

Peoples Health

Jan: 1927

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PEOPLE'S HEALTH.

THE PRITHVI INSURANCE COMPANY, LIMITED,

12/13, ANGAPPA NAICKEN STREET,

MADRAS 1.

AN ANNOUNCEMENT.

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 - (b) Missionary Medical College, Vellore ;
 - (c) Harley Nursing Home, Madura.

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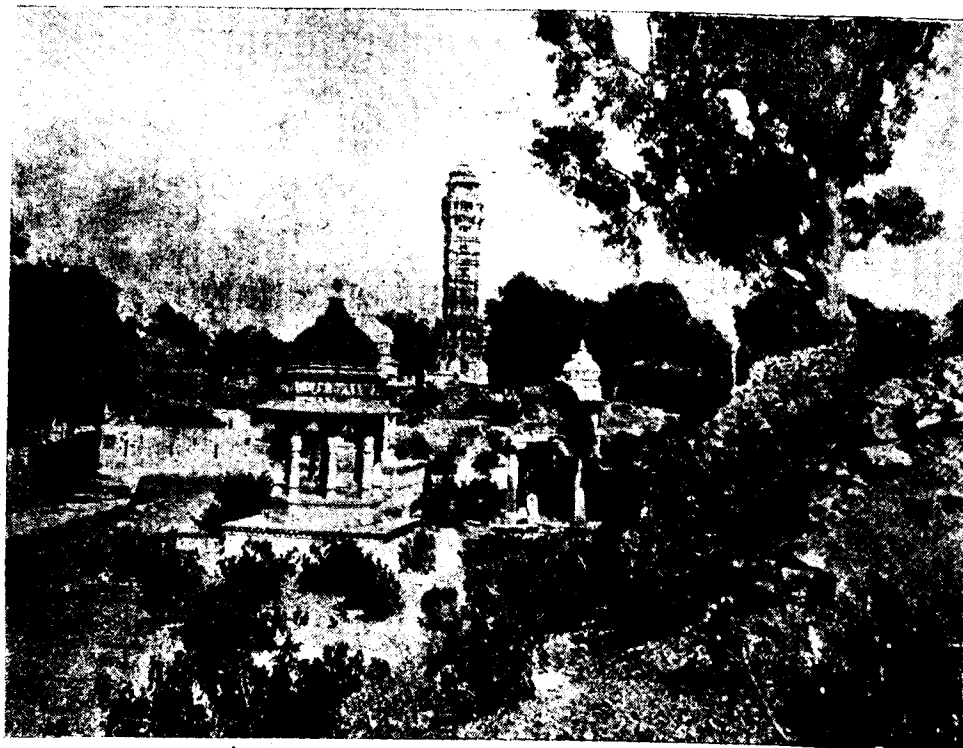
2. A pamphlet has been prepared by an expert authority on "**Tuberculosis and its Prevention**" in Tamil and Telugu. Copies will be distributed free to policyholders on application. An English edition of the pamphlet will also be available very shortly.

It is the intention of the Company, as time goes on, to afford these facilities, viz., institutional treatment and health advice in an increasing measure.

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S. PARTHASARATHY,

Managing Director.



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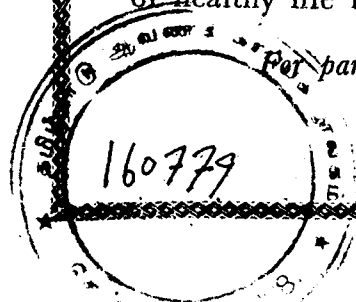
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Then visit Udaipur the city on which Nature has showered all her beauty. Feast your eyes. Here you have the lovely lakes in their natural setting among beautiful hills. And the glorious sunset is also there.

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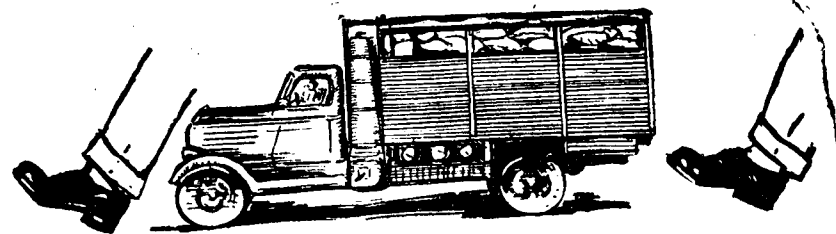
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H. D. RAJAH,
General Manager.

PEOPLE'S HEALTH.

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PEOPLE'S HEALTH.

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Mechanical Data of the Magazine

Over all size, 10" X 7½".

Size of printed page, Crown Octavo, 8½" X 6".

Width of Column 17 ems. 2¾".

Length of Column, 8½".

Number of Column, Two.

Kind of paper used, M. G. White printing.

Number of pages, 64.

Screen for half-tones, 85/100.

Type of printing press : Power.

Last date for accepting advts. : 20th of each month.

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PEOPLE'S HEALTH

A Pioneer in the Field of Public Health

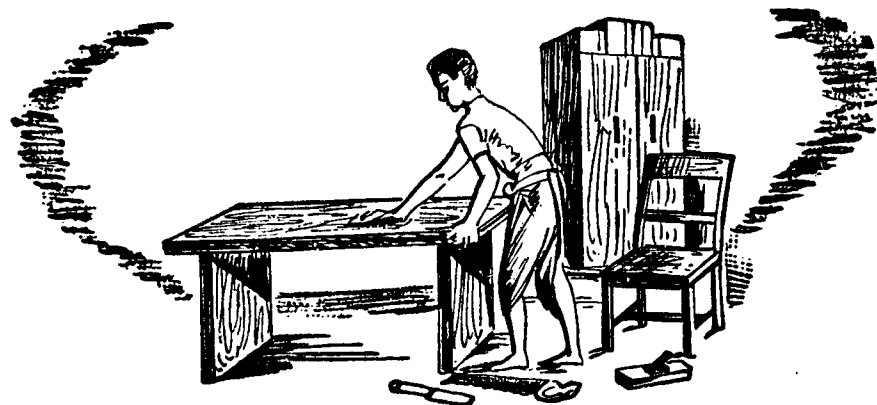
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PEOPLE'S HEALTH.

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PEOPLE'S HEALTH

A Pioneer in the Field of Public Health

VOL. I
No. 4

JANUARY, 1947

ISSUED
MONTHLY

"The best way to live is to work well. Good work is the daily test and safeguard of personal health."—Joseph Mortimer-Granville.

EDITORIAL . . .

ANNUAL ADMINISTRATION REPORTS.

These are bulky printed volumes. Innumerable tables and figures are incorporated in them. They are as a rule published long after the close of the year to which they relate. Few people care to read them. The so-called review on them has reduced itself to a ridiculous, stereotyped routine. If the writer of the report happens to be a favourite of the powers that be, occasionally a bouquet is thrown at him in the 'review.' The writer in his turn pays back the compliment at the earliest opportunity in his next report.

A radical change is called for in the presentation of the Administration Reports. The Director of Public Health or the Surgeon General or other Heads of Departments should address the annual reports of the respective departments to the Minister concerned. In England, the Chief Medical Officer of the Ministry of Health, tenders his report to the Minister of Health. Similarly here also, the heads of departments should present their reports to the Ministers concerned. The reports, instead of being a mere collection of

figures, tables and the like which do not create interest in the readers, should be presented in a form which would attract the reader's attention. The rigid, iron rules which now bind the writers of reports, should be relaxed and freedom given to the heads of departments to present their reports in the most effective form which they consider best. Bulky statistics necessarily form part of the report on the working of a department; but the text of the report should be so drafted by some responsible officer that it will grip the attention of the reader and rouse a curiosity in him to examine the tables and statements. American and English Reports are good models in this respect. It is unnecessary to add that the heads of departments should be expected to know what basic data from the actual working of the departments should be incorporated in the reports. We are sure that these officers would not abuse this privilege by airing their pet aversions and views which would be out of place in their annual reports of administration. These reports should be well and attractively printed and offered for sale to the public at cost price.



Disease Retorts :

"What! Fighting your **OWN** vested interests! Why all this **SHOW**?"

The Ministers in their turn should submit their reports on the administration of the departments entrusted to their care to the Houses of Legislature before they present their budget to them. This procedure is in vogue in England. It is a very good and useful practice worthy of emulation by our own popular Ministries.

The change of administration from the hands of a foreign bureaucracy to those of people's representatives has not changed old traditions a bit. Still the Ministers refer to themselves as "Government." Why not straight say the 'Minister of Health' or 'the Minister of Finance' as such and give a *personal* touch to the Administration? The word, 'Government' has acquired in this country a reputation for being wooden, iron, antideluvian, soulless, satanic and so on, all attributable to rank despotism. 'Government' is often deemed an airy entity which the common man cannot grasp and contact. To him, 'government' is neither a substance nor a shadow. Why then persist in using the term with reference to the actions and orders of individual Ministers? We suggest that our Ministers should abandon using the term 'Government' when they refer to their own actions in the departments entrusted to their care. This 'personal touch' would have a healthy effect on the several Departments administered by the people's own representatives. In the "Mother of Parliaments" for instance, the Minister of Health does not refer to 'His Majesty's Government' except in those cases where His Majesty's Government as such, have taken up decisions. The Minister refers to himself as Minister of Health and not as 'Government.'

The common man wants to hold some one *personally* responsible for the promotion of people's health. That is

the extenuating circumstance which has compelled us to make a reference to this aspect of the administration.

HOW TO UTILISE INSURANCE FUNDS TOWARDS PROMOTING PEOPLE'S HEALTH?

The usual plea of lack of finance which was hitherto advanced, can no longer hold water, to justify the inaction of the State in improving the environmental sanitation. As we already pointed out, what is required urgently is the *will of the State* to improve the living conditions of people. While discussing the financial implications in installing water supply schemes and in improving the sanitation of our cities and villages, we suggested that the Central Government, should divert the funds which the Insurance Companies are obliged under law to deposit in Government Securities towards these purposes. The precaution of demanding the Insurance business to deposit 55 per cent. of their investment in Government Securities is primarily intended to check any possible fraud. There seems to be no objection to utilise the funds so secured for improving the environment in which people live. We also suggested that the accumulated funds to the credit of Insurance business should be utilised in a like manner for the promotion of colonisation, town extensions, housing schemes and the like. They are, as a rule, safe investments. We also put forward a plea that the State should in its turn come forward to co-operate with Insurance Companies when they offer to do their bit of service to the people. (*Vide* December issue of 'People's Health,' page 120).

We invite special attention to an article by Mr. S. Parthasarathy under the caption "Insurance and Public

Health" which appears on page 186 of this issue. He has put forward definite suggestions for the utilisation of the funds of Insurance Companies for the promotion of people's health. The members of the Central Legislature would be doing a public service if they examine the proposals put forward in the article and see that definite steps are taken to utilise the funds in providing the essential amenities of life for the people. The Provincial Health Ministers would also be well advised to consider how far the co-operation of Insurance business could be evoked and enlisted to promote the health of the masses.

Improved health is readily reflected in lowered mortality. Insurance business would be the first beneficiary to profit directly by a reduction in the death rate. Putting it in its worst aspect, one would expect, self-interest should induce the insurance business to sponsor health programmes, stimulate health activity and finance schemes for the promotion of health. This is well in evidence in Western countries. In our own land, even indigenous insurance companies have so far turned a blind eye to this aspect of their activities. In India, insurance *per capita* is Rs. 10 while in England, it is Rs. 1,200. The potentialities of insurance in this country are undoubtedly great. If insurance business comes forward to sponsor schemes for the promotion of the health of the community as a whole, the imagination of the masses would be captured which in its turn is bound to make insurance as popular as it is in Western countries.

CHLORINATION OF WATER SUPPLIES.

Chlorine as a means of sterilising water has come to stay. It is cheap

and it is effective. These very reasons may tempt a water authority to short-circuit the recognised methods of purification of water and resort to chlorination as the *primary line of defence*. Indeed, the late Sir Alexander Houston struck a note of caution even in the very early days when chlorination was successfully tried as a sterilising agent, that it should NOT be utilised in place of recognised methods of water purification in our public water supplies. The tendency to use chlorination as the *first and primary line of defence* is evident in certain cases. For instance, the purification plant of the Madras City water supply, continues to be a delusion and a snare. Instead of putting it in proper order, the authorities depend entirely on chlorination to ensure the safety of the drinking water. Not infrequently the panicky water authority, quite unmindful of the results, resorts to doping the water with doses of chlorine to such an extent that everything which comes in contact with the tap water smells of chlorine. Coffee, tea, rice, dhal, vegetables and in short, everything smells of chlorine! The smell, at times, has been so strong that people had been driven to resort to indifferent sources like abandoned wells, ponds and other dangerous sources. Far from ensuring the safety of consumers, such a procedure definitely exposes the public to serious risks. This case-hardened attitude cannot be too strongly condemned.

So early as 1854, calcium hypochlorite or bleaching powder was used by English workers to de-odourize sewage. In 1885, the American Public Health Association recommended it as the most efficient and cheap disinfectant available. From 1892, the efficiency of bleaching powder as a sterilising agent for water supply led to con-

siderable laboratory studies. Bleaching powder was first applied in 1897, to public water supply in Maidstone, England, following an epidemic of typhoid. In 1904-05 Sir Alexander Houston used it for sterilising Lincoln water supply. The first extensive use of bleaching powder in water sterilisation was in Chicago dockyards in 1908 and later in the same year at Jersey City. At Cincinnati, chlorine was first applied in 1911. Chlorination has stood the test of experience and it has now come to stay; not to supplant the recognised methods of water purification, but to serve as a *second line of defence*. Even in the best designed and executed water purification plant, unexpected inefficiency may result, though temporarily, for reasons which could not be anticipated. Hence, chlorination as a regular disciplinary method is adopted in all modern water works.

It should be remembered that frequent estimation of residual chlorine is essential to guard against incomplete sterilisation on the one hand and over chlorination on the other. Greatest vigilance should be exercised in apportioning the dose to meet the varying circumstances and skilled supervision is essential and indispensable. It is quite feasible to produce a tasteless as well as perfectly sterilised water; provided of course, competent supervision is available.

Allegations of harmfulness of water sterilised by chlorine is heard, sometimes. There has been some loose talk among the laity, in particular, that a substance powerful enough to kill bacteria may be injurious to human beings also when ingested. The answer to it according to a high authority, is, "there are some substances which are much more toxic to human

than to microbial life; with other materials, like hypochlorites the position is reversed. The consumer does not or should not receive the treated water unless and until the activity of the hypochlorites has been reduced or eliminated by their action on the oxidisable matter in the water."

During the battle of Verdun in the World War I, there were present large numbers of troops from Indo-China. They were subject to attacks of typhoid and amoebic dysentery. It was a menace to the French troops. The water was chlorinated, but its taste was so objectionable that it was found practically impossible to make the troops use it. Col. P. Bunau-Varilla, the officer in charge of water supplies decided to experiment with smaller doses of chlorine. He found that if chlorine, immediately on being added to the water, were violently mixed with it, as for instance by passing it through a centrifugal pump, perfect sterilisation was obtained with about one-tenth of the quantity of chlorine which is ordinarily used. The bacteria were destroyed before the chlorine could be wasted in oxidising the organic matter. No taste of chlorine was imparted to the water, and the water thus sterilised was thoroughly acceptable from a bacteriological standpoint. The process is called 'Verdunisation' (*Vide* The Work of the Sanitary Engineer by A. J. Martin).

The King Institute, Guindy, had carried out large scale experiments on the 'Minimal dose' of chlorine. The results were quite satisfactory. Wherever pumping is done through centrifugal pumps and where the organic load in water is not heavy, this process can be adopted with success. The clearness of the water is, however, an important consideration, to ensure its efficiency.

DO THEY MEAN WHAT THEY SAY?

Sir Shafaat Ahmed Khan, the then Member in charge of Health in the Interim Government in opening the Health Ministers' Conference said:—"If there is a question of priorities—and planning means priorities—I think an active programme to improve water supply and sanitation in all towns and villages is one of the most urgent needs." Pandit Nehru, the Prime Minister of India, stated on that occasion:—"If funds could be available for big wars there is no reason why they should not be provided for the fight against ill-health". It is quite unlikely that the present Member for Health would dissent from these views, which appear *prima facie* so elementary and fundamental. The Bhore Committee while emphasising the importance of environmental hygiene have admitted that the subjects under consideration are of such importance and some of them raise issues of such complexity as would seem to justify special investigation before decisions can be reached in respect of them. The suggestions which they have put forward in respect of these problems are admittedly not conclusive. According to the report, they do not constitute conclusions based on such detailed consideration as the importance of the subject would require. The suggestions put forward by the Committee are but limited in their scope. They are only intended to stimulate discussion and to facilitate

further action. Having regard to the admitted importance and urgency of the subject the people have a right to expect the Central Government to constitute a Committee immediately to go into the question as a whole. Far from putting first things first, the Government of India have thought fit to give preference to a Committee for the organisation of a Central Medical Research Institute at New Delhi. We do not certainly object to the constitution of that Committee. But we do protest that the Government of India are content with lip service to environmental hygiene. The common man even begins to suspect whether the authorities do mean at all what they say. Politics have no place in the promotion of the health of the people. Party, personal or communal considerations should not be allowed to impede progress in the promotion of the health of the people.

We invite the attention of the authorities to Mr. N. V. Modak's plea for 'Environmental Hygiene' which appeared in pages 121-124 of the December issue of 'People's Health.' He has made out a cogent case for the constitution of a Committee to go into the whole question. Will the authorities be pleased to lend their ears to our appeal to constitute a committee of competent Engineers forthwith to go into the question? May we expect any of the people's representatives in the Central Legislature to take some interest in the subject?

* * * *

THE CANKER OF CORRUPTION.

"Corruption is like a ball of snow, when once set a rolling it must increase. It gives momentum to the activity of the knave, but it chills the honest man, and makes him almost weary of his calling; and all that corruption attracts, it also retains; for it is easier not to fall than only to fall once, and not to yield a single inch than having yielded to regain it"—COLTON.

WATER SUPPLY AND DRAINAGE

A CONSPECTUS OF THE POSITION IN THE MADRAS PRESIDENCY.

I. STATISTICAL PARTICULARS :

- (i) Area of British territory of the Madras Presidency : 126,166 square miles (*i.e.*, 11.51 per cent. of the area of the British India, or 7.06 per cent. of the area of India, as a whole.
- (ii) Its population : 49,341,810 (1941 census) or 19.21 per cent. of the population of British India or 14.15 per cent. of that of India, as a whole.
- (iii) Local Administrations :
The Presidency is divided into :—
 - (a) 82 Municipalities.
 - (b) 24 District Boards.
 - (c) 238 Panchayats with an income of over Rs. 5,000 per annum.

Note.—There are perhaps, some thousands of Panchayats with an income below Rs. 5,000 per year.
- (iv) How is the total population distributed ?
Total Population : 49,341,810.
Municipal (82) : 3,651,137.
Panchayats of over 10,000 people (129) : 1,936,656.
Major villages of over 10,000 people (38) : 466, 963.
Villages from 5,000 to 10,000 people (830) : 5,365,336.
Other Villages : (34,757) : 37,144,237.

II. What is the present position in regard to Water Supply and Drainage?

- (i) Water Supply : Municipal.
46 Municipalities have protected water supply schemes, serving a population of 2,523,960.
7 schemes are under execution. These would serve 258,137 people.
The aggregate population which will have the benefit of water supply in the municipal areas, is 2,782,097, *i.e.*, 78.8 per cent. of the Municipal population.
29 municipalities have yet to have water supply. This population is 748,610.

COSTS : Water Supply—Municipal.

The capital outlay on the 46 schemes is Rs. 289.82 lakhs.
Estimated cost of 7 schemes under execution is Rs. 123.87 lakhs.
Total cost for 53 municipalities is Rs. 413.69 lakhs.
The probable cost for the remaining 29 municipalities is estimated at Rs. 271.07 lakhs.

(i) (a) Water Supply : Rural.

There are 129 panchayats and 38 villages of over 10,000 people.
The total population in these rural areas is 2,405,619 or 5.34 per cent. of the total non-municipal population.
7 Panchayat areas serving a population of 113,209 have water supply in operation.
For 3 panchayats, the schemes are either under execution or ordered to be executed.
The population served by them would be 50,284.
The total population of these 10 panchayats is 163,493.
This works out 0.36 per cent. of the population in rural areas.
For 119 panchayats and 38 villages of over 10,000 people water supply is yet to be provided.

EXPENDITURE AHEAD : Rural Water Supply.

The capital outlay involved in the 7 schemes is 6.35 lakhs.
Estimated cost of 3 schemes under execution is Rs. 3.75 lakhs.
Total cost involved in 10 schemes is Rs. 10.10 lakhs.
To provide water supply for 119 panchayats is Rs. 169.48 lakhs.
To provide water supply for 38 villages of over 10,000 people is Rs. 47.22 lakhs.
Total cost to be incurred is Rs. 216.70 lakhs to serve the remaining 157 units of 10,000 people and above.

TOTAL VALUE OF WORK AHEAD : Water Supply.

Municipal :	Rs. 271.07 lakhs.
Rural :	Rs. 216.70 lakhs.
Total :	Rs. 487.77 lakhs or say in round figures Rs. 5 crores

(ii) DRAINAGE : Municipal.

Of the 82 Municipalities only 6 have drainage schemes (including partial ones).
Population served by these 6 schemes is 500,657 assuming that the partial schemes serve the entire population.

In the case of 7 other municipalities to serve 455,196 people the schemes are under execution.

The total population so served by the 13 schemes will be 955,853; 69 municipalities, Drainage schemes have yet to be provided.

Cost : Drainage—Municipal.

The capital outlay involved in the 6 schemes executed is Rs. 63.99 lakhs.

The estimated cost of 7 schemes under execution is Rs. 40.16 lakhs.

The total cost involved in these 13 schemes is Rs. 104.15 lakhs.

To provide drainage schemes for the rest 69 municipalities, it is estimated to cost Rs. 630.27 lakhs, inclusive of the completion of partial schemes or say 6 crores.

(ii) (a) DRAINAGE : Rural.

No drainage scheme for any rural area has been executed. To provide drainage for 129 panchayats to serve a population of 1,936,656, the estimated cost is Rs. 369.95 lakhs.

To provide 38 other rural areas of over 10,000 the estimated cost is Rs. 94.56 lakhs to serve a population of 466,963.

Total cost for 167 units of 10,000 people and above, is Rs. 464.51 lakhs or say 5 crores.

VALUE OF WORK AHEAD :

Drainage.

Municipal areas : Rs. 630.27 lakhs.

Rural areas : Rs. 464.51 lakhs.

Total : Rs. 1,094.78 lakhs or say 11 crores.

Total value of work ahead for water supply and drainage : Rs. 16 crores to serve all the remaining municipal towns and all rural units of 10,000 people and above.

Note.—(i) The foregoing figures have not taken into account the City of Madras.

(ii) The completion of the programme in the matter of providing water supply and drainage facilities at a cost of 16 crores would serve only 12.5 per cent. of the population. Provision for 87.5 per cent. should still be made.

* * * *

[We shall be glad to publish similar statistical particulars from other Provinces also. We invite the authorities to co-operate with us by furnishing them. The publication of these figures would go a great way to help to visualise the problem of water supply and drainage which faces the country. An analysis of the figures so published may possibly help the authorities to hammer out a programme for immediate adoption.

—Ed., P.H.]

VILLAGE SANITATION

BY

DR. T. S. S. RAJAN,

Ex-Minister of Health, Madras and the Father of the First Public Health Act in India.



Environmental sanitation is a big word and it covers a lot of conditions in which people live, which are rarely observed or even casually noticed. Environmental sanitation or environmental hygiene as it is called, includes the provision of good and abundant water supply, provision of an efficient system of drainage arrangements, collection, conveyance and disposal of refuse, the preservation of the purity of the air we breathe, provision of clean storage of food and preservation of food and the like. It includes town and village planning and layout and also the design and construction of healthy homes in healthy environment. It should be obvious that environmental sanitation is a specialised subject. Even if the environment is rendered healthy, it should be *maintained* in a healthy state and this can be done only through education of the proper type.

Living in a tiny village as I do, I wonder whether the cluster of huts which constitute the place was ever planned by anyone and whether even a moment's thought was really bestowed on its location. How it ever grew is a wonder. The early environment which produced the village, though shrouded in mystery, still remains. One obvious, imperishable environment is a sand stone hillock about 400 feet high, crowned by the inevitable temple—indestructible monumental structure of our ancient culture. The village has certainly grown out of the temple. Considered from the point of view of sanitation, a better location of the village in the vicinity cannot be conceived. Perched on the basal slopes of the hill its drainage is perfect. The soil

is gravelly and dry. Whoever selected the site has exhibited commonsense and an innate knowledge of hygiene. Water supply is plentiful in the perennial flow of the Cauvery and its branches which run through the village. During the monsoon the manmade hollows harbour mosquitoes with all the attendant evils. The soil is ordinarily dry. In these environments one should expect that the village is sanitariously sound; but it is a pity that it is not so.

Indiscriminate fouling of drinking water sources and promiscuous defecation in all available open spaces, are shockingly disgusting. There are no sanitary conveniences. Even if there be one, I am sure people will not use it! There seems to be an incurable urge among our villagers to expose themselves during defecation without any sense of shame. Otherwise, the preference for open air for both sexes even with the provision of excellent sanitary conveniences is inexplicable. Even before providing a village with suitable sanitary convenience, it would be necessary that our people should be trained to seek privacy in answering nature's call for two reasons :—

(1) Ordinary decency requires that indiscreet exposure of the body is highly objectionable during the performance of natural and necessary functions which can neither be stopped nor postponed. A minimum of privacy is essential and should be provided for.

(2) Decency varies with the training of the individual and the society in which he lives. There is the question of public danger. Using every open space as a latrine should inevitably lead to infection spreading and affecting the health of the entire community. The water supply would get contaminated resulting in epidemics of cholera; there is the hook-worm infection and many other evils which are not, as yet, understood by our villagers. The ordinary villager does not realise that his thoughtless acts may prove to be a common danger, often of a grave type to the community as a whole. The first step should therefore be to explain to the villagers the seriousness of the age-old habits he is accustomed to with a view to enlisting his co-operation in the maintenance of his own health and that of the community. But propaganda by itself without the provision for facilities would be of no avail whatsoever.

The villagers and even many of our townsmen have to be taught how to use a sanitary convenience. For, the success of any scheme of improving sanitation largely depends upon how the services provided are utilised. Some time ago, I was shown a public sanitary convenience in one of our big cities by the sanitary authorities. I found that the principles underlying the design were perfect in themselves. The Engineer who designed it had exhibited considerable ingenuity in complying with modern sanitary requirements. The work was executed strictly according to plan. Every care had been

made in it to meet the habits of the people for whose benefit it was designed and constructed. Quite a large sum of money had also been spent in its construction. To my utter dismay and disgust, I found the sanitary convenience so thoroughly misused that all the safety arrangements so elaborately designed in its construction, had all been defeated. The whole place was littered with nightsoil. The condition of that modern sanitary convenience was not dissimilar to that of an ordinary conservancy latrine in a neglected state! This case shows that though an up-to-date convenience had been provided, the knowledge of its use is very important. If this knowledge is not imparted to the users the whole scheme would be declared an unqualified failure. A mental environment should also be created for the success of the scheme. Whenever an innovation of this kind is introduced, it is essential that a qualified attendant should be there to put the people in the way. It would be a pennywise pound foolish policy to stint money in the employment of an attendant.

Sometime ago, I called on Mahatma Gandhi while he was at Bombay. I went there just to pay my humble respects to him. He was alone then. "Are the people still fouling the sacred banks of the Cauvery?" was the first question he shot at me. I was, I must confess, taken quite unawares. I regretfully answered "Yes, they still do." He looked very sad when I gave him this answer. "Is there no way of solving the problem?" he asked again. I said "Yes, there is. We have to guard the river banks and set punitive laws of the Health Act in motion for some time against the offenders till the old habit wears out." He said, "I know you are an old terrorist and I am not surprised at your suggestions." He

then recounted an episode which happened at Wardha some years ago. Mira Ben, the English lady of the Sevagram Ashram, undertook to correct this disgusting habit of our people in a non-violent way. She first started doing *bhangi's* work in the locality and began cleaning up the place in the hope that the people would be put to shame and may not repeat the offence when they saw *her* doing this work. The next day she found the place as filthy as ever before. So Gandhiji asked her to clean up the place over again and put up a shed wherein she could stay on the spot, watch and see the effect. The people did not foul her shed itself but the environment showed no improvement. This story goes to show what a difficult task is ahead of us. If this were so in a place like Wardha, what about the remote villages and the villagers living in out of the way places? But this habit should be prevented and this can be done. There are many remedies. Let me state a few of them:

- (i) Watch over the source of drinking water supply and prosecute people if they offend the rules; create public opinion against the offender.
- (ii) Education through schools—of teachers first and their students there-

after on principles of sanitation. Theoretical instructions will not serve the purpose. The principles should be demonstrated in practice. Special attention should be paid to disposal of excreta. It should be rendered innocuous and turned into manure. These require practical demonstration. No amount of classroom lectures would bring home to the minds of people the exact *modus operandi* involved in the process.

(iii) Devising suitable places for defecation in or near about the village in consonance with the habits of the people and yet make scientific disposal of nightsoil practicable. I shall describe one such method when I write next to "People's Health."

Despite all handicaps, attempts to improve the sanitary conditions of villages, should *not* be abandoned in despair. We can still succeed, provided we launch upon our programme with firmness. America is the most advanced country in the world. Staggering advances have been made in that country in sanitation. Still, see what Smillie says in his book, Public Health Administration in the United States, under Health Education and Publicity:

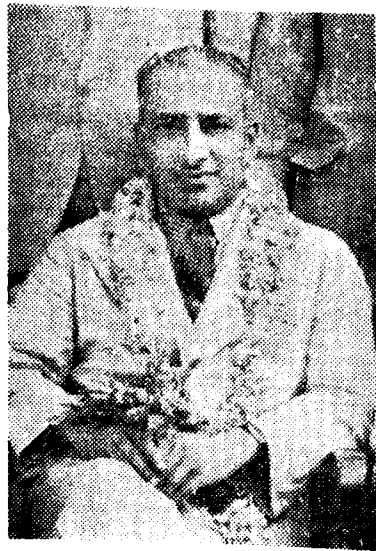
"The chief difficulty has been that adults of the present generation did not receive thorough instructions in principles of hygiene during their elementary school training. Their scientific information is limited and their ideas are often bizzare-founded on superstition and misinformation. Furthermore, adults are slow to receive new ideas. Their habits and customs have become fixed, prejudices are established, their pattern of their life is formed; old ideas that are well established are changed with difficulty. An excellent example of this fact is the opposition, inertia and obstacles that the health officers of the south have faced in attempting the installation of simple pit privies in rural portions of the southern states for the control of hookworm infection. The people understand the mode of infection of parasite, they are willing to take treatment, but many of them will not instal or use sanitary toilets."

RAMBLINGS OF A HEALTH WORKER

BY

LT. COL. G. M. GANAPATHY, C.I.E., M.C., I.M.S. (Retd.).

If ever an attempt is made to assess the trend of Public Health in India in its modern form since its introduction to its present stage of development, it would not require much effort to realise the tragedy of the fruitlessness of experience and the apparent unteachability or indifference of her mankind. Although there has been unequal progress in different provinces yet the aim of public health workers to secure uniform and universal progress throughout India has not been attained as yet. One is tired of hearing about the sub-continent of India thereby leading one to the inevitable conclusion that it is not possible to secure uniformity in a land occupied by different communities with different ideologies and standards; but such an attitude must be brushed aside as a 'Counsel of despair'. The daily newspapers give us an idea of epidemics occurring with clockwork regularity every year in some part or other of India. But have we as yet succeeded in stamping out these pests? All that one can say is that we have controlled some of them but not removed them root and branch—a very unflattering position to find a country in. Here it must be said straight-away that the present development or progress is due in a very very large measure to the Government authorities but the response from the public at large has been either absent or very lukewarm indeed. It is obviously the duty more than ever of the present and future public health workers and leaders of the people to get under the skin of the masses and create in them an enthusiasm for their own well-being by making them absorb the essentials of public health from a practical point of



view. Another important factor which goes hand in hand with public health is the economic factor. Unless and until a human being is kept from starvation he cannot be expected to take any interest in what he is bound to designate as 'new fangled ideas' propagated by the public health department or any other. It must however, be admitted that there is much to be said for this attitude of the common or garden man; once he has been enabled to get over the anxiety of finding food, it would be easy for him to show a lively interest in other matters which have a direct bearing on his well-being and co-operate. The problem of education has not been touched in this article as its importance from the public health point of view cannot be over-emphasised.

LOCAL BODIES.

As regards Local Bodies it would perhaps be pertinent to ask how much they have contributed towards the progress of public health. With the

exception of a notable few, their general attitude has been one of treating the Public Health Department, as a necessary evil and a nuisance not deserving encouragement financially or otherwise, unless compelled to do so by the powers that be. Even the Public Health Officers are subjected to a hostility thoroughly undeserved, which cannot conduce to the efficient discharge of their duties—the contributory cause to this being that these officers are treated as subordinates of Local Bodies whose duty is not to argue but to carry out orders however unpalatable, lest through a no-confidence motion their transfer to another area is demanded. It is not meant to convey that these officers are paragons but security of length of stay in a particular area and encouragement are essential before any further progress could be made. To overcome this obstacle it has been suggested in more quarters than one that the Health Officers should be placed on the same basis as District Education Officers in the sense that the latter have the power to recommend the withholding of a grant or perhaps even threaten to hold it back. This may not be the ideal state; but it certainly will give the Health Officers the desired freedom to carry out their duties and institute advances in public health within reason. The Public Health Act of Madras has given the Health Officers power to appoint extra staff and purchase extra material during epidemics without a reference to the Local Body concerned with the result that there has been no unavoidable delay in tackling them. If such powers are given judiciously in the administration of the other branches of P. H., it will be all to the good of the people as Health Officers being human knowing their limitations and the powers they possess, are not likely to use them in a manner prejudicial either to the

people or to the chances of Health Officers advancement in their official career. It is only when local bodies begin to realise that public health is as integral a part of the nation building departments as any other, can a change in their outlook take place. Such a change cannot but bring in its train a volume of influential public opinion for the betterment of their health conditions. How long one has to wait before this desideratum materialises, is a matter which no one can forecast with certainty but the material is there waiting for the necessary impetus, which only the right thinking people with no axe to grind of their own can give. Finally, it is discouraging to note that the Local Bodies who have enjoyed Self-government for a very long time have not utilised the nation building departments to the fullest extent and as far as possible.

GO-OPERATION OF PUBLIC HEALTH DEPARTMENT WITH OTHER DEPARTMENTS.

The Public Health Department must as everyone knows be in close contact with the other nation building departments but it is common knowledge that this has not been the case. The teaching of Hygiene in primary schools is of recent origin and any syllabus drawn up for this purpose must be done in close collaboration with the P.H.D. It is understood that this procedure is being adopted.

It is not the intention to criticise any department but to draw attention to the fact that the habit of working in water tight compartments exists, taking no account of effect of this pernicious system on the health of the people. Experts in every department are very touchy but there exists no reason why consultation with the affected departments should not take place before a

scheme is launched. Villages and small towns which had never known malaria are now full of it consequent on burrow pits and irrigation schemes. If the connected departments had worked together, the danger would have been mitigated to a considerable extent and the health of the people would not perhaps have been subjected to the horrors of this disease as obtain to-day. The time has come to appreciate the fact that no department can be independent of the others and therefore everyone has to pull together for the common good from all points of view.

POSITION OF WOMEN IN PUBLIC HEALTH.

It is a truism that no nation can advance without a corresponding progress in the status of women. Even this patent fact was overlooked till a few years ago. Now-a-days it is pleasing to find that a few women are very keenly interested in Public Health and have come forward to do their bit. It is a beginning in the right direction but they are required in very large numbers before any advance is made and this can only be done when men give them the respect they are entitled to and also freedom of movement in the discharge of their duties without let or hindrance. While the position of women engaged in Public Health work in towns is fairly safe, one cannot but admire the girls trained in Institutions who are sent out to rural areas. Here in spite of inconveniences and lack of personal safety, they are doing a piece of work worthy of the highest encouragement. Their number in rural areas is necessarily limited for the reasons mentioned above and until a group of officers with their wives are stationed in the Headquarters of a group of villages, nothing startling in the rise of their number can naturally be expected. The presence of these

officers will be a guarantee and act as a break against the depredatory nature of some men who have one standard for their female relatives and another for those who are strangers. Women are required in their hundreds, perhaps thousands, to take up the work of nurses, mid-wives, etc., but it seems that the condition precedent to this venture is the improvement in the social relationship between man and woman which will have to come rapidly if this country is to take its rightful place in this world. It does not seem necessary to dilate any more as the facts stated are within the common knowledge of every person.

SLUMS.

There are no two opinions regarding the necessity for the elimination of slums which are undoubtedly a disgrace and an eyesore. But the question is, will the destruction of existing slums and substitution of modern sanitary buildings solve the problem and create a heaven on earth for the unfortunate slum dwellers by their transfer to new and healthy environments? The answer from experience is definitely in the negative; unless the people involved are first taught the elements of Hygiene by propaganda and precept before such transfers take place. Good buildings erected for this purpose have been found after a year or two of occupation to be in a worse state than the slums, because the elementary precaution of training the people was not undertaken. Our people are very receptive to kindness and if this is coupled with firmness a solution is capable of attainment.

POPULATION.

Much has been said and written in and out of season about the terrific growth of our population and the resulting inability of India to support

her inhabitants. True as this may be, cannot ways and means be found to cope with the increased burden? With enlightened methods of cultivation by which land could be made to yield two or three times the present yield, there appears to be a part solution of the problem. Further as is patent to everyone, the enormous increase in the population of a country is generally associated with poverty. The improvement in economic condition with its concomitant higher standard of living is bound to act as a very strong factor in limiting the growth of families, since this standard cannot be maintained if there is no self-imposed restriction. It is when this stage has been reached that people will come forward of their own accord for scientific aid to help in this restriction. The advocacy of contraceptive measures as a wholesale measure at

the present juncture cannot succeed as the factors for such a demand are conspicuous by their absence, except in the hands of a very small proportion of the population.

Finally, attention must be drawn to the excellent Bhole Committee Report which is the result of earnest men having endeavoured to give a lead and new orientation to the public health problems of India. Will the provinces undertake to give the report a fair trial or will it be put aside for lack of necessary funds? While public health cannot produce immediate and theatrical results with profits like some other departments, it cannot be gainsaid that in the long run a healthy population in India will be an economic asset instead of the economic loss that it is to-day on account of its unhealthiness.

SOCIAL MEDICINE.

In interpreting Health and Disease man must be considered in relation to his social and physical environment. The study of disease as a community problem demands that the approach should be on a wide basis so as to include social and economic factors such as housing, nutrition, poverty and ignorance of the hygienic mode of life. The causative organism of tuberculosis, for instance, is widely spread in highly industrialised and urbanised communities and yet the incidence of the disease shows a remarkable variation depending largely on variations in social and economic conditions. The remedial and preventive measures that are adopted in respect of individual patient will largely fail to achieve results, if these factors are not considered and if the necessary steps are not taken to neutralise their harmful effects. A recognition of these facts has led to the emergence of 'Social Medicine,' which has widened the conception of disease from the narrow view of tissue changes and microbial and other specific causes by the inclusion of social, economic and environmental factors which play an equally important part in the production of sickness. In consequence, social medicine is beginning to develop its own methods of study of the community health problem. In the words of Professor John A. Ryle, 'the socio-medical survey, that is to say, the combined social and clinical study of community health and sickness, often with special nutritional and economic assessments and careful sampling and controls,' is coming to be accepted as the correct method of approach to such study. Side by side with such surveys controlled experiments directed towards influencing the life of selected communities through the provision of improved health services, better nutrition, a cleaner environment and health education have become recognised as a valuable method of extending experimental practice in the laboratory into the field of community life. This wider outlook has brought into the sphere of social medicine many workers besides the doctor. They include the public health nurse, the hospital social worker, the nutritionist, the Public Health Engineer, and the statistician. (*Report of the Health Survey and Development Committee, Vol. II, Pages 7 and 8*).

INSURANCE AND PUBLIC HEALTH.

BY

S. PARTHASARATHY.

An insurance company can more properly be called an 'adjuster of losses' than an 'insurer against risks'. For its primary function is to distribute the losses suffered by an individual subjected to a hazard on the community of its policyholders. In life insurance it performs this function in such a way that the person who emerges out unaffected by a hazard seldom realises that bits out of his savings have been cut off to meet other people's losses. This is achieved by the engrafting of a "Savings Scheme" in ordinary life insurance which enables the man who survives the protected period to get back a good part of his savings. As an intermediary between the individual and society the insurance company performs a social service and as the custodian of people's savings it performs a function of national importance.

The stability of an insurance company depends upon the continuance in the long course of future years of those conditions assumed by it in its calculation of the premium. The main assumptions are those relating to the rate of mortality in age groups, the rate of interest which could be earned on its accumulations of premiums and the percentage of expenses of management to income. Should these assumptions prove incorrect and should there be adverse violent fluctuations, then the stability of the company would be impaired. The capital of a company except perhaps in its early years would hardly be sufficient to stabilise its position. Older and wiser companies therefore take another bit out of the poor individual's savings to provide a reserve to meet such contingencies.



The insurance department of the Government of India are concerning themselves mainly with the task of supervising the affairs of the insurance companies, of checking fraud and preparing statistical information. The legislation sponsored by the department and now before the Legislature is concerned mainly about the safety of investments of companies and about the economy of management. Legislators will no doubt claim that these measures have been conceived in the best interests of policyholders. But if the position were to be investigated, losses suffered in the past by policyholders either as a result of improper investment of funds by companies or as a result of extravagant management when compared to the total sums paid out would be very insignificant. I am not suggesting that legislation is unnecessary in these directions but they have assumed too large a stature in the public eye thereby shadowing the

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real issues before us. We have seen that a lower mortality rate, a higher interest rate and lower expenses are the factors which would enlarge the size of the savings of policyholders by bonus additions. It is not within the competence of an insurance company to keep down the mortality rate except to a very small extent by exercising strict selection. This has the effect of shutting out a large group of people who are in need of insurance protection more than others. Nor is it within the competence of the company to regulate the yield on its investments. The present tendency on the part of the Government is to pursue a 'cheap money' policy and to decentralise the responsibility for the maintenance of public health in the country. Both these tendencies are bound to affect adversely the savings of policyholders. We have to compare the figures of insurance per capita in India which is Rs. 10 to that in England which is Rs. 1,200 to realise the future potentialities of insurance. Insurance companies impelled by competition have at least done a great service in popularising insurance which the Postal Department of the Government of India and the State Insurance Departments of some Indian States have failed to do. But I am not on the question of nationalisation. That question involves greater issues than a mere evaluation of individual initiative and competitive spirit. At this stage we are concerned with the interim period during which insurance will continue to function under the present framework.

I am of opinion that the savings of people effected through the media of insurance should be earmarked for being employed only in those schemes which have a tendency to minimise

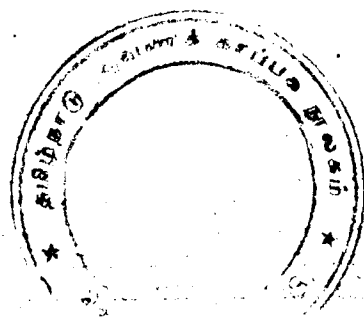
those perils that people have insured against. The Select Committee of the Legislature, according to press reports, have shown a preference to legislation requiring insurance companies to invest their entire life fund in Government Securities. Even to-day out of the total insurance assets of over Rs. 100 Crores, more than 81 Crores are invested in Government of India, Provincial Government Securities, Indian State Loans and Loans of public authorities. *The assets of insurance companies should be apportioned among the provinces according to the distribution of policies as loans to be utilised by them in schemes for promoting the health of the people of the province.* Legislation may be passed requiring the insurance companies to keep deposited with the Reserve Bank their life fund on which they would be guaranteed a rate of interest approximating more to the rate assumed in the life tables of companies than to the borrowing rate for the time being of the Government of India. Such a measure with legislation limiting the percentage of expenses would mean that those factors on which the progress of insurance depend would be stabilised.

There is great need for finance to promote measures of public health in the provinces. The provincial Ministries on account of political entanglements are unable to divert sufficient funds for these purposes. The statistics of the Madras province for the year 1940-41 show a surprising disparity between the urban and the rural death rates. *For instance the death rate in rural areas in males between the ages 20 to 30 is 7.5 per thousand while in urban areas it is 12.02.* To a layman like me, the inference seems to be that the higher mortality in urban areas

should be ascribed to bad housing conditions and defective nutrition: for, urban areas enjoy over rural areas better sanitation, protected water supply and medical facilities. The housing problem to-day is engaging the attention of some of the ablest brains throughout the world, be they politicians, architects, businessmen, or medical men. *Large funds would be required to finance proper housing schemes and one can see a great impetus to such schemes if insurance funds are diverted to that purpose.* The investment would also prove remunerative to the Government and would justify a higher rate of interest to the companies. A policy pursued on these lines would pave the way for the ultimate nationalisation of insurance. In fact, the companies would more or less be acting as agencies of the Government for the purpose of effecting insurance policies. The policy of the Government should be to encourage the canalisation of the savings of the public in insurance so that larger and larger sums would be available for being employed in national welfare activities. In England, the largest suppliers of funds to local authorities, either for water-supply schemes or for development of new area for housing, are the insurance companies.

"While the many social services which this country has instituted represent different principles in the distribution of financial responsibility, the provisions they make have a common origin in the annual income of the community, derived from its common productivity and its accumulated savings. There may come a time and, in fact, there has come a time, when the State may justifiably turn from searching its conscience to exploring its purse."

(From the Report of the Royal Commission on National Health Insurance).



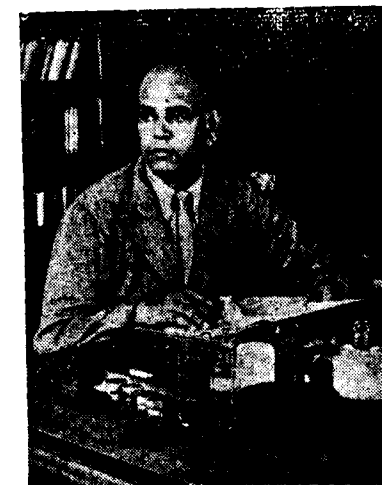
THE WAY TO PEOPLE'S HEALTH

BY

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

The infant, that is, the child from birth to the end of the first year of life, is generally under the care of the mother all the twenty-four hours. It is not sent, usually, to any school or institution under ordinary conditions. It is, however, found necessary to have, in labour centres, *creche's* for the babies of working mothers, if there is none at home to look after them during the absence of the mothers from home, when they are out on work. The houses of the better classes may provide a nursery room or hall which is solely devoted to be used as the living and playing space of the child crawling on all fours. There is one important point to be borne in mind in this connection. As the child crawls on all fours on the floor and as it is natural for such children often to put their fingers or the hands into the mouth, the cleanliness of the floor of such nursery rooms or halls is of paramount importance. Persons entering the house from the streets should not walk straight into the nursery without thoroughly washing the feet clean of all street dust and filth which are likely to be sticking to the feet and which are highly infective.

From the beginning of the second year of life the toddler stage practically begins. The child tries to stand up and walk during this period (or even from an earlier time). Accidents from falls are likely to happen now; and it is the duty of the mother to watch the child carefully to see that the child is not seriously injured by such accidents. It is not to be understood by this that the child should be prevented from making its attempts at standing up or walking. It must be



[This is the fourth 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.]

given the freedom to take some risks. Only, we must guard the child against possible injuries—and this must be done without arresting the undue attention of the child.

As the child gets older its physical developments enable it to have greater activities in respect of moving about. It requires a wider sphere for its movements. This desire can be satisfied by taking the child out to parks—if there be any—or other open spaces in the town; or, if in the villages, to the open fields in the countryside where the child may satisfy its curiosity and get into touch with the wider

world. If a properly conducted nursery school be available near by, the child may be sent to that school for a few hours in the day. The child will have the opportunity, then, of playing with other children of its age, and learn to live and get on among equals. Now, the toddler gradually gets into the pre-school stage. It may be sent to the Montessori school now in which the child will have the freedom to learn for itself, by the exercise of its senses, about the things that surround it. The Montessori school provides free scope for the play of the child's talents and initiative and develops them. In this connection, it will be useful to have an idea of the Montessori method of teaching these young children. It will enable us to understand how the school can be utilised by us for our children. Therefore, a brief description of this method will not be out of place here:—

THE MONTESSORI METHOD.

This method is an adaptation of many of the principles developed by Seguin and Froebel, combined with those she herself laid down from her own experience, in educating backward children. The method is based on the importance of training and educating the senses, especially the sense of touch which is so much neglected. By this method the children are trained to do the tasks of daily life in a scientific way. This leads to early control of the muscles and to some extent to a symmetrical physical education. This system is now applied to all children, backward and normal. Irksome discipline and restraint are done away with. Restraint is exercised only when the child's activities interfere with the rights of others. Individual initiative is very much encouraged. The pupils are allowed the

liberty of assuming any comfortable posture or attitude, *i.e.*, sitting, lying or standing, while they are at their self-selected tasks. Self-expression and individuality are the keynotes of the system. A complete set of apparatus is designed by Madame Montessori to teach the children. This system designs to teach them how to do the ordinary duties and tasks of daily life, through practice in doing them well, while at play. This method directs the play impulse to useful activity. It develops the sense organs, thereby stimulating the brain. It adapts the principles of home life to school life. At the same time, it permits the child to follow its own inclinations while it employs the prosaic duties of life for education purposes.

The upbringing of the pre-school child requires special knowledge and training. The period between the end of the first year of life and that of the sixth is the most plastic time in the life of the child. It is the period of rapid learning when the child's memory gets stocked with facts and experiences. During this period the child must learn the ways and means of living. Now its senses of sight, hearing, touch, smell and taste are exercised; and their experience is recorded on its memory. He then learns to handle, walk, talk, understand, feed himself, dress himself and do scores of other acts that are essential for him to know for living normally among his fellow beings. In fact he must learn the social customs and manners; and in learning this, he must learn the fact that he is an individual living among others like himself in this world; and that he has to adjust himself to them and the realities in it. He must learn this without any conscious effort, from the influence of examples of the behaviour of those among whom he lives.

The first thing for the child to realise is that he should give up his feeling that he is the centre of the world round which every thing should turn and that all others in the world are intended solely to cater to his desires and pleasures and minister to his wants. This feeling he acquires on account of the constant and often necessary attention paid to his needs, particularly in the earlier period of his life, by his parents and near relatives. He must learn to depend more on himself than upon others. He must learn to take a pleasure in doing things for himself. He must learn to give and take. Then alone will he be taken as a welcome member of society or group of his companions. He must learn to give up the habits and behaviour that please himself, but that cause pain, unhappiness or discomfort to others. He must learn gradually that he cannot have pleasurable experiences always; and that he must put up with any unpleasant ones, now and then. In fact, the foundations of behaviour consisting of initiative, adjustment to his group and due obedience to authority, must be laid only in the pre-school child.

There is one fact, however, to which reference has to be made in this connection. The parents seem to feel a heavy responsibility about the burden of learning that has to be laid on the young child, before it goes to school. It has to be noted that a major part of this burden of both teaching the child and the learning process of the child are borne without either the parents or the children being aware of it. We do not teach the child with a conscious view to teach it to see, hear, smell, walk and do many other acts involving the development of human relationships. Our admonitions or precepts bear little relation to the success or failure of our

conscious efforts to teach the child during this period. How, then, does the young child learn? It learns by imitation. By imitating the parents, the child learns the mechanics and manners of living and learns to attach definite values and significances to certain emotional conditions and relationships. The actual experiences of living among the emotional attitudes and relationships that exist in the world—which consists, to begin with, of his father, mother, and himself—also teach him in a sort of direct way. In short, the child teaches himself. By observing the pre-school child in the family, one can often know the ways and manners of the parents and the household. As the child goes through life it continues to attach these very values to all similar situations and relationships. He looks upon the whole world as he regarded his parents and other members of the household. And he expects the inhabitants of his surroundings to act towards him in the same way as his parents and others at home do.

During this period, at first, the child feels that it is small and helpless in a hostile world. Therefore, it will have to seek somebody who will protect and love it and be kind to it. Later, he sheds the fear and feeling of helplessness. He realises his own place in the family or society and feels that he is a wanted member. Then he begins to do as his parents do, by imitating them; and he derives pleasure out of doing things for himself. Later still, he does things independently of the parent altogether. At every stage the child gets satisfaction by gaining a certain degree of independence. These experiences may be gained in a pleasant way or in an unpleasant way. But it must be gained at all cost.

The child learns clearly what its parents expect of him; but whether he accedes to their desires or not depends on which gives him better satisfaction, whether by doing what they want, or by not doing it. The training of the pre-school child depends, therefore, more on the underlying attitude of the parent towards him than on what the parent does or says. A child, with his ready perception of how the parent feels, senses readily and rightly their underlying attitudes; and reacts to them rather than to the parent's attempt at training.

Child's personality is formed directly on the emotional attitudes and relationships which exist between the parents on the one hand and the child itself on the other. This interplay of emotional relationships leaves a very deep impression on the plastic personality of the pre-school child. The adjustment of both parents to their own lives and to each other affects their attitude to the child. And it is this attitude, as much as any training methods that influence the formation of the personality and the development of the traits of behaviour.

There are certain parents who are over-conscientious and who find their lives fairly satisfying but who dread, lest they should make some mistake, in handling the problems of their children. This type of parent is rather common at the present time, particularly among intelligent people; they want to do the best for their children; and their attitude of fearfulness is almost as destructive to the upbringing of the child as a more serious maladjustment would be. Constant apprehension and criticism make the children feel that they are no good and they are not wanted; and so they will begin to attract the

attention of the parents by undesirable behaviour.

It is safe to say that the personality and the behaviour of an individual child are moulded during his pre-school years by the interplay of the emotional attitudes and relationships between his parents and himself. The development of personality in a child depends on the satisfaction he derives of his basic psychological needs.

The important consideration of habit formation should be taken up at this stage. First, cleanliness should be made into a habit with the child. The average child has no idea of cleanliness. It is all one to it whether it is clean or dirty. He has no aversion to either state, to start with. There is this distinction between cleanliness and uncleanness from the child's point of view; it is easy for the child to remain dirty; but it is a trouble and bother to become clean. This distinction is clearly realised early by the child. When we try to impress on the mind of the child the desirability of being clean as against its being dirty, we are as it were, on the offensive. The child feels that we interfere with his freedom and so he takes an attitude of resistance. But if we can get the child to seek cleanliness, of his own free will as a part of his activities, we can attain better success. By establishing a routine of cleanliness at fixed hours and sticking to it, the thin end of the wedge may be driven. Outside the period of routine, the child should be allowed freedom to do as he liked, *i.e.*, we should not prohibit the child getting dirty. The child that remains immaculate during his playtime is apt to become an indolent child. No child that works and plays as actively as we wish him to work and play can possibly remain clean during the playtime.

Every child's day begins and ends; meals, nap and toilet punctuate the time between the beginning and the ending of the day. The other activities have to be fitted into the intervals between these punctuations. If at these pauses in the eager activities of childhood we interpose the routine of cleanliness, washing will not be such an unwelcome or unpleasant item of the routine. Of course, it cannot be denied that it is an interruption of the child's chosen activities—and probably an unpleasant one to start with. What we should instil in the child is the idea that he should wash not because he is dirty but because he should be clean before it takes his food—rice, dhal, curry, cake, pudding, milk and fruit. This item of the routine must mark the beginning of a pleasant item of the same routine—meals. To get the child to follow this routine, it should not be encumbered with inconvenient and unpleasant details. The essentials must be insisted on and the non-essentials must be discarded to begin with. Tidying the hair and clothes and cleaning the finger nails must be encouraged. The child must be allowed to do this by himself as much as possible. They are clean habits as well as good manners. The child should be taught to think of the practice of eating any fruit or candy, with horror, when he does so without washing the hands, especially after a visit to the bathroom. Bare essentials of cleanliness should be maintained in the routine. In these circumstances, the child will consider it a pleasure to have a wash. Again, if the accidental falling of soap suds into the eyes and the smothering way of washing the face are avoided during a bath, the child will not dread a bath. In the tropics, a bath is a pleasant experience. Children generally, en-

joy it—nay they revel in it. This pleasureable experience should be availed of in instilling habits of cleanliness. The time, temperature, and frequency of the bath, are matters which are adjustable to circumstances—at least one bath a day in the tropics and washing the hands after toilet, before eating or handling food and after a visit to the lavatory, are essential to health and decency. They are not matters of expediency. Children should also cultivate the habit of cleaning the teeth and fingernails. Brushing or combing the hair is a matter of tidiness and also cleanliness of the hair. The age at which the child may be encouraged to assume the responsibility of keeping itself clean varies. Usually, it asks the mother to be allowed to do some of these acts for itself. It must be permitted to do it. When a child is given the responsibility to keep himself clean he must be given facilities for it. Too large a piece of soap, too large a size of towel or vessels in which the water for bath is to be handled, and too hot or too cold the water supplied for bath are all great inconveniences that cannot be put up with by the child. These are difficulties that cannot be overcome by him, himself. We must make it easy for the child to keep clean. It must be given the chance of feeling the pleasure of keeping clean. When a child is dirty, hot and tired after play if he is given a bath, he will learn to enjoy the luxuriousness of it.

There must be a programme for the training of the child for habit-formation. This training relates to such processes as elimination, eating, sleeping, dressing and playing. These habits are important for the physical and social development of the child. Of course, these are not ends in themselves, but they are the means to the

end of independent social existence in this world. It will be noted that children thrive better and are happier on an orderly regime than on those regimes that are less organised. The following are some of the questions every intelligent mother would like to have answered :

How early shall a child be expected to acquire bladder control? When ought he to be left to himself to feed without any help from the mother or nurse? When may he be allowed to put on or take off his own clothing? The answer to these questions depends largely on the circumstances of individual variations manifested by

the children. No general rule can be given. Age factor, social habits and customs of the household and the community, eating habits as to whether they sit at table and eat with spoon and fork, or sit on the floor and eat with the hand from plaited leaves or plates, and many such considerations will have to be taken into account. So, in such matters, it is inevitable that we have to rely on our own resources and experience for a solution. No hard and fast rule can be set for it. The child will now out-grow the stage of the Montessori school and pass into the next stage.

WHAT HOPE IS THERE FOR EUGENICS?

"Many persons, recognising the importance of heredity, have become interested in *eugenics*, the science of improving the human race by the mating of sound individuals. The most notable attempt in the field of eugenics is the action taken by certain states to prevent the transmission of feeble-mindedness. These states require feeble-minded persons to be sterilised so that they cannot bring off-spring into the world. The improvement of human beings by eugenics is difficult because individuals possess so many hybrid characteristics that the transmission of particular characteristics is uncertain. Even two promising individuals may transmit undesirable characteristics if the genes of certain recessive characteristics happen to combine. On the other hand, there is little doubt that the human stock could be improved if careful mating were pursued over a series of generations. Just as Mendel developed garden peas of pure stock with which to conduct his famous experiment, so doubtless pure stock characteristics could be developed among human beings. Certainly eugenics is worthy of consideration, because children have a right to be well-born."

(Extract from "Life and Health", by Wilson-Bracken-Almack. The Bobbs-Merrill Company, Indianapolis-New York, pp. 43-4.)

GROWTH OF CHILD WELFARE IN U.S.A.

It was not until the beginning of this century that an organized system of child welfare was introduced in the U.S.A. As late as the last years of the nineteenth century, children of poorer classes, of course, were ill-looked after, their health and welfare sadly neglected.

Children were a source of income, not of pleasure, to the impoverished parents and more often guardians. Children were given away, even in the infant stage, to anyone who offered to take into custody. These 'guardians' waited impatiently for the child to be of age—say, nine or ten, whence the child was mercilessly leased out to the work-houses, where conditions, no better than those portrayed by Dickens in *Oliver Twist*, prevailed. Ill-fed, ill-clothed and ill-treated and knowing nothing of the pleasures of a happy home, the children lived the span of life allotted to them. These conditions were quite common to the poor and even lower-middle class families in the U.S.A., as late as 1900.

It is interesting to see how a girl, who lived in the conditions stated in the previous paragraph, roused public opinion and rectified the heart-rending state of affairs in the poorer families. To her indeed the present day children of the poor class in U.S.A. are indebted for their happy life and needless to say they thank God for not being born a half-a-century ago!

In the early years of the present century, a scientific minded, enthusiastic, young lady—a social worker—not the so-called well-draped, well-toileted and perfumed 'social-worker', so commonly found in the streets of India, leading a child from the slums with one hand, and the other plugging the nose with a lavender-scent bottle—By Jove!, I do not mean such 'a social-worker'—found in a street of an American town, a girl, ill-clothed and famished, sobbing bitterly. She did not turn her head and pass on to a neighbouring restaurant. The social-worker stopped, appeased the child and asked her gently what the cause of her grief was. The child hesitated but soon burst forth her grief. She stated that she was under a 'guardian' and was sent by that worthy to a work-house, where she was ill-treated, beaten and overworked. This was too much for the enthusiastic social-worker.

She approached the authorities and presented the case before them. They asked her if the child was destitute. She replied that the child was under a guardian, though for all practical purposes a destitute. This answer was not satisfactory to them and they declared that they could not interfere as the child was under a guardian. Little did they know of that fond substitute of a parent! The social-worker thought over; she saw the name "Society for the Prevention of Cruelty to Animals" staring into her eyes. She decided and approached the S.P.C.A. and asked them if they would treat a child as an animal. The S.P.C.A. was taken aback, but understood what the lady meant when she supplied details regarding the child which she had so recently seen in a sorry plight. After some deliberation, the S.P.C.A. agreed to treat the child for all purposes as an animal and fight out the case with the authorities. They won, but that was not all. The spirits of the callous public were roused. S.P.C.A.'s and C.W.A. sprung up and the Government could no longer sleep over the question. The general state of child-welfare was improved and standards of health laid down on the satisfaction of which only children could be employed. And, children became a source not of transient wealth but of the real joy of home.

Thus, did young Mary serve the children and future citizens of America.

* * * *

[The foregoing is from the pen of a fourteen-year old lad with whom Dr. G. Ramamurthi had a short chat on the subject, amongst others. This speaks not only highly of the lad's receptivity, but also the learned Doctor's impressionable manner of telling stories to youngsters.

We shall be happy to publish similar articles from our young readers.

—Ed., P.H.]

HOME ENVIRONMENT

BY

"HOUSEWIFE".

A college girl has thought fit to pull me up for my failure to make a reference to the training of the prospective housewife in the art of cooking. She finds fault with me for confining my remarks to the training of "professional cooks." I did not feel impelled to refer to the training of girls as cooks—not as professional ones though, as I felt that the college authorities would have made their own arrangements for the purpose. The idea of teaching 'Domestic Science' to our college girls looms large at present. Hostels are usually attached to our educational institutions. These can very well be utilised for giving practical instructions to girls in cooking. Had I a voice in the matter, I would go to the extent of allowing batches of girls to take up the responsibility of cooking in turns, for the whole institution. This would help to test the efficiency of the instructions given to them by the teachers. I feel that the college girl in question has pulled me up instead of the authorities.

It is often said that we women have one code of conduct when it relates to *our own relations* another quite a different one, to those belonging to the *husband's family*. It is not



"...These can very well be utilised for giving practical instructions to girls in cooking..."

wholly true; but we should admit that it is substantially true. Let me narrate a case to the point—a tragic one, I am afraid. A brother of a housewife arrived accompanied by his

daughter with a baby in arms. The occasion for the visit to his sister's house was to secure medical aid for his ailing daughter. He did not indicate even remotely in any of his letters to his sister the nature of the 'ailment.' The very sight of the emaciated girl, coughing constantly, was enough to show what was wrong with her. Events proved that the housewife had guessed it correctly. She was suffering from that fell disease, *Tuberculosis*. The housewife had then a rude shock that she was compelled to accommodate a tubercular patient in her own sweet, little home, the environment of which she was endeavouring to maintain in as healthy a state as she could manage. She was nervous, terribly nervous, about the safety of her little ones. Had the guests been from the family of her husband she would have literally driven them out of her house and faced all consequences. She would have rightly justified her rudeness on the ground that the interests of her children were supreme to her. But she could not buck up courage to send her *own* brother and *his* daughter with a little baby in arms out of the house. Call it feminine sentiment, if you like, or call it by any other name, you please. The delicacy of the situation could well be imagined. She was between the devil and the deep sea. She had no other go but to submit to the inevitable. She could not even impose restrictions on the movement and behaviour of the patient who coughed and spat all over the show. It was a sad sight. In the girl's affection for the chubby children of the housewife she persisted in embracing them and even showering them with kisses in their mouth! The emotions made her cough all the more. She gave the poor children a shower bath with her own spit. The children were too young to understand the gravity of the situation. They responded to the affection of the poor girl with a gusto. It was but natural. She could not tear away the children by physical force without causing offence to the guests. She could not suggest the segregation of the patient even if it were possible in that little house. Any suggestion of segregation would have been strongly resented. The housewife improvised a spittoon near the bedside with some disinfectant in it. It proved to be but an ornament after all. The patient would not use it. She was crawling about the house in spite

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of medical advice. The girl though "educated" had absolutely no idea of hygiene. All this ended in a tragedy as will be seen.

Medical opinion was sought and obtained. Our specialists believe in "investigations" before diagnosis. What is obvious to the laity is a problem to our expert professionals. Investigations should be done. They are expensive but it cannot be helped. After all the investigations and the exertions involved the process, the case was definitely diagnosed as tuberculosis. Highly specialised medical treatment was considered essential. The prognosis was very grave. Admission into a hospital was suggested, it was impossible. How many in authority care to know the practical difficulties in securing admission in our medical institutions even for deserving and urgent cases. As usual many friends suggested many, many methods of getting the patient admitted in a hospital. Some of the suggestions so generously and gratuitously offered reflected little credit on those in charge of these so called public institutions. No one feels indignant over the conditions which prevail. The administration should feel ashamed of the malpractices which are so openly and blatantly rampant. A "premium" has to be paid before admission could be secured. An excuse is also put forward that even the names recommended by many high-placed and influential authorities are on the waiting list. What does it show? Those who have no money, authority or influence have no chance whatsoever in getting any service from these institutions. My aim is not, however, to draw a long list of grievances but I must say that even open secrets do not catch the eye or reach the ears of the authorities. These public institutions are built, equipped and maintained at the cost of the uninfluential masses for the benefit of a select few who have got at their command money, influence and what not. That is what it comes to in actual practice.

The net result was the patient could be neither sent back to her home in the face of the grave prognosis and the dire consequences which might ensue nor could she be admitted in a hospital. The housewife had to brave the situation with all the courage she could muster. The baby whom the ailing mother insisted on suckling in that state of health soon developed tuberculosis. The poor baby in that famished state soon succumbed to the disease. The shock of it made the patient's condition worse than ever before. It was a living death for her. It was a tragic sight. The housewife was in

her tender hooks. How to protect her own children from infection was the problem which faced her. Finding the position impossible she decided to abandon her own home the



"...She gave the poor children a shower bath with her own spit..."

environment of which she was so very keen to maintain healthy and shift to her house in a mofussil station. The breadwinner of the little family was left to shift for himself. He would have undoubtedly showered curses on women in general and he had every justification to do so. The patient and her father were left to themselves. Eventually the expected happened. The poor girl expired. What was worse, the father who had been nursing the patient in the last and anxious days, contracted the disease himself. Readers would not be interested in the story any further. Let me stop but I should like to draw some conclusions from this case. The home which once defied any infection became a veritable incubator for tubercle germs. The building had to be left unoccupied for months, though for all legal purposes it was occupied. Many months elapsed before the house was considered safe for re-occupation.

Readers would themselves be able to recount from their own experience many instances of how infections of smallpox, chickenpox, measles, whooping cough and the rest of it were introduced through their guests, their "callers" and their "Sam Wellers."

My object is to show how even the so-called educated persons are unmindful of the risks to which they are exposing hospitable and affectionate relations. If the brother of the

housewife had only informed beforehand the nature of the illness from which his daughter had been suffering, the housewife would have had a chance of averting the situation. It is difficult to say whether it is the ignorance on the part of the visitor or his utter indifference to the consequences of his own actions. If it is ignorance, it does not redound to the credit of the University which awarded him the double degree of B.A. and B.L. If it is callousness or indifference it shows how our so-called education has failed to instil ideas of responsibility of individuals to the society. It is all unadulterated non-sense to talk that *lack of education* is responsible for all these. It is the lack of *proper type* of education which is directly responsible for many of our ills. The aim of our 'education' seems to be to train *gumashtas* for Government offices and business houses. Even they should have some training in hygiene.

The Editor of "People's Health" has been inviting the readers to offer their suggestions for making the magazine a power for social good. Here is a suggestion. In the programme for 'educating the educated,' articles from competent epidemiologists setting out clearly in simple understandable language without introducing high sounding jargons, the 'Do's' and the 'Dont's' in respect of say, smallpox, chickenpox, measles, cholera, typhoid, dysentery, whooping cough and similar diseases,



"... Teachers should get themselves specially trained before they are permitted to give instructions to children on hygiene..."



"... The teachers may rightly turn round and ask 'how on earth can we practise principles of hygiene and cleanliness...'"

may be included. I have no doubt in my mind that our public health authorities would readily respond to the Editor's request to them to contribute articles on these subjects.

This instance further proves how our educated people have not had instructions in the elementary precautions which should be adopted in cases of infectious diseases. Catch them young and instil in them ideas of health and cleanliness. If the subject of hygiene is merely included in the curriculum for the class-room study it cannot bear fruit. Teachers should get themselves specially trained before they are permitted to give instructions to the children on hygiene. Apart from getting themselves trained, the teachers, should themselves practise the principles of hygiene. The environment of our schools should reflect the principles of hygiene which are taught in the classrooms. The housewife may strain every nerve to instil ideas of hygiene and cleanliness in the minds of her own children. But all her efforts would be in vain if the environment of our educational institutions remains to be what it is to-day.

The teachers may rightly turn round and ask 'how on earth can we practise the principles of hygiene and cleanliness when we are put on semi-starvation.' The authorities should find an answer for it. If they cannot find an answer they should frankly say so and refrain from resorting to the tall talk of raising India to the level of a self-respecting nation.

HEALTH WORKERS!

FOR YOUR BENEFIT

BY

ONE OF YOU.

160779

REFER YOUR PROBLEMS TO US. THEY MAY BE BAFFLING OTHER WORKERS ALSO. WE SHALL HELP TO SOLVE THEM. IF YOU HAVE SOLVED ANY OF THEM, LET US KNOW. IT WILL BENEFIT OTHERS.

[Ed., P.H.]

GREETINGS!

In our last article, we saw that ventilation was good if it helps to regulate our body heat correctly. It had practically no effect on us by the excess of carbon dioxide that it may contain. The index of ventilation is the feeling of comfort. Ventilation is good if the resultant cooling power is within the "comfort zone."

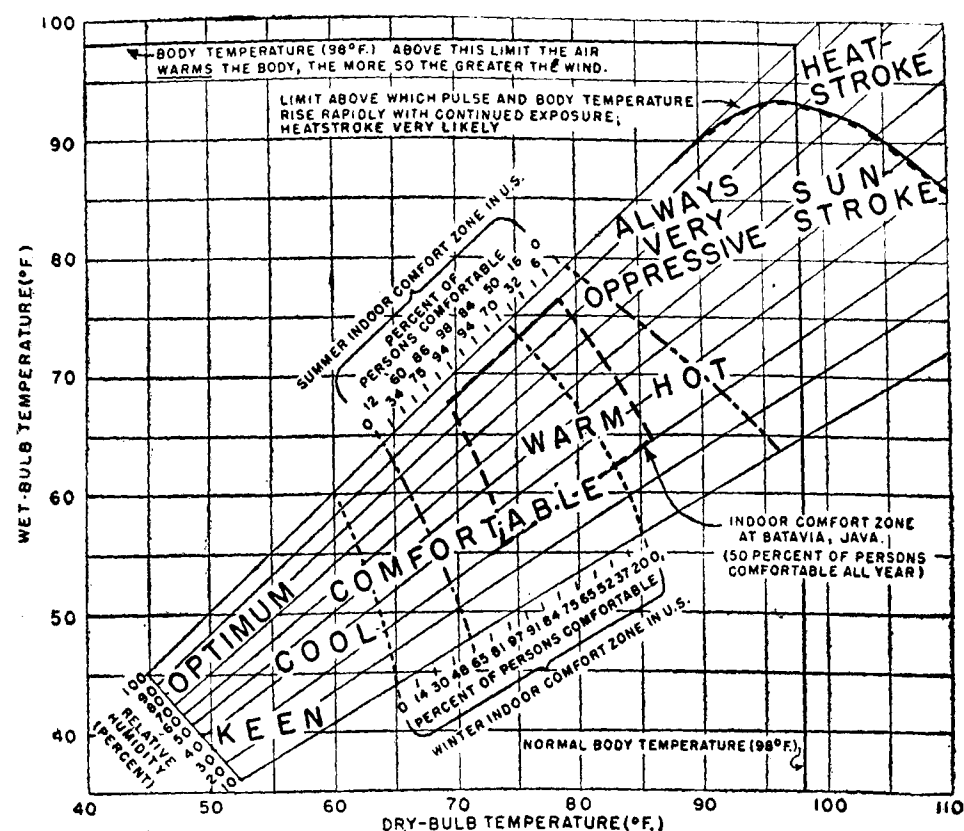
We also mentioned that we needed a yard stick to measure this and grade ventilation accurately. The search for this yard stick has engrossed the attention of all workers. For years they were at it in America, England and Europe. Mathematicians, scientists and engineers were roped in. Prolonged labour of this vast body of workers resulted in many measuring devices. Each one claimed a merit and an improvement of its own. Though the devices were many, the thing measured was the same in all. The object of ventilation is to maintain the heat balance. So the best way—in fact, the only way—of measuring ventilation is to measure the heat loss produced by it. In other words, the cooling power of the air is the measure of its ventilating power. Ventilation

is therefore to be judged good or bad according to whether it cools our body or not.

The workers, whose achievements we have described above realised this principle early. It did not take them long to see that if only the cooling power of the air could be measured, ventilation could be graded directly according to that measure. They had many instruments at their command. There was the thermometer to measure the temperature, the hygrometer to assess the humidity and the anemometer to determine the air motion. Each of the three factors concerned in ventilation could be measured independently. But, how is their combined effect to be known?

Repeated observations showed which combinations of the three factors were felt to be comfortable. The observations extended over a wide area and time. They were checked accurately. The results are reduced to the form of a graph as shown in figure 1.

Note.—Although this section is addressed primarily for Health Workers who are usually trained for the profession, the 'common-man' would be profited by perusing it. —Ed., P.H.



(Fig. 1).

With acknowledgement to United States Department of Agriculture : Climate and man.

Comfort and subjective sensations at various temperatures and humidities for normally clothed and resting persons according to indoor-chamber experiments and ordinary experience outdoors. The indoor comfort zones shown are based on controlled-chamber studies with almost still air and no sunshine; the effect of wind would be to shift the zone some degrees to the lower left of the chart, that is, toward lower wet- and dry-bulb temperature, while the effect of sunshine would be to shift the zone to the upper right (toward higher wet- and dry-bulb temperature). The terms in capital letters describing various subjective sensations, "COOL," "COMFORTABLE," "WARM," etc., give the outdoor feelings of most people when the general outdoor temperatures are in the regions where the terms are located on the diagram, assuming average conditions of wind and sunshine, customary clothing, and moderate activity, and that the individuals are used to those temperatures. There is considerable overlapping of the zones of neighbouring sensations on the chart, owing to differences in sun and wind and in acclimatization and clothing of the individual. A comparison of the Java and United States winter indoor comfort zones indicates the magnitude of the shift in the comfort zone from the cooler climates to the Tropics or vice versa. Comparing the indoor with the outdoor sensations of warmth or coolness, one notes that with some sunshine, proper clothing, and physical exercise it is likely to be comfortable at lower temperatures outdoors than indoors at rest. On the too-warm side, however, exercise, sunshine, and clothing make one more uncomfortable at lower temperatures outdoors than indoors at rest. In the lower left of the diagram is an "optimum for civilization" zone, which extends to still lower temperatures (35° F.) than shown. This is roughly the climate which Ellsworth Huntington has suggested as most conducive to human physical and intellectual activity, for he found some evidence that people are healthier, produce more goods, and have more advanced culture in regions of the earth where mean temperatures in this approximate range prevail, along with sufficient yearly range and day-to-day variability to be stimulating. It is not a "comfort zone," however, as one can readily see. All of the data for this figure are so crude and subject to so many limitations of interpretation that one should not attempt to read it in much detail; it rather serves to illustrate the general principles and very approximate order of magnitude of the contrasts.—[Extract from CLIMATE AND MAN, United States Department of Agriculture, Page 249].

The chart in Figure 1 is no doubt interesting. It helps us to find out if the temperature, and humidity in which we live are within the comfort range or not. To know that however is not enough. We must also be able to express it; not only express it but also to grade it. This can be done only by a single scale of figures which automatically expresses the effectiveness of ventilation. Now the degree of warmth or coolness is best expressed by a temperature. We are long accustomed to hear of temperatures. We always associate temperature with warmth. Ventilation is effective only if it properly cools. Hence the best scale of numerical values would be a temperature scale. The temperature scale chosen must be that where the effect of the other two factors are fully taken into account. Several combinations of temperature, humidity and air motions have the same cooling power. This cooling effect lessens as humidity rises; it becomes greater as air motion increases. Let these two be at their worst, namely, humidity at its highest which is 100 per cent. and air motion at its least which is still air. Even then, we will feel cool enough if the temperature is sufficiently low. The sensation of coolness which we feel at this lower temperature will be the same as in higher temperatures and different humidities and air motions in which we ordinarily live. For any given air temperature, humidity and motion, there is a corresponding low air temperature with maximum humidity and least motion that will give us the same sensation of coolness. This range of low temperatures will therefore be a correct single numerical index of the combined result of the three factors.

This scale is called the "Effective Temperature" scale. It is "that temperature of saturated, motionless air which would produce the same sensation of coolness as that produced by the combination of temperature, humidity and air motion under observation." It is an empirically determined index of warmth or coolness. It expresses in a single figure the effect of three factors.

Let us take an example. A person lightly clothed and at rest will find a room temperature of 75° F comfortable even if humidity is nearly 100 per cent. He will feel equally comfortable if the temperature is increased to 80° F, provided humidity is reduced to 60 per cent. The feeling of comfort will continue unchanged with a temperature of 88° F, if only the

humidity is well reduced to 15 per cent. In all these three conditions of temperature and humidity, the air was not in motion. Now let us set a fan in motion on him. He will then experience the same degree of comfort at higher temperatures. The comfort sensation will be similar with a temperature of 80° F and 100 per cent. humidity or temperature of 84° F and 60 per cent. humidity, or temperature of 91° F and 15 per cent. humidity. Thus, we have six combinations of temperature, humidity and air motion which produce the same degree of comfort. All these conditions which are alike can be expressed by one figure, namely, "75° Effective Temperature." A chart has been worked out which shows easily the effective temperature corresponding to different combinations. The chart is shown in Figure 2.

This chart was devised in America and is extensively used there to measure ventilation. It is an interesting chart. It makes our work easier. We need not calculate the actual relative humidity. It is enough if we just read the wet and dry bulb thermometer and take the speed of air movement by an anemometer. With these three simple observations we can derive a lot of useful information from the chart. Let us take an example.

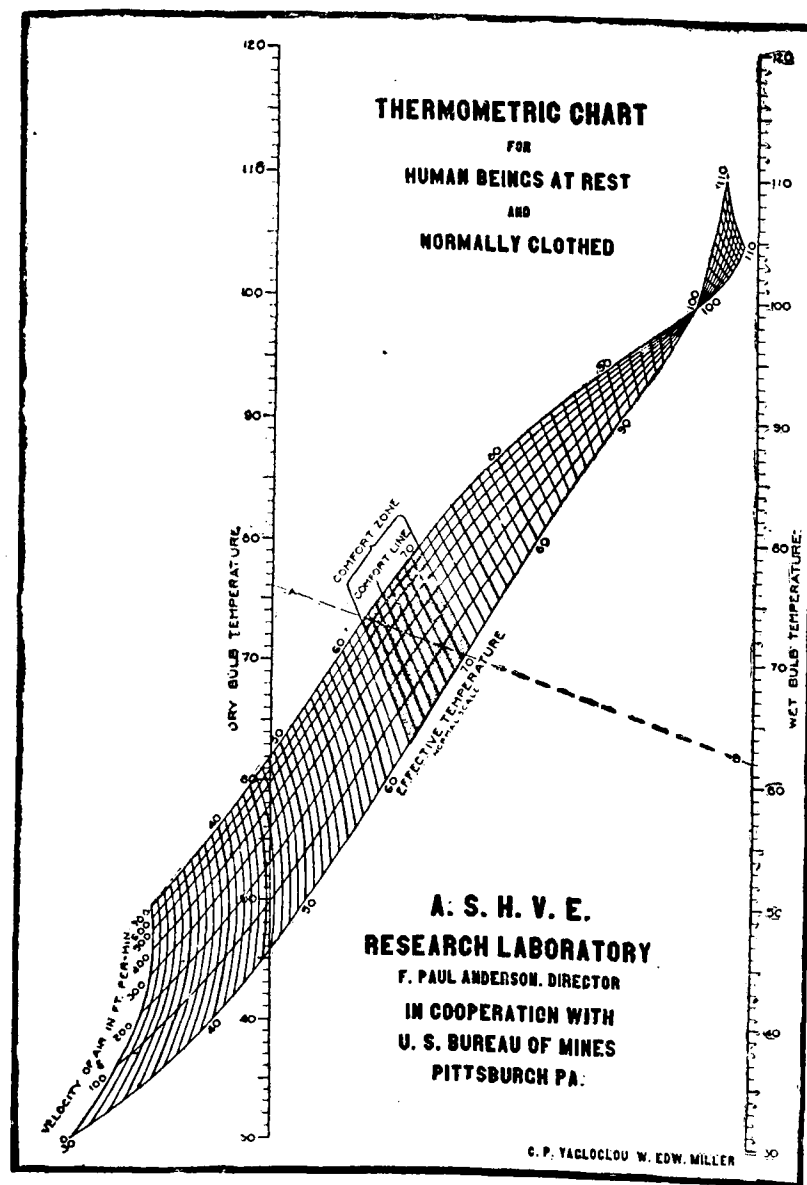
Suppose the following were observed in a room: Dry Bulb Temperature 76°, Wet Bulb Temperature 62° and Air Velocity 100 feet per minute. We can answer the following questions with the help of the chart.

1. What is the effective temperature of the condition? Draw a line AB (as shown in the figure) through the observed Dry and Wet Bulb temperatures. See where this line intersects the observed velocity line, namely 100 ft. per minute. This is at 69° effective temperature. So the effective temperature of the condition is 69°.

2. What will be the effective temperature with the same dry and wet bulb temperatures but with still air? Follow the line AB to its intersection with the 0 air velocity line. Read the effective temperature at this intersection point as 70.4°.

3. What is the amount of cooling produced by the air movement alone? By the movement alone, air has been cooled from 70.4° to 60° or by 1.4° effective temperature.

4. Is the present condition comfortable? The effective temperature of the condition falls within the "comfort zone." But it is not in the middle of it. So it may represent comfort for



The Effective Temperature Chart. (Fig. 2).

With acknowledgement to : Modern Principles of Ventilation and Heating, by T. Bedford, Publishers.—H. K. Lewis & Co., Ltd. London.

a lesser number of people. The comfort of the greatest number will be at 66° effective temperature.

5. What is the velocity of air required in this condition to produce the maximum comfort of 66° effective temperature? Follow line AB to the left. See where it cuts the 66° effective temperature line. Read off by interpolation

the air velocity value at that point. It is 340 feet per minute. If the air velocity is increased nearly three and half times, it will give maximum comfort to the occupant. In adjusting ventilation, we cannot alter the temperature of the room or its humidity easily. But we can easily increase the movement of air. Open more windows or set a fan on, and the

air is moved faster. The answer to this question is therefore of great practical interest. For a given wet and dry bulb temperature, we can easily know from the chart what air motion is needed for comfort. By providing it by means of windows or fans, we can improve ventilation accurately.

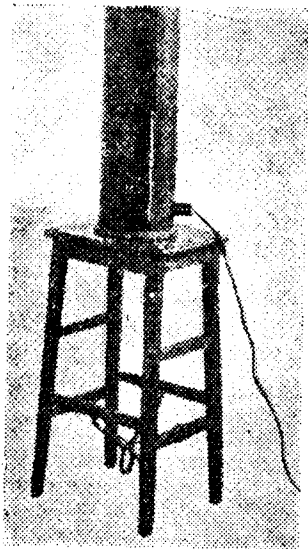
The subject has been investigated in American cities largely. The comfort zone has been ascertained by actual trial. This is shown in the chart. For temperate climates, it is between 63° and 71° effective temperature. A few observations were made in Java. Those data are shown in figure 1. Even for these, the actual comfort zone has not been worked out. Barring this, there are no data relating to our tropical conditions. Before we can make use of this chart to check ventilation in our country, we have to make extensive observations. We have to fix what will be the 'Comfort zone' for us. We rate our ventilation now rather blindly on old traditional data determined by westerners. *We have not yet worked out the scientific basis on which we can have maximum ventilation comfort under our climatic conditions. This is a field yet to be explored. It is open to our physiologists, hygienists and health engineers to take up this research in earnest.* The range of the comfort zone for our country is likely to be slightly higher than that for America. One observation made by Napier in Calcutta showed 75° effective temperature to be comfortable.

English workers, who were working on different lines, did not take to this useful American chart kindly. They remarked and rightly too, that this chart did not consider one other factor, namely, radiant heat. In cold countries, rooms are often heated artificially. The heat radiated from such sources interferes with comfort. So, that must also be considered. Radiant heat is measured by taking the surface temperature of walls and other radiating objects in the room. The English workers therefore devised a new chart, called the "Equivalent warmth" chart. It resembles to some extent the effective temperature chart and has values for radiant temperature and absolute humidity also. Scientifically it is a more accurate chart. But for us in the Tropics, radiant heat is never a factor interfering with ventilation. We need not therefore study the equivalent warmth chart and its working.

The account we have given so far may perhaps frighten the health worker. He is apt to feel that the measurement of ventilation is a complicated job. It entails the taking of observations of dry and wet bulb temperatures as well as of air motion. It does not stop with the taking of those readings. The worker has to carry the chart with him and then work out the results. He might consider this task rather a nuisance. He is perhaps right. The English and Continental workers had a similar feeling. Their efforts to devise a measure of ventilation was on simpler and more direct lines. The taking of too many observations must be avoided. There should be no need to make any further references to a chart. Ventilation is cooling power. To measure ventilation, cooling power should be measured. If this could be done directly by any instrument, it would be very easy. The workers in the old World set about the task of devising such an instrument. Research and invention were active. Many instruments, each one claiming to be an improvement on the other, were invented. The first one was the Kata Thermometer. This was said to be somewhat defective in a certain respect. Several other instruments came into the field; these were claimed to be useful each in its own way. Yet, despite the defect attributed to it, the Kata Thermometer continues to be the simplest and most commonly used instrument. Every health worker should therefore be familiar with the working and use of this. Before explaining the features and handling of this instrument, we may make a brief reference to the others.

EUPATHIOMETER: This instrument is better than all the others mentioned above. It is very nearly similar to the Kata Thermometer in construction and working. It consists of two spirit thermometers; the bulb of one is blackened and that of the other is silvered. There are two marks on the stem. The bulb is gently heated till spirit rises above the top mark. The instrument is then hung in the room to be tested. The time taken for the spirit to cool from the top to the bottom mark is noted with a special stop watch. This instrument contains two other scales one black and the other silver, besides the scale showing time. As the time is observed for the black thermometer, a corresponding figure on the black scale can be read off. The silvered thermometer is dealt with in the same way and the reading on the silver scale noted. The sum of the black scale reading and the silver scale reading gives the result in terms of 'equivalent temperature'.

ature.' This as well as the other instruments are also referred to in popular language as 'comfort indicators.'



The Eupathioscope. (Fig. 3).

With acknowledgement to : Modern Principles of Ventilation and Heating, By T. Bedford: Publishers—H. K. Lewis & Co., London.

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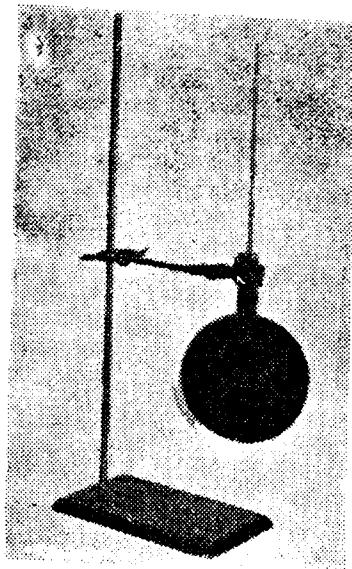
EUPATHIOSCOPE: This instrument was devised by the Building Research Board in England. It is illustrated in Fig. 3.

The instrument consists of a hollow blackened cylinder of copper, 22 inches high and $7\frac{1}{2}$ inches in diameter. The instrument is heated electrically. The heating is so regulated that the surface temperature of the cylinder is raised to a slightly higher level than that of the atmosphere of the room. This is to correspond more or less to the surface temperature of the clothed human body in a cold country. The readings of the instrument are directly read off in a scale of equivalent temperature. This equivalent temperature is similar to the effective temperature in significance. The instrument is cumbersome for outdoor work. It cannot be worked in temperatures above 75°F . Its cooling is not influenced by humidity. So it fails to measure the full effect of humidity in ventilation.

* * * *

GLOBE THERMOMETER: A few years ago, Dr. Vernon introduced a simple instrument

which he called the Globe Thermometer, (Fig. 4). This consists of a blackened hollow copper sphere, 6" in diameter, containing an ordinary thermometer with its bulb at the centre of the sphere. The globe is not heated. Its temperature depends entirely on the environment. The reading of the thermometer is influenced by radiant heat and by air movement. It is not influenced by humidity. This is therefore more useful really to measure the effects of radiation than to measure cooling power as a whole.



The Globe Thermometer. (Fig. 4).

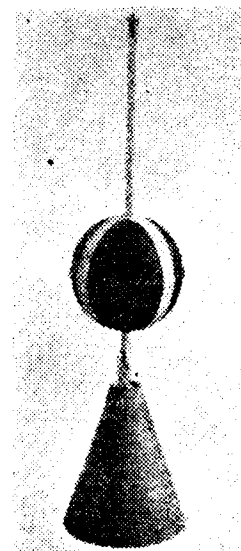
With acknowledgement to : Modern Principles of Ventilation and Heating, by T. Bedford.

* * * *

RESULTANT THERMOMETER:—This instrument was invented in France by Professor Missenard. It is illustrated in Fig. 5.

This is an improvement on the Globe Thermometer. It has a copper globe and a copper cone below it. The copper globe, $3\frac{1}{2}$ " in diameter, has about one-third of its area covered with moist gauze. An ordinary thermometer is fixed with its bulb in the centre of the globe. The instrument is not heated. Observations are taken in the room. Being covered with moist gauze, it takes into account the effect of humidity to some extent. The air movement also cools the globe. The larger size presents greater area for cooling. If the air movement is great, this instrument cannot be used. It is not also very convenient to be carried about for outdoor work.

* * * *



The Resultant Thermometer. (Fig. 5.)

With acknowledgement to : Modern Principles of Ventilation and Heating, by T. Bedford: Publishers—H. K. Lewis & Co., Ltd. London.

It is not necessary for the health worker to know much about these varied instruments in his daily work. They all have some defect or other. They are cumbersome to handle. Some of them are not applicable to our local conditions. They are mentioned here partly

for academic interest. They serve one useful purpose; that is to indicate the intensive work done and the ingenuity shown by research men in other countries in the problem of ventilation. With the possible exception of Eupathioscope mentioned above, Kata Thermometer is the only instrument which measures directly the cooling power. It is also the one which takes account of all the factors concerned in ventilation. It is a small instrument easily carried about in outdoor work. It is equally easily handled and can be set up and read in any place. There are modifications to suit different purposes and places. The Kata measurement is the one most commonly used in English practice in assessing ventilation. It is the measurement which is described in the rules regarding ventilation under the Indian Factories Act. The Health Worker must know all about it. He must also get into the practice of handling it often. He must check up ventilation wherever possible with the help of this simple instrument. It would be useful if he could record observations with this in as many places as possible along with the comfort vote of the occupants. Such data are now wanting for our country. The instrument is not very costly. It can well form part of the routine equipment of every health worker.

Lest we tire the reader too much, we shall defer a description of this instrument to the next issue.

We get Vitamin A in green vegetables; Vitamin B (there are really several different Vitamins B) comes from seeds, such as whole wheat; Vitamin C is found in fruits, such as oranges, and in new potatoes and parsley. Only Vitamin D is not primarily a plant product; we either make it in our own bodies if there is sufficient sunlight, or we get it, along with Vitamin A, at second-hand in fish-liver oils.

One may ask why the plants make these vitamins. It is very nice for us that they perform the complicated chemical process required to turn out the substances we need to remain in good health, but it seems too good to be true, unless the plants also get something out of it.

Until a few years ago, nothing was known of the use of vitamins to the plant. Now it appears that several of them at any rate are important in the plant's living processes. Vitamin B₁, for instance, is formed in leaves and passes from there to the roots, whose growth it stimulates. Only very minute quantities are necessary: it has been said that one gramme of B₁ (enough to "cover a three-penny bit") is sufficient for the growth of 1,200 miles of root. The supplies we eat in seeds are, of course, the stores which have been laid down to give the new plant a start in life before it has leaves to manufacture its own vitamin.

Our knowledge of the functions of vitamins in plants is quite new and very incomplete, but it has already been put to good use. Judicious use of Vitamin B₁ sometimes makes it possible to root cuttings which do not take. This is a good beginning, but the procedure is ticklish and does not always come off; there are certainly other vitamins concerned, which we do not yet understand.

(Extract from *Science News*, Edited by John Enogat, Penguin Books, 1946, pp. 91 & 92.)

READERS' FORUM.

This section is open to readers for their frank, free and fearless expression of views on all aspects of people's health.

Type-written letters facilitate work.

Rationing of paper restricts space. Brevity is the soul of wit.

Please remember that "People's Health" is above communal, party or personal politics.—
(Ed., P.H.)

WHAT ARE WE TO DO?

You have extracted some notes on 'mental hygiene' and prevention of "mental illness" from the American Journal of Public Health. Can you tell us whether this denotes an extensive prevalence of "mental ill-health" in that country? Were it so, it would be a tragic commentary on civilization. Or is this receiving so much attention merely because other "illnesses" which could be prevented have been already controlled? I remember having read somewhere, though I cannot place my fingers on it now, that in England, attention is now being paid to a new kind of medicine; I believe they call it "Social Medicine." I wonder what this "Social Medicine" is; perhaps a new system like Homeopathy; or perhaps a new line of treatment as Naturopathy. If my guess is correct, it might soon gain the appellation—"Sociopathy." Why should England which is equally—if not more—advanced as America waste its time in developing a new system of Medicine? Why not merely copy their cousins by trying to tackle the mental and other illnesses they have? What puzzles me is as to what we are to do? Whenever you extract something good from other countries I wish you would tell us what we can do about it.

"INDIAN HEALTH."

(We tender our appreciation to the writer of this letter. It shows that our pioneer effort evokes interest and stimulates thinking, even if it puzzles sometimes. In public health as in other respects, America is the most advanced country. It has provided safe living conditions, controlled practically all communicable diseases, and has long ago taken up the almost impossible task of tackling the non-communicable ailments such as heart disease, cancer, mental illness, diabetes,

etc. England has so far achieved sanitation and brought under control the infectious diseases. Now only it is turning its attention to the non-communicable diseases. It is to this new development that the term "Social Medicine" is given. Coined by doctors the word 'Medicine' could not be avoided, though a more appropriate term would be "Social Health". As for what we are to do, we cannot do better than follow the footsteps of these two countries; improve sanitation and give good living conditions to the people as the first step; control diseases which are communicable; and then think of other illnesses. We quote such extracts with the very object of evoking interest in our readers and among the public. We are glad this extract has well fulfilled its object.

—Ed. P.H.)

STATE RESPONSIBILITY.

My hearty congrats! Your Editorial (whatever the may mean), are simply superb. You hit upon the right topics and you have a knack of making just the points which should be made. But I have a bone to pick with you on your notes on "Water supply and Sanitation." In the third paragraph following the resolution, you give a forceful plea to a dictum which must be the guiding force in every good Government. You lead one to the emphatic conclusion that where health is concerned, it is patently foolish to count the cost; you also assert what is but obvious, namely, that the responsibility for public health falls squarely and solely on the State. These are principles which should underlie the financial policy of every well-organised State. If any State deviates from this, it is not, to that extent, good Government. Well and good so far.

PEOPLE'S HEALTH.

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But look at your next paragraph. You go ahead in it with a facile assumption that provision for Public Health is the responsibility of the local bodies and not that of the State. You suggest a new—and quite a good—method of slightly improving the finances of local bodies. So far as it goes, it is certainly a very good way out of the difficulty and deserves the attention of our Ministry as you yourself bespeak at the end. I do not question your suggestion; but I dare to question your presumption. A 'fighter' like you should be prepared for 'opponents'; I would be interested to see how you meet this 'opposition.'

My point is this. When the responsibility of the State for public health is accepted, why on earth should it be coolly shoved on to a decrepit, incompetent, soulless, bodiless entity like the so-called "Local Body." Is it to bolster up the soothing complacency that local self-government is a mighty achievement in a land under foreign control? Or, is it merely a slavish imitation of the administrative set up which our rulers have at home, and which is unquestioningly accepted as the best and most suitable for us too?

You may turn round and pour your scorn on me as a reactionary who is against even local self-government. I have a faint hope that you will not let yourself be side-tracked like that. You may on the other hand, plead that the local bodies are the creations of the Government, and what the local bodies do are all acts of Government. With this false logic you will even see perfect cogency in your notes. Let us however accept the plea without question. Even so, it does not explain why the subject of Health which is obviously State responsibility need to be administered in an indirect and circuitous way by a new creation—the Local Body—which sometimes claims independence even from Government, its creator? Why again should this unwanted agency be hedged in with limitations, while at the same time its burden is overloaded? An agent must carry out his principal's wishes; he cannot and is not entitled to do what he likes. Conversely, the principal must set a task within the competence of the agent and, in addition, provide the agent with full facilities for its performance. Are these simple axioms true with respect to the agency of the local body? Look at the magnitude of the responsibility—Communication, Education, Civic Amenities, Health and Medical Relief—to mention the main ones. And look at the meagre wherewithal out of which the agent is to cater to all these. No wonder

Governments have to come to the rescue by grants and loans. That the incongruity of this is recognised is established by the rapid easing of the burden recently attempted or advocated. Roads are taken away, education becomes a direct State concern, and hospitals are provincialised. Public Health continues in the same place where it cannot possibly improve. Can you find a better example of evasion—or hoax played on the masses?

If you chose to don the mantle of 'democracy,' you might adduce the oft-heard justification that local people must be responsible for local needs. Quite so. We do not want others to bother us or to bother about us. But why not apply this to the logical extent? Take an example. One of the local needs is the protection of property and protection of person from injury. This need is met by the police. Are the police forces recruited and controlled by local bodies? Or, is police administration left to them, even as it is in some western countries? The State assumes it as its first responsibility although the task is purely local. Whereas in health—a sphere which transcends local man—drawn boundaries—the State quietly shoves it on to the local body. Why not hand over the police to the local body and take over health as a provincial responsibility for direct administration? Are not our administrators fighting shy of logic and common sense? Are they not trying to hoodwink the public? Are they not shirking their responsibility by the easy method of making the people believe it is somebody else's responsibility?

As a level-headed Editor, I thought these aspects of the question would have struck you. Since there is no evidence of it in your "Editorial. . ." I was forced to write this long letter to you. From what I see from the three issues of the journal so far, I have a confidence that you will publish this letter in spite of its length, if only more important things do not crowd it out. I have also a hope that your next bit of "Editorial . . ." may contain your vehement reply.

"SIMPLETON."

[The author of this letter is by no means a "Simpleton" as the pseudonym suggests. He must be one who is keen on the promotion of the health of the people. In his anxiety to speed up progress he wants our Local Bodies to be divorced from all activities governing

the health of the people. We have made it abundantly clear that the State should accept *the fullest responsibility* for providing all the essential amenities of life. If radical and far-reaching changes in our local administration, are now proposed it would only raise controversies and divert the attention of the people from the immediate aim in view.

In U. S. S. R. where considerable progress has been made in the promotion of the health of the people, the local Soviets took a great and active part. Semashko says in his book on "Health Promotion in U. S. S. R." "*The protection of the health of the workers is the task of the workers themselves.*" But he adds "*The organisation of prophylactic and medical aid for the population of the U. S. S. R. is regarded as one of the basic duties of the State.*" The enormous improvements made in that country to promote the health of the people in such lightening speed were possible because "central direction and decentralised execution" was the principle observed in implementing the programmes. Again, "*unity in the organisation of the Health Service is the first distinguishing feature of Soviet medicine.*" These are exactly the principles which we advocate for adoption in our own country which even to-day is not dissimilar to the Czarist Russia, in many respects.

Improvements in local administration are no doubt, urgently called for and are still possible. What is required now is the will of the people to remove inefficiency and corruption and provide an urge for progress in our administration. While dealing with the subject of financial assistance to local bodies we made certain suggestions to ease the burden of taxation. From this it is not correct to conclude that the responsibility for providing amenities of life

are vested entirely in the local authorities. We are glad, however, that the writer of this letter has raised the issue and given us another opportunity to reiterate our point that the responsibility for the promotion of the health of the people should primarily rest on the State.

—Ed., P.H.]

"A CONFESSION OF WEAKNESS."

You seem to use your scissors effectively to take out just those press cuttings which interest the "common man."

* * * *

I revel in reading the extracts which appear in "People's Health." They rouse my interest in the subject. The latest you have given, has prompted me to write this to you. It is an extract from a speech of the highest authority in the land. (*vide* December issue of "People's Health", page 126). It is from Lord Wavell—the Viceroy of India. To the best of my knowledge and information, this is the first and only occasion when so high-placed an authority as the Viceroy of India ever made a statement of this kind. He states: "*Make no mistake though: hospitals, even the best and the largest, are to some extent a confession of weakness. They mean that we have failed to control Public Health at its source.*"

But even the Viceroy of India appears to be powerless to control Public Health at its source! Tradition has cut such a deep rut in our administration!! Even the best and well-meaning administrators are unable to get out of it. Even the people's Governments continue to vie with each other in extending hospital services at enormous expense. By doing so, they impliedly confess their incapacity to control health at its source. According to them, the first and spectacular step in their postwar development plans is to extend the Medical Services, in preference to providing drinking water to the people who are getting annihilated like moths against a burning lamp.

It would be a good idea to have the words of Lord Wavell quoted above painted in gold letters at the entrance of everyone of our hospitals. It would remind people how our past and present administrators have failed to fulfil a fundamental obligation of the State to the masses.

May I appeal to our Ministers of Health, through your columns, to imagine for a moment the number of people who die of 'preventable diseases' like cholera as compared with the

number of people who pass away for alleged want of medical aid? We have to depend only on our commonsense and imagination to picture it in our mind. There are no statistics to show the number of people who die for want of medical aid and those who pass away in spite of the best medical assistance! Even in hospitals which have been built, equipped and manned by medical men, services are not available in practice to those who cannot afford to pay but are in immediate need of relief. Only personal experience of our hospitals would help one to understand the difficulties in getting oneself treated in these institutions. I do not wish to discuss the difficulties of the common man in getting services in our medical institutions; but I wish to impress that our Ministers of Health in our country should first provide the primary necessity of life, namely good and abundant drinking water. You have been crying hoarse that *first things should be put first* and dependable water supply is the very first necessity which should be satisfied without any further delay. Any programme for providing so essential a commodity like drinking water should not be spread over a period of time, say 20 or 30 years. It should be provided *immediately* and within

as short a period as practicable. The Popular Ministers of Health should concentrate on this single item of improvement and show results.

"M.L.A."

[All sane persons should readily recognise that people's health should be placed above political, communal, linguistic, religious, territorial and such other considerations. Indeed, it is sad to see that the people's representatives in our legislatures have not been taking as much interest in the promotion of the health of the people as one would desire. Apparently, their time, thought and energy are diverted in other directions. We would appeal to them to pull together as a team to force the State to improve the environment in which people live as the first, essential and effective step in the progressive promotion of the health of the people.]

—Ed., P.H.]

If, in the third place, we look into the Profession of Physick, we shall find a most formidable Body of Men. The Sight of them is enough to make a Man serious, for We may lay it down as a Maxim, that when a Nation abounds in Physicians, it grows thin of People.... This Body of Men, in our own Country, may be described like the British Army in Cæsar's time. Some of them slay in Chariots, and some on Foot. If the Infantry do less Execution than the Charioteers, it is, because they cannot be carried so soon into all Quarters of the Town, and dispatch so much Business in so short a Time. Besides this Body of Regular Troops, there are Stragglers, who, without being duly enlisted and enrolled, do infinite Mischief to those who are so unlucky as to fall into their Hands.

ADDISON,—"*The Spectator*," 1711.

LAW AND PEOPLE'S HEALTH.

DAMAGES CAUSED BY A FALLING TREE ON THE ROAD—LOCAL AUTHORITY HELD LIABLE FOR NEGLIGENCE.

The wife and children of the first plaintiff were killed while going in a cart along a road vested in the District Board of Narsapur, by the falling of a tree, which was alleged to be due to the negligence of the board, in that it took no steps to cut down the tree in spite of its attention having been drawn from time to time to the dangerous condition of some of the trees on the road. The plaintiffs therefore claimed damages against the defendant board under the Fatal Accidents Act. The trial Court,

for the exemption of a local body from liability for negligence by non-feasance exists With very great respect for the view of the Indian authorities on this question, we shall venture to doubt whether local bodies in India should be exempt from liability for such acts of negligence in the maintenance of their roads or cause loss or injury to persons using them. With regard to trees growing on the margins of the roads, we feel that the case of the local bodies for exemption from the common law liability arising out of their failure to cut down the trees in a dangerous condition is even weaker."

Ignorance of law is no excuse. Therefore a person has to act on his peril even though he may not know his legal obligation. Hence, it is necessary to educate the 'Common man' on the subject.

By giving extracts from the decisions of the Courts of Law in these columns, we do not encourage or recommend people to resort to litigation, at the slightest provocation. Our purpose is only to bring to notice the duty which the public authorities or individuals owe to the people and the rights and duties of individual citizen.

At the same time, it can not be gainsaid that a knowledge of their fundamental rights by all citizens and the realisation thereof by public authorities will be the finest check on such authorities which may otherwise be tempted to trample down those rights with impunity.

It should be remembered that litigation is an expensive luxury. But those who can afford to bear the cost and stand the strain of litigation, owe a duty to the public by establishing valuable public rights through Courts of Law.

—Ed., P. H.

though it found negligence on the part of the board, dismissed the suit on the grounds that it could not be made liable in damages for mere non-feasance and also that the suit was barred by limitation. On appeal, the High Court also held that the suit was barred by limitation. As regards the liability of local authorities for mere non-feasance, the High Court made the following observations without finally deciding the point.—"There is no clear reason why this exception" (*viz.*, a statutory body responsible for the repair of roads is not liable for damages, if it does not do so) "peculiar to the common law of England should be applied to India, when no such historic reason

Subramanian and others v. President, District Board, Narsapur, 1941 Madras Weekly Notes, 450. (Extracted by R.V.)

DAMAGES CAUSED BY STORM WATER—MUNICIPALITY HELD LIABLE.

One Manak Lal sued the Surat City Municipality for damages on account of injury done by storm water to his garden land alleging that it was due to the negligence of the Municipality that the water broke into his garden. The Court found on the evidence that the carrying capacity of a ditch which would carry the storm water had been greatly reduced by the gradual accumulation of silt and rubbish

in its bed, that the Municipality had done nothing to maintain it in proper order, that the sluices at the dam were choked up with weeds, sedges and silt and were rendered unworkable and that the water therefore collected in a channel of reduced capacity and unable to discharge itself through the sluices burst into the plaintiff's garden. It was contended on behalf of the Municipality that the facts so found amounted to no more than non-feasance for which it could not be made liable in damages. The Court held that by not keeping the ditch properly clean but by allowing it to fill with silt and permitting the dam to be choked with weeds and sedges, the Municipality, by its negligence, turned its works into a nuisance so as to throw the water collected on its property into the plaintiff's land that it was therefore liable in damages.

Rajendralal Manaklal v. The Surat City Municipality, I.L.R. 33 Bom. 393. (Extracted by R.V.)

UNSUITABLE LOCATION OF PUBLIC CONVENIENCE—INJUNCTION GRANTED RESTRAINING MUNICIPALITY FROM CONTENDING IT.

A Municipality proposed to construct a public latrine behind the fruit stall of one Nataraja Pillai, who thereupon sued for an injunction to restrain the Municipality from so constructing. It was found on the facts that the erection of a latrine at that place would constitute a nuisance to the plaintiff; but it was contended on behalf of the Municipality that as it was empowered by statute to construct public latrines at suitable places, no action would lie. The Court held that the fact that an obligation was imposed on a local authority to provide and maintain public latrines in suitable places would not empower it to erect them in such a way as to create a nuisance and the injunction was granted.

Madura Municipality v. Nataraja Pillai, 1941 Madras Weekly Notes, 502. (Extracted by R.V.)

DAMAGES CAUSED BY GRAVEL HEAPS ON ROAD MARGIN COMPENSATION AWARDED.

The Municipality of Vizagapatam employed a contractor to repair a road vested in it. In the course of doing that work, the contractor stored up heaps of gravel along the road to a breadth of 9 feet in the roadway which was 27 feet wide. No light was placed on the heaps to warn persons using the road. One Foster, who went along that road on his motor

cycle at about 6 P.M., came against the heaps and sustained injuries, for which he sued the Municipality for compensation. The Municipality pleaded among others non-liability under the general law and also on the ground that it employed an independent contractor for the repair of the road. Negating the contentions, the Court held that in laying and maintaining a road, Municipalities in this country are not exercising sovereign functions and consequently they are liable for misfeasance, that such liability exists even when the municipalities derive no profit by the levy of tolls or otherwise out of such works that the absence of a provision for payment of damages in the District Municipalities Act which directs the application of the municipal fund in a particular manner, does not affect the right of a person against whom a wrong has been committed by the statutory body to recover compensation for such injury and that though the contractor to whom the work was entrusted must be taken to be an independent contractor, the case came within the exception to the rule, that an employer is not ordinarily liable for illegality or neglect on the part of a contractor employed by him, *viz.*, that where the employer is aware that the doing of a contract work involved public danger, he ought to see that the contractor so discharges his duty as to avoid such a danger and that where statutory bodies are entrusted with the performance of a public duty, their liability cannot be shifted to a contractor. It was further held that though there was a large margin for persons to go through, the liability of the Municipality is not lessened by that circumstance, as the passer-by has a right to use the full breadth of the road. In the result, the plaintiff was awarded a compensation of Rs. 2,500.

Municipal Council of Vizagapatam v. Foster, I.L.R. 41 Mad. 538. (Extracted by R.V.)

THE GENERAL PRINCIPLE IN THE CASE OF HIGHWAYS AND STREETS WHICH ARE VESTED IN AND BOUND TO BE MAINTAINED AND REPAIRED BY LOCAL BODIES BY STATUTE, NO ACTION WILL BE AGAINST ANY SUCH LOCAL AUTHORITY BY REASON OF MERE

NON-FEASANCE.

(Steel v. Dartford Local Board, 60 L.J. Q.B. 256, C.A.)

C, who was the owner of certain cottages in a public highway received a notice from Defend-

ants under the Public Health Act, 1875 (C. 55) requiring him to connect the drains of his cottages with the main sewer and in compliance therewith he dug a trench in the road and made the connection to the satisfaction of the Defendants' surveyor, and he then filled up the trench. The soil afterwards subsided and the subsidence was the cause of an accident to the plaintiff while driving in a pony cart. The Defendants were the Sewer authorities and Highway authorities of the District. In an action for damages for personal injuries held (a) Defendants were not liable as Sewer authorities, as the notice did not constitute C, their agent. (b) Nor were they liable as Highway authorities as no action would lie against a local authority for personal injuries arising from a non-repair of a highway. Same principle laid down in numerous other cases.

BUT

Thompson v. Bradford and Tinsley, (1915) 3 K.B. 13.

There was a narrow road and a foot-path by its side. The local authority wanted to widen the road by including the foot-path. There was a telegraph post on the foot-path which the Postal authorities were asked to shift to some other place. They removed it but did not fill up the hole solidly. The plaintiff's steam wagon, passing over the place, after it was thrown open for traffic sank and was badly injured. Held that the Corporation was liable for damages as what they did was equal to opening a new road, i.e., by altering the character of part of an old road (i.e., in effect making a new road) and their duty was to make it so that when they threw it open for public use it should reasonably safe for the purposes for which it was intended to be used. The Postal Authorities were also liable because though they did the piece of work voluntarily, they did it negligently.

Short v. Hammersmith Corporation, (1910) 104 L.T. 70.

Per *Phillimore, J.*—"A highway authority is not liable in an action by a passer-by for non-feasance. Long established rules of prudence have prevented a highway authority from being exposed as they would be, to the complaint of every tramp. They are not liable for non-feasance. They are liable for misfeasance, something they positively do to injure the road, either by raising the ground suddenly higher (hump?) so as to create an elevated obstruction or by digging the ground suddenly lower so as to create an obstruction by depression and

possibly in other ways for misfeasance they are liable. You have to look very carefully into the facts to see whether they establish misfeasance or non-feasance. When you are once certain they establish only non-feasance, the Highway authority is not liable in an action."

McClelland v. Manchester Corporation, (1912) 1 K.B. 118.

Per *Lush, J.*—"If a duty is undertaken and improperly performed and actual damage is occasioned thereby the person injured has a perfectly good cause of action."

Municipality of Pictou v. Geldert, (1893) A.C. (P.C.) 524. (*Appeal from Nova Scotia*).

PRIVY COUNCIL.

Per *Lord Lobhouse*.—"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 to an action for damages at the suit of a person who had suffered injury from their failure to keep the roads and bridges in proper repair."

"It must now be taken as settled law that a transfer to a public Corporation of the obligation to repair does not of itself render such Corporation liable to an action in respect of mere non-feasance. In order to establish such liability it must be shown that the legislature has used language indicating an intention that this liability shall be imposed."

"The law was laid down by this Board in the case of *Sanitary Commissioners of Gibraltar v. Orfila*." (1892) A.C. 345 thus:

"In the case of mere non-feasance no claim for reparation will be except at the instance of a person who can show that the statute or Ordinance under which they act imposed upon the Commissioner a duty towards himself which they negligently failed to perform."

"The question then is whether any Statute has given to private persons the right of action now claimed against the Municipality which does not exist at common law."

(In this case it was found on an examination of the Statute that no such right of action had been given).

Sir Basil Scott, C.J. and Batchelor, J. (I.L.R. 38 Bombay, 116)—Drainage water passing along a certain drainage cut owing to some default, instead of flowing along the assigned channel

flowed across the road into the plaintiff's field and caused damage to the plaintiffs and the damage was found to be due not to the authorised drainage work but to the neglect of the drainage channel which the Municipality was bound to repair.

Held, The Municipality was liable to the plaintiffs in damages.

"The exemption from liability of local bodies on the ground of non-feasance is confined to neglect

of highways and does not apply to drainage works carried out by the local bodies for their convenience which they are bound to maintain in a proper state of repairs so that they shall not be a nuisance to the neighbouring owners."* This appears from the judgments of the Privy Council in *Borough of Bathurst v. McPherson*, (1879) 4 A.C. 256 and ***Municipality of Picton v. Geldert* (1893) A.C. 524 at 531.

(Extracted by V.C.G.)

* "The Municipality of B., incorporated under New South Wales Acts No. 13 of 1858 and No. 12 of 1867, and having thereunder the care, construction, and management of the roads, and streets within their municipality, constructed therein a barrel drain into which ran an open drain, the brickwork of which having broken away, and not having been repaired, a hole was caused, into which the Plaintiff's horse fell, carrying the Plaintiff with him, crushing the Plaintiff's leg against one side of the hole, and causing a compound fracture of the leg."

In an action claiming damages against the municipality (a) for negligence in constructing the street, (b) for negligence in keeping and maintaining the street and not repairing the drain, gutter or sewer in the said street (plea, the general issue) the Chief Justice directed the jury that the Defendants under their Act of incorporation were not liable for the result of any mere non-feasance; that if they thought fit to construct a sewer, and did the work in so negligent a manner as to bring about the accident, they were liable for that misfeasance; but if they constructed the sewer properly in the first instance and it became defective afterwards they were not bound to repair it; and further, that if the defective state in which the drain was, arose from the operation of the weather or wear and tear, it having been properly constructed originally, they were not liable. Verdict for Defendants:—

Held, on motion for a new trial, that as regards (b) there was misdirection. The barrel drain was not only made by the Defendants, but the sole control and management of it were by the statute vested in them. By reason of their construction of that drain and their neglect to repair it, whereby, as an indirect but natural consequence the dangerous hole was formed, which was left open and unfenced they caused a nuisance in the highway for which, whatever their statutory obligation to repair may have been, they were liable to an indictment, and also to an action by the Plaintiff who had sustained direct and particular damage from their breach of duty."

*** "In delivering the judgment of the Committee Sir Barnes Peacock expressly says that they do not decide whether the legislature threw upon the municipality the obligation of keeping in good repair the works it took over. The ground of the decision was that the municipality having, under the powers conferred upon them, constructed a drain which unless kept in proper condition, would cause a nuisance to the highway, were bound to keep this artificial work in such a condition that no nuisance should be caused, and that if owing to their failure to do this the highway subsided and a nuisance was created, they were as much liable for a misfeasance as if they had by their direct act made the hole in the road which constituted a nuisance to the highway."

INSANITARY RESTAURANT BRINGS HEAVY PUNISHMENT.

Last July an inspection was made of a well-known eating place in San Luis Obispo County and again in November. Further inspection in March revealed the fact that no attempt had been made to correct the insanitary conditions that had been previously noted and reported. As a result, a complaint was sworn out through the district attorney's office, charging the proprietor of the restaurant with violation of the State Food Sanitation Act and the operation of an insanitary eating establishment. The proprietor pleaded guilty and was fined \$100, the judge warning him that if he was brought into Court again on these charges the fine would be \$500 and 6 months in jail. The restaurant was placed "off limits" for 3 days by the U. S. Army.

An idea of the conditions prevailing was revealed in the following portion of the inspection report.

"(1) Refrigerator boxes very insanitary and foul from decomposed foodstuffs.

"(2) Box used for cracked ice insanitary; no false bottom to keep ice out of residue that accumulated on bottom of box.

"(3) Fish box in bad state of repair making the proper cleaning impossible.

"(4) Condiment shelf above pie worktable insanitary and cluttered with filth and grease; condiment containers filthy and covered with dirt.

"(5) Drawer used for knives, grinders, and various tools filthy; covered with decomposed food residue.

"(6) Shelf below table used for pan and kettle storage covered with grease and filth.

"(7) Cracks, crevices, and openings around worktables filled with filth and decomposed food.

"(8) Toasters, mixers, etc., insanitary and covered with decomposed foodstuffs and grease.

"(9) Place in general in bad state of repair insanitary, and unfit for the serving of food for human consumption." VINCENT v. RAGLAND. (P. H. Engg. Absts., Vol. XXII, No. 7).

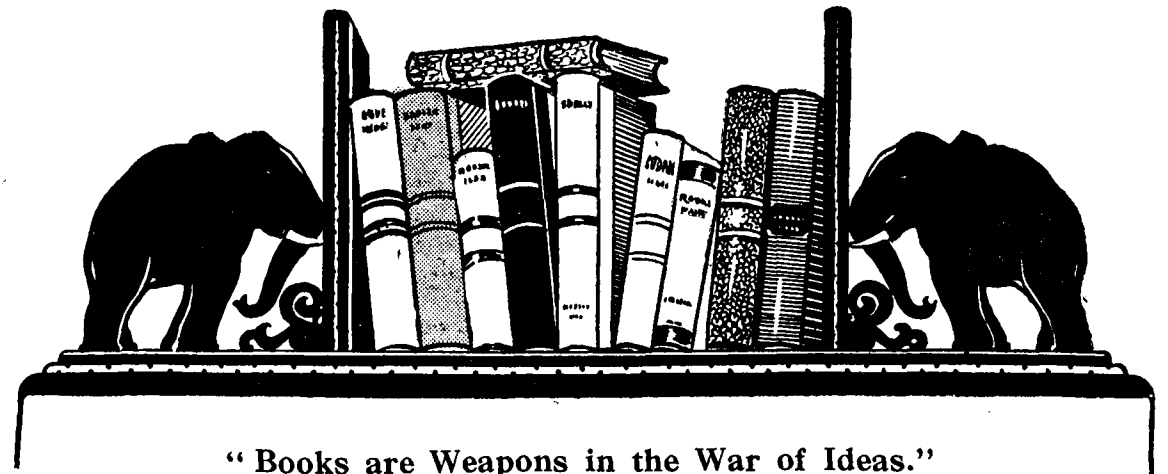
IS A HIGHWAY AUTHORITY LIABLE FOR NON-FEASANCE AS WELL?

The statement of law that a Highway Authority is not liable to damages for acts of *non-feasance* (e.g., non-repair of the roads, the proper maintenance of which is one of its statutory duties) but is liable only for acts of *mis-feasance* (e.g., execution of repairs to a road in a negligent manner, thereby causing injuries to a person) seems to require reconsideration, in view of the trend of recent judicial pronouncements, at least so far as India is concerned. (*Vide* Ramaswami Iyer on "Torts" (1944) 3rd Edn., Ch. VI, para 17, page 171). "There was a tendency at one time to follow the English rule of immunity for non-feasance; but in view of its peculiar history in England, it should not be regarded as having general application elsewhere." (A note by P. S.)

[We invite our lawyer friends to furnish us with extracts of cases to establish the liability of local authorities for mis-feasance and non-feasance, alike.
—Ed., P.H.]

"Tortious liability arises from the breach of a duty primarily fixed by the law: such duty is towards persons generally and its breach is redressible by an action for unliquidated damages."

(Extract from 'Law of Tort' by P. H. Winfield, 1943.)



"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!

HOW TO RAISE A HEALTHY BABY.

Author.—L. J. Halpern., M.D.

Publishers.—Prentice-Hall, Inc., New York.

Price 1.95 Dollars.

Size.—8" X 5½".

Pages.—388.

Prima facie, it is patent that this book is very popular. It was first printed in November, 1940. Since then, the book has been printed seven times. The latest was printed in August, 1945. Its popularity is well deserved.

It is the experience of many mothers that a sense of bewilderment overtakes them as to what they should do in bringing up a baby. Many questions occur to them and they are unable to get satisfactory answers to them. At times, some problems even puzzle them. Several of them may seem silly in the eyes of those who have had no experience of motherhood. In our country, the repository of all information on babies from maternity onwards, is the old women! Their experience should not be under-rated; but that they are ignorant of many things should not also be overlooked. Out of sheer ignorance, the significance of what *appears* small are usually overlooked. They eventually prove to be rather serious. This book brings to prominence many such details.

It is written for the benefit of countries where the welfare of an infant is placed under regular and capable medical supervision. The author rightly assumes that many questions may still arise in the minds of mothers. In our own country, an inexperienced young mother often finds herself helpless. She has to bring

up her baby depending largely on her own initiative and on occasions trusting the wisdom of her old aunt!

The book is divided into four sections. The first deals with the new born period comprising the first two weeks of life; the second, the period of infancy from two weeks to six months; the third, the period of infancy from six months to two years; and the fourth, the preschool age from two years to six years. Another section is devoted to the common contagious diseases. The publishers have included a diary at the end of the book. They have very thoughtfully provided space for birth and family record; the picture of the baby, birth certificate, hospital record and so on. If a diary is maintained on the lines indicated, it would prove to be of incalculable value later on. But many mothers may not have the time or patience to maintain a diary. Mothercraft requires asinine patience! Modern struggle for life leaves them little leisure.

The most remarkable feature of the book is that the very questions which would occur to an ordinary mother are set and the answers to them given. As one reads the book, further questions strike one. When checked up whether those have been included, one is very agreeably surprised indeed, that they have been.

Have we not observed ignorant mothers trying to cleanse the ears and nose of the baby? The process is a veritable ordeal for the tender baby. Irreparable injury could be done to the ears by mishandling. The book gives clear instructions as to how it should be done. It is a fashion among our 'educated,'

mothers to wean out the baby at the earliest possible moment in the false belief which that their physical forms would otherwise suffer damage! 'When may an infant be completely weaned from the breast?' is one of the questions raised and answered. 'A healthy mother should nurse her baby as long as she can. Even though she may only have enough milk for two or three feedings each day, maternal nursing is worth while.' Why is it that they say that a baby is to a certain extent immune from certain diseases? The answer is: 'breast milk is believed to contain protective qualities against certain diseases, especially some of the contagious diseases; for the first six months of life. Cow's milk lacks these substances.' Another important question is why is that the modern children do not show much affection and love towards their mothers. By resorting to 'bottle feeding' very early in life, the baby is denied the opportunity of developing the mother-infant relationship. The author says, 'the feeding of breast milk also tends to continue the previous mother-infant relationship which artificial feeding often tends to preclude.' Many such interesting and important questions are raised and answered.

This book should be in the hands of every mother who is keen to raise a healthy baby.

It would be an excellent idea if the Editor could obtain the special permission of the publishers to extract some of the questions and answers in 'People's Health.' This would help to rouse interest in the readers to know more and more about the subject. Any enterprising firm of Indian publishers may also secure the permission of the publishers and bring out vernacular editions of this very valuable book.

"HOUSEWIFE."

"PUBLIC HEALTH WORK IN THE U. S. S. R."

Author.—Professor N. Semashko.

Publishers.—"Soviet News," London, 1946.

Price.—1 Sh.

Size.—7"X4 $\frac{3}{4}$ ".

Pages.—48.

The Soviet experiments were looked upon in many quarters with considerable suspicion and misgivings. The vested interests, needless to add, viewed them through their jaundiced eyes; but the proof of the pudding lies in the eating of it. It is now recognised at all hands that Soviet Russia acquitted itself wonderfully in the World-War II. As the Rt. Hon. M. R.

Jayakar has put it: "There is a strong family resemblance between present-day India and Czarist Russia in the misery, ignorance and poverty of the masses and in the contrast between the rich and the poor." The U. S. S. R. covers 8,220,000 square miles. It is more than one-seventh of the total land area of the earth and one-sixth of the inhabited earth: in extent it is 4 $\frac{1}{2}$ times that of India. The population of U. S. S. R. is over 170,000,000. Since 1920 the population has increased by 35,900,000. Since the census of 1926 it has increased by over 23,000,000. 75 per cent. of the adult population of that country were illiterate under the Czarist regime. It is stated that in some of the most remote sections illiteracy was then as high as 98 per cent. Soviet Russia is the only country in the world which competes with our own unfortunate land in the variety of racial types and languages. It is said that more than 180 nationalities exist there speaking about 158 languages or dialects. In India according to the Census reports there are some 225 languages and dialects. The people are further divided in our country into religious and communal groups. Despite the extent of U. S. S. R., the variety of the racial types and the staggering number of languages spoken, it has succeeded in fighting out the preventable diseases within a short time of about two decades. Mortality has decreased by 40 per cent., small pox has been reduced by 96 per cent. and typhoid by 71 per cent. and diphtheria by 80 per cent. It is a notorious fact that Czarist Russia was a happy hunting ground of preventable diseases as on our own country it is even to-day. Despite all handicaps, U.S.S.R. has so galvanized the people that the nation was able to give hell to Hitler and Company during the World-War II. Why is it, one may pertinently ask, that in our own unfortunate land no improvement worth mentioning in the health of the people has been brought about notwithstanding the British rule for over 150 years. The usual excuses are want of finance, the apathy and the ignorance of the masses, communal and religious creeds and differences and so on and so forth. To all sceptics we would strongly recommend the small pamphlet by professor Semashko. In 1934 the same author has published a book 'Health Protection in U. S. S. R.' It covers a wider field. What is urgently required in this country is the will of the people to improve their own lot and the will of the State to carry out the will of the masses. Those in charge of our Public Health Administration in our country would be profited by perusing this

pamphlet. It would help them to open out their eyes and to launch with determination on a bold programme towards the promotion of the health of the people.

"R."

YOUR FOOD.

Author.—Minoo R. Masani (special edition for Children by Shirin Mistri).

Publishers.—Padma Publications, Limited, Bombay.

Price.—Re. 1.

Size.—8 $\frac{1}{2}$ "X5 $\frac{1}{2}$ ".

Pages.—49.

This little book by M. R. Masani specially adapted for the use of children by Shirin Mistri is sure to be a best seller. The expectations of the readers of "Our India" by the same author are fully satisfied. In simple English the author brings home to the minds of his readers the dire need for improvement in our country. Facts and figures which are likely to puzzle even economists, are presented in the most unalarming manner in "Your Food." Our unbalanced diet and its evil effects are dealt with in some detail in a convincing manner. Minoo Masani has attributed our bad diet to three factors: Ignorance, Superstition about meat eating, and Poverty. How to improve the existing conditions and how to make the most of the present conditions are questions clearly dealt with in this book. Mr. Shirin Mistri has used his discretion in deleting certain portions from the original which are likely to be above the heads of the younger readers.

One would be greatly benefited by reading it. Many simple questions about food which occur to us are answered in this little book. Even text-books in schools which are approved by a Text-book Committee are printed in types which literally bring tears in the eyes of the young readers. They are unattractive in many respects. This little book under review is printed well in good type, and it is profusely and appropriately illustrated. This book should find a place in any child's library.

In short, it conveys information worth much more than a rupee priced for it.

"HIGH SCHOOL STUDENT."

We presented a copy of the book to an intelligent lad and asked him to read it carefully and let us know his reactions. The foregoing is his impression of the book. It would be read with interest as it comes from one of

the very class of persons for whose benefit the book has been adapted.—

—Ed., P.H.

"A FUTURE FOR PREVENTIVE MEDICINE."

Author.—Edward J. Stieglitz, M.D., F.R.C.P.

Publishers.—The Commonwealth Fund, New York.

Price.—1 Dollar.

Size.—8 $\frac{1}{2}$ "X5 $\frac{1}{2}$ ".

Pages.—77.

Post war conditions have, besides giving rise to new problems, brought about fresh concepts in the methods of approach to old ones. Under the auspices of the New York Academy of Medicine, twelve monographs have been prepared on 'Medicine and the Changing Order,' the latest one in the series being a handy volume of about 70 pages under the caption "A Future of Preventive Medicine" by Edward J. Stieglitz. He states that the benefits of preventive medicine of the recent past in effecting a tremendous decline in the mortality from diseases associated with faulty environment and an increase in life expectancy—40 to 63 in U. S. A. in the period 1850 to 1940—have not been an unmixed blessing. According to him environmental sanitation may, by interference with Nature's law of survival of the fittest, actually weaken rather than strengthen the quality of mankind making the existence and development of the fit increasingly precarious; the extreme unorthodoxy of this observation has been admitted by Stieglitz himself and the general acceptance of his view is doubtful: secondly, increased expectancy of life achieved as the efforts of preventive medicine has profoundly influenced the age constitution of the population by materially increasing the proportion of individuals in the later ages; these are prone to suffer from chronic degenerative disorders and diseases which, apart from being a burden and misery to the sufferers and their families, are decidedly a more serious menace to national health than acute diseases; the factors concerned in the causation of these degenerative diseases of senescence being entirely different from those of infectious diseases require a new pattern of approach for control and prevention. He, however, warns that this concept should not be taken to mean that the present pattern of public health practice is unnecessary: but that on the other hand, the present wholesale measures should not only be continued un-

abated but improved by research on the unsolved problems of epidemiology of infections and better methods of prevention, by proper integration of the programmes and division of responsibility among personnel specialised in their respective fields and co-ordination of preventive medical and health activities. Regarding degenerative diseases, Stieglitz lays great emphasis on a complete reorientation in the concept of the Medical profession that health is not only freedom from diseases but that it has quantitative attributes involving functional reserve capacities and that the primary duty of the physician is to retard the depreciation in health by building up this reserve capacity. To achieve this purpose, he urges the scrapping of the system of 'periodic examination' wherever it exists as it is too hurried, too superficial and too routine-minded to do any good and advocates the introduction of the

"health inventory" which has a fivefold advantage; viz., analysis of the health state of the patient and interpretation of the effects of previous habits of living, prompt correction of remediable defects, advice and guidance of future habits, determination of the capacity and limitation in connection with occupation and last but not the least education in hygiene. This is designated by Stieglitz as "Constructive Medicine." Only by a combination of these individualistic measures and the wholesale or *en masse* environmental hygienic measures, the real objectives, of preventive medicine can be achieved. Everyone concerned in the administration of preventive medicine should keep in view the objectives enunciated in the instructive and thought provoking monograph on this subject.

"R. ADISHESHAN,"
Ex-Director of Public Health, Madras.

PROGRESSIVE IMPROVEMENT IN NATIONAL HEALTH.

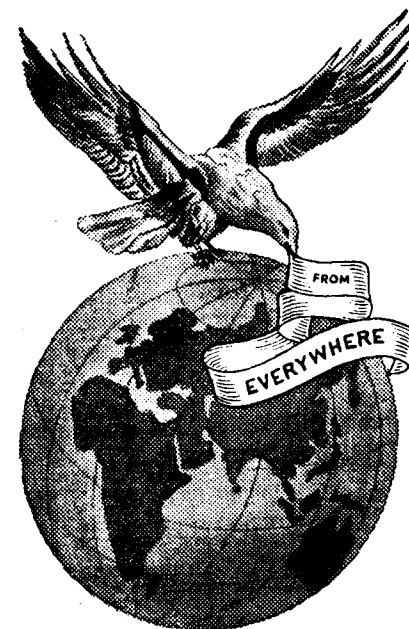
Before preventive medicine was organised, infectious diseases rioted uncontrolled to a large extent throughout England. In 1838 the reports of Dr. Neil Arnott and Dr. James Phillips and Dr. Southwood Smith give a terrible picture of the ravages inflicted by infectious diseases in London at that time. They showed that, out of 77,000 persons, 14,000 were attacked with fever, one-fifth part of the whole, and that out of the 14,000 attacked nearly 1,300 died.

Hence, environmental hygiene was the first task of administrative public health. From 1875 to 1900 there were a long series of progressive reforms under the direction of the Local Government Board, comprising general sanitary improvements, pure water supplies, pure food supply, provision of isolation hospitals for infectious diseases, public vaccination, the supervision of slaughter-houses and common lodging-houses, etc. Local Authorities obtained control over housing, powers to condemn slums and to provide new housing accommodation. Infectious diseases were made notifiable, while port sanitation prevented the admission of fresh disease, plague and pestilence.

These measures have produced a wonderful improvement in the national health. The water-borne diseases, formerly so rife, have become almost negligible. Cholera has disappeared and typhoid is exceptional, though "carriers" may still cause epidemics of the disease. Personal cleanliness and lessened over-crowding have stamped out typhus, and smallpox no longer claims a deadly toll of victims annually.

Here two things must be remembered. The first is that these triumphs of Public Health were not born out of legislative enactments in Parliament or devised in the offices of Whitehall. They were made possible by the notable advances achieved in medical and natural science, through pioneer work by surgeons, physicians and pathologists in the laboratory and hospital, by general practitioners at the bedside, and by the great discoveries made by Darwin, Huxley, Lister, Pasteur, Simpson and Koch. There was a wealth of new knowledge in biology, antiseptic surgery, bacteriology, anaesthetics and engineering science, the lessons of which received practical application in public health administration. The second point, often forgotten, is that work in environmental hygiene must be continually maintained and never stands still.

SIR ARTHUR MACNALT, K.C.B., D.M., F.R.C.P.,
Formerly Chief Medical Officer, Ministry of Health.
(Extract from "Health and Social Welfare", 1944-45).



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.)

DEFECTIVE SPEECH AND POSSIBLE LEFT-HANDEDNESS.

To the Editor.—A 5 year old girl who appears to be normal in every other respect has a tendency toward left-handedness and defective articulation. The flow of speech is smooth, but she substitutes *y* for *i*, *d* for *sch* or *g* and *w* for *r*. Thus "Mary had a little lamb" becomes, in her rendition, "Mawy had a yitta yamb"; "the red school bus" becomes "the wed dool bus" and a "green" chair becomes a "deen" one. I once heard a professor of physiology who was afflicted with stammering attribute his difficulty to his being left-handed but compelled to use his right-hand, thus interfering with the speech centre of Broca. When the child under consideration is eating, she is seen to carry the fork sometimes in her left-hand, sometimes in her right. Because of the observed tendency for her to use her left-hand would it be advisable, as a preliminary to attempting to correct her defective articulation, to encourage her to use her left-hand as the dominant one? Any other suggestions as to methods of correcting her speech will be appreciated.
—M. D. ALASKA.

Answer.—It is not unusual for children of 5 to demonstrate this type of defect. Some children, although normal in other respects, are slow in learning the language skills—perhaps because of a slower maturation of the language centres of the cerebrum. They will often, as

the child in question apparently does, substitute simpler speech sounds for the more complex, or sound made at the front of the mouth for sounds made farther back. (Sight plays an important role in the acquisition of speech; and the child usually learns first the sounds whose essential movements can be easily seen and imitated, for example, *p*, *b*, *m*. Conversely, he learns last the sounds whose essential movements are made farther back in the mouth and cannot be easily seen, such as *r*, *k*, *g*, *ng*.)

The tendency to ambidexterity may or may not be significant. It would be best to make no attempt to establish the dominance of one hand. Given time, the child will no doubt do this herself. In regard to correcting the speech defect, a daily period of speech drill is recommended. The defective sounds should be isolated and pronounced alone until the child can produce them correctly; later they can be incorporated into simple sound combinations and eventually into familiar words and phrases. (From "J. A. M. A.", Vol. 126, No. 13).

RELATION OF HEALTH OF CATTLE TO SAFETY OF OUR MILK SUPPLIES.

Dr. Schalk points out that the greatest achievement of any political unit is to establish and maintain a plentiful supply of clean, wholesome milk for all of its people.

First and foremost this supply must come from clean, vigorous, healthy animals. There-

fore, dairy inspection should begin on the farm.

While it is true that pasteurization does destroy disease germs, it is equally true that pasteurization is not universal nor entirely effective as practiced. Tuberculous cattle may give off germs. Therefore any cow reacting positively to the tuberculin test is a menace to the public health of the community which it serves. It has been found that the Tuberculosis Eradication Campaign reduced the infection to less than one-half of one per cent. of all cattle tested.

More than fifty per cent. of dairy herds have been found to be infected with Bang's disease. Thus people drinking raw milk are exposed to this disease. Cattle should be routinely tested and the positive cases should be eliminated from the herd.

Septic sore throat is also cited as a menace and can be controlled, as it is often associated with mastitis in cattle.

The often retained and neglected placenta is also often the source of a variety of decomposition and of putrefying germs which result in intestinal disturbances to those who consume raw milk.

Foot-and-mouth disease is also cited as a possible menace to the public from infected cows.—M. K. HAVENS. (*P. H. Engg. Absts.*, Vol. XVIII.)

CHANGING BOYS INTO GIRLS.

SCIENTISTS' CONFERENCE, LONDON.—The possibility of changing baby boys into baby girls to give them a better chance of long life was suggested by the British Professor F. A. E. Crew at a London Conference when British and European scientists discussed problems of longer human life.

Prof. Crew, according to the authoritative British Medical Journal, *Lancet*, was speaking at a Conference called by the British branch of the Club for research on ageing. He pointed out that the male infant has a much poorer chance of survival than the female and asked whether sex hormone preparation could be used temporarily to transform a male infant into a female and so get over this disadvantage.

Experiments on female rats, in which an apparent anti-ageing effect had been produced by the use of certain hormones, were described, but it was emphasised that these effects might only be a temporary stimulation of the ageing organs.

Lord Nuffield, the famous British industrialist and motor manufacturer, who was elected Chairman of the Club, said that he could not

understand how ageing began in childhood since the athletic performance of a child went on improving up to the age of 15. Two professors then explained to Lord Nuffield that different organs developed at different ages, the brain and bone having priority at the early ages, and that muscle developed later.

The conference passed resolutions proposing international co-operation, establishment of permanent institutes for research and provision of ample funds to secure these facilities. One delegate remarked that much public money was being spent on providing homes for old people, though the urgent need was for money to be spent on preventive measures which meant research.—REUTER.

IMPORTANT DATES ESTABLISHING THE GERM-THEORY.

1880 marked the commencement of the modern ideas of preventive medicine.

"The Germ-theory explained the nature of the vast host of contagious diseases, and thereby opened up the possibility of prevention and cure, while the new surgery gave to its uses the means of reaching and removing or repairing organs till then wholly beyond access."

The years between 1880 and 1890 saw the isolation and culture of the bacteria which caused many of the common diseases; thus, in these years, mainly owing to the work of Koch and his pupils, the bacteria which caused the diseases of anthrax (1876), sepsis in wounds (1878), typhoid (1880), tuberculosis (1882), cholera (1883), diphtheria (1883), Malta fever (1887), tatarus (1889) were discovered and cultivated. Succeeding decades have brought to light many others, of which the best known are plague (1894), dysentery (1898), syphilis (1905). (*A Century of Science* by SHERWOOD TAYLOR.)

NEW DRUG SUPERIOR TO PENICILLIN.

SOVIET DISCOVERY.

The Soviet scientist Prof. Nikolai Krasilnikov has discovered a new drug "superior in some respects to penicillin," it was stated this afternoon. (April 10, 1946).

Advanced tests with the new drug called "Aspergillin" are being made in Moscow, Leningrad and other Soviet cities.

A statement said that the drug can be used against bacteria which are not affected by Penicillin. It is said to be effective against tuberculosis, dysentery, typhoid and cholera.

(—REUTER.)

FLOODS WITHOUT EPIDEMICS ARE NEWS!

"From the 30 sanitary engineers and sanitarians, assigned to flood duty by the Illinois Department of Public Health since May, reports have come in that 4 sewage treatment plants in the State were completely out of commission for a while as a result of the 1943 floods and that 13 public water supply systems were crippled, 5 of them being entirely non-serviceable for a time. In the face of these rather startling community-wide sanitation hazards, it is particularly gratifying that to date no outbreaks of communicable disease resulting from the floods have been reported in the State. This record speaks well for the preventive forces of sanitation in Illinois, and reflects great credit on the effective typhoid-immunization clinics conducted with the co-operation of local physicians."—W.E. (*P. H. Engg. Absts.*, Vol. XXIV, No. 3).

EXAMINATION OF FOOD HANDLERS.

As foods are vehicles of disease transmission the handlers of foodstuffs bear need for examination. Food handlers should be considered in relation to the construction of the establishment in which they work, the equipment used, and the nature of the food handled. Because of physical factors which surround food storage (refrigeration, protection from dust, and contamination), food handling may only play a part in disease transmission.

The food handler should be considered as to his educational background, his general physical condition, his past history, and his physical and laboratory examinations all play important parts in determining the likelihood of a food handler's transmitting any disease. The first 3 points concern his personal hygiene which may or may not allow disease transmission even if the food handler may potentially transmit disease.

The physical and laboratory examinations should include:

- (1) An outward physical inspection of the appearance of the individual.
- (2) A thorough physical examination.
- (3) Laboratory examination of chest and sputum for tuberculosis; nose and throat cultures for diphtheria, and hemolytic streptococci; faeces and urine for enteric infection; and blood Wassermann for syphilis. The frequency with which these examinations should be repeated is uncertain. The conclusions of the majority concerning the economic feasibility of such examinations of food handlers seem to

indicate that it is usually impractical and prohibitive.

Education of food handlers through instruction in personal hygiene, methods of food handling, and not working while ill, seem to be more practicable. No amount of food handler examination will compensate for the handling of food by filthy, careless personnel, and the lack of proper facilities and equipment for food handling.—RICHARD F. PETERS. *P. H. Engg. Absts.*, Vol. XXI.)

WHOOPING COUGH.

A popular theory has it that flying in airplanes will cure whooping cough. Controversies have raged and claims have been made, but generally the whole thing has been dismissed as another silly story.

More fuel for the controversy which threatens to revive, is provided by Sweden where statistics have been prepared which appear to give an answer to the long-standing doubt. According to experiments carried out under medical supervision in a Dragon Rapide plane, 25 children out of a hundred whooping cough patients were completely cured, while 50 were definitely better.

Eight parents and eight children were taken on each plane trip to a height of 10,000 feet. Twenty-five children were unaffected, but it is thought that trips another few thousand feet higher might result in cures. All of which sounds very odd as infants who catch whooping cough in high hills stations often have to be taken "down the hill." (*Press Cutting*).

AIRPLANES AND HEALTH.

The development of international airplane traffic will cause a potential health menace through the possibility of the transmission of communicable disease.

Certain insects and rodents are known to be the vectors of transmissible diseases. For example, yellow fever and malaria are spread by infected mosquitoes, typhus and relapsing fevers by lice, Rocky Mountain spotted and relapsing fevers by ticks, plague and typhus by fleas, African sleeping sickness and several other diseases, even cholera, by flies.

Disease-carrying insects might easily find their way into planes and survive a trip from a distant airport. Passengers may become infected shortly before leaving a foreign port and thus transmit the disease.

Some of the international airway firms disinfect planes in flight to destroy insects which may be aboard. Efficient and adequately staffed departments of health will be required to control the many complex problems involved

in the potential spreading of disease through airway traffic.—RICHARD D. HOAK. (*P. H. Engg. Absts.*, Vol. XIX.)

METHODS OF SANITIZING EATING AND DRINKING UTENSILS.

Andrews reports the results of a comprehensive survey of eating and drinking establishments made in an Eastern city. Bacterial counts were made of plates, tumblers, spoons, forks and beer glasses. The lowest count reported 2,800, was on spoons at eight soda fountains. The highest count, 7,000,000, was on beer glasses at nineteen bar rooms. The next to the highest count, 390,000, was on tumblers at the eight soda fountains. Each figure is the average "Swab count" of ten utensils. Rabbit blood agar was used for plating. These counts, all of which are greatly in excess of the standard of 100 organisms per utensil surface, show the need for improvement in dishwashing practice. On the average, lower bacterial counts are obtained with machine washing than with hand methods. However, the data do not justify the conclusion that manual methods should universally be discarded in favour of dishwashing machines. Satisfactory results can be obtained by either method. During the rush hour dishes will frequently be put through the machine too rapidly to give proper washing and rinsing. Observations at one large cafeteria during the noon rush showed that for a group of ten consecutive racks of dishes washed one rack was in the machine for only twenty seconds, four for thirty seconds, three for forty-five seconds and two for sixty seconds. The shorter exposures are inadequate. One solution of this problem is to encourage the restaurant to have in use a large enough supply

of utensils to tide over the rush period without having to make the dishwashing operation only a pretence. Frequently the person doing the dishwashing has not been instructed in the proper dishwashing technic and has not been impressed with the importance of his job. Since the outbreak of war, the problem of maintaining good sanitation in restaurants has been intensified by shortages of manpower and materials and increased customer loads. There are indications that the amount of disease spread in restaurants is increasing. (*J. A. M.*, Vol. 126, No. 10).

AN UNUSUAL CASE OF FOOD POISONING.

"Three persons fell ill one hour after drinking some home-made lemonade. The constituents were each found free from any harmful matter but the drink contained a salt of cadmium. The lemonade had been set to freeze in cubes in a refrigerator tray. The base of the tray was brass, plated with cadmium; the inside surface was corroded. It had been used for ten years for freezing water cubes quite safely, but in this instance the tartaric acid in the lemonade had attacked the cadmium and dissolved it. Experiments showed that a lemonade containing 0.27 per cent. tartaric acid, when frozen into cubes in the tray came to contain 405 parts per million of cadmium. The illness caused by drinking it was nauseating, vomiting and abdominal pains; it was transient. Because of its lustre, smoothness and ease of electrifying deposition, cadmium is coming into use as a protective coating on metal utensils. Such utensils should not be used for holding acid drinks."—R. E. TARIETT. (*P. H. Engg. Absts.*, Vol. XIX.)

SCOPE OF MEDICAL TREATMENT.

Medicine for a long time has concerned itself mainly with the curing of disease, but now its scope has been enlarged to include the maintenance of health. This entails the consideration of the patient as an individual and not simply as a carrier of disease; . . . All factors that are adversely affecting him must be considered with a view to their elimination or mitigation, either by enabling him to deal with them himself or by actually removing or altering them by outside interference. In future not only must the physician be ready to use all the medical knowledge and resources available to him but he will accept, as part of his duty, the obligation to assist "the patient, the attendants and external circumstances" to "conduce to the cure".—MAEVE WHILEN AND M. H. BREE,

Lancet, Oct. 5, 1946, p. 477.

(Extracted by K. V. V.)

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