**Annual Subscription Rs. 10**
East ... $ 8 00
Foreign ... £ 0 15 0
For Clerks ... Rs. 6 0 0

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An
All—India
Weekly.

*Chief Editor:*
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B.A. (Madras), L.T., (B.H.U)
M. R. A. S. (Lond.)

(DEVOTED TO ECONOMIC AND WELFARE PROBLEMS)

# WEALTH & WELFARE

Editorial Office : Lucknow. Publishing Office : Madras—Saidapet.

VOL. III No. 38
12 pages.
Lucknow, Friday, 16th September 1927.
Registered
No. M—2119.

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# HEALTH.

MALARIA. *Continued.*

Housing is also responsible for a great deal of the malaria which occurs in villages. To begin with when a village is built, the usual method of obtaining building material is to make a large excavation to obtain the necessary clay and to build the houses all round this excavation. This excavation fills in the rains and serves the purpose of the village tank for the water supply of cattle. It is quite understood that there must be a tank for the village cattle to drink at, but this tank should be at least quarter of a mile away from the village and not in the inhabited area.

Malaria is transmitted from one human being to another by means of certain mosquitoes and these mosquitoes breed in water. The flight of a mosquito is under normal conditions considerably less than a quarter of mile, so that the situation of the tank with regard to the village is a most important matter in connection with this disease. The simple remedy here pointed out would result in a great reduction in the incidence of malaria in a village.

Mosquitoes also like to spend the day in houses, specially in dark and ill-ventilated rooms, consequently the present dark and ill-ventilated rooms, which are found in every village provide for them the desired resting place during the day.

Mosquitoes also breed in wells [illegible]

[illegible] The remarks made above with reference to cholera also apply to these two diseases, as they are diseases which are carried by germs in the water supply. The insanitary habits of the people in fact the sub-soil water gains access to the drinking water wells and thus the diseases are transmitted to those drinking the water. They are, therefore, due largely to the lack of adequate sanitary provisions in the houses.

*Relapsing Fever.*

This disease is transmitted from one human being to another by the body louse and the body louse is an insect which cannot live in the presence of pure air and sunlight, but when several people sleep together in dark and ill-ventilated rooms, its transmission from one person to another is made easy.

*Tuberculosis, Pneumonia and other Respiratory Diseases.*

The diseases are transmitted from one person to another by the medium of the breath and the sputum and consequently the habits of the people in living in small dark and ill-ventilated rooms, during the cold and wet weather give them every chance to spread from one person to another. The mortality from fever during the winter months as reported by the village chowkidar is very high.

The chowkidar not being a Doctor puts down all deaths from these diseases as a rule to Malaria, but since we know that Malaria is not prevalent in the winter months, there is no doubt whatever that the great majority of deaths attributed to Malaria during December, January and February are really due to respiratory diseases.

I have now detailed about the causation of the above diseases which cause high mortality in villages. I have only mentioned the chief causes and not the secondary causes in each case.

It is now necessary to advise simple remedies in addition to those above mentioned. The first great necessity is that the houses in villages should be better ventilated; in each room there should be thorough ventilation, which can be provided by having a large window in the outer wall of the room and a door in the other. It is well known that villagers being afraid of theft usually object to open windows at night through which thieves can enter into the houses, but this can easily be prevented at very little expense by having all the windows provided with iron bars fixed into a wooden frame work. The doors should open out into the yard where privacy for the family can be obtained. The cattle should be housed in cattle sheds separated from the living apartments and they can be protected in the same way as the living rooms by the provision of windows with iron bars. If privies are provided, they should be situated at the outer wall of the yards with a drainage opening leading to the outside. In villages it is not possible for financial [illegible] surface drainage. It is, therefore, better that these privies should drain into soakage pits situated at the outside of the wall. These pits are easily constructed, they should be about 6 feet wide and 6 feet deep and should be filled with *kunker*. Soakage pits of this description will only be required to be cleaned out about once in two years. A similar soakage pit should be provided outside the cattle shed in order to dispose of the urine of the cattle. It remains now to deal with the disposal of the house refuse. It is the usual custom in villages for this to be collected in deeps in the yard of the house for use in the fields as manures, but this system leads to the breeding of flies which is one of the subsidiary causes of the spread of dysentery, cholera, enteric fever and other intestinal diseases. There is no reason why the occupier of the house should lose the benefit of this manure for his fields. He can get such manure in a most sanitary manner by keeping it in a pit specially dug for the purpose, from which he can remove as required for the purposes of manure.

With regard to night-soil, in very few villages are there a great number of privies the majority of the inhabitants using the fields surrounding the village for the purposes of nature. In the present condition of society in villages in India, it is not desirable to substitute any other method, but the use of the fields should be supervised and no field close to inhabited area should be thus used. In case of privies, the night-soil should be removed by sweepers to fields at a distance from the inhabited area and there burned.

In this short pamphlet I have indicated a few general rules, the observance of which undoubtedly lead to a great decrease in the mortality in villages of preventible disease. In no case would the observance of these rules entail to any expense which could not easily be borne by the majority of the villagers with the result that not only the mortality would decrease but also the sickness, thus greatly increasing the health as well as the wealth of the village. Plans of model village houses in four different grades, and plans of the lay out of a model village have been prepared under the auspices of the Board of Public Health and such plans are now available for distribution to all desiring to improve the housing of villages in the districts.

## PLAGUE.

Plague is a disease caused by minute germs called plague bacilli. They are delicate organisms which can only exist in the body of a living animal. Under ordinary circumstances, infection can only take place when plague germs are injected beneath the skin, i.e. the bacillus requires to be transferred from the blood of the sick to the blood of the healthy. This transfer of the germs is generally effected by a small sucking insect, the rat flea. It has been proved that the germs of plague multiply in the stomach of fleas, retaining their virulence for seven or eight days [illegible] so that the flea serves not only as a carrier, but as the multiplier of the germs. They ingest bacilli from the blood of infected rats: the bacilli then multiply in their stomachs, and again are transferred through a bite to healthy rats which develop the disease.

### HOW IT SPREADS.

1. The flea feeding on an infected rat, leaves it when it dies, while in search of food attacks another rat and thus plague spreads among them. After most of the rats are dead or have run away, the hungry flea attacks man and other animals and thus the disease spreads among them. The habits of domestic rats afford possibilities for fleas to gain access into the rooms and bedding of human beings; there they get the chance to bite and to deject the bacilli, which gain entrance into the body either by a bite or by the bacilli being rubbed into the skin on account of the irritation set up at the site. People who sleep on the floor with their feet and body uncovered are most exposed to this method of attack.

2. Rat fleas cannot travel far, unless carried by a host. By themselves they can hardly travel a distance of 20 to 30 yards, and they can jump to a height of 2 feet. Fleas are most frequently carried by rats from place to place; but as rats usually confine themselves to small areas, infection can only be spread in this way to a limited extent. However at times the rats are carried in trains, and in ships for long distances, concealed among various articles of commerce, specially grain, clothes, bedding, etc, thus rat fleas are transferred from place to place.

Another method by which transference may take place is by the carriage of these insects by man on his person, or in his clothing. This method of transference is most often found in a plague-infected house or locality, after the rats have become scarce. Thus the rat fleas are carried to healthy areas, and when introduced there, they leave man and seek rats, and thus plague breaks out among rats and later among men.

## PREVENTION OF PLAGUE.

*1. Rat destruction.*

Considering the enormous loss of life due to plague for which the rat is solely responsible, and also the vast amount of damage done to property, the problem of rat destruction becomes of the first importance.

This can be effected (1) indirectly and (2) directly.

(A) Indirect methods of attack.
- (1) By cutting off the access of rats to their food supply.
- (2) By reducing their sheltering places.
- (3) By reducing the opportunities for their breeding.
- (4) By separating rat infested centres from areas inhabited by human beings.

The domestic rat's highest jump is 2½ ft. It burrows with its teeth never to a greater depth than six inches. It cannot climb up a hard smooth vertical surface and its runs are close against walls and corners of rooms.

(1) The first of these methods can be met by constructing rat-proof buildings. The flooring should be of impermeable material, the walls at least to a height of 3 feet should be pucca and impervious to attacks by rats the ceiling should be of solid construction and the rooms well lighted and ventilated; Drains should be pucca and their joints should be proof against rats gnawing through them. All holes and burrows should be well rammed in with cement or glass.

Rat proof receptacles should be used for the storage of food and refuse.

(2) The second can be realized by keeping our compounds clean of all dirt, refuse, etc.

(3) Reducing the opportunities for breeding.

This can be achieved by disturbing the sheltering places of rats in various ways. House cleaning and shifting of furniture at regular intervals is one of the easiest methods to gain this object.

(4) The fourth can be effected by locating granaries, etc at a distance from human habitation.

(B) Direct methods.
- (1) With the help of their natural enemies such as cats,
- (2) By means of trapping.
- (3) By means of poisonous baits.
- (4) By making search for rat holes and destroying the baby rats.
- (5) By filling up the rat holes with glass or some other hard material.

In India the annual economic loss due to rats is estimated at 60 crores of rupees and the main key for the elimination of rats is contained in the word "cleanliness"; as by now the dictum "no rats no plague" is well established.

*2. Inoculation.*

Inoculation is the best means for personal protection. It is not at all a painful process, the only sensation being that of the prick of a needle. Inoculated persons acquire a high degree of protection and death from the disease among them has been proved to be of rare occurance. Inoculation has also the great advantage of instilling confidence, which is very necessary to avert a panic. Always get yourself inoculated if you are living in a plague infected locality, or if you have to go to a palgue infected place.

*3. Evacuation.*

The evacuation of the infected areas or the houses, as soon as the rats begin to die, is a precautionary measure of great value. It is never too late to evacuate an infected place as it takes a certain amount of time for a flea to pass from one rat to another or to the next host.

*4. Disinfection.*

Disinfection should be carried out by the local sanitary authority to whom an application should be made at once by the public. If there is no such local sanitary authority then the method mentioned below should be followed.

The best method of disinfection is by means of pesterine. You can easily get it from any chemist. Whenever a case of plague occurs in a locality or in a house, sprinkle a [illegible] pesterine on the floor of the room to be disinfected and then remove all the furniture, etc. out of the room and keep it in the sun. Any fleas dislodged in this process will be caught in the pesterinesolution and die. Pour a little quantity of the disinfectant into every rat hole found on the floor and spray pesterine over the walls upto a height of 3 feet.

## FLY.

The presence of the house-fly in our dwellings is admitted as an irritating but an inevitable nuisance, yet certain remedial measures would almost exterminate the insect which is dangerous and a peril to the humanity. The house-fly may seem at first much less to be dreaded then any one of the biting or blood sucking flies, yet it should be regarded as a much greater enemy to mankind and a more dangerous creature than any of the other flies. Its food includes excrement, sputum and every kind of putrifying organic matter, likely to be full of dangerous micro-organism. As it feeds, it walks over the food, and the hairy joints of its feet carry germs with them; wherever it alights and walks, it prospects with the touch of its trunk, which is chiefly responsible for spreading the evil. It has a very filthy habit of depositing pale vomit matter as well as dark cloured fæcal droppings which are visible on walls, windows, ceilings etc. When it feeds upon solid food it pours forth a little saliva, then it regurgitates some previously imbibed fluid and then re-imbibes; thus besides eating soft food it dissolves befouls, and pollutes sugar and many other food materials. The regurgitated fluid commonly swarms with Bacteria and other micro-organisms. Bacteria are not killed in the digestive apparatus of the fly, for its excrement has been found to abound with infective organisms. In the market, the food shops and on the dining table the house fly seeks every opportunity of contaminating human food. The germs of nearly all infectious diseases are carried by this insect from place to place, from animal to human beings and from one man to another.

### GENERAL LIFE HISTORY.

Unlike the other varieties of flies the house fly is very fond of living indoors and delights to live beside human habitations. It will be content to remain indoors and rejoice in a warm kitchen on a hot summer day. Next to human habitations, stables and cow-sheds are the favourite breeding places of the female house-fly. The house-fly has a preference for house dung for laying its eggs. The domestic dust bins, deposits of market garbage, and heaps of town refuse give rise to a worse plague of house flies than stables. They deposit batches of whitish looking eggs in crevices shielded from exposure to strong light or draughts. The larvæ avoid day light and can not withstand dryness. As the larvæ feed, they eject a juice, which dissolves the food before it is imbibed. They are about half an inch long when full grown. The house fly lays batches of eggs four or five times in its life time. They are about hundred and fifty on the first occasion, then hundred or less on the subsequent occasions. Under favourable circumstances, the eggs hatch within a few days after they are laid in warm weather. The magots when full grown pupate in six days or so and the perfect insect emerges in about ten days. When nine or ten days old the fly may begin to lay eggs, hence with such a life cycle, in a month of very favourable weather the progeny of a single pair may number five hundred or so; in two months' time the number may become two hundred and fifty times five hundred; and in three months time it may be many millions.

### REMEDIAL MEASURES.

Effective measures are so easy of application that if universally carried out the house-fly may become a rare insect in a very few days time. The habit of house fly and its life history would make it clear how its breeding may be abolished. The breeding places can be easily dealt with and the food supply of larvæ can be easily stopped. In all places a house to house collection of domestic refuse and garbage must be made bi-weekly during summer and the material may be cremated in a refuse destructor soon after collection; and thus neither the larvæ nor pupa would be able to survive. The refuse collecting bins of a good pattern should be used. Speedy removal and cremation of stable manure would be quite effectual in dealing with the fly nuisance. Chloride of lime when mixed with manure stable kills the magots of the house fly.

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For God, Crown and Country.

**Wealth & Welfare.**

**Lucknow, Friday, 16th September, 1927.**

# EDITORIAL.

## CO-OPERATION IN MYSORE.

It is gratifying to see the satisfactory working of the Co-operative Movement in Mysore State during the year 1925-26 the report of which is just before us. The movement is growing more and more popular being recognised as a powerful force in the work of rural reconstruction and the economic uplift of the people. The development of agricultural co-operation has created a keen desire for making use of improved methods of cultivation and inducing societies to sell improved agricultural implements seeds and manures at rates fixed by the Director of Agriculture. There were 1474 societies at the beginning of the year and 1663 at the end of the year. The working Capital of the societies increased from Rs. 92,21,614 to Rs. 98,65,731 during the year and the Reserve Fund from Rs. 12,95,652 to Rs. 15,74,852. The total transactions of all the societies amounted to Rs. 3,16,85,175 resulting in a net profit of Rs. 4,61,832 against Rs. 4,03,214 in 1924-25 showing that the public confidence in the movement is increasing. Inspite of the spreading of the movemennt people in rural areas are ignorant and indifferent to their own interests. There were 27 honorary supervisors and four honorary organisers of Co-operative Societies working in the movement as on 30th June 1926. For a big State like Mysore which claims to be a Model State for India the sense of civic consciousness is not yet roused among the villagers. Mysore is still wanting in sufficient number of non-official gentlemen imbued with high real patriotic motives for the work in rural areas. The introduction of the village panchayat system has not done much in training people in the management of village affairs. It has to be observed that much of unnecessary routine work and redtapism should be done away with before achieving real progress. Much propaganda work remains to be done. Co-operation in Malnad is highly unsatisfactory, though the little but substantial work done is mainly due to some honorary workers whose names are mentioned in the report. There were only 292 societies consisting of 16,185 members with a working Capital of Rs. 9,96,653 during the year in the Malnad. The problems relating to the Malnad are peculiar. Questions relating to Sanitation, health, communications affording proper facilities for travelling etc., remain yet to be solved. The first thing to save the situation is for Mysore to learn from H. E. H. The Nizam of Hyderabad to lead a simple life. Mysoreans should live according to the Means. Goldspooned people can easily afford for the pompous style of living of the western Methods but he never thinks in his heart that unless and until his poor neighbour's health be looked after his pomp and wealth will not be able to save his dear and near ones from the ravages of the communicable diseases due to poverty and ignorance prevailing in the State owing to maladministration. The standard of living has been wrongly set up high for the middle class and the poorly paid clerks. Though from all outward appearances the lowpaid Government employees appear with their costly lace turbans and very often borrowed costly dress their real standard of living is comparatively low owing to their indebtedness. The preventible diseases such as Malaria and tuberculosis are levying a very heavy toll. In order that we can very freely utilise the resources available in the State the Vegetable and animal products should be improved in the true sense of service to humanity. The poor of the Malnad feel the need for this. To improve the moral and social and economic condition of the people in Malnad urgent practical and sympathetic measures need to be adopted. It is a well-known fact the highest form of officialdom prevails in the Malnad administration. The report of the Registrar of Co-operative Societies, Mysore, that is before us makes mention of the measures adopted for removing the disabilities of the Malnad people. We have ourselves been into the whole of the interior of Malnad for nearly five months and are unable to appreciate the modest way of exhibiting the progress of the co-operative movement in the Malnad. The report says that H. H. The Maharajah and H. H. The Yuvarajah have always been solicitous about the progress of the Co-operative Movement and have given their gracious support to it in several directions. As outsiders who judge the progress of the Co-operative Movement in Malnad studying critically the economic condition of the people for five months in the year will have only to make a plain statement that this is an exaggeration of facts. His Highness may be all sympethetic about the progress of his people and it is not a perversion of facts that His Highness has been solicitous about the progress of the people of Malnad; but still the progress of the Co-operative Movement in the Malnad is very unsatisfactory. The Heads of the Districts are too much engrossed in their official dignity-barring an exceptional few. and the Dewan's visit is only a source of oppression to the people in the Malnad without the Dewan's knowledge. We followed the Dewan to several places during his tour in the Malnad—though we were not a party of his or to the pleasures arranged for him in the Malnad. Without exaggeration we may inform our readers in India and elsewhere that the tour programme of H, E. The Viceroy and the Governor-General of India to Ootacamund in August 1927 cannot beat out that of the Dewan of Mysore. The Dewan's movement was so rapid that it is not possible for him to look into most of the important affairs. Much was not done to safeguard the Co-operative interests of the Malnad during the tour of the Dewan in the Malnad. We can vouch for the enormous number of arches, festoons and pandals erected mostly under official supervision for the reception of the much advertised Dewan. During the course of our study tour we ourselves noticed in the Malnad that the poor ryots and coolies were forced by the Patels to work without payment to erect pandals etc. The Deputy Commissioner of Kadur District had to make rapid tours several times before the visit of the Dewan to see to the erection of pandals, festoons, mudplastering and whitewashing of the culverts on roadsides. We invite any enquirer that doubts this fact to pay a visit to the Malnad and he will see that the whitewashing of even the trees on roadside can even now be seen in spite of the rains. If this kind of whitewashing is expected to be taken for progress in the Co-operative movement in the Malnad, then the Mysore Government richly deserves the congratulations through outside widely circulating journals and newspapers. The economic condition of the poor in the Malnad is miserable. Neither vegetable nor the animal products are available for keeping the body and soul together. Drinking prevails to a very large extent leading to the people getting devitalised and being unable to resist Malaria. The poor groan under the weight of oppression of the petty traders and shopkeepers. Things are sold in very many places at very high rates and the Co-operative Department has done nothing to encourage the store-movement in the Malnad specially for the supply of food-stuffs to the estates and their labour. With want of facilities of easy communications, costly and annoying bus-services, and insufficient and improper supply of food-stuffs, how can the prosperity of the Malnad improve when the labour is degenerating on account of devitalisation? We must point out that the demand for co-operative societies in the Malnad is increasing largely and the demand must be met adequately by giving the Registrar a special liberal increase in the establishment of the Co-operative Department and specially for the Malnad. On paper the Government appears, to be very sympathetic but not in action. There is no use in expecting the Registrar with his mouth gagged up in hand and foot tied without proper financial help to show progress in the Co-operative Movement. Under such disadvantageous circumstances the Registrar of Co-operative Societies has been able to bring out his administration report of the Co-operative Department. We must invite the special attention of the Dewan to His Highness the Maharajah of Mysore to the urgency of the development of the Co-operative Movement in the Malnad areas in all aspects. Much red-tapism should be cut short in the administration of at least the Co-operative Department.

## REAL DEVELOPMENT.

We congratulate the Hon'ble Minister of Development on his having spent Rs. 2,913-7-0 on his tour. We are sure that Mr. Renganatham is a keen student of practical economics and above all a patriot-real. Every pie of his tour expenses will be productive since he has no axis to grind of his own and also that he is a true and practical Sanyasin and Missionary for the cause of India. Will it be beneath the dignity of a Minister if he tours only in a First Class compartment or a second class compartment reserved for himself so that the extra savings may be utilised further for extensive productive tours. We are sure Mr. Renganatham will not take it amiss when the suggestion is made by us an ideal one. It is for him to show that the commoners ought to be perferred to Aristocrats and Zemindars as Ministers. If touring in Second Class will be a strain on his Physical Body which is a very necessary vehicle for discharging efficiently his duties as a Public Servant and Minister, certainly he ought to travel in First Class. We wonder if a Saloon is really very necessary for tours in Madras Presidency especially when he is very well known. He ought to set a good example to other Ministers not only in Madras but elsewhere also. The Minister of Public Health has spent Rs. 2322-1-0 and the Zemindar and Aristocrat Rs. 1493-2-0. Perhaps the latter is due to his spending money out of his pocket for his canvassing tour to retain his berth. Though we are not in sympathy for more than one reason with the No-Confidence Motion, we regret a good opportunity of getting a better Minister for Education who can do something substantial for the Public is lost. It was a foregone conclusion that the killing of Dyarchy in Madras was out of question as the mentality of Madras is not very far from being right in spite of the virulent efforts made by the disappointed Justicites. Is it not high time that the Chief Minister of the Government of Madras gives his serious consideration to the question of his vacating the place for a better person? Poor Madras which retained its place in India in the matter of education will have to be passed over in the matter of merit. If Education is not a matter of consideration and an adjunct to development then any one can be a Minister. Any number of alphabets after one's name alone is not enough. Real substance counts for much practical work in these days of struggle for Reforms. We are sincere Co-operators and we shall be failing in our duty if we do not point out to this Aristocratic Minister that he is rendering a dis-service to Madras by his sticking on like a leach to his office. We assure every one interested in the welfare of Madras that the no-confidence motion was certainly against only the individual of the Chief Minister [illegible] No party will [illegible] to working with other Ministers, though the Non-co-operators may think that the Public Health Minister also should go because he shows undue preference to Messrs. Parry and Co. and also works against the Health Principles as criticised by the Madras Mail in one of its Editorial Columns. We do not lack behind any in the matter of getting rid of Dyarchy which is a three-legged race. We would go back to the pre-reform days, if we cannot get full autonomy. But we do not believe in killing the Economic Prosperity of the country by appointing incompetent hand at the head of the Ministry in the Dyarchy system only to prove to those who think that India is not yet fit for self-government. How far the Economic Prosperity of the country suffers can be realised by only those who go out into the villages to study the condition. Offering criticisms from Arm Chairs commands better respect of late. When will India work out its Karma and get rid of Aristocratic Ministers? Real Development can be seen only when such people with alphabets after their name realise that there are better men than themselves and allow others to work sincerely for the country.

# ON THE LINE.

### OFFICES COMBINED.

The C. P. Legislative Council discussed a resolution that the appointments of the Director of Public Health and the Inspector General of Civil Hospitals be combined into a single appointment The motion was carried without division.

### PLANTING DIRECTORY.

The Planting Directory of Southern India.—A third edition was after considerable delay published in February and twice as many copies have been sold then as were disposed of in the first five months after the issue of the second edition. The many letters of appreciation received show that the book is found of value and supplies an actual want which is satisfactory considering the amount of work entailed.

### INDIAN JOURNALISTS IN CONFERENCE.

Syed Mahomed Padsha Sahib Bahadur, President, said the Indian Press had discharged its onerous duties without fear of favour and had always striven to serve the best interests of the country. It had generally maintained its high tone. He could not, however, speak of the Press without expressing his regret at a section of it which, by subordination of the higher national interests to the ambitions, of a section or party, had turned the Press, which should otherwise have been an instrument of good, into one of the worst evils. To indulge in personalities, to burst into rabid recriminations, and to accentuate differences would be to militate against those cardinal tendencies which the Press had got to bring into play with a view to compose differences, to bring about harmony and to consolidate society. The primary duty of every public man, be he a politician or a journalist, Liberal, Moderate, or Extremist was to avoid doing anything which in the least calculated to add to the differences, and a journalist who failed to appreciate that failed to appreciate his responsibility.

### MYSORE-OOTACAMUND SERVICE.

When the Ootacamund-Mysore Railways Bus Service was established, the Postal Department made that service a subsidy for carrying the mails from Bombay via Mysore to Ootacamund. The service has been tried during the past season and though the Postmaster-General found that the amount of postal articles carried between Bombay and Ootacamund by this service did not justify its continuance, yet certain arrangements have been come to between the M. S. M. Railway and the Mysore State Railways by re-arrangement of timings which will enable not only the Bombay post to be brought up by this service but also the English mails from Bombay. At a meeting held at Mysore recently, the Postmaster-General appeared to be inclined to recommend the continuance of the subsidy to the Mysore-Ootacamund Bus Service in view of these undertakings by the railways. The matter has gone up to the Government of India and the postal authorities may continue the [illegible] Ootacamund to get its Bombay mails 24 hours earlier than Madras. The Government through the District Board is having the Seegoor ghat road re-surveyed with a view to the gradient being improved where this is made the direct route from Ootacamund to Mysore will be reduced in length of journey by 14 miles and the Bus Service will become even more popular.

### THE MADRAS CENTRAL URBAN BANK DEBENTURE LOAN.

The five lakhs 5 per cent debentures issued by the Madras Central Urban Bank must be deemed an atractive security to investors who are on the look-out for a non-speculative scrip. The Central Urban Bank is the Provincial Co-operative Bank for the whole of the Madras Presidency and its management is on sound business lines. Its securities, therefore, are perhaps as good as pucca gilt-edged ones.

The issue price of the loan is 95 which, taken in conjunction with the rate of interest offered—5 per cent—means an yield of over 5¼ per cent. There is also the added advantage that interest is payable half-yearly. Considering that the Government are not prepared to offer more than 4 per cent for their loans, the Urban Bank debentures must be held to be securities combining safety with an attractive yield.

### SPINNING EMASCULATES CHILDREN

At the Central Provinces Legislative Council Mr. Rohan moved a resolution asking the Gevernment to make weaving and spinning compulsory in schools. An amendment was moved by another member seeking to take away compulsion. The Director of Public Instruction opposed the resolution on the ground that the Government was opposed to the imparting of mechanical training to students of 5 to 12 years of age. He was not opposed to spinning if it was done outside the school hours. The Hon. Mr. E. Raghavendra Rau, Minister for Education, made the position for the Government clear. He said that the Government was not opposed to spinning and weaving because it infused the nationalist sentiment in children. In the course of his speech he cited a German authority who considered that spinning had an emasculating influence on children and requested the Council to give him more time to consider the resolution. The resolution was pressed to a division and declared lost 23 voting for and 27 against.

### "CAPTAINS OF LABOUR"

In his annual report to the Government for 1926, Mr. S. Ranganathan, I. C. S., Agent in Ceylon to the Government of India, urges the planters in this country to "truly function as captains of labour." Mr. Ranganathan writes:—

"The future of the planting world is difficult to forecast. Of the factors working to change it the most potent seems to be the most elusive. Many planters realise that intermediaries between themselves and their labourers will have to go. It should be equally obvious to them that they should truly function as "captains of labour." This ideal is hardly new to Ceylon, for the proprietary planter of the past responded to it in his time. One hopes that the planter of today will not be less responsive to it, when he realises the true significance of the change inaugurated by the "Standard Wage Ordinance."

"More valuable than even the standard rates, is the freedom of movement assured to the Indian labourer and the opportunities given to him to raise his standard of living. The Standard Wage Ordinance is only the first instalment of the Legislation which will make this change possible. It is to be hoped that greater freedom of movement will prove to be a blessing and not a curse".

"It is not rash to predict that none but the planters will be able to hold their labourers together. On the other hand, it will be easy for the labourers to injure themselves no less than the employers, if they loose their respect for the law of contract. This is not an imaginary fear: for, not less than thirty per cent of the total labour population on estates (nearly 3,000) change their residence in the course of the year. And many of them do so without giving their employers the legal month's notice or awaiting its completion".

"This tendency to rove is accentuated by the 'cash inducements' offered by some planters. It is an utterly pernicious practice, which demoralizes the labourers for more than the planters. If in the suppression of this practice, the voluntary action of the planters prove to be inadequate, there would be another reason for strengthening the control of the Ceylon Government over every department of it."

### PLANTER'S CONFERENCE.

The number of Planters' Associations supporting the U. P. A. S. I. is thirteen and the number of Firms and Companies' members seventeen.

Acreage.—During the year there have been small reductions in the area under coffee in most districts. Rubber shows an increase of area supporting the Association owing to new membership and tea considerable increase in all districts owing to extensions now being made. The total area supporting the Association at the 1st July was 195,518 acres as compared with 188,633 acres at the same time last year being an increase of 6,885 acres.

The area of each product in the different districts is shown in the following statement.

ACREAGE SUBSCRIBING AS AT 1st JULY, 1927.

| Associations. | Tea. | Rubber. | Coffee. | Cardamoms. | Cinchona. | Pepper. | Total |
|---|---|---|---|---|---|---|---|
| Anamalais | 18,131 | ... | 2,411 | 2,535 | 590 | ... | 23,697 |
| Central Travancore | 18,220 | ... | ... | 72 | ... | ... | 18,292 |
| Coorg | 316 | 322 | 14,007 | ... | ... | ... | 14,645 |
| Kanen Devans | 24,373 | 25 | 613 | 700 | 97 | ... | 25,808 |
| Mundakayam | 1,824 | 12,822 | ... | ... | ... | ... | 14,646 |
| Mysore | 319 | 121 | 17,390 | 517 | ... | ... | 18,347 |
| Nelliampathies | ... | 192 | 2,090 | 111 | ... | ... | 2,393 |
| Nilgiris | 7,664 | 39 | 3,933 | ... | ... | ... | 11,636 |
| Nilgiris Wynaad | 9,079 | ... | 4,239 | ... | ... | ... | 13,318 |
| Shevaroys | ... | 170 | 4,250 | ... | ... | ... | 4,420 |
| South Travancore | 6,172 | 12,484 | ... | ... | ... | ... | 18,656 |
| West Coast | 250 | 19,010 | ... | ... | ... | ... | 19,260 |
| Wynaad | 9,909 | 61 | 290 | ... | ... | 140 | 10,400 |
| Total ... | 96,257 | 45,246 | 49,253 | 3,935 | 687 | 140 | 195,518 |

## COFFEE.

Theft of Estate Goods between the Coast and Estates.—This matter was raised particularly in respect to consignments by cartmen from Mangalore to estates in Coorg and Mysore. As a result of the resolution passed at the last annual meeting, Mr. C. Lake and Mr. S. P. St. C. Raymond representing the U. P. A. S. I. met representatives of Messrs. Peirce, Leslie and Co., Volkart Brothers, Aspinwall and Co., and A. J. Saldanha and Sons at Tellicherry on the 20th November and considered steps to be taken for reducing the robbery that was being carried on. At the request of the Committee the matter was taken up by this Association with the Inspector-General of Police and it is hoped an immediate improvement in matters may be made.

Export of Coffee.—In last years report the statement of exports was given for calendar years, but that system gives no indication of the seasons crop, which appears much more clearly if the figures are compiled for a year commencing 1st July and ending 30th June which has been done in the following statement.

| Season. | | | |
|---|---|---|---|
| 1921-1922 | ... | 238,907 | cwts. |
| 1922-1923 | ... | 174,595 | „ |
| 1923-1924 | ... | 205,900 | „ |
| 1924-1925 | ... | 276,172 | „ |
| 1925-1926 | ... | 145,052 | „ |
| 1926-1927 | ... | 256,969 | „ |

## TEA POSITION

South India Tea Crop 1926.—In accordance with the practice established a few years back figures as to the production of tea during the year, showing the crops from each district, are given below. It will be noticed that for the first time South India records a crop exceeding fifty millions of pounds.

| | | Lbs. |
|---|---|---|
| From Anamalais | ... | 8,558,115 |
| Nilgiris | ... | 4,987,286 |
| Nilgiri-Wynaad | ... | 3,687,487 |
| Wynaad | ... | 5,315,380 |
| Coorg | ... | 133,068 |
| Central Travancore | ... | 10,799,096 |
| Mundakayam | ... | 766,219 |
| Kanen Devans | ... | 13,585,731 |
| South Travancore | ... | 3,232,622 |
| | | 51,065,004 |

Consumption of Tea in Southern India.—The figures received from the Ports of the Presidency and Travancore show that during 1926 the total exports were 44,402,720 lbs. which would leave a remainder when compared with figures of production 6,662,284 lbs. consumed in the country. But owing to the high price of Tea, estates are shipping relatively more to the London market than hitherto and it is thought that a considerable amount of Java tea is being sent down from Calcutta for consumption in Southern India. Import figures at the Madras ports show that it is not coming in through them to any considerable extent.

PRODUCTION AND APPARENT LOCAL CONSUMPTION.

| | | Production. | Local Consumption. |
|---|---|---|---|
| 1921 | ... | 31,399,000 | 4,009,619 |
| 1922 | ... | 36,231.287 | 6,713,366 |
| 1923 | ... | 43,538,648 | 6,321,706 |
| 1924 | ... | 46,161,408 | 8,207,006 |
| 1925 | ... | 47,975,955 | 4,027,107 |
| 1926 | ... | 51,065,004 | 6.662,284 |

Adulterated and Spurious Tea.—The manufacture of so-calld tea from leaves other than those of the Cameillia Thea and Cameillia Chiniensis has without doubt increased greatly in the last couple of years both in the Presidency and in Travancore, but as long as some proportion of real tea is mixed with these products no legal action can be taken until the Madras Prevention of Adulteration Act or some similar legislation is brought into force.

## RUBBER.

Production of Rubber in Southern India....From figures supplied to the Association the following statement shows the exports of rubber from Southern India during the last six years.

| | | | |
|---|---|---|---|
| 1921 | ... | 7,243,936 | lbs. |
| 1922 | ... | 6,725,646 | „ |
| 1923 | ... | 8,411,018 | „ |
| 1924 | ... | 10,151,636 | „ |
| 1925 | ... | 13,950,915 | „ |
| 1926 | ... | 14,628,915 | „ |

## STEPHANODERES.

Stephanoderes.—No decision has yet been arrived at by the Government of India in respect to the request made by this Association in 1925 that the import of coffee into India, except as roasted and ground, should be prohibited owing to the serious danger of the introduction of Stephanoderes into the coffee districts of Southern India. The opinion of the Government Entomologist that the danger was almost negligible was forwarded to the Association, but in its opinion the conclusions arrived at were due to want of knowledge of actual conditions. In the meantime a consignment of Robusta seed made to the General Scientific Officer of the Association was found badly infected with the pest and was destroyed. It is understood the Government of India has now deputed Mr. Bainbridge Fletcher to visit Madras and consult the Director of Agriculture, Madras, on the matter.

## THE TASK OF ELEMENTARY SCHOOL TEACHERS

Mr. R. M. Statham M.A.I.E.S., says:—"I do not view the problem which is facing us to-day as merely making the young generation of this country all literate—of course it is essential. Your task as elementary school teachers particularly is very much bigger and more important than that. I am sorry to tell you that in addition to your difficulties, your struggles and your wants, you still have further larger responsibilities. I am sorry to say this because it may worry you; what I want you to try is to think for the moment that education is something completely divorced from slates, examination, etc. I want you to think of your country and in how many ways, unfortunately, we find it defective. Is it not a fact that there is much disease in our villages which could be prevented? Is it not a fact that there is much insanitation? Is there not race feeling or caste feeling? Is there not caste intolerance? What does it mean when I say that when I was passing on a road in Malabar a man was crying for alms, not from the road but from the middle of the field? In the Punjab, I found that only little sparks were wanted to make an explosion. The answer is that education is not having the real effect it should have. It is not in contact with the living reality and surroundings The school must be the centre of rural reconstruction work. If this ideal can be realised, then the elementary school teacher will be an important person in spite of his low, and humble situation. Through him and his products the village life will gradually be lifted higher by villagers learning their lessons of sanitation, hygiene and co-operation from them.

"I was very glad to see that in your report it has been suggested that the village teacher should be one who is more or less a villager himself. An urban teacher may not make education a living reality in the village. It is perfectly possible for the villager who happens to be a trained teacher to improve it. He understands its needs, requirements and environments.

"I was very glad to see this afternoon a small pack of boy scouts here and they have helped in welcoming me. I mention this not merely to thank them but to further illustrate the point which I wish to press home. Do the boy scouts have any relation to the general uplift of this town? I am not going to quote now what I have seen in the Punjab to show that it is better than Madras—which it is not. But I found in the Punjab in several small villages where there were boy scouts they were an illustration of my theory that the school was a real inspiration for better life in the village. I found there some small boy scouts with showel and wheelbarrows themselves acting as scavangers. I don't want to request the boy scouts of Ponneri to become scavangers. It is the spirit behind the fact that matters. It is the feeling that the elementary school masters are something higher than instruments for removing illiteracy that I want to impress on you. It is not merely an educational problem but it is the problem of rural reconstruction of which education is a part and not the whole. I do admit Gentlemen, that if you all assist in this great effort, your condition also should be made as reasonably good as possible.

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*Continued From page 4.*

### CONTROL IN THE HOUSE.

Kitchen refuse of all kinds should be collected in brown paper bags which should be kept open for a few days at suitable places round about the house for the access of gravid female house fly. Every such collection should be burnt on the third day. For in-door use, insectisides are very useful. A liquid or moist food poison is effective in destroying them one of the best substances being formalin; a table-spoonful of formalin mixed with a half pint of water and placed in shallow dishes attracts flies and is fatal bait for them. The handiest and the safest preparation is sold in the form of a dry paper, which contains arsenic. A spoonful of water is used to moisten the paper. Another poison recommended is a strong decoction of tea leaves to which a little beer and sugar is added. The smell of geranium is odious to the house fly and so pots of this plant may be kept inside the house. Paraffin painted on window panes is said to be still more efficient. Traps in the form of wire gauze cages and glass non-return bottles are also used. Flies may be easily prevented from entering the rooms through doors and open windows by means of screens and venetians and *chicks*. If there are windows on two sides of the room the window screen must have closer meshes. The protection of larder and covering of food should not be neglected. The prevention of access of flies to fœcal matter and to all [illegible] the sick room is of the [illegible] importance, The key to the extermination of flies consists in the word "cleanliness" which should be observed inside and outside the dwelling places.

### EXERCISES AND GAMES.

The exercises must be adapted to the age, general requirements and physical condition of the pupils. They must be arranged on a definite systematic plan, each exercise having its special object in view. The following may be found to be a suitable order in which exercises may be classified.

1. Introductory exercises.
2. Arms-bending and stretching.
3. Trunk bending-backward and forward.
4. Balancing Exercises.
5. Trunk turning and bending sideways.
6. Breathing exercises.
7. Marching, running and jumping.
8. Games.

*1. Introductory exercises include the order movements.* The order movements are the movements of the pupils in immediate response to the order of the teacher as for instance the pupil learns to march instantaneously at the word 'MARCH" and to stop immediately at the word "HALT". This is the first step towards the physical training and can be acquired very easily by the children.

*2. Arms bending and stretching.*

(*a*) Arm stretching sideways:—The arms are bent and then fully stretched horizontally sideways in line with the shoulders. The fingers and thumbs must be straight and close together, and the palms turned down.

(*b*) Arm stretching upward:—The arms are bent and then stretched upwards to their fullest extent, the distance between the hands being the width of the shoulders apart; the fingers and thumbs straight and close together, and the palms turned in. The hands should be in a line with the arms.

(*c*) Arms stretching forward:—The arms are bent and then stretched forward at the shoulder level, keeping the body erect. The fingers and thumbs must be straight the palms turned in, and the distance between the hands and arms should be the width of the shoulders apart.

(*d*) Arms stretching backward:—The arms are bent and then stretched backward, the fingers and thumbs being straight and the palms turned in.

Such movements help to expand the chest, strengthen the muscles of the arms and make the joints more flexible.

*3. Trunk bending backward and forward.*

(*a*) Trunk bending backward:—

The chest is first raised and then the upper part of the spine is bent backward. The head makes no separate movement and is carried backward with the body. The body should not be bent backward from the waist, and the knees should be kept straight. The breath must not be held during this exercise.

It serves to expand the chest, and helps to produce good carriage.

(*b*) Trunk bending forward:—

The body is inclined slowly forward from the hips with the chest raised. The back must be kept straight. The head should not hang down, but must be directed slightly upwards. The knees must remain straight.

(*c*) Trunk bending forward and downward:—The body is first inclined forward and then downward as far as possible from the ground. The knees must remain straight.

These exercises strengthen the muscles of the back, correct round shoulders, and render the body more supple.

*4. Balance exercises.*

(*a*) Heel raising:—The heels are kept together and slowly raised as high as possible from the ground. The knees must be held straight and the body erect.

(*b*) Heel raising and knee bending:—The heels are first raised, and knees are then bent as far as possible the heels being kept together. The head and body must be kept erect.

(*c*) Leg raising forward;—The leg is raised forward as high as possible with straight knees the toe pointing upward. The body should be kept erect and the leg supporting the weight of the body should be straight. Similarly the exercises of leg raising sideways and backward can be carried on.

These exercises serve to develop the brain centres and help the child to acquire the faculty of concentration. They improve the general carriage and at the same time have a corrective action if there is a tendency to stoop.

*5. Trunk turning and bending sideways.*

(*a*) Trunk turning:—The body is turned slowly as far as possible without moving the legs to the left or the right, the head and arms making no separate movements. Both knees must be quite straight and both feet must be kept firmly on the ground.

(*b*) Trunk bending sideways:—The body is bent slowly to the left and right as far as possible without altering the position of the legs. The shoulders must be square to front, the knees straight, and both feet kept firmly on the ground throughout the exercises. The head makes no separate movement.

These exercises tend to increase the capacity of the chest especially in its lower part the muscles of the body-wall are strengthened.

*6 Breathing Exercises.*

They consist of a combination of movements partly of the body muscles and partly of the lungs, themselves, the first result of which is a deeper inspiration and the more complete expiration than in ordinary breathing. In a certain sense every physical exercise is a breathing exercise. Certain arm movements are amongst the simplest of these breathing exercises, "Arms raising forward and upward, and lowering sideways and downward." "Arms raising sideways and upward and lowering sideways and downward." The air is breathed in as the hands are raised and breathed out as they are lowered. The movements of the arms may be combined with deep breathing which must be slow and must correspond with the inspiration and expiration. They should always be performed in a pure atmosphere. These exercises allow a full expansion of the lungs, especially of the lower ribs.

*7 Marching running and jumping.*

These hardly need any explanatory note and are the best forms of exercises which can be easily carried out in villages. The game of "KABUDI" etc, are well known, and children should be encouraged to take part in these games in a systematic way. In marching and running the head and body must be kept erect, and the arms should swing freely from the shoulders. In marching, the shoulders should be kept steady and square to the front, and while running the body should be slightly inclined forward. These exercises exert a considerable influence on the circulation, respiration, digestion and execution. These movements have also valuable educational effect in producing alertness, ready response and happy cheerful spirit.

8. *Games.*

Besides the popular game of "Kabudi" the following games may be introduced.

"*Cat and mouse*":—The children join hands and stand in a circle with the "Cat" outside and the "Mouse" inside. On the word "Go" the cat tries to catch the mouse, following him exactly as he runs in and out of the ring, passing between the other players under their clasped hands. The players in the ring move round and allow the mouse to pass freely in and out of the ring by raising their hands, while they are to prevent the cat from following him by lowering their hands. As soon as the mouse is touched, the last two prayers in the circle who let the cat pass between them become "cat and mouse."

(*b*) Fill the gap. The children form a circle holding hands. One player running round the outside of the circle touches another, who at once starts running in the opposite direction; each of these two children trying to get to the vacant place first. The unsuccessful player continues running and to touch another child.

(*c*) Stepping stones. Two lines are drawn on the ground twenty to thirty paces apart to represent the banks of a river supported to lie between them. Across the river thus formed a number of circles to represent stepping stones are drawn at irregular intervals to get from one to another. The players divide into two teams and assemble on one bank. From here one at a time, they run quickly across to the other bank by jumping from one stone to another but only one foot should touch, each stone. If the player lands outside the circle he is drowned and stands aside, the team which gets the largest number across the "banks" safely wins. Various games of this type can be suggested in which the children will take delight to indulge. Besides, the children should be encouraged to take part in popular and healthy games such as football, hockey and cricket.

The recreative effect of games is always of great importance.

It makes the lives of children brighter and more joyful. The educational effect on the mind and character is equally valuable. They easily learn the value of cooperation, self sacrifice and self control. There is also an actual physical effect on the body as a whole, as in games a considerable amount of muscular exercise is secured with comparatively little effort and fatigue.

### MALARIA.

Malaria is one of the most prevelant of all preventible disease. It has been confirmed after various experiments and long researches that a particular species of anopheles are the carriers of the disease and are indispensable for the propagation of the parasite. No other disease compares with it in the extent of its distribution. It heads the list of the diseases which are responsible for high mortality and suffering among the people. The mode in which the disease is conveyed is briefly as follows:—

In an infected mosquito the salivary glands contain a large mumber of malarial parasites. When the infected mosquito bites a man, these parasites are injected into his blood. There the parasties, multiply, enter the red blood cells and grow at their expense. After certain changes in the blood the parasite completes its sexual phase of life and is converted into minute bodies. Now if human blood containing these bodies is ingested by female mosquito to its stomach, certain changes take place which is the sexual phase of the parasite, resulting in the production of vast numbers of minute, slender, encapsulated bodies. A few days later the capsule bursts and these bodies are discharged into the midgut of the mosquito. From here they pass into the salivary glands of the mosquito ready to be injected into the human blood through its bite.

From the method of propagation described above it becomes evident that there should be no malaria if there were no mosquitoes.

Practical methods of prophylaxis, therefore, have for their object the extermination of these insects or failing this the prevention from their bites. The most important method to prevent its spread is the education of the people in the "Mosquito malaria theory". Sanitary measures can rarely be carried out effectually without the co-operation of those whom they are intended to benefit.

Mosquito eggs in their development pass through the states of Larva and Pupa, before the perfect insect is formed. Almost all mosquitoes are acquatic in their larval and pupal stages and any small collections of water may afford breeding grounds for them. The Larva of Anopheles lies almost horizontally beneath the surface of water as it breathes, through apertures placed dorsally on posterior half of the abdomen. The larvae of other forms of mosquitoes breathe whilst the body is completely immersed, as it is provided with one long air tube at the end of the abdomen. The larvae of Anopheline mosquito can therefore be destroyed, by pouring some oil such as crude Kerosine oil on the surface of the water, which prevents entrance of air through the breathing apparatus.

Approximately one ounce of oil to every 15 sqr. feet is sufficient.

### GENERAL CONSIDERATIONS.

*The habits of mosquitoes*:— (1) It is only the female mosquito that bites and is the carrier of the disease. During the day they live hidden and sheltered while they come out to bite men in the evening and night.

(2) They do not wander far from the place where they are born and do not fly high.

(3) Shady and damp places and dark rooms are the favourite abode of mosquitoes.

Remember the mosquito besides being the source is the only carrier of malarial infection.

### PROPHYLAXIS.

1. Education of people both regarding the source of infection as well as the methods of prevention and protection is of the greatest importance. When once the people are made to realise the enormous loss of life and money that this disease is causing every day in India and the method of its infection and prevention, their co-operation shall be forth coming and it will certainly mitigate the evil.

### 2. ERADICATION OF THE DISEASE FROM THE SYSTEM.

This consists in the disinfection of the blood of the patient by means of quinine which is a specific remedy for all malarial fevers unfortunately there is still some old prejudice against the use of quinine and more so among the uneducated people.

#### *Destruction of larve*

In order to get rid of the breeding grounds of mosquitoes, marshy tracts and swamps etc., must be drained and all small ditches and ponds surface pools and excavations should be filled up.

All the rejected tins and cans capable of holding water should be removed. Large open spaces do not harbour mosquitoes and therefore all rank vegetation overhanging tanks &c. and the weeds and the grasses on their banks should be removed.

Crude Kerosine oil should be poured on the surface of all the stagnant pools, unused tanks &c. which will asphyxiate the larvae. Small fishes, tadpoles also destroy mosquito larvae.

#### *Destruction of mosquitoes*

The substances used are divided into three categories odours, fumes and gases.

Under the first head oil of turpentine and Idoform occupy foremost position, next come menthol and nutmeg. They cause apparent death of the mosquitoes in ten minutes and actual death in 2 to 3 hours.

Camphor and Garlic stupefies them in a few minutes and kills them in about 3 to 4 hours.

Under the second comes the ordinary smoke caused by lighting a fire in a closed room which kills the mosquitoes in a short time. The most efficient article in this connection is the tobacco smoke; this instantly stupefiies them and kills them in 2 or 3 minutes. Relatively an enormous quantity of tobacco is necessary for killing them which cannot easily be procured. It is preferable to burn in the houses the powder of Chrysanthemum and pyrethrum (akarkara and neem leaves which follow tobacco in respect to their culicidal action. The fresh leaves of euclyptus may also be utilized in this way. Louan (Benzine) is also used.

The flames of rosemary and Quassia wood come next in their efficacy.

Under the head "gases" are included, sulphur-di-oxide hydrogen sulphide and formaldehyde gases. They cause apparent death instantly and actual death after one to two minutes. Of the gases the most easily procured is sulphur-di-oxide gas, which can be generated by burning sulphur in a room.

It is to be remembered that all odourous fumes and gases must completely saturate a room in order to kill the mosquitoes.

Amongst the measures for personal prophylaxis the use of quinine is of great value.

An effort should always be made to protect the body against the bite of mosquitoes specially at night, by sleeping under a mosquito curtain, and if it is not possible by the innunction of the skin with ordinary mustard oil or oil containing camphor or euclyptus. Suitable clothing should be worn to protect the body from the chill and from mosquito-bite.

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# MISCELLANEOUS.

## INDUSTRIAL CO-OPERATION.

DOES it exist in India? Can it be applied in India? Has it ever been tried in India? If so, by Indians? Who can answer any of these questions by a plain "yes" or "no"? It is possible that there are any employers who can. It is *possible*.

Then there is yet a fourth question—is it desirable to try and apply it to India? Surely there can be no hesitation in saying "yes". And one might go still further and say that the salvation of the country depends on it. Supposing, in earlier days, before we introduced the very doubtful blessing of politics into this country, we had first educated the agriculturist. not to be discontented with his plough, but how to plough properly. On the principle of better late than never, steps are now being taken to this desirable end. But what a lot of lee-way to make up! Agriculture is indisputably the basic industry of India, and it does India no good service to take the agriculturist's son and pump windy political platitudes into his head.

### "STICKY BACKWARDNESS."

But India has perfectly reasonable aspirations towards taking her place in the comity of nations. Inter alia, she is developing an industrial, as well as an agricultural, side to her being. Or, rather, it would be more truthful to say that this industrial tendency is being developed for her. Judging by comments passed on the recent enquiry into the condition of Bombay's basic industry, it would appear that that industry is being run in accordance with principles, or lack of principles, that obtained in the year 1. And this sticky backwardnesss, perhaps common to too much of India's industry, re-acts prejudicially throughout her being.

Supposing, by way of a change, we just cut out so-called politics, which are so apt to degenerate into office-seeking and a desire for the lime-light, and perhaps for the good things of this world which a well-lighted office is apt to carry with it, supposing we cut them out, and worked from the bottom instead of from the top, or at least from what considers itself the top? In other words, built upwards on a sound foundation, and then, when that is assured raised our political edifice. What we are doing now is to try and enclose a bubbling, boiling, inchoate mass within a thin veneer of polished—and not always that—Talk.

### WANTED—A CONSTRUCTOR.

There does not seem to be any real constructive policy, as understood by an engineer or other hardbitten customer. So far as one can judge, the aim and ambition of the *average* Indian "politician" is simply to have unlimited license for unlimited—Talk. (Please note the word "average.") Mr. Gandhi has long ago given up all hope, and, like Lord Fisher, says "scrap the lot, and let's go back to the spinning wheel." Of the two, I'd vote for Mr. Gandhi. Because he has, apparently, only seen the harm that comes from Westernising an Eastern country before it is ripe for the transformation, and before the vast bulk of the population wants it. So he wishes the country to go back to the times before wind in the head was a common disease, when people worked (in his view, at least), for themselves, and not for others who—Talk. Mr. Gandhi wants to go back, but India says (through her Talkers) that she wants to go on.

But what part of India really says she wants to go on? Not the dumb millions who don't know what the Talkers are Talking about, and care less. All they want is decent wages, decent food, and, perhaps, decent prospects—the common right of all mankind. That is their idea of progress, and it is the best idea of progress. But they really do not want the inestimable privilege of electing a Talker to Talk.

Now, what on earth has all this Talk of mine to do with Industrial Co-operation? Well, it is like this. Let us leave the agriculturist to his plough. If he ploughs properly, in accordance with modern knowledge, he *will* gain decent wages and decent food, and, if he wants it, a decent dwelling place. With rare exceptions he cannot look far beyond the boundary of his farm. The very nature of his work leaves him with a limited power of expansion. But to enable him to derive the full benefits of his labour he has to rely on quicker, broader minds, who can find him transport and markets and who can commercialise his products. And a finer, better type you cannot hope to meet in any country, within his mental limitations.

But India is developing industries other than agriculture. If she wants to play a big part on the world's stage, if she wants to develop those industries, so as to prove herself the industrial, and therefore the scientific (and all that that word implies), equal of other nations, she must develop them on modern lines.

### A LESSON FROM AMERICA

What started the writer off on this dangerous voyage was an article in one of those splendidly "got up" American Industrial Magazines. If the Bombay Directors and Mill-owners spent some of their spare time in studying that type of magazine, instead of spending it—however they may spend it—there would surely have been no need for a Committee to enquire into the state of Bombay's basic industry. In this article referred to, the President of the Baltimore and Ohio Railway, who was converted to Industrial Co-operation against his will—that is, co-operation between employers and employees—makes the astounding statement that the employees of his Railway had put forward 18,000 suggestions for consideration within five years, and that of these 15,000, or 84 per cent. had been accepted by the management.

And there I will end. But I venture to say that if India introduced Industrial co-operation, which of itself implies Industrial education, in the process of time she could build that sound foundation of practical men, from whose actual experience and knowldge political and social ideals could be developed in accordance with the *practical* needs of the nation. It would be a very very slow business, the slower and surer the better. But it would be building upwards from a rock foundation, and not building fairy edifices on a quicksand. Only very recently has England started to copy America on a wholesale scale, and therein lies England's salvation.

Why should it not be India's salvation too?—*Pedantious*—*Pioneer*.

# ALL THAT LATHERS IS NOT SOAP.

Don't be guided by the appearance, smell, packing, size or cheapness of a soap. None but the purest soap should be used for toilet purposes.

## ESSENTIALS OF A GOOD TOILET SOAP:—

1. It should be free from injurious chemicals.
2. It should not contain Silicate of soda, Sodium carbonate, Chunam, Clay and such loading materials.
3. It should have not less than 62% of fatty (soapy) matter.
4. It should not contain excess of moisture.

*See the following table of analysis of soaps and judge for yourself which soap is good and which bad.*

| | Name of Soap. | Percentage of fatty acids. | Percentage of Silicate of soda. |
|---|---|---|---|
| (a) | BORAX SOAP (IMPORTED.) | 47·3 | 26 |
| (b) | do. do. | 46·0 | 27 |
| (c) | BORAX (Indian Make) | 56·6 | nil |
| (d) | VEGETOL | 62·0 | nil |
| (e) | KERALA ROSE | 83 to 84 | nil |
| (f) | KERALA SANDALWOOD | 83 to 84 | nil |

(a) and (b) are positively injurious to the skin. (d), (e) and (f) are the best.

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Printed by F. B. Clothey, and Published by K. R. Swami at the A. A. M. Press, Saidapet,
for the Chief-Editor Mrs. M. R. JANAKI, B.A.L.T., M.R.A. S. (LOND), Lucknow.