

PEOPLE'S HEALTH

EDITOR
A.V. RAMAN



VOL. IV

AUGUST 1950

NO. 11

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PEOPLE'S HEALTH

A Pioneer in the Field of Public Health

Vol. IV

AUGUST, 1950

No. 11

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SISTA'S-GO-6

the people, the absence of the minimum possible quota of food per head, had contributed largely to the volume of popular discontent.

Explanations can always be ingeniously advanced by the government and ingenuously believed by the people, but imminent disaster is never staved off by a bout of diplomatic talking. Mr. Munshi, India's Food Minister, who is as ready with his ideas as Mr. Daulatram was with his verbal assurances, has not succeeded in replacing the hunger of today with mere visions of the indigestion to come tomorrow in the wake of sudden supplies of grain and milk (from the Venezuela tree?).

People cannot any longer swallow official explanations unmutteringly. The Quip Modest should be gently administered:

"If our roads flowed with milk and honey, and if our coffers were brimful, we would not need a Minister. Where there is dearth, there it is that one is needed to exercise his intellect and find *practical* solutions. We do not need a Minister to tell us, there is no food, or worse still, that there is some substitute for food somewhere, that will be available sometime later."

RIGHT TO FREEDOM

The framers of the Constitution of India have very thoughtfully provided

rights to certain freedoms. Rights have been conceded to freedom of speech and expression, to assemble peaceably and without arms, to form associations or unions to move freely throughout the territory of India, to reside, to acquire, hold and dispose of property and practise any profession and to carry on any occupation, trade or business. Of what use are these rights to the Common Man, when he has not been given the *legal right* to demand healthy environment to live in and labour for the country? Our leaders very rightly appeal to the people to work harder and harder to produce more and more. The environment in which they live at present does not allow of any such endeavour on the part of the people. The people live in mortal dread of being swept away by any of the waterborne epidemics and other ills brought about by bad environment? How can the people have the zest to live and labour under such conditions?

No doubt the chapter dealing with the Directive Principles of State policy is a unique feature of our Constitution. Among the economic rights and principles of social security, they have included "conditions of work assuring a decent standard of life, full enjoyment of leisure, social and cultural opportunities and raising the state of nutrition and improvement of health."

The Constitution makers have taken care to state "the provisions contained in this part shall not be enforceable by any court, but the principles therein laid down are nevertheless fundamental in the governance of the country, and it shall be the duty of the State to apply these principles in making laws." Our Constitution makers, like the satyrs of old, seem to be pastmasters in the art of blowing hot and cold together in the art of giving doubtfully with one hand and removing definitely with the other.

We know how the Instrument of Instructions issued to the Governors of Provinces under the old Government of India Act was observed in practice. It was observed carefully to protect vested interests of the foreigners employed in this country. Similarly also, the directive principles can be expected to be enforced to serve vested interests only. The enunciation of the directive principles which are not enforceable in any court reduces itself to laying down a principle that 'honesty is the best policy'. The trouble arises in the application of this principle in practice. So the Common Man cannot be expected to be enthusiastic over the rights to freedom. What he wants and what he is deeply concerned about is the improvement of his living conditions. Without attending to this fundamental need, it is idle to expect people to

respond to the appeals of our leaders to work harder and harder and to produce more and more, however pressing the need may be for such work.

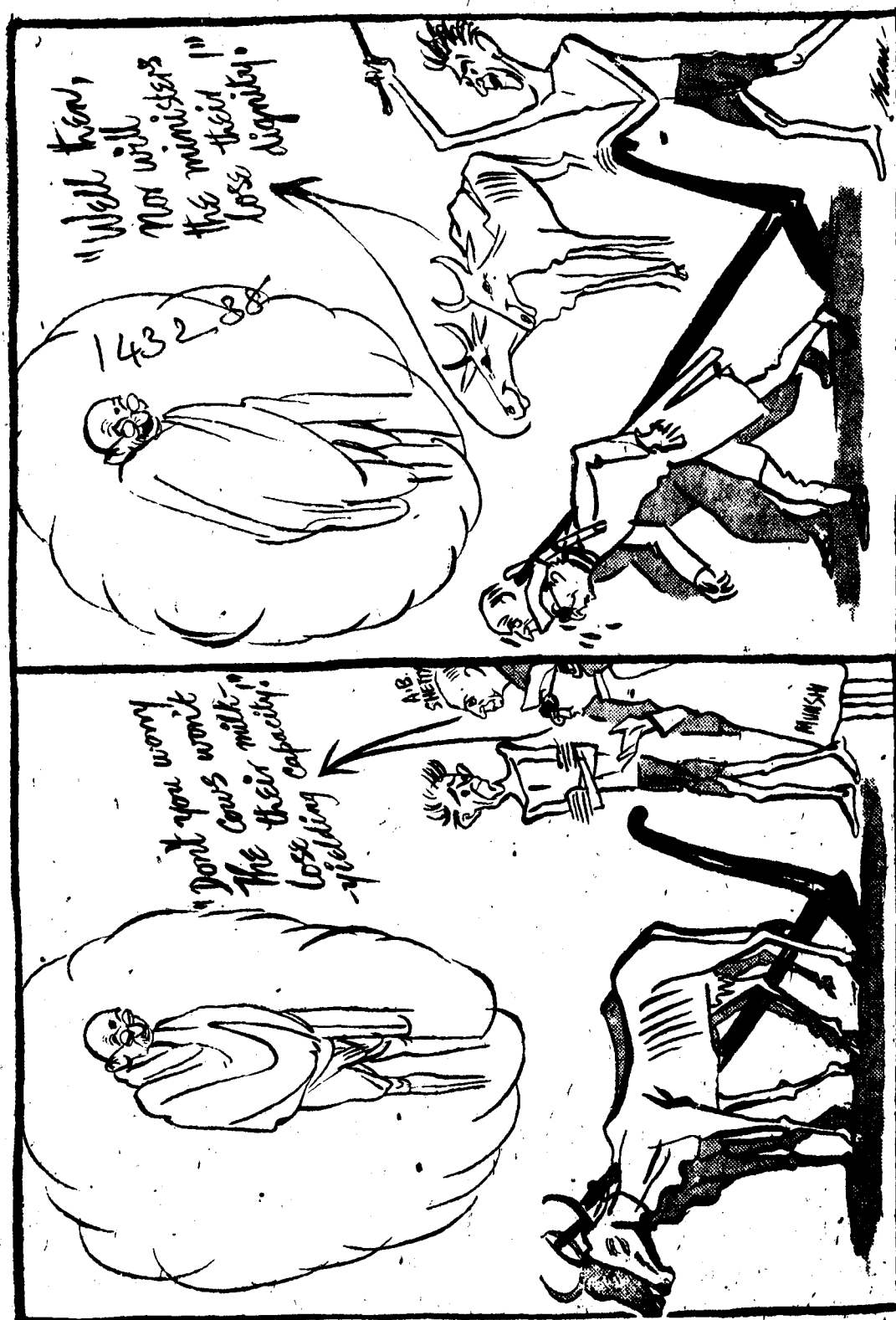
HEALTH MINISTERS' CONFERENCE

It is reported that the third Health Ministers' Conference under the presidency of Rajkumari Amrit Kaur, India's Health Minister, will be held in New Delhi from August 31 to September 2, 1950, and that it is likely to be attended by the Health Ministers from all the Part A and Part B States and representatives of the Centrally administered areas. It is also reported that the Prime Minister of India is likely to inaugurate the conference. It is further reported that the more important subjects to be discussed are:

- (1) Report of the Indigenous Systems of Medicine Committee;
- (2) Report of the 'Homeopathic Enquiry Committee';
- (3) Organisation of an All-India Health Service; and
- (4) The question of establishing a Central Council of Health under Section 263 of the Constitution.

So far so good.

Judged from the results which had accrued from the first and second Health Ministers' Conferences held in



Ramrajya in Independent India!



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AUGUST 1950

ISSUED MONTHLY

EDITORIAL . . .

THREE YEARS OF INDEPENDENCE

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

THE profundity of this confession and its applicability to India, are realized by no one, more than they are by our Prime Minister; and perhaps only by him. In his fervent patriotism, he does not gloss over facts however unpalatable they may be, and however uncomplimentary their reflection on Congress administration may be. By virtue of his great personal qualities, Pundit Nehru, we feel, is the last and greatest link between the government that has failed to measure up to its tasks and the people who have been disabused of their expectations and who peer hopelessly at a bleak future, illumined if at all by the personal radiance of a popular Punditji.

August 15, 1947, was celebrated with pomp and rejoicings all over the country and the Common Man expected, not unnaturally, that his govern-

ment would attend to *his* primary needs as its first duty. He was happy in that expectation. By August 15, 1949, a marked change was observed; the Common Man had ceased to celebrate the day and begun to retrospect. January 26, 1950, saw a new Head of the State make his bow to the people, through the Parliament. His lengthy address touched on all subjects save the health of the people. We do not blame poor President for his address; but we do blame those who were expected to tell the President about the subject, but failed to do so. August 15, 1950, was singularly devoid of public hullabaloo; the Common Man, like the shepherd in Virgil, had at last grown acquainted with Freedom and found it like Love to be but a native of the rocks. Why this depression? Over and above the progressive deterioration of living conditions of

October, 1946, and August, 1948, respectively, it is clear that these periodical conferences only help our Health Ministers and their army of administrative and technical advisers to assemble gaily at State expense. One cannot congratulate those responsible for preparing the agenda of the conference. We have discussed the results of the second Health Ministers' Conference at some length. (*Vide* Vol. III, No. 2, pages 49-56 of *People's Health*.) We drew pointed attention to the inappropriateness of the Health Ministers discussing, for instance, the vent way which should be provided in railway culverts. Clearly the advisers of the Health Ministry have neither vision nor sense of values. The most pressing subject is the improvement of the living conditions of the people. Mahatma Gandhi had been trying to instil in the minds of his followers that the improvement of sanitation should be given the highest priority in improving the nation's health.

Our Prime Minister, in opening the first Health Ministers' conference, stated "if funds could be available for big wars, there is no reason why they should not be provided for the fight against ill-health." In our country, we are most concerned by ill-health caused by insanitary environment. This is the root cause for the clamour for more and more

doctors and still more hospitals. We are not so much concerned with the treatment of degenerative diseases, which should be the main function of our hospitals. Funds should have been made available first to improve the insanitary conditions in which our people live. It is sad to reflect that nothing has been done.

Sir Shaafat Ahmed Khan, who was then in charge of Health in the Central Government, stated: "If there is a question of priorities—and planning means priorities—I think an active programme to improve water-supply and sanitation in the towns and villages, is one of the most urgent needs." Such pious pronouncements do not help to provide people with even an ounce of safe drinking water. What did he do to implement his own pronouncement? None.

Much is talked about the Planning Commission. Great expectations are raised in the minds of the people that the labours of the Planning Commission would make the land prosperous. Planning of grandiose schemes for industrialisation, irrigation and agricultural developments in the country cannot be of any practical use to the people who are wallowing in the insanitary conditions. It is idle to jabber about the improvement of living standards of the people and making the country self-sufficient and so on, when our people are allowed to live

like beasts in such disgraceful insanitary conditions.

Even the Bhore Committee which is often quoted to bolster up vested interests, has clearly and unequivocally stated:

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

The WHO of which India's Health Minister happens to be the President, has recognised:

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

Yet, the WHO, through the co-operation of the India's Health Minister, has only secured successfully Indian human guineapigs for investigation on the efficacy of BCG vaccination with a view to putting it on a scientific basis. The WHO, despite having held out hopes, has not however come forward to eradicate cholera in our riverine areas where the water-borne and other environmental diseases continue to be endemic, carrying away tens of thousands of people annually.

ENVIRONMENTAL HYGIENE COMMITTEE

Considerable pressure had to be brought to bear on the Government of India to appoint a committee to go into the subject of environmental sanitation. It was like attempting the proverbial unwilling horse to drink water! The Committee was constituted in June, 1948. It is said that the Committee submitted its report to the Government of India quite a long time ago. It has not yet seen the light of day; one doubts whether it would ever see the light of day at all and even if it does, whether effective steps would be taken to improve environmental sanitation in this country.

THE ONLY HOPE

India's Prime Minister is inaugurating the next Health Ministers' Conference. Unless he takes it into his head to focus attention on the subject, the chances are the subject will continue to drift in the backwaters of health administration. May we expect Punditji to make a pertinent reference in his usual passionate tone to the importance of giving the highest priority to environmental sanitation, as the first and foremost step in improving the nation's health? It is only his forceful directive which would make our Health Ministers sit up and think. May we hope that he will?

WORLD HEALTH ORGANISATION ITS MALARIA POLICY

A Critical Review with Constructive Suggestions

While our popular ministers and leaders appeal at every turn for public co-operation, it is their duty to consider the constructive suggestions of the kind set out in this article. Let them have some respect for their own appeals of co-operation and lend ear, in public interest, to the suggestions made by an expert who knows his job.

—Ed., P.H.

General Considerations :

It is in refreshing contrast to the wrong emphasis laid on BCG vaccination in the prevention of Tuberculosis in under-developed countries without taking any effort whatever by way of improvement of environmental sanitation, that the World Health Organisation has accorded malaria control in rural areas with the application of DDT, as an indoor residual insecticide, topmost priority in its programmes. Its policy of awarding fellowships for theoretical and field training to health officials of the various member nations in order to equip them to undertake malaria control projects in their own countries is also a laudable step in the right direction. Again, its policy in sending out demonstration teams to certain countries in order to prove to their Governments that rural malaria control is economically feasible, is sound on general principles. But we beg leave to point out that there need necessarily be no uniformity of procedure in the matter of the composition of such teams or in the nature and extent of demonstration. Such a uniform-

ity of procedure fails to take note of the amount of research and investigation already carried out in these countries, the extent of control measures which have already been successfully undertaken in these areas, and, above all, the progressive evolution of general public health administration in such areas and the place of malaria control and organisation in such evolution.

Malaria Record of the Indian Union :

For instance, taking India, it is indisputable that a considerable amount of malaria research has been carried out in this country during the last 50 years after Sir Ronald Ross's epoch-making discovery of the transmission of malaria by the mosquito, notably by Sir Richard Christophers and Col. Sinton. More recently, Sir Gordon Covell, as the Director of the Malaria Institute of India, has played a very considerable part in making Governments, both at the Centre and in the Provinces, as well as the Army administration, extremely malaria-conscious in so far as control programmes, are concerned.

Army Record :

The Army malaria control in the last war is a matter for legitimate pride by way of practical accomplishment, for the success of which Sir Gordon Covell, Col. Afridi and Col. Jaswant Singh are very greatly responsible, not to speak of the elaborate army personnel.

Delhi :

The Government of India have to their credit a very successful programme of malaria control in Delhi itself, in which the co-operation of various administrative units has been effectively secured.

Mysore :

In Mysore State, for the last 20 years, excellent work has been carried out by the Bureau of Malariology, in the earlier stages of whose activities Dr. Sweet, of the Rockefeller Foundation, took a leading part. His colleague, Dr. Anantasamy Rao of Mysore State has very ably followed up the work, more especially in bringing an effective liaison between the engineers, the irrigation authorities, the public health officials, and the people at large.

Railway :

The Bengal Nagpur Railway, under the leadership of Major Senior White, has a substantial record of malaria control.

Bombay :

More recently still, as we had occasion to review in the columns of this journal, the Bombay Malaria Organisation, under the leadership of Dr. D. K. Viswanathan, has established an excellent record of malaria research and control, and our present information is that in this State, rural malaria control has been established in 9 districts, catering to a total population of 9 million,

at an estimated cost of 2.7 million rupees every year.

In all humility, we ask the various authorities concerned whether in a country with such a long record of basic research and a more recent record of practical accomplishment in a big way, the policy of the WHO in malaria control should be of the same pattern as in other countries in the South-East Asian region, as for instance, Afghanistan.

Present WHO programmes in India :

We are informed that at present there are four demonstration teams of the WHO functioning in this country, one in the United Provinces, one in Orissa, one in Mysore, and one in Madras. We have no detailed data regarding the progress made by the Malaria Section of the Department of Public Health of the United Provinces, although we are aware that the Director of Health Services of that State who retired only recently (Dr. Banerjea) has been a malariologist of long-standing prior to his promotion to more important administrative posts. In Orissa, too, we have no detailed information as regards the achievement of the Malaria Section of the Public Health Department. In Mysore, on the other hand, as we have already stated, there is no dearth of local technical talent for direction, research, supervision and control. Surely, that State does not stand in any need of any foreign personnel in the matter of advising the local authorities as to how to control malaria. It has pained us to learn that even Bombay State, at some stage solicited the services of a demonstration team. So far as Madras State is concerned, although we had occasion in the past to goad the Malaria Section to

more energetic activities, we are aware of the establishment of a fairly large organisation and its competency, and we are convinced that there is no need for importing any team of foreign experts for advising the local authorities on malaria control. We are informed that the demonstration team of the WHO is functioning in Ernad taluk in the Malabar district, in Madras State. Indeed, it would appear that it was contemplated that it should be located in Wynaad, despite the fact that effective malaria control measures with the application of DDT were already being carried out in that taluk. We ask the authorities if the work done in Wynaad taluk has not already produced good results, and whether there is any need for any further demonstration team of the WHO for showing the utility of similar work in an adjoining area with perhaps identical malaria conditions.

WHO and parallel teams :

Yet another matter that should merit consideration in this connection is the composition, both of the foreign teams and of the parallel teams, which, we understand, are required to be provided by the local Governments, as a condition precedent to the establishment of demonstration teams. A malariologist, an entomologist, a malaria engineer or inspector, and a public health nurse are said to form the basic component parts of a WHO demonstration team, and the local Governments are required to find their opposite numbers in the parallel team. The area of the demonstration team is confined to such a small extent that only about 40 to 50 thousand population is benefited. For this purpose, a team consisting of four members, each drawing a salary of about \$6,000

to 7,000 a year plus additional allowances of various sorts involves a top-heavy expenditure that no member nation of the South-East Asian region can ever afford, and psychologically it is bad demonstration. It is no good stating that their salaries are met by the WHO. The funds of the WHO are provided by the member nations, and it is gross extravagance to keep people in these countries on salaries several times more than the local governments can ever afford. Psychologically, the members of the parallel team, who are trained to do exactly similar type of work, would have nothing but discontent when they find that their salaries form only a very small fraction of the salaries of their opposite members in the WHO team.

What is needed :

Any demonstration team that is provided should be such that it is capable of extension on the same pattern to other areas under the participating government. Is it conceivable that in this country we can multiply malaria control teams on the pattern of the present WHO teams? Again, for malaria control with DDT, which, as we have pointed out in these pages, is to be looked upon as *premises sanitation*, is it necessary for work in a small area, to have so many personnel at the top as a malariologist, an entomologist, an inspector and a public health nurse? To much more profitable use could these funds be utilised, by provision of other sanitary amenities, such as drinking water supplies, drains, privies, public baths, etc., and, if indeed possible, rural houses.

Demonstration for a standard million :

On the whole, therefore, so far as this country is concerned, what should engage

the attention of the National as well as the State Governments and the WHO authorities is that any demonstration that is provided must be in a sufficiently large enough area, say, for instance, a whole malarious district with about a million or two population.

Personnel of the teams :

For such demonstration projects, there is no dearth of trained personnel in the country, in training whom the Malaria Institute of India has been playing a very notable and creditable part. If necessary, the psychological factor that 'No man is a hero to his own valet' may well be catered to by the exchange of personnel from one State to another under the aegis of the World Health Organisation. It has been the recorded experience in Ceylon as well as in this country, particularly in Bombay, Mysore and Madras, that once a large-scale malaria control project in the rural areas is successfully accomplished, its further extension to other areas can very well be left to the clamorous demand on the part of the public, which no popular Government can afford to resist.

Moral blessing of WHO and Supplies of Materials :

What this country needs is the moral support of such an expert international body like the World Health Organisation, and not a mere body of foreign experts without adequate knowledge of local conditions. More than that, a supply of materials and equipment will be most useful especially in these days of exchange difficulties. Efforts should be made for the waiver of all customs or excise duties or even sales taxes.

This is a point on which our popular ministries, both in the Centre and in the

States, should take co-ordinated action in the interest of the nation's health. Will they?

Areas needing Demonstration :

We, therefore, earnestly plead that the policy of the WHO in malaria control in India should undergo a radical change and the present small scale demonstration teams with top-heavy personnel must be replaced by demonstration projects for units of million population each, say, one in Bengal, one in Assam, one in Bihar, one in the Uttara Pradesh, one in Orissa, one in Madhya Pradesh, and one in the Punjab. The leaders of these demonstrative teams should be chosen from among the malariologists of this country itself under the general auspices of the WHO and our popular government at the Centre. For the first couple of years, supplies by way of materials and equipment should be furnished by the World Health Organisation to the extent to which their budgets would permit, the rest being provided by the State Governments, with a grant, if necessary, from the Government of India. The actual field programme and technique may be laid down by the WHO authorities on the advice of their Expert Committee on Malaria, which would naturally take into account the previous experience of local organisations in formulations, dosages, frequency of application, vector species and equipment. Appraisal of results and recording of data may be standardised by the World Health Organisation in co-operation with the Malaria Institute of the Government of India and the State organisations. No doubt, a guarantee should be required from the State governments through the National Government at the Centre that the projects will be continued

in the areas from the funds of the States themselves, after the withdrawal of the demonstration team, say, at the end of two or three years. From a purely pragmatic consideration, there is no need for this guarantee, because the results will be there to speak for themselves, and, as we have stated, no democratic government can flout the demands of large sections of people. *Per contra*, even if a guarantee was given, when a government is strong enough to override the interests and demands of the public at large, it can well afford to ignore any guarantees it may have given, no matter to whom, on the plea of lack of availability of funds. The best sanction for enforcing the guarantee is effective public opinion and this is inevitably secured only by undertaking malaria control in a big way over a sufficiently large area with a sufficiently large population, say, for instance, a million population in a district or two.

Help to more Advanced States :

In mentioning some of the States in which the demonstration teams should work we have excluded certain forward States like Mysore, Bombay and Madras. In these areas, quite possibly, the only assistance that may be required to be given by the WHO will be in the matter of supplies of insecticides, solvents and equipment on the basis of repayment of cost in order to quicken the pace of their progress. States in India are by no means homogeneous and while there are undoubted rivalries within each State often operating fissiparously to stem the tide of concerted progress, they are sufficient in the present instance to clamour for and

secure a rapid extension of malaria control throughout the State. In that task, however, supply of equipment in a large scale will add great momentum. Trespassing on trade rights is far too insignificant for serious consideration in a matter affecting the health of millions in the Tropics. Improving the health of the Tropics is as much a challenge as a solution to the rivalries of the advanced western countries. A more healthy tropical people add much to the wealth of the World in its essential requirements and afford a vast market for the products of organised industry of the better developed countries. Humanitarian, economical and political considerations all point to the need for revolutionary planning and assistance to tropical countries. Piecemeal undertakings with top-heavy costs furnish no solution but may conceivably add to the pessimism of underdeveloped countries.

Conclusion :

Our remarks are to be deemed in no spirit of disparagement but rather as constructive, and designed to secure within the shortest period of time, the most efficient and economical fulfilment of the common objective, as much of the WHO as of its member nations, namely, the control of malaria amongst the rural millions. Malaria, which was the bugbear of public health officials in the past, when they were struggling with anti-larval methods, now affords a most glorious opportunity for quick and large-scale results. May we plead in all humility to all authorities concerned to give our views their most earnest consideration, with a view to secure the greatest good to the greatest number at the cheapest cost?

THE INFLUENCE OF MUSIC ON HEALTH

by

Prof. P. Sambamurthi



The author is a profound scholar on music. He is the Professor of Music in the University of Madras. He is not only proficient in Indian and Eastern music but also on the western type. His suggestions deserve serious consideration at the hands of all the authorities concerned.

—Ed., P.H.

HEARING good music is of as much importance to the healthy life of a person as wholesome food, water and air. Food, water and air are of importance to the physical well-being. But man possesses such a thing as a soul, in addition to the physical body. Mere nourishment of the physical body will not make a man live a full life. The soul can be nourished only through fine arts. The aesthetic hunger in a person is legitimate and gets satisfied only when he listens to good music or reads fine poetry or sees splendid specimens of painting, sculpture or architecture. Music is an art that appeals through our aural sense.

It is the language of emotion and has a universal appeal.

The human voice was intended not only for speaking but also for singing. It is only in singing that the fullest use is made of the human voice. A cultivated voice is able to sing music embracing a compass of 2½ octaves. In the day to day life of a person, the compass of the speech rarely exceeds half an octave. Persons who do not sing, voluntarily refrain from using about a 4/5 of the vocal gifts bestowed upon him by Nature. During singing the other organs of the body also vibrate. The other organs are also thus kept active.

In any country, compared to the total population, the number of persons pursuing a career of music will be microscopically small. Opportunities for listening to good music for the rest of the population should be provided by the State or other Agencies. It is a well-known fact that for the proper functioning of the body, every part of it should be active and responsive. In the inner ear there are thousands of delicate nerve fibrils and they respond only when music is heard. People who have not been listening to music during their official career and who go to concert halls, after their retirement, find that even the best music leaves them untouched. They envy the lot of the other members in the audience who get to raptures over the music heard. This is due to the fact that long non-use deadened the delicate fibrils in the inner ear. Such people are almost in the same position as stone-deaf people.

It is the legitimate right of every person to have opportunities of deriving aural pleasure through music. When a person returns home after listening to a good concert or after listening to a properly conducted *bhajana* or a well performed *Harikatha*, he gets a feeling that his whole body has passed through a process of purification. He feels that he has been cleansed of all dirt, physical and mental. He feels a certain amount of ease and exhilarating freedom. This is due to the good music that he heard. The good music has had its salubrious effect on his nervous system. His soul was touched. The much desired mental equipoise and tranquillity came to him easily. The pleasure that he has derived can be compared to the pleasure that one

derives by a bath in the sacred *Ganga* at *Haridwar*.

Music is a potent factor in affecting our emotions. That a note and its octave or a note and its *panchama* when sounded together give a pleasant effect, is a truth which holds good in all countries. All systems of music are developed on the basis of these fundamental truths. The universal phenomenon of children sleeping to the sweet lullabies is a proof of the universal character of the effect of music.

Singing is a discipline. Singing to correct *sruti* and *Kala pramana*, at the same time keeping the individuality of the *raga* intact gives an excellent training. People who have studied music will not be victims of violent passions. Some training in music has always been considered as an important part of the accomplishment of a person. Philosophers like Plato and Confucius have laid emphasis on the necessity of some amount of musical training for statesmen. In the *Ramayana*, Valmiki emphasises that one of the qualifications possessed by Sri Rama for being crowned as the Emperor was his proficiency in music.

Musical Therapy

The subject of musical therapy has not received the same amount of attention here as in the West. We read of how in American hospitals, operations are performed while patients listen to music. In a country wherein music has been developed on the lines of the *raga* system, musical therapy ought to be a practicable science. There was a manuscript called "*Raga chikitsa*" in the Tanjore Saraswati Mahal library. This work dealt with *ragas* which were

useful for curing particular ailments. But there is now no trace of this manuscript. Sleeplessness can easily be cured by making the persons listen to pieces in *Nilambari raga* periodically under specified conditions. Likewise martial fervour can be instilled in persons by making them listen to pieces in *Bilahari* or *Kedaram* under specified conditions. The frequency of the beating of a heart, beating faster than normal, can be brought to the normal frequency by music. At first the music played should be in the same tempo as the beating and then gradually the tempo of the music should be slackened till the required tempo is reached. The heart is bound to react sympathetically to the music.

It is the birthright of every child to be taught singing and the birthright of every citizen to be provided opportunities for listening to good music. The Radio solves the problem to some extent. In some of the countries in the West, the lowpaid workers are given free tickets to attend concerts and operas. It is time that some such thing was done in our country also, by the State or the Municipalities. There is a real joy when people listen to live music from performers before them. In former times, the Zamindars and the landed aristocracy provided entertainment to their tenants with their *Yakshagana* troupes and *Kathakali* troupes. The *samasthana vidvans* also gave concerts in temples and other places to which one and all had access. With the abolition of the Zamindari, the problem has become more acute still.

The Military bands can perform martial music for the delectation of the people once a week at a public place as is done in Munich

and other places in Europe. The Institution of *Bhajana* should be revived in temples so that common people can go and derive spiritual solace either as participants or as listeners. *Bhajana* is an interesting form of democratic worship developed in India. Societies for promoting congregational singing should be established. In hospitals, particularly, patients should be given opportunities for listening to selective music and it would certainly aid their speedy recovery.

In South India, there is a tradition, that pregnant women who listen to the sweet strains of the *Veena* are assured of a safe delivery. Likewise there are other interesting traditions based on experience and in most cases it is possible to give a scientific explanation for them. The practice of concluding concerts, *bhajanas*, *Kalakshetrams* and *Purana Patanam*s with *Madhyamavati raga* is very old. *Madhyamavati* is a *raga* which takes the first three notes in the cycles of fifths and fourths (*samvada dvaya*) and naturally has a high degree of *rakti*. When sung at the end, a state of aesthetic equilibrium is restored in persons who have been subjected to emotional appeals of a varied character in the concert or religious exposition. *Sriraga* heard after a noonday meal aids digestion. *Sama raga* helps to restore mental peace in agitated minds. *Bhupala*, and *Malayamarutam*, when sung before dawn, serves as an agreeable request to people to get up from sleep.

Music can play a mighty part in the promotion of the health of the people. The problem should be approached with sympathy and facilities should be provided for people who are interested in research in this direction.

research and agree it has none. While fly control is an admittedly good health measure, it has no relationship to the spread or control of polio. Flies have been found contaminated with the virus, but there is no scientific evidence against them as carriers. People who welcome the inconvenience of DDT spraying for the comfort of protection against polio are misleading themselves or being misled by local health officers, who sometimes have advocated this measure out of their own uncertainties and sincere but false hopes.

Nor is there any scientific evidence to condemn the swimming pool as a source of infection. No one has ever been known to get the disease from water.

The Real Danger

The danger lies in the assembling of children where crowding permits the close personal contact through which the polio virus may be transmitted. It is for this reason that attendance of children at such public places is discouraged.

One mother in Los Angeles, where epidemics have raged for three of the past four years, said last summer :

"I never let my children go swimming. I never let them go to the movies, to the beaches, not even off the block to play with their friends. I told them not to do this, not to do that or they'd get polio. But they got it anyway. And both my boys went into it sick with worry and fear because I had made them afraid with all my warnings.

"I wish at least they'd had some fun to remember when they were lying so helplessly in their hospital beds."

Is there nothing you can do? Not at all.

The National Foundation for Infantile Paralysis suggests the following precautions :

Necessary Precautions

1. Keep children with their own friends. Keep them away from people they have not been with right along, especially in close daily living. Many people have a polio infection without showing signs of sickness. Without knowing it, they can pass the infection on to others.

2. Try not to get overtired by work, hard play or travel. If you already have polio in your body, getting very tired may bring on serious polio.

3. Avoid getting chilled. Don't bathe or swim too long in cold water. Take off wet clothes at once. Chilling can lessen your body's natural protection against polio.

4. Keep clean. Wash your hands carefully before eating and always after using the toilet. Hands may carry polio infection into the body through the mouth. Keep all food clean and covered.

5. Watch for early signs of sickness. Polio starts in different ways—with a headache, sore throat, upset stomach, sore muscles or fever. Persons coming down with polio may feel nervous, cross or dizzy. They may have trouble swallowing or breathing. Often there is a stiff neck and back.

6. Call your doctor at once. Until he comes, keep the patient quiet and in bed, away from others. Don't let the patient know you are worried. Your doctor will tell you what to do. Usually polio patients are cared for in hospitals, but some with light attacks can be cared for at home.

(Continued on page 462)

GOVERNMENT MILK COLONY AT AAREY

by

D. N. Khurody

Milk Commissioner, Bombay

THE Milk Colonisation Scheme of the Bombay Government aims at re-organising the milk production in Bombay City on a permanent basis with a view to increase production and to remove cattle from the congested stables in the city which are source of great danger to the health of the public. Under this scheme cattle will be looked after on up-to-date and scientific lines with proper facilities, so that cost of production of milk can be brought down to a reasonable level. The scheme consists of constructing 32 dairy farm units to accommodate 15,000 cattle in the first instance from Bombay City and to establish a Central Dairy for the pasteurisation of milk and deliver the same to the consumers in sealed bottles. Needless to assert that the scheme is a bold venture on the part of Government without parallel anywhere in India and in the fulfilment of the scheme, a permanent solution will be found to ensure adequate supply of wholesome milk at reasonable rates for the consumption of the people in the City. The entire scheme is expected to cost about Rs. 3½ crores.

Some important aspects of the scheme are briefly dealt with below :—

(1) *Dairy Farm Units*.—More than 3,000 acres of land have been acquired at the Aarey village, about 20 miles from Bombay City, for the colony at a cost of nearly 40 lakhs. 32 dairy farm units are proposed to be constructed for housing 15,000 cattle.

Out of these, 17 units are completed and the remaining are expected to be ready by the end of this year. Each unit can accommodate 500 cattle together with other structures for the storage of cattle-feeds, quarters for attendants, etc. The cost of each unit comes to Rs. 5 lakhs approximately. Each unit occupies about 8 acres of land and each will have 40 to 60 acres of agricultural, and exercise land attached to it. There will be approximately 3 animals per acre at the colony against nearly 1,000 per acre housed in most unhygienic conditions in the City stables. All units are inter-connected by well laid-out cement concrete roads facilitating transport work. Electricity will be shortly installed at the colony. Eleven units have already been occupied and more than 4,500 cattle are being housed there. The other completed units will be occupied shortly. These units are given to licensees on a nominal charge of 8 annas per adult animal per week towards interest on capital. Free veterinary aid is provided for each unit. Government have also arranged for the procurement of green fodder, cattle-feeds and other requirements. The milk produced at the colony at present is being taken over by Government and used for the milk distribution scheme in Bombay City.

(2) *Central Dairy*.—The Central Dairy building is designed to house a pasteurisation and bottling plant with a capacity of 40,000 lbs. per hour. The dairy building,

GOOD NEWS ABOUT POLIO

FALSE FEARS

by

Trudy Whitman

AS summertime approaches, the shadowy substance of polio becomes deceptively clear. Like an iceberg looming out of the calm blue ocean, it casts a sharp outline against a charted course, but the bulk of its peril is hidden and deep.

In recent years, as scientific research has shown up more of the basic truths about polio, it has highlighted the fallacy of surface protection. Control measures, like quarantine and isolation, have come in for sharp review as health authorities and increasing numbers of physicians recognize that many of them, designed to protect health and prevent the spread of disease, do little more than hold out false hopes and encourage false fears.

Quarantine? Isolation? DDT? Close the swimming pool, or keep it open? These are but a few of the familiar questions that come up each season as polio advances. There'll be some new answers this year, and less confusion.

For a major effort to clarify the facts and separate truth from tradition was initiated last summer by the National Foundation for Infantile Paralysis, during the heat of the worst epidemic this nation has ever known.

Sober Evaluation

While cases were spiralling upwards toward a record-breaking peak of 42,375 for the year, the Foundation called leading medical and health authorities to a con-

ference at Ann Arbor, Mich. There, while agitated citizens appealing to their local health boards were confused by conflicting advice and contradictory recommendations, the men who know most about the nature of this unpredictable disease sat down quietly and soberly to evaluate existing control measures and revise them to fit the now-known facts about this disease.

Their conclusions and recommendations have since been endorsed by the Executive Committee of State and Territorial Health Officers and approved by both the American Medical Association and the American Public Health Association. Compiled into a 12 page leaflet and distributed throughout the country by the National Foundation, these findings bring the first authoritative source of reference to all state and local health officers, hospital administrators and medical societies, providing all communities with the same set of answers to the same perplexing problems.

Quarantine Unwarranted!

Quarantine, they say—though it may come as a surprise to many—is unwarranted. Enforcement of it may create public fear or hysteria in an epidemic, waste the time and efforts of professional personnel and facilities and produce needless economic and social hardships for the patient and his family. Quarantine is a false hope because it doesn't control polio.

It doesn't control it any more than it controlled scarlet fever. Experience was hard-gained in that disease, too, and many years elapsed before the states revised sanitary codes governing procedures for communicable diseases to make the control measures compatible with the facts about that disease. The scarlet-fever quarantine, aimed at the child with the strep throat and the red rash, seized on the visible rash as the sign of infection, posted a placard on the child's house and kept the neighbours out and the family in until the child's skin returned to normal colour. Only about five years ago did health departments and state laws acknowledge what research had established ten years earlier: for every child quarantined with a red rash, many more without it were running around with infectious strep throats. Many a child was held back in school for as long as a year because he or his sister had scarlet fever, and many other long-lasting hardships were imposed before the law acknowledged that quarantine of red rashes did not control scarlet fever.

Paralysis—an exceptional case

Similar realizations are slowly creeping into public understanding about polio. The National Foundation, through the educational services of its local chapters, has done much to bring medical facts about this disease into the public domain. It is now generally known that polio *with* paralysis is the exceptional case, just as scarlet fever with red rash proved the exception rather than the rule. It is also known that many healthy people may harbour the polio virus without any harm to themselves, sometimes

developing none of the clinical symptoms of the disease, and sometimes such mild ones that they are dismissed as a summer cold or seasonal malaise. If a child's illness is diagnosed as polio, by that time the chances are that in addition to the family his associates, including the boy who delivers the groceries, the iceman, the milkman, his friends and schoolmates and the neighbours have all been exposed to the virus. Whether or not these contacts acquire the disease depends *not* on quarantine but on individual experiences with the virus and individual physical ability to resist infection.

Long Term Isolation Needless

Another source of confusion and false fear stems from the wide variation in laws concerning isolation of polio patients. In many states a 14 day period is generally accepted as proper, but by the law, as defined in each state's sanitary code, the mandatory isolation requirement ranges from duration of fever to as long as 21 days. The experts at Ann Arbor recommended that the isolation period be uniformly established as one week or the duration of fever, if longer. Long-term isolation protects no one and only adds expense for families or medical agencies paying the hospital bill. More important, particularly during epidemic times when hospital beds are at a premium, it creates a bottleneck in acute care facilities and limits effective treatment when it is most critically needed.

Flycontrol is Futile

The value of DDT spraying can no longer be considered debatable, for the medical experts accept the facts established by

allied structures and dairy machinery cost Government approximately Rs. 46 lakhs. Milk produced at the colony would be pasteurised, bottled and transported in large insulated vans to transshipment centres from where it will be transferred to smaller units and delivered to consumers ex-centres. For this purpose, milk bottles and steel crates have been ordered from England. It is expected that the construction of the dairy and installation of the plant will be completed this year.

Veterinary aid and artificial insemination centre

It has been fully realised that provision of veterinary aid is of utmost importance. Each unit is to be provided with a Veterinary Dispensary. Establishment of a well-equipped central veterinary hospital at the colony to look after the health of the cattle in general is under way. Besides, an artificial insemination centre is proposed to be established with 20 bulls.

Calf rearing scheme

Large number of calves are starved to death each year in the present milk supply

arrangements of Bombay. Government have in view a calf rearing scheme in which thousand calves are proposed to be reared every year. They will be resold to the licensees.

Agricultural scheme

Much importance is attached to the cultivation of fodder and green grass as it is realised that colony should be self contained in this respect. Large area of jungle land is being broken up with the aid of mechanical means and is brought under cultivation. A complete plan to produce maximum quantity of green grass and fodder for the requirements of the colony is under way.

Welfare of the inhabitants of the colony has engaged the attention of the Government and facilities are provided for medical help and for other amenities of life. When the land was acquired by Government for the colony, it was a barren tract devoid of human habitation. The place is now bristling with activity. It is hoped that the colony in time to come will serve as a model and also would prove to be a lasting contribution to the increase of cattle wealth in India.

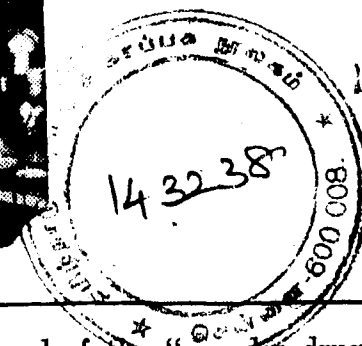
St. NYE

Britain's assured Health Minister Aneurin ("Nye") Bevan was certain that socialized medicine was getting more popular with British doctors. Said he to a group of Durham miners: "I will almost make you a promise that before very long the British Medical Association will put up a statue called St. Nye."

—TIME



SELMAN WAKSMAN AMERICAN SCIENTIST AND DISCOVERER OF STREPTOMYCIN



Most of us have heard of the "wonder drug", streptomycin, and few of us have, perhaps, had a shot of it. But, even in the medical world, the name of Dr. Selman Waksman will be a new one, just as Banting's name is still unknown to many diabetics, daily taking their insulin. By publishing this biographical sketch, it is our intention, not so much to stress the curative potentialities of the drug, as to make known the lives of scientists of Dr. Waksman's calibre. The author recognises the drawbacks of the new drug, and says that, in its 99 per cent pure state, its evil effects have been cut down. *Just cut down, and not eliminated*, we point out to our Indian G.P.s who assert its cent per cent harmlessness. Let us, however, hope that Dr. Waksman, still at work, will soon come out with a more wonderful drug, that has the powers of streptomycin, but is bereft of its sinister aftermaths on the patient.

—Ed., P.H.

DR. Selman Abraham Waksman, Eastern State of New Jersey, has won Chairman of the Department of Microbiology at Rutgers University in the fortune. A dozen chemical companies

are turning out the new "wonder drug" streptomycin discovered by him, and for every gram (1/28 of an ounce) sold, Rutgers University receives 2 cents. With this money the university and Dr. Waksman are planning to build an Institute of Microbiology. Dr. Waksman will enjoy the new equipment and the more spacious laboratories. For himself he asks little. He might have claimed all the proceeds of his discovery and become a millionaire. But he turned over his royalty rights to Rutgers University's Research and Endowment Foundation with the mild observation: "Rutgers will not let me starve."

Dr. Selman Waksman was born in 1888 in a little village near Kiev, in the Ukraine. His father wanted him to go to Zurich, Switzerland, to study industrial chemistry, but the boy had grown up in a fertile country and was fascinated each spring by the return of the generative cycle. Frequently he asked himself: "What is life? How does it begin? How does it function?"

He decided to go to the United States, where he entered Rutgers College of Agriculture in 1911. By 1915, when he graduated, he already had one toe on the threshold of a great discovery: he had found in the soil a microbe which he has since named *Streptomyces griseus* (from the Greek for "white twisted Fungus"). He had no reason to suspect that it was a life-saving drug. He was on the road to streptomycin, but it would be almost 30 years before he reached the end of the road.

After getting his Ph.D. at the University of California, Dr. Waksman returned to Rutgers University where he worked mostly on the soil problems of farmers. But he

began asking himself a question which is still far from answered: "What do microbes do to the soil, to each other, and ultimately to man?"

In 1924, a student came to Rutgers University to work for his degree, a young Frenchman named Rene Jules Dubos. Dr. Waksman turned him loose on the activities of microbes in reducing plant fibres to humus. Dubos took samples from patches of soil and noted which micro-organisms were present in them and how many of each kind. Then he made a brew of pneumonia bacteria and poured it on material from the patches. He repeated the experiment many times, watching for changes in the soil's microscopic population. Some of the organisms thrived on the strange diet, indicating that they might destroy pneumonia bacteria. Dubos made cultures of the hardy fighters and tested them against various disease-causing organisms.

By this method and refinements of it, he at last found, in a sample of cranberry-bog soil sent to him by Dr. Waksman, an organism from whose cultures he separated an active fraction that he named gramicidin. It killed or halted many disease bacteria, but it was dangerous for internal use. Dubos announced his discovery in 1939. A group of British researchers heard about it and recalled Dr. Alexander Fleming's *Penicillium notatum*. The substance it secreted is penicillin. The exciting news spread quickly through the world's biological laboratories.

Dr. Waksman gives full credit to Dubos for inspiring him to change the direction of his work. The new direction was obvious: penicillin is mainly active against a particular group of bacteria causing pneumonia, scarlet

fever, tonsillitis, gonorrhea and syphilis. It was necessary to find a substance which would be active against other bacteria—against the smaller rickettsias (which cause typhus)—or the even smaller viruses (which cause such diseases as poliomyelitis and influenza).

Dr. Waksman and his research associates tested thousands of cultures. Time and again they felt that success was in sight. Most of their antibiotics were poisonous. Only one of a series of six showed any promise of being useful in the human body. They tried the 1915 culture of *Streptomyces griseus* and it produced nothing. Then a farmer brought a sick chicken to the poultry pathologist at Rutgers University for a diagnosis. Nothing, it seemed, could have had less to do with the search for antibiotics. But in a culture taken from the chicken's gizzard a white spot appeared which looked like a colony of Dr. Waksman's favourite microbes. It was sent to his laboratory. The culture grew well, and in growing it produced a deadly germ-killer. Once again, hopes rose.

This time, hope was rewarded. "Within two days, both the chicken culture and a similar culture from heavily manured soil produced the same antibiotic. Both organisms proved to be *Streptomyces griseus*. The two 1943 strains were potent, while the 1915 strain had failed. (With nearly all micro-organisms, a species is made up of many strains which may differ as much as a German shepherd differs from a Pekingese in the dog species.)

Dr. Waksman called his seventh antibiotic streptomycin and was happy to see that it worked against many germs which resist penicillin. Though more toxic than peni-

cillin, it was not too toxic to use. It worked in the test tube against one of the most stubborn of all diseases, the tubercle bacillus. But so did many other substances which were of no use in treating tuberculosis in humans. Extensive tests followed. Finally Dr. Waksman could announce that streptomycin was what the doctors had been looking for: the first drug to work at all against tuberculosis, which still ranks seventh among the killing diseases; between ages 15 and 35 it ranks first.

Streptomycin does not cure all cases of tuberculosis, nor is it foolproof. In some patients it has caused such undesirable reactions as dizziness, ringing in the ears, and temporary deafness. As the drug has been purified (it is now about 99 per cent pure), these effects have been cut down. Also it was found in 1946 that two hydrogen atoms added chemically to the complex molecule of streptomycin produced an equally effective but less toxic variant. Called di-hydro-streptomycin, the variant is now produced in two to three times the volume of ordinary streptomycin.

Dr. Waksman's great success did not change him visibly. He continued to work, as he does today, on the third floor of an old, vine-covered building. His office is cluttered with books and scientific papers. The laboratory next door is also small and cramped; no one would guess that from its windows a great light has shone.

Dr. Waksman himself is more impressive than his setting. A small, somewhat stocky man, he has the great dignity that confident small men often have. When he speaks of the new institute that his discovery will pay for, his eyes light up. He sees the

been sound in the past, need not be blindly adopted in modern conditions of living. There are yet some others the adoption of which may well be injurious to health. We, in this modern world, in which we have plenty of reliable information based on scientific investigations, should sift our old customs and traditions and accept only those which we feel are sound. But, on the whole, most of our traditions are sound and will continue to be so for all time.

Applying to a cup or other drinking vessel to the lips when drinking, has always been frowned upon in our State, particularly in orthodox families. We now know a cup used by a sick person, suffering, for example, from tuberculosis or a sceptic throat, may well constitute a source of infection, if used without being properly cleaned. It may be that our ancestors discovered this consequence, in the hard school of experience, and laid the embargo. It is quite possible that this embargo was found necessary in a society in which drinking vessels were not available in large numbers, and each family, or other unit, possibly had only one or two. Or it may be, our remote ancestors had no very hot beverages, which could be drunk and enjoyed, only by putting the vessel to the lips. In modern conditions, there can be no objection to each person having his own drinking cup, or to the same cup being used by others, after a thorough rinse in hot water. Each soldier in the army usually has his own drinking mug, and in this case, there need be no absolute prohibition against the user of the cup drinking out of his own vessel, with his lips applied to it. Similarly, the observance of pollution on the death of a

relative, may have been very sound in ancient days when communities lived together and relatives were not separated by wide distances. The observance of pollution possibly helped in these days, to prevent the spread of any infection, which the dead man may have had, through those who had been in contact with him. But to-day, when we are in a position to distinguish between infectious and contagious diseases and others, it may not be necessary to observe the rule of pollution in all cases. In any event, it seems to me to be carrying the custom to ridiculous lengths, for a relation to put himself into quarantine, so to say, on receipt of intimation of a relative's death, miles away. While this is so, the practice of having a thorough bath after returning from the cremation or burial ground is probably very sound even to-day. The state of our cremation grounds, by no means, instil any aesthetic sense of appreciation, or respect for the dead, in us. Similarly, there can be no doubt that the practice of leaving one's shoes outside, before entering the house, is based on very sound sanitary principles.

One school of thought holds that all such traditions are based on requirements of health. This may not always be the case. There are certain traditions, the origin of which may possibly be the desire to preserve health, or more probably some other motive. The dreaded disease of small-pox was treated as a visitation of God in an age when its causation, prevention and treatment were unknown. The disease being a visitation of God, the people did not have the courage to attempt to treat it, but passively let it take its toll. Any attempt to treat the patient,

used to be considered an insult to the Deity, likely to be visited by more dire punishment. But this state of helplessness need not be indulged in to-day. We do our best, through vaccination, to prevent an attack; and we treat actual cases and try to ensure a cure. At the same time, it strikes me that the hanging up of Margosa leaves in front of a house with a case of small-pox, was probably intended to warn people to steer clear and avoid spread of infection by a more or less sound method of isolation.

There are certain other traditions which, in my opinion, err too much on the side of caution. It is a custom in some communities to wash once again cooking utensils which have been thoroughly cleaned and washed already by the servant of the house. While, of course, there is no objection to a further cleaning of the vessels, and in fact such cleaning may be wholesome, it is not essential, if the original cleaning and washing has been thorough enough. Similarly, the practice of smearing a thin paste of cow-dung and water over ground on which a person had eaten from a leaf or plate, is, besides being messy, unnecessary. Cleaning the place with plain water and mopping it up will be just as safe and effective. While some authorities claim that cow-dung has some antiseptic properties, it cannot be denied that it also harbours certain dangerous germs. The tradition of using cow-dung as a purificant is probably based more on reverence for the cow and its products than on hygienic principles. But it is my considered opinion that the use of water in which a little cow-dung has been mixed, for sprinkling over part of the street in front of the house is definitely good. Plain

water will not settle the dust and facilitate the muddy paste being swept away. The addition of a little cow-dung will assist, considerably, the process of removal of the fine dust, leaving a clean and plastered surface.

While we have many traditions and customs which are probably entirely and rightly based on sound principles of personal hygiene, we do not have the same volume of traditions which bear on civic cleanliness and civic hygiene. There are a few traditions the adoption of which will improve our civic hygiene, for example, the prohibition of spitting. On the other hand, there are no traditions which charge us not to throw household refuse out on the street. There is no tradition which makes us take care to see that drainage from our house does not pass into the back-yard of our neighbours; there is no tradition, or even superstition, which lays customary embargo on our bathing near a public well. We would be a cleaner people indeed if we evolved new traditions to preserve civic sanitation, as distinct from personal hygiene. It is because of the absence of such traditions, in the large part, that statutory prohibitions have had to be laid down to preserve and improve public health. But no law can be self-enforcing, and without the willing co-operation of the people, it will be largely a dead letter. The inauguration of new traditions and practices which would have even greater force than law is, therefore, essential in public interests.

I have thought over the matter carefully and in the light of what I have already stated, I cannot help coming to the conclusion that quite a good part of our traditions is

(Continued on page 469)

financial success of his work only as a means to do future service.

Recently he announced that he and his assistant, Hubert Lechevalier, had isolated another antibiotic from a soil microbe which Dr. Waksman called *Streptomyces fradiae*, in honor of his mother. The drug, neomycin, is as effective as streptomycin against tubercle bacilli in the test tube, and Dr. Waksman hopes that it can be combined with streptomycin in treating tuberculosis. There is need for such a combination because streptomycin, more than any other of the antibiotics, tends to develop resistant strains of germs. Some strains learn to live with it, even becoming dependent on it. The resistant strains can be highly dangerous; if they infect another victim, he cannot be cured by streptomycin or anything else yet known.

It is still too early to put neomycin among the widely useful antibiotics because of

possible harmful side effects such as kidney damage. But it has already been used with success as a last, desperate measure.

While Dr. Waksman waits to set up his institute, the search for better antibiotics goes on in the United States. The biggest class of germs against which no drug, antibiotic or otherwise, has been found effective, are the viruses. Rutgers University has recently added a virologist, Dr. Vincent Groupe, to Dr. Waksman's staff. Thus far, no progress has been reported; the job may take years. But Dr. Waksman is convinced that some day, somewhere, something will be found to ease the horror of poliomyelitis and the nuisance of the common cold. That something may well be an unknown micro-organism fighting its battle in the soil.

—Time through U.S.I.S.

Good News About Polio

(Continued from page 456)

7. Call your own chapter of the National Foundation for Infantile Paralysis if you need help (look for the number in the telephone book or call your health department for the address). Chapters are made up of people in your own town or county, banded together to give help to polio patients. Polio is a very expensive disease to treat, but no patient need go without care. You pay what you can afford, and your chapter pays the rest of the cost of care. This help includes payment of hospital bills, nurses and physical therapists, transportation to and from hospitals or clinics, treatment after the patient leaves the hospital, wheelchairs and braces if needed. It is not a loan.

The American people make these services possible by giving to the March of Dimes.

Hope for Parents

There's a chance that parents and children will suffer less from unnecessary restraint this summer as polio runs its unpredictable course. The welcome trend towards uniform application of control measures should relieve some of the community confusion. With more factual information at hand, parents may more confidently balance out their false fears with genuine hopes, as the counter-attack against polio goes deeper below the level of surface protection.

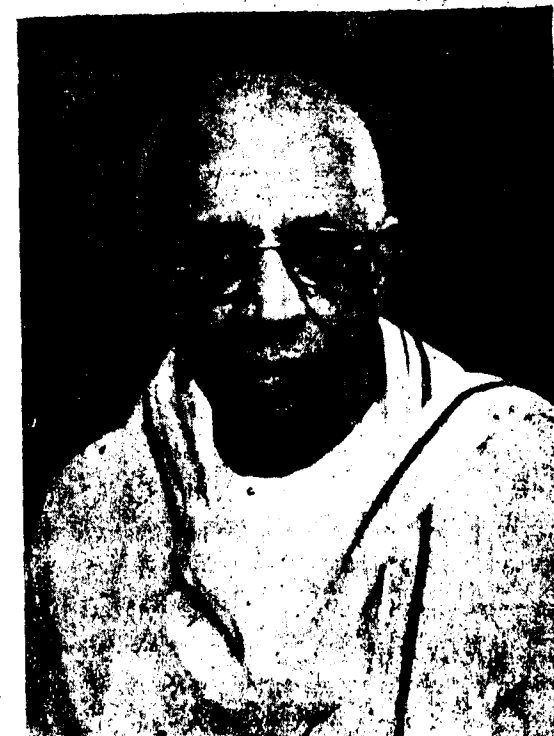
—Courtesy, Hygeia

RURAL HEALTH: TRADITION AND SANITATION

by

The Hon. Dr. T. S. S. Rajan

Minister for Public Health, Madras



TRADITION is the handing down of opinions or practices to posterity, unwritten, and Sanitation, in the larger sense of the word, is the science of preserving health. I have been asked this evening to talk to you on the inter-relation, if any, between tradition and sanitation.

I distinctly remember the occasion when, after attending school for the first time, I returned home in the evening. My mother insisted on my having a bath, soaking my clothes, and putting on clean clothes after drying myself, before doing anything else. I asked my mother why I should do so, when, as usual, she delivered the first and last word on the subject, by saying it was the custom. Now why should this custom have been introduced? In what way had I become more unclean by attending school than I would have, had I remained at home? My mother's explanation, later, was simple.

She pointed out that at home, she saw to it that everything and everyone, was spick and span and cleanly, whereas there was no guarantee that those I had come into contact with at school, and on the way to and from school, maintained themselves in a similar state. The custom was a practice which had been followed for generations by our fore-fathers. The opinion has always been prevalent in India, and in many cases still holds good to-day, that what was good enough for our fore-fathers ought to be good enough for us also, and that it is not for us to reason why. In the instance I have mentioned, there was a specific reason, sound enough to justify the practice, and obvious enough for any one to appreciate it.

There are traditions which are definitely sound and which we should do well to follow, in the interests of health. There are others which, although they might have

redevelopment by private enterprise at a more propitious time.

A city-wide employment survey disclosed that Norfolk is essentially a one-industry town. The U.S. Navy employs directly one-half of the total labour force. Since the salary range of these employees is comparatively low, redevelopment for industrial purposes, which might result in attracting new industry to the city, was considered essential. Two sub-standard areas were selected by reason of their location for industrial redevelopment, in addition to the strip of land between the belt highway and the railroad mentioned above.

The relocation problem was assessed by means of a thorough house-to-house survey of family composition and income. This survey, conducted by the consultants with the help of about 100 volunteers recruited by Norfolk's chapter of the Women's Council for Inter-racial Co-operation, yielded the information that a typical redevelopment project would displace 2,137 families plus 815 individuals. After redevelopment, the same site would accommodate a maximum of 1,000 families, leaving 1,137 families and all the single individuals to be accommodated elsewhere.

Norfolk is fortunate in that it is the first American city in which the International Basic Economy Corporation (IBEC) is erecting its semi-detached four-room houses, built with standard road-building equipment, which will rent at \$45 per month. These 200 units will arrive on the market in time to be of great help in relocating some of the families whose incomes would disqualify them from admission to low-rent housing. Those who will qualify will be

accommodated in the 3,000 low-rent units which Norfolk has received as its allocation for the first 2-year stretch of the 6-year housing programme inaugurated by the new Housing Act.

Throughout the preparation of this programme the Redevelopment and Housing Authority and the consultants enjoyed the full co-operation of every city department. The School Board and the Planning and Recreation Commissions, the Departments of Public Works, Public Safety, Public Health, and Real Estate were all most co-operative in furnishing information which was lacking. Of greatest help was the understanding guidance of the City Council.

To make the available local funds stretch as far as possible, all city departments have been urged to concentrate on those public works that will be acceptable as part of the local contribution in connection with the contemplated redevelopment projects. In addition, the impact of a programme of such magnitude will have on the life of the city will necessitate a thorough and careful re-examination of all previously conceived plans. Only thus will it proceed with a minimum of confusion and needless expenditure of public funds.

Norfolk's initial application for redevelopment funds contemplates a \$ 5,000,000 loan and a \$ 3,800,000 grant, on the theory that the re-use value of slum land will not exceed 25 percent of the total expenditures incurred in its acquisition and clearance. The city's contribution would amount, to \$1,900,000, to be spent in equipping the cleared sites with new streets, utilities, and community facilities required by the new uses specified in the redevelopment plan.

The new Act favours those cities which are taking the initiative in modernizing their codes and statutes governing building and land use.

Norfolk's redevelopment programme has concerned itself primarily with the city's slum areas. However, their redevelopment has been planned in terms of the best interests of the city as a whole. The programme goes far beyond mere elimination of slums and blight. Within its scope, it has brought major highways into the heart of the city and made maximum reasonable provision for industry, shopping, traffic, and parking. The residential areas will be bounded, but not traversed, by major traffic arteries, which will mean increased safety for the children residing in them and increased peace of mind for their parents. Some of the new neighbourhoods will be equipped with adequate educational and recreational facilities, while in others ample land will

be set aside to receive such facilities when funds for their erection become available.

The Norfolk redevelopment programme has formulated the ways of achieving the physical framework of an entirely new pattern of urban living. The "suitable living environment," the realization of which is part of the national policy under the new Act, is recognized to embrace more than the area bounded by the four walls of the individual home, more even than the larger area occupied by the housing project. Its realization is sought through the development of integrated residential neighbourhoods. The great significance of the new Housing Act is that it makes such neighbourhoods possible, and that it gives every community which is ready to make a determined effort to coordinate its redevelopment activities within an over-all plan the opportunity to create them.

Rural Health : Tradition and Sanitation

(Continued from page 465)

based on sound sanitary principles and should continue to be followed. There are, however, certain other traditions based on conditions prevalent in the ages past, which are either unnecessary or undesirable in present conditions. For a people to have traditions and to follow them is a good thing but there can be no virtue in blindly accepting old practices without questioning their origin and the necessity or desirability of following them. The modern man should adopt what he finds good after examination, and discard what he is sure is obsolete and unnecessary. I must however say that, unfortunately, the impact of a number of

civilisations and cultures on our life has made us break away from certain salutary traditional practices and assume certain others alien to our culture, our conditions of living and our climate. But with our own country restored to us, and being free to develop our own culture, there should be no difficulty in our adopting good traditions and, in fact, originating new traditions suited to our conditions and our ways of living. Tradition dies hard but there is no virtue in following practices shown up by modern science as valueless.

—(Courtesy A.I.R., Madras.)

PLAN FOR REDEVELOPMENT OF A CITY

by

George M. Raymond

This article appeared in *The American City*, a magazine devoted to municipal problems. The author, George M. Raymond, is with the firm of Harrison, Ballard and Allen, Housing and Community Planning Consultants, with headquarters in New York City. He was retained as consultant by the Norfolk, Virginia, Redevelopment and Housing Authority.

NORFOLK, on the eastern seaboard of the United States, is a city of some 200,000 people. Its population has increased some 40 per cent over that of 1940, mainly because of war industries, the great expansion of the naval establishment in the area, and the continued migration to the city of the marginal farm workers released from the land by the increased mechanization of agriculture. Norfolk suffers from a severe over-congestion in its central business district because of inadequate highways and off-street automobile parking space. Most of the major highways linking the city with its hinterland stop about a mile short of the business centre, where the traffic is picked up by a series of narrow streets and forced to wind its way through the heart of a thickly populated area.

A redevelopment programme was prepared by Harrison, Ballard and Allen, Housing and Community Planning Consultants, for the Norfolk Redevelopment and Housing Authority. Upon recommendation of the Housing Authority, the City Council

appropriated money for planning purposes months before the enactment of the Federal Housing Act of 1949. To date, the Authority has built and is operating 3,000 dwelling units, among which can be counted two of the most successful housing projects anywhere in the United States. The Virginia State Redevelopment Enabling Act, passed in 1946, also gave the Authority redevelopment functions.

The first task before the planners was the delimitation of the problem areas, and a comparative study of their quality of housing. Fortunately, the City Assessor had just completed a physical re-assessment study of the entire community, basing his new assessments on such factors as age and condition of buildings, land coverage, and the presence of mechanical equipment in dwelling units.

A map of average assessed valuations covering the entire city was prepared first. This map showed very clearly the comparative standards of dwellings in the various parts of the city. To insure greater

accuracy, this map was supplemented by a map of dwelling density, a map of fire calls, and one spotting cases of tuberculosis by address of patients. At the same time, 1940 census data as to condition and age of dwellings was mapped. All this information was checked by means of extensive field surveys.

Since the city lacked an official master plan of major highways, a great deal of time was spent working out a comprehensive highway plan in co-operation with the City Planning Commission. A belt highway was proposed to parallel the railroad, which circles the central business district, and short of which the greater number of the major incoming arteries now stop. The belt highway would pick them up at this point and serve as a circumferential distributor of traffic whose destination is outside the central business district itself. Thus a large congestion factor would be eliminated. At the same time, a valuable strip of land, highly desirable for industrial purposes, would be created between the road and the railroad.

As a result of this and many other new highways made possible by this programme, it was recommended that the whole federal-aid highway system within the corporate limits of the city be revised, and that new and more adequate routes be selected instead of the tortuous ones now so used.

The superimposing of the major highway system over the sprawling slum area had the effect of sub-dividing it into smaller, more manageable units. About 50 to 60 acres in size, these units are large enough to accommodate 1,000 to 1,200 families each. As part of the local contribution demanded by the Act, it is proposed to equip some of them

with their own school and recreation grounds. The others will continue to use existing facilities, though, in some cases, it will prove feasible at least to enlarge the sites now used by them. Since it was found that adequate shopping exists on the fringes of these neighbourhoods, no additional land in them was set aside for commercial purposes. Commercial redevelopment was, however, suggested in other areas.

Once defined, each redevelopment project area will be offered to private enterprise, to redevelop in whole or in part. Areas that are earmarked for residential use and that will not be redeveloped by private enterprise will be turned over to the Housing Authority for low-rent housing projects. This decision was based on a number of determining factors. Owing to the great shortage of suitable land elsewhere, these areas had to be devoted to the rehousing of the families now living in the area. Otherwise, the entire programme might have foundered on the rocks of the housing shortage, still further intensified by extensive demolition of sub-standard dwellings.

An exhaustive housing-market analysis disclosed the almost complete absence of a market for private housing at the currently prevailing rent level among the families to be displaced. It became obvious that, failing their redevelopment by private enterprise, the only use to which these areas could be put would be low-rent public housing.

In this connection, it must be pointed out that the initial programme will embrace only a relatively small portion of the central area. There are still sections close to the central business district, desirable for higher rental housing, which have been left for

ENVIRONMENTAL SANITATION SERVICES

IN carrying out its responsibility of supervising the food and drug industry—it is estimated that approximately 35 million pounds of food and beverages are consumed each day in New York City—the BUREAU OF FOOD AND DRUGS has the following objectives: to make certain that all milk, foods and beverages are wholesome and unadulterated, and that drugs and cosmetics are safe, properly labelled and sold in compliance with regulations; to prevent any disease transmission in food-handling and to exclude diseased foodhandlers from their trade; and to see that all establishments in which milk, food, drugs and cosmetics are manufactured, held or sold are clean and sanitary.

Every establishment in the city manufacturing, holding or selling foods, drugs or cosmetics, comes under the jurisdiction of the Bureau. In addition, inspectors are permanently assigned to various districts in the country milk shed to supervise the production and delivery of milk to New York City. Unapproved farms may not send milk to the city. This inspection is one of the functions of the *Milk Division*. This division also supervises all milk and cream pasteurizing and bottling plants in the city, as well as wholesale frozen dessert establishments. It is concerned not only with the wholesomeness of the milk, but also with the adequacy of supply.

The *Retail Division* is responsible for the supervision of retail food establishments, including restaurants. Because restaurants present the greatest potential hazard to the

consumer, the main efforts of the division have been devoted to them. Inspection of delicatessens and other retail processing establishments has also been intensified.

The *Wholesale Division* supervises wholesale food establishments and poultry slaughterhouses in the city. A staff of veterinarians examine any country-dressed carcasses coming into New York City from upstate slaughterhouses not having government inspection. All other meat must come from government-inspected slaughterhouses.

Inspection of retail pharmacies and wholesale drug and cosmetic establishments is handled by the *Drug Division*. This division is constantly on the alert for false and misleading claims on labels and circulars or in newspaper and radio advertisements. The division also enforces the regulations of the Sanitary Code prohibiting the sale of certain drugs and investigates all illnesses or deaths allegedly due to drug poisoning.

The *Shellfish Division* exercises control over all fish and shellfish sold in the city, maintains a constant patrol to prevent people from digging shellfish in polluted waters. Shippers of shellfish into the city must be registered with the Department of Health.

The *Division of Hospital and Institutional Inspection* devotes its attention to the inspection of all hospitals having maternity service.

The Bureau also investigates all reports of food poisoning and orders the appropriate measures to prevent any recurrence. A detailed file of all such investigations is maintained. Another of the Bureau's special activities is the help given to manufacturers

in the design of food and dishwashing equipment. Proper cleaning of equipment and the proper washing and sterilization of eating utensils are often made difficult by improper design and construction. The Bureau helps manufacturers to redesign their equipment so that it will meet sanitary specifications.

One other Bureau's activity of considerable interest is the education of foodhandlers to make them aware of their responsibilities in the protection of public health and to aid the owner and his employees in complying with the regulations of the Sanitary Code. The Bureau offers a one and one-half hour lecture for employees and a 32-hour course on food sanitation for supervisors and operators.

The objectives of the BUREAU OF SANITARY ENGINEERING are to establish and maintain a clean, healthful, sanitary environment through the correction of health hazards and the abatement of nuisances. Much of the work of the Bureau consists in the investigation of complaints made by citizens. The present trend is toward the investigation of problems and the planning of programmes based on need.

An appreciable part of the Bureau's work is performed in co-operation with other departments of the city. The safeguarding of the public water supply, proper drainage and the disposal of sewage, the collection and disposal of garbage and refuse are some examples of activities under the control of other departments but of direct concern to the Bureau.

The *Division of Water Control* protects the city's water supply through close supervision over water supply reservoirs and systems,

over water boats, watering points for interstate conveyances, private well water supplies and harbour waters. In addition, this division makes bacteriological and chemical examinations of samples of public and private water supplies, bathing beaches, swimming pools and sewage-polluted waters.

Considerable time is spent in efforts to locate and correct plumbing hazards to the city water supply, such as cross-connections between the city water and an auxiliary private water supply. Whenever a report of gastrointestinal outbreak indicates that water may have been the cause, an investigation is instituted.

At present, the division is preparing sewerage sanitation maps for each of the five boroughs, showing the sewers, the approved street areas, areas where drainage plans have been approved, areas of privately owned sewers, intercepting sewers, sewage treatment plants, outfalls, approved bathing beach areas and approved shellfish areas. This data is basic to the development of more effective measures for eliminating insanitary conditions due to improper sewage disposal.

A detailed study of pollution in the harbour waters of the city and surveys to determine the adequacy of existing sewerage facilities in specific areas are also being conducted.

The *Division of Inspection* investigates complaints from citizens about alleged violations of the Sanitary Code in residences, loft and office buildings, schools and theatres. These complaints include inadequate heat, insanitary housing conditions, rodent, insect and other vermin infestations, defective plumbing, noise and refuse on lots. Another important phase of this division's work is the investigation of applications for permits and

licences for barber shops, beauty parlors, x-ray laboratories, stables, pet shops, laundries and offensive trades. The division is responsible for the proper supervision of all gas fumigations.

The Bureau of Sanitary Engineering also engages in several specialized activities. One unit is responsible for the control of noxious gases and other offensive odors. A ragweed control programme started in 1946 utilizes 2, 4-D to destroy ragweed. The ragweed growth in the city has already been appreciably reduced.

Similarly, a mosquito control programme seeks potential mosquito breeding sites. Appropriate control measures are employed such as drainage, ditching and larviciding.

In the field of rodent control and housing, special units of the Bureau have made investigations that have brought to light facts basic to the development of programmes affecting rodent control and sanitary housing. Last year, an intensive rodent control programme was initiated throughout the city, in co-operation with other agencies and bureaus. Many inspections were made, a house-to-house study was undertaken in a limited area, and courses in building maintenance were given for superintendents.

Another unit of the Bureau investigates the sanitary conditions of schools, day care agencies and shelters.

—Quarterly Bulletin of P.H.O. in New York City.

PARALYSIS DISCOVERY

Milk from human mothers contains an ingredient that counteracts the paralytic effects of infantile paralysis (poliomyelitis) in mice, according to a United States physician. The same ingredient is found, but to a far lesser degree, in the milk of some cows.

Dr. Albert B. Sabin, Director of the Children's Hospital Research Foundation of Cincinnati, in the State of Ohio, recently reported the discovery to the Society of American Bacteriologists. He says it is not yet possible to predict the value of this milk factor in preventing infantile paralysis in humans or relieving its effects.

The discovery, Dr. Sabin told the bacteriologists, followed study of a

severe poliomyelitis epidemic among a group of Eskimos in Canada. Researchers found that although 20 per cent of all other age groups in the Eskimo colony suffered various degrees of paralysis, breast-fed children under three years of age seemed to be immune to the paralytic after-effects of a polio attack.

Laboratory tests subsequently uncovered the anti-paralytic factor in the mothers' milk. Mice exposed to crippling doses of human poliomyelitis did not become paralyzed if they were treated with this milk factor. Further tests of the milk factor are being made on monkeys.

—Indian Medical Guide.

FRUIT JUICES

FRUIT juices are very popular as drinks and appetisers. Citrus-fruit juices, tomato juice, pineapple juice, etc., when taken with little or no sugar, are for most persons healthful and satisfying. When tired out and in need of a "lift", it is advisable to drink a cool, refreshing glass of fruit beverage than to benumb the feeling by a narcotic poison such as tobacco, or to whip the body into unnatural activity by a stimulant such as that found in drinks containing caffeine—tea and coffee, for instance. Fruit juices have particular virtue chiefly because of their vitamin content, caloric value, alkalinising mineral salts, agreeable flavour, definite appetite stimulation, and absence of any harmful physiological action.

Fruits are one of our most valuable and abundant sources of vitamins, particularly vitamins 'B' and 'C'. It is a well known fact that before the eighteenth century scurvy was a serious scourge among seamen on long voyages. As early as 1795 lime juice was added to the daily ration of the sailors in the British Navy and this was particularly beneficial in case of scurvy. From this time onward the incidence of scurvy became less and less. In recent years the reason for the fact that citrus-fruit juice is a specific in the treatment of scurvy has been shown to be its richness in vitamin 'C'.

Fruit drinks have food value. They are an excellent source of readily assimilable simple sugar. With no other sugar added, orange juice contains about 10 per cent of carbohydrates, and yields approximately 100 calories a glass. Fruit juices are often

given when other foods cannot be tolerated and when there is immediate need for energy-yielding food which will in no way burden the digestive organs.

In feeding the sick and debilitated, and for infants, fruit juices are invaluable. Fruit drinks, when not too sweet, generally act as appetisers. Their agreeable odour, attractive colour and flavour give pleasing sensations that effectively arouse the appetite. Vitamin 'B' is closely linked with good digestion and appetite, and the presence of this vitamin in fruit juices serves therefore materially to enhance their dietetic value. As hot-weather beverages, fruit drinks of pleasing variety and flavour are very cooling and satisfying and may be taken quite freely if made with very little sugar.

The acids of the fruit beverages do not increase the acidity of the body. They do not produce acidosis. In fact, their use has just the opposite effect, namely, to reduce the acidity. The salts of citric acid and other organic acids are oxidized, or burned, in the body to become alkaline, or base-forming, ash. The use of fruits therefore, is the most satisfactory way of preventing the urine from being too acid.

Tomato juice has become very popular as an appetiser and beverage. It is a splendid food drink. Tomatoes supply the vitamins 'A' and 'B' in greater abundance than oranges do. Their value in vitamin 'C' is about equal. Tomato juice is a very valuable source of vitamin 'C' for babies, which is quite essential to protect the bottle-fed baby against scurvy.

Efficiency News.

£1,500,000 HOUSING SCHEME IN LONDON PART OF 1951 FESTIVAL PLAN

A PERMANENT contribution towards the post-war improvement of London will be made by the architectural section of the Festival of Britain. This will take the form of a full scale housing scheme sponsored by the London County Council. During the Festival next year it will be displayed as an example of British methods and achievements in modern town planning, architecture and building research.

Many of the houses, flats and shops will actually be occupied before the Festival begins next May. Three hundred families will have moved into their new homes by then. Schools will also be in use as well as the shopping centre while one of the three churches will have held its first services. When fully completed the site will carry 30 blocks of flats, maisonettes and terraced houses with room for 1,500 people, as well as a specially planned home for old people.

They are being built on land in East London where there was great devastation by air attacks during the war. The scheme, therefore, forms part of a larger plan for the reconstruction of London, and the greater

part of its cost would have been incurred in any case. It will amount to just over £1,500,000 (Rs. 2 crores) of which the London County Council are contributing the major proportion. They are also meeting the cost of acquiring and clearing the site, estimated at £500,000 (Rs. 66.66 lakhs).

It will constitute a permanent new neighbourhood complete in itself yet integrated with its surroundings and will be laid out in a pleasant straightforward style with houses grouped around small open spaces. It forms one of the first comprehensive pieces of re-planning under the new reconstruction scheme for London and, as such, is considered by architects and experts to be of more than usual importance.

During the coming months this area of London will be a busy scene of activity with 2,500 workmen engaged in creating this new colony. Their work will enable visitors from overseas to see for the first time a practical demonstration of how the future London is steadily rising from wartime destruction.

—(British Information Service.)

BCG VACCINE

LANSING (Michigan), June 2.

A University of Minnesota scientist charged that the use of BCG tuberculosis vaccine destroys the effectiveness of the tuberculosis test for active TB.

Dr. Arthur J. Myers, the scientist, told the 42nd annual Tuberculosis Association Conference that the body becomes sensitive to tuberculin when BCG is used to immunise against TB.

"BCG is a living TB germ" he said, "While BCG tuberculosis is developing, tissues become sensitive so that the tuberculin test is no longer able to detect the presence of TB infection if and when it is caused by active TB germs."—UPA.

DEVELOPMENT OF INSECTICIDES OF VEGETABLE ORIGIN

THE leading article in the June, 1950, issue of the *Journal of Scientific and Industrial Research* draws attention to the scope that exists for investigation in the field of plant insecticides. A considerable amount of research is already being carried out in various laboratories in India, including the Chemical Laboratories of the Council of Scientific and Industrial Research.

While drawing attention to the use of well-established insecticides, obtained from plants, such as pyrethrum, rotenone bearing plants (Derris, Lonchocarpus and anabasine), the article points out that much research work could be carried out with a view to evolving the best possible modes of application of insecticides. The manner of application and the phenomena of synergism in respect of various insecticides need a comprehensive study. Further, the particle size of the active principles in sprays and their wetting and spreading properties are of importance in extending the usefulness of insecticides, and there is considerable room for research in that direction. Concentrated effort, it is felt, should be made for the cultivation of pyrethrum and other well-established insecticidal plants; also for the standardization of their extracts and preparations on the one hand, and industrial utilization of tobacco waste, for the manufacture of standardized extracts as well as nicotine and nicotine sulphate, on the other.

It is emphasized that in the present context, with paucity of research personnel and difficulties in the way of collaboration between chemists and entomologists, it would be advisable to recognise the limitations and handicaps and throw the whole weight of organised effort into cultivation and development of well-established plant insecticides.

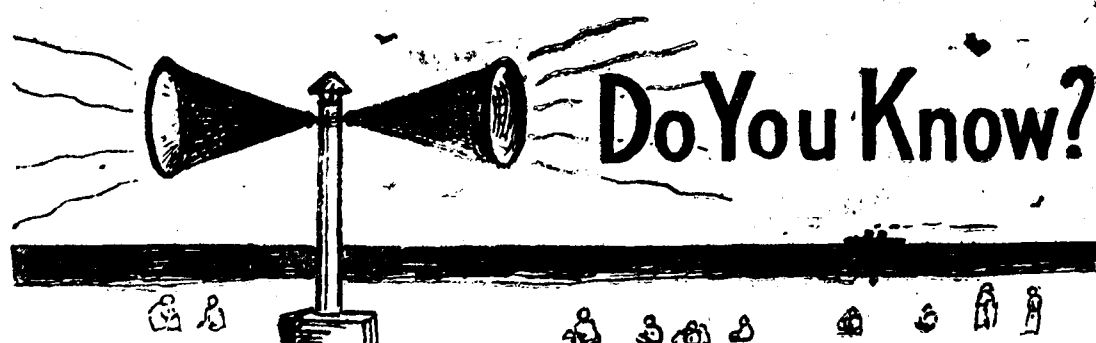
Fungi That Grow on Jute

Under certain conditions of moisture and temperature micro-organisms affect jute, making the storage and protection of raw jute and jute materials a problem. Investigation designed to isolate and identify these fungi has been undertaken in the Laboratories of the Indian Jute Mills' Association Research Institute in Calcutta, and 27 species of fungi, mostly *Aspergilli* and *Penicillia*, were found to grow on samples of raw jute, yarn and hessian.

Another research paper relates to a micro-biological assay method developed for the estimation of the amino acid cystine, present in proteins and foodstuffs.

Among other articles of interest in the issue, one entitled "Rubber in Industry" is a review of some applications of modern research on rubber. The article is illustrated with a number of photographs.

—(Journal of Scientific and Industrial Research)



WHAT SLEEP DOES?

Many of us try to get along with a lot less sleep than the body needs

While it is true that some people require less rest than others, those who defy nature by ignoring the body's demands for rest when it becomes tired are just asking for trouble.

Insufficient rest and sleep take their immediate toll by cutting down a person's speed, accuracy, and alertness at work, study, or play. It interferes with full enjoyment of the day's activities because the sufferer is "dragged out" and weary.

SLEEP REPAIRS WORN PARTS

From a long-range point of view, insufficient sleep and rest can have injurious effects of a permanent nature on the health.

While adults need enough rest and sleep to repair parts of the body worn by work and play, children need *extra* amounts because their bodies must grow as well as repair by way of plenty of sleep and rest.

For people of all ages, sufficient sleep and rest are necessary to maintain the body's resistance to illness and disease. When energy is drained by fatigue, and not replaced as soon as possible by adequate rest, the body becomes vulnerable to sickness that it would ordinarily resist.

There are some people who have difficulty in sleeping and resort to sleeping tablets. All these tablets taken in large quantities

are dangerous and they should never be taken unless under the advice and prescription of the doctor.

CAN'T SLEEP?

Those who suffer from sleeplessness for unexplained reasons should see their doctors. Prolonged inability to sleep can be the sign of a serious illness and the doctor might detect unsuspected disease or infection. Doctors believe that good sleeping habits if established early in life, have a tendency to persist through life. Habits favourable to restful sleep include regularity of hours, proper ventilation in the sleeping room, and the avoidance of heavy eating and undue excitement in the hours immediately before bedtime.

FOR GOOD LOOKS

Like many other healthful habits, getting enough sleep and rest is one that's important to our good looks. Fashion models and movie actresses, whose livelihoods depend on looking and feeling well, are very much aware of the importance of rest and sleep and make certain that they get their full quota.

Many cases of insomnia, however, are due to easily corrected things like worry, overwork, lack of physical exercise and fresh air, or eating too heavily immediately before bedtime.

—NTA—REPORTER

RAIN-MAKERS VERSUS RAIN-BREAKERS

A fantastic 'battle' with rain clouds has begun in New York. The trouble started when rain-maker, Dr. Wallace Howell, a Harvard Professor, began to achieve distinct success in inducing rainfall by feeding clouds with dry ice dropped from aircraft. Prof. Howell gets £35 a day to replenish city reservoirs. Proprietors of a big New Jersey amusement park, who find rain bad for business, complain that since the end of April, there have been only two really dry days. "We offered to double Howell's pay if he would stop," they said. "But he refused."

So anti-rain makers, Dr. J. E. Sykes and Mr. Edward Twardus, were engaged at £175 a day to disperse rain clouds from New Jersey. They do this, it is claimed, with "radio and electro-magnetic waves" which "draw the clouds away". Two "wave" stations, one in New York State, the other in New Jersey, are employed. The rain-breakers claim that they would be able to keep rain away within a 100-mile radius. They seem to have used their apparatus for ten years at a race course near New York.

CINEMA SHOWS ON TRAINS

Italy expects to be the first country in the world to offer railway travellers regular cinema performances.

It is hoped by the end of this year to equip five mainline expresses with cinema cars, in which two two-hour shows will be a regular feature.

Film enthusiasts will be able to watch one two-hour show sitting with their backs to the engine and then another sitting the other way round. For each film car will be equipped with two projectors, placed in the middle.

They will concurrently show two different programmes, using 16 mm. film.

The sound-proof, air-conditioned cars will be 20 centimetres (8 inches) higher than normal coaches, to allow the 70 seats to be stepped in tiers. Six of these cars, with one in reserve are expected to be put into service this year on the trunk lines linking Milan, Rome, Genoa, Turin, Bologna and Venice.

Tickets for each show will cost Lire 600 (seven shillings). These cars will be one of the features offered by a 27,000 kilometres (17,000 miles) national railway network struggling back to pre-war efficiency. (P.T.I.)

HOUSE-KEEPING AND HEALTH

The family is engaged in a variety of activities associated with home-making, house-keeping, and childcare with which we are so familiar that we often fail to realize their significance. If there is to be any effective health care and preventive medicine, as distinguished from treatment of the sick, it cannot be provided by doctors, nurses, or other professionals—however much their knowledge and skills may be needed by the family. Health care and preventive medicine are carried out in the daily activities of house-keeping and home-making. Through marketing, cooking and the serving of meals, basic nutritional needs must be met, and through house-cleaning, laundering, dish-washing, and similar sanitation, the necessary defense against infections and contamination must be maintained. Through provision of rest, care of minor ills, and all the cherishing functions with the home, individual members are protected and restored, so that they can live in health and carry on their daily activities.

—LAWRENCE K. FRANK, "The Survey"



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

Death a Murder!

Treat every death as a possible and, under our present system, a probable murder, by making it the subject of a reasonably conducted inquest; and execute the doctor, if necessary, as a doctor, by striking him off the register.

—G. B. Shaw.

Tending The Rich

"Say, doctor," said the brawny scrub-woman "yer gettin' a perty good thing out of tendin' that rich smith boy, ain't yer?"

"Well" said the doctor amused, "I get a pretty good fee, yes. Why?"

Hygienic Cup

And each imbibes his rations from a hygienic cup—

The bunny and the baby and the prophylactic pup.

—Arthur Guiterman.

Potent

"Did the patent medicine you purchased cure your aunt?"

"Mercy, no. On reading the circular that was wrapped around the bottle she got two more diseases."

It Fitted Him

Hypochondriacs should never go to medical lectures. Invariably they become afflicted with symptoms of any disease they hear about. One such man, having returned from a lecture on diseases of the kidney, immediately called upon his doctor.

The doctor attempted to explain that in that particular disease there were no pains or discomfort of any kind.

"I knew it," gasped the hypochondriac. "My symptoms exactly."

How to Test Man?

Taste is the mark of an educated man, imagination the sign of a productive man and emotional balance the token of a mature man.

—Philip Youtz.

Life

Life is no brief candle to me. It is a sort of splendid torch which I have got hold of for the moment, and I want to make it burn as brightly as possible before handing it on to future generations.

—Bernard Shaw

Value of a Friend

So long as we love we serve; so long as we are loved by others, I would almost say that we are indispensable: and no man is useless while he has a friend.

—R. L. Stevenson.

Heavens

The vicar had been overworking, and, when at last he called in a doctor who had been his friend for many years, he asked for the blunt truth.

The examination revealed that the vicar's lungs were gravely affected. The doctor said a rest was essential.

The vicar protested that he could not possibly afford to leave his work.

"Well, you have the choice of Switzerland or Heaven," replied the doctor.

The vicar paced the room for some time. Then he said resignedly. "All right, you win—Switzerland it is!"

From Ear to Ear

A small Negro boy went to a physician to be treated for a painful sensation in one of his ears. Upon examination the ear was found to be full of water.

"How did it happen?" he was asked after the ear had been drained. "Been going in swimming?"

"Nah, suh," said the little fellow, "been eating watermelon!"

Had To

An 80-year-old man came to his doctor for a blood test and medical examination before getting married. The doctor checked him and then asked, "You mean at your age you really want to get married?"

The old man replied, "Well, I don't exactly want to, but I've got to."

And Let Live

"When sick, I go at once to the doctor. Doctors have to live. After getting the prescription, I go directly to a chemist. Chemists must live. When I get home, I throw the medicine on the fire."

"Why ever do you do that?"

"Well, I too must live."

Courtesy

After a shipwreck, a doctor, a parson and a lawyer found themselves in a rowing-boat without oars. They came in sight of an island, but their only hope of landing was for someone to go over the side through the shark-infested sea and tow the boat to land.

Lots were drawn, and it fell to the lawyer. When he slipped over the side of the sharks divided, and made an avenue for him.

"An answer to prayer," said the parson.

"No, no, just professional courtesy," commented the doctor.

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.

THE CLEANING AND STERILIZATION OF GLASSES IN LICENSED PREMISES

(J. G. Davis & J. C. L. Resuggan. Proc. Soc. Appl. Bact., 1946, No. 1, 20: *Sum. Current Lit.*, Sept. 1947).

"A survey of methods used for cleaning glasses in licensed premises in London showed that transmission of infection occurs mainly through the water in which glasses are rinsed before re-use without drying; in many cases this water is changed infrequently. Tests showed that N-N-di-n-octyl N-N-dimethyl-ammonium bromide, a compound of the quaternary ammonium type, could be used satisfactorily as a bactericide in the rinsing water without imparting taste to drinks later served in the glasses. Results of bacteriological examination of drinking water, to which had been added the quaternary

ammonium halide solution alone or mixed with detergents, are given in tables. A rinsing water containing, per gal., 2 gr. of a mixture consisting of 60 per cent. sodium carbonate, 20 per cent hydrated sodium metasilicate and 20 per cent of a 75 per cent solution of the quaternary ammonium halide proved very satisfactory; brilliantly clear glasses were produced, and, after rinsing, 60 glasses, coliform organisms were absent in 0.1 ml. and the total bacterial count was 562 compared with 39,000 in rinsing water containing no bactericide. The quaternary ammonium compound was found to be about equally toxic to streptococci, staphylococci and coliform bacteria and was more toxic at pH 10.0 than at pH 7.2."

—W.H.B.

—(P. H. Engg. Absta.—Sept. 49.)

THE IMPORTANCE OF CLEAN FOOD

(F. A. Belam. *Med. Officer*, 1948, Oct. 16, v. 80, No. 16, 176—7; *Bul. Hyg.*, Jan. 1949: Charles Wilcocks.)

"In this short note Dr. Belam outlines the steps which he and his council have taken in Guildford to awaken the interest of food handlers in the question of food cleanliness and safety. A survey was first made of all food premises, during which many were found to be deficient in sanitary provision. Conferences were held between representatives of the traders, the council and officials of the public health department. The upshot was the formation of the Guildford Hygiene Food Traders Guild, and the formulation of codes of practice for each type of food trade. Nothing was demanded unless it was practicable. Each trader who joins the Guild and complies with the requirements is given a certificate renewable each year, which may be displayed; and employees also have their codes and may wear buttons of membership.

"This system is regarded as much better than one which would rest on legal proceedings to enforce compliance; it stimulates good spirit and keenness. (This new approach in Guildford will be watched with interest.)"

—W.H.B.

—(P. H. Engg. Absta.—Sept. 49.)

PLUMBING IS NOT GUILTY IN POLIO

(Cornelius W. Kruse & Griffith E. Quinby. Repr. From *Plumbing & Heating Business*, 5941 Grand Central Terminal, N.Y. 17, N.Y., 2—4—No date).

The authors state that no polio epidemic has been traceable to plumbing. There is no

proof that polio is a water-borne disease, as a polio epidemic does not behave like a typical waterborne outbreak such as typhoid or dysentery. Suspicion falls on many possible causes, among which are flies, contaminated food, infectious secretions of the throat, and infected feces, but scientists have not yet learned how polio is transmitted.

—Vincent T. MANAS.

—(P. H. Engg. Absta.—Sept.—49.)

TELLING THE WATER SUPPLY STORY TO THE CONSUMERS

(H. B. Fisher. *Water Works Engin.*, April 1949).

"Public confidence has to be earned and maintained." This is a task for all employees of a water supply system, from top to bottom. Through activity in all sorts of community improvement organisations, a department personnel can fraternize with community leaders, and thus make the water department organization a part of the life and growth of the community. The East Bay Municipal Utility District uses a programme of pictures, posters, sound films, photographic displays, and a model filter plant to inform the public.

On one occasion a part of the laboratory was used as an exhibit, water samples being analyzed and the procedure explained to the public. Special attention is given to news releases on any occasion calling for publicity. Tours of construction projects are given to members of the press.

As a part of an educational programme, the District has prepared well-designed, illustrated, and edited booklets for libraries,

schools and citizens desiring them. Grounds around filter plants are beautifully landscaped. This all pays off in good will and consumer satisfaction.

—H. B. FOOTE.

—(P. H. Engg. Absts.—Sept. 49.)

A BUG'S EYE-VIEW OF FOOD PLANT ARCHITECTURE

(Edward M. Searls. *Modern Sanitation*, June, 1949.)

In this article the author, an entomologist, gives general precepts about building food plants from a sanitarian's point of view. These include location away from busy thoroughfares, rivers, lakes, and urban centres (with their heavy quota of dust, soot, smoke, odors, vibration, insects and rodents), construction embodying the principles of rodent and insect proofing, and the use of filtered air, preferably combined with air conditioning, in the place of conventional ventilation. All doors should be double-acting, fast closing, metal-sheeted, and properly bumpered.

The author distinguishes between two types of areas, the critical and non-critical, the former constituting those rooms where food is actually exposed to the atmosphere. Such areas should not be directly accessible from the outside, should never be used for primary raw material storage, and should always be completely separate from bottle or can-washing rooms, or the like. The problem, which conveyors present with regard to insect and rodent proofing is discussed, but no solution offered. Properly designed store rooms are stressed.

Elimination of double ceilings, wherever possible, the use of smooth, finished walls to prevent absorption of residual-type insect sprays and to eliminate insect nesting, the avoidance of open insulations and control mechanisms which are not either flush fitting or open for cleaning—all excellent insect-hiding places are other factors to which the thoughtful designer, according to the author, should pay increasing attention.

—FELIX BRONNER.

—(P. H. Engg. Absts.—Oct.—Nov. 49.)

MILK AND OTHER FOODS

Clean Handling and Service of Food.
Warren J. Scott. *Conn. Health Bul.*, (April 1941).

The Connecticut Sanitary Code (Regulation 123) sets forth certain basic sanitary requirements for public eating and drinking places. The code requirements are relatively simple and deal with:

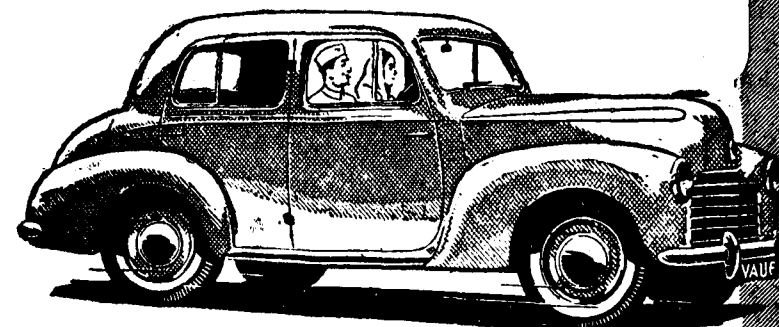
- (1) Equipment of the eating or drinking place.
- (2) Proper protection of food.
- (3) Maintenance of clean conditions.
- (4) Methods of washing and disinfecting eating and drinking utensils.
- (5) Health of employees.

The question is raised as to whether the results obtained by compulsory examination of food handlers justify the expense to the public. The author stresses the importance of the education of food handlers along the line of good sanitation.

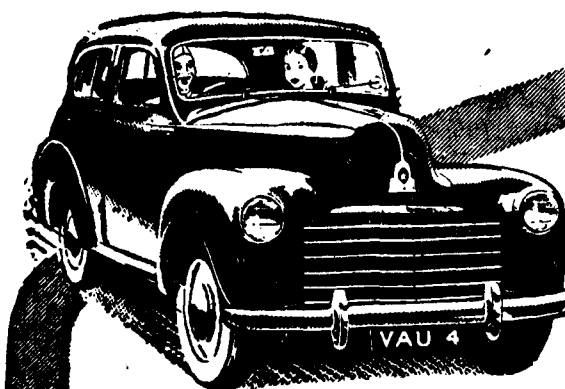
L. D. MATTER.

—(From P. H. Engg. Absts.)

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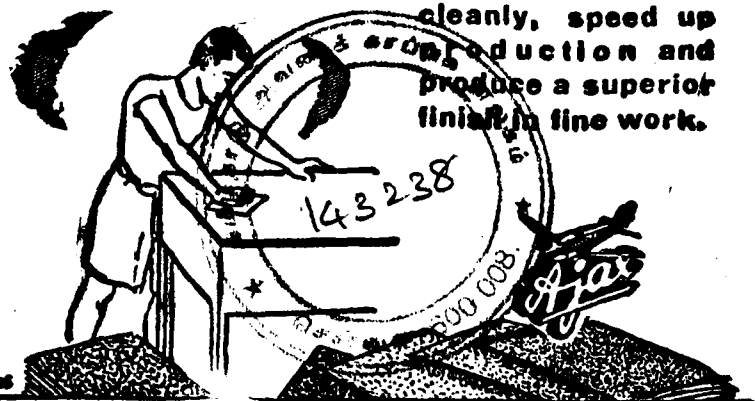
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