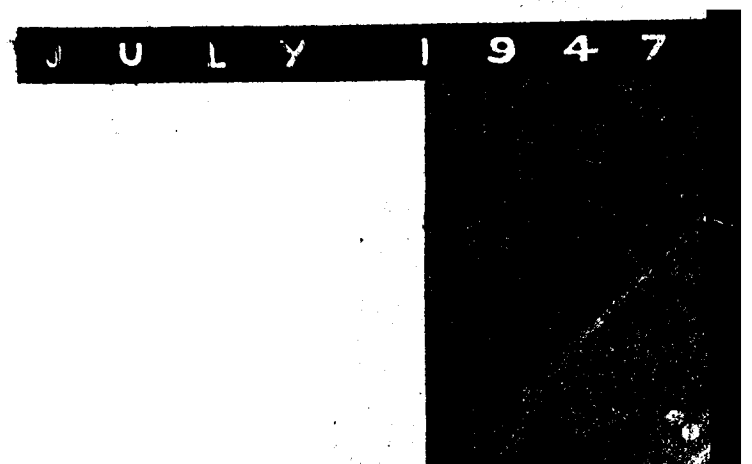


215/87

PEOPLE'S HEALTH

EDITOR: A.V. RAMAN



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PEOPLE'S HEALTH

A Pioneer in the Field of Public Health

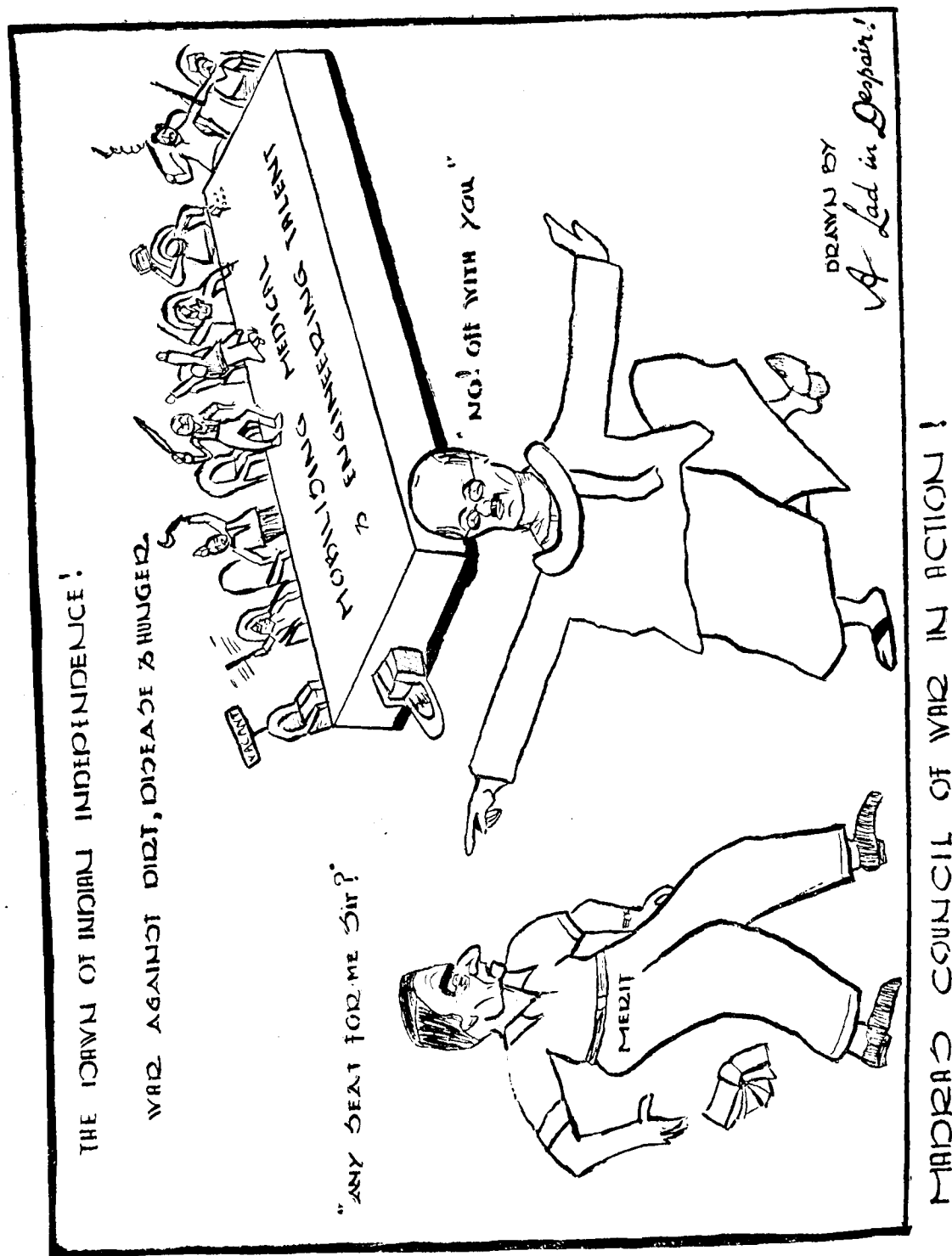
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JULY, 1947

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A PIONEER IN THE FIELD OF PUBLIC HEALTH !PEOPLE'S HEALTH!

VOL. I
No. 10

JULY, 1947

ISSUED
MONTHLY

Merit, however inconsiderable, should be sought for and rewarded.

Napoleon I.

EDITORIAL . . .

EXORCIZE THE DEMON OF MERIT!

THE recent decision of the present Madras Ministry to reverse the policy of the previous one and abolish the reservation of 20 per cent of the seats available for new entrants to the Medical and Engineering Colleges for being filled up solely on the basis of merit, while leaving the balance of 80 per cent to be determined on the basis of certain fixed communal proportions has to be greatly deplored. The idea of introducing a rigid pattern of communal proportions for admission into colleges, technical or otherwise, *irrespective of the number of applicants from the various communities*, entirely indifferent to the merit entitling each applicant for entry, and devised on an utterly illogical basis of classification, intended to shut out a certain section of the Hindu community, while providing ample weightage to some of the non-Hindu communities and leaving the

balance to an amorphous class of Hindus called non-Brahmins, was the device of a machevillian foreign bureaucracy for adoption by a communal party in power with a negative label and positive hatreds, over two decades back. At the time of the introduction of communal rotation in colleges in this province, it found a parallel nowhere else in the world. This was the unique contribution of a communal political party to education in Madras. The havoc this rule caused, was nowhere so visibly bad as in the technical institutions like Medical and Engineering Colleges. It ruled out efficiency and merit as being the basis of selection altogether. Even in the case of Brahmin applicants, the number of seats available was generally so small in comparison with the number of applicants and ideas of efficiency being at a terrible discount, *only such Brahmin applicants as could command influence with the powers that be, secured admission*. In the case of applicants from non-Hindu

communities, there was hardly any need to apply the process of selection as the number of seats assigned was rarely outnumbered by the number of qualified applicants. The logical outcome of this unintelligent and perverse rule with its complementary regulation in the matter of selection of candidates for entry into Government service operated to find a place in Government service for all the candidates of certain communities passing out of the technical colleges and this was especially true in the case of those belonging to the Muslim community.

The Bhore Committee's recommendations (Vol. II, Chapter XVIII, para. 24) laid down that in the matter of admission to Medical training institutions, a percentage should be selected on pure merit and suggested about one-third of the total vacancies for this purpose. It is surprising that the members of the Committee who were mostly men of the Medical profession, should have countenanced at all any proposal of communal representation in the profession to the prejudice of progress in Medical science. This is by the way. The mischief in the eyes of communalists of this recommendation was further emphasised by its express prohibition against any diminution in communal quota, in case the members of any particular community or communities monopolised the seats set apart for selection on the basis of merit. It is well-known that Mrs. Rukmini Lakshmipathi, the then Health Minister, insisted in the first instance on the adoption of this recommendation of the Bhore Committee in respect of admission

to medical training institutions but later on, the application of a percentage to be selected on the basis of merit was extended to Engineering Colleges and the percentage was reduced to twenty by the Prakasam Ministry. In fact, had the Prakasam Ministry been wiser, they would not only not have agreed to try the experiment for one year only as they had done in this instance but while making the scheme a permanent feature, would have provided for a progressive annual increase in the percentage set apart for selection on merit which will result at some future date in the elimination of the communal quotas altogether. We regret that the Congress Ministry now in power should have decided to take the retrograde step of terminating even this limited experiment in the direction of progress.

In this connection we would like to draw attention to the following passage in the Bhore Committee's recommendations on the tests for admission into medical training institutions:

"We should, however, say that any test which does not provide for assessing a candidate's personality, initiative, powers of observation and independent thinking will have largely failed in its object. A candidate's academic record should be given due weight but character, physical fitness and athletic attainments should not be left out of account."

But as far as the Madras Ministry is concerned, the first test is the religion and/or the caste to which the father of the applicant belonged, and in the case of communities, where

the number of applicants and the number of seats tally, the wise injunctions of the Bhore Committee have no validity, as there does not seem any bar to admission of students to Medical College, who possess the bare minimal qualification provided; we believe, there are no candidates belonging to that community with better qualifications, even if it be that dozens of first-class applicants belonging to other communities have to be turned out.

Man it is said has a natural tendency to imitation, nay it is even a necessity for him. But why should Prime Minister Omandur Ramaswami Reddiar think of imitating the methods of a discredited political party that died at the polls over ten years back? Why should he feel that the action of the Prakasam Ministry in this matter was a mistake? Gustave le Bon a philosopher with an almost prophetic vision said "Imitation to which so much influence is attributed in social phenomena is, in reality, a mere effect of contagion". We are loath to believe that Sri Reddiar whose emergence from the arcadian surroundings of Omandur was in response to the patriotic calls of the Congress and who, in the eyes of his romantic admirers, appears as a modern edition of Cincinnatus, has laid himself open to the contagion, arising from contact with the putrescence of a dead political party.

The curious position in South India, during the past thirty years and over, of a communal problem within the Hindu community has done much to retard the progress of this Province and displace it from

the position of primacy in All-India politics. With the merits of the question, as it was in the days of its genesis and the apportionment of blame between the sub-communities involved, we are not now concerned. There can be no reaction without provocation and the leaders of South India of those days belonging to the Brahmin community cannot be absolved of all blame for having contributed to the emergence of this sub-communal canker. But the results of it all has not materially helped the progress of the province as a whole. While standards in the field of public life, administration and education have all been visibly lowered, and we are surrounded on all sides by mediocrities and sub-mediocrities, all incentives for human action have been subordinated to securing positions of power and patronage and jobs from which these can be exercised. We are pained to observe that in spite of the twenty-seven months of Congress Administration in 1937-39, these forces of reaction continued to exist and gathered increased momentum during the inglorious, autocratic regime of Sir Arthur Hope. We understand that a certain Administrative Board that functions under the Government of Madras, whenever it sends up a list of officers for promotion to higher posts, invariably adds a rider that the list contains the best amongst those available (subject of course to the need for maintaining communal proportions) but it cannot be said that the officers recommended are the most suitable for the posts in question. If our information is correct, we believe that Sri Reddiar has also heard about it. In the face of all

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this, we are not convinced that there was any need to exorcize the demon of merit that had inadvertently crept in during the days of maladministration of Sri Prakasam and enthrone once again that guardian angel of the late Justice Party, the angel of sub-communal hatred?

If the tone of our administrative services have deteriorated, nowhere is it more visible than in the scientific and technical services. The problem to-day that faces any Government of achieving the greatest good to the greatest number cannot even be partly solved if considerations of claims of a sub-communal character cloud our vision and it is true, that in the fields of activity, where the main objectives have primarily to be achieved, the choice of the personnel should be based on efficiency and merit and not on any other consideration. How could this be achieved if in the field of training of this personnel, a third class applicant is preferred because he belongs to a particularly favoured community as against a first-class man belonging to a less favoured community. We are sure that, by and large, the members of the non-Brahmin Hindu community do not prefer to be killed by a second-rate non-Brahmin doctor than be saved by a first-class Brahmin doctor, though it might be that non-Brahmin politicians have other views on the matter.

We were led to believe that when there was a change in the Ministry with the personnel being more or less hand-picked, though from out of an indifferent lot of legislators, we could expect progress in all directions of administration and the elimi-

nation of intrigue and scheming and the corruption that goes with it. But within three months after the Ministry is installed in power, we find evidence of the presence of a few of the worst features of the Prakasam Ministry along with some of the glaring defects of the administration of the discredited and the now defunct Justice Party, creeping into the administration. We respectfully ask Sri Reddiar and his colleagues to sit up and take note.

"VEGETABLE GHEE": ITS PLACE IN NUTRITION

Some time back at a meeting of the Central Food Council, Sir Duttar Singh raised the question of the manufacture of *Vanaspathi*. It is being used among other things for adulterating ghee. Sir Duttar desired to know whether *Vanaspathi* was not injurious to the health of the consumers. Sir J. P. Srivastava the then Food Member, categorically and unequivocally stated in reply that there was no evidence at all, that the consumption of *Vanaspathi* had any deleterious effect on the consumers' health. He also stated that adulteration of ghee was inevitable in this country for many reasons, and that it was better to adulterate it with a known pure *Vanaspathi* than with any unknown impure stuff. That was that.

A few months back, it would appear that two scientific workers in a Government laboratory conducted certain experiments to find out whether hydrogenated fat sold throughout the length and breadth of the country under several trade

names such as *Vanaspathi*, *Marvo*, etc., has any evil effects on the consumers. Based upon these laboratory experiments, the present Food Member, Dr. Rajendra Prasad publicly announced that the consumption of hydrogenated fat produces blindness in the third generation of the animals on whom the experiments were carried out, with fall of hair. If the findings of these laboratory experiments on rats and mice are considered conclusive by the authorities, the most obvious course is to prohibit peremptorily the manufacture of *Vanaspathi* and similar products. If, on the other hand, the laboratory experiments are not considered conclusive, then it was rather premature to have raised the issue publicly. The declaration of the Food Member has only resulted in causing alarm in the minds of the consumers of *Vanaspathi* and similar products. The industries should also find themselves in a fix whether or not to improve the factories. They should be considering whether the manufacture of hydrogenated fat should be continued at all. In the market, the supply of the stuff is so deplorably low and grossly inadequate that the needs of the common man who cannot afford genuine ghee, are not met.

It should be recalled that the industry was based upon the brilliant discovery of a French Scientist Paul Sabatier that unsaturated compounds like oils could under the catalytic action of nickel be converted into butter-like and ghee-like products. As it so often happens, advantage was taken of that dis-

covery by industrialists who utilized it on a commercial scale for the manufacture of *vegetable ghee*. Under this process, even strong smelling fish oils could be transformed into odourless, palatable ones with the consistency of butter or ghee. We may here question whether these laboratory experiments conducted on *short-lived animals* can be taken as conclusive evidence of reactions on *human beings*, without further corroboration. We may pertinently quote here Dr. Alexis Carrel from his "Man the Unknown."

"Certain data, urgently needed, can be procured with the help of short-lived animals. For this purpose, mice and rats have been chiefly used. Colonies consisting of many thousands of these animals have been employed to study different diets, their influence on the rapidity of growth, on size, disease, longevity, etc. Unfortunately, rats and mice have only very remote analogies with man. It is dangerous, for example, to apply to children, whose constitution is so different, conclusions of researches made on these animals. Besides, the mental states accompanying anatomical and functional changes in bones, tissues and humours under the influence of food and mode of life, cannot be properly investigated on such low types of animals."

No doubt, experiments on rats and mice have furnished valuable information in the research for vitamins and their importance in nutrition; but it would be rather wrong to assume that such experiments on

short-lived animals would hold good with *human* beings in *all* cases unless further evidence is forthcoming. Fat in some form, animal or vegetable, is indispensable for nutrition. It is only the rich and the influential who can afford genuine butter or ghee.

Vegetable oils cannot be kept long without getting rancid. Some of them have their own peculiar odour which suits the tastes of some persons while being disagreeable to others. Hydrogenation improves the keeping properties of these oils and renders them odourless. The use of vegetable oils is universal in our country. For the bulk of our population, it is the only source of fat in the diet. Our country does not produce enough ghee for our needs; nor is its price within the reach of any but the 'upper classes'. We have not noticed and medical science has not recorded either that any untoward effect like blindness or loss of hair in the third generation follows the use of vegetable oils. Were it so, we should all be blind and bald by now! Hydrogenation is stated to convert these innocent vegetable oils into harmful products. We are not told how this dangerous change is brought about. It cannot be the presence or absence of any nutritive factor which is common to the vegetable oil or its hydrogenated fat. Vitamin A is found in butter-ghee and absent in vegetable oils and hydrogenated fat. The lack of this vitamin is said to cause night-blindness in the consumer not to his third generation. Vitamin D is another such factor; but this has nothing to do with blindness or baldness. Does hydrogenation then

introduce any new factor into the vegetable ghee which causes the said results? Beyond the fact that the unsaturated fats become saturated, scientists have not told us of any other change brought about by hydrogenation. We do not know either of any major differences in the metabolism of the saturated and unsaturated fats which may bring about at such remote time blindness or baldness. To condemn vegetable-ghee outright on the basis of some *isolated animal experiment* is in our opinion absolutely unjustified. It is positively dangerous to National Health and National Economy for persons in authority like Members of Government to voice such uncorroborated views in a forthright manner and cause panic among the public. It looks as though vegetable ghee industry has come to stay in our country to meet the needs of the common man. It is true that it is used extensively to adulterate butter-ghee. The consumer is cheated into paying a higher price for a cheaper product. Naturally, such malpractices must be put down; but not by frightening the public on grounds of health. Some years ago, there was a proposal to compel the addition of a harmless dye to all vegetable ghee which will allow adulteration to be easily detected. Vested interests countered the move then. Why not revive it and bring it into effect and automatically ensure detection of adulteration? If health and not malpractice is the main concern, why not compel the producers of vegetable ghee to 'fortify' the product with the required vitamins?

We welcome the news that the Indian Institute of Science, Bangalore, is taking up the matter for investigation. But would it not be still better if further researches in this matter are conducted with the co-operation of the Nutrition Research Laboratories, Coonoor? This institution is established by the Indian Research Fund Association for the sole purpose of examining such problems and giving the right lead to the authorities and public alike. Our Governments seem to have a knack of duplicating personnel and facilities and working in watertight compartments. It is time that the State—both the Centre and the Province—should pool all available resources, co-ordinate work and eventually create a unified organization. It is only by such combination that research can be fostered and the best can be got out of the existing material. Before long, the facilities which are even now available at the King Institute, Guindy, should be further increased to facilitate control over the working of the Drugs Act. Would it not be wise to centralise all research activities here, although the administrative control may be under different heads of departments?

RE-ORGANIZATION OF MEDICAL AND PUBLIC HEALTH SERVICES

Every Provincial Government had prepared its own post-war reconstruction programmes. The publication of the report of the Bhore Committee necessitated their reconsideration. Some Governments

have had their proposals whetted in the light of the recommendations of the Bhore Committee by a special committee set up specially for the purpose. We recommended that a similar whetting of the Madras programme may be entrusted to the Post-war Reconstruction Health Sub-Committee of the Province. The Hon'ble Mr. A. B. Shetty, the Minister of Health, Madras, has been keeping his ears open to any suggestions put to him by responsible individuals and representative institutions. Mr. Shetty is well known among his friends who knew him intimately as a strong and silent man. He is a man of few words. He is one with an eye to business. His response to our appeal was original, indeed. He convened a conference of selected top-ranking officials and non-officials interested in the subject to re-consider the recommendations of the Bhore Committee. This conference met on the 27th, 28th and 30th June, 1947. The geniality with which the Minister of Health conducted the proceedings put every one at ease. There was a free and frank discussion. The members spoke without inhibition but with decorum. The observations were brief and to the point. Substantial contributions were made by the Vice-Chancellor of the Madras University Dr. Sir A. Lakshmanaswamy Mudaliar, who was himself a member of the Bhore Committee. Our new Surgeon-General, Lt.-Col. Bhatia, who has had considerable experience of medical education, Bombay, was extremely helpful with his suggestions.

We should like to make specific reference to two aspects. Public Health Engineering as a profession is not as yet known in this country. The Bhore Committee has emphasized the importance of environmental sanitation. The training and organization of the profession of Public Health Engineering had the unanimous support of the conference; and the other was the development and expansion of the teaching of preventive and social medicine in a 'School of Health' as part of the Medical College. The conference divided itself into two small business-like sub-committees to work out the details in the light of the discussions at the conference. The committee has been requested to report before a set date. The reports of the sub-committees will again come before the conference for consideration. It is hoped that the conclusions of the committee, as one should naturally expect, will be implemented as quickly as possible by the Minister.

The Minister of Health, Madras, has also set up a separate committee to consider comprehensively the question of expediting the execution of water-supply and drainage schemes in the Province. This committee is working at top speed. Its report is expected to be in the hands of Government very shortly.

The procedure adopted by the Minister of Health, Madras, has ensured the State deriving the benefit of all available talent in a quick and business-like manner. We commend this procedure to the Ministers of Health in other Provinces, where the recommendations of the Bhore

Committee have been relegated to the backwaters of the administration.

FACE THE FACTS

We have received many complaints that officers who do not know Telugu, are being posted to serve in *Andhra Desa* while officers whose mother tongue is Telugu are available. With the enforcement of education in the local language, it will be impossible for such officers to take their children with them to Telugu areas for educations. With the present housing shortage, which the Government is proceeding to tackle on wrong lines, if it tackles at all—the officers are finding it extremely difficult to secure an accommodation in their new stations. For reasons which we need not dilate upon here the *Aravas* are finding it more and more difficult to serve in *Andhra Desa* where a prejudice against them prevails. This antipathy is not directed against Government officers only but also against those who occupy quasi-official positions. We are not concerned with individual postings; but with a principle involved in it. It is only a question of time before *Andhra Desa* is formed into a separate province. Is it not therefore wise to plan ahead and to post Telugu officers to Telugu areas as far as may be possible? Such a procedure would help the Andhra province to function normally soon after it is formed. It would also help the officers to have a feeling that they work among their own people; they will then serve with a smile in their face.

BURMA BEANS: BEWARE!

(Contributed)

[There has been an acute shortage of pulses in the Madras Presidency, in particular. So much so the distribution of certain varieties of them—Bengal gram, Green gram, Red and Black grams—is strictly rationed. The quantity of supply per head of population is strictly limited. The sales of these rationed varieties are effected through the ration shops only. Naturally, there has been a demand for the cheap varieties of pulses all over the country. Large quantities of what is known as 'Burma Beans' have been imported into this country. Recently some cases of ill-health for no apparent reason, were reported from Virudunagar Municipality (Madras Presidency). The Municipal Health Officer investigated the cases and suspected that the consumption of Burma Beans should have been responsible for them. Further investigations and analysis of samples by the Government Analyst, King Institute, Guindy, revealed that the suspicion of the Health Officer was well founded.

Some alarming reports on the subject with glaring banner head-lines appeared in a certain section of the press. Far from allaying public feelings and educating public opinion, they created only a panic among the people. We have made thorough enquiries from authoritative sources. We are glad to inform our readers that the authorities had taken prompt and adequate steps to avert a catastrophe which would have inevitably ensued by the consumption of the poisonous Burma Beans imported into this country. We understand that the Ministry of Health is taking immediate steps to see that the consignment of the stuff recently landed at the Madras Port is not made available to the public without further investigation.—Ed., P.H.]

There are many varieties of leguminous plants which produce beans. Almost all of them are nutritious; but some are poisonous. Lest there be any confusion in the minds of the people as a result of the alarmist reports which followed the grave symptoms of poisoning, consequent on the consumption of a variety of beans imported from Burma, some people have gone to the extent of suspecting even the green beans and other harmless varieties of the species, as if they were all dangerous for human consumption! The variety which is poisonous is known as *Phaseolus Lunatus*, Linn—is Lima or Duffin Bean; Madagascar Bean; Burma Beans.

Hindi—*Kursumbulle-pullie*
(Burma).

Bengali—*Bunburbutti*
(Burma).

Punjab—*Lobia* (Burma).
U. P.—*Sem* (Burma).
Sinhalese—*Pothudhambala*
(Burma).
Tamil—*Pitanga*, *Thulukka*
payaru (Local).

There is no name in Telugu for this bean. It is popularly known in the market as *Burma* or *Rangoon* bean.

These are the dry beans. Large quantities of them seem to have been imported into this country from Burma. Even in this variety, there are two classes, the deliberately cultivated type and the wild variety. The latter, it is said, grows wild in Mauritius and Burma. It was originally used as a green fodder or green manure. It has been fairly well established that these beans, of which there are several varieties, white, yellow, red-mottled, contain

a cyanogenetic glucoside (Phaseo Lunatin) and an enzyme. When these two are brought into intimate contact, as by soaking the beans in water, glucoside is decomposed by the enzyme yielding among other substances hydrogen cyanide (Prussic acid) a quick acting poison. The amount of hydrogen cyanide which may be liberated depends on the variety of the beans.

There are conflicting views about the use of these beans as food for human consumption. Some opine that soaking the seeds overnight, boiling them afterwards for two hours and more and straining away the water, would free the beans of the poison. It does not seem practicable to boil them for two hours and more, even granting that the poisonous ingredients in them could be effectively leached out by the process. We have not investigated how far boiling the beans for so long time would adversely affect their nutritional value.

According to some others, the seeds are edible if the seed coat is detached and the inner kernel alone is used. There is also a popular notion that if these seeds are soaked for 12 hours and cooked thereafter with tamarind and other condiments, no harm would ensue. We have not so far any scientific evidence to prove or disprove these beliefs. On the other hand, the seeds at times may not contain the enzyme though they may contain the cyanogen producing the glucende. Consequently, the hydrogen cyanide may be formed in the stomach after the seeds have been eaten. At any rate, there is no rough and ready method of finding

out precisely by tastes and appearance or other such means, whether or not the seeds contain the enzyme or the hydrogen cyanide producing constituents. Even for a trained analyst, the problem of estimating correctly the hydrogen cyanide content of the seeds, present practical difficulties. Following the grave symptoms caused to several persons who ate these Burma Beans at Virudhunagar, the analysis of the samples revealed beyond doubt that they are *poisonous*. It should be easy for the public to distinguish Burma Beans from harmless varieties of the species. The poisonous Burma Beans are kidney-shaped, flattened at one end, the white hilum covering occupies a fraction of the length of the beans in the centre unlike the edible variety in which it occupies a major portion of it.

It is stated that in Germany and France, these beans which could, produce over 100—300 parts of hydrogen cyanide per million are not permitted to be imported. Monier Williams, a distinguished chemist at the British Ministry of Food, states that any food which is capable of liberating more than 20 parts of hydrogen cyanide per million should not be used as food. In Switzerland, no food which contains more than ten parts of this poison is permitted to be sold. Moreover, in England, U.S.A. and other countries, the food authorities do not permit the import of any food from any other country unless it has been examined and certified to be fit for human consumption.

A Press report (*vide* the 'Hindu' dated July 4, 1947 page 10, col. 4)

states that recently about 7,000 bags of Burma Beans were landed at Madras on the 3rd July, 1947 by "S. S. Ekma". We have no doubt Government would have taken action to test the samples before permitting the distribution of this consignment.

We, in India, should take immediate steps to constitute a body of Analysts to examine and advise the Government on the quality of imported food stuffs which are not certified as fit for human consumption by competent authorities from the ports of export. No doubt, food is scarce in India at present; but this fact should not be the excuse to

dump damaged, decomposed, filthy and poisonous foodstuff, which would certainly further undermine the nation's health which is now at its lowest ebb owing to insufficient quantity and poor quality of our food. We are reliably informed that ship loads of canned food, foodgrains, or other foodstuffs which are below the minimum standards of quality prescribed by the Governments of exporting countries are being sent to this land. This country has long been the dumping ground of many sub-standard stuff. This practice should be stopped immediately. We appeal to the authorities to take *prompt* action.

P. LUNATUS

Interest has recently been aroused in this bean owing to the poisonous properties which the species sometimes exhibits. A report was issued by Dunstan on its chemical composition (Proc. Roy. Soc. 1908, 72, 285; also Agri. Ledg., 1905, No. 2.). The first specimens examined came from Mauritius, where the plant is raised in a practically wild state and used as a green manure. Chemical examination showed the presence of a cyanogenetic glucoside (phaseolunatin) and an enzyme. . . . In partially or wholly cultivated forms, the testa is either pink with a few purplish spots, pale cream-coloured or even white. Dunstan states that these are undoubtedly less poisonous than the almost wild type grown in Mauritius. While the Mauritius beans were being investigated there were imported into England from India quantities of beans described as Rangoon, Burma or Paigya beans, which were intended to be used in preparing food-stuffs for cattle. . . . Dunstan concludes by advising the cultivators of this particular bean to grow perfectly white forms rather than coloured varieties. Leather (Agri. Jour. Ind. 1906, i., pt. iii, 224), in a paper on CYANOGENESIS IN PLANTS, alludes to the poisonous property. "I have obtained prussic acid," he says, "from Rangoon Beans (*Phaseolus lunatus*) and VAL (*Dolichos lablab*) by simply allowing the crushed seeds to remain in cold water for a few hours" (*see* p. 767). More recently, Dunstan and Henry (Jour. Board, Agri. 1908, xiv, 722-31) have given additional particulars and reviewed the results obtained by other investigators. They then conclude that "it is undesirable that any further definite advice should be given to discontinue the use of Rangoon beans, since in spite of the fact that both the red and white varieties have now been shown to yield prussic acid, there is at present no evidence that this is formed in quantity sufficient to be injurious; and although these beans have been used as a feeding stuff now for some years, no poisoning cases have been traced to them so far as is known. At the same time, since the beans yield prussic acid in varying quantity, it is clearly not permissible to recommend them for use as a feeding material. All that can fairly be done at the moment is to place the facts on record." (Cf. Church. Food-Grains of India, 1886, 155).

(Extract from "The Commercial Products of India" by Sir George Watt—page 880.)

GOSPEL OF HEALTH

BY

V. V. SRINIVASA AIYANGAR, B.A., B.L.

Advocate



All references to "good health" whether in connection with the individual or the community or the country, can only be with reference to the human body and the human mind. There never was a truer saying than the age old one "a healthy mind in a healthy body" indicating the desideratum for a happy span of human existence in the world. It is perhaps possible that every healthy body may not house a healthy mind; but the converse is generally always true. In this view, the health of the body and its maintenance and promotion assume very high importance in our lives and careers. There is no doubt, a parallel line of thinking, dating from quite ancient times, which would appear to treat the human body as a low, and contemptible thing, fit only to be disregarded and discarded at the earliest possible moment and described and reviled meanwhile as "filthy", "foul", and "false". Whatever might have been the esoteric significance of such an outlook, meant by those that propounded it, we are certain, that it could not have been meant to be taken too literally.

This is the first of a series of articles by Mr. V. V. Srinivasa Aiyangar who needs no special introduction to our readers. If, as he very aptly states, "man is an embodied soul" and it is the aim of all faiths and religions to obtain salvation for the soul, it follows without question that the body which cannot be separated from the soul, has also to be taken great care of and kept as healthy and strong as possible. Whatever may be the theories or views to be found in other schools of thought or philosophy, Mr. Aiyangar, will be giving our readers, the benefit of his wide reading and understanding of the invaluable works and sayings of Sri Vedanta Desikar, the great Vaishnavite Acharya, bearing on the subject of the health of the body and its promotion and upkeep. To many of our readers, it will be a revelation to see the amazing accuracy and clearness of the rules of good health in all its aspects laid down by that great Acharya, several

centuries ago, but in such close conformity with the results of the latest research on the subject by Western scientific experts of this day.

We are deeply indebted to Mr. Aiyangar for having so kindly acceded to our request to contribute a series of articles on the subject. We feel that no one is more qualified to speak of or write on the "health of the body" than he, who in his seventy-sixth year, proves by his personal example, the absolute truth and value of the precepts of Sri Vedanta Desikar, who lived to a ripe old age of one hundred and twenty. Our pleasure and satisfaction at getting this opportunity to publish this series is all the greater, as we have always held the view that our forefathers were at least as wise if not far wiser than ourselves in all matters that counted for the good and progress of society. (Ed., P.H.)

I. Supremacy of Health in Life.
—From his birth till his death is man's life on earth. It is therefore a divine beginning and a divine end.

* * * * *

The problem whether a man is or has a soul and whether such soul has an individual personality, whether it has had any existence before birth or whether it survives the death and destruction of the body are all questions which need not detain us here and now.

* * * * *

It is true that atheists and materialists refuse to believe in the existence, apart from the body, of a thing called soul. Be that as it may. It makes not much difference for our gospel. But most human beings of any faith or religion have belief and are still believing in the existence of what is called the human soul.

* * * * *

We may therefore take it for all practical purposes that man is an embodied soul. Born as an infant, it grows gradually into a baby, then boy or girl, youth, adult, an old man or woman, and then comes the end which is called death. Health therefore is the proper and effective

condition of the human body between the beginning and the end. It is a matter for consideration that what is called health has no connection with the English word 'Heal' as may be supposed, but is on the other hand, connected with the word 'Whole'.

* * * * *

It is a matter for regret that some so-called Vedantins and even some philosophers belonging to other faiths have deemed it proper if not merely fashionable to speak contemptuously of the human body, and the maintenance of its health during life. Nothing can be more mistaken.

* * * * *

Even according to the highest vedantic philosophy which is the most valuable heritage of Hindus, the soul obtains the human body with the price of what is called the good deeds done and the proper life led in states of previous existence. The implication undoubtedly, is that whether the human body is what is attained in the course of the evolution of matter or spirit, it is equally an exalted acquisition fit to be treasured, cared for continuously and cherished. Any notion to the

contrary *albeit* expressed or implied anywhere should be construed merely as a piece of warning against regarding this body of ours wholly as an end in itself and trying to impress it on us with its being only an instrument with the help of which we are designed to attain even more valuable and exalted ideals such as TRUTH, BEAUTY and GOOD. It were best to regard this body of ours as a kindly gift by God. It is indeed a trust. It has been entrusted to us not for the purpose of being abused and misused and broken to pieces but to be cherished as a sacred trust for the purpose of enabling us, with its aid and through its instrumentality, to achieve our higher and still higher evolution in the scale of being in spirituality and in the endless process of gradually making Gods of ourselves. It follows from this that the duty of preserving and promoting the health of our body is a *sacred duty* in the way of performance and discharge of a *sacred trust*. Those who fail in or fall short of this ideal are only committing one of the worst of conceivable offences, viz., Criminal breach of trust.

Suicide is condemned as a sin in all systems of religion. An attempt to commit suicide is an offence punishable under the penal code. All this only goes to show that the body which you call yours is not really your own in the sense of your being entitled to play "*Ducks and Drakes*" with it, so to say.

There has been a more or less widespread notion amongst Hindus that the more the body is allowed to

suffer and the more the senses are starved, the more meritorious it is. A more false or fallacious belief cannot be imagined.

The *Vedas* and *Vedantas* always speak of a hundred years of a man's life, not indeed, as the utmost limit, but as the proper average age. It is difficult to see how, when prayers and blessings are for a hundred years of life, the hundred years should be allowed to be so many years of suffering and sorrow and not of health and happiness. Indeed, there are innumerable passages in most *Upanishads* with regard to senses of man being maintained in all their highest efficiency. "May all my senses stay with me in their fullest strength and highest efficiency" is a common prayer indicated even in the *Upanishads*. How can it be otherwise? If life is a trust and life depends upon the senses and the mind which according to *Vedanta* is the sixth sense, it is the efficiency of the senses that can make for the efficiency and happiness of life. "May we see for a hundred years", "May we hear for a hundred years" and so on are common and common place prayers in our *Manthras*.

The usual benedictory verse beginning *Satamanam Bhavati* is one of the most misunderstood and misinterpreted of *vedantic* passages. It is properly speaking, no benediction at all but a mere statement of a great truth. It merely means that if a man were possessed of a hundred senses the hundred years of his life would indeed, be a hundred fold because life is rooted out in the

Indriyas. A hundred senses merely mean the senses of man improved and increased a hundred fold signifying the possibility of improving, educating and the strengthening of each of our senses and its particular functions.

The Gospel of Health is therefore the first and foremost of gospels.

II. *This wonderful body of ours*.—This body of ours is the most wonderful thing in creation. I say creation because its shape, its form, its anatomy, its organs, its functions, all point to purpose and design. I refuse to believe that it can be the accidental result of a blind struggle for existence.

The first thing a man should study is human physiology. It is a fascinating study. A proper and correct understanding of the build of our body and of the functions of the various organs of which the organism is composed, is *indispensable*; for, a healthy and happy life it is absolutely necessary. No one who has studied the science of physiology and appreciated it can be a real atheist.

Even the anatomy of man is simply marvellous. If man indeed, was evolved from a beast the story of his gradual transformation into what he is to-day must indeed be a marvellous and almost incredible narration. The skeleton is apparently the iron frame of this building of the body. How even the skeleton is so adapted as to render possible and easy the thousands of different motions of the body and the limbs is an aspect of the study which by itself is supremely myste-

rious and fascinating. And then there are the muscles, the different senses, the various organs, the limbs of the body and so on each of which may be made the subject of a wonderful study.

Living man has to breathe all his life. The blood in his body has always to be circulating and every organ including every cell in the body has to perform its function and how all this is made possible is a study perhaps not in physiology but in metaphysics.

Indeed, this body of ours has been described in *Vedanta* as *Brahma Pura* or the City of God. It is fortified all round with a sensitive skin. Any in-road into this fortification is not left to be discovered by a sleeping or wakeful sentinel, but is immediately telegraphed by an automatic process to head-quarters and orders are issued immediately not only for the attack and crushing of the enemy but also for the immediate work of repair and reconstruction.

We import food into this city. It is ultimately manufactured into various ingredients for the maintenance of life and health including the very requisites for the transformation. The circulating blood is pumped from the central heart through the body nourishing and purifying it and this blood again gets purified in its own turn by the lungs and certain other organs of the body. This city is not unlike a self-governed unit, *albeit* there is a King or President in the City. It acts and reacts even as a well organised single city.

CONTAMINATION OF FOOD THROUGH UTENSILS

BY

K. V. SUNDARAM AYYAR, M.Sc., F.S.I.C.

Government Analyst, Madras



[Late in 1938, the Government of Madras called for a report from the Government Analyst on the contamination of food through vessels used for storing and cooking it.

The Government considered that the information furnished in the report of the Government Analyst would be of benefit to the public at large. The report was therefore published for general information in the *Press Communique* No. 11, dated 22nd November, 1938. Seeing that the subject is of considerable importance to the public, the author at our request, has been good enough to revise the contents of that report bringing it up-to-date, for publication in *People's Health*.—Ed., P.H.]

VESSELS for storing and cooking food form an important equipment in an Indian household. The vessels generally used are:

1. Earthenware and soapstone.
2. Enamel.
3. Glass.
4. Metallic.

EARTHENWARE AND SOAPSTONE VESSELS

Vessels made of earthenware are not only the cheapest but most hygienic. Practically, they are unaffected by exposure to air or to the process of cooking. They do not, unlike metals, enter into chemical combination with the food elements and deprive the food of its flavour. The only disadvantage is that these

are easily breakable and require thorough and careful cleaning as the pores are not readily accessible. Soapstone utensils are not so easily broken nor are they so porous as to be difficult to clean. They are comparatively better than mudpots in these respects. After use, they should be thoroughly cleansed and exposed to air and sunlight for drying till they are again required for use. This naturally involves a certain amount of labour and care.

ENAMELWARES

Enamelwares, only the better and costlier variety should be used. The glaze or outer white or coloured coating of these vessels sometimes contains fluorides and oxide of antimony which are poisonous. Fluorides give rise to teeth troubles. Hence, one should

take special care in the selection of enamelwares. The manufacturers as well as Government owe a responsibility to the public in placing on the market only such enamelwares as are free from these injurious compounds.

GLASSWARES

They are non-absorbent. They are not acted upon by acids. They are readily cleansed. But they are not suited to our conditions. In fact, they are not used as cooking utensils. They break easily leaving sharp edges which would be a source of danger especially to children. If these break, people should see that they are collected carefully, especially the small particles, with a wet towel and thrown away in a place inaccessible to people.

METALLIC VESSELS

General.—As far as possible, every one should see only the minimum number of metallic vessels is used. Metals are all liable to corrosion, i.e., they are transformed on exposure to air and water into different chemical substances. These are more readily attacked by the food or water with which they come in contact. Under the conditions of cooking, the metals themselves may rapidly go into solution in the food. The salts so dissolved might act injuriously on health. However, if the metal surface is kept quite bright and polished, it is less liable to be attacked by the food constituents. The South Indian method of giving an outer coating of mud or starch before they are placed on the hearth for cooking, and also the practice of cleaning first with a coating of tamarind and then scrubbing with ashes, are based on scientific principles and should be adhered to. The outer coating on cooking utensils conserves heat. It also prevents the metallic vessels from being heavily coated with soot. It prevents action of air on the surface; thereby prevents oxidation and deterioration of vessels. Tamarind used for cleaning metallic vessels dissolves the thin coat of oxide that is formed on the surface and thereby makes it easy for removal with ashes.

LEAD VESSELS

Of all the metallic vessels, those that contain lead are the most insidiously poisonous in character and consequently to be eschewed

altogether. In the southern districts of this Province, especially in Tanjore, Trichinopoly and Tinnevely, women vie with one another in getting as many of these lead vessels, (familiarly known as *Iyya Chombu* as possible. These, though supposed to be made of tin, actually contain lead in varying quantities. Lead salts are poisonous and some of them formed in the process of cooking, especially soups (*sambar*, *rasam* and the like) in lead vessels impart a sweet taste. Lead salts are cumulative poisons. Their baneful effects are not produced at once. What accumulates in the system little by little get ultimately locked in the tissues and when sufficient quantity has thus collected, cause anaemia, constipation, stomach pain and other ailments.

It is to be regretted that recently a writer in this magazine has given his *personal* opinion that lead may not be as poisonous as it is represented to be by some persons, and as proof thereof, he cites the fact that many persons like himself in Tanjore who are used to consume what should be massive doses ought to have ceased to live if lead is really toxic. In the interest of the health of public, this opinion should be refuted. Luckily for my friend and others of his way of thinking who indulge and have created a taste for the sweet *rasams*—even a tyro in chemistry knows that lead acetate is called sugar of lead on account of its sweetness—95 per cent of the lead taken is excreted by way of faeces and urine and only 5 per cent gets locked up. A certain dose may be ingested or may accumulate in course of time as in the case of lead, which may be far short of the toxic dose but may nevertheless cause general illness in the tissues which in course of time may give anything from intoxication (as manifested in lassitude, sleepiness and general disinclination for work) to more serious symptoms as chronic constipation, anomalous nervous symptoms, paralysis, etc.

There can be no question whatsoever that lead is harmful when ingested within human system and the better it would be for the people of Kumbakonam to scrap the vessels of lead for the following reasons:

“Lead is one of those substances which exert a cumulative toxic action, that is to say, repeated doses each of which far too small to produce any appreciable effect on health,

may in course of time give rise to serious symptoms of poisoning."—(Monier Williams).

"Because of the fact that it is not an acute irritant to the gastro-intestinal tract and no deleterious effects are noticed during the early course of its ingestion, exposure may occur for a considerable period of time, before the severity of its effects are manifested.

"Lead can be transmitted to the young in the milk of the mother.

"When lead is added experimentally to the diet of man, there is storage in the tissues of about 5 per cent of the amount ingested.

"Children are more susceptible to lead poisoning than adults.

"There is wide variation in susceptibility to lead poisoning.

"Lead poisoning is particularly difficult to diagnose because of the variability in the symptoms and because of their similarity to symptoms of other forms of disease or intoxication."—(H.O. Calvery).

In Switzerland, America and other continental countries, the law requires that tin used for tinning should contain 99 per cent tin and vessels used for storage and preparation of food should not give any test for lead if 10 per cent acetic acid is kept for 24 hours. In England, food that contains more than 5 per cent of lead is considered unfit for human consumption.

COPPER, BRASS AND TIN VESSELS

These, if kept clean, serve well for storing and transporting water, but copper and brass are not to be recommended for cooking purposes. Milk, if boiled in copper vessels, loses its flavour and is deprived of part of its vitamin-A. Brass vessels intended for cooking rice are generally given a tin coating. For reasons stated above, the tin should be quite free from lead. Further, tinning of vessels is ordinarily delayed till the tin coating is peeled off. The corrosive action with such a pitted surface is considerably increased and more of the metal is likely to be dissolved by food juices. It is essential that tinning should be done at very frequent intervals to avoid this possibility. Besides,

tinkers generally add lead or Zinc or both in tinning for the sake of cheapness and easier workability. These are poisonous and consequently the tinkers should not be allowed to use their own 'tin' for this purpose.

ALUMINIUM VESSELS

These which have become popular in Indian households on account of their appearance, cheapness, since the last fifty years, can be safely recommended for storage of foods, especially milk. Though minute amounts are taken up when foods are prepared in such vessels, such amounts as are ordinarily taken into the system, have been found not to cause any deleterious effect, though certain persons may show idiosyncrasy to even small amounts. The author has already dealt with the subject in some detail in his article, "ALUMINIUM VESSELS—THEIR UTILITY AS UTENSILES" which appeared in *People's Health* pages 401-403—May, 1947.

STAINLESS STEEL

These are special steel alloy containing chromium and nickel. Vessels made of stainless steel have been used extensively, especially in America in all food industries. They are unaffected by foods and beverages, keep their lustre untarnished for years of use and unlike other household utensils neither break nor indent when used roughly. There can be no doubt that stainless steel vessels for household will be vessels of choice hereafter. The enterprising men of Tatas would ease the toil of many housewives if they would divert a part of their production for the manufacture of household utensils.

SILVER

In view of this being a favourite of rich and the aristocratic, it may be stated that silver is taken through foods in the order of six to eight hundredth of a milligram. Silver does not seem to play any role in nutrition. Though silver salts are germicidal and bactericidal, they are not toxic to higher forms of life in the amounts that may be absorbed by the use of silver vessels. When ingested in small amounts over a long period of time, there is likely to be produced discolouration of the skin and the tissues referred to as *Argyria*.

CADMIUM

Cadmium was the cause of many fatalities in America. Iron takes a bright silver coating when cadmium plated, and prevents the iron from rusting. Its attractiveness led to its being used as food container in refrigerators; but its use was discontinued when the poisonous effects were known. Cadmium plated food containers of any kind should be prohibited for use for storing food. The

onset of symptoms of poisoning often occurs within ten minutes after ingestion of the material. In America where the writer spent some time with the Food Authorities of the Bureau of Foods and Drugs (Federal Security Service) he was impressed by the thoroughness with which all the utensils used in hotels were systematically tested for the freedom from noxious metallic materials.

We invite attention of our readers to an extract entitled 'Unusual Case of Food Poisoning' which appeared on page 224 of *People's Health*—January, 1947. This case shows that cadmium as a protective coating of metal utensils used for holding acid drinks should not be used.

We also invite attention to an extract which appeared on page 278 under the caption 'The Influence of White-metal, Copper-nickel Alloys on the flavour of Milk'—February, 1947. (Ed., P.H.)

BODY AND MIND.

I suppose I ought to begin by giving you a definition of what health is, so that you may know what I am talking about. But as a matter of fact health, like a lot of other primitive things that we only know by experience, doesn't admit of a definition. If I say that it is soundness of body and mind I am describing it but not defining it. We can't even define health in a negative way, as by saying that it is freedom from disease. Because health is not a negative thing; it is positive.

All living things are able to put up a resistance against the stresses in their surroundings, and perhaps the nearest we can get to a definition of health is to say that it is the power to keep a balance in this matter that is satisfactory to the purposes of life. As a matter of fact, it is not an exact balance. There is a little something to spare, of which the healthy man is quite conscious. This is what leads him to say: 'It's good to be alive', and enables us to speak about 'the joy of living'. It is the ideal to aim at, whether we be doctors or social reformers. This same expression 'the joy of living' links up the body and mind, and inseparable.

"Health without an object cannot live either."—Lord Horder.

An object without health cannot live either. (Ed., P.H.)

LABOUR CONDITIONS WITHIN THE FACTORY

ACCIDENT PREVENTION AND WELFARE

BY

SIR WILFRID GARRETT

Chief Advisor

Factories, Government of India



[This is the sixth and the last article in the series contributed by Sir Wilfrid Garrett on matters relating to Conditions of Work in Indian Factories. By special permission of the author and Labour Bureau, Government of India, we have reproduced all the articles in *People's Health*.]

(This is in continuation of the article which appeared in "*People's Health*", pp. 466-469.—Ed., P.H.)

ACCIDENT PREVENTION

IN spite of the fact that the first Inspectors of Factories in the United Kingdom were mainly appointed to control the excessive hours of children, it is not surprising that their attention was soon attracted to the number of accidents causing either loss of life or serious bodily injury. At this time public opinion was so non-existent or so dull that a state of affairs that would not be tolerated to-day was then accepted as normal; to such an extent was this the case that Sir Robert Peel in the House of Commons in 1815 congratulated the country that not more than one per cent of those employed in the cotton mills had been killed at work during the previous year. There was only slow

improvement and even in 1884 an Inspector sent from England was able to report that the accidents in Indian mills were no more serious or more prevalent than in British mills.

In spite of the efforts of the earlier Inspectors the prevention of accidents on a scientific basis was not taken up seriously till about the end of the last century, when a number of highly-trained engineers were appointed as Factory Inspectors. Since that time, largely under the influence of these men, the prevention of accidents on machines in factories has become the world-wide concern of all industrial nations and has the full help of technical committees of the International Labour Office. This side of Factory Inspection is no static

thing, it is always growing and expanding under the influence of Inspectors, Works Managers and of many voluntary societies. No country, therefore, can afford to stand still or afford to be out of touch with what is occurring in other countries. As an index of the progress made, the figure quoted above, of one per cent fatalities in the cotton mills of Great Britain, has now been reduced to about .014 per cent, or much less than two per 10,000. To keep up this standard, a great weight falls on the makers of modern machinery, because the safeguards necessary can be embodied so much more easily into the machine during construction that fitted in a haphazard manner afterwards. I fear that many of the importers of machinery into this country are not living up to their responsibilities in this respect, because, apart from modern textile machinery, I have seen many machines at work here that are not fitted with the guards now accepted as necessary in other countries.

Another proof of the advance made in the safety of power-driven machines is the fact that the proportion of accidents that occur on these machines has been steadily falling, till in Great Britain it has now reached the low figure of 14 per cent. If then there is to be a real attack on the accidents that now occur in factories, the same attention must, in the future, be given to those accidents due to falls, handling of goods, use of hand tools and the like that make up the other 86 per cent of accidents. Here, in my opinion,

legal enactment can do very little, and results can only be obtained by the goodwill and action of all employed within the factory, both management and workers. In fact the prevention of accidents forms a good subject for the attention of the Works Committees, mentioned below, as a first step in their career of usefulness. There is also such a thing as accident proneness on which our scientific friends are inclined to lay great stress. It has its place in the study of these non-machinery accidents, and may have its influence on accidents on machines though, in my opinion, its influence on the latter is infinitesimal compared with that of making the machines safe by efficient design or efficient guarding.

WELFARE AND PERSONNEL MANAGEMENT

There has grown up during the years since the first World War a new conception of management within the factory, that deals with the study of conditions of work and is concerned with the general human relationships within an industrial organization; this has come to be known as welfare and Personnel Management. This name suggests the two divisions of the work, because the Welfare side, which concerns itself with the physical amenities necessary for the comfort of the worker, is a basis without which no progress can be made. The personnel side, on the other hand, extends, in ever-expanding circles, to those higher reaches of

the spirit which include the psychological study of the human personalities that go to make up the working population of a factory, and takes into account everything that will make for the smooth working of the industrial machine on its human side. The subject has been studied closely in the industrial nations of the world and in the I.L.O. while many societies, both voluntary and professional, are giving their encouragement to its perfecting and development.

To deal separately with the two divisions suggested above, I may point out that some of the provisions, looked upon as welfare amenities in cooler countries become absolute essentials for health in a tropical country such as India. In this connection, I can mention the provision of an abundant supply of clean and cool drinking water, ample facilities for washing and bathing, rest shelters and canteens and perhaps that provision which India seems to be taking close to its kindly heart more than any other nation, the provision of creches for the care of babies and young children while their mothers are at work.

All these can be supplied more easily than kept up to a high standard of cleanliness. It is not an exciting job to see daily that the latrines are clean, but, believe me, they will not be clean, either in this or any other country, unless someone in authority visits them daily, and neglect in this particular has an effect on the minds of the workers that is rarely expressed in words but is always there.

Personnel Management has been defined by the professional institute of Great Britain* in the following terms :—

“**P e r s o n n e l** Management is that part of the management function which is primarily concerned with the human relationships within an organization. Its objective is the maintenance of those relationships on a basis which by consideration of the well-being of the individual, enables all those engaged in the undertaking to make their maximum personal contribution to the effective working of that undertaking.

In particular, personnel management is concerned with :—

Methods of recruitment, selection, training and education and with the proper employment of personnel.

Terms of employment, methods and standards of remuneration, working conditions, amenities, and employee services.

The maintenance and effective use of facilities for joint consultation between employers and employees and between their representatives, and of recognized procedures for the settlement of disputes”.

This is a comprehensive definition that implies dealings with Trade Unions on a fair and equitable basis, the setting up and the encouragement of Works Committees and Safety Committees within the works and the acceptance of the workers and their representatives as persons

vitaly interested in and worthy to be consulted about all that makes for the well-being of the industry concerned.

The first essential, however, in making this great experiment work, is a right attitude of mind on the part of the higher executives of management (because this idea is and will be equally necessary under whatever system industry is carried on).

So far I have seen little sign in India that this attitude of mind is accepted. Many firms, to their honour, are doing their best to develop this side of management and many good and efficient men and women are devoting their lives to the work as personnel officers. But the majority of firms have not yet accepted the full implication that all this idea stands for. In the West this side of management is no longer looked upon as philanthropy—it is considered essential for the conduct of affairs within the factory, and, honestly, I have seen some practices in India, even in large firms, concerned with the handling of labour, that in an industrial nation, would now just be considered bad business.

Many, many, more trained workers are also required in this field; training is essential for these officers, but a short course can now be obtained at Calcutta University and a full course of two years at the Tata School of Social Sciences, Bombay. I would suggest that the acceptance and the development of this idea in Indian industry will do even more for the future of that industry than many of the enactments already on the statute book. What I have written elsewhere for another country is equally applicable in India. May I repeat it as an humble ending of this series of articles :—

“The great advance, however, must come from a right attitude of mind in every one from the directorate to the charge hand with trade union representatives and internal committees. Close teamwork of all concerned with the skilled advice of trained personnel management, will go far towards bringing to the forefront that emphasis on the value of the human side of industry that has been so neglected in the past and is now shown to be of such supreme importance.”

* * * * *

The factors which influence the health of the worker can be divided into two groups, namely, (1) those which are associated with his working environment and (2) those which he shares with the rest of the community in the home and in the places of public resort to which he usually has access. In regard to the latter, it seems reasonable to hold that the workers should share the facilities for health protection that the State provides for the general population and this is what we recommend.

(The Bhore Committee Report., Vol. 11., page 122).

THE WAY TO PEOPLE'S HEALTH

BY

RAO BAHADUR
DR. C. RAMAMURTHI,
B.A., M.B., B.S., B.S.SC.



This is the seventh of the series of articles by the author. This series is intended to educate the 'educated' and the 'common man' on the fundamentals of the health of the people.
Ed., P.H.

IT is well known that health gives us freedom from suffering and disease, and prolongation of life. If man would only apply the available knowledge which science has laid before him, much suffering and disease can be reduced and the span of healthy human life can be lengthened. Health, however, is something more than merely dodging disease. It is the state of the body, the possession of which enables the possessor to live in such a way that productiveness, prosperity and happiness are all increased. It enables the possessor to practise the fine art of living. By this one is enabled to live up to one's maximum possibility of achievement in life consistent with usefulness to himself and his fellowmen. If the game of life is played according to its simple rules, almost anyone who desires health can secure it.

There is such an abundance of information and advice in circulation nowadays that one gets bewildered in a maze of the subject-matter presented especially if some of it occasionally happens to be apparently conflicting.

The American author and philosopher, Ralph Waldo Emerson wrote "Give me health and a day and I will make the pomp of emperors ridiculous". The road to health is a long one and sunny; and it is the fairest road in the world. Health is as important as any other single thing in life; for it is necessary for success in every human endeavour. Without health to sustain us, riches mean nothing; fame is empty; and work and effort are barren. That efficiency, achievement and personality, and all things that count depend on good health

will be freely admitted on all hands. Attention to certain simple rules of hygiene and sanitation will accomplish the acquisition of the benefits of health. "Sanitary instruction is more important than sanitary legislation"; so a great statesman is said to have uttered once, quite rightly. Popular interest in health requires to be roused first before laying down laws of health.

As already stated in one of the earlier of these articles heredity and environment are the two important factors that influence human health. We are not responsible for the former. But it lies in human hands to model and shape the latter to suit our requirements of health. In the present day, with so much knowledge of science to us, our conscious personal habits of health go a long way in securing it. This we call personal hygiene. It begins with a thorough appraisal of our health by a competent doctor of medicine to detect any physical defect or impairment, or faulty habits of personal hygiene with a view to their correction. This is a sort of stock-taking of health. Sometimes, unsuspected defects come to light in such appraisals; and they can be remedied before any serious damage is done by them to health.

It is the special concern of personal hygiene to insist on plenty of fresh air either outdoors or indoors, preferably the former. Other matters of health with which personal hygiene is concerned are sufficient rest and sleep, recreation, efficient work done, if possible under pleasant conditions, and adequate physical exercise.

Further, personal hygiene is concerned with the quality and amount of food taken, and the use of adequate, if not abundant, amount of water taken each day both internally and externally. Furthermore, the avoiding of such poisons as alcohol and other narcotics; and the protection against communicable diseases by proper preventive measures are the concerns of personal hygiene. Also, the proper care of the special organs and members of the body such as the heart, lungs, bowels, kidneys, eyes, teeth, feet, skin and lastly the mind comes under the scope of personal hygiene. And in the choice of dress and clothing a particular and personal care has to be bestowed; and this is within the province of personal hygiene.

From what has been mentioned in the previous articles it must be evident that no single school can give the child a complete education satisfying all the conditions above to fit it for the battle of life. What should be done is to teach the child to adopt itself, as it grows older, to the changing conditions of life and to take its rightful place in society. This education is obtained slowly, if at all, through the lessons learned in the classroom and from its activity in the world. The predominant interests of society vary from time to time; and so the important elements of education will also vary likewise. At one time, it was thought that a literary education alone was very important to meet the popular needs quite effectually. It is still a very necessary form of training for cultured and successful citizenship. But it is now generally admitted that

a literary education alone is inadequate for the purpose. For, it does not train the senses particularly the hand for skilled work. Yet a vast majority of the people become manual labourers, but without skill. Both brain and hands should be trained i.e., educated each in proportion to the demand made on them, in later life. Therefore, certain elementary forms of technical and industrial education must also be provided in order to fit the children for success in later life. High ambitions without adequate skill end in frustrated hopes and discontent. We live now in an industrial age; and in it book learning alone is so plainly insufficient, that many children that are practically minded (and most children are practically minded) lose interest in their theoretical work and drop out of school. The mental health of such children requires careful treatment. And its neglect results in the formation of a large body of the unemployed in later life, who had great expectations but hardly any realisation. A great deal of the truancy at school eventually leading to delinquency is due to this cause. Or, the child may enter, early in its life, some gainful occupation and swell the ranks of child labourers. As they grow older, their skill and capacity for technical work remains limited; but their ambitions and desires soar high without any chance of realisation. Therefore, if unemployment, discontent, maladjustments in life and employments, and even a great deal of delinquency should be tackled successfully; the time to begin its mending is when the person is young, in the school stage: Does to the unemployed meet only an emer-

gency; it is not a permanent preventive measure.

As a factor, in the training of the youth of any country for the duties of life, the schools of the land should have no equal. Whatever may be their shortcomings, their importance will be felt more and more in future, as the people realise the fact that it is the schools that train the majority of the individuals of a country to face the struggles of life with success.

The real test of the educational system of a land depends on the percentage of the illiterates among the population under twentyfive years of age. A good educational system with adequate number of schools, good teachers and compulsory school attendance all tend to reduce the proportion of illiteracy in the cities to a lower level than that attained in rural parts where the facilities referred to above are fewer. It should not be forgotten that the purpose of education should be to fit the child for the battle of life. To accomplish this purpose, the child must become capable of adapting itself to the changing conditions of its environments, of enjoying higher pleasures, and of taking his proper place in society and state.

The most successful education accomplishes two important results:

(1) it prepares the child for life; and (2) it sustains its interest until the essentials have been gained.

In a system of education in which there is a decline in the higher standards or forms of the school, the second condition is not satisfied. The rural schools of this country may be quoted as examples of this limitation which is a defect. This results

in a large number of children leaving school with a very meagre and inefficient educational equipment.

Compulsory primary and secondary education remedies this defect in some measure. But the vital object of training them to adapt themselves to the varying vicissitudes of life is not gained. Further, exemptions from attendance at school fail to protect the educational interests of the children. Regular

attendance at school throughout the year is essential to obtain sufficient advantage from their education. Between philanthropy and State aid must be divided the burden of providing the competent poor child with the necessary facility to continue at school until the school-going age is passed. As the poor change their residence frequently, it is difficult to trace and enforce regular attendance of school on their children.

MAN AND WOMAN, WHEREIN LIES THE DIFFERENCE?

The differences existing between man and woman do not come from the particular form of the sexual organs, the presence of the uterus, from gestation, or from the mode of education. They are of a more fundamental nature. They are caused by the very structure of the tissues and by the impregnation of the entire organism with specific chemical substances secreted by the ovary. Ignorance of these fundamental facts had led promoters of feminism to believe that both sexes should have the same education, the same powers and the same responsibilities. In reality, woman differs profoundly from man. Every one of the cells of her body bears the mark of her sex. The same is true of her organs and above all, of her nervous system. Physiological laws are as inexorable as those of the sidereal world. They cannot be replaced by human wishes. We are obliged to accept them just as they are. Women should develop their aptitudes in accordance with their own nature, without trying to imitate males. Their part in the progress of civilization is higher than that of men. They should not abandon their specific functions.

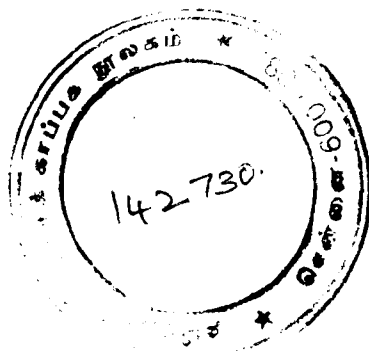
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Her physiological and psychological conditions are always modified by it (pregnancy). But females, at any rate, among mammals, seem only to attain their full development after one or more pregnancies. Women who have no children are not so well balanced and become more nervous than the others. In short, the presence of the foetus, whose issues greatly differ from hers because they are young and are, in part, those of her husband, acts profoundly on the woman. The importance to her of the generative function has not been sufficiently recognized. Such function is indispensable to her optimum development. It is therefore absurd to turn women against maternity. The same intellectual and physical training, and the same ambitions, should not be given to young girls as to boys. Educators should pay very close attention to the organic and mental peculiarities of the male and female, and to their natural functions. Between the two sexes there are irrevocable differences. And it is imperative to take them into account in constructing the civilized world.

(Extracts from 'Man, The Unknown—by Dr. Alexis Carrel—a winner of the Nobel Prize.)

Pioneers in Public Health

TO OUR YOUNG READERS



BY

A COMRADE

May all be healthy and happy!

I hope all of you liked the article on Pasteur last month. I have received shoals of letters, some appreciating and some criticising the section. Some have sent suggestions whilst others have taken the trouble to enclose materials on Koch which I am introducing here. I would like to deal with the correspondence in detail but that would be cheating the Editor of his valuable space. I am therefore proceeding with the article and shall try to reply to the correspondence next month.

* * * *

Robert Koch has to his credit many discoveries; but the greatest of them were his researches in bacteriology perpetuated by the name of 'Koch's postulates' which earned him the name 'Father of the Modern Bacteriology'.

ROBERT
KOCH.



Professor Robert Koch was born at Klausthal in Germany on the 11th of December, 1843. He studied medicine at Gottingen. When 29 years of age, in the year 1872, Koch settled down as an ordinary medical practitioner in Wollestein in the district of Bomst in the Grand Duchy of Posen. By virtue of his ability, he soon became a famous physician in Bomst. Though by profession he was a curative medical man, his mind had a 'preventive bias' to put it in the Editor's language! All his thought, attention and time during his spare hours was devoted to the study of anthrax bacilli which cause the deadly disease, 'anthrax' amongst cattle, and about which I have mentioned last month. But his station was far away from the comparatively civilised cities of Germany. He had a microscope but no incubator. He had no syringe, nor had he

animals like rabbits and guinea-pigs for purposes of experiment. They were not available for love or for money. He had to experiment on mice (which were available in plenty) with scanty, self-made and ingenious tools in place of regular implements. After struggling for four long years, he put down in 1876 the result of his researches in an article wherein he exhaustively dealt with and conclusively established the causative organism of the disease which was a bugbear to the farmers. This article is very important and the theories expounded in them are now known as "Koch's postulates". Towards the close of the same year, he read a paper to an enlightened audience consisting of many scientific notables of the day, in which he answered all questions on anthrax, and suggested methods of cure. Thus from that year begins the era of the 'germ theory of disease'. In 1880 Koch became a Member of the Sanitary Commission at Berlin and a professor of the School of Medicine.

Two years later Koch was able to elaborate and discover the bacillus of tuberculosis, mainly due to his patient and meticulous methods of bacteriological investigation. This disease had caused over 50,000 deaths in England annually. Seven years later, he prepared 'Tuberculin', which to-day plays the most prominent part in 'Tuberculosis Surveys'. Dr. Koch maintained that tuberculosis in man and in cattle is not the same disease and that the danger to man of infection of milk and meat is *less than* from other human subjects suffering from the disease. Words cannot adequately describe

how much indebted we should feel to this great pioneer who discovered the cause of a disease which is dreaded by every civilised country. But for him consumption would have wrought greater havoc among the people of the world. But, the relation between human and bovine tuberculosis was a controversial matter. The authorities did not agree with Dr. Koch but they dare not refute the conclusions of the foremost bacteriologist of the day. They therefore referred the whole question to a Royal Commission which later issued several reports.

In 1866 Dr. Koch had served in Lunatic Asylum in Hamburg—not as an inmate though! In June of the same year, an epidemic of cholera attacked and rapidly destroyed over a lakh of Hamburgians. Thus Koch had obtained, a first-hand knowledge of the disease, which helped him later. He was called upon by the German Government to be the leader of a delegation to Egypt and India to study the etiology of Asiatic cholera. Accompanied by two of Pasteur's assistants and one Gaffky, Koch departed for Alexandria in 1883 where the Egyptian peasantry were dying by the thousand. Of the four, only Koch returned to Europe. He identified the comma bacillus as the specific organism of that malady. He came to Calcutta where his theory was strengthened by further evidence. In 1897, he came to Bombay at the head of a Commission formed to investigate Bubonic Plague. After making investigation and suggesting a method of cure for the Rinderpest, an indigenous disease of South Africa, he

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undertook further travels in pursuit of the study of Malaria. He was summoned to South Africa a second time in 1903 to give expert advice on veterinary diseases. On his return, he was elected a member of the Berlin Academy of Science and was given a magnificent reception by fellow scientists of that country. He was acclaimed as the 'Father of Modern Bacteriology', a title which he deserved fully. As a crowning honour he was awarded the Nobel Prize for Medicine and Physiology in 1905. But the old man did not retire from active scientific field work. In 1906 and 1907, he spent over 1½ years in East Africa investigating 'sleeping sickness'. He died at Baden-Baden of heart disease on the 28th of May 1910. He can be said to have given the "greatest push to preventive medicine" and

"advanced the cause of public health as no other person has ever done. He was a shining example of patient study, meticulous observation and extreme modesty. To the student of medicine his name must be an ever revered one".

* * * *

So, Comrades, this is the great German scientist of whom I promised to tell you last month. A superstitious young reader may be pardoned for thinking that whiskers are essential to be a pioneer in public health! But to prove him wrong I am writing on the clean-shaven Lord Lister next time! This English peer has done as much as any of the be-whiskered gentlemen I have told you about in promoting the people's health.

Your Loving Comrade,
BROTHER MOHAN.

SANITY AND SANITATION.

Three hundred years ago the average length of human life in England was thirty years. Today it is sixty-one. Of a thousand babies born in Bacon's time about three hundred normally died in their first year. Today sixty die in England and thirty in New Zealand. With intelligent statesmanship we could bring the British figure down at least as low as that of New Zealand. In part, the record of progress is due to poor law reform, old age pensions, and other ameliorative measures. In part, it is due to sanitation and drainage undertaken—as with malaria—without any clear theoretical guidance. On the other hand several diseases have been eliminated by definite application of newly found knowledge, or, like smallpox, by the use of immunization before the nature of the technique was understood. Malaria, which was rampant in the fen counties of Defoe's England, disappeared before the part played by a mosquito in transmitting the organism was known. Because we know this now, it is being stamped out deliberately and effectively where it still persists. Unless sanity and sanitation are submerged in world war by Japanese imperialism, cholera, typhoid, diphtheria and infantile diarrhoea will soon be historical or geographical curiosities like typhus, malaria and bubonic plague.

(Extracts from 'Science for the Citizen' by Lancelot Hogben—
Publishers: London George Allen & Unwin Ltd.)

READERS' FORUM

AN APPEAL TO MADRAS MINISTERS

INTROSPECT, PLEASE

DEAR EDITOR,

Our 'popular Ministers' and leaders of 'groups' and cliques' who stand behind the throne are often repeating on any provocation and from every platform that they are there in power and in authority *in the name of the people and for the benefit of the people!* They appeal to the people to co-operate with them in their selfless task of serving the people! It sounds all right. In practice, they do what they jolly well like in the name of the people. They claim to know what the people want. They turn a deaf ear to what the people or their representatives say.

We, the M.L.As. and M.L.Cs., are but dummies. We are in a sorry plight. We are not justified in calling ourselves representatives of the masses. We represent 'only the leaders' of 'groups and cliques', who have selected us as *their* candidates. Our main qualification was that we were all "*August Tyagies!* *August indeed!*" Most of us do not lay any claim to knowledge on public affairs or politics. We are but humble workers for the country's freedom. It does not give us competency to take part in the proceedings of our Legislatures. In our heart of hearts if at all we have that organ in our body—we must feel that we are but misfits. A few like me may express occasionally our impotent anger; but those whom we have put in power are impervious to any subtle feelings of men. They are in fact power-blind. When necessity comes, the 'kanganies' to whom we owe our seats in the legislature musters us together like a shepherd mustering his flock of sheep to cast our votes to their dictation. Many M.L.As. would agree with me but they cannot express openly what they feel. Suppressed indignation is dangerous. I am myself unable to reveal my identity. To that extent, I admit I am a coward. At any rate, I let out a little steam. My writing this letter to you helps to relieve the tension of my feelings. It is said that we should not depose our Ministers, whom we have ourselves installed in power. It is said that the

prestige of the organization would be weakened, if the Ministry is disturbed now. I know that you will not open the 'Reader's Forum' for a discussion on the subject of this kind. But kindly pardon me. I have to preface my letter with these remarks which I am unable to bury in my mind any longer.

I write this letter to you so that the attention of the Ministry may be drawn to their elementary obligation to improve the conditions in which the vast majority of our people live. We have talked enough to catch votes. Tall talk won't do any more. As you have pointed out, we do not care to follow Gandhiji's advice, although we have used his name freely to catch votes. Gandhiji has been repeating and repeating that the sanitation of our villages should be improved, that the living conditions of our villagers require radical change for the better, and that they should be given the elementary necessities of healthy conditions of life. In his constructive programme also, a section is devoted to it. We, as followers, talk glibly that every one should work the constructive programme of Gandhiji! Schools are opened to train volunteers for the purpose! All this is but throwing dust in the eyes of the masses. My complaint is that in carrying out the constructive programme, the most essential part of it, namely, the sanitation and health of the people, have not been attended to. We can walk about in nakedness. We can even shelter under the shade of trees but we cannot live without risk to life in the absence of sanitation.

Take housing, as an example. In the very first issue of *People's Health* (page 47) my silent friend—but a man with strong emotions and feelings—Mr. Satagopa Mudaliar, M.L.C., made certain suggestions based upon his own experience and observations for the consideration of the Ministry. There has been no indication whatsoever, that the Ministry took any notice at all of his suggestions. The M.L.Cs. who took part in the discussion on the late Mr. Anthony's resolution gave valuable suggestions. Dr. V. K. John read out copious extracts from *People's Health*; but all to no purpose. In truth, the Ministers do not care to hear what others say. Whenever they appeal for co-operation, they only mean to say; "I know all about your requirements. Don't come to

me with your suggestion." That is the kind of courtesy which the popular Ministry shows even to those who voted to instal them in power! How can the Ministry expect public men to go to them with their suggestions to improve our conditions?

The Ministers are only mindful to get the votes when a crisis comes; but they do not care a jot for suggestions which would help them to serve the people rightly.

Under the heading "Homes for the people", you have put forward your strong protest against wastage of public funds on ill-conceived and ill-digested schemes. Again, you wrote in the May issue of *People's Health*, "Are they fooling the public". Yes, they are fooling the public; but they cannot fool the people for all time.

If the Minister for Housing is allowed to push forward his 'schemes', it would be only a question of time before the Ministry falls. A drop of poison is enough to spoil a pot of milk. It is open to our Prime Minister to use his independent judgment, if any, and rectify matters in good time. Let us all hope and pray that God would give him the vision and wisdom to realise the realities of the position. What else can we helpless people, do except hope and pray!

"M.L.A."

Our 'Reader's Forum' is not certainly intended to discuss politics. We have however refrained from deleting the opening paragraphs of this letter to help our esteemed M.L.A. to relieve the tension of his feelings. The letter bears the stamp of downright sincerity. It shows the helplessness of the so-called representatives of the people. We agree with the writer that there is something radically wrong in the 'schemes' of the Minister for Housing. He is really running amuck. If he persists in pushing forward his 'schemes' it would certainly result in something scandalously serious. The Ministry should remember that

the 'homes' which Mr. Churchill built for the workers drove him out of office. He learnt this bitter lesson, "We shape our buildings and afterwards our buildings shape us", a little too late in his life. Our Ministers should be benefitted by the experience of so mighty a person as Churchill. We have pleaded strongly that there should be reshuffling of portfolios among Madras Ministers. We did so in the interest of efficient work. We have still hopes that the Prime Minister will bring to bear his independent judgment and see the force of our arguments. We join our esteemed correspondent in his hopes and prayers that vision and wisdom will dawn on the Prime Minister, Madras.

(Ed., P.H.)

BANGALORE,

Dated, 28-6-1947.

Dr. H. R. Sadashiva Rao (Retd. D.M.O.), writes:

"Have you heard of 'COST ACCORDING TO INCOME'? Strange doctrine indeed. Can world get on on this principle? You will be surprised to learn that X-ray pictures are sold in Government hospitals on that principle. This crying scandal should be wiped out."

Government Hospitals having x-ray sell x-ray pictures to outpatients or private individuals to so-called 'poor' at the most uneconomic rate of Rs. 5 per picture. Cost of pictures is graded according to income of those who want them; Below Rs. 50 cost Rs. 5; above Rs. 50 cost varies according to income, maximum being somewhere at Rs. 80 per picture. Except Government servants and Railway men—those in other walks of life,—rich villagers, and ryots, business men, industrialists, bankers, etc.,—claim this commodity on payment of a nominal fee of Rs. 5 per picture. Elaborate forms are supplied asking for information about incomes. People religiously sign these forms, vouchsafing

their incomes as below Rs. 50. The Superintendents of Hospitals have neither the time nor the inclination for checking the statements. Their staff is already overburdened with work. Nor does anybody care to get unpopular on that account. Even if the District Medical Officer or Superintendent should refer any case for scrutiny to Revenue people, they get nonplussed for various reasons.

This scandal should be set right as quickly as possible. Government should fix a certain definite rates irrespective of incomes. Cost should be the same for 'poor' and 'rich'. We don't hear of cost of cards and embossed covers as "according to incomes". The strange logic does not bear scrutiny on any grounds.

For one thing, Government stands to lose a considerable income by the present rules which have held sway for a long time. For another thing, it kills the initiative and enterprise amongst younger practitioners of promise. At least Government hospitals should be barred from selling such pictures in O.P.

Will our popular Government in Madras look into this matter and do the needful?

Government Hospitals should be restricted as far as possible to "poor people who cannot afford to pay. Those who can afford to pay should enter nursing homes conducted by private practitioners."

To the extent to which upper classes get admitted, to that extent, really the 'poor' lose opportunities for treatment on admission. There should be a system of Lay Secretaries or small committees for every Government Headquarter Hospital and also for bigger State Hospitals in Madras, Vizagapatam, Madura, etc., to assess the incomes of admittees. This procedure ought to be very advantageous towards ensuring hospital income which would otherwise be lost.

TROLLEY BUSES v. TRAMS ON RAILS

In the concluding paragraph of my letter addressed to you which appeared in "People's Health", February, 1947 (pages 261-268) I made a suggestion that the transport system should be modernised and that electrically operated trolley buses should be introduced in place of trams on rail tracks. It does not

look as though the authorities had been good enough to consider the suggestion in consultation with their experts.

I would strongly plead that the matter be considered dispassionately.

I was not content by writing to you only. I had been discussing the matter with members of the public, representative members of the travelling public and my professional brethren. Excepting a few, not one raised a dissentient voice; in truth all of them approved the suggestion whole heartedly, but the few friends who disagreed with me were apprehensive that the trolley buses would result in more road accidents. It would appear that it was tried in Delhi and that it did not prove to be a success. I have no personal knowledge of the working of the trolley buses in New Delhi; but I claim to have some knowledge of its working in Singapore, Rangoon and in certain foreign countries, particularly America. After an exhaustive study of the problems of transportation in urban areas just before the end of the war, the City of Birmingham (U.S.A.), launched an extensive modernisation programme. I attach 3 photographs to give an idea of the trolley buses. We, in Madras, may not require the long bogie to accommodate a large number of passengers. What we want here is only frequent movement of trolley buses with a comparatively smaller seating capacity. Motor cars are scarce nowadays and to maintain them is difficult. I wish more and more of our public men and big business people use public conveyance as they do in western countries. This would automatically tend to improve the quality of service and the amenity of travelling within the city. It has been found that in a public transit vehicle a person uses 70 sq. ft. of street space as compared to 500 sq. ft. in an automobile. Economy in the use of road space is necessary.



It is said that our Minister of Transport stated the other day in the floor of the House that the Madras trams as they exist now are *roadworthy*. I doubt very much whether his views represent the opinion of the users of trams or his own opinion based upon his experience or he simply repeated what was put to him by the office. From all enquiries I understand that the Minister of Transport had not entered any of these trams after he came to Madras. Whether he did so or not, I cannot say. I consider it wholly wrong that a Minister should have dealt with that matter in an irresponsible manner. Even when we have Congress Ministers, we cannot claim that they reflect the opinion of the man in the street whom they pretend to represent.

The awkwardness caused by the trams stopping *side by side*, in unexpected places where the road margins are too narrow to allow vehicular traffic to pass by, cannot be imagined. One should have had the actual experience of it. If more street accidents have not been taking place, it is due to the dexterous hands of the motor drivers in manipulating the cars. Those who have taken upon themselves the administration of transport should discharge their public duty with some knowledge and experience. The way in which this branch of work is administered shows beyond any doubt with how little the administration is being carried on. Tram on rails in the City of Madras is an anachronism in 1947!

K.V.A.



LAW AND PEOPLE'S HEALTH

BY

K. S. S.

SO far we have drawn attention to the English cases holding the local authorities liable for injuries sustained by persons using the highway. The principle laid down so early as 1788 in *Russel v. The Men Devon*, 2. T.R. 667 that no person can maintain an action against a highway authority for injury arising from their neglect has been maintained as sound in law. But in practice, its application has been limited by invoking the aid of other principles which tend to impose the liability. In an appeal from *New South Wales, Municipal Council of Sidney v. Bourke*, (1895), A. C. 433, while holding that the Municipal Council was not liable in damages for injuries sustained by a person in consequence of their non-repair of the roads vested in them, the Lord Chancellor added at page 445, "whether the law is in a satisfactory state; it is not for their Lordships to say. Weighty reasons have been adduced both for and against the liability sought to be established in the present action. It is for the Legislature to determine to which side the balance inclines." In *Shoreditch v. Bull* (1904) L.T. 210, Lord Halsbury doubted if the legal position as to the non-liability of highway authorities had not been pressed too far and said it may require to be examined on some later occasion. In *Skilton v. Epsom & Uwell U.D.C.* (1937, 1, K.B. 112 at page 127, Swift, J., referred to the principle in *Russell v. The Men of Devon* and said "how long it will be allowed to continue a principle of law of this country I do not know; but there it is, and we do not interfere with it."

We shall now examine some of the cases in which the local authorities were held not liable in damages. In *Sanitary Commissioners of Gibraltar v. Orfila*, 15, Appeal Cases, 400, the plaintiff owned a dwelling house at the base of a steep rocky cliff of Gibraltar. At a height of 45 feet above the plaintiff's house, a highway ran along the face of the cliff. On one side of the road, it was supported by a retaining wall which was carried down to the rock and it stood

there for many years. But in 1887, owing to a continuous and heavy rain for five days, the wall gave way and by fall of the debris the plaintiff's house was considerably damaged. In an action by the plaintiff, it was held that the defendants were not liable. Lord Watson said at page 411 "In dealing with that question, it is a material consideration that the injury complained of arose, not from any act of Commissioners or their servants, but from their non-feasance. Their Lordships do not wish to suggest that Commissioners or other public trustees who have no pecuniary interest in the trust which they administer can escape liability when they are negligent in the active execution of the trust. It is an implied condition of statutory powers that, when exercised at all, they shall be executed with due care. But in the case of mere non-feasance no claim for reparation will lie except at the instance of a person who can shew that the statute or ordinance under which they act imposed upon the Commissioners a duty toward himself which they negligently failed to perform. The *Mersey Docks* case, L. R., 1, H. L. 98, was distinguished on the ground that the *Mersey Docks' Trust* was a Corporate body independent of Government and Government control and differed in no material respect from private enterprise authorised by statute, whereas, in the present case, the local authority was appointed by the Governor and the only duty imposed upon them with respect to the retaining wall was to maintain and repair it for the safety of passengers and the ordinary traffic.

In *Cowley v. Newmarket Local Board* (1892), A. C. 345, the defendants had the control of a highway and the power to level alter and repair it. An owner of an adjoining field in making an approach to his land made a drop in the level of the highway and left it in a dangerous condition. The plaintiff walking along the highway fell down and injured. In an action by him, the defendants were held not liable. The

decision in *Russell v. The Men of Devon* was held to apply in so far as the Common Law liability was concerned, and as regards the statutory liability, the statute conferred no right of action to a person using the highway.

In *Municipality of Pictou v. Geldert* (1893), A. C., 524, it was laid down that public corporations to which an obligation to keep public roads and bridges in repair had been transferred were not liable to an action in respect of mere non-feasance, unless the legislature had shown an intention to impose such liability upon them. In that case, the action was for damages for injuries caused by the neglect of a Municipality incorporated under the County Incorporation Act 1879 to repair a bridge. The action was dismissed on the ground that by that Act there was no indication of an intention that this liability shall be imposed. Lord Hobhouse said at p. 527 "By the Common Law of England, which is also that of Nova Scotia public bodies charged with the duties of keeping public roads and bridges in repair, and liable to an indictment for a breach of this duty were, nevertheless, not liable for damages at the suit of a person who has suffered injury from their failure to keep the roads and bridges in proper repair." And after referring to the County Incorporations Act, His Lordship proceeded to remark "It is to be observed further that the statute does not in terms impose any obligation upon the municipality to repair the roads or bridges. It confers upon the Council powers and authorities which extend to those subjects; but the powers and authorities are conferred in precisely the same terms with reference to objects with regard to which the powers clearly must be discretionary and not matters of obligation.

"In the opinion of their Lordships, it is impossible to find in any of the legislative provisions the indication of an intention on the part of the Legislature that a person injured by the mere non-repair of a road or bridge should be entitled to sue the municipality for damages in respect thereof."

In *Municipal Council of Sydney v. Bourke*, (1895) A. C. 483, the defendants, a municipality, allowed a portion of the street to fall into disrepair and in consequence Bourke was thrown down from a van and

died by injuries sustained by him. In an action by his administratrix, the defendants were held not liable. There was no complaint of misfeasance, the sole charge against the defendants being one of non-feasance in failing to repair the highway. The Lord Chancellor said at p. 485, "If, then, they are liable in the present action, it must be either because that liability has been expressly imposed by some enactment, or because the Legislature has imposed some duty upon them for the breach of which a right of action accrues to any person injured by it." The Municipal Council of Sydney being a creation of statute, such rights and duties as it possesses or are incumbent upon it must have been conferred or imposed by the Legislature. On an examination of the statute it was held that while the defendants had a discretion to maintain the public ways, there was no binding obligation upon them enforceable by law to so maintain them. The Lord Chancellor proceeded to observe "There is no doubt, in a certain sense, a duty incumbent on the council to see to the maintenance of the highways. It is for them to exercise the powers conferred upon them by law for the benefit of the community. In these matters, they represent the citizens, and ought to have regard to their interests. For their discharge of these duties they are responsible to those whom they represent. The members of the Council are the choice of the citizens and if they do not use their powers well they can be displaced. But if they fail to maintain in good repair the highways of the city, it is not a matter of which the Courts can take cognisance, or which can be the foundation of an action if any citizen should be thereby aggrieved."

In *Shephard v. Glossop Corporation*, (1921), 3, K. B. 132, a street was vested in a local authority under the Public Health Act, 1875. It declined shortly and was bounded on one side by a retaining wall separating it from land at a higher level, the land and the retaining wall being the property of a private owner. In pursuance of Sec. 161 of the Public Health Act, the authority placed a lamp on the retaining wall, but extinguished it at 9 p.m. every night. The plaintiff on his way home strayed on to the private land at 11-30 p.m. and fell over the retaining wall into the

street and was injured. In an action against the local authority for negligence in the performance of an alleged duty to light the street sufficiently, it was held that the local authority was not liable. Sec. 161 conferred upon them a discretion but imposed on them no obligation to light the street and left it to their discretion whether they will light the street or any part of it and how long the lamps shall be kept lit in any portion of the street which they elect to light. At page 149, Scrutton, L. J., laid down the principle thus:—

"Under S. 161 of the Public Health Act, 1875, whether or not local authorities are under any obligation to light—it is left to their discretion—they are under no obligation to continue lighting either in whole or in parts; the power given them is discretionary. If they do light they will be liable in damages for negligence in lighting; negligence in allowing gas or electricity to escape; negligence in putting posts in a highway without warning and not lighting them at night. But they are not liable merely because in the exercise of their discretion they do not light, or because they continue lighting, dangers which they have not themselves created." In the same case, Lord Apkin said as follows:—"If a local authority having statutory powers decides to exercise those powers, it is under a duty to persons interested to take reasonable care not to cause damage, so far as the avoidance of damage is consistent with the exercised of the statutory powers. But it is under no legal duty to act reasonably in deciding whether it shall exercise its statutory powers or not, or in deciding to what extent, over what particular area, or for what particular time, it shall exercise its powers. If it decides to light any area, its lamps and appliances must be placed and maintained with reasonable care so as to avoid danger to way-farers or owners or occupiers of adjoining property. If gas or electricity is conducted to the lamps, care must be taken to prevent the gas or electricity from escaping so as to cause damage. There is no duty to exercise the power of lighting at all. Nor, if the local authority do light, are they obliged to light the whole of their district or any particular part of it. They are under no duty to light all dangerous places, or any dangerous place;

and if they do light a dangerous place for part of the night, they are not bound to light it during the whole night."

In *Dormer v. New Castle Upon-Tyne Corporation*, (1940), 2, K. B. 204, the plaintiffs owned a block of Offices and shops in a busy street in Newcastle. The defendant set up a barrier along the edge of the pavement in front of the plaintiff's premises to prevent persons from crossing the road at that point. In an action against them for the removal of the barrier and for damages, held that that the defendants were not liable as what they did was within their statutory power and they had acted *bona fide* in the exercise of their power.

In *Wodehouse v. Levy* (1940) 2, K.B. 298, there was an unilluminated bollard at the end of a refuge in the middle of a road. The plaintiff going in a Taxi during the blackout hours collided with the bollard and sustained injury. In an action against the defendants Casosels J., held that they were liable, as they were bound to light the street refuge and, though clothed with statutory powers, they must so exercise them and with such reasonable care as to prevent injury to others. But this decision was reversed in appeal in (1940) 2, K. B. 561, where the Judges held that the statutory obligation was abrogated during the period of the war and that there was no other duty to illuminate the refuge either at Common Law or by Statute. This view was followed in three cases, *Greenwood v. Central Service Co.* (1940), 2, K.B. 447, *Lyus v. Stepney Borough Council* (1941) 1, K.B. 134, and *Fox v. Newcastle-Upon-Tyne Corporation* (1941) 2, K.B. 120. But all these cases were considered in *Fisher v. Ruislip Northwood U. D. C. and Middlesex C. C.* (1945), 1, K.B. 584, in which Green, M. R. expressed his dissent from these decisions and expressed his view that the undertakers by exercising a power, in the one case statutory, and in the other at Common Law, placed themselves in a relationship to the public which from its very nature imports a duty to take care. The question must always be whether the statute manifested an intention that the relation created should not import a duty to take care; or does the statute negative the existence of an implied duty to take that care.

East Suffolk Rivers Catchment Board v. Kent, 1941, A.C. 74, is an important decision of the House of Lords. There owing to a very high tide a breach was made in a sea-wall, as a consequence of which the respondents land was flooded. The appellants in the exercise of their statutory powers undertook the repair of the wall, but carried out the work so inefficiently that the flooding continued for six months thereby causing serious damage to the respondents pasture land. It appeared from the evidence that by the exercise of reasonable skill the breach in the wall might have been repaired in fourteen days: Held (Lord Atkin dissenting), that the appellants being under no obligation to repair the wall, or to complete the work after having begun it, were under no liability to the respondents, the damage suffered by them being due to natural causes. The ground of decision was this: Where a statutory authority is entrusted with a mere power it cannot be made liable for any damage sustained by a member of the public by reason of a failure to exercise that power. If in the exercise of its discretion the authority embarks upon an execution of the power, the only duty owed to any member of the public is not thereby to add to the damages which that person would have suffered had the authority done nothing. So long as that authority exercises its discretion honestly, it can determine the method by which, and the time during which, the power shall be exercised; and it cannot be made liable except to the extent just mentioned, for any damage that would have been avoided if it had exercised its discretion in a more reasonable way. At p. 84, Viscount Simon, L. O., said "The problem of law which now arises is by no means an easy one. Its essential elements are these: (1) The appellant Board were under no statutory duty to repair the breach, but they had the power to enter upon the land for the purpose of endeavouring to effect such repair and they did so enter. (2) It was the original breach in the wall, caused by the act of nature, which produced the flooding of the respondents' land and it was the operations of the tide which kept it flooded; the efforts of the appellants were directed to abating this damage. The appellants want of skill did not cause such damage at all. (3) If the appellants had not shown such want of skill in trying to repair

the wall, and if they had been served by an adequate well-trained staff, the gap in the wall would have been closed much sooner than it was and the flooding would have been more promptly abated. The question is whether, in the above circumstances, the appellants are liable to the respondents in damages to such amount as would represent the nett loss to the respondents due to the delay in abating the flood.

It is not, of course, disputed that if the appellants, in the course of exercising their statutory powers, had inflicted fresh injury on the respondents through lack of care or skill, they would be liable in damages for the consequences of their negligent act. If, for example, the appellants, by their unskillful proceedings had caused a further area of the respondents' land to be flooded, or had prolonged the period of flooding beyond what it would have been if they had never interfered, they would be liable. But (apart from two minor matters, which it is agreed do not govern the main issue) nothing of this sort happened. The respondents would have gained if the flooding had been stopped sooner; their complaint against the appellants is that they did not act with sufficient skill to stop it more promptly; but the respondents cannot point to any injury inflicted upon them by the appellant Board, unless it be the Board's want of success in endeavouring to stop the flooding at an earlier date. In order that the respondents should succeed in this action it is necessary that they should establish, not only that the appellants were wanting in care and skill when exercising their statutory powers, but that they inflicted injury and loss upon the respondents by their negligence. Lord Parker thus states the proposition in *Great Central Railway v. Hewlett*, (1916) 2, A.C., 511, 519, "It is undoubtedly a well-settled principle of law that when statutory powers are conferred, they must be exercised with reasonable care, so that if those who exercise them could by reasonable precaution have prevented an injury which has been occasioned, and was likely to be occasioned, by their exercise, damage for negligence may be recovered." On these considerations, Viscount Simon held that though the respondents had suffered damage, they could not recover compensation from the appellants, because they did not cause the loss; it is

caused by the operations of nature which the appellants were endeavouring, not very successfully, to counteract: The respondents would have no claim if the appellants had never intervened at all: the respondents equally have no claim when the appellants do intervene, save in respect of such damage, as flows from their intervention and as might have been avoided if their intervention had been more skilfully conducted. In his dissenting judgment, Lord Atkin said, that a statutory duty may be imposed for the protection of particular citizens or class of citizens in which case a person of the protected class can sue for injury to him due to the breach. At p. 88, he went on to say "As a rule, the statutory duty involves the notion of taking care not to injure and in such cases actions for breach of statutory duty come within the category of negligence. See *Lochgelly Iron and Coal Co. v. M'Mullan* (1934), A.C., 1." But apart from the existence of a public duty to the public, every person whether discharging a public duty or not is under a common law obligation to some persons in some circumstances to conduct himself with reasonable care so as not to injure those persons likely to be affected by his want of care. This duty exists whether a person is performing a public duty, or merely exercising a power which he possesses either under a statutory authority or in pursuance of ordinary rights as a citizen. To whom the obligation is owed is, as I see it, the principal question in the present case."

* * * * *

* Fatal Accidents Act.—

Whenever the death of a person shall be caused by wrongful act, neglect or default, and the act, neglect or default is such would (if death had not ensued) have entitled the party injured to maintain an action and recover damages in respect thereof, the party who would have been liable if death had not ensued shall be liable to an action or suit for damages, notwithstanding the death of the person injured, and although the death shall have been caused under such circumstances as amount in law to felony or other crimes.

Every such action or suit shall be for the benefit of the wife, husband, parent and child, if any, of the person whose death shall have been so caused, and shall be brought by and in the name of the executor, administrator or representative of the person deceased;

And in every such action the court may give such damages as it may think proportioned to the loss resulting from such death to the parties respectively for whom and for whose benefit such action shall be brought; and the amount so recovered, after deducting all costs and expenses, including the costs not recovered from the defendant, shall be divided amongst the before mentioned parties, or any of them, in such shares as the Court by its judgment or decree shall direct.

The word 'person' shall apply to bodies politic or corporate and the word 'parent' shall include father and mother and grandfather and grandmother and the word 'child' shall include son and daughter and grandson and granddaughter and stepson and stepdaughter.

Negligence of a Public Body exercising Statutory powers, is actionable in Tort unless such liability is expressly or by necessary implication excluded by Statute.

A.I.R. 1947, Calcutta 195 (R.C. Mitter and K.C. Chunder, J.J.).

Sm. Jeet Kumari Poddar and others .. Plaintiffs.
Versus

The Chittagong Engineering and Electric Supply Co., Ltd. and another—Defendants.

The widow, two minor sons and a minor daughter of one Hariananda Poddar filed a suit against the Chittagong Engineering & Electric Supply Co., Ltd., and another under Section 1 of * the Fatal Accidents Act for the recovery of Rs. 20,000 as damages for loss sustained by them as a result of the death of the said Hariananda Poddar due to the negligence of the Defendant—Company. The facts of the case are as follows:—

The deceased was a young man of 28 years in sound health and was assisting his old father in the latter's cloth-shop as an assistant. He took his bath on 1-7-1939 at a pipe-water hydrant in Sim Road, Narayanganj (Bengal) and with his body wet was coming back to the cloth-shop of his father. This shop adjoined the road and there was a drain in between and a verandah on a raised platform next to it. An electric wire came down to the ground from a pole on the road nearby and this should have been a dead wire, that is, a wire without current in it. Unfortunately for the deceased, at that time this wire was a live wire. The deceased was taking a short cut and as he was carrying a vessel containing water, he put his hand on the electric wire for support

when getting upon the platform and was instantaneously killed. The plaintiffs proved the following facts to establish negligence on the part of the Defendant—Company:—

(1) The pole fuse from which connection had been taken at that place (at the place of the death) was defective;

(2) The earth wire used was of a higher resisting power and therefore could not have been capable of immediate discharge of electricity into earth;

(3) The insulation bush at the open end of the G. I. Pipe, which prevents the destruction of the insulation in the V. I. R. Cables inside the pipe, was absent.

The Defendant—Company, while admitting negligence on its part denied liability for damages on the ground that the deceased was guilty of contributory negligence that is, the deceased could reasonably have avoided the consequences of the defendant's negligence if he had not been negligent himself in trying to take a short cut and put his hand against the wire in support when he was wet of body.

The trial court held that the defendants were guilty of negligence and that the deceased was not guilty of contributory negligence. In the result, the plaintiffs' suit was decreed for Rs. 1,500.

The plaintiffs as well as the defendants appealed to the High Court at Calcutta and in the appeal the plaintiffs reduced their claim to Rs. 6,000.

Hold, by R. C. Mitter & K. C. Chunder, JJ:

(1) that the deceased was not guilty of contributory negligence as there was no duty in law on the part of any person that he should not go about with a wet body or that he should not take a short cut for convenience or that he should not put his hands on something for support;

(2) that the defendants were clearly guilty of negligence.

(3) The law on the point is clear. In the case of a public authority exercising statutory powers, there may or may not exist a duty to take care in favour of particular individuals. Where such a duty exists, an individual who is injured by negligence in the performance of such a statutory duty has a right of action in respect of that negligence unless the statute expressly or impliedly excludes such liability (in the present case the Defendant—Company admitted that there was such a duty to take care and that the right of individual action was not expressly or impliedly excluded by the statute).

In the result, the High Court dismissed the appeal of the Defendant—Company and allowing the appeal of the plaintiffs, granted a decree for Rs. 6,000. (*Extracted by R.S.*)

The adulteration of milk offered for sale is getting too common, and the Government have decided that it should be put down with vigour. Such adulteration is an offence under the Madras Prevention of Adulteration Act and the rules made hereunder. There appears to be a mistaken impression that the sale of hot milk adulterated with water or otherwise is not an offence, and that only adulteration of raw milk is punishable. This is incorrect. The High Court has held recently in Criminal Appeal No. 268 of 1946. *Public Prosecutor Vs. Medi Kondayya* "(1946, II M.L.J. 311" that any act either of addition or abstraction that diminishes the prescribed percentage of milk fat and milk solids, is an offence, and that hot milk is only milk in its natural condition that has been made hot, and that it should not be treated as different from milk in the ordinary sense.

Press note No. 289, dated Fort St. George, the 20th December 1946.

(The facts of the case have been briefly reported on p.p. 50-51 of "People's Health", Oct. 1946.—Ed. P.H.)



"Books are Weapons in the War of Ideas."

"Some Books are to be Tasted, others to be Swallowed and some few to be Chewed and Digested." . . . and some to be Eschewed!

PREVENTIVE MEDICINE AND

PUBLIC HEALTH

Author.—Wilson G. Smillie.

Publishers.—The Macmillan Company, N.Y.

First Edition—1947. Pages.—607.

Size—9" x 6". Price \$6.00.

One lacuna in medical literature is that there is no proper text book in the subject of Hygiene and Preventive Medicine for the under-graduate medical student. There are many which are intended for the post-graduate who specialises in public health. These text-books have been made use of mostly by the under-graduates also. The concept of the subject has undergone radical changes in recent years. Environmental sanitation which is a portion of the field most foreign to the medical man has long occupied over two-thirds of the space in every text book of Hygiene. Modes of spread and methods of prevention of communicable diseases covered the rest of the space. It is only recently that the idea has evolved that positive promotion of health is also a vital function of every medical man. The importance of this aspect has given rise to the concept of "Social Medicine"—a subject which is just creeping into text-books. With this change in view, the emphasis on

environmental sanitation for the medical practitioner is decreasing. Dr. Smillie's book is almost the first to bring out this new concept. In fact, the author starts by saying that the book "is planned as an introduction of medical students to a point of view". The scope is further defined by the statement that the book is not for health officers or sanitarians but for the student who proposes to practise clinical medicine.

A book which breaks new field can be best reviewed by summarising the notable features:

Firstly, the book faithfully adheres to the scope set for it. The medical student is told only the barest fundamentals of environmental sanitation. This is a refreshing departure from tradition. If our universities will only recognise it, the subject of hygiene, will cease to be associated in the medical student's mind with 'dung and drains'.

Secondly, a distinction is sought to be made between 'preventive medicine and 'public health'. The author believes the former to be a function of the individual and the latter a function of the community. This distinction, though "a true and valid one" as the author says, has not been quite clarified so far; nor was the training of the medical student well based on this distinction. The book applies this idea in the sections into which it is divided. Section (III) "communicable disease control"—covers the field of "preventive medicine". The subsequent three sections

which deal with child hygiene, adult health and administration relate to "public health". The space devoted to each is appropriate; section (III) forms a quarter of the book and the three others form about 40 per cent of the volume.

Thirdly, this is the first text-book which deals specifically with the preventive aspects of the common non-communicable diseases. Section (V) which deals with 'Adult Health' comprises this. Malnutrition, cancer, peptic ulcer, heartdisease, diabetes, arthritis, alcoholism and others are treated from a preventive aspect. This is of inestimable value to the medical student who is to be the practitioner of tomorrow.

Fourthly comes an important feature. Present day developments tend to relegate the new field of 'social medicine' to the teacher or administrator most incompetent to handle the subject. The clinician of the hospital is naively presumed to be the person suitable and the subject, if ever it forms part of our medical curriculum, is likely to be an appendage of "Medicine". According to Dr. Smillie, the department of public health represents the community point of view and consequently the subject of social medicine should be presented to the student by this department in a judicious manner. The author is to be congratulated on clarifying this issue and giving emphasis to it by presenting us with a text-book based on this concept. As he says in the preface, preventive medicine and social medicine should be integrated with clinical medicine. Such integration involves close liaison between the patient in the hospital and the home or environment he came from. The department of public health alone can effect this liaison and can do it only if the staff of that department are given clinical appointments. The author makes a forceful plea for this, which our universities and administrators would do well to heed.

Fifthly, one is accustomed to treat Industrial Hygiene as part of environmental sanitation, and Disinfection as part of communicable disease control. Dr. Smillie includes the former under Adult Health and in the treatment of the subject has brought out the modern emphasis on the personal health of the industrial worker rather than on the

environment in which he works. The latter is included under environmental sanitation to indicate that we always destroy the infectious agent only when it is present in the environment of man. With such considerations, it is not clear why the subject of ventilation has been omitted altogether.

Lastly, the subject of statistics vital and medical, which every modern medical student must be familiar with, has been dealt with adequately in Section I.

Those who, like the reviewer, have had the privilege of having been a student of Dr. Smillie will be well aware of his depth of knowledge, clarity of conception and ease of presentation of the subject. This latest production of his reflects these qualities in every page. Any student or practitioner reading it will not fail to secure a sound grasp of the subject. The book is well illustrated and the format keeps up to the high level of American publications.

"BELL"

NEW ARCHITECTURE AND CITY PLANNING, A SYMPOSIUM

Editor.—Paul Zucker.

Publishers.—Philosophical Library, New York.
Size.—9" x 6". Page—694.

Price—\$10.00.

Literally, lorry loads of literature on the subject are available. Some of them are to be tasted, others are to be swallowed, some few to be chewed and digested and some others to be eschewed altogether, as the quotation at the head of this section aptly puts it.

This book under review is unique in many ways. Both the editor and the publishers deserve to be congratulated on the excellence of the matter presented and on the get-up of the volume.

The editor has been assisted by no less than 58 collaborators, each eminent in his own field. As the editor has rightly acknowledged, each collaborator has contributed his best from the rich treasures of his knowledge, experience and vision.

The book is divided into six sections: specific building types; new materials and new construction methods; housing; city and regional planning; the problem of a new monumentality and education. Under each of these chapters, the subject is dealt with in a masterly manner under various sections. The subjects covered by the volume are wide and varied.

The book should be of intense interest in this country where team work is practically unknown. Here any 'professional man' professes to be a master in any branch of work. The importance of team-work is well emphasised in the book. The editor states in the opening chapter: "We need this team-work more than self-expression, as we need more interest in the life we live together and in the work we do together. Again, social orientation must balance functional expression. The evolution of society as a whole must not only be expressed and artistically formed but also helped and given new impetus by architectural, city and regional planning. That may sound like a truism, but it is not, since cause and effect are continuously confused in this realm. The real job of building before us, has to be seen clearly and universally as a combination of technical, social and actual spiritual tasks. This three-fold obligation of all building will be understood as soon as we realise the formative educational power of the environment we create."

The contribution by William H. Schuchardt on the principles of slum clearance should be of particular interest in our country. Notwithstanding the deep interest which the author had taken in city planning and housing for over 30 years in his own country and in Europe, he feels that he is still groping in the dark! The author adds that many others seem to be groping about with him. The complexity of the subject baffles even experienced men of the standing of the author of this section. "Where angels dread, fools rush ahead", they say. When eminent authorities still feel diffident in presenting solutions for the grave problem which faces the society in the matter of slum clearance, our amateur administrators and the so called

professional men rush ahead with 'proposals', costing enormous sums of money. To quote a recent instance, the Madras Minister for Housing did not hesitate to throw away two lakhs of rupees on the construction of 'plinths' in the name of solving the housing problem for the benefit of the homeless poor! Such administrators would be educated—if they are inclined to be educated at all—by perusing this valuable contribution by the eminent author. The author states in all humility, that the views he had presented are far from being a complete answer; for, they are after all but the surface treatment of a big city disorder. The author confesses that whatever may be those of his thoughts on the subject, which are perhaps a bit worthy of presentation, they are at best gropings in the dark and he offers them merely as a provocation for further discussion! In this section, the author has given an outline as costing enormous sums of money! In this section the author has given an outline as to what a 'Master Plan' should be. It richly deserves to be perused by all those who are interested in the subject. The question of ownership of land is a vexed one as also the devastating effect of land speculation. The author states that the Russians have waved the difficulties aside rather simply by completely abolishing private ownership. In Germany, Sweden and other continental countries, many cities abolished speculation in and the divided control of land used, by outright purchase of 80 to 100 per cent of all the land within their boundaries. The question of ownership of land deserves serious consideration at the hands of our administrators here. It is a difficult problem no doubt; but it must be faced in the process of the liquidation of our slum. Why fight shy of it?

Space does not permit the reviewer to do justice to this excellent book. This weighty volume, weighty in every sense, should be in the hands of all engineers, architects, sociologists, municipal administrators and state authorities, in spite of its high price, in money value.

"R."

The borrower of a book incurs two obligations; the first is—to read it immediately; the second is—to return it as soon as read.—Murphy.

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.)

TOWN—THE SYMBOL OF SOCIETY

The town is the symbol of society of mutual help and friendly co-operation, of fatherhood, motherhood, brotherhood, sisterhood, of wide relations between man and man—of broad, expanding sympathies—of science, art, culture, religion.

And the country! The country is the symbol of God's love and care for men. All that we are and all that we have come from it. Our bodies are formed of it; to it they return. We are fed by it, clothed by it, and by it we are warmed and sheltered. On its bosom we rest. Its beauty is the inspiration of art, of music, of poetry. Its forces propel all the wheels of industry. It is the source of all health, all wealth, all knowledge. But its fulness of joy and wisdom has not revealed itself to man. Nor can it ever, so long as this unholy, unnatural separation of society and nature endures. Town and country must be married, and out of this joyous union will spring a new hope, a new life, a new civilization.

—Ebenezer Howard.

DON'T EXPAND CITY LIMITS

It required very pungent comments on the development of the Greater London area

during the twenty years between the two wars, by Sir Patrick Abercrombie in his monumental report on the Greater London Plan, 1944, to focus the attention of Government circles on these two large scale and vital experiments in conscious town-building. For Professor Abercrombie is emphatic in his view that London is far too large and should not be allowed to grow any more. He believes that it should, in fact, be reduced during the next few years by building half a dozen or more satellite towns at distances from twenty to thirty miles from the centre of London to which industry and people should be transferred.

By John F. Eccles, O.B.E., Managing Director of Welwyn Garden City, England.

RAT AND ITS RAVAGES

It carries diseases of man and animals—plague, typhus, trichinella spiralis, rat-bite fever, infectious jaundice, possibly Trench fever, probably foot-and-mouth disease and a form of equine "influenza". Its destructiveness is almost unlimited. Lantz, of the United States Department of Agriculture, has

What do they say about it?

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made some approximate estimates of this, as follows (we abbreviate):—

Rats destroy cultivated grain as seeds, sprouts, or after ripening.

They eat Indian corn, both during growth and in the cribs, and have been known to get away with half of the crop. A single rat can eat from forty to fifty pounds a year.

They destroy merchandise, both stored and in transit, books, leather, harness, gloves, cloth, fruit, vegetables, peanuts and so forth.

The rat is the greatest enemy of poultry, killing chicks, young turkeys, ducks, pigeons; also eating enormous numbers of eggs.

Rats destroy wild birds, ducks, woodcocks, and song birds.

They attack bulbs, seeds, and young plants or flowers.

They cause enormous damage to buildings by gnawing wood, pipes, walls and foundations.

Hagenbeck had to kill three elephants because the rats had gnawed their feet! Rats have killed young lambs and gnawed holes in the bellies of fat swine!!

They have gnawed holes in dams and started floods; they have started fires by gnawing matches; they have bitten holes in mail sacks and eaten the mail; they have actually caused famines in India by wholesale crop destruction in scant years.

They have nibbled at the ears and noses of infants in their cribs; starving rats once devoured a man who entered a disused coal mine!!!

Extract from "Rats Lice and History" by Hans Zinsser: Publishers: George Routledge & Sons, Ltd., London, E.C. 4.

CONSIDER WHAT YOU EAT

WATER ESSENTIAL, THOUGH NOT A FOOD:—About two thirds of the weight of the body is made up of water, a combination of hydrogen and oxygen. Water is scattered generally through the body, accounting for the liquid nature of blood, digestive juices, and

other body fluids. Pure water, such as rain water, contains no food substances but drinking water often contains small percentages of minerals, including iron and sulphur. Even though water is not a food, it is essential to life because the body is dependent upon fluids. It helps in the digestion of foods, in the passage of digested food substances from the blood into cells, in the elimination of waste materials from the body, and in numerous other processes.

A person partly satisfies his water requirements from the water which he drinks during the day, but usually he obtains larger quantities from foods, especially from liquid foods, such as milk and soups. Most foods, however, contain surprisingly large quantities of water; fruits and vegetables for example as much as 90 per cent, fresh pastries about 35 per cent, and even such dry foods as crackers and wafers about 5 per cent. No food is entirely lacking in water.

The body continually gives off water. Most of the water leaves the body in the form of urine, a liquid waste from the kidneys. Smaller quantities pass from the skin in the form of perspiration, from the alimentary canal with the wastes of digestion, and from the lungs in the exhalation of air. An average adult loses in various ways between two and two and one-half quarters of water per day.

Extract from "Life and Health" by Wilson—Bracken—Almack.

Publishers: The Bobbs—Merrill Company, Indianapolis, New York.

HOUSING

SANITATION AND TOWN PLANNING

James F. MacLaren—Water and Sewage, 82, 46-48 & 94-100 (Nov. 1944).

A general discussion of post-war planning for municipalities and developed areas with special emphasis on the importance of water supply and sanitation. Co-operation between municipalities is discussed and some interesting examples are described. Factors which enter into the design of works for water supply and sewerage are discussed in a general way, and the main thought of the article is summed up in the statement that "so long as many municipalities lack adequate

water and sewerage systems . . . , it will be difficult to justify expenditure of public funds on some of the dubious schemes and fantastic projects proposed for post-war construction."

F. M. Veatch (*P.H. Engng., Abts., Vol. XXV*).

AESTHETICS AND PUBLIC HEALTH

Differentiation between aesthetic and hygienic measures is of considerable importance in public health work, particularly in local activities. Perhaps one of the first to make this distinction was John Snow, an Englishman who, astonishingly, combined a very high degree of efficiency in two quite unrelated medical activities: anesthesia and epidemiology. In the latter field he demonstrated (1849-1854) the role of water in cholera, and in 1855 he entered into a brisk argument with the General Board of Health of London on the matter of nuisances. His views, as expressed by his biographer, Richardson, are unusually clear and succinct.

No mere emanation arising from evolution of foul smelling gases can, *per se*, according to his views, originate a specific disease such as smallpox or scarlet fever; as well expect that the evolution of such gases should plant a plain with oaks or a garden with crocuses. The small-pox may occur over a cess-pool as an oak may spring up through a manure heap; but the small-pox would never appear over the cess-pool in the absence of its specific poison; nor the oak rise from the manure heap in the absence of the acorn which seeded it.....He indicated that he was no defender of nuisances, but that whereas a bad smell, cannot, simply because it is a bad smell, give rise to specific disease, so an offensive business conducted in a place where it ought not to be, should be proceeded against by ordinary law as a nuisance, without applying to it the word pestiferous, or otherwise dragging in and distorting the science of medicine (3).

The last clause of the above quotation is significant enough to repeat: "Dragging in and distorting the science of medicine." It is a danger that continues to exist and to the detriment of real advances. City councils, even to-day, may resist providing adequate

hospital care for the tuberculous, for instance, but for purposes of widening a sidewalk will, with piety, invoke the old expression "the public health demanding it." Similarly, individuals with little scientific information but urged by a great enthusiasm still lay down schedules of personal hygiene, commendable enough as decent things to do but not the panaceas that their proponents declare them to be.

From "Government in Public Health" by Harry S. Mustard.

Publishers: The Commonwealth Fund, New York—1945.

RURAL SANITATION

STUDIES IN RURAL HYGIENE IN THE TROPICS

I. THE DISPOSAL OF HUMAN EXCRETA.

D. B. Blacklock. *Annals of Tropical Medicine and Parasitology*, Vol. 30, No. 2, July 17, 1936, pp. 171-176.

The author lists over a score of diseases, each of which, he contends, could be eliminated if every member of the community were educated and trained to dispose of their excreta safely. From wide experience and observation in tropical countries he believes that the bore-hole method of latrine construction as developed in the Dutch East Indies, Malaya and India, has great possibilities for Africa. In all countries visited, with the exception of China, the evidence obtained was that this type will be accepted readily by the people in rural areas.

Details are given concerning the construction maintenance and education regarding the use of bore-hole latrines as practised in many countries. The general regulations applied by Dr. S. F. Chellappah in the installation of bore-hole latrines cover most of the points and are quoted:

"(1) The latrine should not be more than 30 feet from the house; (2) It should not be nearer a well than 100 feet; (3) It should be kept away from fences or walls; (4) It should not be under a tree which drips on to the roof; (5) The superstructure should fit closely round the squatting plate and should be well ventilated and lighted; (6) The ablution water should go into the bore-hole."

Several points regarding the degree of safety of disposal by this method need further investigation, and it is wrong to assume that it will be safe in all circumstances. Questions of mosquito and fly breeding, the rat and cockroach nuisance, and choice of site, must all receive attention.

J. K. HOSKINS.

P. H. Engng. Abts., Vol. XVII.

LICE AND POLITICS!

Lice have even been important in politics. Cowan tells the story of the custom prevailing in Hurdensburg in Sweden, where in the Middle Ages a mayor was elected in the following manner. The persons eligible sat around a table, with their heads bowed forward, allowing their beards to rest on the table. A louse was then put in the middle of the table. The one into whose beard the louse first adventured was the mayor for the ensuing year.

HANS ZINSSER.

THE COOLIE MYTH

China is a land of myths. Some of them are very recent creations. Like Bernard Shaw's plays, they can be divided into two classes: Myths Pleasant and Unpleasant. There is, for instance, a pleasant myth (current among the New York intellectuals) that in China, we do not call our medical man "doctor of medicine" but "doctor of health". "What a beautiful idea"! my New York hostess once exclaimed. "But it is a beautiful misunderstanding only, madam", I was honest enough to reply, for the term I-sheng means merely a "cure man" and not, as the Sinophile imagines, "one who cures you to life." Besides, what really matters is not the name, but what these doctors do to you. Since both Chinese and Western doctors' business is to put you in bed, it really does not matter by what name you call them.

"With Love and Irony" by Lin Yutang.

THE SANITARY PRIVY AND ITS RELATION TO PUBLIC HEALTH

E. S. Tisdale & C. H. Atkins, *American Journal Public Health*, 33, 1819-22 (Nov. 1943).

This is a history of the development and importance of the sanitary pit privy in relation to public health since the beginning of the 20th Century. The original impetus to wholesale installation of sanitary pit privies was given by State Boards of Health, the U.S. Public Health Service and volunteer health organizations. The article suggests that work done in rural sanitation, primarily the installation of sanitary pit privies for proper excreta disposal, was a strong factor in the development of full-time county health organizations. Further impetus was imparted by the intensive work accomplished during World War I in the extra-cantonment areas, where close co-operation between the State Health Boards and the U. S. Public Health Service helped in the development of full-time health service.

The development of the community sanitation programme under the CWA, FERA and finally WPA, in co-operation with the state health departments and the U. S. Public Health Service, and its phenomenal construction record, is described. This developed the "esprit de corps" that enabled health authorities to cope with problems which could not be solved by one agency alone. At the same time, the Farm Security Administration was also building and improving environmental sanitation on a large number of the smaller and poorer farms, some of which had no excreta disposal whatsoever.

The authors indicate the need for better sanitary excreta disposal facilities in areas where water carriage sewerage systems are impractical. The article indicates that, as a conservative estimate, more than 4,000,000 additional sanitary pit privies are needed in the United States, especially in areas where the incidence of typhoid fever, dysentery and hookworm is highest.

M. A. SHAPIRO.

P. H. Engn. Abst., Vol. XXIV.

DDT ENTERS WATER PURIFICATION FIELD

The first application of DDT to the field of water purification occurred recently at Alexandria, Va., when officials of the American Water Works and Electric Co., Inc., used minute quantities to eliminate "wrigglers" in

the clear water storage reservoirs. The experiment was discussed in a recent issue of the company's house journal, *Water*.

The "wrigglers" more scientifically identified as the larvae of one of the flies of the family *Tendipedidae* genus *Spanatoma*, caused Manager Howard Richards headaches on two accounts. First because although the larvae are harmless from a public health standpoint, they still are not attractive in a glass of water. Secondly, he had considerable difficulty pronouncing this scientific tongue twister over the telephone when talking to scientists in his home office.

These larvae are distinctive because of their ability to live wholly in the water without coming to the surface for air. They also demonstrate a strong resistance to chemical treatment; chlorine, copper sulphate, and lime seem only to give them added energy.

The solution of what to do about the "wrigglers" came from members of Alexandria's City Health Department: Dr. Shrop, Clerk Slaymaker, Keith Wade, and Richard English. They had information which indicated that the insecticide was not toxic if the dosage was held down sufficiently and recommended an application of 0.01 ppm.

After receiving approval for the insecticide's use at this rate from Richard Messer, Director of Sanitation for the Virginia State Health Department Manager Richards, together with engineers from the New York office applied the chemical to the 15 mg reservoirs at the Alexandria filtration plant. They made the application by spraying an emulsion containing DDT on the water surface. The treatment required only 1½ pounds of DDT in all, or less than a gallon of 25 per cent emulsion.

Because of DDT's slow action, they noticed no effect until approximately a day and a half later when the larvae suddenly disappeared entirely from the reservoir and the distribution system.

From "The American City", Jan., 1946.

HOUSING

HOUSING AND HEALTH

Peoria Health News, June 1939, p. 8.

The Federal Housing Project of Peoria is contemplating razing old houses comprising

nineteen city blocks and constructing in place thereof modern apartments capable of housing 1100 families.

This article indicates that statistics do not furnish conclusive evidence that unfavourable housing conditions alone are responsible for high mortality rates, for those who live under conditions of unfavourable environment are likewise affected by other factors inimical to health, such as poverty, ignorance and malnutrition. Nevertheless, it is unquestionable that sanitary and wholesome housing will contribute to the improvement of community health. Statistics supporting the latter belief are contained in this article.

S. A. KOWALCHIK

P. II. Engng. Abts., Vol. XIX.

PUBLIC HEALTH ENGINEERS

AMERICA'S ADDITIONAL DEMAND

As pointed out in the report *Local Health Units for the Nation*, by Dr. Haven Emerson and the Committee, there is a need for more than 1,000 additional public health engineers to meet even minimum requirements in the field of environmental health. The need for professional leadership in this field has been recognized as a paramount problem by the Engineering Section Council and the Association's Committee on Professional Education. Consequently the Section Council with the approval of the Executive Board has undertaken a field project to explore the problems related to sanitary and public health engineering with a view toward:

1. More adequate provision of needed personnel employed in the sanitation of the environment.
2. Establishing the engineer in a position of greater usefulness to the administrator.
3. Developing sanitary engineering and public health engineering as professional careers offering attractive opportunities to young men now entering our colleges and universities.
4. Stimulating universities to the expansion of undergraduate and graduate curricula which will prepare the student for his professional engineering role.

5. Improving and broadening the environmental health services in all of the functional fields in keeping with state and community requirements.

(From A.J.P.H., Vol. 37, No. 1).

WHERE CONCRETE PIPE CAN BE USED SAFELY

Concrete pipes can be used without fear of deterioration in any part of the Sewerage system that is not troubled with hydrogen sulphide. Fred D. Bowlus, Office Engineer, County Sanitation Districts of Los Angeles County, Calif., pointed this out to the American Concrete Pipe Association.

House connections, street lateral systems, and mains collecting fresh sewage before the sulphides have had an opportunity to be generated, are safe locations for the use of concrete pipes. When the sulphide begins to be generated, claypipe offers the solution most often employed by the Los Angeles Sanitation Districts in so far as the diameter of this type of pipe will permit.

(Sewerage and Sewage Treatment).

CHLORINATION TERMINOLOGY

Technical advances in recent years have not only added terms but have also given new shades of meaning to old terms. Chlorination, for example, is an all inclusive term which refers simply to the act of applying chlorine to water. In the over-all term no hint is provided as to how, where, or why the chlorine is being applied in a given plant. Gradually words have been introduced to answer these questions and to "express properly the various niceties of chlorination".

References to the position of chlorination in the plant was one of the first steps in this direction. The standard practice of adding chlorine either at the end, after filtration, or at the beginning, before filtration, has led to such designations as *pre-* and *post-chlorination*. *Re-chlorination* refers to additional chlorination along the distribution system. *Reservoir chlorination* concerns additional chlorination at the reservoir supplied for a specific purpose.

Super-chlorination is the application of chlorine to water in amounts greater than that

required to produce an initial residual. The process is used to combat tastes and odours and the residuals produced are often so great that some form of dechlorination is used. This process is the removal or neutralization of chlorine.

The chlorine-ammonia process of water treatment known as chlorination is the addition of chlorine in addition to ammonia to form chloramine residual-chlorine plus nitrogenous compounds.

One of the newest processes to be developed is "break-point chlorination" the application of chlorine to water to produce and maintain a residual of free available chlorine.

Marginal chlorination is a term created to designate the type of chlorination that is not concerned with the type of residual produced or its persistency. It is defined as the application of chlorine to water to produce an initial residual of either free available chlorine or combined available chlorine.

A. E. GRIFFIN

From "The American City" April, 1946.

SANITIZATION OF EATING UTENSILS

A. Harry Bliss. Weekly Bulletin, Calif., State Dept. of Health, 20, 88-85 (Mar. 22, 1941).

There is no question to-day as to the value of a programme of sanitization of eating utensils. There are many methods of disinfection, but no one method is applicable in all situations.

Methods include disinfection by heat, dish-washing machine, chlorine and other chemicals, ultraviolet light, and single-service paper containers. Each of these has its place in any sanitization programme. The sanitary inspector should be able to evaluate the situation and recommend the best procedure, depending upon the type of food or drink served and the size of the establishment.

Heat alone may stimulate bacterial multiplication, or merely inhibit bacterial growth, rather than kill all of the bacteria. Furthermore, it is not possible to wash dishes by hand in water of a temperature sufficiently

effective to kill bacteria. The use of a fully automatic dish-washer would eliminate the personal consideration.

A chlorine rinse following treatment by heat is suggested. Here the chemical used depends upon situation, and again the personal factor is a problem. An automatic chlorine dosage system is desirable. There is eye appeal to the public and it therefore has its place in a sanitization programme. However, its effectiveness as a bactericidal agent is open to question.

The problem of the soda fountain is best answered by single-service containers.

LESLIE A. SANDHOLZER

P. H. Engng. Abts., Vol. XXI.

IMPORTANCE OF PHYSICAL ENVIRONMENT

But the sociologists know that bricks and mortar, good layout, beautiful surroundings, and first-rate architecture alone do not constitute a town. A town is nothing less than an association, more or less intentional, of perhaps fifty or sixty thousand human personalities, all with their own individual and corporate aspirations. The preservation of democratic vitality and freedom in such a community, the granting of the maximum facilities for the expansion and development of the human personality, and the need to create a sense of tradition, interdependence, and mutual interest are part of the responsibility which the town builders of to-day must face.

Spoon feeding human beings is not desirable, but it is equally undesirable to move people about the country like so many pawns on a chess board, ignoring the scale of modern requirements, particularly in the sphere of recreation and culture—which the vast majority of people to-day demand as part of their inheritance. If builders of the new

towns can provide both a good physical environment and the background for the satisfaction of all other needs, then Britain's decision to build new towns will stand as one of the most remarkable social revolutions of the present century.

By JOHN F. ECCLES, O.B.E.,
Managing Director of Welwyn
Garden City, England.

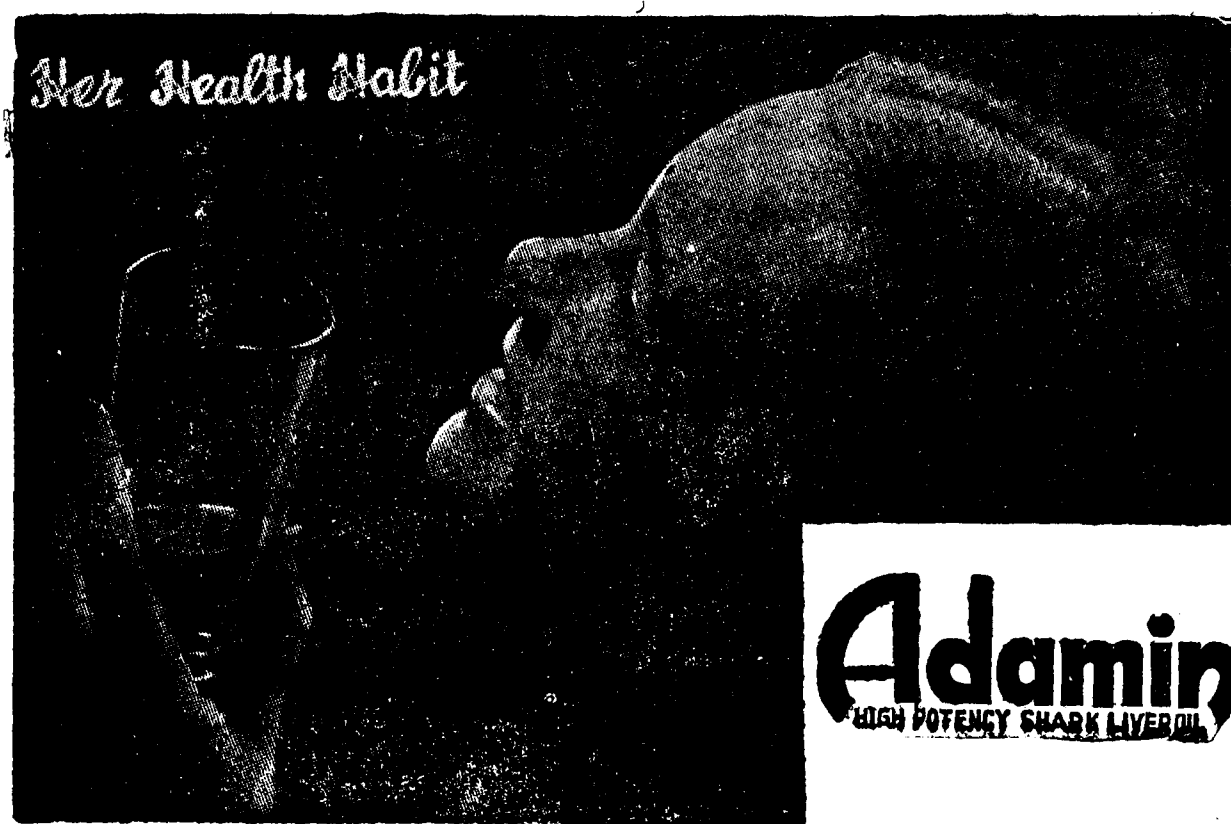
HOW TO FIND CRACKS IN CAST IRON PIPE

The American Cast Iron Pipe Company's research and testing laboratories have developed a new method of finding hairline cracks in cast iron pipe by utilizing the penetrating properties of turpentine and its wetting power on dry portland cement. This method was reported in the Fourth Quarter edition of *Pipe Progress*. Here is the procedure:

First, clean and dry the surface to be inspected; then apply a thin coat of turpentine using either a brush or spray; wipe off the excess and immediately dust on a thin film of portland cement. The cement will disclose the presence of any crack by a wet streak directly above it. The dry cement can be dusted into the pipe by a number of methods such as an old-fashioned salt shaker, a burlap bag, or a cloth sack. Its inspection can be performed at the trench without delaying the pipe laying program. It can also be done at the point of unloading if desired.

The existence of a crack in the pipe can be determined by suspending the pipe in the air and striking it with a hammer. If the sound produced rings clearly like a bell the pipe may be judged to be free of cracks. If the sound is not clear the inspector can then apply the turpentine and cement to locate the flaw if a visual examination does not disclose it.

(*The American City*, March, 1946).



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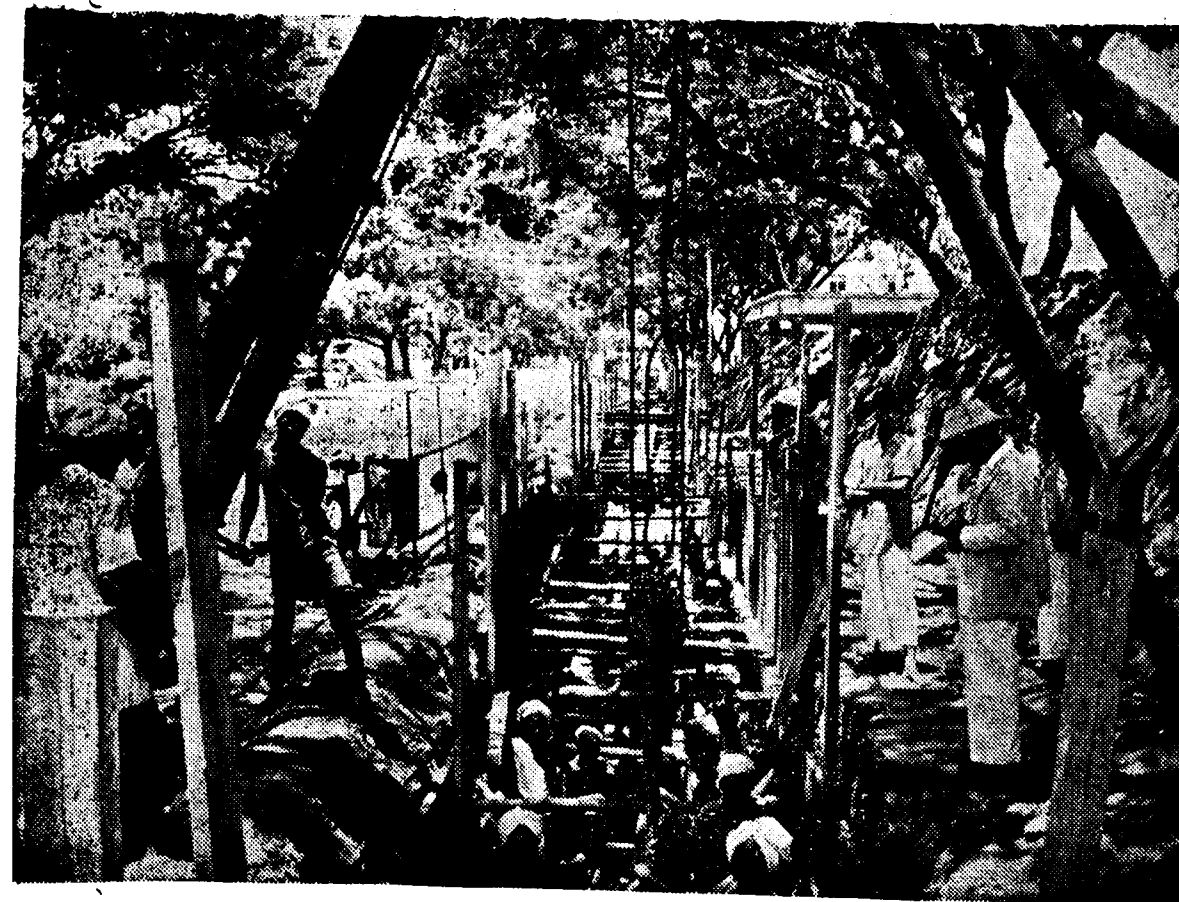
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