

377 NO9

PEOPLE'S HEALTH

JUNE - 1951



JL
L 50211, N47 PE.
NSI. S. 9
143245

PEOPLES HEALTH

EDITOR
A.V. RAMAN



RE. ONE



JUNE 1951

NO. 9

WATER SUPPLY & DRAINAGE SCHEMES

for

INVESTIGATION, DESIGN & EXECUTION

RESPONSIBILITY ONE CONTRACTOR
ONE RESPONSIBILITY

*We are glad to announce
that we have secured the
Services of Specialists—
Indian and Foreign—in
Field Work, Design
and Execution*

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

COTTON YARNS

5,00,000 Spindles

Counts upto 80s

Put to the Highest
Test of Strength and Reliability
MADURA MILLS YARNS
HAVE PROVED THE BEST
BY THEIR OUTSTANDING
QUALITY

MADURA MILLS CO., LTD.
Mills at :
MATHURAI, TUTICORIN & AMBASAMUDRAM

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

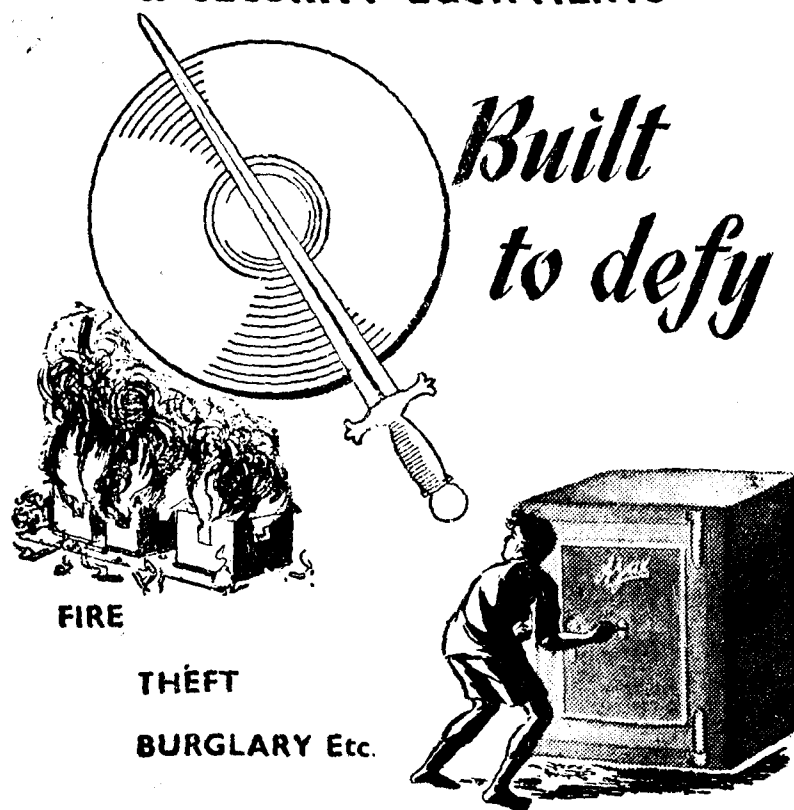
Our Specialities :
SINGLE YARNS, DOUBLE YARNS, CHEESE YARNS,
WARP YARNS, CONE YARNS, CORE YARNS,
COMBED YARNS, Etc.

Managers :
A. & F. HARVEY LTD.
MATHURAI

Ajax

SAFES

& SECURITY EQUIPMENTS



FIRE

THEFT

BURGLARY Etc.

Ajax Safes afford complete protection
for your 'Gilt-edged Securities'.
Documents, cash and jewels.

AJAX PRODUCTS LTD.

106, ARMENIAN STREET, MADRAS.

Managing Agents: MURUGAPPA & SONS.

For Insurance of Every Description

Consult



VANGUARDS

Competitive rates of premium,
prompt and efficient service to
policy-holders, and liberal policy
conditions are our watch words.

WANTED AGENTS ON VERY ATTRACTIVE TERMS

THE VANGUARD
Insurance Company Limited

THE VANGUARD
Fire & General Insurance Co., Ltd.

Head Offices: "VANGUARD HOUSE"
11 & 12, SECOND LINE BEACH, MADRAS-1

HIGHWAY ENGINEERING

IS SPECIALISED NOW-A-DAYS

The construction of highways is surprisingly economical in the long run, provided modern specialised knowledge in the field is fully utilised.

We provide that specialised knowledge both in design and construction.

Reinforced concrete and structural steel-work are also our speciality.

Messrs. TARAPORE & COMPANY,
ENGINEERS AND CONTRACTORS,

10, MOUNT ROAD, MADRAS -2.

Telephone: No 84128

Telegrams: "Taraporeco" Madras.

PEOPLE'S HEALTH

A Pioneer in the Field of
Public Health

Vol. V.

JUNE, 1951

No. 9.

CONTENTS

Subject and Author

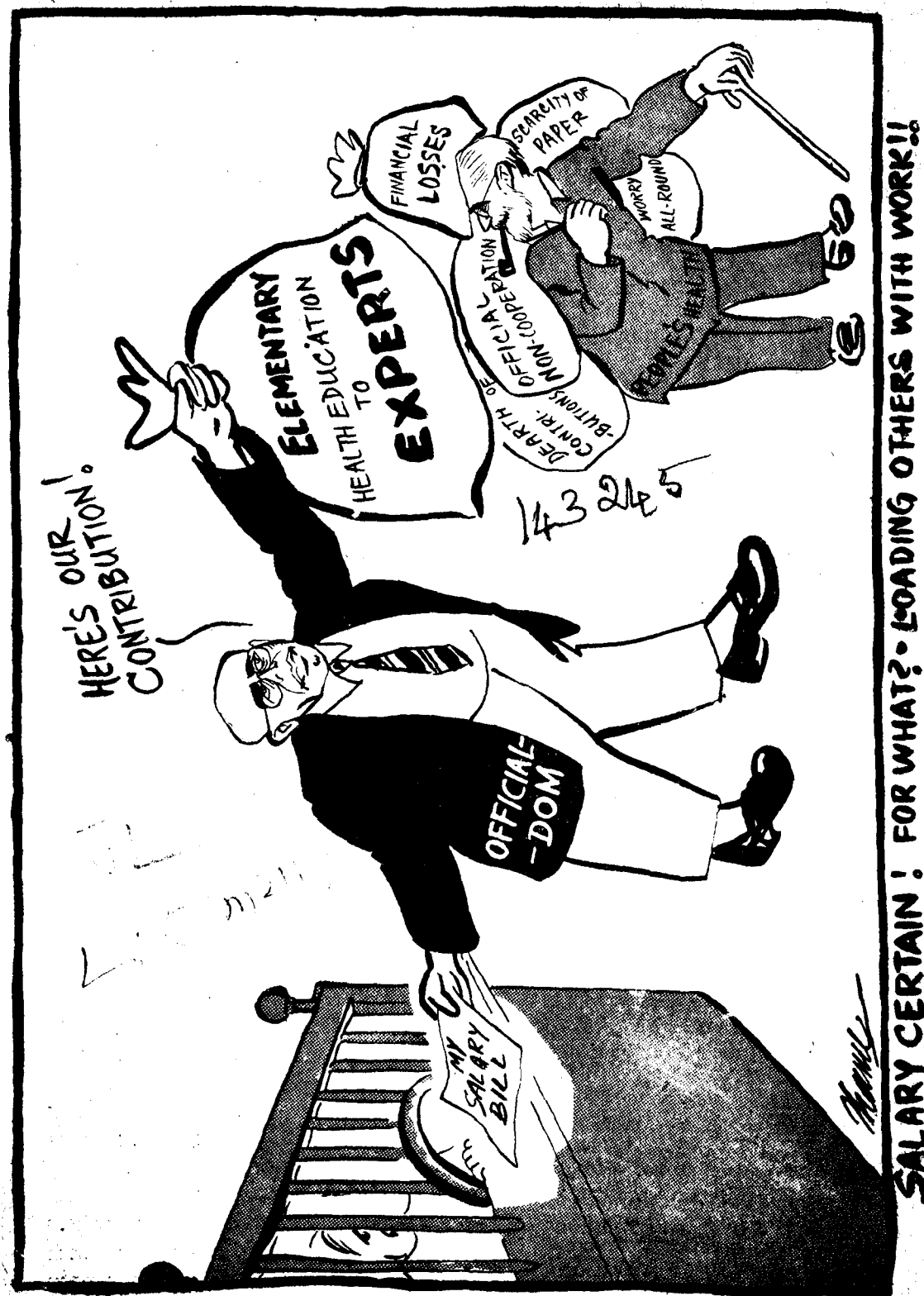
	Page		Page
Salary Certain! For what?		Food and Food Supplements	
Loading Others with work!!		—by V. Subramanyam	373
A Cartoon—		Fools rush in where Angels fear to tread—	
—by Thanu	352	B.C.G. Humbug	
Editorial	355	—by Ajit	377
Sparks From The Anvil		Alcoholism—A Health Problem	
—by Sledgehammer	356	—by Dwight C. Monnier	379
The Conquest of Malaria in Mysore State and Ceylon		Growth of Industrial Health Services	
—by Our Independent Observer	358	—by Herbert Tracey	382
Soviet Public Health Facilities in the Service of the People		Atomic Research Aids War Against Disease—World Demand for Isotopes	
—by Alexander Shabanov	360	—by Guy Leonard	383
Earth Houses		Disposal of the Dead	
—by S. K. Karr	362	—by T. R. V. Sastri	385
Problems of Producing and Using Films and Filmstrips for Health Education in India		Do You Know?	386
—by Donald F. Ebright	365	Wit And Wisdom	388
		What Do They Say About It?	390

MAY WE AGAIN REMIND?

1. That we cannot afford to supply, free of cost, the copies of any specific issue or issues of the magazine on the ground that copies were not received at the subscriber's end, unless complaint of non-receipt of copies is made *before the 15th of the month following*.
2. That, if spare copies of any back numbers are available, they will be supplied at a cost of Rs. 1-8-0 per copy, on requisition.
3. That the annual subscription of Rs. 12/- is payable *in advance at Madras* and those, who send cheques in payment of subscription, are requested to add the banker's commission of As. 8/-.
4. That due intimation of any change of address will avoid copies of the magazine being misdelivered.
5. That, despite the scarcity of newsprint and other working difficulties, the publishers are desperately struggling to continue the publication of the magazine *without increasing the subscription*, in a genuine spirit of public service and with the zeal of a fanatic crusader.

Madras-14,
June 30, 1951.

MANAGER,
People's Health.



Vol. V. No. 9.

JUNE, 1951

Issued Monthly

EDITORIAL . . .

To serve man's necessity is charitable; to serve his convenience is warrantable; to serve his iniquity is blameable; but to serve his purity is honourable.—W. Secker.

Our leaders rightly repeat their exhortation to us that we should not depend solely upon the Government to do everything and that we should do service ourselves for the benefit of society. Thus co-operation is expected from the people at every turn; but this demand for co-operation seems to be a conveniently one-sided bargain in the eyes of the permanent servants of the State.

Such an attitude is strikingly evident in the conduct of the Public Health Department of our State. The Department has won a notoriety for floating in the backwaters of the scientific field. It has scarcely a single brilliant scientific idea to promote and to maintain the health of the people. It is running in the old, old worn-out groove. The so-called control of epidemics has degenerated into an unimaginative, mechanical routine. The supply of statistics has reduced itself to a numerical farce. The field workers are expected to be trained sanitarians. The supervising authorities in the districts are also expected to be experts in their work.

Education of the field workers in the elements of sanitation and allied subjects as also the conveyance of up-to-date information on health matters garnered from various sources in the different countries of the world, is left to a non-official agency like *People's Health*. The task is one after our heart and we shall do it gladly; but a certain amount of co-operation is quite naturally expected from official quarters, whose legitimate duty it is to educate the department and the public alike. This co-operation, sad to say, has not been given to us in any measure and considering that, we have fared well indeed, in our endeavour to educate the field-worker. It is regrettable that to instruct the field workers of our State, we have perforce to depend on information, not merely from without the State, but from without the country as well. How much more profitable and reassuring would it be if our officers, the highly qualified and richly experienced men that they are, thought of the toiling fieldworkers once in a while, and chose to part with a portion at least of their knowledge.

through media like ours? Attitudes being what they are at present, it seems idle for the ministries to talk of co-operation from the public, when

CREATION OF NEW CASTES

This unfortunate land of ours has always been torn to pieces by castes, creeds, communities and such other artificial distinctions between man and man. In the West, people were divided into classes which in its turn tended to tear up the unity of people. In our own land, our great leaders have been attempting to create a casteless and classless society. But Madras State has acquired an ill-fame in the country for harping on the caste and community distinctions. Apparently not satisfied with the existing ones, it has created a new class among professional engineers!

Once upon a time, the licentiates in medicine were looked upon as *Harijans*. Dr. T. S. S. Rajan, who belonged to that untouchable class in medical profession, notwithstanding the eminence he attained as a foremost surgeon, very wisely abolished that caste altogether when he was the Minister of Health in the first Congress Ministry in 1937-39. It is wholly wrong to divide a profession into castes and obviously taking the advice of some reactionary in the engineering profession, the Government have now decided to introduce a new class of engineers by reducing the duration of the training from four to three years. This fresh move is neither in the interests of the advancement of the engineering profession, nor in the interests of the professionals them-

officialdom pays no heed to, much less, helps actively, non-official effort to aid it in the discharge of duties, strictly its own.

selves. If the profession is to advance, a qualified engineer at the lowest rung of the ladder should have the right to occupy the highest one by his own effort. In the normal course of his promotion, his academic training in this artificial manner should not be allowed to stand in the way. It should be remembered after all that the academic training in any profession is but a passport for the professional to gain proficiency in the subject, by acquiring field experience.

A story is told of a famous surgeon in the Madras Medical College, who, while addressing the graduates of the old M.B. & C.M., said that they should not consider themselves surgeons, now that they had obtained the degree of M.B. & C.M. The degree merely gave them a passport to *learn surgery by experience* and they should remember that without guidance they were unfit as yet to remove even a digit of a finger, notwithstanding their degrees.

A Member of the Madras Public Service Commission gave publicity to the fact that he asked an engineer candidate whether he had seen *surki*. The candidate replied that he had not seen it and that he knew nothing about it. When the Chairman of the Commission, who was a layman, pointed out to him that *surki* was but mere brick powder and questioned the candidate on the purpose for which it was

used in building construction, the reply of the candidate was interesting. He said he was a war-time candidate (who had been given 3 years training instead of 4 years training) and that his professor did not teach him anything about it for want of time!

Sanitary engineering is included in the syllabus for the B.E. Examination. Sometime back, when about 15 candidates appeared for direct recruitment to the P.W.D., a question paper was set to them covering the bare fundamentals. Even then, they were given a choice of questions. Only two candidates attempted to answer the paper. One of them secured fifteen marks out of one hundred and another eleven! This indicates the standard of training given to engineers in our engineering colleges. Incidentally, we would like to refer to the unhealthy rivalry that exists between graduates holding the B.E. degree and those holding the A.M.I.E. diploma of the Institute of Engineers. The former scoff at the latter for their lack of 'college training', while the latter, with far better reason, look down on the degree-holders, whose innocence of the practical side of the profession is pitiable indeed! Be it remembered that our engineering graduates acquire experience at public cost! Very curiously, the engineering college is not in the hands of the profession. It is under the education department. Engineers with practical field experience and project experience are not training the young engineers, but arm-chair experts who are apparently giving lectures on subjects of which they have had no first hand field experience.

The training of all professionals should be in the hands of the profession itself. The Madras Bar Council is agitating to take over the legal education in Madras State into its hands and very rightly too. If the Madras medical graduates have a good market value, it is because the medical professionals who are in practice, are training the medical students. It may be urged that there is a big demand outside the Madras State for the Madras-trained engineers. It only indicates the lower standard of training of engineers obtainable elsewhere in this country. The Institution of Engineers should take up the question in right earnest and give a lead in the matter of training engineers in this country. If, as at present, the training is left to departmental engineers who move in blinkers, the profession cannot hope to lift up its head. It is no wonder therefore that barring Sir M. Visveswarayya, no other engineer has occupied the position of an administrator or a top-ranking planner.

The Institution of Engineers is the only independent body representing the profession in this country. It has laid down its standards of training engineers in India. It should logically accept the responsibility of insisting on the same standards being followed in all the training institutions, government or private. If these standards are not attained, the Institution would be justified in declining to accept other qualifications as equivalent to the associated membership of the Institution.



By

SLEDGE HAMMER

Fear not to lie, 'twill seem a lucky hit;
Shrink not from blasphemy, 'twill pass for wit;
Care not for feeling—pass your proper jest,
And stand a critic, hated yet caressed—Byron.

New Bombay Rule for Promotions

Promotions of higher grade Government employees in the State of Bombay will, in future, be purely governed by "positive qualifications" such as personality, professional qualifications, initiative and readiness to assume individual responsibility and not on considerations of seniority.

Positive personality vs. negative personality! By Jove! If only this test had been applied to the selection of some of our leaders to the positions occupied by them, they should have been sacked and sent out a long time ago! Oh, for all their funny faces!

Admission to Professional Colleges

On behalf of the Madras Branch of the Indian Medical Association, a deputation waited on the Chief Minister and stressed the need for preference to the children of medical men in the matter of admissions to medical colleges. So what?

A Vaidyan's son or daughter should be a Vaidyan? To him that hath shall be given! The thermometer, stethoscope and blood pressure recorder will be in the family, the case histories will run for generations, the patients will continue to be

pedigreed heirlooms and tradition will be maintained. "His grandfather died at the hands of my grandfather", the budding doctor would say, "and I hope he will die at my clinic"! The budding gynaecologist would exclaim "Do you know, I have the case history of your grandmother? My grandmother did a caesarean on her; and I am looking forward to doing one on you!" It will all be a nice homely chat on both sides, so why not?

Ours is a welfare state, and we should be interested in the welfare of the sick as much as of the medical man!

Housing in Madras

They are thinking of building a satellite town twenty miles away from Madras to relieve the housing shortage. Do you know what a satellite means? An obsequious follower! It has a peculiar Indian flavour. Reminds me almost of mutton *Pilav* and chicken curry. The latter is the ideal "satellite" to the former!

They first attempted at Thambaram. It soon became a slum, very mangy, and pimply. So they thought of Gandhinagar and it turned out to be a flashy monstrosity. So they are thinking of a really old-fashioned callisthenic satellite, with clasped

hands, lowered eyelashes, bated breath and whispering humbleness! All of our leaders have their satellites, "Lotus", as they call them in slang, so our cities must follow suit. In India, we always cling to a pattern!

Health Minister's Press Conference

Talking of primary medical relief at the aforesaid conference, the Director of Medical Services referred to a scheme for conducting health surveys through mobile motor vans! That, I know, did not make sense. No one can conduct health surveys in this country; they can conduct only sickness surveys! The terminological inexactitude is unpardonable.

Dr. Rajan said that people fell victims to smallpox because of lack of resistance, and when asked whether poverty and food shortage were the causes of lack of resistance, he replied that not only the poor but also the rich fell victims to the disease.

What he apparently meant was that the poor lacked resistance due to under-eating, and the rich due to over-eating. In the former case, there was malnutrition and in the latter, there was sans-metabolisation. The filthy eating habits and dietetic degeneration of most of our rich folks have resulted in their internal organs performing only one function ruthlessly and inexorably—viz., *Persistalsis*!

Assistance from WHO

A cable from Geneva (or is it only an air letter?) says that the WHO have sanctioned an emergency appropriation of 30,000 dollars (about Rs. 1,40,000) for medical aid to the scarcity areas of India!

What a ridiculous bit of news item concerning a 'World' Health Organization! Scarcity areas, indeed! As though there are just a few patches of them! And this aid was being given following a request for help from the Government of India! Serve them damn well right!

Insanitary Coimbatore

A correspondent in a newspaper, complaining about the insanitary condition of

Coimbatore, refers to it as one of the best health centres of South India. He is of course talking of the Coimbatore that was (but for periodical visitations of bubonic plague), not the Coimbatore that is. It is of course one of the best money making and money spending centres of Tamil Nad, but certainly not a health centre.

And the correspondent makes special mention of R. S. Puram! I believe R. S. is a contraction of Ratna Sabapathy and the Puram was named after that esteemed doyen of the business community in Coimbatore, who did so much for that town as chairman of the municipality. We suggest that he should now ask for deletion of his name from the Puram unless the area is immediately cleaned up, and if the municipality would do neither, he should—I respectfully suggest—change his own name by a Deed—Poll!

Oh yes, I forgot! He should wait until the elections are over; otherwise, he would lose his franchise.

Mobile Nursing Clinic

Rajkumari Amrit Kaur received one of these named after Lady Mountbatten as a gift for India. "The travelling clinic was a symbol of the tremendous friendship between Britain and India" said the Rajkumari.

Yes, as a symbol, it is beautiful, reviving in us a nostalgia for the glorious days of British rule. As a gesture, it is magnificent. As a token it is wonderful. As a pointer (to what?) it is perfect. So what? Quite rightly Lady Mountbatten spoke of the 'staggering' progress which had been made in India under the guidance of the Rajkumari. Well, Why not? Progress is being staggered in India—over a long period of years—slowly, surely and steadily! For the present, we stayput with symbols, tokens, gestures and pointers!

The mobile van is equipped with a 100-gallon water tank. Ergo, the Madras Government should have nothing to do with it. Our water-supply is not sufficient to stand depletion by the mobile van!

THE CONQUEST OF MALARIA IN MYSORE STATE AND CEYLON

by

Our Independent Observer

Progress in Mysore

Nearly a quarter of a century ago organised field studies on malaria were established in the State of Mysore by the Rockefeller Foundation in co-operation with the Department of Public Health of that State. Preliminary surveys were followed by control schemes with the then known methods mainly consisting of the application of paris green as a larvicide. Soon, however, the prevalence of malaria which occurred in the wake of irrigation from the Krishnarajasagara through the Irwin canal intensified the activities of the Malaria Bureau. Despite repeated human experience of malaria being left as a trail of new schemes of irrigation, Mysore State added to the score of such human shortcomings. A scheme primarily of great utilitarian design, resulted in avoidable human suffering and threatened to defeat the primary object of increased cultivation. Canal water mainly taken along the high cantours led to a considerable degree of waterlogging of village sites at lower levels. Large tanks which previously used to contain only rain-fed water remained filled with water and vertical weeds, all through the year on account of continuous seepages from the canals high-up as well as the over-flow of water from the irrigated fields in the terraced valleys. This in turn led to disease of sheep with liver flukes and the wool industry was adversely affected. More than all, on account of extreme water logging, it was impossible, in the canal irrigated tracts, to grow any dry crops which formed the staple article of food for the rural people of this area. On the one hand, therefore, they had to import their own article of food and whatever rice was grown locally was exported. Rural economy was, thus, profoundly affected and the scheme failed to fulfill its original expectations.

Co-ordinated Activity

Under the leadership of Dr. D. A. Rao, the Mysore Government established a close liaison between Irrigation, Revenue, Public Works and the Public Health authorities and ordered that no new area should be brought under the command of the canal without a prior scrutiny by a competent body of the above mentioned experts and implementing their recommendations well in advance. Even with respect to areas already brought under cultivation similar proposals were considered on merits, although naturally such measures proved a little more costly than when they were undertaken in advance. The remedial methods consisted of prohibition of wet cultivation within a belt of 2 furlongs of the village site, construction of intercepting drains, and of impervious drains along the natural lines of drainage, the breaching of tank bunds and the establishment of automatic siphons and a rotation of crops, all of which tended to provide for careful water management resulting in minimal facilities for mosquito breeding. The cultivation of dry crops was also facilitated. All new areas brought under the command of the Irwin Canal after these recommendations were implemented have remained remarkably free from malaria. Slow progress is being made with respect to areas already brought under cultivation before rigorously implementing these recommendations. Mysore State thus affords a most notable example of closest co-operation between the engineering and the public health authorities.

The Advent of DDT

The advent of DDT has no doubt made rural malaria control comparatively easy and brought it within the economic competence of rural communities. Mysore State has not been slow to take advantage

of this modern scientific advance. At present more than a million people are receiving the benefit of DDT scheme and the total expenditure is well over a million. But a special feature of the health programme in Mysore is that all rural health service is rendered through the primary health unit. In this respect Mysore State may well be deemed to have anticipated the Bhoze Committee's recommendations. Today they have more than 100 primary units and nearly 2 dozen secondary units are also in operation. Each primary unit serves to control all communicable diseases including malaria and undertakes compilation of vital statistics, disinfection of water supplies, provision of private latrines, maternity and child welfare and rural medical relief.

Although DDT is most popular and has resulted in spectacular benefits by way of reduced sickness rates and death rates, increased birth rates, reduced infantile mortality rates, etc., it should be said to the credit of Mysore State that the permanent advance that they had made by judicious combination of public health and economic needs of villagers is not being lost sight of merely because of the availability of an easier and most spectacular method of malaria control that is available in the use of DDT.

Advances Made in Ceylon

In Ceylon practically the entire malarious tracts are now included in malaria control. During 1950 all houses in the malarious localities were treated with a solution of spray with 70% water wettable DDT. A 2½ per cent suspension was sprayed at an approximate dosage of 50 mg. per sq. ft. In the majority of cases, the interval of spraying was 6 weeks but in some units, the spraying interval was prolonged to 8 and even 10 weeks. It may be stated that in Ceylon malaria is almost perennial and the number of sprays is not less than 6 times per year. There are well

defined zones in Ceylon, viz., the wet, intermediate and the dry. The continued spraying with DDT for the last few years appears to have almost eliminated *culicifacies*, the local vector species from the wet and the intermediate zones. Even during periods of droughts when, in the past, *culicifacies* used to infiltrate into these zones, during 1950 there was no such evidence. Along with the disappearance of the vector, there is also an almost complete disappearance of the malarial parasite from these two zones. While this may lead to an impression that malaria is being eradicated from Ceylon, the authorities sound a note of caution that they can by no means expect to eradicate the vector species from the island. This is mainly due to the fact that recent work has shown that *culicifacies* prevails abundantly in forest both in the larval and adult stages and, obviously, eradication of this species in its sylvan haunts is not a practicable proposition.

The Organisation

In the Ceylon Organisation, there are 33 truck units, 8 jeep units and a few walking units. The organisation maintains a central work-shop for periodical maintenance of equipment. The total expenditure in Ceylon is Rs. 2.7 million. This protects a total population of 2.7 million and the per capita cost is thus Re. 1 per head per annum, compared with the Indian estimate of As. 8 per head per year. The higher cost in Ceylon is due to twice as many rounds of applications of DDT as in India (6 in Ceylon as against 3 in India).

The malaria death rates have dropped in Ceylon from an average of 1.5 per thousand to 0.2. The infant death rates have dropped from about 160 per thousand to 80. The crude death rates have dropped from 20 million to 12.4. The credit for this large scale organisation and progress is due to Dr. S. Rajendran, the malariologist of the Government of Ceylon.

SOVIET PUBLIC HEALTH FACILITIES IN THE SERVICE OF THE PEOPLE

by

Alexander Shabanov

Deputy Minister of Public Health of the USSR.

THE Soviet Government and the Communist Party of the USSR display profound solicitude for the health of the working people. The land of Socialism has built up the best and most democratic system of public health service in the world, a system representing a fundamentally new state form of organisation of medical aid to the population.

The years of the Soviet power have seen the growth in the USSR of a wide network of hospitals, clinics, dispensaries and other medical institutions. As compared with pre-revolutionary times the number of hospital cots in the country has increased seven-fold, and the number of polyclinics and dispensaries—16-fold.

Especially striking are the advances of public health protection in the national republics, which, prior to the revolution, were backward outskirts of tsarist Russia. Georgia, for example, which in 1913 had only eleven dispensaries and polyclinics all told, today boasts about 400 such institutions. On the vast territory of modern Kazakhstan there were 1,800 hospital cots in 1913, as against over 25,500 in the Kazakh republic today.

Hospitals, polyclinics and maternity homes have appeared in remote districts of the country, where they were entirely unknown before. For example, the population of the Koryak national area on Kamchatka now has at its service tens of hospitals and dispensaries, 31 medical stations and six children's creches. Prior to the revolution, there were six small, poorly-equipped hospitals in Buryat-Mongolia; today this republic has 78 hospitals, 20 maternity homes in the collective farms; 129 dispensaries, 201

stations serviced by midwives, 42 women's and children's consultations, and 30 children's creches.

The difference between the medical aid available in the big cities and in the rural districts is gradually being effaced in the USSR. The planned development of the network of medical institutions, the even distribution of medical personnel and the centralised leadership of the entire work of public health protection make possible a wide and universal application of the latest findings of medical science.

The system of Soviet public health service is built along the lines of administrative units and industrial enterprises. Each district of the USSR has its district hospital staffed with surgeons, therapists, pediatricists and other specialists. In addition, there are rural hospitals catering to smaller areas.

Plants and mines have their own hospitals, clinics, medical stations and other medical institutions. Medico-sanitary departments existing in large industrial enterprises give medical and prophylactic treatment to the workers, check up on their state of health, take part in putting through summer health measures and in sending workers to resorts and rest homes.

The basic principle of Soviet public health service is prophylactic treatment. Wide-scale prophylactic measures are carried out by the state sanitation organisations and district physicians. The organisation of public health work by districts gives the physician the opportunity of systematically following the course of his patient's disease through all its stages and of taking the necessary

measures. Early diagnosis and correct treatment make possible the timely recognition of a disease and its rapid cure.

Soviet public health organisations make wide use of aviation to keep up constant connections between clinical institutions and remote rural hospitals. The RSFSR (Russian Federation) alone has 32 medical aviation stations ready at a moment's notice to answer the call of rural doctors. Flights are made both to accord first aid, and to give medical consultations to physicians on the spot.

The number of scientific-research and educational institutions in medicine in the USSR is rapidly growing, and giving the country tens of thousands of additional specialists every year. By the end of 1949 the number of doctors in the Soviet Union had increased 12-fold, as compared with pre-revolutionary times.

Soviet medical science, leaning on the wide support of the Soviet Government and the Communist Party of the USSR, has achieved considerable successes in recent years. The land of Socialism today boasts about 350 medical research institutions, headed by the USSR Academy of Medical Sciences. The numerous army of Soviet physicians includes over 10,000 Doctors and Candidates of Science.

Physicians in the Soviet Union are all given opportunities for continually raising their qualifications. For this purpose they can attend the regular gatherings held at urban and regional hospitals, as well as special Institutes for Raising Physicians' Qualifications, institutions whose like is not known in any other country.

The vast increase in the network of medical institutions, the improvement of their equipment, and the growth of the number of skilled doctors leads to the constant improvement of medical treatment in the USSR. As a result, sickness is on the decline in the country, and the physical conditions of the youth is improving with each passing year. Many serious diseases, such as smallpox, plague, and cholera, which were such a terrible

scourge for the population of tsarist Russia have completely disappeared from the Land of Socialism.

All expenses connected with the organisation and upkeep of medical institutions in the USSR are borne entirely by the state. The government appropriations for public health amounted to 21,600 million roubles in 1949 alone. All forms of medical aid are at the service of the Soviet population entirely free of charge.

It is interesting in this respect to recall that the USA knows no such thing as free medical assistance. A physician's advice, the least treatment, or medical analysis—all this in the land of the dollar costs money, and no little money at that. It is therefore not surprising that one-half of the population of the USA never has recourse to doctors, while about 80 per cent. of American families cannot afford the cost of regular medical treatment. This leads to a big percentage of illness and a high mortality rate. Even official statistics admits that one-sixth of the population of the United States—25,000,000 people—suffer from various chronic complaints. Approximately 325,000 people die annually in the USA due to the absence of effective medical aid.

The attitude towards the common man in America is strikingly illustrated by the following fact. One hundred eleven miners were killed in an explosion in the pit "Centralia No. 5" in the state of Illinois, which occurred as a result of the lack of ventilation. The mine owners were fined 1,000 dollars for this, or less than 10 dollars for each life lost. Such is the price of a human life in "democratic" America!

The great, constant solicitude of the state for the people is one of the fundamental laws of the Socialist society built up under the leadership of the Communist Party of the USSR. The dearest, most precious thing in the USSR, is man, his life and health.

The Stalin Constitution not only grants to all citizens of the USSR the right to material security in old age and in the

event of illness or disability, but it guarantees this right by the wide development of social insurance of workers and employees to state expense, by free medical aid, and by the extensive network of health resorts, sanatoriums and rest homes.

No other country in the world has a system of sanatoriums and health resorts comparable to that in the USSR. The eminent British public man Pritts wrote in this connection: 'What have we in Great Britain to compare with the happy life of tens of thousands of workers, who receive a paid vacation and rest in Sochi, Yalta, Mineralnye Vodi and countless other truly heavenly spots of nature? Of the

16,000,000 British workers 14,000,000 do not even receive a paid vacation."

In 1949 USSR expenditure on social insurance of working people, on free accommodation to rest homes and sanatoriums, on grants to mothers of large families and unmarried mothers, on free medical aid and analogous services amounted to 110,000 million roubles, or three times the figure for 1940. This affords strong and convincing testimony to the vast solicitude which the Soviet Government and the Communist Party of the USSR display for the needs of the people, for their material and cultural well-being, and their health.

—TASS.

EARTH HOUSES

by

S. K. Karr, B. Sc., Eng. (U.S.A.)

EARTH is the most primitive of building materials utilised from time immemorial and perhaps with the dawn of civilization. When building materials such as, cement, steel, dressed stone, stone chips, bricks, etc. are very rarely available and are quite insufficient to meet the enormous need, necessity will force us to revert to Earth. This will entirely eliminate the question of availability and will, at the same time, reduce the cost of material for walling to nil.

Plastering and painting on rammed earth walls are easily possible, but can be done away with where cost and immediate availability for occupation are the primary considerations. Various external finishes are suitable for this type of construction. The British Government Bureau recommends three as specially applicable. These are 1: 1 mix of sand and ground lime, chalk lime and cement respectively. The favoured finish in the past was a coat of hot coal tar, which, upon cooling, forms a base for any desired paint.

Its maintenance cost is almost nil, and needs no special or specialised attention

after its construction is over. For this reason, this type of construction is termed in America as "Once-over, all-over."

Outstanding Examples

Prof. Ferdinand N. Menefee of the Department of Engineering Mechanics at the University of Michigan constructed at Ann Arbor, an attractive 6-roomed 2-storey rammed-earth residence in the year 1926. This is a most interesting experiment, as in this building compressed air was first utilized for the purpose of ramming.

Outstanding examples of modern homes made of rammed-earth are to be found in two Government projects that were built during the last 15 years by the famous architect, Thomas Hibben. In 1926, he designed seven rammed-earth houses for the Farm Security Administration. These were built at Gardendale. In 1942, he completed several multiple dwellings near Alexandria by the use of Pneumatic Rammer. This was the first attempt in U.S.A. towards the mass production of rammed-earth buildings and was the outcome of progressive experimentation.

Buildings made of well-mixed and puddled or pagged clay are very common in Bengal, not only in villages but also in small sub-divisional towns. Such buildings are found to remain quite habitable for over 75 years. Houses of this type are quite comfortable to live in and are not unhygienic. These buildings take over to three months to be completed for habitation.

In comparison with these, a hand-rammed-earth building of equal size in the Punjab takes about 5 to 7 weeks. In U.S.A. it has been found quite feasible to construct a pneumatically rammed-earth wall up to 9 feet height in a day of 8 hours. Two days are therefore considered quite a liberal period of time to construct the wallings of a complete house by this method. Considering the urgency of the situation, if it is decided to work double shifts, it can be completed in a day. Such walls are superior in quality and durability and cheaper in construction cost, in addition to the time it saves. When the situation is such as brooks no delay, pneumatically rammed-earth buildings are the only and immediate solution for providing shelters for 2.5 millions of refugees from East Bengal.

It is the usual practice in the Punjab to use a light wooden rammer of 1½ to 2 lbs. in weight for hand-ramming whereas in Europe and in America, wooden rammers of about 7 lbs. in weight are commonly used. A layer of 5 to 6 inches of earth is spread into the wall-forms at a time and compressed into 2½ to 3 inches by constant ramming. As the ends, where necessary, earth is spread off at an angle so that a stronger union may be formed with the next overlapping section. Even freshly built walls prove strong enough to allow roofing work to proceed immediately. As in the case of the puddled clay walls of Bengal hand-rammed-earth walls in the Punjab have been found to withstand the ravages of 75 years, whereas in Spain and France, of over 150 years without any appreciable wear.

How Ramming is Done

Pneumatically rammed-earth walls for a complete house, say, with 2 main rooms

of 16'-0" x 14'-0" and 16'-0" x 12'-0", and two small rooms of 8'-0" x 6'-6" each (can be used as kitchen and store), a front verandah 27'-6" x 6'-0" and a back verandah 8'-0" x 6'-6" can be completed in two days only, as described above. If ready-made doors, door-frames, windows, window-frames, lintels, roof trusses and roofing materials are available at site, such houses can be made habitable within 7 days from the date of start of construction.

Another special advantage of construction of this type of house is that it does not demand any technician, artisan or specialized labour other than a few carpenter and compressor drivers who can build their respective houses on a co-operative basis without any labour cost.

In addition to roofing materials, doors and windows, a few Inger-soll-Rand Air Compressors, Rubber Hose pipes with couplings and Inger-soll-Rand 15 or 24 size floor rammers or 34 size Backall Tampers are the only special machinery and equipments necessary for the purpose. Each rammer or tamper will require one length of hose pipe. Four or five such rammers or tampers can be worked from one 315 cfm. Air Compressor and 7 to 8 from a 500 cfm. compressor. Two to three rammers or tampers will have to be used for each house, and that only for two days. One 315 cfm. compressor can supply compressed air for two houses, and 500 cfm. compressor for 3 houses at a time.

Materials for a House

In addition to these machinery and equipments, a few steel sheets fabricated into wall forms with a few fishplates, bolts and nuts to tie the wall forms in position will be necessary. These forms are exactly like the ones employed in rearing concrete walls, with the only modification that the corners are to be rounded for the steel backall tamping pad to work efficiently. Proper gauge of walls can very easily be maintained by means of iron cross rods. This will produce a very smooth surface. Other materials are a few bamboos and coir strings for scaffoldings, phowrahs, baskets, carpenters' tools,

Mason Square, Spirit level, plumb bob, Metallic tape and the like. The entire materials will be salvaged to their full value after two days, and may be utilized for the next building.

The only consumable materials for a house are a few lintels for every house. Hard-wood planks with a coat of hot coal tar can be used as a good substitute where cost or availability is of great consideration. In addition to these, 20 to 25 gallons of High Speed Diesel Oil, $\frac{3}{4}$ gallon of Mobil oil, $\frac{1}{8}$ gallon of petrol and $\frac{1}{2}$ lb. of cotton waste will be consumed per compressor for a shift of 8 hours. These include the lubricant required for the rammers. A thin coat of oil, to be applied inside the wall forms can be had from the crank case of the compressors when mobil oil will be charged after every 100 hours of working.

There is no difficulty about the availability of air compressors and rubber hose pipes either from Messrs. Ingersoll Rand (India), Ltd., Bombay and Calcutta, or from the Disposal Directorate. If sufficient number of Floor Rammers or Backfill-Tampers is not available, the same company's 730 or 750 size Core Breakers, size 58, 73, 75, 158, 173, 273 or 275 Diggers, or L-54, R-63, CC-68 or CC-80 Paving Breakers and required size steel fitted with Backfill Tamping Pad can be used as workable substitutes. Even I. R. Jackhammers, thousands of which are now in use in India on all big and small rock-cutting projects, can very conveniently be converted into pneumatic rammers by taking out their rotation parts, such as, Rotation Pawl, Rotation Pawl Springs and Rotation Pawl Plungers.

Cost of Machinery

The construction of pneumatically rammed earth buildings cannot be taken up by the refugees themselves even on co-

operative basis, if the Government does not shoulder the responsibility of supplying Air compressors, rubber hose pipes and the pneumatic rammers due to high cost. One 315 cfm. Air compressor was costing Rs. 45,000 before devaluation. One 50-foot length of $\frac{3}{4}$ " dia. rubber hose pipe was costing Rs. 81 and a pneumatic rammer, according to size and type, between Rs. 750 and Rs. 1,140. In consideration of the requirement for a couple of days per house, the cost is surely prohibitive for an individual or even for a co-operative colony of moderate size. The Government can supply these three items and can charge a reasonable rent per day of 8 hours. The usual life of an Air Compressor is taken as ten years, but with proper maintenance, I have used quite a few for over 20 years with desired efficiency.

Earth to be used for the purpose should be free from organic matters, such as, plants, stems, leaves, roots, etc., as these will cause additional shrinkage when moisture is evaporated and will weaken the coherence of the wall.

Monsoon months in Bengal are not suitable for this type of construction. High and dry grounds, where there is no possibility of accumulation of rain water or for flood water to come in and where good sandy earth as described above is available in plenty and at hand, will be an ideal site for this type of construction.

Roofing Materials

If there is scarcity of roofing materials, such as C. I. sheets, Asbestos Cement sheets, Mangalore tiles, and timber for trusses, or if their cost stands in the way, bamboos and grass or Gol leaves from the Sunderbans can be used as substitutes. Sheets or tiles can be substituted at a later date when desired and are available.

—A. B. PATRIKA.

PROBLEMS OF PRODUCING AND USING FILMS AND FILMSTRIPS FOR HEALTH EDUCATION IN INDIA

by

Donald F Ebright, M.A., Ph.D.

IN a land where 85% of the population cannot read or write, the value of audio-visual aids is being increasingly realized by Government officials, social service workers and educationists who, with the film producers, are giving considerable thought to the role of the educational film.¹ Among this group of pioneers are doctors, nurses, medical superintendents and health officers, in the district, state and national levels who are concerned with the problems of making and using films and filmstrips for health education.

Let us remember that while all public health workers come from different backgrounds, they have one purpose; to get the masses to understand the meaning of "good health" and how it is achieved and maintained. This presupposes an understanding of the causes of ill health (flies, adulterated food and bad air); and the methods and tools to eliminate these causes (D.D.T.; pure food and fresh air). The people must be taught hygienic habits. (Note film: "Environmental Sanitation") both for personal living and community life. They must be made aware of the consequences, if approved scientific procedures are not followed. (Note film: "Water-Friend or Enemy"). Since the achievement of "good health" implies nutrition and the understanding of balanced diet it is necessary for the public health worker to deal with the best use of available foods.

1. By "film" this paper restricts itself to the 16mm sound film, unless otherwise indicated. The "filmstrip" and "2 x 2" slide" is dealt with in a later section.

2. Let not the layman be misled by this item "visual aid". Any type of teaching device whereby one learns through the sense of vision is a visual aid.

Actually, the public health worker will need to utilize a variety of simple and inexpensive visual aids² in person-to-person, family-to-family and village-to-village contacts, such as charts, posters, pictures, the flannelgraph and models. These are indispensable aids in lifting the level of health and hygiene among India's masses. We presume then the fullest use of scissors, paste, cloth, paper, clay, etc., in making and using these patent non-projected aids; but we will confine this paper to a consideration of projected pictures, 16 mm. cine film, 35 mm. filmstrips and 2" x 2" slides. This paper is not primarily concerned with the specialized clinical films for medical audiences but will concentrate upon the health and hygiene films suitable for general exhibition.

India has not lost sight of one of the major contributions of the war-training program, namely, that educational films can be successfully employed in a broad health and hygiene campaign. Hence we are not surprised to find audio-visual aids being included in all new educational schemes. While education in India is a State matter, visual education will be run by the Central Government to ensure co-ordination. Some provincial governments are conducting local experiments which are all to the good. At the present moment, we are waiting to see how the Films Division of the Ministry of Information and Broadcasting is going to function. But the fact is that on March 28th, 1950, this promising department was not ready yet with its scheme of 16 mm. sound prints.

The purpose of the Films Division is to produce and distribute informational films on educational, social and cultural subjects for India and abroad. Six produc-

tion units are to be formed, of which one is to produce films for rural areas and which will be most closely related to the health education program.

A Committee of Visual Education has been created by the Central Government with the following terms of reference: (1) To investigate the use of films in primary, secondary, university and adult education; and (2) To organize the Government's Central Film Library. It intends to have as part of its Central Institute of Education, a Department for Audio-Visual Education which will function as an All-India Training College for teachers.

Reports from certain areas indicate that: (1) The Government of Madras has sent an officer to Europe to study audio-visual education; (2) In Delhi a projector is being used as part of an adult literacy scheme; (3) Orissa has three mobile units; (4) the Government of West Bengal is using sixty 35 mm. filmstrip projectors for rural propaganda; and (5) the Central Provinces has a fleet of twenty-two mobile units. Health education ranks high on the list of objectives in these provincial schemes.

Motion Pictures

With this general background, let us now face the specific problems involved in the production and utilization of: (1) films, and (2) filmstrips for health education purposes.

We will consider

- (1) The sense of need for more effective tools and techniques;
- (2) The desultory use of films;
- (3) The lack of understanding of the problems involved;
- (4) The dearth of equipment and materials;
- (5) The effectiveness of foreign produced materials;
- (6) The need for indigenous films;
- (7) The association of motion pictures with entertainment and excitement; and

- (8) The need to understand the philosophy underlying mass media communications.

The Sense of Need

1. The sense of need for more effective tools and techniques is evident in all progressive educational circles, because the use of book and the spoken word has proved inadequate for the demands of free India. But herein lies both hope and danger. It is a hopeful sign that officials are eager to adopt new methods and that discussions of visual aids proceed on "high levels". But the danger is that agencies and organizations seeking to implement government targets will embrace the use of audio-visual aids without a thorough understanding of their use and possibilities and expect to reap miraculous results with less effort. It takes time, energy and money to utilize visual aids. Already, there are evidences of too hastily built "Mobile Units", with carelessly acquired equipment and inadequately trained operators resulting in disillusionment and a consequent setback to the audio-visual movement. Some educators are fearful of the new development while others rush to embrace every technical device without considering its educational merits or de-merits. Our problem in India is to discover a reasonable attitude midway between the two extremes.

2. **The Desultory Use of Visual Aids:** An over-all picture of health education in India will reveal that the use of audio-visual aids is desultory. We find carefully planned, systematic and consistent visual programs in few institutions. All too often, the work is built around an enthusiastic individual who is subject to transfer, and the work stops. There is a lack of Camera Clubs, Operator's Training Classes, Film Evaluation Services, Documentary Clubs, Workshops and Institutes to develop local talent for carrying on a long range programme and for ensuring continuity.

The desultory use of visual aids is partially due to the lack of adequate equipment and accessories. The Civil Surgeon may have a 16 mm. sound projector but he often

lacks a portable screen, spare bulbs, an inverter for use in DC areas and a microphone to give a running commentary.

Then frequently leaders in the health education movement are seniors, who are more at ease in the use of older methods (lecture, question and answer) with the result that "Pictures" are used as a bait or reward for a programme. As the Special officer for Education announced on tour, "at the end of the programme there will be movies".

3. **Lack of Understanding of the Basic Problems Involved:** All educators, and this includes health officials, must be led to realize that learning to let pictures speak for themselves, and to let 16 mm. transcriptions stir the listeners to create his own mental image is equal to learning a new language. This is a basic problem in India where the verbaliser has been venerated for centuries and the District Health Officer has in the past learnt to paint word-pictures with an occasional reference to a chart or poster. To-day he has a well-equipped mobile unit with a glittering array of new tools which require that he takes cognizance of the fact that the projected picture and the recording "speak" a new language. This new language is infinitely more powerful than the one he has been using. When this basic lesson is fully grasped, the educator will begin to study this new media with the concentration he expends upon Hindi or Sanskrit. The serious official does not toy with Hindi and no more can he afford to toy with the new language of mass media communication.

4. **The Dearth of Equipment and Materials:** There is a marked dearth of equipment (projectors, etc.) and materials (films, etc.). Due to the rigid import regulations and the price of equipment since devaluation, a mere trickle of equipment is entering India. Travel from Delhi to Madras, or Bombay to Calcutta, and you will hear a chain of requests for projectors, screens, turntables, microphones and films. This point can be verified by talking with the heads of such educationally alert firms as Ama Educational Limited, Educational

Films of India, Patel India Ltd., Kodak Ltd., and others.

How soon can Indian industry begin to meet this demand? May I give my personal opinion based upon extensive travel and wide contacts? Certainly, the production of the mechanically simple opaque projector and the 35 mm. projector for filmstrips and 2" x 2" slides should impose no serious problems. It is to be hoped that Indian industrialists will enter this field at the very earliest opportunity. However, in the field of the 16 mm. sound projector, a precision-built machine, there are technical problems and practical considerations which may rightly delay the indigenous manufacture of sound equipment for some years.

Where can films be secured? The following table was compiled for North India but is a fair indication of the condition of film-hungry India. Possibly the excessive duty of four annas per running foot on all but a very small group of "educational" films (as interpreted by the Bombay Board of Censors) accounts to a large degree for the sub-normal quantity of films for sale or rent.

Sources of movie rentals in India are:

16 mm. Sound

1. United States Information Service, 54 Queensway, New Delhi; or Bombay, Calcutta. (Only the one in your area will serve you), (Informational, education, entertainment, war).
2. British Information Service, Eastern House, Man Singh Road, New Delhi. (Education, informational, documentaries).
3. General Motors, India, Ltd., P.O. Box 39, Bombay No. 1. (Technical, engineering, few general).
4. Metro-Goldwyn-Mayer, India, Ltd., P.O. Box 22, Pratap Buildings, Connaught Circus, New Delhi. (Current and older major theatre feature films selected shorts).

5. Ama Ltd., Canada Bldgs., Hornby Road, Fort, Bombay. (Comic, entertainment, travel).
6. Monogram Film Exchange, Ltd., Excelsior Theatre, Wallace Street, Bombay. (Dramatic, gangster, westerns full length entertainment films).
7. Patel, India, Ltd., 190, Hornby Road, Bombay. (Entertainment, educational).
8. Radio Corp. of India, P. O. Box 111, Hazratganj, Lucknow (Same as Patel).

16 mm. Silent:

1. British Information Service, Eastern House, Man Singh Road, N. Delhi. (Educational, documentary).
2. Ama Ltd., Hornby Road, Bombay. (Entertainment, travel).
3. Patel, India, Ltd., Hornby Road, Bombay. (Educational, entertainment).
4. Bureau of Education in India, Library of Educational Films, Educational Secretariat, New Delhi. (Educational).
5. U.P. Civil Secretariat, Information Directorate, Lucknow, U.P. (Indian Information).
6. Other Film Source Possibilities:
Your Provincial Dept. of Education.
Film and Camera Companies.
Other Information Services, Canadian, Russian, etc., and Publicity Depts. of Commercial firms.

5. The Effectiveness of Foreign Produced Materials: How useful are foreign produced films for India? The bulk of available 16 mm. films, filmstrips and 2" x 2" slides on health subjects are Western Produced. While this is not a healthy condition this material is by no means unusable. In other words, it is not correct to categorically praise or reject this body of material. There are foreign films which are useless as well as films which are very useful, if correctly screened.

Because there are relatively so few silent films, this paper is chiefly concerned with sound films. It must be noted however that there are educators who prefer silent films, because they tend to move more slowly and a vernacular commentary can be given to carry the health message.

There are moreover 16 mm sound films in English, made for Western audience, which can be used as they are for limited English speaking urban audiences. But in order to reach the rural masses, and that is a major aim of the health education program, the sound track must be "cut" and a running commentary given in the regional language. An excellent example of this type of film is the Walt Disney cartoon series distributed by the Institute of Inter-American affairs, Washington, D.C. These 16 mm. color sound films run 10-12 minutes and are in English or Spanish. Let us examine one and see its content and purpose.

In "Planning for Good Eating", the principles of nutrition are taught by animated cartoons, "Careless Charley", and his little house and farm somewhere in South America, is the chief figure. In this film the different kinds of food, starchy, animal and vegetable are shown and what they contribute to human health by supplying energy, muscle and bone. There is an emphasis upon goat-keeping for a supply of milk for the children. Here is a film which can be recommended for health education in India. The details (shape of house and breed of goat) are minor, for, the basic health needs are universal. The Latin American background is nearer India than a corresponding North American farm. A commentary with a minimum of explanation will make this film understandable. Others in this series include: "Environmental Sanitation", "Hookworm", "Insect as carriers of Disease", "Infant Care", "Tuberculosis", all of which the writer has shown to many an audience in rural and urban India. On a recent occasion, where the writer was presenting health films, Rajkumari Amrit Kaur, New Delhi,

Honourable Minister for Health for the Central Government, presided, and expressed her great hope that visual aids might be used increasingly for spreading health education.

On the other hand, there are western films with a more limited use. Such a 16 mm. sound film is "Menstruation", produced by the International Cellucotton Products Co., Chicago, Illinois. The technical quality is very good. While the physiology of menstruation, the rules for conduct with reference to it, the diagram drawings of the female organs and the psychological implications are treated in a matter-of-fact manner, the "American-girl" and "American-background" present a more alien look than does "Careless Charlie's" farm. This film would be limited to a few girls' schools, very western in atmosphere, and women's groups—even where the American background would need explanation.

It is now obvious that the usefulness of a film for India can only be established after reviewing it and making an objective evaluation. The writer discussed this point at length with Mr. B. S. Kesavan, formerly Curator of the Central Bureau of Education, who has been a friend of the educational film for years. He had just spent a week viewing some 300 American short subjects with a view to purchasing films for the Central Government. He rejected over 50%.

If we compare two films from the same health series produced by Coronet Films, "Safe Living at School" and "Cleanliness and Health" we will see that the first has little usefulness for India, while the second film could be used. In the first film two children, Ted and Ruth, are members of the Junior Safety Council, a situation with no parallel in India. But in the latter film, David who believes that "A little dirt won't hurt you" goes to his doctor and observes germs through a microscope. The world of microphotography brings America and India together. The germs on David's hands are the same as on Ram Dutta's. This film could be useful in India for health education.

The Encyclopaedia Britannica Health and Hygiene 16 mm. films can be used generally in India. I have projected "Tuberculosis" and "Heart and Circulation" to many village groups with a Hindustani commentary bringing a new understanding of the menace of Tuberculosis and a new appreciation of the wonderful muscle, the heart. British Information Service has an excellent list of Health and Medical films of which the "Your Children and You" series can be highly recommended.

6. The Need For Indigenous Produced Film: It should be obvious now that while we endorse the use of selected western produced material for use in India we must work toward the production of a large footage of India-made health films. If any material is to be understood, it must be built around the familiar.

This raises the question of language again. Even a film in Hindi is not enough to reach the average villages, for, the film ought to speak the dialect of each area. The lack of funds will probably prevent the recording of as many dialects as would be educationally beneficial. The only solution is to cut the Hindi soundtrack and furnish a trained commentator for the regional language of the respective group.

Some recent health films produced in India include: (1) The United Nations Organization sponsored trio: "Mother", "Child", "Community" produced by Paul Films of Documentary Unit India, which was a most commendable project. No foreign actress could take the audience so close to the heart of India's rural health problems as Sita Devi, the Social Service Worker. (2) "Uddhar", produced by Mothane, Ltd., for the Prohibition Board, Bombay, was made to influence the masses by an educational approach against the consumption of alcohol. (3) "Saput—Kaput" (Good Son—Bad Son), a 22-minute black and white health film with Hindustani commentary is another government produced prohibition film released through Associated Educational Films, Ltd., Bombay, (4) "A Tiny Thing Brings Death",

produced by Documentary Unit India for the Imperial Chemical Industries (India) Ltd., is a film which could play a vital role, in promoting Malaria Control campaigns. These are a few of the current films produced in India for health education but it is obvious that a much larger quantity of film is required, if the shift is to be made from foreign production to indigenous production.

The dearth of independently produced or "Sponsored documentary" films is partially due to the policy of the Films Division of the Ministry of Information and Broadcasting. Every cinema is now required by law to screen a certain footage of film which has received an approval certificate granted by an Advisory Board appointed by the Government. As only 52 certificates will be issued each year, with 36 to be produced by the Films Division, that means only 16 certificates are left for independent productions, provided the name of the sponsoring company is not in the titles. The exhibitor who is loaded down with "approved" films is loath to use a "sponsored documentary" ("A Tiny Thing Brings Death", "Kurvadi Road", by CIBA pharma, "The Doctor's Advice", Horlicks, etc.). The independent producer is hesitant to invest in film which may be useful for health education purposes when he realizes the opportunity for sale or release through cinema booking channels is very small. So the question still remains, "Who is to produce the quantity of health education films required for India?"

7. Having made a case for the use of motion pictures because the film correctly used has an undoubted value in enlarging public appreciation of the principles of good health and the methods required to achieve it, let us consider two dangers inherent in their use. These are: (1) the films close association with entertainment, and (2) the "excitement" element. The motion picture has been associated very largely with popular entertainment. Consequently, the educational film starts with an initial handicap. Most people go to the cinema for entertainment which may be interpreted as the "absence of any

matter which requires concentration or undue mental activity". Thus, serious educational content is considered an intrusion. One effort to meet this opposition resulted in the cartoon type of instructional film, which, in some cases, has been successful, as witness the Walt Disney series but in many instances any educational value has been lost amid the comi-cappers of animals or men.

Then, we must be on our guard lest the initial popularity of a film program be equated with educational result. Go to any village and set up a screen and project any film. There will be an excited audience of hundreds of thousands. Nothing may have been learned. The writer projected films to audience up to 12,000 in the Refugee camps of New Delhi in 1948. Yet, one seriously questions any profound health learnings. Conditions and habits remained much as they were. Let us face the fact that most crowds get entertainments, diversion and excitement from sound movie programs. This is alright, provided we do not equate this with the learning-process. The film is an aid in health education and presupposes careful use and follow-up.

8. The Need to Understand the Philosophy underlying Mass Media Communication: In the average Indian village, with the slow tempo, it can always be said that the motion picture is fast. Moreover the lack of electricity and the dearth of flat pictures have limited the average man's experience in viewing pictures after dark. Hence it is an effort to translate image (symbols) on the screen by means of artificial light into reality. Dr. George Pearson of the Colonial Film Unit (British), in "The Film in Colonial Development" (March 1948, p. 24) writes: "Since 1942 we have maintained a close examination of educational and instructional films from every available source. Of 1,500 such films that we have viewed, only ten might be useful to us for our illiterate audience, but even those ten would need drastic cutting and resnapping. The final result could be nothing more than makeshift".

"Despite these warnings of dangers in the use of motion pictures for health education among the masses, let us not react so violently that films are neglected and only India-produced material is used. Our guiding question should be "Do they serve the purpose of spreading health information?" Then it is our duty to retain adequate control over audience, setting, equipment and film so that our purpose is achieved.

If we would retain control over our audience in using films or filmstrips, we need an increased understanding of audience reaction. One gains the impression from conferences in India that educators are more concerned with acquisition of projectors than in acquiring a personal knowledge of the underlying philosophy of mass communications. It is hoped that seminars, workshops, and institutes can be held for educators and officials all over India so that they can come to grips with "semantics"—the effect of the medium and the mode of expression upon a given audience. There is no excuse for saying things in the wrong way, if the right way can be apprehended. The progressive Health Visitor may be compelled to put up with an "Old Dog" who scorns new tricks, but it is far safer this way than to arm the "old dog" with a 25-watt Public Address System.

We will use motion pictures for health education, because, (1) the motion picture has the ability of creating the illusion of movement which has compelling power; (2) it has the advantage of closer attention since films are generally projected in a darkened room; (3) it has the advantage of bringing a large number of images before the audience in a short time, so that the life cycle of a living thing can be studied in a few minutes; (4) it can increase the picture-size enabling thousands to follow the message; (5) it is an aid in changing attitudes and habits.

The Filmstrip

The 35 mm. filmstrip is not widely known or used in India as yet. When the writer filmed and produced 360 black and white filmstrips on "Malaria", "Flies"

"Hookworm", "Good Water", "Tuberculosis", "Itch", and "Cholera" there was not a commercial company producing this medium. Yet, the filmstrip has been established as a practical and inexpensive aid for health education and its use must be promoted.

What is a filmstrip? A filmstrip is a series of related single photographs (frames) interspersed with titles to tell a direct story on a strip of 35 mm. film. The story may involve the use of 30 to 100 frames of film. Thus a 5-foot piece of 35 mm. film with 100 frames will tell a story which otherwise would require 400—800 feet of 16 mm. cine film. The filmstrips and 2" x 2" slide has largely replaced the old "magic lantern" with the heavy and cumbersome glass slides.

There are really four forms to consider: (1) the standard glass slide 3 1/4 x 3 1/4 inches becoming obsolete; (2) the 2" x 2" miniature slide which consists of individual frames from a filmstrip mounted in glass-binders; (3) the filmstrips, and (4) the 16 mm. microfilmstrip, which in this paper we can disregard.

Because of the availability, portability and economy, we will concentrate upon the 2" x 2" slide and filmstrip. The miniature slide, usually spoken of as a 2" x 2" slide, has a picture size commonly 1" x 1 1/2" or 2.5 cm. x 3.8 cm. This size is based on the 35 mm. film. There are a variety of frames for binding the cut-up 35 mm. film from very inexpensive cardboard binders to glass covers with plastic binders. Where slides are to be used, such glass mounting is advisable.

The filmstrip is a set of slides on a piece of 35 mm. film which moves through a projector, picture by picture, or frame by frame. The filmstrip is the lightest and least expensive of the 35 mm. media and is excellent to present a fixed series of pictures. If one wants flexibility, i.e., the use of a few pictures out of a series, slides are to be preferred.

The filmstrip or slide projector is simple to operate. Each picture is flashed into position by a turn of the knob on the sprocket wheel. Personal comments may

be "live" or recorded on discs or tape to make it a sound programme. With each filmstrip, there is a printed script giving a frame by frame commentary.

What are the advantages of the 35 mm. filmstrip and projector? It is most helpful when a vernacular commentary has been added to a western produced filmstrip. The equipment involved is portable, simple to operate, compact and inexpensive. Models can be operated on electricity, storage battery's gas-electric generator or with a Petromax-type lamp. Films can be produced easily and very cheaply. They can be projected in a semi-dark room which is of value in extension service.

There are today tens of thousands of filmstrips for sale covering every phase of school curriculum. We are particularly fortunate in the health and hygiene resources in the filmstrip and slide field. Let us consider one filmstrip, "Your Teeth and your Health" distributed by the Society for Visual Education, Chicago, Illinois, for the American Dental Society. The contents include actual photographs of children in situations illustrating the care and neglect of teeth. Special attention is given to correct brushing of teeth and a balanced diet, while the background is typically American lessons are generally applicable and will be useful in India until something better is produced indigenously. Substitute "chewing sticks of neem" for toothbrushes and the same lessons can be transferred.

Because filmstrip production is so simple and can be produced in any amateur dark-room, it might be well to note some of the factors involved in home-made filmstrips. Having chosen the core idea, we must

consider the picturization possibilities inherent in the idea. Next, we consider the point of view to be expressed in the filmstrip which is one phase of the total philosophical considerations. The audience must be considered at this stage and a clear understanding reached as to where and when and with whom the filmstrip will be used. My filmstrip, "GOOD WATER" would serve little purpose in a city for it was designed for use in a typical village. Vocabulary factors, language and audience needs will likewise be in mind. As the picture sequence grows, the script must be completed with titles, the commentary and method of continuity formulated. The photography, graphic problems, laboratory requirements and publicity are not now our chief concern. But top-flight filmstrips do not grow by using a series of photographic discards. A good filmstrip is an achievement.

As far as the writer knows personally, the West Bengal Secretariat is the only governmental agency in India producing and using propaganda filmstrips. "Mahatma Gandhi's Last Rites", is just one of a series of such filmstrips used with 60 projectors which circulate throughout West Bengal as part of their information service. This is a wise move and worthy of duplication elsewhere.

In conclusion, we can repeat that good health calls for established health habits which involve the learning of scientific facts about food, disease and medical care. For mass education, a variety of aids is required among which are the indispensable motion picture filmstrips and 2" x 2" slides.

The phenomenon of thought transference is in no way inconceivable, nor is at variance with what we know about the operation of the human mind.

When you strike one tuning fork, another of the same key will vibrate in unison; when you set in motion one of two magnets hanging in the same position, the other will swing with it.

The material of which the human brain is composed is far more subtle and wonderful than the material of a tuning fork or a radio tube. Perhaps telepathy will be explained as the radiations of thought waves going out from one mind and receivable under certain conditions by another

—Henry Allen Stonewall.

FOOD AND FOOD SUPPLEMENTS

by

V. Subrahmanyam, D.Sc., F.R.I.C., F.N.I.

Director, Central Food Technological Research Institute, Mysore.

IN different parts of the world, people consume various kinds of foods, the nature of which depends largely on availability, climate and other environmental factors. Thus the Esquimos live on a predominantly non-vegetarian diet in which fat and protein constitute about 80%. There is very little vegetable matter in their diet and of this starch forms an almost negligible part. In the temperate and sub-tropical regions, the diet is more balanced and contains 10 to 15% of fat and 15 to 25% protein. It is generally mixed diet in which cereals, vegetables, fruits, etc., form about 40 to 50% of the diet. Over a large part of the tropics, the diet, especially of the poorer sections of people, who form the majority contains about 5% fat and 8% or less of protein. This type of diet is predominantly vegetarian and contains over 80% of cereals, tubers and other starchy foods. It would thus be seen that starch forms the main constituent in the diet of the tropical regions, while it is almost absent from the diet of the people in the extremely cold regions. Foods which can easily be burnt in the body are required for maintaining the body temperature in cold regions, while those which are less rich and develop less heat energy are required in the warm tropical climate. It will thus be seen that the choice of food is essentially one of adaptation to environment and subsequent development as a habit. Experience has shown, however, that one can change from one diet to another, though it may take some time to get used to the change. It would be possible to live on a diet which is completely free from starch or even fat. Protein is essential but one can change from a high protein to a low protein diet depending on environment.

Utilisation of different diets in the human body

The extent to which a diet is utilised by the human body depends not only on age,

condition of health, habits of life and other related factors, but also, to a large extent, on the nature of the diet. Thus, it is of interest to mention that people who live on a diet which consists predominantly of fat and protein, digest most of their food and that there is very little of faecal excretion amounting to hardly 200 gms. a day in the wet state. On the other hand, a diet which consists predominantly of cereals and vegetables is not wholly digested and yields a large faecal residue which may be as high as a kilogram or more per day.

Variations and quality of different Indian diets

While in most of the smaller countries there is not much of regional variation in regard to diet, there is considerable variation in the bigger countries like India and China. Thus, we have in India nearly a dozen types of regional diets. We have the range from the rich mixed diet of the Punjabies including meat, milk, eggs and fish together with wheat, pulses, and vegetables, to the poor South Indian diet which consists mostly of cereals and tubers with very little of pulses, meat or milk. The quality of the food is reflected in the physical development and other attributes of the people in the different regions. More than two decades ago, McCarrison carried out an experiment comparing the response of experimental animals (chiefly, albino rats) to the different types of Indian diet. He observed that the growth response varied considerably with the nature of the diet; that while the animals grow at 12 gms. or more per week on the Punjabi diet, they grow 3 to 4 gms. on the poor South Indian Rice diet as also on the poor Bengali diet. He also noted that the animals receiving the poor cereal diet showed a number of pathological symptoms such as hæmorrhage in the digestive tract, liver disorder,

shedding of hair, etc. He also reported that the animals on the poor diet had a tendency to develop lung affections and that many died of pneumonia. Experimental animals do not breed well on the poor cereal diet. The few young ones that are born do not survive for long. The observations on experimental animals are generally reproduced in the case of human subjects. It is chiefly in respect of reproduction that the human subjects differ mainly from the experimental animals. The rice-eaters are some of the most prolific in the world and this in fact has been mainly responsible for the food crisis of the present day!

The rice problem

In spite of its being a food material of low nutritive value, rice is the most popular cereal in the world. It is eaten in practically all the tropical and sub-tropical countries which account for more than half the population of the world. The following are some of the causes for the high popularity of rice. It has an attractive appearance and a natural taste and is easily digestible. It has been found that in addition to the normal rice-eating population, a fair section of even those who have been accustomed to eating millets and tubers change over to rice whenever circumstances permit them to do so. Persons accustomed to eating rice find it extremely difficult to change over to any other grain or tuber. During the sad and devastating Bengal famine of 1943, it was observed that the rice-eaters would not readily change over to millets, even when there was practically no rice to be had. Similarly, during 1946 and subsequent years, when large quantities of wheat and millets were distributed to meet the shortage of rice in South India and in Bengal, these grains were used only to a very limited extent and quite large quantities went to waste. Rice has a tremendous hold on its consumers and we will have to see how far their requirements can be met either directly or in other ways.

At the present time, the estimated potential surplus production of rice by

countries like Burma, Siam and Indo-China is of the order of about two million tons, whereas the requirements of deficit countries like India, China, Malaya, Ceylon, etc., is very much more. The rice production countries can of course increase their output of rice by suitable application of fertilisers and organic manures. The latter are however available only in very small quantities and it is unlikely that, in the absence of these, there will be any appreciable increase in the production of rice. Thus, India would require a few million tons of Ammonium Sulphate alone for her rice fields, whereas the maximum contemplated production for all the crops is less than four hundred thousand tons. Even this will take some years to come to the stage of maximum production. In the meantime, the population of rice-eaters keeps on increasing and to meet the increasing requirements, alternative foods acceptable to such people should necessarily be sought for and provided.

The rice grain contains about 80% starch, which is the main constituent. It also contains about 8% protein. Similar types of starch, as also proteins of nearly as good quality, are widely distributed by nature, but none of these natural forms provide grains which can be cooked and consumed in the same way as rice. Most of them contain varying amounts of fibre. They also have tastes and flavours which are not generally acceptable to the rice-eating people. The consumers of rice are generally keen on having the cooked product in a condition in which the grains stand apart. This facilitates penetration by the body juice and thus leads to easy digestibility. It is because of this that the rice-gruel which causes the grain to stick together is drained out although most consumers are well aware of the loss of vitamins and other essential ingredients during the process.

Substitutes for rice

One of the most promising methods of meeting the requirements of the rice-eating people is to process different forms of starch bearing materials so as to elimi-

nate the characteristic taste and flavour and also to obtain the desired grain-structure. This could be achieved by concentrating the starch fractions of the different grains and incorporating the necessary amounts of proteins minerals and vitamins from other sources. The possibilities in this direction have already been envisaged and work is actively in progress in this country and elsewhere.

Our experience has already shown that it is not difficult to nearly reproduce the grains structure of rice. Any slight difference in this direction is not very material provided the taste and flavour are otherwise acceptable. To achieve this end, the processed starch used for the synthesis should be as clean and white as possible. The added proteins and minerals should be well balanced, and, at the same time, impart no characteristic taste or flavour. There should be practically no fat in the product, for, otherwise, there will be grave risk of spoilage through rancidity. We have found that several such products can be prepared, but it will be quite some time before the processes can be fully standardised and carried to the stage of large scale mechanisation. It will be no easy matter to produce a few thousand tons, let alone the few million tons, which would represent the present extent of the shortage.

Supplementation of the rice diet

While the provision of more rice or a good substitute for rice is a major measure for dealing with increasing rice shortage, there are other and equally important problems relating to the supplementation of the rice diet. During the past few decades, a number of workers have drawn attention to the multiple gross deficiencies of the rice diet. The diet requires to be supplemented with proteins, minerals and vitamins. Milk, meat, fish, eggs and other concentrated foods would make excellent supplements, but they are beyond the reach of the majority of the people. Among the individual supplements, calcium is very important, but this is best provided through a suitable natural vehicle. Supplementation with small

quantities of milk or skimmed, has been shown to be very effective as an all-round supplement. Fats do not have any supplementary effect and, in fact, the recent trends of evidence would show that increasing amounts of fat are actually harmful.

The milk problem

Excepting for isolated regions, there is generally short supply of milk in tropical countries. In fact, in regions which get heavy rainfall, there is invariably acute shortage of milk. The average production of milk in India is hardly 25% of the minimum requirement for the well-being of the people. Over large parts of South India, the average production of milk would correspond to hardly 2 oz. per capita. Production of more milk is highly desirable, but it is doubtful whether, in spite of the most energetic measures, it will be possible to increase milk production in the country. Availability of fodder and concentrates would form the bottleneck in milk production. There is a strong case, therefore, for supplementing the available supply of milk with other forms of food materials, which are equal or nearly equal to milk in their food value.

Supplementary value of soya milk has been established.

Since the early forties, researches have been in progress in India to determine whether soya bean which is so extensively used in China and other Far Eastern countries can make a useful supplement to the poor cereal diet. The earlier work was directed towards the assessment of the whole bean either in the raw or in the cooked state. This showed that, used in this form, the bean is not superior to any of the indigenous pulses in spite of its very much larger content of protein together with the valuable oil. This led us to the study of the effect of processing of the bean and we found that germination, followed by disintegration of the cell and the preparation of the milk emulsion, increases the digestibility and the biological value of the proteins by about 50%. On fortification with calcium, the supple-

JL

L: 500 21, N 47 PE

NSI. 5. 9

mentary value is further increased and corresponds to about 90% of that of cow's milk. We carried out extensive studies on protein values not only by the usual balance sheet and growth methods, but also by investigating regeneration of red blood corpuscles and formation of liver protein. We also carried out studies on the over-all vitamin complex values and showed that the processed milk are not inferior to those of cow's milk. With the background of these observations, we carried out an extensive programme of human feeding experiments in welfare centres with over 100 children (eighteen months), in orphanages with about 400 children (two seasons) and in schools with over 5,000 children (two years). The institution feeding experiments were carried out in association with the medical observers from Nutrition Laboratories, Coonoor, and statisticians from the All-India Institute of Hygiene, Calcutta. **The results have now shown convincingly that soya milk and also the sour curd prepared out of it have a definite supplementary value to the poor rice diet corresponding to over 80% of that of milk.**

In addition to the above, we have carried out a dozen of consumers' trials and have shown that soya-milk, curd and the allied products can be generally used in the same way as cow and buffalo milk products. The residue after separation of the milk has also got its application and can be used for a variety of food preparations. If carefully prepared, it would be difficult in practice to distinguish between those prepared out of soya-milk or curd and those obtained out of the corresponding cow or buffalo milk products. There is a very strong case, therefore, for the State not only to recommend but also to actively assist in the popularisation of the use of soya-bean milk and its products as supplements to the available limited supply of the milk.

All animals derive pleasure from food. But for man there has been reserved the additional gratification derived from the social meal. It is pleasant for us to take our food in company. Why is it so? There is no need for this. It might have been otherwise; it might have been natural to us, as it is to some of the lower animals, to carry away each of his portion of food and consume it apart; nay, we might have been so made, as to feel shame or disgust at the very thought of eating in the presence of, or along with, others. But had it been so, of what a source of gratification, as well as of moral culture, had we been deprived! how would society have wanted one of its most potent cements—one of its most soothing and refining influences!—Dr. W. L. Alexander.

Vitamin A and carotene

The poor cereal diet, is grossly deficient in practically all the vitamins. Among these, that of vitamin A is one which is quite extensive. Shark-liver oil is a rich source of the vitamins, and during the recent war, a unique opportunity to revive the indigenous industry, which had practically died out. The industry was bringing a good return till 1946, but even long before evidence was not wanting to show that, consequent on the adoption of unsatisfactory methods, absence of adequate protection and also gross adulteration with other oils, the quality of the product was unsatisfactory. A great deal of scientific work has been done and among these we have shown, fairly conclusively, how the vitamin A potency of the oil for which it is chiefly valued could be best preserved. It is distressing, however, to find that the necessary precautions have not been generally taken. While, on one side, we are crying for the production of more vitamins, an indigenous industry concerned with such a production is actually dying under our eyes on the other.

Fish liver oils, however good, are not very pleasant to take. Carotene from plant materials are 60 to 70% as efficient as vitamin A and we can produce the entire carotene requirement of the people in the country without much difficulty. Proposals for the general fortification of oils and Vanaspathi have been put forward. It has also been shown that the fortification is comparatively inexpensive. In spite of this, no definite steps have been taken to encourage the fortification of oils and Vanaspathi. If there is a State legislation on this aspect, the entire supply of the oil and Vanaspathi intended for use as human food can be fortified in less than six months.

Courtesy—"New Pakistan Medical Journal."

FOOLS RUSH IN WHERE ANGELS FEAR TO TREAD

B. C. G. HUMBUG

by

Ajit

Contrary to expert and commonsense view alike that ill-nutrition invites disease and good nutrition keeps it at bay, our Government have, without caring to provide for a square meal for men, sought to fight T. B. with B.C.G.—an obscure and dubious serum which has not yet passed the experimental stage. Already 30 lac school children have been inoculated with this poison. Crores more are scheduled for this infliction. This, in face of the fact that no other Government has thought it right to subject its citizens to its inoculation. Truly has it been said, fools rush in where angels fear to tread.

THE B.C.G. vaccination campaign which is being carried on a mass scale by the Congress Governments in Bharat with a zeal and determination worthy of a better cause, does not seem to have attracted the attention it demands either in the press or on the public platform. The reason perhaps is not far to seek. The public at large do not seem to realise as yet the dangers and perils with which this much-advertised 'public health' measure is fraught.

It is true Sri A. V. Raman of Madras—an authority on Public Health and Sanitation—has raised his powerful voice against the ill-considered action of the Government in a series of instructive and thought-provoking articles, but so far his voice seems to have proved only a cry in the wilderness. Already three and a quarter million school children have been inoculated with a poisonous serum, the precise effects of which no one seems to know or to even care to know, and it was recently announced that the Government of Bharat in the plenitude of its wisdom has decided to offer this 'protection' against tuberculosis to the entire population between 1 and 25 years of age in the villages as well as in towns.

A Poison

To judge by the vigour with which the Union and the State Governments are carrying on the campaign, one would think that the efficacy of the B.C.G.

vaccination has already been established beyond doubt. But, believe it or not, it has not yet passed the experimental stage. The innumerable experiments conducted by the most eminent scientists in different western countries have proved absolutely inconclusive. Fierce controversies are still raging between two rival schools of scientists as to the precise results of B.C.G. vaccination. A large number of scientists prove by facts and figures that B.C.G. vaccination is attended with most injurious effects on the system, while some more opine that the vaccination is at best only of doubtful efficacy. Even these scientists who advocate this new-fangled method of combating tuberculosis, admit that certain bad after-effects do ensue from B.C.G. vaccination, though they would have us believe that they are only temporary, and as such, not to be regarded as a serious objection.

Men Or Pigs?

In this baffling conflict of opinion among the scientists themselves, and while even the western nations are so chary of trying this still un-proven form of vaccination in their own countries and on their own children, one may be excused for asking why all this indecent haste on the part of our Congress Governments not only to take it up but also to make a veritable crusade of it in our poor ill-fated Bharat? Is it because the scientists concerned could not find in their own countries a sufficiently

large number of parents prepared to offer their children as human guinea pigs for purposes of experiment and research? Or, is it because the Congress leaders at the helm of our 'Welfare State' thought that over-populated Bharat could very well afford to risk a few million lives in such a 'noble cause' and could at one stroke have not only due gratification of their vanity of being ultra-modern but also the satisfaction of taking a big strife forward towards solving the present difficult food-problem? Or, is it because we Bharatyas, weak, gentle and fatalistic as we are, were considered to be ideal victims to be freely experimented upon without the danger of even a protest? Or, is it because our democratic government, fully conscious of their possession of a brute majority in the Parliament, hoped that even in the remote event of any voices of protest being raised, they could all be easily silenced, and drowned too, by—is Master's Voices, in the legislatures? Whatever the reason, this hasty, ill-conceived and outrageous action does not reflect much credit on our Government. Indeed, it calls for the severest condemnation.

Our Congress leaders lose not a single opportunity to invoke the magic name of Gandhiji in the course of their public speeches and to claim him as their Master, Prophet, Guru and what not and thus lead the world to believe that they are loyal followers of Gandhiji. Now it is well known that Gandhiji was not only an ardent advocate of Nature cure treatment but a determined and life-long foe of vaccination and all forms of inoculation. His considered view was that people with a strong constitution and strong powers of resistance are proof against all disease, just as people with a weak constitution and weak powers of resistance are standing invitations to diseases of all kinds, and he therefore, with his rare insight, always attached more importance to the building up of a strong physique by proper nourishment than to protective measures like B.C.G. vaccination. It can be safely asserted without the least fear of contradiction that, if that great man were alive to-day, this dangerous measure would never have been resorted to and even if

it had, that true Soul of Bharat would have fought against it tooth and nail and got it withdrawn even by staking his precious life. How is it then that his closest and staunchest followers (including even his 'political heir and successor') are bent upon carrying through a measure which would have been so hateful, and have proved even fatal, to one for whom they profess so much reverence, homage and loyalty?

The only possible explanation is that our leaders had little faith in Gandhiji's principles even during his life-time and have now even less, after his death, and that Gandhiji's name was, and is still, being invoked by our leaders, in season and out of season, just for its propaganda value and nothing else. Witness the woeful neglect of khadi and other village industries, which to Gandhiji were as the very breath of his life, and which, if only properly organised and developed, immediately the Congress came into power,—would by now have gone a very long way towards solving at least two of the most baffling problems facing the country to-day, viz. this cloth problem and the housing problem.

Let us not forget that the Government of no other democratic country in the world would have dared to play ducks and drakes with the precious lives of their citizens, as they are doing here in Bharat to-day and that, even if they had, the people would have either stopped such an outrage at the very outset or pulled down the Government itself for its daring audacity. Let the Congress Government on their part remember that even the worm turns. The partition of Bharat, the pro-Muslim policy, the Hindu Religious Endowments legislations, the Hindu Code Bill, the food, cloth and housing scarcities, the soaring prices, the growing taxes and the mounting muddles have already sufficiently tried the patience of the long-suffering masses. The present B.C.G. vaccination crusade may well prove to be the last straw on the camel's back. Let the Government remember the story of the greased cartridges and be warned in time.

--Courtesy, "Organiser."

ALCOHOLISM—A HEALTH PROBLEM

Why the study of alcoholism should be taken up in health education.

by

Dwight C. Monnier

MR. MONNIER is Executive Secretary and Director of Education for the Western New York Committee for Education on Alcoholism, Inc. in Buffalo. He is vitally concerned with this problem and its educational implications.

ALTHOUGH there are laws on the books of each of the 48 states pertaining to the study of effects of alcohol, comparatively little attention has been paid to them. Regardless of law, any consideration of the problems involved can be effective only through a dynamic approach, resulting in subsequent arousal of interest by the students which will enable them to formulate their own positions in the light of all available evidence.

Adequate education has never been met by mere lip service to a legalistic mandate. In addition, there is considerable question as to the effectiveness of the "moralistic" type of "temperance" teaching, which has been carried on by some schools. Since the influencing of students towards socially acceptable standards of conduct is a legitimate and important objective of health education, it would seem obvious that the study of alcoholism has a definite place in the overall scheme of health education.

An impartial consideration of the many aspects of alcohol and alcoholism will demand on the part of the teacher considerable ingenuity, tactfulness, and research with careful preparation and presentation. To compensate, there will be exceedingly worth-while rewards of properly handling something that is not only difficult for most teachers, but also of vital importance for our youth to understand. I wish to emphasize that our position at the University of Buffalo Information and Rehabilitation Centre is neither with the "Wets" nor the "Dries." The approach is fundamentally the same as may be taken towards any other disease. For alcoholism is a disease and as such

has been recognized by the medical profession.

Alcoholism Affects the Family

As a public health problem, it is wider in scope than many others. Although it is not contagious in the sense of infectious germs, the resulting impact of the disease upon the relationships of alcoholics to their families and society are far greater in their sociological implications than most other health problems. It would seem theoretically, and it has been borne out in practice, that consideration of problem drinkers and the underlying causes of this problem will be most effective in the creation of healthful attitudes and favourable standards of conduct if a comprehensive, dynamic, exploratory type of approach is used.

Any such approach to a problem of educational interest must take into account the natural interest of the students, the material chosen, and the techniques involved in presentation.

Teachers Must Understand the Facts

Although there is no disagreement among medical people or research scientists that alcoholism is an illness, there is bound to be disagreement within any group on the social outcomes resulting from use of alcoholic beverages. This latter can be effectively utilized in the teaching situation by any teacher who is well-versed in scientifically proven and accepted facts underlying problems of alcohol. At the same time, it is safe and effective material upon which one can build the teaching unit. Anyone not familiar with the many and involved feelings connected with

alcohol among individuals and groups is bound to be astonished by the emotional overtones involved, which invariably tend to color interpretations of facts. For example, it has been common for many people to think of the alcoholic as a "weak character."

There is no more character weakness involved in the alcoholic than there is in the person suffering from cancer, T.B., or schizophrenia. To complicate matters, the social ramifications are oftentimes much farther reaching and more evolved from emotional and psychological standpoints than are most other public health problems. The psychological causes and results are fascinating from the standpoint of unbiased and scholarly study. Interpretation of these to youngsters and by the youngsters themselves have proven to be of great interest both to adolescents and their parents.

One must remember that in practically any group there will be some who have had at least a casual contact with problems created by excessive use of alcohol, without in the least understanding the underlying involvements. And there are some who have had direct contact in a tangible fashion. As a result, they have become emotionally involved "up to their ears." When the latter happens, it is of vital importance, and I cannot stress this too highly, that the teacher use sound, healthful guidance in helping the unfortunate youngster over a very difficult but important portion of his emotional maturation.

How to Present Facts

There is no one best way. The most effective technique is the method that will work best for the teacher in putting across enough material in such a manner that healthful and socially acceptable habits and attitudes will be strengthened or created.

The following outline is suggested as one type of approach for junior and senior high-school health classes:

I. Class discussion of alcoholism and alcohol.

1. Adequate time should be given in order that each student may raise the questions he wishes to have answered.
2. Listing of questions and problems raised regardless of whether they be physiological, moral or psychological in nature.
3. Some questions which indicate a wide variety of interest that have been asked the author are:
 - a. What is meant by alcoholism?
 - b. Is it inherited?
 - c. Why don't drunks use "will power" to stop drinking?
 - d. If a person's father is a drunk, will his son become one?
 - e. Does alcohol affect a boy in sports?

The above are but a few samples which illustrate the extreme interest that American youth has in this problem.

4. The raising of questions both by students and teacher is of considerable importance in a unit such as this.
5. There should be opportunity for questions to be written and subsequently raised with the writers remaining anonymous.

II. Presentation of the historical role of alcoholism in various cultures throughout the ages.

1. Students of all age levels seem to find this fascinating. They are particularly interested by the methods which various cultural groups have used wine to help them against their enemies.
2. This material may be presented by the teacher.
3. Where material is readily available, students either individually or by groups reporting to the class is a very effective means for such presentation.

III. Differing concepts at the present time, such as:

1. The man who drinks like a man.
2. The so-called "weak character."

IV. Summation of role of alcohol and alcoholism as a disease by the teacher.

V. General class discussion.

Correlation with Related Fields

It should be pointed out that there are stages throughout the entire study of problems of alcohol where definite correlation with related fields can tend to bring new meaning and greater awareness of the overall importance of the several subjects. For example, the historical role of wine as used by the Romans against the Barbarians can work as double-edged stimulus both for ancient history and for health. Let us briefly look at the facts of this portion of study.

The Romans used wine as a definite aid for destroying Barbarian invaders. This was done in approximately the following manner. The Romans, when realizing they were outnumbered by large forces of invading Barbarians, would at times abandon outposts leaving a large supply of wines and beat strategic retreats to safer positions. It was somewhat typical of the Barbarians that upon taking possession of any outpost or village they would immediately sack the place. As a result the finding of wine was an invitation to them for a good, free-for-all drunk. Roman scouts would determine when the Barbarians, or at least large parts of them, were under the effects and then a swift vengeful attack by the well-disciplined Romans would result in the slaughter of large numbers of the enemy. Is there ancient history involved in this type of material? Of course there is!

It is an interesting type of education for youngsters that not only holds their interest but raises further problems for them to solve. It is also true that early Christian writers, and writers before that era for that matter, advised athletes to use wine lightly, if at all. A consideration of social problems as caused by alcoholism or vice versa is also of interest to teenagers. The psychological relationship of alcoholism where alcohol is used as an

escape mechanism to run away from some underlying emotional involvement can be worked out in a variety of ways. This is especially true of the more intellectually minded students who wish to delve a little deeper than the rest of the group.

We know that alcoholism is a disease which is usually preceded by a drinking history of from seven to 20 years in the male and from two to four years in the female. Oftentimes, alcoholism seems to be the result of a failure to adequately adjust emotionally to some of the problems of modern life. These are important facts for all of us to know.

Educational Implications

A study of the known facts of alcohol problems in the fields of physiology, psychology, medicine, sociology, and education seems to very definitely indicate that the adequate and comprehensive study of this field can be extremely valuable emotional aid to adolescent youngsters. Any approach must result in far more than the mere learning of causes, symptoms, and rehabilitation. There must be no suggestion of preaching or moralizing to the students. Such a study is bound to uncover youngsters, who have definite emotional problems involving relatives. The understanding and sympathetic guidance by the health teacher can do much to prevent further development of those emotional problems in socially unacceptable manners by the youngsters. When youngsters are approached as equals, they will in their own evaluation of the entire problem of alcoholism, tend to make a more wholesome adjustment in their own lives and ultimately satisfy one of our underlying aims, that of development of favourable and healthy standards of conduct.

There is a challenge here to every teacher of health. Whether or not this challenge is met depends largely upon the members of the health and physical education profession. It is up to you.

—Courtesy, "The Journal"

GROWTH OF INDUSTRIAL HEALTH SERVICES

by

Herbert Tracey

Member of the British T.U.C.

No small contribution to the development of labour efficiency and higher productivity in British industry is made by the industrial health services, a fact underlined in a report just issued by a Committee of Inquiry appointed by the Prime Minister, Mr. Attlee, to examine the relationship between these services and the general preventive and curative health services provided for the general population.

The report bears emphatic testimony to the essential importance of the industrial health services, from whatever angle they are regarded, and treats them as a normal function of enlightened management today. The services are of great value because of the contribution they make, says the report, both to the health of the workers and to productivity. By taking care of his health, these services help to keep the worker at his employment, contribute to his confidence, and thus increase his satisfaction with his work and conditions. "They are thus an important element in promoting and maintaining good morale in industry", says the report.

There are at present about 230 medical men on full-time jobs in factories in the United Kingdom. Another 1,500 hold part-time appointments — giving substantial service of more than 12 hours a week on the average—while several hundred more give from three to 12 hours a week to medical work in factories.

More than 1,200 other doctors who are not strictly factory doctors give their services, too; and there are about 4,000 on the nursing staff (half of them State-registered nurses) who are connected with these services: that is to say, they are concerned with the medical supervision of factory workers, with nursing and first-aid services for these workers, and generally with their welfare as employed persons.

Medical Factory Inspectorate

The present industrial health services constitute a characteristic British combi-

nation of private and public enterprise. They have grown up, on the one hand, from the medical factory inspectorate which was set up in the past by the State to enforce and advise upon an increasing volume of legislation concerned with the health of factory workers and their working environment.

Britain's first Medical Inspector of Factories was appointed in 1898. There are now some 15 such officers who form part of the Factory Department of the Ministry of Labour. It is their duty, among other responsibilities, to make special investigations into questions of industrial hygiene, industrial diseases, and such environmental conditions as affect the health of workers; especially those diseases that are of industrial origin and those that are directly dangerous to health.

It is primarily to assist this Medical Inspectorate that about 1,800 "appointed factory doctors" are in the industrial health services today. Their main task is to devise protective measures against industrial diseases, and to inspect all young people annually and adults in certain dangerous occupations periodically.

On the other hand, a growing number of employers have found it desirable to appoint doctors and nurses, not only to assist them in complying with the requirements of factory legislation but to provide standards, above the requirements of the law, in what the report describes as "a spirit of enlightened management and in recognition of a moral obligation" to their workpeople. The two World Wars gave an immense stimulus to the growth of the medical services in industry. Many of the wartime factories were under the control of a special Government department which had a medical department to advise on all questions of industrial health.

Private Employers' Interest

In addition to their own competent personnel, these services can call on medical manpower in the general preventive health

services connected with work and workplaces. It is pointed out in the report that the industrial health services are not, indeed, wholly medical in character; they are bound up with the carrying out of certain functions, largely non-medical, at the place of work. Medical Officers of Health appointed by the Local Government authorities also have responsibilities arising out of duties imposed by factory legislation upon these authorities.

Much importance attaches, for the development of the industrial health services, to the active interest of private employers as well as employing authorities, such as the National Coal Board, the British Transport Commission, the National Dock Labour Board and similar bodies. There is a Mines Medical Inspectorate, with a principal Medical Inspector and his Deputy stationed at the headquarters of the Ministry of Fuel and Power, and six Medical Inspectors stationed in the main coal-producing areas of the United Kingdom.

All new entrants to the mining industry under 18 years of age have to pass a medical inspection, and the nationalising Act of Parliament applying to the mining industry requires the Minister to introduce a per-

manent scheme of initial and periodical medical examination of all coal miners.

Recommendations

Along these lines a steady development of the industrial health service can be expected. The British Government has already indicated its acceptance of the general aims of the Committee's report. One of the recommendations of the Committee, on which two leading representatives of the trade union movement served—Dame Anne Loughlin of the Trades Union Congress and Mr. J. T. Byrne, of the Electrical Trades Union—is that a new permanent advisory council of doctors, nurses, workers and employers should be set up along with representatives of the Ministries of Health, Fuel and Power, and Labour, to act as a link between the national, public, and industrial health services.

It is common ground that the nation cannot afford to ignore the contribution which the industrial health services can make to higher efficiency and productivity in connection with the defence programme and the broader economic interests of the country.

B.I.S.

ATOMIC RESEARCH AIDS WAR AGAINST DISEASE

WORLD DEMAND FOR ISOTOPES

by

Guy Leonard

A technical journalist who contributes to a number of British Newspapers.

Growing knowledge of the medical value of radioactive isotopes has brought an enormous increase in their use. So far such isotopes are the only truly peaceful benefits to be derived from atomic energy. They are revolutionising some aspects of medicine. They have made it possible to discover more about certain diseases and bodily functions, and are also helping in the treatment of some diseases.

Most dramatic of the isotopes, in some respects, is cobalt, which is now widely used as a substitute for radium. Cobalt can be used in exactly the same way as

radium for many purposes, but it costs only one two-hundredth part of the price of radium. It can be manufactured almost as and when required, and is much easier and safer for hospital staffs to handle.

Most widely used of the isotopes is iodine, which is valuable for the treatment of thyroid cancer. Radioactive iodine has helped, and is helping, doctors and physiologists to study the workings of the thyroid gland.

Locating Tumours

There are two chief uses for phosphorus isotopes—which follow iodine closely in

popularity. The first is in the treatment of diseases of the red blood cells. Even more valuable, however, it has the property of concentrating itself in brain tumours, enabling surgeons to discover exactly where tumours are situated before they operate. Previously, exploratory operations were frequently necessary to locate tumours before the main operation was performed.

For the study of the circulation of the blood and tissue fluid, radioactive sodium is being used. The rays which any of these isotopes emit can be detected wherever they are in the body. If they are in the blood stream, their course through the arteries and back through the veins can be followed.

At Cost Price

Indicating the growth in the use of radioactive isotopes is the export of active material from Britain's Atomic Energy Research Establishment at Harwell, in Berkshire. During 1950, 1,291 parcels were sent overseas to 24 countries. In 1949, 223 parcels were exported, and in 1948 the number was 23. Every country in Europe, except the Iron Curtain lands, purchases isotopes from Harwell. Because of their immense medical value, they are sold at cost price (the figure does not include the cost of building the pile in which they are irradiated).

The biggest customer in 1950 was France to which country 247 parcels were sent. Next came Sweden, with 236. Switzerland was third, with 145; Belgium and Germany each took 91 parcels; Eire took 82, Italy 74, Holland 65, Denmark 39, Norway 37, Austria 25 and Finland seven.

India's Purchase

In the Commonwealth, the Union of South Africa took 76 parcels, Australia 53, New Zealand seven, while Ceylon, India and Nigeria bought one each. Five parcels were sent to Spain, two to Portugal, one to Turkey, one to Yugoslavia, and one to the United States.

It was in 1945 that the Atomic Energy Research Establishment was set up at Harwell, and since then considerable quantities of these immensely valuable isotopes have been produced there. It was natural that

hospitals, universities and industries in the United Kingdom should be the first to make use of the products of Harwell, and of the 3000 parcels sent out from the Establishment in 1949, nearly 2,800 were used in Britain. In 1950 production was about 6,000 parcels—twice the previous record figure—and over 1,200 parcels went overseas. There are upwards of 400 different types of isotopes now being made.

Rate of Production

Production has risen steadily, apart from the sort of interruption that might be expected—summer holidays, for instance. Once in three months or so, too, the pile has to be closed down for a week for over-haul, and no isotopes are produced during that time. For example, in April, 1950, 349 parcels were produced, as against 473 in March and 532 in May. But it was in April that the pile had one of its seven-day rests. November saw the biggest monthly total, with 620 parcels. On the other hand, the rate of production in December was higher than ever before, but advantage was taken of the Christmas holiday to shut the pile down for one of its overhauls.

It is quite likely that in 1951 the output of isotopes will reach 10,000 parcels. The probability is that an ever-growing proportion of the production will be sent to countries overseas. As knowledge of the value of isotopes grows, and as experience in their use accumulates, so ever growing advantage will be taken of their availability to help in the war against disease.

Industrial Uses

Few overseas countries have yet made much use of isotopes in industry. The field of possibilities here is even wider, if not so dramatic, as that in medicine. X-ray photography can be achieved with radioactive isotopes. They can be used in thickness gauges, in counting the contents of packages, and in reducing the fire risk from static electricity.

In these and many other uses radioactive isotopes can be made fully automatic and foolproof. The risk in handling isotopes at the production stage is extremely small. In industrial use, given proper and reasonable safeguards, it is non-existent. B.I.S.

DISPOSAL OF THE DEAD

by

T. R. V. Sastri

Disposal of the dead has a religious side but its more important aspect is its bearing on the health of the living survivors.

A friend draws my attention to an article in "The Sunday Times" dealing with my statement in "The Hindu" about the incongruity of a Samadhi at Rajghat after distributing Gandhiji's ashes far and wide. The writer in "The Sunday Times" agrees with my view of its incongruity but goes on to say that burial is not only a more ancient but a more holy method of disposal. He says that cremation is irreligious, brutal and monstrous. Cremation is to some of us enjoined by religion. Brutal and monstrous they are to one who attributes his feelings to the corpse. I have the impression that Gandhiji directed cremation. If I am right there, he preferred cremation as better than burial.

I am asked whether the house we tenemented in life should be burnt. I put the counter-question whether it should be buried. If neither cremation nor burial is proper, then apart from the Parsi method of exposure, which to many of us is repugnant, the only one which remains is to keep the corpse locked up in a room and if we adopt the primitive ideas that persist in both forms of disposal, we should leave food periodically in the room of the dead for the spirit to eat.

Whatever might be our view of life after death, the question for the living is, how to dispose of the dead. Life is self-acting and self-cleaning, resisting corruption; death is corruption, spreading poison, unless put away. If all the generations had been undying, there will be not sufficient standing space on earth. Lying prostrate, at death, they occupy more space and there will be even less space for all the buried corpses.

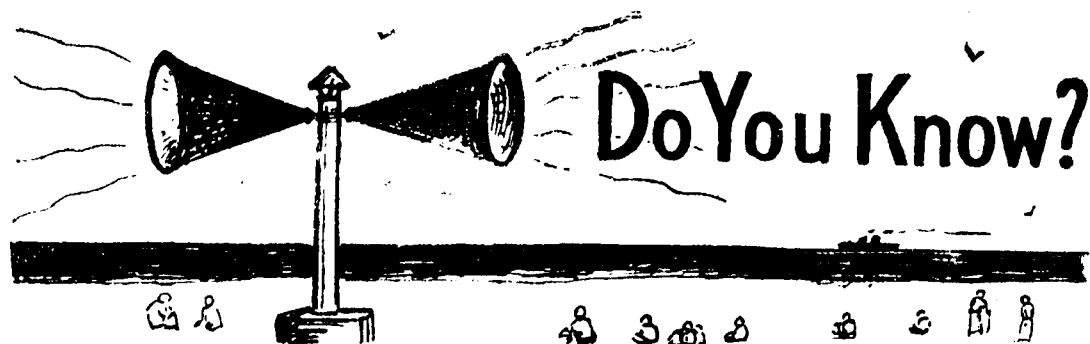
Small-pox deaths are not cremated in the belief that the germs of the disease will spread by cremation. I am told that they are first burned for some hours and then cremated. I do not know if that is right, but what I do know is that institutions have real or supposed reasons behind them.

I have heard not that the Saiva temples are tombs of the dead but that ashes are buried underneath and Vaishnavas hold that Saiva temples are therefore polluting places.

The body decomposes into its component elements whether by burial or cremation. Decomposition is not preventable. If decomposition is to be promoted cremation is the quicker method. Not theories of life after death but cleaner methods of disposal are demanded in the interests of the living.

Many may be the reasons that may be urged for burial but they will finally be seen to be obstinate superstitions clinging to usages of the past which we are unable to shake off.

People are ready to make many injurious innovations in life. But when rational changes are made, old institutions are pleaded to resist the change which deserves to be welcomed. Fortunately for me, I have not now to commend an innovation struggling for acceptance. Cremation may have been an innovation in the second or third millennium B.C. It has since won its way with people receptive of new and healthier ideas. It does appeal to advanced minds not obsessed by any religious beliefs of life after death as requiring the preservation of unpreservable bodies of dead men. Cremation is bound to win in the long run over interment.



Why Do We Like Perfume?

It is difficult to say why we like the perfume of flowers, but evolution may have something to do with it. Many essential oils have been shown to be more powerfully antiseptic than carbolic acid; for example, the oils of thyme, verbena, rose, anise, orris, cinnamon, orange-blossom, peppermint, lavender. The old-time judge had beside him on the bench a bunch of rue and rosemary to ward off gaol fever. The theory that pestilences were bred of bad odours was false; but the practice of using sweet ones was sound. In the bad old days, when sanitation was unknown, folk who loved fragrant flowers and spices stood a better chance of survival than those who did not. I suppose we are the descendants of the survivors, and share their tastes.

It is very early times, by the way, fragrant woods and gums were so highly valued that they were considered most suitable offerings to the gods. They were burned on their altars; and that is how we got the word "perfume," which means "by smoke."

—H. S. Redgrove.

How Do Cigarettes Help?

Cigarettes contain an alkaloid, nicotine, which stimulates your adrenal glands. These tiny glands when stimulated, send sugar coursing through the whole blood-stream. Sugar means energy. Indeed, the best indication of a person's energy at any given time is an analysis of his blood sugar concentration.

Fifteen minutes after you smoke a cigarette, your blood sugar concentration begins to rise. The stimulated adrenals

release into the blood-stream part of the sugar stored in your liver and your muscles.

Your energy flows back to you. You feel more alert. You feel less hungry.

There can be no doubt. It is a medical fact, supported by human experience. Cigarettes are a medicine. A stimulant. A pick-me-up which there is no reason to believe does you harm.

—Peter Howard.

Q. Are brown eggs more nutritious than white ones?

A. Eggs are designed by nature to contain the maximum of nourishment in the minimum of space for the developing embryo, and, other things being equal, one egg should be exactly the same as another from a nutritive point of view. Actually the colour is imparted to an egg-shell as the last in a long and complicated series of processes concerned with the making of the contents of the shell and even the shell itself; the colour of the shell has no connection, therefore, with what is inside it, and exists only for reasons of natural camouflage, examples being the brown tint of the partridge's egg and the green and black of the eggs of the guillemot. On the subject of nutritive values, it has often been stated that an egg affords as much food as a pound of meat, but modern dieticians refute this theory, following in the steps of Florence Nightingale who, in her "Notes on Nursing" (published in 1860), caused much discussion by stating that in her opinion the nutritive value of eggs was almost non-existent.

—Frank Lambe.

Do You Know?

387

Q. Would people on the moon see the earth "rise and set"?

A. A picture by a celebrated British artist depicts "Earth-rise as seen from the Moon." No moon-dweller would, however, see such a sight, since the earth would always be in full view, and although it would be noticed to pass through several phases, being sometimes unilluminated and sometimes quite bright, it would always be in a fixed position in regard to any point on the moon's surface. There would be thus no such words as "earth-rise" and "earthset" in lunar vocabulary. Conversely, on earth there is really no such thing as "moonrise" or "moonset" because the moon rotates on her axis in exactly the same time, a lunar month, as she takes to revolve round the earth, and its various phases occur because its path relative to the sun is not a circle but a wavy line, alternately inside and outside the earth's orbit. When the earth is between the sun and moon, the latter appears "full." When the moon is between the sun and the earth, all we see is the light of the sun reflected off the curve of its circumference; but it does not rise and set in the sense that the sun itself appears to do with relation to the earth. —Frank Lambe.

Q. What is Hydatid Disease?

A. This is transmitted to man through a cycle beginning with sheep and cattle, proceeding to dogs which are fed with infected organs from slaughtered animals, and subsequently passing from dogs to man. Dog droppings in pastures complete the cycle by again infecting grazing livestock. Children, in playing with the dogs, are particularly liable to the disease, which may be fatal. It is most prevalent in the livestock country embracing Uruguay, Northern Argentina, Southern Brazil and Chile, and is spreading. —WHO Newsletter.

Work in a Hot Climate

Q. What is a person's ability to adjust to a hot climate after living in a temperate zone? Can this ever be done? If so, how long does it take?

A. There are four chief factors involved in the body's adjustment to heat. They

are temperature, circulatory state, water balance and electrolyte (chiefly salt) balance. Studies have shown that when a man first works in heat to which he has not been accustomed, one of these balances may fail. Frequently the body temperature rises to fever levels and the heart beats faster. If the general physical condition is below par, prostration may occur. However, even unfit people adjust quickly to heat and within a week are able to perform a reasonable amount of work, though perhaps not for an entire day. Water and salt losses caused by excessive perspiration must be made up promptly. In the case of water, the loss does not decrease as a person becomes adjusted to the hot climate. There is a gradual reduction in the amount of salt lost in sweat. Exposure to excessive heat in different climates does not lessen one's resistance to disease.

Denture Trouble

Q. Soon after a person gets a set of artificial teeth, he begins to notice that large amounts of saliva are collecting in his mouth. This is kept up for a couple of months or so. What should be done?

A. Excessive secretion of saliva can be caused by lesions or irritations in the mouth as a result of infection or sensitivity to materials in fittings or dentures.

When excessive saliva flow occurs following the insertion of artificial dentures, the condition usually disappears within one or two weeks. If salivation continues after that length of time, an adjustment of the denture may be required.

Obviously, a diagnosis cannot be made by mail. If the condition continues, a dentist should be consulted.

Chewing Gum

Q. Does gum-chewing help or harm the teeth?

A. It has been said that gum-chewing provides needed exercise for teeth and jaws and healthful stimulation for the gums. There is no scientific evidence of the truth of this statement. But there is evidence that sugar contributes to dental decay in some people. Chewing gum contains sugar.



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

A Matter of Teeth

Teeth, or the lack of teeth, play an integral part these days in the policy of the medical profession. This week I met a gentleman who has for some time past been in poorish health. He visited a specialist for the purpose of remedying this. The specialist, he assures me, took one look at him and said, "I can do nothing for you until you have had all your teeth out."

"All my teeth out?" repeated my friend.

"All your teeth out," said the doctor.

"Very well," said my friend, with a gesture of resignation. At which he took out both sets, top and bottom, and laid them on the doctor's table.

—Patrick Balfour.

Genius And Ill-health

To compensate for an illness that saps health and vitality, that cuts such a man off from normal activities and distractions of the healthy outside world, his mind is often driven inward, making him discover and develop those qualities of self with which he is most richly endowed and which otherwise might never have been developed.

A long study would be required to tell of the pathetic battle with tuberculosis waged by such geniuses as Dante, Voltaire, Sterne, Beardsley, Jane Austen, Paganini, Gorki, Ghekhov, Dostoevski, Poe, Katherine

Mansfield, Elinor Duse, D. H. Lawrence, O'Neill, Andrew Jackson and a host of others on the roster of the great. Their lives may almost convince us that tuberculosis was at least an incentive to mighty achievement; and that genius, apprehensive of death, often more deeply and significantly interprets the meaning of life.

—Edgar Mayer.

Knowledge Limited

My father often boasted that when he left medical school, he knew a little anatomy, less physiology and one drug, ipecac.

—S. W. Vandegrift.

Physician, A Definition

A physician is a person who pours drugs of which he knows little into a body of which he knows less.

—Voltaire.

The Splenetic Socialist

The following is what a leader writer of "Izvestia" had to say of his predecessor:

This wriggling, hypocritical, lecherous reptile, this poisonous Trotskyist snake, hiding his fangs behind his ingratiating smile. Struggling all his life against Lenin and beaten many times, he clung like a worm in the powerful oak of the Soviet state, many times changing his colour by order and going deep underground there

to weave his counter-revolutionary cobwebs to wreck and outsell our nation.

His Own Enemy

Confession of error is like a broom that sweeps away dirt and leaves the surface cleaner than before.

A clean confession, combined with a promise never to commit the sin again, when offered before one who has the right to receive it, is the purest type of repentance.

A man who has broken with his past feels a different man. He will not feel it a shame to confess his past wrongs, for the simple reason that these wrongs do not touch him at all.

A patient can ill afford to conceal his disease. If he does so, he becomes his own enemy.

—The Mind of Mahatma Gandhi,
Humphrey Milford,
Oxford University Press.

Great Minds and Others

Great minds have purposes, others have wishes.

—Washington Irving.

Limits of Flexibility

The constitution is flexible indeed, but it should not be so flexible that we should simply fold it up and put it away.

—Lord Samuel.

An Irresistible Contagion

While there is infection in disease and sorrow, there is nothing in the world quite so irresistibly contagious as laughter and good humour.

—Charles Dickens.

Shun It

Shun idleness. It is a rust that attaches itself to the most brilliant metals.

—Francois Voltaire.

The Lamp of Experience

I have but one lamp by which my feet are guided, and that is the lamp of experience. I know of no way of judging of the future but by the past.

—Patrick Henry.

Decisive Hour

One of the illusions is that the present hour is not the critical, decisive hour. Write it on your heart that every day is the best day in the year.

—Emerson.

An Instance of Bureaucratic Planning

In building and running hospitals, the engineers and doctors and nurses have a large voice, but not the patient, for whom they are intended.

Follow Doctor's Advice

"The doctor gave my brother a prescription and asked him to follow it strictly."

"Well?"

"The prescription flew out of the window. He followed it and broke his leg."

Trick of the Trade

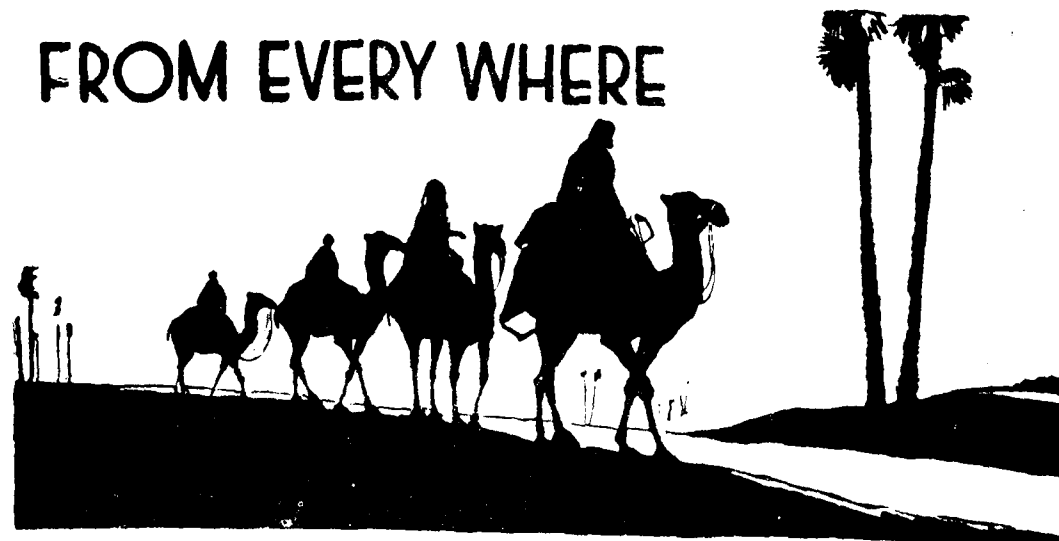
A doctor was very popular with his woman patients. A colleague wanted to know the secret.

"To me no woman is ugly. I call every one an angel."

"What did you say, to that flat nosed woman?"

"That she is an angel fallen from heaven but only she landed on her nose."

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 readers.

—Ed., P.H.

Branding

The custom of branding is prevalent almost over whole of Bharat. It is practised more in rural areas where it has its sympathisers. Branding is burning a certain area of the skin with a hot piece of iron. It is a treatment resorted for the relief of pain, usually in the abdomen and the chest. This practice exists in rural areas amongst uneducated classes—rarely amongst the educated ones. There are certain practitioners who give this treatment for relief of various types of pain, be it due to any disease—colic, hernia, headache, arthritis, etc.

When a patient goes to the practitioner for consultation, he examines the part and interprets the various disorders and explains to the sufferer that he should be branded in particular area of the abdomen or the chest as the case may be. The number of marks depends on the interpretation and the patient confidently agrees. In the case of a child, the treatment is done *per force* by the sympathisers and relatives. Before actual branding, some preliminary marks are made on the skin either with ash, ink or oil. A piece of iron,

generally a rod or nail of particular size is heated to redness. It is directly applied to the skin, which is burnt, causing terrible pain to the ignorant patient. The brander then takes his fees as much as one rupee per mark and allows the patient to go with certain instructions.

I shall take this question mainly from two points of view (1) Humane, (2) Medical.

(1) Everyone will agree that this treatment is quite inhuman, nay, it is criminal. Even hard-hearted man would be moved to see the sight during branding. A poor patient, a red-hot piece of iron and the shouting! Who would not be affected when a child as old as 6 to 8 months is being branded when the arms and legs are fixed by relatives and it is subjected to this sort of burning for no fault of its own?

In certain cases there might be relief of the disease as will be explained hereafter—but it is obvious that this sort of treatment is worse than disease itself and it is high time that this treatment should be disallowed by the Government.

From medical point of view, this treatment seems to be based on the principle of

What Do They Say About It?

relief of deep seated pain by counter-irritation, as cupping, application of irritating emplastra and drugs, used in Allopathy.

While latter measures do not give much pain to the patient, branding is the most crude and uncivilised method of counter irritation.

I have seen hundreds of patients in rural areas, having brand-marks on their abdomen, some of whom have taken treatment from me either for the sepsis or having had no improvement in their condition after branding.

We are living in the age of high scientific achievements as television, planes, rockets and what not? It is branding the profession if we do not rise to the occasion in this age of antibiotics—if such crude methods as branding are allowed under our own noses without any scientific basis of the method. We, as medical men, can play our role in two ways. Firstly, by educating the masses when patients come to our dispensaries. I have convinced many people in the villages in this way. The practice of branding is prevalent due to ignorance both on the part of the patient as well as the practitioner.

Secondly, by urging the Government to stop this practice by strict legislation and its enforcement. Only by such a method can we improve the situation and save many people from unnecessary torture.

—N. R. ACHARYA,
"Medical Digest".

Review of Literature on Dust

(J. J. Forbes, Sara J. Davenport and Genevieve G. Morgis—Bureau of Mines Bulletin 478, pp. 333 (1950)).

This review of the voluminous literature on harm to health caused by breathing inorganic dusts has been confined to readily available data and almost wholly to respiratory disease, chiefly lung affections. It gives little or no consideration to the numerous ill effects to human organs, other than the lungs, due to breathing more or less insoluble dust or

the harm to other internal organs (stomach, liver, kidneys, etc.) or to the nose, throat, and bronchial tubes from breathing more or less soluble or so-called poisonous dusts; nor does it take into consideration the numerous hazards to human beings in breathing organic dusts, with accompanying hay fever and kindred ills. Moreover, numerous dusts, both organic and inorganic, have harmful effects of various kinds on eyes, ears and other parts of the body and on the skin from external contact; indeed, some dusts cause harm to health by absorption through the skin. Hence, while pulmonary disease due to the breathing of air-borne dust is unquestionably of great importance, its various ramifications (pneumoconiosis, silicosis, anthracosis, or these combined with tuberculosis), while vitally important, constitute by no means the only detrimental effect to human beings in coming in contact with dust, externally or internally.

Close analysis of the status of dust in industry (and in general life outside of industry also) indicates that numerous—one might almost say innumerable—uncertainties still exist as to specific features connected with dust harmfulness. So numerous and far-reaching are these uncertainties (only a few of which have been indicated in these conclusions) that almost the only definite fact is that dust is a menace and that all kinds of it likely to come in contact with human beings should be reduced to a minimum or at least be held under positive control until such well-planned, well-correlated research and investigation (field and laboratory) have been conducted on almost every phase of the subject.—Authors' Conclusions.

The Problem of Safety and Industrial Hygiene in Water and Sewage Works

(E. Gorecki. *Gaz. Woda i Tech. Sanit.* (Polish), 24, 103 (Mar. 1950) and 24, 149 (Apr. 1950). Reprint from *Sewage and Industrial Wastes* (Oct. 1950)).

This is a classification of hazards at water and sewage works according to the

scheme in use by the International Labour Bureau, Geneva. A review of existing regulations pertaining to construction practices and crafts as they relate to sewerage and sewage treatment is given; for example, shoring for different excavation depths and soils in sewer excavation to prevent cave-ins, hazards associated with electrical equipment, welding, etc. In sewage works the hazards listed are associated with asphyxiation or explosion in sewers, observation wells, settling, and digestion tanks; electrocution from contact with electrical currents in damp locations; slipping or falling on catwalks, stairs, other slippery surfaces; possibilities of falling or drowning in tanks inadequately lighted or improperly barricaded; drowning in combined or storm sewers, settling, and digestion tanks, etc.; and the possibility of skin diseases from contact with sewage and/or industrial wastes. A listing of 40 regulations pertaining to approved safety and industrial hygiene practices is given. A very extensive discussion is presented of means for identifying and determining amounts of gases in sewers, manholes, etc.

—Conrad P. Straub.

Antibiotics in Milk

(F. J. Doan. *The Milk Dealer*, 40, 102-6 (Oct. 1950)).

Antibiotics such as penicillin, aureomycin sulfamethazine, and streptomycin, used for the treatment of mastitis infections in the udders producing dairy cows have been reported in the milk for several milkings after treatment. This may become a serious problem in the dairy industry and veterinarians and field men should impress upon any producers using antibiotics the necessity for keeping milk from treated udders off the market. The article contains tables showing the results of tests and, while antibiotics vary somewhat in their potency against starter organisms, it is the opinion that any treatment effective against mastitis will result in milk showing toxic qualities toward starters.—T. T. M.

Significant Characteristics of Sewage and Industrial Wastes

(John T. Norgaard. *Sewage and Industrial Wastes*, 22, 1024-32 (Aug. 1950)).

This paper considers several characteristics of sewage and industrial wastes and their significance in the design and operation of treatment works. Too frequently, the 5-day B.O.D. and suspended solids values are the only criteria given serious consideration. "B.O.D. is an inconsistent and, to laymen, incomprehensible measure of material losses." Likewise, the suspended solids fail to give a true picture when a large proportion of the solids are dissolved, whereas the total solids represents the suspended, colloidal and dissolved material and also reveals the total losses of material of an industrial plant into the sewer. B.O.D. removal, when varied and lower than anticipated, may cause overloading of secondary treatment facilities or on receiving waters for which the author gives examples from experience. The variations in B.O.D. removal by settling of certain industrial wastes and the rate of B.O.D. reaction is discussed in some detail. Recent research has aided immensely in the determination and evaluation of the characteristic of sewage and industrial wastes and more use should be made of this knowledge in designing and operating sewage treatment plants.

—P. H. Engg. Absts.

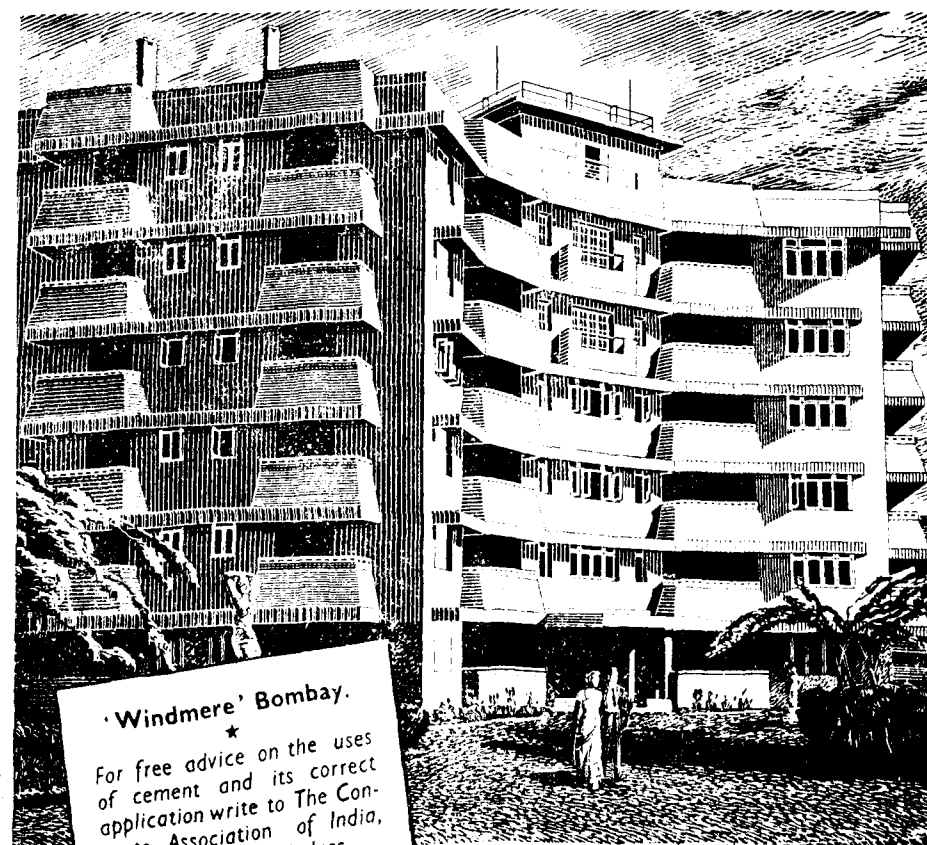
Mobile Court in Calcutta

A drive against the use of short weights by vendors in the municipal markets of the city has been started. The raids are carried on simultaneously with the drive against the sale of exposed foodstuffs.

Considerable numbers of fish and vegetable sellers are being arrested on a charge of having in their possession short weights and measures. The Mobile Court is awarding proper punishment in the shape of fines between Rs. 5 and Rs. 20. Pavement hawkers are also being produced before the Court and sentenced to fine or imprisonment.

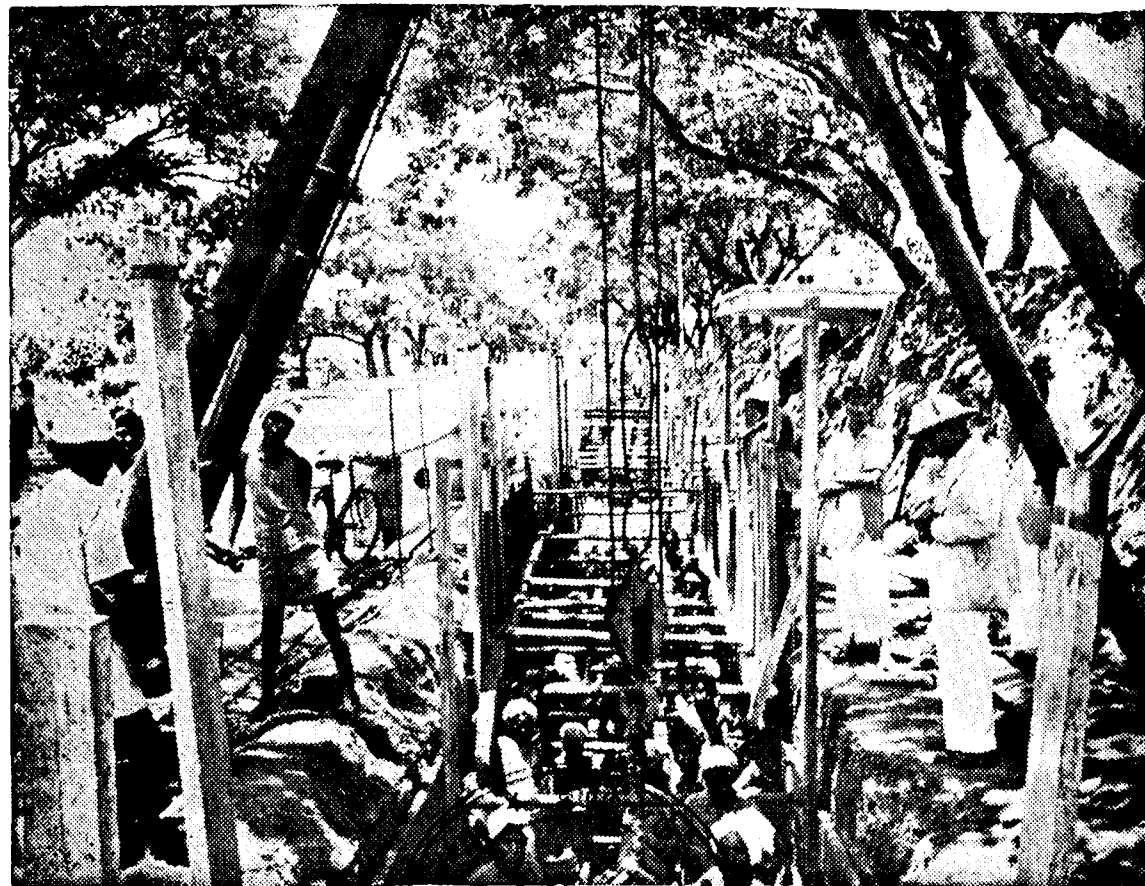
—The Calcutta Municipal Gazette.

Built to last
with **ACC** cement



THE CEMENT MARKETING COMPANY OF INDIA LTD.
SALES MANAGERS OF

THE ASSOCIATED CEMENT COMPANIES LIMITED.



GANNON, DUNKERLEY CO. (Madras), LTD.
14, BOAG ROAD 142245 MADRAS, 17
Phone No. 88316 Telegrams "VITOPUS" Madras

WATER-SUPPLY AND DRAINAGE SCHEMES

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

Consult Us

Published by Mr. A. V. Raman for People's Health Publications Ltd., at Lloyd Corner, Royapettah, Madras-14.
Printed by Mr. E. Sendall at the Associated Printers (Madras) Ltd., Mount Road, Madras-2.

Peopl

