was no undue delay on the plaintiff's part in filing this suit against the defendant as it was done soon after she reached the age of eighteen. It was declared that her marriage with the defendant was a nullity and that she was not the wife of the defendant. In the light of this judgment the notion that a Hindu sacramental marriage is indissoluble under any circumstances will have to be revised.

Religious Education for Girls: Her Highness Maharani Scindia has rightly

stressed, among other things, the importance of religious education in girls' institutions, while presiding at the prize-giving function of the Sardars Daughters' School. She struck the right note when she said that "though there are diverse religions, they preach the same gospel of truth, love and justice. A perfect unity lay in this very diversity of religions and if girls were brought up and educated in such a wholesome atmosphere they would doubtless prove a worthy asset to the womanhood of India and would lead their illiterate sisters to real happiness." She took occasion to advise the teachers of the school as to how this education is to be imparted. She observed "you should never encourage a parrot-like cramming and spoon-feeding of the principles of religion. It would indeed frustrate the very object with which it would be introduced. When I say 'religion' I do not mean this or that religion, for it is my honest belief that the scriptures of all religions, Ramayan, Gita, Quran, Bible, etc., deliver one and the same message. What I advocate is this, that their teaching should be translated into action in our lives." In these days when the claims of religious instruction in schools are being slowly recognised, as the one thing that is needful to develop character among boys and girls and to make them grow into worthy members of society, the exhortation of Her Highness is quite timely and appropriate. We wish that other enlightened ladies would also lay equal emphasis on this aspect of girls education.

SADHANA.

Regd. No. M—3245.

A. B. S. ASRAM.

The monthly Sammelan for July was held at Rajahmundry at Mr. M. Jagga Rao's house on the 1st & 2nd. The usual programme of divine services, devotional readings, bhajans and prayers were gone through on both the days.

Next Sammelan:—5th & 6th August at the same place.

BUSINESS NOTICE.

No V. P. System
Subscriptions to be sent by M. O. or
Postal Order (*uncrossed*).

Please send your

Total Subscription Dues: Rs

Arriars — —

Current — —

THE BHARATA, DHARMA.

(Now in its 22nd year.)

A monthly Magazine of Liberal Hinduism—the Official Organ of the Arya Mata Sabha.

If you believe in the glorious past and no less glorious future of Hinduism, Buy and Read Bharata Dharma, which is devoted to the cause of Liberal Hinduism.

Annual subscription } Rs. 3/- beginning
including postage: } with any month
of the year.

Single Copy — Four Annas.

Apply to the

EDITOR, "THE BHARATA DHARMA"
23, East Mada Street,
Mylapore, MADRAS.

Edited and Published by K. Kalliana Swami, B.A., B.L., Cocanada.

Printed by Rao Sahib P. Seshagiri Rao, Proprietor, George Press, Cocanada.

(Annual Inland Subscription Rs. 1/- Single Copy 2 As.)

JUST OUT.

IN TELUGU

SRIMAD BHAGAVAD GITA.

Contains Original slokas, their word-for-word meaning, their general purport according to Sridhara Swami and explanatory foot-notes in differentiating types.

An elaborate Introduction, Gita dyna, Gita upasana, Gita Mahatmya, analytical contents, indexes, cross references to parallel quotations, add to its usefulness. Pages: 10+410, Price Rs 2—8—0

For other books in Telugu ask for a Catalogue.

SRI RAMAKRISHNA MATH,

Mylapore, MADRAS

ASTRO-MATRIMONIAL MAGAZINE.

The only illustrated monthly journal of its kind in India containing very interesting articles on astrological, predictive and matrimonial topics.

Every home should have this unique journal as it helps to solve the very intricacies of every individual of the family and also the difficult problem of marriage.

Annual Subscription Rs. 4/-

Single Copy As. 6/- Stamps

WANTED AGENTS IN EVERY TOWN.

Apply:—Astro-Matrimonial Magazine,
425, Visveswarapuram,
Bangalore City.

The "dispensary service" and the "Home visiting of the worker" under the Employees' State Insurance Act is mainly a curative service. But the institution of such service outside the factory should not materially alter the position inside the factory. The existing voluntary industrial health service has great social importance and as such its continuance is not only very essential but complimentary to the "Dispensary Service" to be instituted under the Insurance Act. What is desired is that the existing industrial health service should endeavour to be more and more preventive in character than curative, in order to improve the health of the worker, his working environment and production capacity. Thus, it is essential that each employer should establish and maintain his own medical service. This applies more to the small employer and the State Factory Inspectorates should pay more attention to the development of such services for the smaller factories.

In any scheme of expansion and organisation of Industrial Health Service either by a voluntary or statutory body, it is essential to make investigation of:—

- (i) the state and extent of service,
- (ii) the requirements of industry in terms of personnel and material.

ACCOMMODATION AND EQUIPMENT

It is difficult to lay down any definite scale of accommodation and equipment as wide variations in the set up of medical departments are met with depending on the size of the factory. This department can be anything from a well-equipped casualty department in a modern hospital with a laboratory, physiotherapy and records departments combined to a series of First-aid boxes (Factories Act, 1948. IV of 45).

In the main such departments can be of the following types:

- (i) *Group factory clinic*.—One of the big organisational problems in industrial medicine

is how the benefits enjoyed by workers in large factories employing their own doctors, nurses and welfare officers can be made available, economically and efficiently, to workers in small factories which cannot afford to provide their own health services. The solution to this problem lies in the provision of services for a whole area to meet the needs of all workers. In such a way the requirements of large number of workers can be met with efficiently and at less cost than by individual firms employing their own medical officers.

Such a scheme would require planning at a highly skilled level. The organisation of State Insurance dispensaries comes under this category.

(ii) Full-time Factory Medical Officers Department with or without observation wards and indoor treatment facilities.

(iii) Central main surgery or Ambulance room with out-post first-aid stations.

ACCOMMODATION

Before the location of the Medical Department is decided upon by the physician, he is advised to do the following:

- (a) Spend several days within the factory;
- (b) Get acquainted with every department, its location, type of machines and the kind of employees.

(c) Find out from which department the greater number of accidents come.

(d) Get intimately acquainted with every foreman and the head of the department and obtain their views about the organisation of medical services.

Factors on which will depend the planning of the Ambulance room are:

1. Size of factory—whether one ambulance room is necessary or a Central Ambulance Room with ancillary units (First-aid posts).

2. Location of factory—in relation to other centres of medical aid like a hospital, or dispensary in the town.

5L
L15m211.147PE N 50.4.5

3. Evacuation of Casualty—through stretcher bearers or an ambulance van coming right inside the works.

4. Space and lay-out—in relation to flow of patients, choice of rooms, and side, alterations to existing rooms, location of mains and drains.

5. Site and accessibility—in relation to place of work, injured worker, location of labour department—away from noise, accessibility of water and light and ventilation.

6. Main Services—surgical, medical, dental, physiotherapeutic rest-rooms, ambulance, garage and attendants room, recovery room.

7. Size of rooms—in relation to flow through fixed equipment, furniture, stretcher cases (doors) and multiple accidents.

8. Rooms :

(a) Record Room—combined as or with waiting room and general office.

(b) First-aid or Dressing Room—possibly duplicated for men and women with accommodation in room or possibly in an ante-room for sterilization equipment and nurses interviewing room.

(c) Doctor's consulting room—two doors, if possible, one being from (a) or (b).

(d) Rest-room or Resuscitation ward or observation ward—duplicated or divisible by screens for the two sexes.

(e) Lavatories.

(f) Doctors' Office (and clerk's office unless (a) used as such).

(g) Room (s) for ancillary medical services or laboratory.

(h) Room(s) for stores.

(i) Ambulance garage and attendant's room.

Many variations and combinations of these rooms are possible.

The Ambulance room should be—

(a) bright, cheerful looking, well ventilated;

(b) in as quiet a location as possible;

(c) easily accessible for the injured worker who may be required to be carried in a stretcher.

(d) entrance to the room should be preferably through the factory.

(e) Evacuation through ambulance should preferably be through an entrance in the street and not in the yard of the factory as the sight of an ambulance van in the works is very disturbing to all workers.

(f) The size of the room should depend on the amount of medical work in the factory. Under the Rules to the Factories Act a minimum of 250 sq. ft. of floor-area should be allotted for the ambulance room.

The important considerations are :—

(a) The equipment of waiting rooms must all be washable as employees with grease, oils, acids on their clothing will attend.

(b) Floor of the entire Medical Department should be non-slip and washable, so that it could be kept clean and in a sanitary condition.

(c) Enough space should be provided for stretcher cases without the necessity of removing furniture.

(d) Treatment room should be large enough for several dressings at a time to economise time of employees. Patients should not be kept waiting long for dressings.

(e) Accidents involving several workers at a time is a contingency which does not happen frequently but must be provided for.

(f) Provision for enough light through windows and ventilators must be insisted on.

(g) Stretchers and first-aid kit should always be kept near the entrance to the medical department in a place which can be quickly reached in place of emergency.

(h) All attendants at the Medical Department should be provided with white uniforms.

(i) The doctor in charge should obtain the co-operation of the staff in introducing the work of his department to the employees.

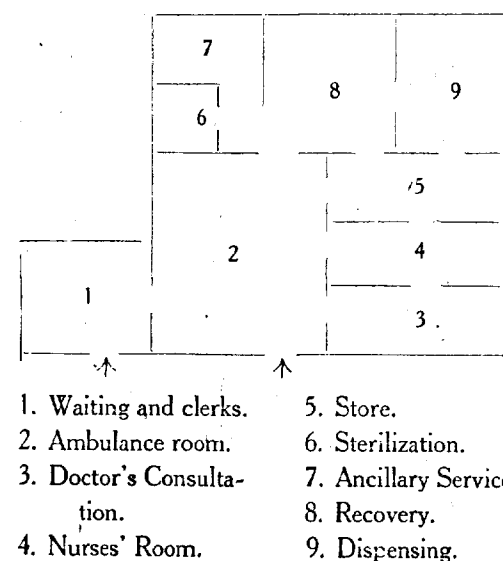
DRESSING CABIN

While an ambulance room is desirable in the case of large works where more workers are employed (over 500), it is also necessary to plan for the medical department of small factories with 200 to 500 workers. In such cases it is considered that at least 100 sq. ft. of accommodation is allowed for establishing a small "dressing cabin" or room. It should preferably be a room separate and easily accessible from all parts of the works. It should be on the ground floor and easy of approach for stretcher cases and situated on one of the main thoroughfares of the factory ground. It should not be a make-shift, but good brick-building with washable floor, and ample lighting.

SUGGESTED LAY-OUT OF CENTRAL AMBULANCE ROOM

In the designing of ambulance rooms the principles outlined above should be carefully considered and help of technical people obtained. A diagrammatic sketch of the lay-out of such an ambulance room is suggested below.

SUGGESTED LAY-OUT OF A MEDICAL DEPARTMENT



Various combinations could be formulated depending upon the availability of funds and space and the number of employees to be served. It is however necessary to provide for the following :—

(a) Separate room for treatment of injured worker and those awaiting treatment or examination.

(b) Provision of recovery room for accident and shock cases.

(c) Separate room for dressing of each sex.

(d) Toilet facilities, separate for each sex.

(e) There should be planning for future expansion.

(f) All beginning should be moderate and of maximum value to the worker to think about the value of good health for himself.

EQUIPMENT

It is not intended to give details of various types of equipment here. However, the equipment required is as follows :

1. Furniture.
2. Recording equipment.
3. Medical equipment.
4. Equipment for ancillary research.
5. Equipment for ancillary medical services.
6. Apparatus for usual medical examinations.
7. Equipment for investigating industrial diseases and studying the environment.

It is desired to indicate the equipment under item (7) only.

Examples of the kinds of investigations carried out and some of the diseases for which they are appropriate are :—

(a) Blood counts, e.g., in poisoning by benzene, lead, T.N.T. or in luminising with radio-active hazards.

(b) Methaemoglobin estimations, e.g., aniline Nintrobenzene and also carbon monoxide estimations in blood.

(c) Urine examination e.g., in poisoning by mercury or diethylene dioxide or for

excretion of metals (lead, mercury) of aromatic amines, etc.

(d) Cystoscopy, e.g., beta-naphthylamine, etc.

(e) Eye investigations, e.g., slit lamp for punctate keratitis (H₂S) or for cataract (heat rays, dinitro-phenol visual fields (carbon tetrachloride)).

(f) Nasal examinations, e.g., chrome, arsenic.

(g) C.N.S. investigations, e.g., in poisoning by manganese, carbon disulphide, methyl bromide, tetra-ethyl lead, etc.

(h) Liver tests—toxic jaundice, e.g. in poisoning by halogenated hydrocarbons, etc.

(i) X-ray examinations, e.g., skeleton (Fluorine), nasal sinuses (arsenic), jaws (Phosphorous), Lungs (the Pneumocniosis, arsenic, beryllium, etc.).

(j) Bacteriological examinations, e.g., anthrax, erysipeloid, etc., ordinary cultures for sepsis, contacts, etc.

(k) Skin patch tests and biopsy.

ENVIRONMENT

1. Dust sampling, particles and size number; impingers, jet dust counters, thermal precipitator, konimeter, electrostatic precipitators.

2. Lighting—photometer.

3. Environmental warmth measurement—Thermometers, dry and wet bulb; globe thermometer (heat by radiation), Eupathescope (equivalent temperature), Kata-thermometer (rate of cooling) Psychrometer, Hygrometers, humidity charts.

4. Air velocity measurement—velometers, anemometer.

5. Estimation of toxic gases, and dusts—Porton's Pump and Chemical reagents.

6. Radio-activity hazards.

ADMINISTRATION

In considering now the administration of the emergency and routine services in industry,

dealings with the people, organisation of equipment and control of situations that arise, it is best to link up what has been said above with what has been detailed in the five previous articles. The broad principles of administration will only be considered below and details left for those to whom responsibility for them is delegated. But technical and semi-professional duties of the doctor and of staff qualified to work under medical supervision, as well as the specific techniques and procedures required to formulate policies need to be specified here.

THE INDUSTRIAL MEDICAL OFFICER

(1) He is responsible for all work carried out in the Work Surgery by himself and by his staff and for arranging for staff, equipment and ancillary services.

(2) Medical examinations and reports (pre-employment, periodic for toxic hazards or special cases, transfers on medical grounds, after sickness absence, etc.).

(3) Emergency treatment of or arrangements for treatment of, major injuries, acute illness and skin conditions.

(4) Referring patients for ancillary treatment.

(5) Arranging programmes of follow-up examinations.

(6) Visits to factory—routine and *ad hoc* as occasion demands or when complaints are received.

(7) Special investigations.

(8) Formulating techniques for sterilization procedures and dressings to be carried out by nursing staff.

(9) Formulating standard instructions to be taken by nursing staff in special cases, e.g., eyes, acutely ill, cases under observation, etc.

(10) Examining records, weekly reports, sickness absenteeism and reporting on them.

(11) Conducting health teaching programmes, preparation of memoranda on health topics for use of workers, training courses, etc

(12) Liaison with other staff.

(13) Attendance at meetings and committees.

NURSING STAFF

(1) Carrying out of nursing techniques formulated by the doctor.

(2) Arranging sterilization and maintenance of equipment and stores.

(3) Helping the doctor in physical examinations of workers, taking weight, height, eyesight, pulse, etc.

(4) Preparing instruments for operations, injections, transfusions, etc.

(5) Recording details of attendances at the Ambulance room.

(6) Notifying departments about accident cases and their disposal—Notification to Factory Department.

(7) Education in health of workers.

Clerical Staff.—Maintenance of medical record files, sickness, absenteeism lists, compiling data on medical records and reports, etc.

Industrial Medicine is in itself a speciality. In order to satisfy the administrative or health promotion requirements, the industrial doctor besides proving a good surgeon or physician should possess special interest and qualifications to be able to establish a really good industrial health service for the benefit of the workers.

LONGER YEARS

"A sociological development that has had little public notice, perhaps because it has come about gradually rather than overnight, is the increase in longevity in the United States. There may be general awareness that people are living longer but ignorant of the phenomenal rate of the increase. In the short time between the end of the Second World War and the end of 1948, according to the Metropolitan Life Insurance Company, the average length of life (the expectation of life at birth) of the industrial population of the United States rose about two years, to an all-time high record of 67.16 years. The Company's experience with industrial policy-holders last year is analyzed in its Statistical Bulletin for last month.

"What seems even more remarkable than the post-war longevity jump of two years, considering the relaxation from the 1941-45 tension and anxiety, is the finding that in less than two decades the improvement has amounted to ten years. Moreover, since 1911-12, when the Metropolitan started its statistical series on the longevity of the industrial population, twenty and a half years have been added to the expectation of life

at birth. Noteworthy too, is the finding that in the last two decades the average length of life among wage-earners and their families has been increasing more rapidly than in the general population. Whereas in 1911-12 the industrial policy-holders showed a disadvantage of six and a half years in longevity, by 1948 they had practically reached the level of the population as a whole. This progress may be attributed largely to advances in the medical sciences, to public health measures, and to the rapid rise made in the standard of living as the nation's work has become more equitably distributed.

"Encouraging though these figures are, there is still room for improvement. To use the Statistical Bulletin's own term, 'colored policy-holders', although now relatively high in average length of life, still led considerably behind white policy-holders. The mortality of colored males at age 20 is as high as that of white males at 34; the rate for colored females at age 20 is the same as that for white females at 38.

"Much remains to be done to raise the level of health and longevity among the colored people."

—Editorial—"New York Times," Sept. 20, '49.

HEALTH AND ENVIRONMENT

by

Our Study Circle

This is the fifth of the series of articles. The World War No. I set back progress in many directions. India's health was no exception. It is desirable to review comprehensively the progress made from 1857 to 1914. Instead of culling out facts and figures from the several administration reports and other printed documents, our Study Circle feels that it should allow the Government of India to present the case in their own way. Our Study Circle also thinks that it would be wise to reproduce *in full* the resolutions of the Government of India, Department of Education (Sanitary) Nos. 808—908, dated Simla, the 23rd May, 1914. These resolutions were not much before the public eye, even when they were first published. We prefer to allow the readers to form their own opinion on the statements which appear in these resolutions.

—Ed., P. H.

Historical Summary.—The modern history of scientific sanitation in India may be said to date from the end of the last century. Previously there had indeed been periods of useful spade work and spasms of general sanitary activity. A Royal Commission, appointed in 1859 and reporting in 1863, recommended the formation of commissions of public health in the presidencies of Madras, Bombay and Bengal, with a view to the diminution of sickness in the army, and the improvement of the health of the general population. These commissions were appointed but were soon replaced in each presidency by a sanitary commissioner with an assistant. Sanitary Inspectors-General, afterwards called sanitary commissioners, were appointed in other provinces; and the sanitary and vaccination

staffs were gradually amalgamated. In 1888, Lord Dufferin's Government issued a resolution drawing the attention of local bodies and village unions to their duties in the matter of sanitation; and sanitary boards were formed in every province. But comparatively little success attended these efforts except in the larger towns. On the one side, sanitary measures and systems of western countries were applied to India without due regard to the fundamental differences of western and eastern civilisations and of the conditions of life in tropical and temperate climates; on the other side, the people were unprepared for reform or any kind of change.

2. The ravages and horrors of plague and the discoveries resulting from medical research made some real impression on the educated

community in India; and a demand gradually arose for sanitary surroundings and preventive measures, such as had not been known before. Individuals left their insanitary quarters for cleaner and healthier localities and in increasing numbers men began to realise the dangers to which they were exposed from existing conditions, and to appreciate the economic value of health and the wastefulness of sickness and premature death. Dislike of action was, however, for long persistent even among the educated. So far as the uneducated masses were concerned their apathy, fatalism and resentment of interference constituted a formidable obstacle to all sanitary progress.

3. *Recent Activity.*—The Governments in India have moved more rapidly of late. In 1898, the Government of India issued an important statement of policy. In 1908, imperial grants amounting to Rs. 30,00,000 (£200,000) a year were made to local Governments. A new department of the Government of India was created in 1910 in order to relieve the Home Department of education, sanitation and some other branches of the administration. In addition to sanitary conferences held by local Governments, three all-India sanitary conferences have been convened at Bombay, Madras and Lucknow, respectively, over which the Hon'ble Sir Harcourt Butler presided as Member of the Governor-General's Council in charge of the department concerned. These conferences were attended by non-officials as well as officials, by laymen as well as professional sanitarians. Again, the Indian Research Fund Association has been founded to further the prosecution of research, and the propagation of knowledge and experimental measures generally in connection with the causation, mode of spread and prevention of communicable diseases. To this fund the Government of India make an annually recurring grant of 5 lakhs of rupees (£33,333). Moreover, since the constitution of the new depart-

ment of the Government of India, imperial grants have been made to local Governments and Administrations to the amount of Rs. 4,61,47,000 (£3,076,466), of which Rs. 55,23,000 (£368,200) are recurring, and Rs. 4,06,24,000 (£2,708,266) non-recurring. In addition, grants amounting to Rs. 82.33 lakhs (£548,866) a year have been made to district boards in certain provinces, a substantial portion of which will, it is hoped, be expended on rural sanitation. These grants have rendered practicable the execution of schemes which a few years ago seemed beyond the limits of financial possibility; and there can be little doubt that the movement for sanitary reform is now well established and progressive throughout the country.

4. *Cardinal Principles.*—There has thus been progress although the rate has hitherto been slow. In the land of the ox-cart one must not expect the pace of the motor car. The truly remarkable improvements effected of late years in the health of the army in India, in the case of Indian no less than British troops,* cannot be expected in connection with the civil population. In the case of the army, the problem is concerned mainly with well nourished adults, all of whom are selected lives, living in sanitary surroundings, under military discipline. Moreover, so soon as a soldier becomes unfit for active service, he leaves the army and forms part of the civil population. In the case of the civil population, the conditions of the problem are very different, and sanitary reform has still to grope its way through a labyrinth of difficulties. In order to be successful it must conform to three cardinal principles:—

(1) it must rest on a knowledge of the people, their conditions of life, their prejudices, social customs and habits, their surroundings and financial means; and it must secure their co-operation;

(2) it must recognise the diversity of local conditions in a country which includes numerous communities, castes and creeds

and which exhibits almost every variety of climate, temperature, humidity and level of sub-soil water, from the deltas of Bengal with their steamy atmosphere and dense lush vegetation to the burnt brown hills of the North-West Frontier;

(3) its introduction must be preceded by preliminary local surveys, inquiry or experiment.

ment of India in all technical and sanitary matters, but all questions of personnel as well as the administration of the bacteriological department and research generally have been placed under the control of the Director-General, Indian Medical Service, with the Sanitary Commissioner as his staff officer.

6. The sanctioned strength of the superior sanitary organisation in India now is—

YEAR.	*BRITISH TROOPS.		INDIAN TROOPS.	
	Constantly sick.	Death rate.	Constantly sick.	Death rate.
1875—1879	62.40	20.37	44.04	19.93
1880—1884	67.64	16.30	41.40	19.00
1885—1889	74.85	15.11	33.06	12.90
1890—1894	85.63	15.09	34.66	13.48
1895—1899	87.68	17.14	30.10	11.34
1900—1904	64.58	13.03	27.20	10.87
1905—1909	47.21	8.93	22.31	6.78
1910	31.90	4.66	21.10	4.89
1911	28.80	4.89	19.80	4.88
1912	28.90	4.62	20.10	4.42

5. *Sanitary Organisation.*—As a result of the Plague Commission's Report, Lord Curzon's Government took up with vigour the reorganisation of the sanitary department. Research institutes were started and an appointment of Sanitary Commissioner with the Government of India was created. The functions of this officer were to advise the Government of India upon sanitary and bacteriological questions, to settle with local Governments the principles on which an advance should be made and to organise and direct research throughout India. The arrangement was not completely successful. Among the disadvantages the separation of research from clinical work deterred men from entering the department, and the office work in connection with research prevented the Sanitary Commissioner from undertaking wide and constant touring. The organisation was accordingly modified in 1912. The Sanitary Commissioner is now the independent adviser to the Govern-

(a) A Sanitary Commissioner with the Government of India.

(b) A bacteriological department comprising—

(i) 13 laboratory appointments.

(ii) 15 new appointments for the prosecution of research work and direct investigation in the field.

(c) The following establishments under local Governments:

Sanitary Commissioners 11; Deputy Sanitary Commissioners 26; Health Officers, 1st class 45; 2nd class 94; Sanitary Engineers 10; Assistant Sanitary Engineers 16.

(N.B.—Abridged from the Resolution.)

In their resolution, dated the 23rd May 1912, the Government of India provided for a large increase in the number of deputy sanitary commissioners and for the appointment of health officers (of the first-class for larger municipalities and of the second-class for the smaller

towns) on the lines of detailed proposals received from local Governments. Twelve additional appointments of deputy sanitary commissioner, thirty-five appointments of health officer of the first-class, and a large addition to the number of second-class health officers were sanctioned in 1912 and 1913, the entire cost of the additional deputy sanitary commissioners on the basis of the scale of pay fixed for Indians and half the cost of the health officers being met by imperial grants. The Government of India also advised local Governments to take powers, where these did not exist, to require a municipality to appoint a health officer and to veto the appointment of an unfit person. Such powers already exist in the Bombay Presidency and have recently been taken by legislation in Bengal. Simultaneously the Government of India recommended the system in force in Madras whereby every municipality is required to employ one or more trained sanitary inspectors in proportion to population. Sanitary inspectors are now being employed in large numbers in towns. In addition, the civil surgeon in every district is the sanitary adviser of the local authorities and in most provinces controls the vaccination staff. The provision of an increased staff of sanitary engineers is engaging urgent attention.

The Government of India attach great importance to the organisation of voluntary agencies and have recently made a grant of Rs. 20,000 (£1,333)—a sum equivalent to that given by the Bombay Government—to the Bombay Sanitary Association, which was founded in 1903, and now has corresponding branches in several districts and native States.

7. The policy of the Government of India is to keep the control of research under itself, but to decentralise other branches of sanitation. The creation of an imperial department is no departure from that policy, and the large imperial

grants already mentioned have been made without any interference with provincial Governments. While the general direction of a policy of public health must remain with the central Government, all detailed control and executive action are, and will be, left to local governments. The sanitary commissioner with the Government of India is a touring officer empowered to consult and confer informally with local Governments and their officers upon matters connected with sanitation. He is not permitted to encroach upon the authority of local Governments over the officers under their control.

8. The position of provincial sanitary commissioners towards the administrative heads of the medical department varies somewhat in different provinces. The Government of India do not wish to interfere with the arrangements which local Governments may consider best suited to local conditions, but they desire to insist on the importance of defining the functions of the two officers and securing to the sanitary commissioner the position of responsible technical adviser to the local Government in all matters affecting public health.

9. In every province, sanitary boards have been composed with varying powers, some being merely advisory, others having authority to sanction schemes and allot funds. These boards are composed of officers belonging to the medical, sanitary, engineering and other branches of the civil services with the addition of non-officials. The Government of India view with favour and confidence the devolution of financial authority and responsibility to these boards, and they commend to local Governments the appointment of a permanent salaried secretary to the board where this has not been done. They believe that such an appointment, wherever made, has resulted in an increase of efficiency.

(To be continued)

VICTORY OVER MALARIA IN SIGHT

By

Sir Philip Manson-Bahr

The author is a well-known British Consulting Physician in Tropical Diseases.

Malaria, sleeping sickness, yellow fever—these are but a few of the many dread diseases against which British scientists and doctors have been waging a ceaseless war.

In this special article, an expert on tropical diseases reviews what has already been achieved. The work of British pioneers has brought health, prosperity and happiness to millions of people throughout the world.

Britain is waging an unceasing war in the tropics not only against the diseases which are peculiar to warm climates, but also against that whole array of scourges which afflict mankind.

Malaria, sleeping sickness, yellow fever: the list is a long one. The most common of tropical diseases is, however, malaria, constituting until recently the chief bar to progress and development. But now it can be claimed that it has been to a great extent arrested and that ultimate victory is in sight.

Let us consider how this transformation has been achieved.

INTENSIVE STUDIES

When some 50 years ago the mosquito-transmission of malaria had been proved beyond doubt, its eradication at that time appeared comparatively simple. It spelt, in fact, the destruction of mosquitoes wherever malaria was rife, though it soon had to be accepted that this was an impossible task.

As the result of intensive studies by entomologists in many lands it became evident that

for some biological reasons only a comparatively small number of anopheline mosquitoes are capable of transmitting malaria from man to man, and that each of these favours certain breeding places and maintains peculiar feeding habits, so that by concentrating attacks upon them, within the limits of their own peculiar haunts some success might be obtained. This method was aptly termed "species sanitation."

The operative procedures entailed in carrying out these measures differed widely in different countries. In Malaya, for example, some species have been to a great extent eliminated by altering the environment of their breeding waters. Some are partial to shade and concealment; others court the sunlight, and so on. At the present time anti-malarial campaigns have been completely revolutionised by the application of DDT, an insecticide which has proved itself to be the most efficient weapon yet discovered.

MALARIA IS RECEDING

Throughout the whole of Equatorial Africa, *Anopheles gambiae*, a common as well as the most

dangerous carrier of malaria, flourishes in almost every collection of water, however polluted or foul. Until two years ago the possibility of eradication of this small insect from such an immense area appeared fantastic, but now with the example of the successful campaigns in Sudan and Upper Egypt and with the introduction of other insecticides, such as gammexane, malaria is rapidly becoming a rarity.

Malaria, indeed, is receding wherever the spraying of mosquito breeding-grounds is being undertaken. It was recently announced that the island of Cyprus has been freed from the menace after a DDT campaign which has served as a model for the world.

In British Guiana, Dr. George Giglioli has been almost equally successful in an even more remarkable feat, but there he had to deal with vast alluvial plains with rice and cane-fields, swamps and waterways stretching for hundreds of miles. The brunt of this attack was directed against the two most dangerous species—*Anopheles darlingi* and *A. aquasalis*—by spraying huts and dwelling houses which they frequented with DDT. In spite of the fact that both these dangerous species have entirely different breeding habits—one breeds in fresh water, the other in brackish—within the space of two years they have been brought to the verge of extinction and concurrently malaria has practically disappeared.

SLEEPING SICKNESS

When we turn to trypanosomiasis, or sleeping sickness, there is also a stirring tale to tell. The trypanosome is a small tadpole-like creature which lives in the blood and is transmitted by vicious and bloodthirsty tsetse flies. These insects are confined to Equatorial Africa, and wherever they abound they spell death to man and his domestic animals.

It is estimated that of the 65 million residents of tropical Africa no fewer than 2,000,000 are

infected with the deadly trypanosome. On account of this, only two-fifths of the enormous territory of Tanganyika are suitable for settlement and development; the rest is one vast fly-belt. Some 21 species of tsetse are known to science, of which some six are adapted to the conveyance of the germ of sleeping sickness; and it has now been discovered that for each species of fly certain plant associations and climatic conditions are essential in order that it may flourish.

The fight against sleeping sickness has been long and protracted. Whole populations have been transplanted from danger areas, and the ingenuity of many devoted entomologists has been taxed to the utmost to discover methods of controlling the fly. Vast schemes for destroying their breeding places have been put into execution. DDT "smoke" spread by aircraft has, indeed, achieved some local and temporary success. Powerful curative drugs, such as antrypol and tryparsamide, have been discovered and freely used; but the battle is not yet won.

The epic of the Anchau corridor has now been told. The market town of Anchau in North Nigeria in the Emirate of Zaria has always constituted a hot-bed of sleeping sickness and, owing to its filthy and insanitary state, a danger to the community. To free this area from sleeping sickness, 700 square miles of country had to be cleared of bush, and, within the space of 10 years, the local population had been resettled in a new town with model wells and market-places. Cattle, pigs and poultry have been introduced, and flourish there. The cesspit which constituted old Anchau has now been transformed into a settlement aptly termed Takalafiya or "Walk in Health". For this magnificent achievement Dr. H. M. Lester, Dr. T. A. M. Nash and Dr. Kenneth Morris must be given full and generous credit.

CONQUEST OF YELLOW FEVER

The story of the conquest of yellow fever, or "yellow jack" as it was known to our forefathers, has been one of constant and heroic endeavour in which British scientists have played a leading part and one in which valuable British lives have been sacrificed. A hundred years ago yellow fever in epidemic form swept across the West Indies and the South American continent, and from time to time broke out also in West and Central Africa.

The germ cause has been found to be an ultramicroscopic virus which is present in the blood in the first three days of the fever and is disseminated from the sick to the healthy by a gaily marked "tiger mosquito"—*Aedes aegypti*. Fortunately this is a domestic insect abounding in the haunts of man, especially in large towns, whence it can be easily ousted by DDT. This has now been done in many parts of South America and West Africa, so that with its disappearance yellow fever has been banished from the main centres of population.

With the development of irrigation and cultivation bilharziasis is spreading throughout the Continent of Africa. The bilharzia (so-called after its discoverer, Bilharz—and familiarly nicknamed "Bill Harris" by British troops) is a worm, just under half-an-inch in length which lives securely within blood vessels. Here the female produces a great number of hard-shelled eggs which are shed outside the body in the excreta and, when passed in water, give

rise to a motile ciliated creature which burrows into the liver of certain freshwater snails which abound in streams, ponds, rivers, reservoirs and other collections of water.

In this organ an elaborate reproduction takes place, final phase of which is the cercaria, a small thread-like creature with a bifid tail which swims actively in water for about two days. This, now a juvenile bilharzia worm, is attracted to man and, by burrowing through the skin, enters the body and settles down within the portal vein. It is obvious that in the extermination of these peculiar snails, which constitute the host of the bilharzia parasite, lies the only hope of curtailing its ravages. This is a gigantic task which entails the draining of streams, ponds and waterways in an unceasing destruction of these molluscs with sulphate of copper.

This brief account is a story of the manner in which the defeat of the main tropical diseases has been, or is being, brought about. It is probably true that, perhaps with the exception of leprosy, we now possess efficient drugs which are antidotes for them all. This is the lynchpin upon which the health, prosperity and happiness of millions of people depend. For this happy solution a tribute should be paid to members of Britain's Colonial Medical Service, who unread and unsung, sometimes subjected to unjust and uninformed criticism, have laboured on, often amidst uncongenial surroundings, such as can hardly be realised by many.

U.S.A'S NATIONAL HOUSING POLICY

The policy as declared in the Housing Act of 1949, runs: "The Congress hereby declares that the general welfare and security of the Nation and the health and living standards of its people require housing production and related community development sufficient to remedy the serious housing shortage, the elimination of substandard and other inade-

quate housing through the clearance of slums and blighted areas, and the realization as soon as feasible of the goal of a decent home and a suitable living environment for every American family, thus contributing to the development and redevelopment of communities and to the advancement of the growth, wealth, and security of the Nation".

BEFORE THE TOOTHBRUSH WAS INVENTED HOW THE ANCIENTS PUT SPARKLE IN THEIR SMILE

by

W. Schweisheimer

The eloping bride may be flustered, excited, in a happy daze. She may forget about everything else, but—so the saying goes—before leaving on her trip she will be sure to grab her toothbrush! Without it she feels she cannot leave.

This feeling may be a little exaggerated since we know from actual experience that people who otherwise considered a toothbrush of more importance than food and drink were very well able to get along without this hygienic instrument when they had to. But the feeling described is an indication of the fact that today the toothbrush is part of the everyday life of the civilized person.

It has not always been that way. In all probability the toothbrush was not known to European and American mankind before the middle of the eighteenth century—and its inventor never left the obscurity of anonymity.

Unknown to Western civilization the first toothbrush, with real bristles standing at right angles to the handle, had been constructed in China about the year 1500.

HEALTH RULES OF ARISTOTLE

We are told that Aristotle, who lived 384-322 B.C., taught his royal pupil, Alexander the Great of Macedon, "After getting up in the morning thou ought to wash hands, mouth, nose and eyes. Following that rub thy teeth with a thin linen towel which is somewhat rough." These "Health Rules of Aristotle for Alexander the Great," however, were probably not written until the middle of the twelfth century A.D.

Long before Aristotle, 700 years before the birth of Christ, the Assyrians were advised to

rub the teeth with the fingers besides cleansing mouth and nostrils. In ancient Rome, teeth were usually polished with some soft material. The poet Ovid objected to its being done in public—just as today someone will raise objections when girls and women put on their makeup in public. At that time as at this such super-esthetic advice was unheeded.

THE HINDUS RULES OF HEALTH

The Hindus have many rules for health and beauty in their book about love and marriage, "Kama Sutra," which was written in the first century A.D. They recommended in this book the chewing of a certain kind of wood to clean the teeth in order to improve the relation between husband and wife. The eating of betel leaves is also recommended with other things that give fragrance to the mouth.

THE BUDDHIST'S IDEA OF TOOTHBRUSH

The Buddhist teachings long before Christ said that a kind of toothbrush should be made of a fresh branch, not worm-eaten, from a tree or bush without knots, twelve fingers long and the thickness of the little finger. The properties and taste of the wood should correspond to the season.

THE MOSLEM'S MISWAK

The Mohammedans had to use, in obedience to religious prescription, the siwak or miswak, the dental fibre-pencil. The miswak is made as follows, according to Dr. C. Proskauer: From the end of a properly cut little stick of the wood, flexible and knot-free, a piece of the bark is removed. After the stick has been soaked in water for twenty-four hours, the peeled portion

's pounded with a stone or hammer until the plant fibres unravel to form a kind of small paint brush. The unbeaten part of the stick serves as a handle.

The Koran gives definite instructions for the use of the miswak. The Moslems clean first the front teeth, then the side surfaces. Mohammed said: "You shall clean your mouth for that is the way to praise God."

Even modern Turks still chew the root of the walnut tree to clean their teeth. All through medieval times rags were used to clean the teeth. Mouthwash or toothpowder was usually put on the rag to make the cleaning more effective. Aromatic barks were used for the same purpose in the Middle Ages.

Although Erasmus of Rotterdam (1466—1536) recommended dental care for both children and adults, he objected to the popular usage of rubbing the teeth with a napkin publicly at table. He considered the best method of cleansing the mouth to be rinsing with clean water early in the morning.

WINE TO RINSE MOUTH

At about the same time Giovanni della Casa, an Italian writer, objected to the habit of cleaning the teeth at the table with napkin or tablecloth, and especially with the fingers. At that time it was customary at the end of the meal to serve pure wine to rinse the mouth—surely no bad idea.

A plant which for many centuries has been used for dental care is sage, *Salvia officinalis*, generally cultivated in gardens.

The popular seventeenth century German novel, "Simplicius Simplicissimus" by Grimmelshausen, reports that the hero "hath broken a leaf off a sage plant, rubbed his teeth with it and made it known that its taste was delicious, fragrant and healthy—and also that his teeth and gums had been cleansed and freed of everything he had eaten." "In one of the poems of the Nuremberg shoemaker-poet, Hans Sachs,

he mentions a man who rubbed his gums, teeth and whole mouth with a leaf of sage.

In folk medicine sage is still used today as mouthwash and gargle for inflammations of the gums and throat, and it is a widespread opinion that massage of teeth and gums with fresh sage leaves is most helpful.

COARSE LINEN TO CLEAN TEETH!

A German book about tooth care that appeared around 1530 recommended a coarse linen cloth for cleansing the teeth. But a dictionary published in Leipzig in 1719 gives information about the use of the toothbrush.

A toothbrush, it says, is that subtle little instrument in the form of a brush with a somewhat long but fine handle, which removes the uncleanness between teeth and gums; its bristles ought not be too hard, but nice and soft and stand close together so as not to hurt the gums too much.

But even in those times, we learn from contemporary reports, the teeth were still cleansed with the fingers quite frequently, or with a handkerchief or some other piece of linen.

TOOTHBRUSH ESSENTIAL FOR ENGLISH GENTLEMAN!

By 1785 it was essential for the well groomed English gentleman to own a toothbrush. To a certain degree it replaced the toothpick which had been popular.

From that time on English toothbrushes were highly valued in elegant circles, and by 1800 they were exported from England into almost every country. Since then the use and the production of the toothbrush has spread all over the civilized world.

Some primitive peoples have not yet adopted the use of the toothbrush. Instead, they clean their teeth by chewing certain kinds of wood, and it is amazing to see how this primitive method of cleaning keeps their teeth splendidly white and beautiful.

—(Courtesy, *Hygeia*, The Health Journal.)

NEW HOPE FOR CANCER OF THE LUNG

by

Murray Teigh Bloom

An early and accurate diagnosis of a malignant disease is now available to doctors everywhere.

This article appeared in the September 1949 issue of *Woman's Home Companion*, one of the most widely circulated women's magazines in the United States. The writer is a free-lance contributor to American periodicals.

—Ed., P. H.

The best cancer news in the United States today is that doctors can now readily and at small cost detect lung cancer early enough to make a cure possible. And it comes opportunely—at a time when lung cancer is swiftly moving ahead of stomach cancer to become the number one malignant killer of middle-aged people. The new test is based on an examination of sputum brought up by deep coughing. The examiner looks for cast-off cancer cells in the specimen. If they are present, this is virtually proof of the cancer. More than 100 men and women are living today only because this new test is now in use. The old standard means of detecting lung cancer failed completely in their cases to reveal the hidden malignancy. But the sputum test was positive and on this basis the decision was made to remove the suspected lung. In every case the lung proved truly cancerous.

The procedure of giving the sputum test is remarkably simple. The patient is given three small bottles partly filled with a fixative such as diluted alcohol. He is told to take the bottles home and when he has one of his deep coughs to expectorate into one of the bottles and seal it. He is warned that the ordinary saliva present in the mouth is useless for the test. When he has

the three specimens, he returns the bottles to his doctor. The doctor will mail the bottles, or prepared slides on which the specimens are fixed, to any one of an increasing number of hospital and private laboratories in the United States now satisfactorily staffed to interpret the test within a few hours. More than 150 private doctors, some in Mexico and Hawaii, have been doing this with successful results for more than two years.

Who should be given the test? The commonest and most useful indication that it is needed is a steady persistent cough. Coughing is also a symptom of many other chest ailments besides cancer of the lung. And because there was until recently no simple way of determining if a cough was comparatively innocent or the herald of early cancer, most doctors tended to treat it as a symptom of anything but cancer. In a recent survey, for example, it was found that in nearly seven out of every 10 cases of lung cancer the disease was wrongly diagnosed by the first physician consulted. Usually when the correct diagnosis was made, months later, it was too late. Now cancer experts agree that every man and woman past 40 with a persistent cough ought to get the sputum test as a matter of routine.

"If all these people were given this test early enough I think that the lives of thousands of men and women who die of lung cancer could be saved," Dr. William L. Watson of the Memorial Hospital in New York City told me. Dr. Alton Ochsner of New Orleans, Louisiana, and Dr. Evarts A. Graham of St. Louis, Missouri, considered by their colleagues as among the leading chest surgeons in the world, agree with this statement. When I talked with these doctors they recalled that as recently as 1920 lung cancer was so rare that it was almost a medical curiosity. Today the American Cancer Society's statistics indicate that at least 15,000 men and women die of it yearly. The Society's statisticians suspect, in fact, that the actual figure is considerably higher. Many persons who supposedly died of lung abscesses, tuberculosis or pneumonia, they believe, were really victims of lung cancer. This cancer has a villainous reputation for masquerading as other and lesser ailments.

As recently as 16 years ago, there was no effective cure for lung cancer even if it was discovered early. Lung cancer then meant certain death. The traditional weapons in cancer warfare—X-ray and radium—were virtually useless and no surgeon had yet removed an entire cancerous lung safely. Then in 1933, Dr. Graham performed the operation successfully for the first time in history. The patient is alive and well today at 65 with just one lung. Since then thousands of men and women have had a cancerous lung removed safely. At first, chances were against anyone's coming out of the operating room alive but the arduous two-hour operation has been so steadily improved that it now involves only a very small risk. Yet because their cancers were discovered too late, few of the early patients lived beyond five years even when the operation was successful. Today this risk is also lessened. A survey of patients operated on since 1942 indicates that between 40 and 50 per cent will

live their normal spans. Dr. Graham, a cautious prophet, believes that in a few years the figure will be as high as 60 per cent.

But this depends on maintaining the improvement in early diagnosis. At Memorial Hospital, one of the world's great cancer centres, a continuing study is under way to find out why there is so often a great and usually fatal delay in diagnosing all cancers. Five hundred recent clinic patient histories were checked carefully to see whether the patient or the first physician consulted was at fault. The results were compared to a similar study made in 1938. They found that although the patient's blame in the delay was reduced more than a quarter between 1938 and 1947, the physician's responsibility for delay had increased more than a half.

Actually in the past the family physician's delay in cases involving cancer of the lung was thoroughly understandable. As our first line of defence in the war against disease, he must necessarily use certain rules of thumb in order to take care of great numbers of patients. One of these rules is that nine out of 10 people will never develop cancer. When a middle-aged man or woman comes in complaining of a persistent cough, it is likely that it is being caused by some minor irritation. Any family physician would probably treat the throat irritation for a while. If the cough still persisted, he would probably suggest X-rays. But he would realize that even if early cancer is present, it does not always show up as an identifiable mass on the X-ray film.

At this point the average family doctor might consider whether the respiratory tract should be given a more careful examination by a specialist. Up to now two methods were in use. The first and most widely used is bronchoscopy. The bronchoscope is a long metal tube about half-an-inch in diameter, with a series of ingenious attachments which can be used for viewing limited portions of the lung or for scraping off a piece of suspected lung tissue for examination.

Besides being a decidedly unpleasant business, even though a local anesthetic is used, not everybody can get the long steel tube down his windpipe. Worse still, the bronchoscope, because it has a limited radius of movement once it is inserted, can easily miss many lung cancers, particularly those in the upper lobes.

The second test for lung cancer was the needle biopsy. Here a six-inch hollow needle is inserted to reach the part of the lung which showed a suspicious shadow on the X-ray film. Tissue and fluid are withdrawn and then examined. Many chest specialists consider this the most dangerous test of all since the needle may spread the cancer cells when it is being withdrawn. Faced with these troublesome tests for determining lung cancer, the average family doctor was naturally reluctant to have a patient go through all the discomfort and expense merely to check into a

persistent and probably harmless cough. So in most cases he simply treated the cough as a cough and put the cancer possibility out of his mind. Now with the sputum test easily available, family doctors will not have such a difficult decision to make. If the patient will agree to it, the new test is simple, inexpensive and virtually conclusive.

"Early diagnosis is necessary if cancer is to be cured" sounds like a familiar and current warning. Actually the statement was made nearly 2,000 years ago by a Greek physician. The fact that it is still the crux of all hope we now have in cancer does not mean that we have not made any progress. In the past early diagnosis of cancer was, oftener than not, just plain luck. Today in the sputum test we actually have a weapon that can make early diagnosis of lung cancer almost routine.

THE LOCAL HEALTH DEPARTMENT'S ROLE

Broadly speaking, the health department's range of activity involves investigation, prevention, case finding and education, the provision of diagnostic auxiliary aids to the clinician, and the administration of various public services and facilities having to do with care or rehabilitation. As illustrations of the place of the health department in the new public health programs, we may take the patterns now being formulated in connection with mental health and diabetes.

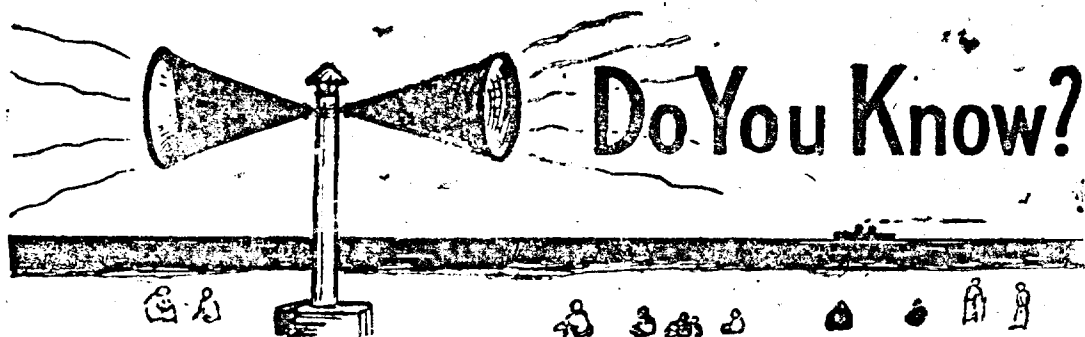
Mental hygiene has had several alternating periods of enthusiasm and apathy but now appears on the way to developing a pattern of public health responsibility for the mitigation and prevention of mental illness. From the standpoint of federal participation, the mental health program is relatively new, having received legislative recognition only since 1946. The local program has still not taken on any final form, but is being developed along broad preventive and educational lines. Central facilities are being established, in communities to handle some of the problem cases and to serve as auxiliary clinics to the mental hospital, but more especially, to initiate and guide a community program designed to impart a broad understanding of the principles of mental hygiene.

In terms of numbers affected, diabetes is an important chronic disease and offers an excellent opportunity for a sound public health program. According to latest estimates, there may be as many as two million diabetics in the country,

nearly half of whom are unaware that they have the disease, diabetes morbidity may be expected to increase even more in the future because it is a disease of middle age and older life in an area of an aging population. Since early discovery of diabetes is the most important single factor in its control, the initial phases of a community control program are usually built around case finding. Early discovery of diabetes is possible through urine and blood examinations, for which screening techniques amenable to mass application have now been developed. An educational campaign on the control of the disease can go hand in hand with the case finding program. Investigation of epidemiological facts associated with the occurrence of the disease and follow-up activities, through home visits by nurses to assist the attending physicians, in obtaining regular and routine checkups, are also included in the local control program.

Classes for diabetics have proved a beneficial and valuable part of a local diabetes control program. By means of group instruction, individuals with diabetes are taught how to prepare their diets, how to examine urine, how to inject and use insulin, and how to adjust to their conditions so as to live normal, active lives. Because the classes can accommodate relatively large groups of people, they are economical and practical; moreover, they are a valuable aid to the physician in helping him to control the course of the disease and prevent complications.

—JOSEPH W. MOUNTAIN.
(Courtesy, *A.J.P.H.*, Nov. 49).



BELIEFS ABOUT SLEEP— TRUE AND FALSE

Q.—Does healthy sleeper never toss and turn?

A.—This is false. Everyone should necessarily change his position many times, because the muscular structure of the body is such that one cannot relax all over at once.

Q.—Does sleeping with someone in the same bed make restful sleep difficult?

A.—This is true. Even the slight movement of the other person keeps one from sinking into a deep and refreshing sleep. (Apart from this, it is unhealthy for two persons to sleep in the same bed.)

Q.—Are those who are able to get along with very little sleep among the most energetic?

A.—This is false. It is known that Napoleon and Edison carried on with only a few hours sleep at night. But then it should be remembered that they took cat-naps during the day. In fact, in any twenty-four hour period, they apparently slept a normal length of time.

Q.—Does lack of sleep alone tend to serious illness?

A.—This is true. Animals die more quickly from lack of sleep than from lack of food.

Q.—Does sleep on the left side strain or hurt?

A.—This is false. It makes no difference whether a person sleeps on his back or on his side, right or left.

Q.—Is it unhealthy to sleep in summer with an electric fan in the room?

A.—This is false. If the fan is turned to the wall to avoid draughts and if it is not noisy, it will improve your chances of a restful night.

Q.—Can physical fatigue make it difficult to get to sleep?

A.—This is true. A warm bath is probably the best way of reducing tension which arises from too much unaccustomed exercise.

Q.—Is a nap after lunch sheer self-indulgence and does it cut down a person's efficiency?

A.—This is false. When students slept for an hour after lunch, their scholastic records were higher than when they used the time for studying.

Q.—Is drinking hot beverages before going to bed, one of the best ways of ensuring sleep?

A.—This is false. Pressure of liquids on the bladder causes restlessness. Only a small amount of liquid should be drunk in the evenings if you want to pass a restful night.

—(Adapted from *Efficiency News*.)

CIRCUMCISION

Q.—Is it medically justified?

A.—Circumcision is "medically justified". There are many good reasons why this operation should be performed in infancy. It is not merely a part of a cultural heritage. Your family physician will undoubtedly explain to you the sanitary reasons.

It is recognized that patients who have been circumcised are less apt to contract venereal

diseases. It is a well established fact that cancer of the penis rarely, if ever, occurs in the circumcised. It is almost a universal belief of all urologists that every male patient should be circumcised.

(*Hygeia*,—The Health Magazine)

CONVULSIONS

Q.—What causes convulsions in children less than 3 years of age?

What can be done during the spasm to aid the child?

How can they be prevented?

A.—Disturbance of the calcium chemistry of the body, due primarily to lack of vitamin D, may be among occasional causes of convulsions. The virtually universal use of cod liver oil has largely eliminated this cause. Convulsions may also be due to birth injuries or other brain injuries which a child may have sustained, or to intestinal disturbances or to epilepsy.

The exact cause of convulsions must be determined by the physician in the individual case. Often such determination is possible only after prolonged observation and in some cases the cause is never conclusively demonstrated.

The best thing to do for a child during a convulsion is to immerse the body in warm water.

(*Hygeia*—The Health Magazine)

THUMBSUCKING

Q.—Some dentists contend that thumbsucking causes the jaw getting out of line and pushing the teeth back. Is it so?

What can be done to stop this habit or will the child eventually outgrow it?

A.—According to a discussion of this problem in the *Journal of the American Medical Association* some time ago, many dentists and physicians believe persistent thumbsucking may produce a bending down of the front part of the lower jaw and at the same time a bending back of the lower front teeth and pushing forward of the upper front teeth. It is recognised, however, that such derangements, called malocclusions may

occur in children who have never been thumb or finger suckers, and conversely the habit may be practised for many years without producing malocclusion. Statements such as those of certain dentists usually are correct, since they are based on actual observation of the individual case, but no general conclusion in either direction is possible.

The thumbsucking habit usually disappears before the child enters school. If it persists long, it is usually considered evidence of emotional immaturity, frequently based on unexpressed feelings of insecurity. Because of that background, attempts at correction must avoid use of punishment. Instead, the child must be given kindly reassurance and, for the time at least, be literally "smothered in affection" while gentle remonstrance is employed. Sometimes showing the child how infantile the habit looks, by having its view itself in a mirror, may be of assistance. Because the practice has become ingrained as a habit, with the original motivation perhaps now extremely minor, persistence of the parent will be required to correct it. Psychiatric consultation may be required.

—Adapted from *Hygeia*

YAWNING

Q.—What causes yawning?

A.—Yawning is caused chiefly by lack of sufficient blood and oxygen supply to the brain. It represents an exaggerated inhalation whereby the body seeks to speed up the circulation and also to take in more oxygen.

—(Courtesy, *Hygeia*)

EYETEETH AND BLINDNESS

Q.—Does pulling the *Eyeteeth* cause blindness?

A.—"Eyeteeth" got their name only because the roots point directly to the eyes. Yet the name is the apparent foundation for the old belief that these teeth have some special connection with the eyes, and directly affect the sight.

—NTA Reporter



*Wit's an unruly engine, wildly striking,
Sometimes a friend, sometimes the engineer.*

—GEORGE HERBERT.

HAD HAD TREATMENT

He was a mine sweeper and, home on leave, was feeling a big groggy. He called to see a doctor, who examined him thoroughly.

"You're troubled with your throat, you say?" said the doctor.

"Aye, aye, sir," said the sailor.

"Have you ever tried gargling it with salt and water?" asked the doctor.

The mine sweeper groaned.

"I should say so!" he said, "I've been torpedoed seven times!"

QUICK THINKING

The one failing of an illiterate but otherwise industrious workman was his frequent absences. But he always produced a certificate signed by his doctor. At last, however, the doctor became suspicious of these visits. When the man came again he gave him a blank certificate. Next morning the boss called the workman in.

"Now look here, John" he said; "that certificate is no good. The doctor has simply put a stroke in the place which should show what you suffered from."

"That's O.K. boss," said John quickly. "That's what I had."

IRISH HUMOUR

A medical officer had called to inspect a peasant's cottage in Ireland.

"Do you think," he said sternly, "that it is healthy to have a pig living in your kitchen?"

The woman in the cottage bridled.

"Sure, year honour, he's niver had a day's illness since he came into the house."

EFFECTS OF REJUVENATION!

The story is told of a quack medicine vendor and how he sold his "rejuvenator."

"Sir, I might mention as a slight testimonial to this world-famed 'Rejuvenator' that, a year ago after taking one small dose overnight, upon awakening in the morning, I said to my wife, 'Mother, give me my satchel—and I shall be off to school.'"

WHAT IS HEALTH EDUCATION?

Health education is the application of measures to induce experiences which favorably influence knowledge, attitudes and actions for the prevention of disease and the perfection of health of the individual members of society.

—Ira V. Hiscock, *Pub. Health News*, Feb., 1949

CONSCIENCE—THE CELESTIAL FIRE

Labour to keep alive in your breast that little spark of celestial fire,—conscience.

—George Washington.

HARDEST MISFORTUNE NEVER COMES

Let us be of good cheer, however, remembering that the misfortunes hardest to bear are those which never come.

—James Russell Lowell.

QUITE NATURAL

If you growl all day, it's only natural to feel dog-tired at night.—*New World News*.

—N.T.A. Reporter.

BETTER A SPENDTHRIFT THAN A MISER

It is better to lose health like a spendthrift than to waste it like a miser.

—R. L. Stevenson.

A MERRY HEART, A CONTINUAL FEAST

He that is of a merry heart hath a continual feast. A merry heart doeth good like a medicine.

—Proverbs.

An Irishman visited a tuberculosis exhibit where lungs in both healthy and diseased conditions were displayed, preserved in glass jars. After carefully studying one marked "Cured tuberculosis lung", he turned to the physician and said:

"Perhaps it's because O'im Irish, but if ye cured th' patient, how could ye have his lung in a bottle?"

A LEVER TO PROMOTE HEALTH

Increased sensitiveness of the public conscience makes avoidable suffering and preventable disease repugnant to national sentiment.

This feeling is a great lever in promoting physical as well as moral health.

Health & Social Welfare.

WHAT IS A ROMANCE?

"When one is in love, one always begins by deceiving oneself, and one always ends by deceiving others. That is what the world calls a romance."

—Oscar Wilde.

VETERAN'S ADVICE

The old medico was advising the young doctor just embarking on his professional career. He began: "It isn't too easy for the young physician to get a good start".

"I know that," the young man replied, "but I'm raising a set of whiskers".

"That's a good beginning", said the veteran. "It will help a lot, and I'll lend you some of my magazines for 1925 to put on the table in your waiting room".

LENT TO MAN

Health is the first good lent to men;

A gentle disposition then;

Next, to be rich by no by-ways;

Lastly, with friendst' enjoy our days.

—Herrick.

EXPERIENCE PROVES IT

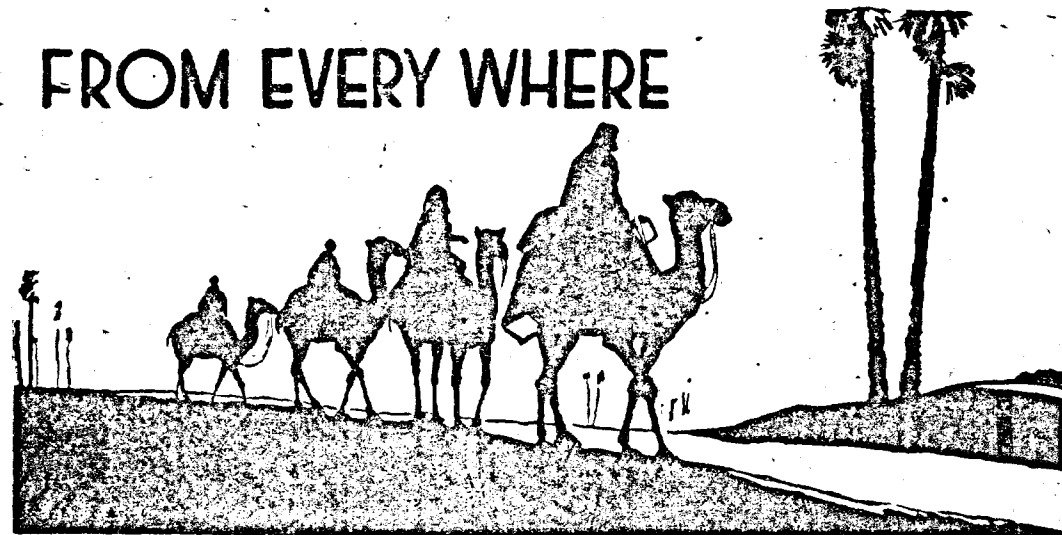
No man was ever made more healthful by a dangerous sickness, or came home better from a long voyage.

—English Proverbs.

IT'S NOW EXPLAINED

Scientists have discovered that germs always work in groups. This explains why we have never seen a measles knocking about on its own.

FROM EVERY WHERE



WHAT DO THEY SAY ABOUT IT?

Readers can contribute to this section. They are requested to send extracts of current literature which, in their view, would interest the people.—Ed., P.H.

EQUAL TO HORSE MANURE

I have made the experiment of composting by volume 50 per cent of refuse dust and 50 per cent of market garbage. This, after a period of standing for consolidation, is physically changed by the breakdown of the garbage material, and by the simple method of heaping, manure has been produced of equal value to horse manure, subject to the moisture content being equal to one sample with the other. In other words, there is 0.5 per cent of nitrogen and 0.3 per cent of phosphoric oxide.

How then can one accept the negative observation that the disposal of refuse dust is a problem to any town? I would agree that such success requires some pioneering and persistent effort, because I do suggest that the ready market we have in Leeds had to be acquired by the effort of salesmanship in the first instance. I feel confident that in future there will be an increasing demand for the compost to which I have referred. Only the last two weeks an order for 100 tons to one farm has been executed.

Again for experimental purposes I have applied 20 tons of the compost to some old grassland at one of the farms. This grassland has not been disturbed by the plough for more than fifty years, and has received dressings of refuse dust and yielded during the past summer up to 16 or 17 cwt. of hay per acre.

(By Albert Mann—"Public Cleansing and Salvage" Jan. 50).

DOCTORS IGNORE PREVENTIVE SIDE

Doctors were told here yesterday that too many physicians disregard, are too busy or are unable to detect the beginnings of disease, a deficiency in the preventive sphere of medical practice which has some of its roots in the modern curriculum in medical schools.

Dr. Leonard A. Scheele, Surgeon-General of the United States Public Health Service, speaking at the Statler at one of the opening day sessions of the American Public Health Association's seventy-seventh annual meeting, said that the effect of the modern curriculum

in medical schools, "crowded with technical facts . . . is that the student seldom contemplates the individual as a whole, in his community, in his family, in his job or with the total health problem".

"So long as medicine is taught purely or largely as a series of loosely related technical disciplines, with emphasis and challenge on the esoteric and unusual", Dr. Scheele said, "so long will we produce physicians with little appreciation of preventive medicine".

SAYS STUDENT NEVER SEES PROBLEM

He added that there is "little wonder" that current medical graduates consider certain problems as pallid, uninteresting and fit only for the attention of "some lesser order of being such as a public health officer or social worker".

He listed some of these problems as community nutrition, problems of resolving the social factors surrounding heart disease and tuberculosis and that of early detection of disease by "routine examinations".

"How can a student appreciate the social problems of medicine when they never confront him and he never sees the people or the organizations struggling for their solution?" Dr. Scheele asked. "In some schools, not more than 3 per cent of the total semester hours is devoted to preventive medicine".

Dr. Scheele said that courses offered tend to emphasize the mechanics of environmental rather than the principles of prevention and the social factors in disease and the practice of medicine.

Dr. Scheele said "the great flaw in medical thinking, which lies like a geological fault beneath much of our teaching and practice, is that we equate 'social' with specific political ideologies, or with the indigent classes who—we fondly believe—are the sole province of public agencies and who will seldom fall to the lot of the average physician in his private practice".

LISTS SOCIAL ASPECTS OF MEDICINE

He said the social aspects of medicine mean the total health care of the individual, in society, "and whether or not a community provides for the proper service to all classes of patients . . . whether or not a man's occupation influences his disease and, if so, can he be rehabilitated or can a more salubrious occupation be found? . . . Whether or not chronically ill patients can be taken care of adequately in their house—both for the medical benefits that may result and for the more efficient use of hospital beds . . . and how can prolonged illness be linked with restorative services, including general education for the children and vocational rehabilitation for the adults"?

Dr. Scheele said that such thinking projects the concept of preventive medicine and public health far beyond the narrow confines of "isolation and quarantine" for acute infectious diseases and far beyond the confines "of its present status in the majority of medical schools".

(By Lester Grant—Courtesy—New York Herald Tribune, Oct. 25, 1949).

EDUCATION FOR DEMOCRACY

Education for democratic living is a principal obligation of public education and all elements of school and college life must contribute to this goal. Different school subjects and different phases of education can contribute in different ways. Happily, physical education offers many opportunities for training in democratic action.

"A democracy is more than a form of government; it is primarily a mode of associated living, of conjoint communicated experience." In order that experience in democratic action can take place, there must be group participation in purposeful activities that challenge the abilities of each member of the group and in which each feels himself a part.

The tenets of democracy become a code of action by recognition of their contribution to success and satisfaction in group activity. Such principles of democracy as respect for personality, rights and liberty of others; a feeling of responsibility for the welfare of others; provision of opportunity for each individual to develop his natural gifts; freedom of participation in group decisions; settlements of disputes by appeal to reason and majority opinion; freedom of speech; and a delegation of authority to individuals chosen by right of merit, but with retained right to withdraw authority, can function naturally in the informal situations of play and games, athletic sports, dance activities, combatives, and gymnastics as taught in our better programs of physical education. In order that these principles of democracy may function, there must be opportunity and guidance. The opportunities are present in physical education, and guidance comes through the teaching method used.

An examination of good method in physical education will reveal such objectives as the following:

1. Giving individual instruction.
2. Teaching respect for private property.
3. Listening patiently to expressions of opinion.
4. Rewarding fair play.
5. Using scoring methods which allow each to contribute to group achievement.
6. Teaching team play.
7. Helping each student to know and understand his abilities and limitations.
8. Allowing all an opportunity for participation.
9. Giving each a chance at leadership.
10. Providing a varied program which allows each to find activities suited to his interests and abilities.
11. Encouraging participation in planning.
12. Giving practice in officiating.
13. Selecting players on the basis of merit only.

14. Developing willingness to abide by decisions of officials.

15. Creating an atmosphere of friendliness in class and on the playing field.

Physical education offers rich opportunities for the realization of such objectives as those listed above and therefore, of contributing to education for democracy. This relationship to the purposes of total education in this country is of prime importance and the contribution of the sports and athletics of physical education of American democracy is of tremendous significance. (Extracts from 'The Contributions of Physical Education to Total Education' By D. K. Brace, University of Texas Austin—Courtesy, "J. A. A. H. P. E. & R".)

13—LUCKY OR UNLUCKY!

The number 13 seems to have had a rather unsavory reputation ever since man first learned to count. It is generally believed that the superstition originated with the Last Supper at which there were 13 present, Judas being the thirteenth.

However, there is a Scandinavian legend that tells specifically that 13 at a table is a sign of ill omen. The story goes that Toki, the Principal of Evil, sat as uninvited guest with the twelve demi-gods at a feast. Hodur, the blind one, symbol of darkness and night had been instructed by Toki to shoot Balbur, the bright one, symbol of the sun, with an arrow of mistletoe. From that time 13 was considered unlucky.

On the other hand 13 has become a rather outstanding number for the people of this country. On the Great Seal of the United States there are 13 stars and 13 bars, an eagle with 13 darts or arrows in its left claw and an olive branch with 13 leaves and 13 olives in its right, and a motto—*E Pluribus Unum*—with 13 letters. The other side of the seal contains an incomplete pyramid with 13 steps. The many uses of the number 13 in the design refers of course to the 13 original colonies—hardly an unlucky number for Americans.

—NTA REPORTER.

LOW COST

Vitamin therapy

For patients who cannot afford imported Vitamin preparations, Madras Government Shark Liver Oils may be prescribed. Since Vitamins A & D are particularly

susceptible to loss of potency in storage, the fresh natural sources of these oils give greater assurance of their full effectiveness in treatment.



Madras Government Brand
SHARK LIVER OIL

Sold in 40 c.c. bottles, this product compares favourably with Halibut Liver Oil and the synthetic Vitamins. It is almost tasteless in milk or fruit juice. Its fat content is just sufficient to enable absorption of the Vitamins, but not enough to cause digestive upset, even in coeliac conditions.

Standardised to:

VITAMIN A 12,000 International Units
VITAMIN D 1,000 per gramme.



Fresh concentrate of
SHARK LIVER OIL

GOVERNMENT OIL FACTORY, CALICUT

Department of Industries & Commerce

GOVERNMENT OF MADRAS

Distributors for South India:—PARRY & CO., LTD., MADRAS.

SISTA'S-GO-4

AJAX ABRASIVES

- FLINT (Sand)
- GARNET
- EMERY
- SILCARB
- AJAXITE
- PAPERS, CLOTH
- DISC, ROLLS,
- BELTS, ETC.



AJAX quality coated Abrasives are used by all branches of Engineering for metal, leather and wood work. AJAX Abrasives cut quickly and cleanly, speed up production and produce a superior finish in fine work.



AJAX PRODUCTS LTD.
106, ARMENIAN STREET, MADRAS

Managing Agents : MURUGAPPA & SONS, MADRAS.

Sole selling Agents for South India :

MARSHALL SONS & CO. (INDIA) LTD., P. O., No. 141, Madras.

PUBLISHED BY MR. A. V. RAMAN, AT "LLOYD CORNER", LLOYD ROAD, ROYAPETTAH, MADRAS 14, MS 30
PRINTED BY V. ANANDA KRISHNA CHETTY, B.A., AT HOE & CO., MADRAS—P.I.C. MS4-24-2-'50 PAPER BY PART



GANNON, DUNKERLEY & CO. (Madras), Ltd.

14, BOAG ROAD

MADRAS, 17

Phone No. 88316

Telegrams "VITOPUS" Madras

WATER-SUPPLY AND DRAINAGE SCHEMES

Now is the time to investigate and design these schemes. We can supplement departmental activities under expert direction.

CONSULT US

