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People's Health



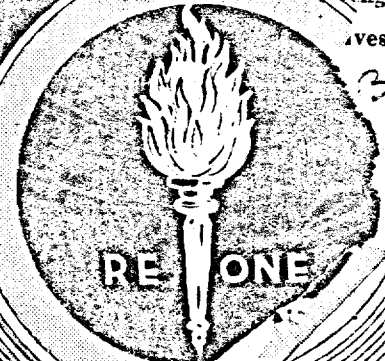
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PEOPLE'S HEALTH

EDITOR
V. RAMAN



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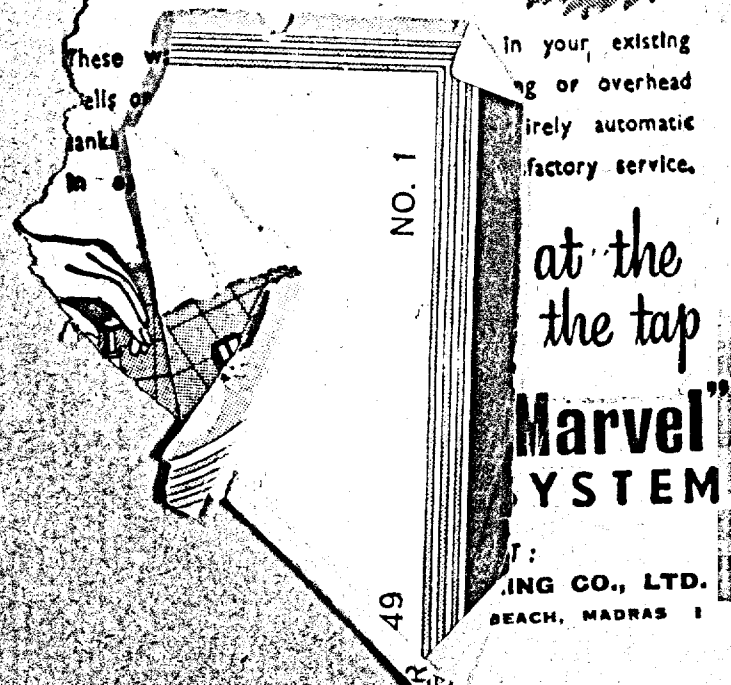
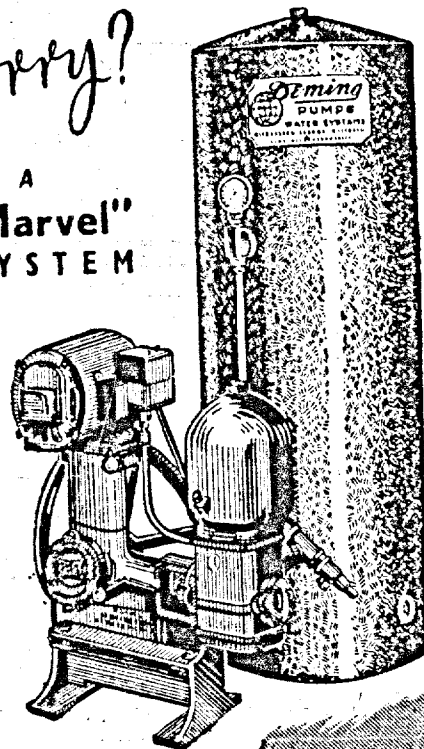
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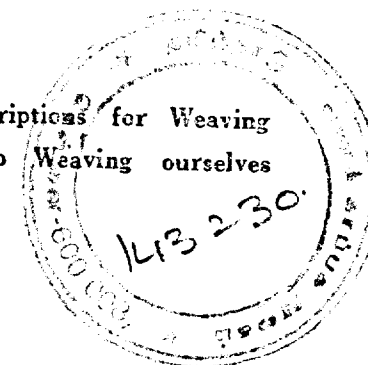
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PEOPLE'S HEALTH

A Pioneer in the Field of Public Health

Vol. IV

OCTOBER, 1949

No. 1

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VOL. IV No. 1

OCTOBER, 1949

ISSUED MONTHLY

EDITORIAL . . .

*May God defend me from the still water,
I will protect myself from the rough.*

—(A Spanish Saying.)

A RIGHT LEAD FROM MADRAS

Madras Province claims to have given a lead to the rest of the country in several directions. It claims to have introduced the first Public Health Act in the country; it claims to have introduced a total prohibition in the Province; it claims to have taken up a bold lead to separate the judiciary from the executive. In all these, there may or may not be total agreement; differences of opinion are possible. But in the latest lead which Madras has given, there may not be even a whisper of any disagreement from any quarter. Madras has taken a bold and forward step of launching upon a combined water-supply scheme to provide eleven villages with safe and abundant drinking water. The prospective population which would be served by the scheme is 75,000.

The cost of the scheme is thirty-eight lakhs. The estimated annual maintenance cost is Rs. 30,000, which will be distributed among those eleven villages in accordance with the quantity of water supplied to each of them.

These eleven villages are scattered widely in saline tracts. Fresh water is not available. The suffering of the people can be better imagined than described. The Madras Government by launching upon the scheme have given a lead to the country. In another page, a short account of the scheme is given. It will doubtless, be read with interest.

The combined scheme was originally outlined in 1938 when the Hon. Dr. T. S. S. Rajan was the Minister of Health in the first Congress Ministry

(1937—39). It has taken all these years to have the scheme sanctioned for execution. It is in the fitness of things that Dr. T. S. S. Rajan laid the foundation stone for the scheme on the 2nd October, 1949—the day on which our great and departed leader, Mahatma, was born. But for the powerful drive of the Minister of Health, possibly the scheme would have taken several decades before it could become a reality.

FOLLOW IT UP PLEASE

We would appeal to the Madras Ministry to introduce a similar combined water-supply scheme to serve a group of villages in Chagalnadu (Rajahmundry). This is an area where water is not obtainable, even at great depth. No dependable surface source is available within a reasonable walking distance. Water is being conveyed from Rajahmundry and doled out to the people in homoeopathic doses. It is indeed, very heart-rending to see people struggling to secure drinkable water. We understand that the sanitary engineering department, as usual, conducted an investigation and that in the end came forward with a scheme without vision. The correct method of dealing with this case is to launch upon a combined water-supply, drawing water from the Godavari.

We would also appeal to the other Provinces to follow the lead of Madras in taking drinking water to the people

who are inhabiting localities where potable water is not available below the feet of the consumers. Such schemes may be expensive; but in the end it is bound to prove cheaper than frittering away thousands and thousands of rupees annually in searching for local supplies.

HOW DOES POLIO SPREAD?

Last month we questioned the soundness of a statement by the Minister of Health, Government of India, declaring a war on some fronts against flies on a charge of their spreading polio. The Hon. Rajkumari Amrit Kaur has but a vicarious responsibility for her statements which should have been based upon the *expert advice* of her advisers. We publish elsewhere in this issue an article on "How does polio spread?" The author of the article says:

"The virus has been recovered from flies and for all we know they may disseminate it at times. But flies do not play an important role and DDT campaigns or fly-killing frosts seem to have little effect on epidemics."

IRRESPONSIBLE TECHNICAL ADVICE

It is most regrettable that in our country professional men are *not* held responsible for the counsel they dole out to the credulous entities in authority. We have had occasion to expose the hollowness of an explanation tendered by a provincial Director of Public

Health on an outbreak of cholera. This official attributed the epidemic to the consumption of 'Bondas'—innocent dishes popular in these parts. We now have the experts at Delhi ascribing to flies the guilt of spreading poliomyelitis. We do not by any means resent the destruction of flies, which are culprits alright, though on different counts. But we certainly deplore sciolism at high professional levels. Our comments are based upon what appeared in the Press. If the information catered to the public is wrong or inaccurate, the blame rests with the authorities responsible for the dissemination of mutilated information to the public.

NELSONIAN EYE

Our public health medical experts quote the West when it suits them. We are asked to have more hospitals and more medicine men and yet more modern equipments on a scale comparable to the standards set up in the West. But when it comes to improving the living conditions of the people, they turn a Nelsonian eye to the experience of the occident. Surely, this is not the way in which the foundations of our nation's health should be laid.

WHY STRAIN A GNAT?

Like the poor, diseases which have for their origin insanitary environmental conditions are always with us. Tens

of thousands of people die of them. We have become so accustomed to such ill-health and death among the masses that we are taking them as a matter of course. When a few hundreds of cases of polio have occurred in Bombay City and elsewhere, so much fuss has been made even at high levels. S.O.S. was frantically flashed across to foreign countries to get by air a few *iron lungs* as though the threatening epidemic could be nipped in the bud that way. It is no good pinning our faith in our ministries of health and their medical officers to root out diseases. In these circumstances, if our people meekly surrender to fatalism, they cannot be blamed.

PURIFICATION OF MADRAS CITY WATER-SUPPLY

The question of selecting an appropriate method of rendering the water-supply bacteriologically safe and aesthetically acceptable, has been engaging the attention of the authorities for many decades. No decision has been, as yet, reached. The history of the case is long and weary. Let us not tire our readers by recounting it at this stage. The problem of the purification of the water-supply still continues to be a problem. A certain set of experts have been strongly supporting rapid filtration-cum-coagulation and settlement. Another view was that the traditional 'slowsand

filters' as such, can be utilised successfully, provided the uniformity of the quality of raw water is ensured. Indeed, this is an essential pre-requisite for the successful operation of slow-sand filters.

A suggestion was thrown years back that a porous bund around *Jones Tower* should be formed so that the grosser suspended impurities including algae, may be kept back from the feed water to the filters. No one seems to have taken prompt and effective steps to implement this suggestion. Opportunities to have this done have been either deliberately or unintentionally allowed to slip by. This is unfortunate!

A PRECEDENT

The waterworks practice as adopted by the Metropolitan Water Board, London, has always been looked upon as the standard British waterworks practice. The additional water treatment plant, which is to be constructed by the Metropolitan Water Board at Ashford Common, provides for micro-screens instead of rapid filters which had been in use to condition the raw water so as to render it fit for subsequent slowsand filtration. The new filter plant is estimated to cost three million pounds.

In the second largest waterworks in the United Kingdom—The Manchester Waterworks—, they have already installed automatic straining plant with a

total flow capacity of seventy million gallons per day. The Manchester Corporation is satisfied with the quality of strained water to such an extent that no subsequent filtration is done!

A SUGGESTION

So far as Madras City is concerned, in conjunction with the proposed porous bund, if water is passed through micro-strainers, the water would be possibly brought to a condition fit for supplying it to the city just adopting disciplinary chlorination. As a measure of further safety, the water could be passed through the existing slowsand beds, perhaps at an infinitely higher rate. We commend this suggestion for the consideration of all authorities concerned, professional and administrative. The potentialities of micro-straining deserve to be examined by the water engineering profession.

AN APPEAL

In this connection, we appeal to the engineering profession to take special care to see that the administrations are not misled by biased estimation of the capital and maintenance costs in respect of each of the alternatives under consideration. The profession owes a duty to itself to see that prejudice in favour of any one method or against another, is not allowed to eclipse its sense of integrity and of public duty.

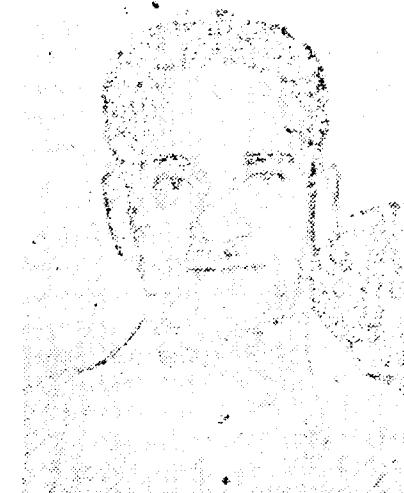
GOOD WORK AND SERVICE

by

THE HON'BLE

Sri P. S. Kumaraswamy Raja,

Premier of Madras.



FORT ST. GEORGE,
Sept. 25, 1949.

I am glad *People's Health* is to commence the 4th year of its existence with the issue of October, 1949. This journal plays an important part in the field of journalism, its aim being to inculcate the principles of health in the mind of the public. The valuable articles which appear in it from time to time, go a great way in fulfilling its aims and ideals. I am sure it will continue to do good work and service to the public in future also. The zeal and enthusiasm of its *Editor*, Sri A. V. Raman, who is striving hard to push through with his work in spite of the pecuniary loss and difficulties, are worthy of praise. I wish him all success.

P. S. KUMARASWAMY RAJA,
Premier of Madras.

SERVICE IN THE RIGHT SPIRIT— GIVE ALL HELP JUSTLY DUE

by

THE HON'BLE
Dr. T. S. S. Rajan
Minister for Public Health.



FORT ST. GEORGE,
17th September, 1949.

I am glad to learn that *People's Health* has entered its fourth year of its existence. This magazine is well edited and brought up and presents features which are very attractive. Trenchant criticism offered though true, may not please very many. Nevertheless, it remains a powerful weapon in the field of public health improvement. There are ways of making it a financial success if the *Editor* adopts ways and means to do so, but having the ideal he has before him in publishing this journal, it won't be proper on my part to pull him down from the path of truth which sustains him. Three years of service is no mean record. I hope that the public will appreciate the important service that Mr. Raman is rendering in the right spirit and give him all the help that is justly due.

With best wishes for continued success of *People's Health*.

T. S. S. RAJAN,
Minister for Public Health.

ORGANISATION OF HEALTH SERVICES IN INDUSTRY

4. INDUSTRIAL MEDICAL OFFICER FUNCTIONS DUTIES AND RESPONSIBILITIES

by

Dr. M. N. Gupta,
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Deputy Chief Adviser, Factories (Medl.),
Ministry of Labour, Govt. of India.



1. THE INDUSTRIAL MEDICAL OFFICER—FUNCTIONS

The problem of providing medical service for the industrial worker both in large and small plants is in the interest of the government, employers, workers and all those interested in promoting better standards of life to reduce the losses sustained through sickness, accident and death. In a country as ours, such problems assume wide proportion owing to both the climate, the poverty and the ignorance of the people which has contributed widely to the existence of tropical and other epidemic diseases.

In connection with the sickness among industrial workers, few employers know the rates of sickness among their workers. Even in industrial concerns where doctors have been employed to provide medical relief, the incidence of diseases of occupation are totally unknown and the concept of such diseases is non-existent. It is, however, certain that a sickness and disease exact a heavy toll from the industrial population and has influenced the efficiency and the earning capacity of the worker to a marked extent.

While it is essential that a programme of instructing the management in the advantages of medical supervision be instituted by authorities concerned, it is of still greater necessity that

the Public Health Service in the country instituted such a programme for the medical personnel. Our shortage of trained medical men is appalling. It is also sad to say that the medical men or the "doctor" in our industries and factories has not grown up with the Factories Act. It must also be realised that there is no substitute for days and months lost because of disabling, sickness, and no substitute for the lives lost in accidents.

The provision for industrial medical supervision is necessary, for, there are a large number of people in large industries and a larger number still in small factories. Also such provision must be provided step by step starting with factories and industries with special toxic hazards or where work is heavy or where there are a large number of youngsters, women or older workers. Efforts must also be made to stimulate Works' Committees to augment health and hospital facilities.

The factors upon which industrial medical supervision depends are :—

1. Those relating to industry or factory.

(a) Place, housing, transport, hospitals, climate, regionalisation.

(b) Number of workers employed—single or numerous units of small or large size.

(c) Type of work—heavy, dangerous, toxic or shift or transport work.

(d) Type of worker—men, women, youngsters, active or sedentary.

(e) Buildings—Obsolete, modern, transition, and expanding. In old and obsolete buildings where it is difficult to catch up with improvements in modern factory design.

(f) Contractors, men where first-aid arrangements for contract labour is necessary.

2. Those relating to the Industrial Medical Officer.

(a) Full-time—

(i) Organisation with over 3,000 employees with nurses or first-aiders. A set up including a headquarter and subsidiary units spread over the various production departments.

(ii) A regionalised administration with assistant medical officers, nurses, etc., for a group of factories.

(iii) A number of smaller units employing 50—250 people, with first-aiders.

(iv) A factory employing less than 3,000 people, with some special toxic hazards, with nurses, first-aiders, pathological laboratory assistance and requiring lot of research work.

(b) Part-time—

(i) to one or two units, in the course of ordinary general practice.

(ii) as examining surgeon to an expanding factory.

In any case even with the above circumstances basic principles for the provision of medical service are the same. There is a difference of degree only. The functions of the Industrial Medical Officer remain the same.

The Industrial Medical Officer must pay careful attention to the following outstanding points:—

1. Pre-placement examination of the worker to assess his fitness for work. The occupational selection of the employees is a problem of prime importance and it is this aspect of the medical officer's work which if adequately carried out brings the greatest applause and appreciation of the management.

The first contact with the medical department should make the prospective employee realise that here is a place where he can depend upon genuine help and consideration. Essentially, this scheme consists of dealing with job evaluation and meet with the medical categorisation of the worker. The Industrial Medical Officer must formulate his own scheme of categorisation in the form of a code which, to comply with essential laws of medical ethics, commands the trust of the employee and no confidential information regarding the medical state of the employee is passed on to the management.

The Canadian Army *PULEMS* system is capable of adaptation to any type of works. The essentials of a physical examination are:—

(1) Only a careful pre-employment examination enables sub-standard persons to be successfully placed in occupation.

(2) Anything less than a full examination is not fair to the worker or to the employer.

(3) Very few applicants are so unfit as to be incapable of any class of work.

(4) The object should be to indicate how each can be employed in safety to himself while performing his daily work efficiently.

(5) Routine mass radiography is valuable to detect pulmonary and cardiac pathological conditions.

(6) The categories of workers should be classified, as: fit for any work, no hazardous machinery, no heavy lifting, work at ground level, no extensive working, severe handicaps such as blindness, and rejection.

(7) At hazardous occupation, periodic examination should be the rule.

(8) The confidence of workers must be gained, they must appreciate that medical supervision is in their interests.

(9) Employees returning after illness of some weeks absence should be re-examined.

(10) Above all the industrial physician must possess "wisdom"; he must be the friend of every one.

2. Second important principle of industrial medical service is the organisation of emergency treatment and arrangements for swift clearance of the acutely ill. It is not too much to impress that this service helps to improve relations in factory between the workers and the management and many a life and limb are saved which bring blessings in disguise from all concerned.

3. Arrangements for periodic health examination of all workers, a systematic check up, especially the examination of people about to be employed in departments where toxic hazards exist.

4. Arrangements for examination of workers and report on their health state.

5. Statutory examinations of—

(i) all young people entering industry;

(ii) periodic examination of these adolescents;

(iii) examination of people employed on dangerous occupations.

6. Provision for research. The opportunities available for the investigation of industrial health problems are innumerable and unequalled material is available to the keen, enthusiast and ambitious worker.

7. Education of the worker on health matters, and providing advisory and consultation service for every worker.

8. Keeping of medical records and their interpretation to the management.

9. Provision of adequate, prompt and skilful first-aid.

10. Provision of nursing and ancillary services.

Industrial health supervision has three important aspects and it is the duty of the industrial medical officer to devote his time and energy to all the three aspects.

(i) The worker.

(ii) The work.

(iii) The working environment.

THE WORKER

It is essential to note the following things when considering the question of employment of people.

(1) Past history—especially the occupational history. This is most essential. Careful enquiries must be made to elucidate the exact nature of his job and the raw material or the by-products that he handles.

(2) Age and physique—physical fitness for the job he is about to handle or he is carrying out.

(3) Deformities and diseases—a physical handicap need not always be a bar to his employment. The job must fit the worker, not the worker to fit in the job.

(4) Social background and family history. Most of the present day illnesses have in their background an unsound social fitting.

(5) If the worker is exposed to toxic hazards, his periodic clinical examination should be directed to—

(a) General bearing, appearance, colour, skin and weight.

(b) Nose, mouth and eyes.

(c) Lungs, liver, kidneys, bladder.

(d) Muscular and skeletal system.

(e) Nervous system.

(f) Special investigations:

Urine,

Blood counts,

X-rays.

THE WORK

While it is essential to have a knowledge of the physical capabilities of the worker, it is of still greater value to be able to have a conception of the nature of the job that the man passed as medically or physically fit has to do. Such factors as the following about the work must be investigated:—

(a) Nature of Work—shift work, night work, work of arduous or monotonous nature.

(b) Demands of the work—demands upon muscular and skeletal system in terms of gross

or fine movements, weight lifting, standing, awkward positions, climbing, bending, kneeling.

(c) Strain on sight, hearing.

(d) The need for protective appliances or clothing, as in welding, chrome plating.

(e) The element of sudden danger or insidious hazard—danger from sudden explosions, or slow absorption of lead fumes.

(f) Individual or team work.

(g) Responsibility for the work or the safety of others.

(h) Working above or below ground level.

(i) Mental demands.

THE ENVIRONMENT

The industrial physician should have a working knowledge of the industrial processes involved in the works in order to prevent occupational disease. It is incumbent on him to make frequent inspections of the work-rooms to be able to assess the hazards. He should also possess a good knowledge of the clinical manifestations of occupational diseases to which the workers under his supervision may become exposed. He should know the prodromal symptoms as well as symptoms of disease when it is fully established.

The environment of the worker may be classified into 4 classes.

A. PHYSICAL

It is the physical environment which is the most difficult to control and also most important for maintaining the physical fitness of the individual. Such factors as ventilation, temperature, humidity, lighting, glare, noise, apparatus, machinery, work benches, seating arrangement, protective measures and their provision, play an important role on the health and well-being of the work-people.

B. CHEMICAL

With the increasing use of a large variety of chemicals in industry the risk from the use of

chemicals is increasing and as such it is necessary for the industrial physician to have a knowledge of:—

(a) Toxic solids, liquids, gases, fumes and dust;

(b) Accidents of gassing, explosions, dust hazards, insidious poisoning;

(c) Dangerous processes covered by regulations;

(d) Other processes carrying risk of industrial diseases.

C. BIOLOGICAL

Knowledge of epidemic diseases and other diseases not specific to industry as Anthrax, Ankylostomiasis, Weil's disease.

D. PSYCHOLOGICAL

It is being increasingly realised that industrial psychology is a subject, the knowledge of which is very essential for the industrial physician. Such factors as monotony at work, anxiety, danger, fatigue, attitude of the worker towards the management and colleagues have psychological basis and their investigation is therefore necessary.

In the end, it is necessary to have an idea of the work of the industrial physician. His work is divided into that performed—

(1) in the work's surgery or ambulance room,

(2) in the factory, offices, canteen, welfare and safety department, etc.,

(3) in his own office, laboratories, etc.

2. DUTY AND RESPONSIBILITY OF INDUSTRIAL MEDICAL OFFICERS

Having such an interest in the health and the welfare of the workmen in his medical charge as has been described above, it is necessary to have some knowledge of the philosophy of industrial health, supervision, as provided by the factory doctor.

The principle of humanitarian service to labour is guided by certain standards of responsibility expected of the industrial physician, which are grouped under the heading of "Duties of Industrial Medical Officers". In every such provision of health supervision, there must be pronounced magnificence and high ranking quality that will serve as a magnet to which all support essential to the success of that provision will be attracted. The composition of that support in our field embraces, employers of labour, the employees, the management, the general medical practitioner, and a wide range of others who directly or indirectly influence health supervision, who are affected thereby, or who have it within their power to aid in the prevention of industrial maladies. There must be a concentration of purpose in the magnificence and the quality of service, from which may be disseminated the allocation of responsibility pertaining to each interest involved. Realising that no matter how much planning goes into a subject its success depends entirely on the spirit of those engaged in its operation, it is essential that the industrial physician observed on his part the ethical rules which govern the professional relationships, between industrial physicians, their colleagues in general practice, and the workers and the staff under their professional care.

In this connection the management has a right to expect from the doctor—services that will be of use to all and which have a bearing on the general improvement of the morale of the workers. The worker also wants help and guidance and some one in whom he can put implicit faith when he feels like confiding his mental and physical ailments in the doctor.

The doctor has therefore two divergent kinds of people to please. In order that he can maintain a happy mean between the two, he should be governed by these ethical rules. He is always faced with the difficulty of expression of opinion to both. Under such circumstances he has to

be prepared to accept rebuffs and criticism till he has blind faith of the two. It is during this trial period that he has to be very careful and watch movements. He has to be alert, on guard and with an open mind make investigations. He has to be on the look-out to know each worker individually in the earlier stages, and be able to get the confidence of the two around him. In the early stages he should act more as a colleague and not as a doctor. He is working as a member of a team and as such a high standard of work and code of conduct is expected of him.

In the disposal of the patients seen by him a great amount of tact and diligence has to be used and for this he should be prepared to ask for cooperation from the management in order that the interest of neither is jeopardised. He must arrange to guide the first-aid, the nurse, the management and the patient in cases of emergency illness. In order that conflicts in the team spirit be avoided, he should be guided by the following duties and responsibilities of an industrial medical service:—

1. He should carefully assess the suitability of his own methods of examination, paying special regard to the occupational history of the worker's illness.

2. He should arrange for all emergency or first-aid treatment at the place of employment of the worker and should make proper entries of the treatment offered and the instructions given to the patient or other responsible person as regards his disposal.

3. If it is necessary, in the interest of the patient, to continue treatment in the factory and where such facilities exist, he should, in consultation with the patient, arrange for such treatment.

4. He should have knowledge of hazardous occupations and while examining persons employed or about to be employed on such occupations he should be able to advise the management on the suitability of employment of such persons, or their transfer or retirement.

5. He should be prepared to advise upon the occupation of any worker, whose duties appear to be too heavy or otherwise unsuitable.

6. He should possess expert knowledge of short-term illnesses in order to avoid confusion with illnesses of malingering.

7. He should know statutory requirements of examination and those specially pertaining to the industry in which he is employed.

8. He should know his day-to-day responsibilities—

(a) his own executive functions.

(b) the discipline of his staff.

(c) the professional duties of his staff.

9. He should be prepared to collaborate with other departments in the factory and assist them with such advice and data relating to the worker, the work and the working environment.

10. In case, where a worker is being treated by another medical practitioner, and a report on him is needed he should, with the consent of his employer, place his special knowledge at the disposal of the attending practitioner.

11. All medical records of workers are confidential documents and they must be treated as such when in his custody.

12. All workers should be allowed free opportunity to consult him. No barriers to these consultations should be set up.

13. He should be prepared to discuss health problems of the family of the worker and these should receive his adequate attention.

14. He should be prepared to write health memoranda for the education of the workers on health problems.

15. He should pay special attention to people suffering from tuberculosis and people in the vulnerable group.

16. He should supervise the general sanitation of the works, and make necessary recommendations.

17. A large number of forms are always hated. There should be less codification on paper. A legibly hand written note from the doctor can do much.

18. Mistakes in diagnosis as well as in action may become "monuments". Guard against these.

19. He should keep liaison with other people and departments and agencies outside the factory engaged in medical services.

Local Hospital—

Casualty Officer.

X-Ray Department.

Skin Department.

General Practitioners.

Local Teaching Hospital or other Hospital—
Department of Medical Research.

Pathological, Bio-chemical and Bacteriological Department.

Medical Officer of Health.

Certifying Surgeon for the District.

Indian Red-Cross or St. John Ambulance Society.

Medical Inspector of Factories.

Tuberculosis institutions.

The Provincial Inspectorate of Factories,
Ministry of Labour.

Industrial Health Advisory Committee
of the Indian Research Fund Association

Industrial Health Research Unit, All India

Institute of Hygiene and Public Health.

The Indian Medical Association—Industrial Disease Committee.

The Chief Adviser of Factories, Ministry
of Labour.

BCG VACCINATION STOP IT

by

Our Medical Expert

"In the opinion of Dr. J. ORSKOV, member of the Expert Committee, it is impossible to achieve a real standardization of BCG vaccine. Making a vaccine that will be uniform every time cannot be done, even when following explicit rules. This applies to BCG as much as to any other live vaccine.

In his view, to arrange that the vaccine be made in the fewest possible number of laboratories, these laboratories maintaining close contact with one another and making mutual comparisons of their BCG strains and vaccine, is more important than to establish standard rules now for the preparation of vaccine."

(Chronicle of WHO)

In the August issue of *People's Health*, an article by Elizabeth P. Ten Broeck was published. It summarised all the available information on the subject in a clear, convincing and dispassionate manner. Since then, information through the kindness of the technical department of the Ministry of Health, England, has been received. Their Medical Memorandum deserves to be read by one and all, including our popular ministries of health, who have been irresponsibly supporting this ill-advised campaign.

NO INDISCRIMINATE VACCINATION

The most prominent fact which ought to be brought to notice in this connection is that the scope of BCG vaccination has been strictly delimited there. It is designed to offer BCG vaccination to hospital nursing staffs and to medical students. In the scheme, BCG is made available to chest physicians accredited to the hospital service, who may wish to make a trial of it on their own responsibility, particularly as regards family contacts. The circular further makes it clear:

"The administrative arrangements will be carried out through Regional Hospital Boards, Hospital

Management Committees (Boards of Management in Scotland), Boards of Governors and Medical Schools.

A chest physician who individually wishes to undertake BCG vaccination should if necessary communicate in the first place with the Ministry of Health (Med. 3) BCG, Whitehall, S.W. 1, or in Scotland with the Department of Health, in order that he may be given information about the procedure to be followed in conjunction with the Medical Officer of Health of the appropriate Local Health Authority (having regard to the responsibilities of Local Health Authorities under the National Health Service Act in connection with the prevention of tuberculosis).

"The advisory services of the Department's consultant adviser on BCG will be available. Arrangements can also be made for demonstration and instruction on BCG vaccination technique."

On the other hand, our ministries of health on the strength of the opinion of their technical advisers (who, by the way, do not seem to have any responsibility therefor) have given a *carte blanche* to their hirelings to get hold of our innocent boys and girls in our schools and colleges and inject the poison into them. Though it is supposed to be on a voluntary basis, yet, we know how insidiously and cunningly pressure is brought to bear to get the children to submit themselves to this tyranny.

B.C.G. VACCINATION - RECORD CARD B.C.G. 4

SURNAME Stamm CHRISTIAN NAME(S) Stamm SEX Male AGE 19

ADDRESS 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

NATIONALITY English

(For British subjects enter English, Scottish, Welsh, Canadian etc.)

PARTICULARS OF KNOWN CONTACT WITH TUBERCULOSIS (if any)

FAMILY None

ANY OTHER CONTACT None

PERIOD OF CONTACT Year 19 months 19

PARTICULARS OF VACCINATION

DATE	B. C. G. VACCINE		LOCAL REACTION (Site in mm.)					Abscess
	Amount	Batch No.	None	Macule	Vesicle	Infiltr	Ulcer	

TUBERCULIN TESTS AFTER VACCINATION

DATE	METHOD *	DOSE in mgms	ERYTHEMA in mm	INDURATION in mm	OTHER REACTIONS	
					+	or -
	P					

* Put X in appropriate column.
P = Pirquet J = Jelly patch
M = Mantoux
+ Use second line if re-vaccination is necessary

CHEST X-RAY EXAMINATIONS (whether before or after vaccination)

DATE	REPORT (see Note)

Note:
N = Normal
Inf = Infiltration
R = Right
L = Left
C = Cavity
Indicate zones by 1, 2, 3

Wt. 16940-1646 50m E-49 W.F.A. & Co. 51-3

In a free democratic country like England, on the other hand, the Minister of Health is held responsible for his action and the Parliament keeps a vigilant eye to protect public interests. Here, on the contrary, our legislators have neither the inclination, nor the time, nor the knowledge to interrogate our ministers of health and to protect the people by holding them responsible for their policies. Even those who raise a few questions occasionally cannot claim to have made a study of the subject. The ministers have successfully evaded the issues by giving some sort of answers to the questions, laughing in their sleeves at the same time, how they had successfully bluffed the members.

IS THERE A RECORD CARD?

We give a facsimile of the record card which is introduced in England. We wish to know whether any such standard record card has been prescribed in this country. Any printed card might be in use. The question is what details have been included in it for intelligent appreciation of the entries. In the absence of any systematic method of recording, how is it possible to keep scientific statistical particulars, to collate them and to gather useful data? Have they made any arrangements for the follow up of the cases after vaccination?

Some time back, a former Minister of Health, Madras, invited those who were interested to probe into the matter further to take a pilgrimage to Madanapalle to examine the statistical particulars kept there and to satisfy themselves that no evil effects of BCG vaccination had been recorded. Apart from the flippancy and irresponsibility exhibited in this invitation, one vital fact has been overlooked: those very persons who are interested to keep back from the public any evil effects of BCG, are in charge of recording these statistical particulars. The public are now entitled to demand that BCG vaccination should be stopped at once and full particulars of the vaccination done so far with com-

plete details of the follow up, if any, and similar other relevant particulars, should be published without any further delay. In a matter of this kind, the hush-hush methods adopted hitherto will rouse serious suspicion in public mind.

WHAT ABOUT SEGREGATION?

As regards segregation, the Madras experts stated ideally the segregation of the infective person, should, if possible, be done; if it is not possible, the vaccinated person does not run any more risk than he would, if he had not been vaccinated. These experts quoted the precedent at Denmark to show that they would prefer vaccination without segregation and give the contact a fair chance to ward off infection!

The circular of the Ministry of Health, England, states as under:

"It is important to avoid contact with known source of infection, while tuberculin testing and vaccination are being carried out. The programme will therefore vary according to the circumstances of each case. In the case of a person living in the same household with a known case of respiratory tuberculosis, it is most desirable in the interests of those being vaccinated for segregation to be carried out. Whenever practicable, this principle should apply to those whose work involves frequent contact with known cases of infectious tuberculosis; if it is not known-contact, the segregation is unnecessary."

WHY THIS ANONYMITY?

A hand-bill explaining BCG vaccination is under in circulation among the people. Presumably, it is on the strength of the statements contained in it that people are expected to submit themselves to BCG vaccination. It does not bear any evidence as to the authority which can be held responsible for the statements contained in it. It looks remarkably like the leaflets which one comes across in the streets, advertising cheap and universal panaceas for all diseases under the sun! The contrast between the circular of the Ministry of Health, England, and this pamphlet is singularly striking: one bears the stamp of responsibility, whereas the other bears the stamp of evasion of responsibility.

by

Our Study Circle

This is the first of a series of articles. The subject covers a wide field. It is proposed to deal with *every aspect* of it in this series. Special care is taken to edit these articles in simple language. The aim is to create an interest in the subject among one and all—the common-man, the schoolmaster, the health worker, the social and welfare worker and all the rest, who labour to improve the living conditions of our people. The professional experts will also be profited, because these articles incorporate in them uptodate scientific knowledge, devoid of technical jargons.

We welcome suggestions from our readers to make these articles more useful and to serve the aim in view more effectively.

—Ed., P.H.

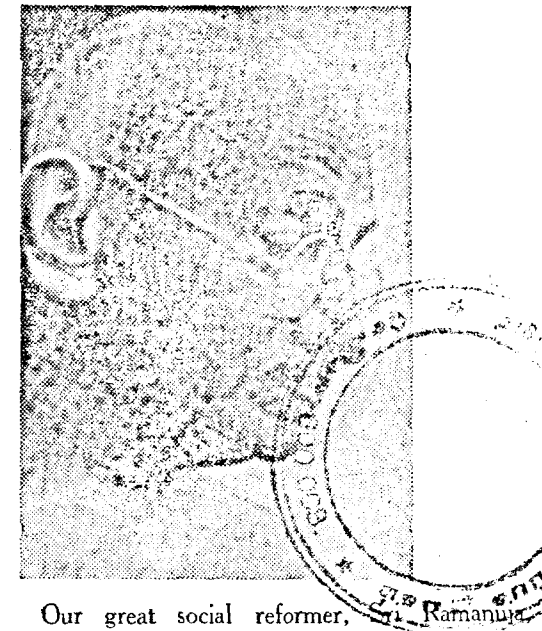
MAHATMA GANDHI'S LEAD

We tender our respectful and humble homage to *Mahatma Gandhi*—the greatest sanitarian of all time. Our nation is *pledged* to follow his lead. *Mahatmaji* is not with us today; but he is watching over us from his seat at the feet of our Creator. We owe a sacred duty to him. It is to follow his teachings, *honestly* and *loyally*. By example and precept, he taught us how to lead a healthy life. He set before us, amongst other ideals, two noble and lofty ones: One is that *truth* prevails and we should adhere to it at all cost. The other is that *non-violence* in word, thought and deed is a mightier weapon than the atom bomb. *Mahatmaji's* was a mighty mind. He had a long vision. He was aware that such high ideals he set before us, cannot take roots in us, so easily. '*Cleanliness is next to godliness*'. This is an old English saying. *Mahatmaji*

gave a new life to it by his example. A clean body alone can develop a clean mind. Only when the body is clean, the mind can imbibe high ideals. He realised this truth. The firm foundation for his lofty ideals, is *cleanliness of body, mind and environment*. He, therefore, exhorted us to develop cleanliness in the widest sense of the term. He had been appealing at his famous prayer meetings that we should keep our body, home and surroundings sanitary.

THE BHANGI OF BHANGIS

It was not as a stunt that *Mahatmaji* gave a high place of honour to the role of the *bhangi*. He realised the importance of the public service rendered by the *bhangi*. He loved to live among them. He looked upon himself as one of them. He was proud to call himself a *bhangi* of *bhangis*.



Our great social reformer, *M. R. Ramanujam*, called himself the '*servant of servants*'. The Pope styles himself in all humility as the '*servant of servants*'. Thus, the world's great men are humble in themselves. They readily recognise the services rendered to the society by the humblest.

Mahatmaji once said that *Swaraj* would come to India, not through parliamentarians in the legislatures, but through the work of the *bhangi*. For, he does not expect any reward or praise for his labour in the form of municipal or public addresses. We have achieved *Swaraj* adhering to *Mahatmaji's* ideal of non-violence. *The best way of retaining our independence, is to implement his teachings on cleanliness*. *Gandhiji* declared, "to have been born a *bhangi* is the result of great *punya* in the previous birth." He set such a high value on the services rendered by the *bhangis* to the society.

WISE WORDS

It is unfortunate that *Mahatmaji's* advice on sanitation is forgotten by our leaders. His utterances on other subjects are often quoted. The subject on which *Mahatmaji* laid such a lot of

stress has gone to the background. This is sad, indeed.

He deplored the insanitary condition of *Gaya*, the prince among the holy places of Hinduism. Replying to the address of the *Gaya* Municipality he said that the Hindu soul in him rebelled against the stinking cesspools he saw in principal streets of *Gaya*. He deplored that many such holy places were the embodiment of insanitation. But *Gaya* was the worst of all, he had seen. Citing *Gaya* as an instance, he exhorted every municipality to regard sanitation as its *first task*. *This one thing must be above municipal politics, parties and intrigues*. It must be the sacred duty of every party in a municipality to keep the sanitation of the city perfect and above reproach. Every municipality should constitute itself as a model school for teaching the science of sanitation. *Gandhiji* pointedly said:

"Municipal councils are often indifferent and obstruct their own elected chairman. Sometimes they are absorbed in internal quarrels and neglect sanitation. It is high time that we develop a healthy sense of civic duty. In this matter, we must learn that we have much to learn from the West. People of the West are builders of big cities. They know the value of fresh air, clean water and clean surroundings. Any city that would attend to its sanitation in a proper spirit, will add to both its health and wealth. *Sacred cities ought to lead the way in this matter.*"

Gandhiji reminded that *Manu*, *Moses* and *Muhammad* had laid down laws of sanitation suited to their times. He wanted these laws to be elaborated in keeping with the modern requirements. This is just what we propose to do in this series of articles. In the truly *Gandhian* way, he said "It is enough to know from these ancient law-givers, that they held cleanliness to be part of a truly religious life."

MAHATMAJI PAINED : PERMITTED COMPULSION

Mahatmaji was so much pained to observe the gross insanitation prevalent throughout the country that he was compelled to say :

"I do not believe in the use of force for carrying out reforms ; but when I think of the time that must elapse before the ingrained habits of the millions of people might be changed, I almost reconcile myself to compulsion in this, the most important matter of sanitation."

VIOLATION OF GOD'S LAWS

The sight of grown-up people lining along the river banks and after the performance proceeding with criminal thoughtlessness to the river and cleaning themselves in it and injecting into its sacred water typhoid, cholera, dysentery germs, had never faded from Gandhiji's memory. This was the water that was used for drinking !

"In the Punjab, we violate God's laws by dirtying our roofs and breeding millions of flies. In Bengal, the same tank quenches the thirst of man and beast and cleanses him and his pots."—These are the words of Gandhiji. He has further emphasised :

"We can no more gain God's blessings with an unclean body than with an unclean mind. A clean body cannot reside in an unclean city."

NATIONAL SELF-RESPECT

In emphasising the importance of sanitation, Gandhiji realised that cleanliness develops self-respect in man. It is because of this lack of self-respect that the African Whites have segregated us as "untouchables". If our national self-respect is not developed, we cannot hope to be treated as equals by other nations of the world. Now, we have attained our independence. The value of our independence would be lost, if we are treated by other nations as "untouchables." It behoves us to follow faithfully our great leader's advice and build up our National Self-respect.

This would be the surest way of retaining our Independence.

CONSTRUCTIVE PROGRAMME

The Congress politicians are not tired of exhorting people to carry out the 'constructive programme' of Gandhiji. From the President of the Congress down to the field-worker repeat the slogan parrot-like. But few seem to have read what Gandhiji had to say about village sanitation in his 'constructive programme.' We reproduce it here for the benefit of all workers irrespective of party or politics :

"Divorce between intelligence and labour has resulted in criminal negligence of the villages. And so, instead of having graceful hamlets dotting the land, we have dung heaps. The approach to many villages is not a refreshing experience. Often one would like to shut one's eyes and stuff one's nose ; such is the surrounding dirt and offending smell. If the majority of Congressmen were derived from our villages, as they should be, they should be able to make our villages, models of cleanliness in every sense of the word. But they have never considered it their duty to identify themselves with the villagers in their daily lives. A sense of national or social sanitation is not a virtue among us. We may take a kind of bath, but we do not mind dirtying the well or the tank or the river by whose side or in which we perform ablutions. I regard this defect as a great vice which is responsible for the disgraceful state of our villages and the sacred banks of the sacred rivers and for the diseases that spring from insanitation."

Those who are reigning over us today in the name of Mahatmaji owe a special and sacred duty to the masses. They quote Mahatmaji when it suits them. They ignore his advice in a matter of National importance, which, according to Mahatmaji, is the very foundation of the noble ideals he has set before our Nation. Is it not sad?

HOW DOES POLIO SPREAD ?

by

E. O. Nichols, Jr.

Research here and abroad in acute anterior poliomyelitis, much of it sponsored by the National Foundation for Infantile Paralysis, has given students of epidemics, the epidemiologists, fairly clear insight into the manner in which the disease is disseminated.

Research in polio has been made difficult by the lack until recently of an easily obtainable laboratory animal susceptible to the disease, and by the lack of accurate and clinically practical means of diagnosing the many cases that show no obvious symptoms. Nevertheless, more facts are now available on polio than on such common diseases as measles, mumps, or whooping cough. Though many problems are yet unsolved, on many others there is fairly general agreement.

POLIO—A CONTACT DISEASE

Most authorities now think that polio is primarily a contact disease. They believe it is transmitted from the infected to the well by direct contact, like most other virus diseases, such as chickenpox or influenza.

During the last few years painstaking studies have been conducted in a number of outbreak areas by teams of experts who have combed the neighborhoods thoroughly door to door. They have always found an exceedingly high incidence of what seems to be mild polio in the "contacts" of proved cases.

Here, we think, is what happens in a typical out-break. Let us choose the small town of Smithville, for in an isolated community the disease is more easily studied. Late in May several children have short illnesses so minor that the doctor is called in to see only two or three. He will pay little attention to them, for they seem

to be mild respiratory or intestinal infections. In June the cases increase. The doctor may now think he has a little epidemic of intestinal trouble on his hands, for people with polio not infrequently have such upsets. Besides, in the usual course of events, he is seeing true intestinal infections and by now is apt to cover too many cases with this most probable of diagnoses. Remember he has no reason to suspect polio ; he may not have seen a case in five years. Later in retrospect, the investigators that come in will notice that this patient had a stiff neck or one a considerable head-ache. They will find some instances of muscle weakness, also some positive though late spinal taps, and thus they will be able to say with some certainty that many of these people actually had mild or "abortive" polio.

Now it is July. This community which has been having an active, though unknown, outbreak for six weeks is shocked and frightened by the report that the Jones' youngest girl is down with polio ! Two more cases of paralysis develop during the next week. The town is in an uproar. The swimming pool is closed, a clean-up campaign is begun, the scout encampment is cancelled and the fly population is sprayed, bombed and dusted with DDT. But more and more children and some grownups get the disease ; a number develop paralysis. Even at peak, however, the prevalence is not as great as it seems ; the now thoroughly alerted physician is doing spinal taps night and day, and diagnosing many of the cases he would have missed a few weeks ago. Parents, too, are rushing the children in with illnesses for which they would have given sulfur and molasses back in May.

By September, Smithville is a town in siege. There is much talk of whether the schools should open, even if that "so-called expert" sent in to help does say it would be all right. Actually that expert believes that nearly everyone in the community has by now been exposed to the disease and opening the schools can do no harm.

But the tide is receding; there are fewer and fewer cases each week, and by the time cold weather comes the thoroughly worn-out doctor sees only an occasional case.

WHAT HAPPENS ?

That, then, is what happens during an epidemic of polio. In many respects it parallels the course of an outbreak of measles: incidence slowly rises to a peak, and then tapers off and the great majority of those not already immune from past exposure have the disease if they come into direct contact with infected persons just before or just after symptoms begin. Often there is no symptom except an outwardly imperceptible rise in temperature. If mild polio had some distinguishing characteristic like the rash of measles, the radial spread of the disease would be obvious. But the fact that paralysis develops in only one case of perhaps a hundred makes its course hard to trace.

It is made still more difficult by the variety of symptoms caused by the disease. It has long been apparent that there are a number of strains of polio. Now some advanced thought among our research men is that we are grouping a large family of related strains or even separate though kindred diseases under the heading of polio.

WHY FLY SUSPECTED ?

When we say that polio is primarily a contact disease, we do not mean to say that it is never spread in any other manner, by house flies for example. *The virus has been recovered from flies and for all we know they may disseminate it at times. But flies do not play an important role and*

DDT campaigns or fly-killing frosts seem to have little effect on epidemics.

The reason that the fly was suspected in the first place is, of course, that fly time and polio time come together from midsummer to early winter. That is also the time of year when we see epidemics of food and water-borne diarrhoeas, in which flies are sometimes a carrier, and it is not the time of year when we see epidemics of other contact diseases, "flu" for example, as we do when people are more closely gathered together, especially in schools. Why, then, should this contact disease, polio, choose this particular time of onslaught? That is one of the most insistently baffling questions that face medical science. Its answer may well be simple, but so far we have little idea what it is.

POSSIBLE EXPLANATIONS

Some suggestions have been advanced. One is that the polio virus may get an opening because of glandular changes occurring in adjustment to hot weather. It is a fact that pregnant women, whose bodies undergo radical glandular changes, are particularly susceptible to the disease. But studies on monkeys both during pregnancy and in hot weather have led nowhere.

Possibly some germ prevalent in summer weather sets up conditions favourable to the polio virus, possibly one of the summer diarrhoeas of which there are many mild strains. But no such symbiotic or teamwork relationship of polio with another infection has ever been proved. Certainly the explanation does not seem to lie within the nature of the virus itself, for it is resistant to cold. Some strains have maintained full infectiousness after being frozen a year in much lower temperatures than you ever get in your deep freeze.

WE DON'T KNOW !

We do see polio in midwinter in cold climates, but it is rare. It has been suggested that possibly

it occurs widely the year around, but is more virulent in the summer-time. This seems doubtful.

There are other odd facts. Why has the disease changed over from sporadic to epidemic form during the last half century? Some say because we recognize it now where it was formerly overlooked; but this may not be the only reason. Especially puzzling is the fact that the most advanced countries, including the United States, are subject to the worst epidemics. Is this because children in more backward countries are exposed to disease earlier in life, when polio appears to be less dangerous?

These and many other questions are yet unsolved. But, to repeat, we now feel fairly confident of the basic mechanism that spreads the disease.

The knowledge that polio is widespread and uncontrolled and that most of us get it sooner or later may lead to further worry by so many parents who already dread the approach of hot weather for fear of the disease. But all is not black. In the first place, most of us have had the disease without ever being aware of it; Johnny may have had it and so be immune; or if not, he may overcome the virus more easily now than he could later, for the mortality rate increases with age.

LEARN THIS LESSON

At least there is one lesson that parents can learn from all this, and that is the importance of being suspicious of their children's summer illnesses. A headache, a fever, a little muscle stiffness must not be passed off lightly. Every physician who has seen much polio can recall many cases that were recovering without difficulty only to relapse and become paralyzed when they were allowed to resume play too early.

Think of polio as you do the "flu", another of the viral groups over which we have but poor

control. Neither is often dangerous, but either, if it finds too susceptible a host, may lead to disablement or death. You put your children to bed when they have the flu. Do the same when they might have polio! And even though they seem healthy, it is wise to protect children from chilling and excess fatigue especially during epidemics.

So be vigilant. Most clinicians believe that if every polio case could be diagnosed early and treated properly, much paralysis would be avoided.

—(Courtesy—Hygeia—The Health Magazine.)

THE ADVANTAGES OF HEALTH

Health is that which makes your meat and drink both savoury and pleasant; else Nature's injunction of eating and drinking were a hard task and as lavish custom. Health is that which makes your bed easy and your sleep refreshing; that revives your strength with the rising sun, and makes you cheerful at the light of another day; 'tis that which fills up the hollow and uneven places of your carcase, and makes your body plump and comely; 'tis that which dresses you up in Nature's richest attire, and adorns your face with her choicest colours. 'Tis that which makes exercise a sport and walking abroad the enjoyment of your liberty. 'Tis that which makes fertile and increaseth the natural endowments of your mind, and preserves them long from decay, makes your wit acute, and your memory retentive. 'Tis that which supports the fragility of corruptible body, and preserves the verdure, vigour and beauty of youth. 'Tis that which makes the soul take delight in her mansion, sporting herself at the easements of your eyes. 'Tis that which makes pleasure to be pleasure, and delights delightful, without which you can solace yourself in nothing of terrene felicities or enjoyments.

—Dr. Maynwaringe.

THE HEALTH OF THE NATION

by

K. A. Abbas



We do wish that eminent writers in our country take an interest in the nation's health and focus the attention of the authorities on the importance of improving the living conditions of our masses, as the writer of this article has so effectively done.

—Ed., P.H.

There was a time when Turkey, under the Caliphate, was known as the "Sick Man of Europe." A dose of Kemal Attaturk's vigorous secularism revived the "patient" and created a robust healthy nation.

Then China was called the "Sick Man of Asia." This particular "patient," too, seems to be on the road to recovery and thriving on the Red Mixture.

The danger, however, is that India may now come to be the "Sick Man of the World"—not merely figuratively but literally so!

ALARMING STATISTICS

Statistics do not necessarily tell the whole tale, and in India there has yet to be a statistical survey

of national health. We can look around our own families and the families of our friends and neighbours and see the poor state of health of our people. Is there a single household in which someone or the other is not ill at any given moment? But if statistics are required to make us realize the alarming situation, here are some, regarding the incidence of typhoid in Bombay City.

It has been estimated that, on an average, four hundred typhoid cases per day could be found in the city's hospitals, each costing approximately Rs. 1,000 in treatment, the average daily expenditure being about Rs. 8,000. These figures were given not by a sensation-seeking journalist but by a medical authority, Dr. Sangani, Superintendent

of one of the larger hospitals in Bombay, in the course of a speech to the Rotary Club. In his own hospital, said Dr. Sangani, out of 2,302 medical cases in 1948, 802 were typhoid cases. Commenting on this the *Sunday News of India* wrote: The numbers quoted reveal typhoid on a scale which would be regarded in other countries as of serious epidemic proportions."

Typhoid is not the only curse which blights India's health. There is tuberculosis (of which staggering figures were published some time ago), there is cholera, occasional incidence of plague, not to mention the all-pervading malaria. No wonder, while an average Australian, Englishman or American may expect to live up to fifty or even sixty, and Indian's expectancy of life is only 27! And, as Dr. Martha Eliot, of the World Health Organization, pointedly remarked in an interview, "infant mortality in India is the highest in the world."

Someone, something, is cheating every Indian of 33 years of life! Is it God or Fate or what?

"I CAN'T—SIMPLY CAN'T—"

Let the highest authority on this subject give the answer. This is what Rajkumari Amrit Kaur said in an interview, within a few days of the publication of Dr. Sangani's Rotary speech and Dr. Eliot's interview:

"I can't—simply can't—give health to the nation unless there is enough food, milk, proper water supply and proper housing."

This is a remarkable admission of helplessness on the part of the Health Minister, speaking as she did on behalf of her Government. "Look at our agriculturists, our villagers on whom we depend for the production of our daily bread," she eloquently declaimed in the course of the same interview and added that "no medical relief is available nor administered to them."

One is tempted to put the Parliamentary supplementary question: *If not, why not?*

With obvious sincerity and humanitarian sentiment, she gave a graphic description of the appalling conditions in which "89 per cent." of children are brought into this world.

"Oh, I can't bear it, I tell you," she said in characteristically feminine accents of anguish, "but there is so little I can do about it."

This might be a proof of the modesty and sensitiveness of the Rajkumari (who still bears a feudal title in a title-less democratic India) but does little credit to the Health Minister of a great country.

The "little" that even so helpless a Health Minister can do is to—RESIGN! Let someone who can do more than a "little" take charge!

DOWN WITH THE MURDEROUS SYSTEM!

Sentimental expression of humanitarian concern is not going to solve the health problems of the country. If the Rajkumari feels that she "can't give health to the nation unless there is enough food, milk, proper water supply and proper housing," then what she (and her Government) should do is to work for the abolition of the economic system that not only permits but creates such conditions and deprives the people of "food, milk, proper water supply and proper housing."

These lacks and deficiencies in the elementary necessities of life were not ordained by God or Fate, they are the result of the inequitable distribution of man's worldly goods. It is astounding that, even in 1949, responsible Ministers can talk of health or social hygiene as if these were unrelated to the economic structure, while there is evidence on every side clearly pointing to the guilt of the exploiting class.

Rajkumari Amrit Kaur talked of "proper housing." Here is a bit from the columns of a paper published on the same day that her interview appeared:

"At the recent opening of the Welfare Centre for Harijans at Mahalaxmi (Bombay

City) it was estimated that approximately four thousand people were inhabiting four hundred rooms in tenements, an average of ten to a room." Talk of the Black Holé!

She talked of food and milk of which the people were not getting enough. As she was talking, *milk was being sold in India at a price higher than anywhere else in the world.* As a U.P. doctor recently revealed, thousands of people were being obliged to restore calcium deficiency in their systems by taking injections because they never had had enough milk to drink. And at least one desperate mother was throwing herself and her babies into a well because she could not provide milk to the babies!

Talk of food? The Health Minister need not be told that sugar is one of the most important energy-building foods. As she spoke, sugar was being sold in many parts of India at Rs. 3 per seer—thanks to the rationing policies of her Government! Even 'Gur' was being sold at Re. 1-8-0 per seer. At places, potatoes were selling at over a rupee per seer! I doubt if the Rajkumari does shopping for her own kitchen, but if she talked to any average housewife, she would know *just why* people in India suffer from malnutrition.

GIVE PRIORITY TO HEALTH

In his address to the Bombay legislators and also on earlier occasions, Prime Minister Nehru stressed the necessity of provincial Governments giving first priority to the more important nation-building activities and not to fritter away money and labour on less important projects.

In any rational human society, Priority One should go to Food—which is the indispensable essence of Life.

Priority Two should go to Health which again requires adequate provision of food, shelter and clothing.

Only after these basic human necessities have been provided for can culture and education be imparted.

An analysis of the National Budget and the series of Governmental actions, both at the centre and in the provinces, shows that departments like Defence, Diplomacy, Administration, Prohibition, etc. claim most of the money, time and energy of the nation, while millions have to go without adequate food or housing.

It is trite to say that a healthy mind resides in a healthy body. But one may as well say that a nation that is not healthy can never be great. *It cannot even be really free.*

THE ROOT OF EVIL

But clinics, hospitals, injections and inoculations, by themselves, do not ensure the good health of a people. Health mainly depends on living conditions—and these are determined by the economic system prevailing in a country, and the *class bias* of the Government!

You cannot provide adequate food to the people without taking stern measures against hoarders, profiteers and middle-men who fatten by starving the people.

You cannot provide adequate housing to the people without rationing living space, without diverting *all* building material to construction of decent, healthy homes for the common people and, at the same time, putting a stop to all luxury buildings.

You cannot afford to provide sanitation and health services to the people, unless you squeeze their ill-gotten wealth out of those who have grown fat and rich by exploiting the people, and use that money for financing a net-work of health services.

And thus, the problem of health is inevitably, completely, inter-linked with the economic structure.

So long as this structure is not changed, our Health Ministers will always be obliged to declare their helplessness like the Rajkumari, "I can't . . . simply can't . . ."

Of course, you can't!

—(Courtesy—Swatantra.)

USE OF INSULIN CUT IN DIABETES STUDY

by

William L. Laurance

99% of Adults do not need it, St. Louis Doctors say After 14 years of Research.

A fourteen-year study of 4,000 diabetic patients has led to the finding that "virtually all adult victims of diabetes can be restored to normal health without insulin injections," according to a report made public here tonight by the American Chemical Society on the eve of the opening of its annual autumn meeting.

Even the less than 1 per cent. of adult diabetes who still require insulin, the report said, "can get along with twenty units a day or less" instead of fifty to as high as 150 units daily now taken by a large number of diabetes victims under present methods of treatment.

The studies carried out by a group of chemists and physicians of the Jewish Hospital of St. Louis, headed by Dr. Michael Somogyi, noted bio-chemist, have led to an entirely new approach to the treatment of diabetes, which has given much better results than the current standard treatment based mainly on insulin, according to the report.

The treatment emphasizes avoidance of excessive insulin dosages at all stages and careful dietary control, particularly with regard to fats.

If the diabetic condition is diagnosed before it has progressed so far as to cause abrupt loss of body weight and abnormal loss of water (dehydration), the condition can be remedied by appropriately balanced diets alone, without recourse to insulin, Dr. Somogyi asserted. If, however, the disease when discovered has reached an advanced state, insulin must be used temporarily.

For diabetic children, he noted, the situation is reversed—that is, those who do not need insulin, are the exceptions, and all others must be treated with injections of the hormone.

"But, again, treated with the new approach, most children require less than 20 units of insulin per day," he declared.

Insulin itself, Dr. Somogyi and his associates found, increases the severity of diabetes if given in such quantity that it lowers the blood sugar content below normal. In fact, the report said, those "innumerable" patients who at present receive large daily doses of insulin—50 or 100 or even 150 units—are actually victims of "chronic insulin poisoning," which makes them a handicapped group suffering constantly from fatigue, depression, irritability and neuroses.

The reason is, according to the report, that large dosages of insulin lead to unbalancing of the delicately adjusted glandular system, particularly the pituitary gland at the base of the skull and the cortex of the adrenal gland above the kidneys. These glands work in unison, along with the insulin-secreting pancreas, to maintain the blood-sugar level on an even keel. When too much insulin is given, it leads to a lowering of the blood sugar to a level below normal. This, in turn, activates the pituitary-adrenal system to elevate the blood sugar back to normal.

"TUG-OF-WAR" THE RESULT

The pituitary-adrenal hormones, Dr. Somogyi pointed out, tend to build up too much sugar. And if this leads to the administration of more insulin, a veritable "tug-of-war" between the

hormones raising the blood sugar and the insulin lowering it is precipitated.

The patient whose body is the scheme of such a tug-of-war, according to Dr. Somogyi's findings, becomes a severe diabetic, the victim of a form of poisoning in which insulin, administered to reduce the blood-sugar level, indirectly but inevitably raises it.

When the dose of insulin is too high, Dr. Somogyi and his co-workers found, the pituitary-adrenal hormones not only arrest and counteract insulin hypoglycemia (low blood-sugar level) but over-compensate and raise the blood sugar to abnormally high levels.

"Thus insulin action causes its own destruction: if it is allowed to produce hypoglycemia, because hypoglycemia begets hyperglycemia (high blood sugar), just the condition that is to be combated in diabetes," the report declared.

The practical significance of the fact that insulin, when it lowers the blood sugar below normal, increases the severity of diabetes, had "completely escaped attention" by clinicians, Dr. Somogyi said. Furthermore, he asserted, the "tug-of-war" between the glands is created by the slightest decline in the blood sugar below the normal level, a condition which in clinical practice is not even regarded as hypoglycemia. In clinical usage, he pointed out, hypoglycemia denotes a condition characterized by symptoms such as profuse perspiration, dizziness, tremors, convulsions and finally loss of consciousness, whereas the condition can actually exist without any of these symptoms.

The "old-fashioned" diabetic diets in which carbohydrates were restricted are rejected by Dr. Somogyi and his associates. Their patients receive liberal carbohydrate rations equal to those customarily consumed by average normal individuals. They also receive normal protein rations. Their total food allowance, Dr. Somogyi said, "is governed by the inexorable injunction

that the body weight of diabetic persons must not be above the ideal normal level."

"This means restriction of the total food intake," he explained, "and this restriction is applied first and almost exclusively to the fat ration. The body weight is first reduced to the ideal level, then maintained at this level by appropriate adjustments of the food supply."

"Then the scale is the judge; if the body weight rises, the fat ration must be cut in the first place. Any diabetic whose weight is above the ideal level is definitely mismanaged."

The dietary regime employed by the St. Louis workers is based on evidence obtained some years ago by the British clinical investigator, Himsforth, who found that if a healthy man is fed a diet containing adequate proteins and fats but less than 100 grams of carbohydrates, changes are produced in the body which handicap the action of the insulin produced in the man's pancreas. The same conditions, Dr. Somogyi pointed out, inhibit the action of injected insulin obtained from animals, which is administered to offset a supposed deficiency of natural insulin.

"By giving liberal protein and carbohydrate rations, and by restricting the fat ration, one factor is eliminated that causes an entirely unnecessary increase of the insulin dosage," Dr. Somogyi said. "An added benefit of this regime is that the diabetic diet is scarcely different from an ideal balanced diet which satisfies the taste of most people."

It is the St. Louis group's theory that fatty infiltration of the liver and certain other tissues may inhibit normal insulin action. This idea, which explains the group's restriction on fats in the diabetic's diet, is based on evidence that the liver function of obese diabetics is impaired. The theory conforms with the widely expressed view that "diabetes is the penalty of obesity."

(From The New York Times, dated Sept. 19, 1949.)

MUNICIPAL HOUSE-KEEPING

Food For Thought

Meet your City Corporation is the theme of the Administration Report for 1948-49 presented by Sri C. Narasimham, Commissioner, Corporation, Madras. He does not, of course, invite the ratepayers to meet our City Corporation. It is physically impossible to do so; as Lord Chancellor Thurlow has put it:

"The corporations have neither bodies to be punished nor souls to be damned; they therefore do as they like."

The report purports to give a glimpse of the services which the Corporation provides and of the ways they touch on our daily life. "A city council's services mean the difference between savagery and civilization", wrote, decades back, Sir E. D. Simon, once Lord-Mayor of Manchester. Let us examine the services rendered by our City Corporation to its citizens and judge whether we lead the life of savages or of a civilized community.

THE OUTSTANDING FEATURE

The 'outstanding feature' during the year, was the enlargement of the Council, consequent on the inclusion of certain suburban areas. The area of the city has been increased from 29 square miles to 50 square miles. The strength of the Council was increased from 65 to 85. The 'commonest' commonsense should have dictated that the extension of the city limits was irresponsible. The Corporation has not been able to provide, during all these years of its existence, the elementary amenities of civilized life to the areas within the city's old limits. The extension should have been agreed to just to tickle the vanity of an I.C.S. Commissioner who sponsored it. Would any of those, who were a party to this vain-glorious act, take, in their family fold, a few children from their neighbourhood when they are themselves too poor to feed the mouths of their own children? Why then, did they commit the ratepayers to an additional responsibility which they can ill-afford to shoulder. This single outstanding act of irresponsibility is enough to condemn the Corporation as unworthy of the trust being reposed in it to run our municipal house-keeping. But, "the corporations feel neither shame, remorse, gratitude nor goodwill" as aptly put by Hazlitt.

Leading authorities have strongly condemned for good and practicable reasons the tendency of extending city limits. We are fast moving away from our traditional happy life as a community. Isolationism is getting hardcrusted in city life. Further, strategic necessities of modern weapons of warfare in which the western countries are specialising and competing with each other, should be a pointer to the urgent necessity

for developing smaller, self-contained centres, as a safety device to avoid wholesale destruction of mammoth cities and their teeming millions. Having committed the folly, a way out should be found before it is too late. The administration of the city should be decentralised, somewhat on the lines on which the great metropolitan City of London, is administered. Would any other alternative lead us to a civilized, happy, community life from this savagery which threatens to devour us?

CREATING AN INTEREST

The Commissioner states that the Administration Report provides the reader with sufficient information so as to create an interest in the civic affairs of the city and to ask, if he cares, for more particulars in any field of municipal activity. The Commissioner adds and adds rightly too, the greater the use the ratepayers make of this report, the greater the constructive criticism, which they offer, in the light of the report, the more efficient will be the Corporation's services."

We wonder how many ratepayers have got a copy of this report? Granting for argument's sake, it is circulated among them widely, how many of them can be expected to wade through a bulky volume in foolscap, covering 332 pages? One is even tempted to ask how many of our *City fathers* can claim to have either the inclination or the time to study the report and appreciate its contents. If it is the intention to educate the citizens on the activities of the City Corporation, the correct method would be to give an accurate and factual summary of the main activities of the Corporation in a form which would be readily assimilable by the ordinary ratepayer. The purposeless and ununderstandable mass of statistics has only helped to increase the bulk of the report! The Ministry would be well-advised to look into the form of the report and revise it, giving some freedom to the executive to exhibit some originality in presenting the report. Stereotyped forms do not rouse an interest in the readers. The form prescribed by the foreign bureaucracy, which had an eye to please their masters in Whitehall, is inappropriate in the present set-up.

A summary should be made available in the principal vernacular languages of the city. Here, we may draw a contrast between the administration report of the kind under review and the handbook published by the Manchester Corporation under the caption "How Manchester Is Managed". Its contents and the form of presentation grip the readers' attention. Over a decade back, this was brought to the notice of the council while discussing a report of our

city's administration. It was then suggested that we should also publish similar annual handbooks for educating our ratepayers. The Manchester Corporation was selling the handbook at six pence per copy, while the cost of production was infinitely greater. If our Corporation really means to keep the ratepayers informed of its activities, it should follow the example of Manchester Corporation. Such a handbook would not only create an interest in the ratepayers on the city administration but would also help to sow seeds of civic pride among the citizens.

ELEMENTARY EDUCATION

Why should our impecunious Corporation be burdened with the responsibility of education at all? It should be the responsibility of the State. At best, the Corporation can agree to run the institutions as agents of the State, provided the requisite funds are placed at its disposal. Shaw once described schools as "prisons". We may describe our elementary schools as veritable kennels. Mostly, these buildings are but models of insanitation and even instability. Even where brick and mortar have been recently thrown away in the name of housing our elementary schools, one observes that no consideration whatsoever has been given to what is known as *school environment*.

The photograph of 'slum school' facing page 64 of the report illustrates a sense of truth and of unconscious humour; 'Train the child in the way he should grow and when he is old, he will not depart from it', is an old saying. We, as a nation, have won a notoriety for our lack of civic or sanitary conscience. Unless ideas of health, hygiene and sanitation are instilled in the minds of the young, our nation for all time to come, would remain innocent of even an elementary sense of sanitation. Sometime back, a Madras Minister for Education threatened to dot the Province with elementary schools in their thousands! Those in authority should understand that it is not the *quantity* that will count but the *quality*. When elementary education is made compulsory, there is a clear obligation on the part of the authorities to provide a suitable school environment. As Professor M. J. Rosenau has cautioned, it should be remembered that the *whole* child goes to school—body, mind and soul. It is the duty of our educational authorities to train the *whole* child. Above all, the teachers should not only be specially trained to take charge of the young but also be given a decent living wage.

Our suggestion is that instead of having elementary schools at every street corner, the Corporation should concentrate on the construction of a *few* complying with *all* the essential requirements of school environment. This would be educating a few on sound lines instead of many on wrong lines.

THE SLUMS

Much has been written and talked about the evils of the existence of slums; but no effective steps have been taken to wipe out these blighted areas. We are told that there are 175 slums in the city of which 36 exist on lands owned by the Corporation, 31 on lands belonging to the State and the rest on private lands. The pretence of providing the so-called primary amenities to these slums and similar other so-called *improvements*, amounts to trifling with a great question. So long as society tolerates the existence of these slums, society should be considered to be still in a state of *savagery*. A desperate disease, they say, needs a desperate remedy. The existence of slums is a desperate disease! And what is the remedy? The example of Vienna in this respect is worthy of emulation. The Vienna Corporation, over two decades ago, resolved that the abolition of the slums should be the *first charge on the taxes collected*. Within a short period, they had built *palaces*, as it were, for housing the slum dwellers, utilising the talents of the best architects of the world. Vienna soon became the place of pilgrimage for social reformers from the two hemispheres. So much so, the visitors wished to be slum dwellers in Vienna rather than what they were in their life! Construction of plinths, provision of common latrines without water, baths without water-taps, these are not, by any means, the right way of setting about a big business like this. It amounts to mere tinkering with a grave social problem. It perpetuates the *savage life* of our unfortunate countrymen. Bold, courageous, and above all co-ordinated action is called for. Can we expect our City Council in its present set-up to take a firm and decisive action to liquidate our slums?

FINANCE

The year was undoubtedly a bright one from the point of view of collection of taxes. The executive deserves to be congratulated on it. The total receipts under revenue account was 176 lakhs as against 156 lakhs in the previous year. Under property tax, the demand was 92.49 lakhs as against 85.54 lakhs in the previous year. The total expenditure was Rs. 182.45 lakhs against 160.84 lakhs in the previous year. The report gives a list of services which had cost the Corporation heavily.

"Little wastes in great establishments constantly occurring may defeat the energies of mighty capital," says Dr. Beecher. Every administration, municipal or governmental, if it means business, should constitute a *permanent investigation commission* to examine the working of each of the departments in turn with a view to finding out where waste occurs, where inefficiency in service has crept in and similar other particulars, to ensure an all round economy and efficiency. This

Municipal House-keeping

is just what our administrations do not believe in. The appointment of a *retrenchment committee* at long, long intervals, to go *comprehensively* into all departments of administration cannot and has not yielded results. On the other hand, examination in close detail of *individual* branches of administration, one by one would bear fruit. Retrenchment as such, need not necessarily be the end and aim of the commission. The sole aim should be to ensure efficient service consistent with economy. So far as the Corporation is concerned, no such investigation seems to have been conducted. Hence, no one knows where wastage is taking place unchecked and wherein lies inefficiency of service. An investigation of this kind is urgently called of so far as the City administration is concerned.

A CONDITION PRECEDENT

There is no doubt, whatever, that more and yet more funds are required for the Corporation to discharge its duties to the ratepayers. Efforts should be made to tap new sources of revenue. First, a programme setting out priority of works to be done should be clearly and definitely determined. There is no good of placing more funds at the disposal of the Corporation, if it continues to squander the rate-payers' money by launching upon spectacular works which only serve to window-dress the administration for the benefit of a top few and for pleasing the eyes of a few distinguished visitors. The primary amenities of civilized community life should *first* be catered for; in other words all the primary and essential needs of the common-man should be satisfied *first*. The common man should feel that he is a member of a civilized society. If the Corporation should work out a programme to meet this end and estimate the cost therefor, the ratepayers should feel that the Corporation could be trusted after all to spend their money wisely for the common good of the community. They would be then willing to bear the burden of taxation cheerfully.

HOW TO AUGMENT INCOME?

The report suggests that the City Municipality Act should be so amended as to empower a terminal tax on goods and a passenger tax be imposed. The Government have turned down the suggestion more than once. The Government have not however indicated any source of revenue to the Corporation. Our popular ministry seems to follow the footsteps of its foreign predecessors and look upon the City Council and municipalities in general as something apart from the general administration of the province.

The Government should at least lighten the burden of the Corporation by taking over the responsibility for education and medical relief from the shoulders of the City Council.

ABOLISH STANDING APPEAL COMMITTEE

There is a statutory standing committee for appeals to sit in judgment over the assessment of properties by the executive. The committee consists of the elected representatives. They cannot be expected to deal with appeals firmly and justly, without showing a bias in favour of the appellants who are after all their masters. The more monied and influential the appellant, the more is his mastery over the people's representatives in the Council. The system is vicious. It is unbusinesslike. It ought to be abolished forthwith, not only in the interest of municipal finance, but also in the interest of maintaining the morale of the administration. The Act should be so amended as to make the highest executive officer of the Council responsible for the assessment, subject to any check by the Council as a body.

REVISE BASIS OF PROPERTY TAX

The basis for the levy of property tax requires consideration. Why should the annual rental value alone be the basis for levying property tax? The annual rental value of a property with only a 20 feet frontage or even less may be, say, Rs. 1,200. But a small cottage located in an extensive compound with a 200 ft. or more frontage may fetch the same rent. But the extent of the municipal services like road, watermain sewers, street-lighting, conservancy and so on, should cost the City Council infinitely more than what it would cost in the former case. Why not take the frontage of a property also as a basis for fixing the property tax? The houses at the junction of roads should be made to pay something still more for the extra amenities such properties enjoy.

RECOVER PORTION OF RENT

Not only a sense of pride in one's city should be created but also a sense of pride in one's own house. Everyone should be encouraged to have a home of one's own. But, if a person invests money in the purchase of buildings with a view to renting them out for profit, why should he not be made to pay a portion of the rents so collected to the City Council? Ordinarily, such moneyed persons do not come forward—barring of course honourable exceptions—to relieve the suffering of the less fortunate among us. The money collected under this head may be earmarked for the construction of dwellings for the poor, which do not as a rule fetch economic rents.

HOUSING IN TOWN PLANNING AREAS

In sanctioning "town extension schemes", no stipulation is made, that the promoter of the scheme should build a certain percentage of buildings for the occupation of people

who cannot pay economic rent. Taking Thyagaroyanagar (Madras) as an illustration, the City Council has not stipulated that the builders of houses there should construct dwellings for the servants. Had they done so, it would not only relieve the housing of an army of servants employed by these people, but it would also incidentally prove to be in the interest of the householders themselves. These domestic servants live mostly in insanitary dwellings under insanitary surroundings. They may be even the carriers of infectious diseases to these bungalows. The Corporation should at least make it a point in future, to insist on a certain proportion of buildings for housing the poor, being built by private promoters of land development schemes. The Corporation should itself insist upon the builders of bungalows in areas developed by it, to construct dwellings for their domestic servants.

LICENCE FEE ON MARRIAGES

In days of old, on occasions of marriage in recognition of the State's services to society, a certain amount was paid to the ruler called *Rajah Sambhavana*. The amounts varied with the social status of the parties. Even the humblest used to pay an amount to the State. Even now such *Sambhavanas* are being paid, but only to be pocketed by the village headman, the *purohit* or some such person on the spot. The Corporation must be empowered to register marriages, since marriage is a vital event and records of marriages should be available for demographic studies. Incidentally, this might fetch some income to the Corporation, if a nominal fee of Rs. 5 is fixed for registration purposes.

TAX ON MARRIAGE EXPENDITURE

When on marriage occasions people do not mind throwing away money lavishly, why should they not be made to pay a certain percentage of the money so spent to the Corporation? After all, on such occasions, the services afforded by our City Corporation are more than fully utilised. Having determined a minimum for expenditure on such occasions, a progressive scale of payment to the City Council should be fixed.

MUNICIPAL BANKING

It is time that the City Council starts a municipal banking service. We may at once say the professional banking brotherhood would raise every possible obstacles to the proposal. But the same determination with which Mr. Neville Chamberlain started in 1916 the Birmingham Municipal Savings Bank, when he was the Lord-Mayor, should be followed. The advantages of municipal banking service are many. It would help the municipal funds being retained in the municipal bank itself, instead of depositing large amounts in other banks to enable them to earn a profit.

Every houseowner may be induced to open an account in the bank and the collection of taxes could be made easy without employing an army of collection staff. The municipal bank could advance loans to owners of property to help them to upgrade their dwellings. The municipal bank can distribute home-saves for the householders to encourage thrift among the citizens. There are many other advantages, which one need not dilate upon here. What is urged now is the consideration of the principle. If once the principle is conceded, then the details could be worked out by experienced experts in banking. Let us await the reaction of the City Council to the suggestions set forth above before putting forward further suggestions to augment our revenue.

ISSUE OF MUNICIPAL BONDS

The Finance Minister, Madras, recently announced that in view of the present financial condition of the country, he was thinking of raising funds locally to go forward with the schemes of local benefit and importance. Municipal works are essentially of local importance and the municipality should therefore be permitted to issue bonds for specific works. For instance, for financing any local improvement work, the residents of the locality may be approached to advance money. This would incidentally make the local people view such improvement works as their own. This would also lighten the financial burden on Government.

WATER-SUPPLY

If any proof positive is needed at all to show that we are leading the life of savages, the water-supply of the city should provide it. The water-supply is precarious. The authorities seem to follow the principle of living from hand to mouth in providing this primary necessity of life. Owing to the successive failure of the monsoon in 1947 and 1948, the storage fell to such an extent that the city was almost threatened with a water famine. By rationing the supply, the famine was averted. The rate of supply per head per day was 14 gallons. As regards the quality of water, the less said the better. The maintenance of the works is far from satisfactory. The water engineering profession seems to be satisfied that its duty is discharged when some sort of nauseating organic emulsion is allowed to trickle through the taps during certain hours of the day.

The Central Advisory Water Committee, appointed by the Minister of Health, England, has presented an excellent report on the sanitation of gathering grounds. In the course of the report, the committee states:

"It has been suggested that a pure and wholesome water must not only be palatable and free from actual danger to health, but must also be kept free from anything

which an ignorant person might suspect of being unhealthy or an imaginative and squeamish person might consider objectionable."

In Madras City, the criticisms of knowledgeable persons on the subject of water-supply go unheard. Our Corporation seems to thrive on ignoring public criticism and yet, they expect the public to co-operate with the city administration. The safety of the Corporation lies in the fact that the civic conscience of our people has not been sufficiently roused to pin the Corporation to its responsibility. The classic case of *Croydon vs. Reed* has been an eye-opener to the water authorities in the west: In 1937, a typhoid outbreak occurred in Croydon. 43 lives were lost and 300 patients were sent to the hospital for treatment. The Corporation had to pay £22,000 as damages for the careless maintenance of the water works. Here, there was practically an epidemic of diarrhoea throughout the season when the water level in the reservoir was low and when the so-called filters could not function even as strainers. But the public were told that bacteriologically the quality of water was, epidemiologically speaking, upto the standard. But our public health experts did not reveal to the higher authorities that diarrhoea could have been "caused by excessive amounts of putrescent organic matter in water." This act has been brought to light by the report of the Central Advisory Water Committee, referred to above. Our experts here left it to others to speculate and find out if they can, what could be the cause or causes for the epidemic of diarrhoea.

The dilatory tactics adopted by the Corporation in considering the suggestion to form a porous bund around *Jones Tower* over a decade back shows the anxiety exhibited by it to improve the quality of water. The suggestion is not declared to be intrinsically bad, deserving its rejection on the face of it. It is conceded by all experts concerned that the move is in the right direction to take the stored water many steps forward to render it suitable for slow sand filtration. There appears to be an insidious and suppressed move somewhere to see that the work is not executed. Apparently, there is a fear that it would yield such tremendously good results that it would scotch vested interests. Otherwise, it is difficult to explain why there should have been such an inexplicable delay in informing Government, as the Corporation eventually did, that the lake vests in Government and therefore they should examine the proposals and order the execution of work at Government cost. A more irresponsible attitude of the City Council cannot be found.

It is a well recognised principle that in the maintenance of municipal essential utility services like water-supply, drainage, public cleansing and others, contract system should

be shunned. Here, so vital a work as washing sand for the filterbeds is done by contract. Everything seems to be bad in the management of our water works. The water works profession as such does not seem to exist at all. Such a lot could be said on the subject to the discredit of the City Council that space alone has become a limiting factor to comments.

The Government, the Corporation and all concerned should see that the *Krishna-Pennar Project* is executed at the earliest possible moment. To place any further reliance on the north-east monsoon in the light of the experience in the past would be a folly of the first order.

SEWER LAYING

With excusable pride, the report states that 17.67 miles (a figure that was not obtained in any year previously) of sewer line was laid. This certainly redounds to the credit of the executive; but it does not exhibit wisdom at higher levels. Admittedly, the progress on the construction of flushout sanitary conveniences had to be slowed down owing to the acute shortage of water. Even in places where this type of sanitary conveniences had been already connected, the quantity of water-supply (14 gallons per head per day) should have materially affected their maintenance. The further extension of the sewerage system should not have been undertaken, before ensuring a copious and uninterrupted supply of water. What is the good of a sewerage system which cannot be put to use, for connecting more and more water-carriage system of sanitary conveniences from the dwellings into the system?

According to the report, 'sanitary engineering' comprises sewer-laying, sewage disposal, stormwater drainage, pollution of city water supply, public conveniences and drainage maintenance. Even according to the ancient definition of *sanitary engineering*, water-supply and public cleansing at least, should have been included. We would suggest the deletion of the term 'sanitary engineering' and substituting in its place 'sewerage and drainage.'

That sewage surcharges through manholes in areas where sewers have been laid, has already been brought to public notice. The crude sewage floods the inhabited areas; it is disgusting to see sewage flooding one's compound. Slimy deposits in the area ferments, emanating disgusting smell. Any drainage authority with a sense of responsibility would have taken note of the conditions and taken steps to examine the causes therefore and remedy the nuisance. This is a further instance to show that citizens are expected to be savages and not as members of a civilized society. The basis of the design of the Madras sewerage system is one with a past history. There had been an unhealthy rivalry between the Corporation experts and the Government experts. The feelings between the Corporation and the Government were

worked up to a pitch on certain occasions. This is an unhealthy sign. Matters not, under which authority an expert is employed. There should be co-operation and consultations among experts themselves. What the public want is not what an individual expert has said or done, but what the profession has done to the public. This is the spirit in which professional men ought to render service to society.

TRANSPORT

Mention is made about the formation of further traffic islands. But nothing is said about the city's transport. Any civilized city council should take an interest on the transport facilities available to the citizens.

Sometime back, the City Engineer was called upon to report on the improvements which should be effected to make the rickety trams roadworthy. Nothing is known as to what happened to the report. The fact remains that the tramcars are a standing disgrace to the city. Apart from the rickety nature of the vehicles, one runs the risk of being electrocuted or having one's clothes burnt, while travelling in them! Passengers are packed like sardines in a tin, during the busy hours. If the City Council is helpless to improve the conditions, it should keep the people informed of it. The Government do not seem to take any interest at all in the subject. The noise created by the tram is insufferable. The vibrations of the moving trams rock the buildings adjoining the tram line to their very foundations. Reduction of noise in a modern city is recognised to be one of the functions of the city council. In no civilised city would this condition be tolerated for 24 hours. The Royal Commission on Transport, in its final report (1931), stated that these trams on rails cause obstruction to traffic and multiply danger points and that they should be allowed to die out. Motor buses or trolley buses have in many places completely ousted the tramcars.

Here, we have got excellent reasons as to why these trams should be scrapped, and some civilized form of transport should be introduced in its place. Even savages would rebel against these monsters roaring along on highways. How can we claim to be civilized when we tolerate without demur this monstrosity? When the provisions of the Public Health Act or the City Municipality Act are strained to harass the petty vendors and others, why should not these provisions be set in motion to put a stop to this public nuisance and a menace to the health and safety of the people? The grant of licence for running a tram service does not amount to a licence to the licensee to cause intolerable public nuisance.

Incidentally, we may point out the obvious absurdity of prohibiting motorcars in certain areas from blowing their horns, while in those very areas trams are allowed to proceed in their inimitable and super-audible manner. Surely the hooting of ten horns cannot produce one-tenth of the noise a tram can with ease.

THE REMEDY

The Commissioner has quoted De Tocqueville to emphasise the importance of civic institutions and to underline that they deserve the fullest support of the public. The quotation runs:

"Municipal institutions are to liberty what primary schools are to science. They bring it within the people's reach; they teach men how to use and how to enjoy it. A nation may establish a system of free government, but, without the spirit of municipal institutions, it cannot have the spirit of liberty."

Unless our citizens take an abiding interest in the city's house-keeping, they cannot imbibe the spirit of municipal institutions. How many of our ratepayers know how our city is managed or rather mismanaged? In the last election to the City Council, barring some who stood on party tickets, others stood as *Independents*. Even the party which set up candidates did not come forward with any programme or policy. The *Independents* did not reveal their intentions. The ratepayers (not all of them), cast their votes in favour of one candidate or another, without knowing why they stood as candidates for election at all and what public service could be expected from them. This does not exhibit that civic spirit which is so evident in western countries. This is the case with the restricted list of voters. When adult franchise is brought into force, no one can foretell what would be the position! Put a saint in the Corporation, the environment will soon make him a sinner! In these depressing circumstances, the executive deserve to be congratulated for what has been achieved during the year under review. There is no good of complaining that the Council is careless, incompetent, and even corrupt; the responsibility therefor rests with our careless citizens, who did not exercise their franchise and with those who exercised it thoughtlessly. The remedy lies in the abolition of the corporation for a period of, say, 5 years and put it under the control of a benevolent dictator pending the introduction of a new City Municipality Act. This period could be used to cleanse the Augean Stables.

The civilized savage is the worst of all savages—C. J. Weber.

RURAL WATER SUPPLY

Rs. 37,50,000 TO SERVE 75,000 PEOPLE SCATTERED IN ELEVEN VILLAGES IN SALT-WATER AREAS

by

A. V. Raman

Here is a bold lead to the country by the Madras Ministry. They have sanctioned for execution a combined water supply scheme, at a cost of Rs. 37.5 lakhs to install and Rs. 30,000 to maintain annually and to serve 75,000 people inhabiting eleven villages situated in a certain 'salt water area'. This is the first scheme of the kind in the country. Bombay appears to have considered certain combined rural water supply schemes; but abandoned them on account of the prohibitive cost. I was told that in the recently constituted *Sourashtra State*, a combined scheme is in operation serving some rural areas. Despite efforts, I have not been able to get any confirmation on the subject.

The Madras Ministry's determined effort in this direction is a portent and a landmark. Cost should not be a consideration to provide this primary necessity of life—drinking water—a precious gift, which *Nature* has denied to these people. The principle underlying their action should spread from province to province.

IN RETROSPECT

A group of villages adjoining the Gulf of Mannar (Tinnevely district), is located 'in a salt water area'. Searches for local sources of potable water proved futile. The people in the area were subject to untold suffering. To them, it was a tormenting problem. Their frantic wailings were of no avail. They have been long suffering in silence. This is the case of all those unfortunate persons, who are compelled by cir-

cumstances to live in areas where drinking water is not available at all.

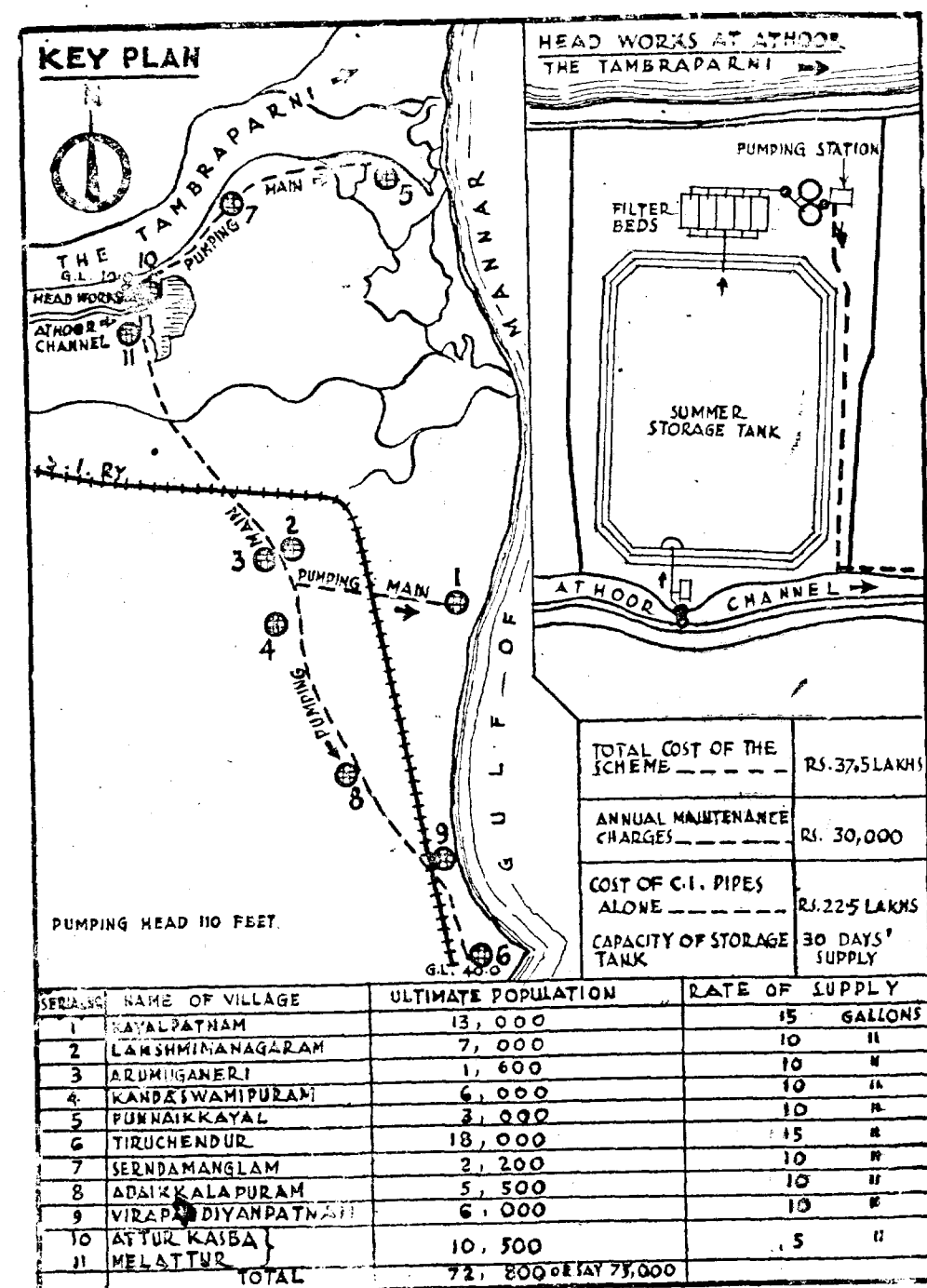
It so happened that soon after the first Congress Ministry assumed office in 1937, certain rich and influential muslim merchants of *Kayalpatnam* interviewed the then Minister of Health (Dr. T. S. S. Rajan) and represented their miserable plight to get a potful of drinking water. In their anxiety to get it, they went to the extent of volunteering to defray themselves a substantial portion of the cost of the scheme.

THE SCHEME OUTLINED IN AUGUST, 1933

In August 1933, a skeleton of a scheme to supply a number of villages in these 'salt water areas' was outlined by the technical advisers of the Ministry of Health. The scheme then outlined was to develop a source of supply from the bed of the *Tambaraparani* and to pump the water into 'distribution reservoirs' to be located in each of the villages. The scheme so outlined was then estimated to cost Rs. 5.36 lakhs to install, Rs. 11,000 to maintain annually, and Rs. 2,600 to investigate the scheme in detail.

DETAILED INVESTIGATION

Thereafter, no progress worth mentioning was made, although the local people made several pilgrimages to the metropolis to represent their dire need. After all, in July 1946, the authorities realised the urgency for taking up the scheme and ordered its investigation. The scope of the scheme, as originally outlined, was modified by



Courtesy: Sanitary Engineer to Govt, Madras.

Government that in the first instance water-supply should be given to *Kayalpatnam*, *Punnakayal* and *Arumuganeri* designing the scheme however, in such a way as to extend it to other villages later on.

The investigation was taken up in October 1946 and concluded in March, 1947, at a cost of about Rs. 4,000.

"In view of the special difficulties attached to the problem, the investigation covered a comprehensive survey in search of a solution which would ensure *economy* in cost and *dependability* in supply". In view of the admitted 'special difficulties', it would be interesting to know how many responsible and competent men were brought together to consider and to get over them.

FEATURES OF THE SCHEME

The index plan gives an idea of the salient features of the scheme. The tabular statement given therein gives the rate of supply of water proposed to be given to each of the villages and other relevant details.

As a result of the detailed investigation, 'the *Tamraparni* river bed itself as a source of infiltration works had to be ruled out, because of the unfavourable subsoil layers and the influence of tidal reach for a considerable distance above Attur'.

The raw water is therefore drawn from the Attur irrigation channel and led into a storage tank. Thence, the water is drawn to feed filter beds. There are five 'slow sand filters', each 85 ft. x 50 ft. The filterate is then drawn into two clear water reservoirs each 37 ft. diameter, holding three hours' supply.

The storage tank is 950 ft. by 700 ft. and with an effective depth of 10ft. It holds the storage required for the duration of the closure of the canal. It is said that although the canal is ordinarily closed for one month, yet, in practice, it is closed just for a fortnight.

The purified water is proposed to be pumped by oil-driven pumping sets of 50 h.p. It is intended to replace these oil burning units later on by electrically driven pumps as and when electricity is made available at the spot. The water is proposed to be delivered to the consumers through 'distribution reservoirs' located in each of the villages.

Although at the stage of ordering the investigation, it was intended to supply only three villages in the first instance and thereafter to extend the supply to others, it is proposed in the sanctioned scheme to supply water to *all* the villages. One other fact deserves special note. Attur and Mela Attur alone are supplied five gallons per head per day on the ground that they have local supplemental sources to help them.

The estimated maintenance charges of Rs. 30,000 will be divided among the eleven villages in the proportion of the water supply given to each of them. The villages are expected to meet it either by taxation or otherwise.

PEOPLE'S SHARE OF COST

It is not clear whether the rich merchants of *Kayalpatnam*, who volunteered to pay a substantial portion of capital cost, have adhered to their promise. If they have not implemented their word of honour, it would amount to a breach of faith. Having tempted the Ministry to launch upon the scheme by coming forward voluntarily to bear a good portion of the capital cost of the scheme, it would not be proper for them to back out of the promise at this stage. The Madras Finance Minister recently stated that he was thinking of raising funds from the concerned localities to finance the schemes which would benefit a locality. This scheme is primarily one such. Not only should the people in the area implement their promise but also advance money to government realizable at a later date at a rate of interest which might be determined by government. Otherwise, even at this stage, there is a serious

risk of the government deferring the execution of the scheme in the present financial situation in our country.

COMMENTS ON TECHNICAL ASPECTS

As one who had some part to play at the very conception of this combined water-supply scheme, I am unable to resist a temptation to offer a few comments on some technical aspects of the scheme as sanctioned for execution. It is said "what a man cannot appreciate, he cannot justly criticise." I claim to appreciate the technical points involved. I therefore feel justified in criticising them. But, I desire to make it abundantly clear that I do so in the interest of the water engineering profession itself as also in public interest. I hope my professional brethren would understand my observations in the spirit in which I offer them.

(1) I do not see that there is any adequate data to justify the abandonment of the bed of the *Tambaraparani* in favour of the Attur Irrigation Channel. It is said that "the soil and subsoil conditions are unsuitable". If in the conditions of the soil and subsoil as revealed by the borings taken during the investigation, a filter basin (not an infiltration gallery) cannot be successfully formed, *adapting* the design followed for Tanjore Waterworks in the bed of the *Vennar*, I do not know what to think of the water-works engineering profession.

(2) It is stated in justification of the change of the source of supply, that "the influence of the tide reach upto a considerable distance above Attur." I question the inference from the data gathered during the investigation. If the subsoil is definitely subject to tidal influences, the water should contain salts in quantities comparable to those obtaining in sea water. The subsoil has also an influence on the theory propounded. This is a point on which the designer of the scheme should satisfy the profession that his inference is justifiable from the data before him.

(3) Any water-engineer who knows his job would not have undertaken an investigation of this nature between October and March. The data gathered particularly as regards chemical quality should be grossly misleading.

(4) I may remind the profession that in Holland the ceaseless fight to keep back the influence of the sea on ground water supplies is going on. The water-engineering profession there has developed definite scientific technique and it has helped the profession in keeping successfully the influence of the sea water at bay. This has been achieved under infinitely more difficult circumstances than what are obtaining in this area.

(5) I put it to the designer of the scheme whether he expects the scheme as designed to function at all, in the light of the experience gained in this very province—at Cocanada, Masulipatam and Ellore, to mention but a few instances. I maintain that instead of drawing water of appropriate quality amenable for slow sand filtration, one would be drawing only a green or blue emulsion (according to the nature of the algae which would develop in the area). The filters would certainly refuse to respect the good intentions of the designer and resist to filter an organic emulsion.

In the circumstances, complete reliance should be placed on chlorination alone to maintain the water epidemiologically safe. Thus, a second line of defence will become the primary line of defence. This is dangerous!

It will be argued that after all the storage is only for a month and perhaps less and therefore no evil results need be anticipated. My contention is that it is because of the small storage risks are all the graver. It should be remembered that on all the 365 days in the year, water should be drawn through the storage tank. Even granting for the sake of argument that surface water alone should form the sources of supply here, cannot the design be so worked out as to avoid the risks detailed above?

(6) Even at the stage of preliminarily outlining the scheme, it was expected that electricity would be available at the spot. Why then install oil engines in the first instance and thereafter replace them by electrically operated pumping plant? It is waste, pure and simple.

(7) To restrict the rate of supply to five gallons per head per day to certain villages on the ground that local supplies are available to them, is a dangerous principle from the public health point of view. When protected water supply is introduced, the people should wholly depend upon it instead of resorting to unsafe sources which might be readily available for them.

The foregoing comments lead to an important issue. It is during the stage of the field investigation, particularly when "special difficulties" present themselves that the expert knowledge at the highest levels should be brought to bear on the scheme. It is again at this stage that the adequacy, accuracy or otherwise of the field data, should be checked. It is *thereafter* the broad outlines of the scheme should be decided upon. There is another stage at which the highest technical expert could apply his personal technical knowledge (not that of his technical section); it is the stage when the report on the investigation is submitted to Government through him. The question is whether the highest technical expert of Government applied his mind on the scheme at any of these stages. If any one re-opens *de novo* the principles outlined on the scheme at the stage of designing it in detail, it would result in inordinate delay. I feel that the engineering profession has let down Government badly. The report of the Water-Supply and Drainage Committee stressed that the organisation of the sanitary engineering department on sound lines, is the very pivot of their plan. It is just what has *not* been done! The

net result is wastage of public funds. Penny wise, pound foolish, they say.

SUGGESTIONS

(1) There is a grave risk in our government's sanctioning such expensive schemes for execution without giving an opportunity to the public to offer criticism on the schemes proposed to be sanctioned. There was a healthy rule of procedure in the past, whereby public notification was issued in the pages of the *Fort St. George Gazette* pointing out that the government propose to sanction a loan or grant for such and such a scheme. The notification used to invite public criticism. It is only after considering all such criticisms, the scheme would finally be sanctioned. Why not reintroduce this healthy procedure?

(2) In western countries, to avoid infructuous schemes being sponsored, the Ministry of Health hold a local inquiry through one of their engineering inspectors before any loan is doled out from the exchequer. This procedure is considered necessary there, although the schemes are as a rule, drawn up by highly competent local officers assisted by consulting engineers of high standing and repute. Apart from this, in the west, there is also the chance of the scheme being criticised by the profession in one of the professional associations where the designer invariably presents a paper on his scheme for discussion by his professional brethren. In the light of the criticism, he usually modifies his scheme, before putting it up before the local authority concerned for its approval. In the absence of such facilities in this country, it is all the more necessary that schemes of this nature should be subject to public criticism. It should be remembered that commonsense of laymen is capable of putting forward brilliant suggestions which might not strike the professionals who move in blinkers!



THE ADVANTAGES OF LAUGHTER :

Laughter is a most healthful exertion ; it is one of the greatest helps to digestion with which I am acquainted ; and the custom prevalent among our forefathers, of exciting it at table by jesters and buffoons, was founded on true medical principles.

—Dr. Hufeland.

THE ULTIMATE IN SPECIALIZATION :

A young doctor returned to the village of his birth and called upon the old family physician. "I suppose that you intend to specialise," remarked the elder. "Oh, yes," replied the youth, "in the diseases of the nose, for the ears and throat are too complicated to be combined with the nose for purposes of study and treatment."

Thereupon the family physician inquired : "Which nostril are you concentrating on?"

MONEY CANNOT BUY :

Look to your health ; and if you have it, praise God, and value it next to a good conscience ; for health is the second blessing that we mortals are capable of ; a blessing that money cannot buy.

—I. Walton.

THE BEST PRECEPT :

To be free-minded and cheerfully disposed at hours of meat, and of sleep and of exercise, is one of the best precepts of long lasting.

—Bacon.

GOOD TO LAUGH :

'Tis a good thing to laugh, at any rate ; and if a straw can tickle a man, it is an instrument of happiness.

—Dryden.

Fortune comes to him who laughs and no one loses by laughing.

—Japanese.

LESSONS IN LIVING :

The tasks of health education are not merely to teach the facts of the modern science of hygiene, but ultimately to persuade men to apply these facts.

—Dr. Iago Gladston.

DOCTOR OR DISEASE :

The doctor is often more to be feared than the disease.

FORETHOUGHT :

Never cast dirt into that fountain of which thou hast sometime drunk.

WHY CLEANLINESS ?

Cleanliness of body was ever esteemed to proceed from a due reverence to God, to Society and to Ourselves.

—Bacon.

SPECIALISTS' MOTTO :

Motto of the old-fashioned practitioner : "I treat what you've got." Motto of the modern specialist : "You've got what I treat."

THE EXCESSIVE CARE OF HEALTH

Those hypochondriacs, who, like Herodius, give up their whole time and thoughts to the care of their health, sacrifice unto life every noble purpose of living ; striving to support a frail and feverish being here, they neglect an hereafter ; they continue to patch up and repair their mouldering tenement of clay, regardless of the immortal tenant that must survive it ; agitated by greater fears than the Apostle, and supported by none of his hopes, they "die daily".

—Colton.

FRESH AIR NECESSARY TO HEALTH

Be it remembered that man subsists upon the air more than upon his meat and drink ; but no one can exist for an hour without a copious supply of air. The atmosphere which some breathe is contaminated and adulterated, and which its vital principles so diminished, that it cannot fully decarbonize the blood, nor fully excite the nervous system.

—Thackeray.

THE VALUE OF HEALTH

Health is certainly more valuable than money, because it is by health that money is procured ;

but thousands and millions are of small avail to alleviate the protracted tortures of the gout, to repair the broken organs of sense, or resuscitate the powers of digestion. Poverty is, indeed, an evil from which we naturally fly ; but let us not run from one enemy to another, nor take shelter in the arms of sickness.

—Sir W. Temple.

THE MURDERING PROFESSION

The following is a bonafide statement made by a 7-year old girl who had listened to medical talk all her life. Being asked her father's business, she replied : "My father is a doctor, but he isn't a quack ! My father's got a license, so if he kills anyone they can't arrest him !"

DOCTOR FELL

I do not love thee, Doctor Fell,
The reason why I cannot tell ;
But this alone I know full well,
I do not love thee, Doctor Fell.

—Tom Browne.

ENEMIES TO HEALTH

The three most dangerous enemies to health are—excess of heat, damp, and cold.

—Dr. Bader.

THE INGREDIENTS OF HEALTH

The common ingredients of health and long life are—

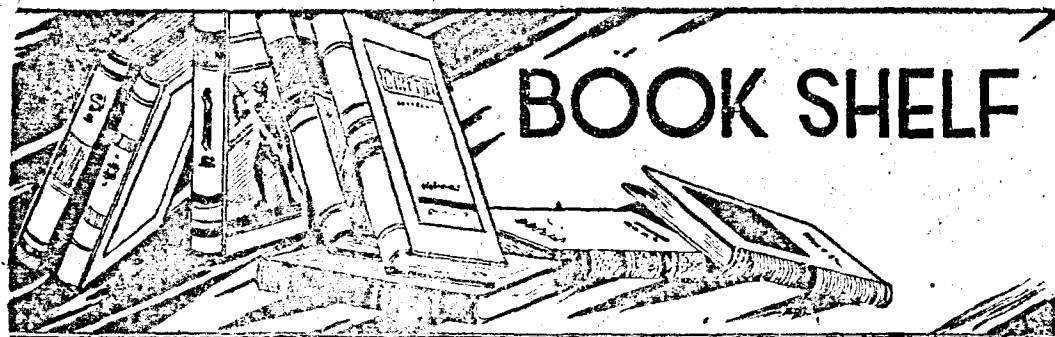
Great temp'rance, open air,
Easy labour, little care.

—Sir P. Sidney.

SPORTING WITH HEALTH

Though health may be enjoyed without gratitude, it cannot be sported with without loss, or regained by courage.

—Buckminster.



"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 !

Name : SEX HABITS OF AMERICAN MEN.

Author : Albert Deutsch.

Publishers : Prentice-Hall, Inc. New York.

Size : 8" by 5½".

Published : In April, 1948.

Pages : 244. Price : \$ 3.00.

This book is a symposium on the Kinsey Report published as "A Sexual Behaviour In the Human Male" by Kinsey, Pomeroy and Martin, by W. B. Saunders Company, Philadelphia, Pa.

The Kinsey report was based on a scientific survey conducted by experts on the various aspects of the question of sex. It was to be followed by a survey of sex habits in relation to women. In the present volume, a series of essays on the findings of the Kinsey group on society, are contributed by well known experts in different sciences. One essay deals with the methods of Kinsey Group and another discusses whether the methods adopted justify the general conclusions. Anthropological, legal and religious aspects are also discussed.

The book contains biographical notes on those famous persons, who have done valuable research work in the field. Though the notes are brief, they are nonetheless valuable.

The book is a thought provoking one and deserves to be read by one and all interested in social questions.

—SYKES.

Name: HEALTH EDUCATION IN SCHOOLS.

Author : Jesse Feiring Williams, M.D., Sc.D.

and

Ruth Abernathy, PH.D.

Publishers : The Ronald Press Company, New York.

Published : In 1949.

Pages : 316. Size : 8" by 5½".

The book is written from the point of view of the educationist and is meant for the teacher and the teacher-trainee.

The authors stress the new concepts of health in their relation to health education. They have considered the subject in three important divisions viz., health service, healthful school living and health instruction and have defined the terms and their scope.

The types of personnel required for health service and their training has been critically viewed. The criticisms challenge consideration. New types to serve definite objectives have been suggested—hygienists and technicians.

The chapter on the nature of the child should be a valuable guide to the trainee in understanding the child and what is more in adjusting himself to the needs of the child. The part played by nature and nurture is well brought out. The growth and health needs of children are neatly summarised.

Healthful school living is considered under (1) the conditions of the environment ; (2) the conditions of the class room experience ; and (3) the conditions of school organization. It is stated that schools exist which are dirty, insanitary, and unfit—comparing unfavourably with the provision farmers make for their stock—as opposed to their children in school. The school site, building, lighting, ventilation, furniture, water-supply, lavatories, cleanliness, all come in for consideration. Disciplinary problems and organisation of the school day are dealt with.

The aims of health service are discussed. The notion that schools need only detect defects and throw the responsibility for remedy on the parents is demolished. The maintenance of health records, the remedial of defects, immunisation practices and cooperative action are considered. The invaluable role of the teacher and his functions are outlined.

The role played by official and non-official organizations in health education is discussed. Some of the wrong trends in commercial efforts at health education have been criticised. Organizations which could provide material have been listed.

Health education connotes not only instruction in health but a way of living and includes outlook, attitudes and practice of healthful living. It treats with the whole child in his total changing environment—in relation to the school, home

and community. It should elicit the cooperation and self-direction of the child. The nature of the problem varies with the age and stage of development.

The functions of the personnel employed in health teaching—the teacher and the specialist—have been set forth. The basic problems in planning of health teaching, the needs and experiences of the individual, the local and community problems and cooperative action are discussed. The basic principles of learning, incentives, classroom techniques, teaching aids, text-books, reference materials, audio-visual aids, local, state and national resources are all considered. Evaluation tests and measurements have also been illustrated. Last, but not least, the consideration due to the teacher, his rights and obligations, his role as a social engineer and his health receive attention.

The book has as far as practicable dealt with the many sided problems from different angles. As it is not possible to deal exhaustively with every aspect, useful suggestions for further reference are incorporated.

The book will undoubtedly serve a useful purpose in stimulating thought on the subject and be of help in formulating schemes of health education in schools which constitutes a primary national need in every country.

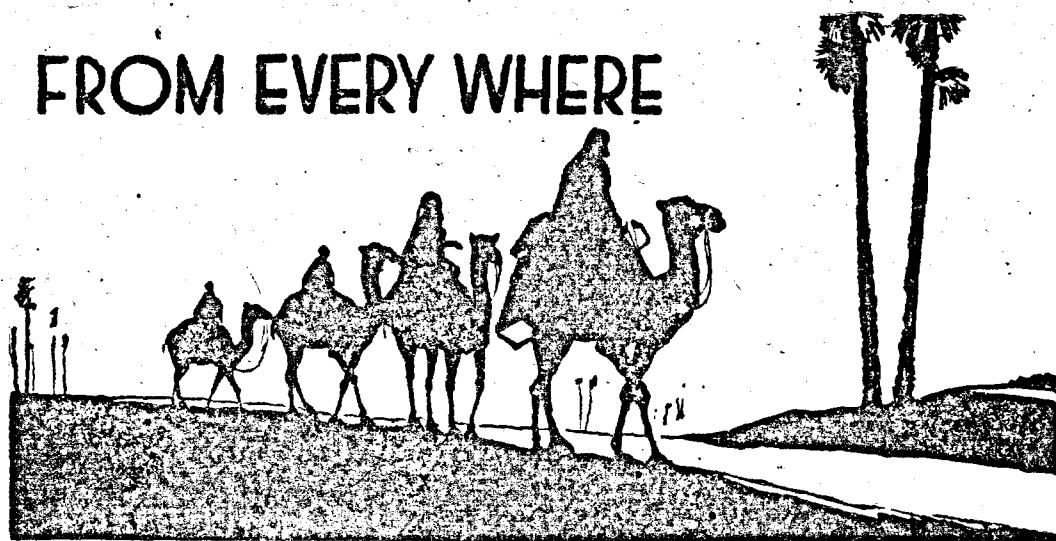
T. LAKSHMINARAYANA,
M.B., B.S., B.Sc., D.P.H. (Lond.),
Professor of Hygiene and Preventive
Medicine, Medical College, Madras.

BOOKS, WE KNOW,

Are a substantial world; both pure and good ; Round these, with tendrils strong as flesh and blood, Our pastime and our happiness will grow.

(Wordsworth).

FROM EVERY WHERE



WHAT DO THEY SAY ABOUT IT?

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

POLLUTION AND MARKET-GARDEN CROPS GROWN ON SEWAGE

"Investigations made to determine the extent of pollution of crops grown on soils which had been irrigated with sewage are described. Samples of soils at a sewage farm, taken from depths up to 12 in., contained considerable numbers of Bact. Coli 24 to 72 hours after irrigation with sewage. Examination of tomatoes cultivated on soil irrigated with sewage which had been treated chemically or biologically, showed that bacteria were absent from the interior of clean whole fruits but fruits which were slightly injured or cracked were heavily infected. Other crops grown on sewage were superficially infected, probably due to splashing with sewage or to infection with blown dust. Crops may also absorb considerable amounts of the water-soluble matter of sewage including products of metabolism from bacteria. It is possible that some constituents of sewage would be present

in succulent vegetables which continuously absorb soluble nutrients from the soil. It is concluded that irrigation with sewage should not be used on soils on which crops such as soft and juicy vegetables are grown but that it may safely be used on soil for certain grain crops, crops to be used for fodder, and sugarcane."

S. C. PILLAI.

R. RAJAGOPALAN & V. SUBRAMANYAN.

VEGETABLE DECHLORINATING SUBSTANCES:

While superchlorination regarded as best method for disinfection of water, its use is restricted because of scarcity of dechlorinating substances. Present work undertaken in order to discover dechlorinating substances which could be employed as substitutes for chems, used for this purpose. To this end series of vegetable substances tested and following proved capable of binding chlorine in adequate quantities: Powd.

briar hips, briar leaves and wood; leaves of oak, hazel, Amur vine, apple tree, birch; needles of pine and cedar. Material for dechlorination prepared in form of powders, infusions and concoctions; no special application required. Disinfection of water in cisterns, casks and smaller containers effected by superchlorination, and followed by dechlorination with vegetable substances, insures supply of water of good quality. This method of dechlorination also recommended for use in wells—B.H.

—(From J. A. W. W. A.)

Note.—In our country, people have been using certain seeds to clarify turbid waters. There is a wide field for investigation in this country to use vegetable substances somewhat on the lines on which U.S.S.R. is proceeding as set out in the extract above.

—Ed. P.H.

FOOD HANDLING AND DISEASES:

United States Public Health Service lists 62 communicable diseases, 25 or 40 per cent. may be associated with food handling business. Many of these are known as killers. The following grouping of diseases is listed according to the various ways by which they may be transmitted to patrons:

(1) Insanitary glasses, dishes, and silverware and the exposure of food to coughing, sneezing, and spitting may spread, the common cold, influenza, diphtheria, measles, mumps, pneumonia, scarlet fever, septic sore throat and tuberculosis.

(2) The use of common cups, towels and toilet articles may transmit the common colds, influenza, septic sore throat, syphilis and tuberculosis.

(3) Failure of employees to wash their hands thoroughly after each visit to the rest room may be responsible for the spread of amoebic dysentery, food infection, and poisoning.

(4) The employment of people who are carriers may cause spread of communicable diseases.

(5) Improper washing, preparation and refrigeration of foods may cause botulism (poisoning caused by decomposed food, especially preserved meat), bacillary and amoebic dysentery, food infection and poisoning, paratyphoid and typhoid fevers.

(6) The employment of food handlers who have sores and boils on their hands and arms, may cause food infection and poisoning.

(7) The use of unpasteurized milk products may be responsible for diphtheria, dysentery, paratyphoid, scarlet fever, septic sore throat, tuberculosis, typhoid undulant and Malta fevers.

(8) The lack of adequate screening and the exposure of food to flies may cause bacillary and amoebic dysentery, typhoid, and paratyphoid fevers (in our country, cholera also).

(9) Improper storage food and the lack of rat control may result in paratyphoid, typhus fever, infectious jaundice, food infection and poisoning.

Vincent V. RAGLAND.

—(P. H. Engg. Abts.)

HYDROLOGY AND CONSERVATION

Report on Tests with the Divining Rod. Fritz Gassman. Monatsbulletin (Swiss) 27: 12 (1947) Tests were made under direction of geophysicist to determine whether movement of rod in hand of diviner due to physical causes. 16 experienced diviners worked independently over 7 selected fields geologic and structural properties of which known to geophysicist alone. Results obtained by each diviner plotted exactly by individual observers and measurements, under seal, compared only after all tests completed. Maps then plotted indicating no. of diviners finding each location sensitive. Several zones indicated by groups of diviners, each zone by different group. None of existing pipes, including 22"

water main, found by any of diviners, but mains indicated by them where none existed.

MAX SUTER.

—(J. A. W. W. A.) Vol. 39, No. 9)

THE DIVINING ROD IS PRACTICAL HYDROLOGY

—V. Zatloukal.

Gas, Wasser, Warne (Austria) 1: 143 (June 1947). Author had opportunity to compare action, behaviour and estimates of divining rod carriers with studies and observations of well yields, pumping experiments and ground water levels. During the pumping experiments the diviners followed rather closely a pattern to be expected when ground dewatering takes place. Two or more diviners followed similar paths, but not completely the same. Repetition after 2 years, however, showed similar results. Construction of test wells did not show increased yields. Several diviners' results on ground water levels showed a complicated pattern, but agreed in general with the actual conditions. The conclusion is reached that the diviner reacts through unknown causes; his reactivity varies from time to time and place to place and is aided by auto-suggestion. Experience shows that the diviner may support the hydrologist in location of wells, dewatering, drainage projects and in determining the porosity of soil. The diviner usually has no knowledge of geology and hydrology, which should be left to the expert, and the expert should use the diviner as an "instrument" who is not faultless.

W. RUDOLES.

(J. A. W. W. A. Vol. 39, No. 9.)

DESTRUCTION OF BACTERIA IN WATER AND HUMAN EXCRETA: ARMY WATER STORAGE METHODS

Methods used in Japan for treatment and storage of water supplies for troops in the field

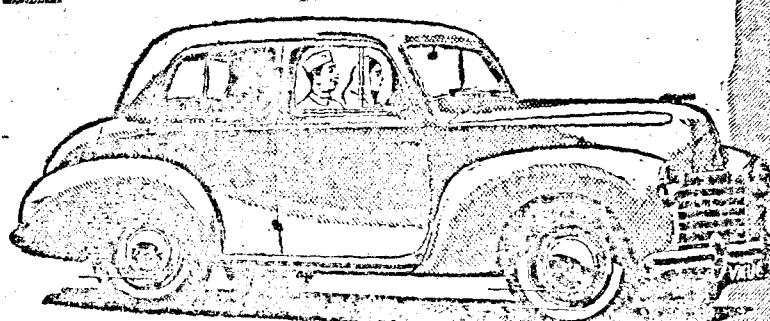
are described. Water stored in canteens was disinfected by coating the interior surface of the canteens with various oligodynamically active metals, such as copper, silver, or manganese; the best results were obtained with linings of silver and manganese. The effect of storage in these canteens on various types of pathogenic bacteria are shown in a table. A plant was devised for use in the field if no Berkefeld filters were available. Water was coagulated with alum and filtered through flannel filters and was then either boiled or chlorinated with bleaching powder, stirred for 15–30 minutes, and left to stand for 2 hours before drinking. A cart carrying all equipment for boiling water and methods for treating canvas used for water-storage tanks are described.

Destruction of bacteria in human excreta: In experiments on destruction of pathogenic organisms, typhoid bacteria and eggs of round worms and hookworm were added to human excreta which was then stored at various temperatures for several months. Typhoid bacteria were destroyed in about ten days in summer, in about one month in June and October, and in about two months in spring and late autumn; a small number survived in winter until spring. Eggs of round worms and hookworm did not develop in the excreta. The eggs were destroyed in three months in summer; in spring and autumn a longer time was required and some survived in winter until spring. Storage tanks for privies, in which the excreta are stored for 100 days, are recommended. Tanks have also been constructed in some cities for storage of nightsoil for 3 months before distribution to farmers as fertilizer. A plant for digestion of excreta, suitable for communities without sewers is described.

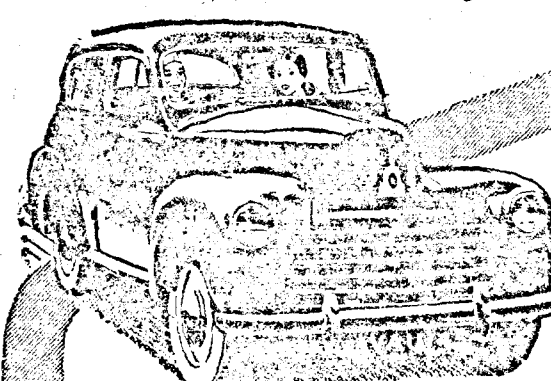
(British Intelligence Objectives Sub-Committee. Rep. No. B, I. O. S. J. A. P. (P. R. s/1387 and 1890. H. M. Stationery Office, London, (1947.).

(W. P. R., Vol. XX, No. 12 abst No 1585.)

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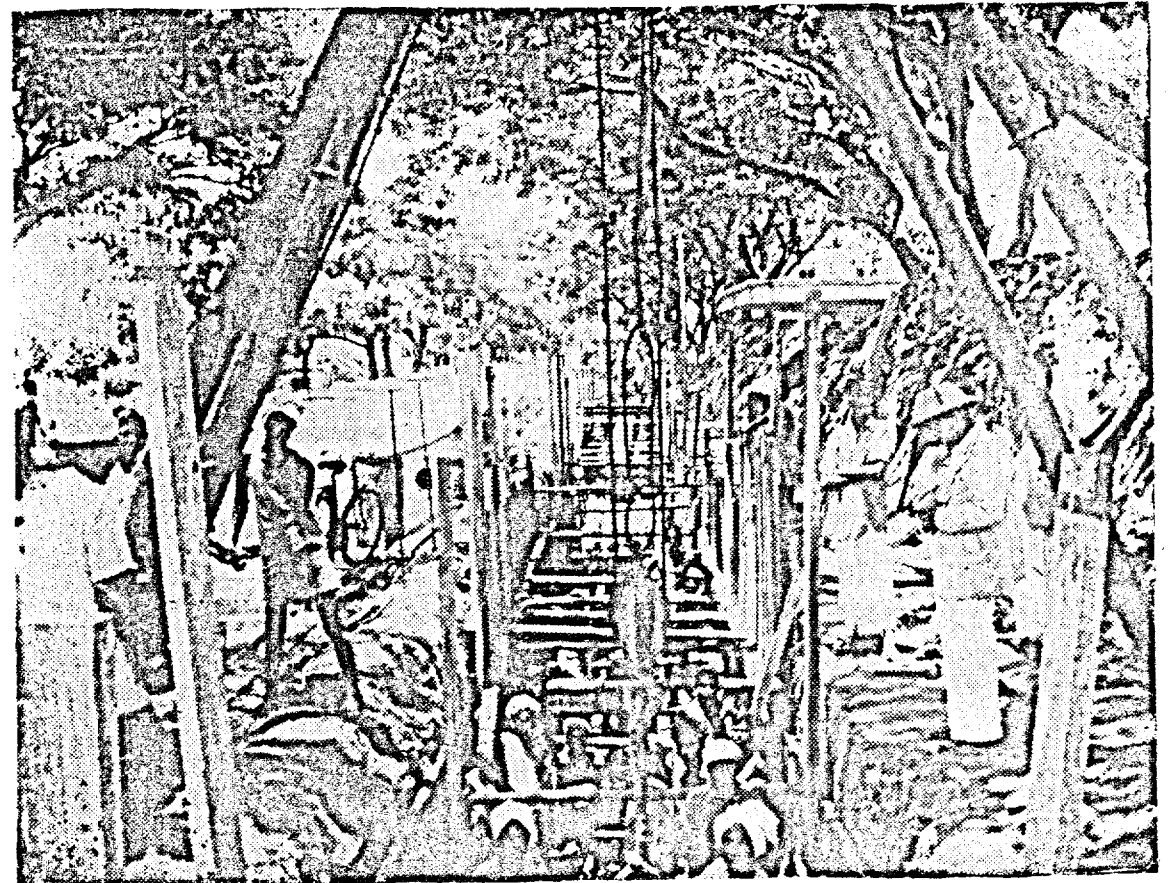


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