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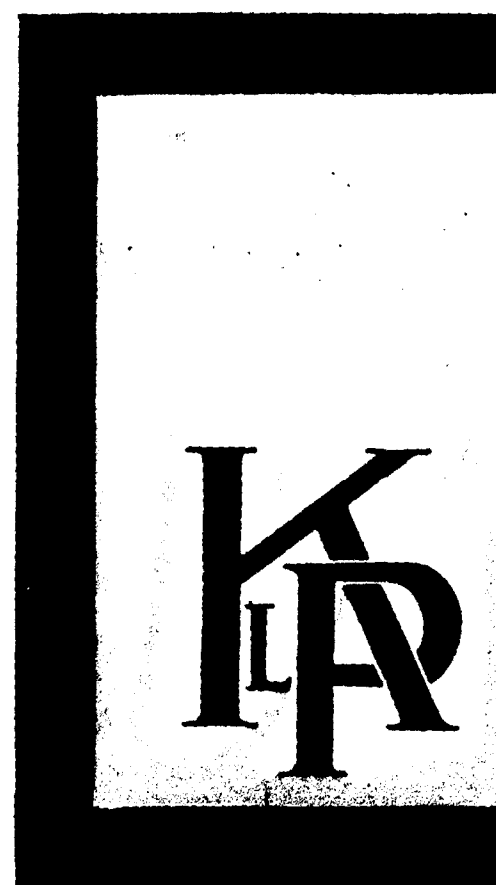
THE
MONTHLY PAPER OF INDIAN INDUSTRY, COMMERCE, PRINTING, STATIONERY



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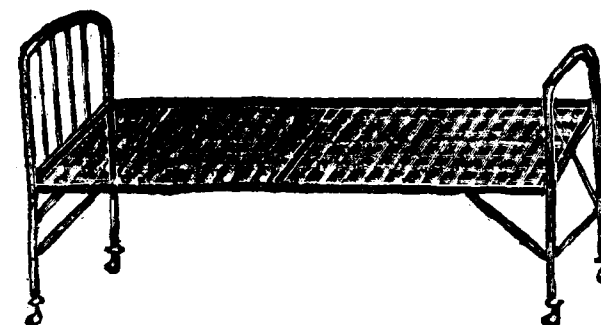
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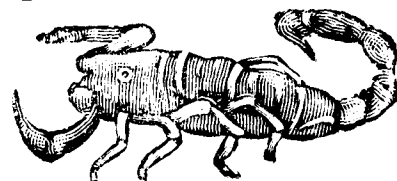
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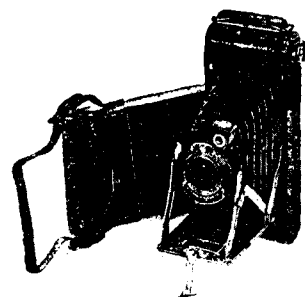
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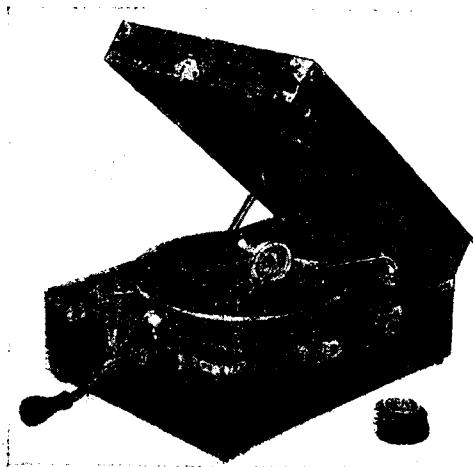
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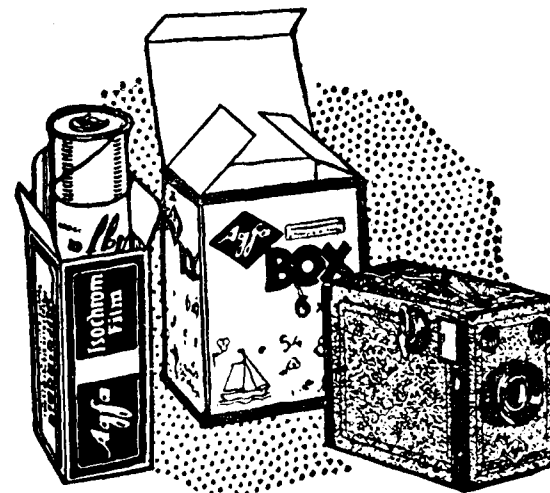


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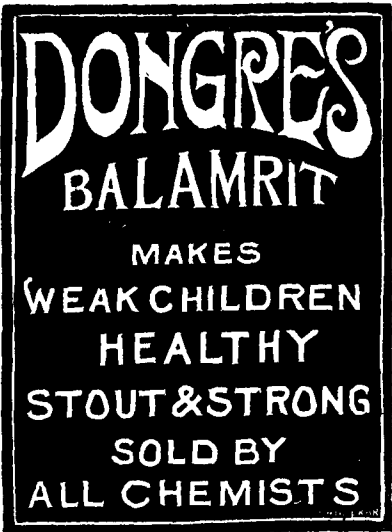
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ALL INDIA TRADE MAGAZINE

MONTHLY PAPER OF INDIAN INDUSTRY, COMMERCE, PRINTING, STATIONERY

NO. 9. VOL. III EDITED AND PUBLISHED BY F. H. BAULEDER JUNE 1938

Parting at Morning

Round the Cape of a sudden, came the sea
And the sun looked over the mountain's rim—
And straight was a path of gold for him,
And the need of a world of man for me. R. BROWNING

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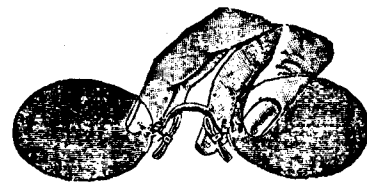
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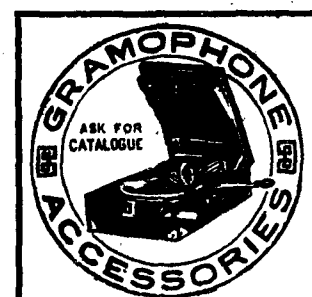
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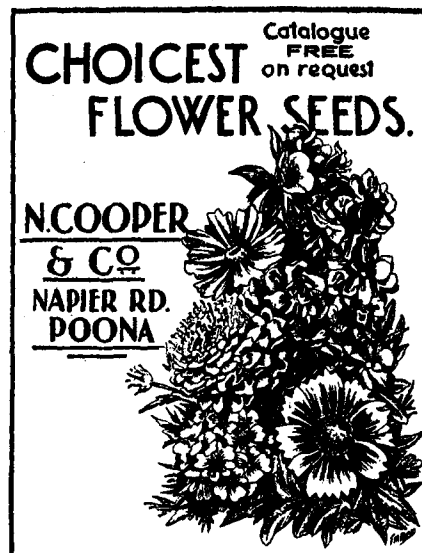
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you have an expert knowledge of any line, and if so, of which,
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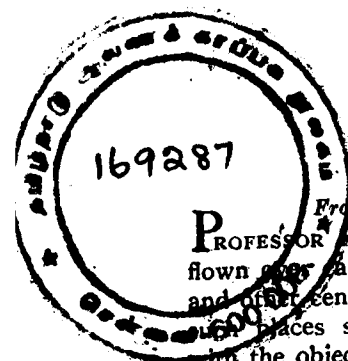
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ALL INDIA TRADE MAGAZINE MANGALORE S. K.



A Banner of Peace

From a Military Point of View. By Colonel A. E. Mahon, D. S. O. Sole Copyright by F. H. Rawleder

PROFESSOR Roerich's idea of creating a flag to be flown over cathedrals, museums, libraries, universities and other centres of culture in every country, and that such places should be regarded as neutral territory with the object of preserving them, not merely for the country in which they are located, but for humanity as a whole, is a practical proposition and not an Utopian ideal. It is an idea that is worthy of the most earnest consideration, and we can ill afford to delay the universal adoption of such a flag.

Although the idea has been welcomed in the highest quarters, and its practicability endorsed by no less an authority than Marshal Lyauty of France, there are still sceptics who express their doubts as to the possibility of respecting such a flag in modern warfare. Similar doubts have been expressed in the past with regard to the Red Cross and yet we must admit that, in spite of regrettable accidents, the Red Cross has been respected and that it has proved an inestimable blessing to all nations.

If it is possible to respect the Red Cross which, generally speaking, is for the protection of the sick and wounded and their attendants, would it not be equally possible to protect those places which, on the cessation of hostilities, are for the benefit of both belligerents?

If it is thought that any nation would sink so low as to abuse the proposed flag and use for military purposes certain buildings over which the flag was flown, it should be possible to make it one of the conditions under which this flag is to be flown in war, that officers belonging to neutral nations should be deputed to see that no building over which this flag was flown was used for any kind of military purpose, and to report to the League of Nations any case which the neutrality of the zone was not respected.

It has to be admitted that in cases of long distance bombardments, aerial bombardments by night, defective shells etc., accidents will happen. But we believe that, as has been the case in the past with the Red Cross, such cases are genuine accidents and that no nations would sanction the bombardment of any place which they had previously agreed to regard as neutral territory.

For the effective protection of any building it would, of course, be necessary to delimit a certain specified zone in the immediate locality of such building and the whole of this zone would have to be regarded as neutral and not made use of for any military purpose. But

it will undoubtedly be necessary in future to apply this rule to hospitals, and what would be possible in one case would be equally possible in another.

If nations can agree not to use soft nosed bullets and to conform to other agreed rules for the conduct of warfare there is no reason why they should not agree to preserve from destruction those edifices which can be regarded as international treasures or which are for the lasting benefit of humanity.

It is, moreover, not only in wars between nations that this flag is a necessity. Recent happenings in Spain have shown us that it is equally desirable in revolutions and internal disorders

that are liable to occur in any country. When once it is realised that certain buildings really are international treasures it should not be difficult for the nations to agree to protect them. It is very true that the most effective protection would be a universal peace, but as this happy state is not likely to be obtained in this generation, the hope of a lasting peace should not blind us to the necessity for taking measures for the protection of irreplaceable treasures until the ideal peace on earth and

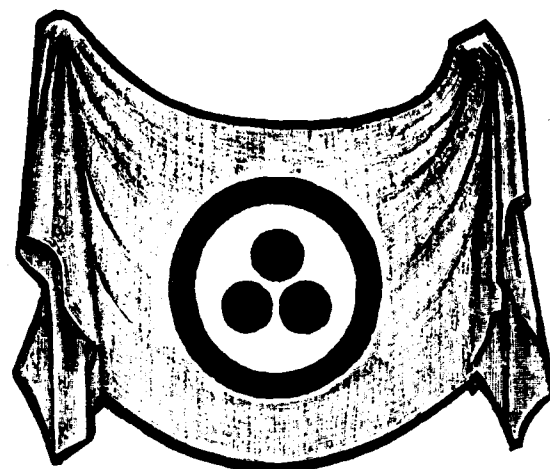
goodwill among men becomes an accomplished fact.

Even in the heat of war, ships flying neutral flags have been respected. It is equally possible to respect a neutral flag that indicates a neutral zone on land.

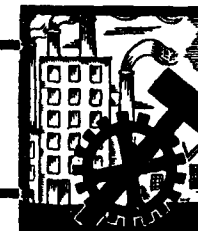
There are always to be found individuals who will decry any new idea. Possibly because they were not the originators of it, or possibly because their visions are limited. Fortunately there are men with broader minds and wider visions. In his plea for a Banner of Peace Professor Roerich has given a lead to these men who are capable of thinking internationally and whose patriotism has not blinded them to the greater issues. One of the greatest dangers to peace is when patriotism runs riot, and the greatest enemies to their own countries are the misguided and over-zealous patriots.

A wider outlook, an outlook that goes beyond our present needs, that considers the future of mankind and the future of our own posterity will surely see that by limiting the destruction of war to purely military needs we are making a long step forward towards that higher state of civilisation that we hope may some day attain that everlasting peace we all so ardently desire.

If the Banner of Peace is not practical from a military point of view then the Red Cross is also not practical, but the Red Cross has been proved to be practical, therefore, as Euclid would say, Q. E. D.



INDUSTRIES



Indian Industries To-day and To-morrow

By Dr.-Ing. F. Isermann, Bombay

"All modern civilization is based ultimately on the work of the engineer, and without him every branch of the complex system of our present-day life would soon cease to function. The engineer is the keystone of the arch."

At the annual session of the Institute of Engineers (India) in Bangalore, Mr. Jardine, President of this association, a few months ago pronounced the above words, and there is hardly a better definition of the engineer's work, especially in India. India is, of course, not yet an industrial country, nor is civilization spread all over the country, but India is on the threshold of an industrial development which will reach out in several directions. However, it must be stated that India is not beginning to industrialize to-day, nor did begin yesterday. There has been an industry in India already for years and years. This industry, based on the abundance of raw materials and agricultural products found in the country, is the foundation of the coming industrial development, and All-India has made up her mind to enlarge this industry, and to supply by the demand of the population of this country.

Three main lines of development are to be observed to-day: the modernizing of plants and factories which have already been running for years; the starting of new lines of industry; and the encouragement and systematic fomentation of the cottage industries. One idea is common to these three lines, viz. to supply the country's demand from country-grown raw-materials and in the cheapest way, so as to save the cost of exporting and re-importing.

What is the significance of the desire to modernize existing plants and factories? There is just now a serious discussion going on about the fact that, for instance, the big mills in Ahmedabad and Bombay cannot compete with Japan in the production of piece-goods. That may, of course, be partly a matter of subsidies, but there is no doubt that it is also due to high production costs. The reason may be this: that these big factories, which were established years and years ago, have not had occasion to modernize their plants so as to enable the cost of the product to be lowered sufficiently to meet the competition of the other countries. Among all the mills—so far as is known—there is not a single one whose power plant is operated with steam of more than 200 or 250 lb. per sq. in. pressure, anything above this pressure being looked upon as "high-pressure". And only a few men up to now have

been calculating that much coal can be saved by running the plants at a higher pressure. Industry is waiting for the man that takes the lead and makes the first trial with a view to cheapening production in that way, and then the others will follow.

And what about the oil-fired boiler? There is oil enough in India, more of it and cheaper than in Germany, where a number of oil-fired boilers are running.

Similar considerations apply with reference to the spinning and weaving-machine plants: only the best and most up-to-date machines will place the mill in a position to cut down the production costs to the requisite level, even if their initial costs are high.

The question of the workers' wages was perhaps not an important one up to now, but in the textile line—as much as in many other lines, and in India as much as in other countries—cheap mass production is largely a question of wages, the standard of which, however, can hardly be lowered. Nor does it need to be; for, the wages generally rise the more a country is industrialized. The wage item of the total production costs can, however, be lowered when the output is increased by the use of new-style machines, such as half-automatic looms, direct-driven spinning machines, weft winders.

There is no need for India to fear that the increase of production due to a thorough modernization of industrial plants will lead to over-production, as it has done in some other countries. The demand for manufactured goods in India is large enough and will increase when the goods are produced, and can be sold, more cheaply.

One of the most urgent tasks of the Indian industries therefore is to modernize the plants and to install new and modern machines. India has now the advantage over the European and American countries that all the experience, gained by them in the course of many years and at big expense, is at the disposal of the Indian industries. The results of the scientific experiments and researches carried out in their large laboratories and institutes are published in books and periodicals, and the machine-builders have redesigned their machines and have improved them step by step. The same remarks apply to boilers, textile machinery, tools and machine-tools, and all other machines.

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However, as long as, for instance, the lathes are purchased in India according to their length, i. e. that the price is expected to be quoted as so much per foot, it would seem idle to speak about improvements in design. Yet there are big differences in lathes to-day: cone-pulley, single-speed pulley, or direct motor-driven, with double gear-box or with change-wheels, for high-speed-steel or for diamond-tool working, etc., and it is necessary to consider in each case what advantages will be obtained when working the one type or another. Similar constructional developments have taken place on all other types of machine-tools, e. g. drilling, shaping, planing, milling, or grinding machines. Drilling machines with built-in-electric motors save labour time, and so do radial-drilling machines. Turret (capstan) lathes of modern design allow to cut down the working time considerably and just these machines are most suitable for the Indian industries, as the demand is too big to be met with the usual lathes, while, on the other hand, the wages are too low to justify working with fully automatic machines. Shaping-machines with built-in gearbox for quick change of the speed save the time for replacing the belt from one step of the cone-pulley to the other.

When starting new industries in India, as elsewhere, it is useful to consider whether they are intended to supply the demand of the home country or to refine the country-grown goods for export. The demand in India with its population of 320,000,000 is big enough to justify the starting of any line of industry which supplies food, provisions, household articles, and anything that is necessary for the daily life. Cloth, soap, and some other goods are already being manufactured in large quantities, which, however, do not suffice to satisfy the huge demand. Then there are a multitude of goods which are manufactured in only a few and small factories, for instance buttons, shoes, and boots, household articles, furniture, building material, metal parts, such as hinges, hooks, knives, pins, nibs, pots, dishes, etc. There is furthermore only one manufacturer of spoons and forks. Only just now two factories for making razor blades are starting, and there is demand enough to keep at least fifty of them going, with an output of 30,000 blades per day each. Only a few factories are manufacturing tooth-, hair-, and clothes-brushes, and there is room for dozens. As far as the writer knows, there is not one that builds ice-boxes, and the demand of course is also very big. Cardboard and paper are being imported at present in large quantities, though there is wood and rice-straw enough in India not only for covering the home demand for paper, but for exporting paper as well. Furniture is still produced by hand. No doubt, hand-made furniture is beautiful, cheap, and of good quality, but when it is produced by machines, the quality and the appearance can be just as good, while the price is bound to be still cheaper. Slates for boys are made by hand in small quantities, although it would be possible to manufacture them with machines and so to satisfy the demand.

As the electric-current supply will extend to a larger number of places in India, the demand for all sorts of electrical goods will rise. Switches, wall plugs, circuit-breakers, ceiling roses will be good sellers, and there is no difficulty in manufacturing these goods in India. As regards electric bulbs, it is questionable whether it would be advisable to take up their manufacture just yet, although it would not be impossible. It would require experienced men and high-class machines.

Traffic is increasing more and more, and the roads are not bad. So the motor-car, the truck, and the lorry are rising in importance. But as long as these goods are saddled with an import duty of 37½ per cent. of their value, their selling price becomes too high. Why should it not be possible to import the engine, the gear, the differential, the wheel-parts, the tyres, and some other parts separately and assemble the cars and trucks in India? The frame, the body, the upholstery, the cover, and many other parts are easily made locally, and cheaply too. Some firms have started manufacturing bicycles for children and baby-cars, and from this to the manufacture of bicycles for adults is only a small step, provided the factory is equipped with high-class machines. If bicycles made in Japan are sold in the Indian markets in huge quantities, it ought to be possible to sell Indian bicycles in much larger quantities.

The last item in this—necessarily incomplete—survey of possible new industries shall be a brief reference to laundry work. The Indian *dobie* still washes the laundry in the manner of a thousand years ago. He beats the laundry on stones until it is clean, and naturally it gets damaged in the process in a short time. In spite of the obvious drawbacks of this method, there are, in the whole of India, only two or three modern laundry plants with washing, drying, and ironing machines, although these machines offer big savings in soap, labour and time, and treat the laundry far more gently.

The cottage industries are the third line which will have to be further developed in India, although they are not to be looked upon as an essential item in the industrialization of India. The problem is rather one of providing the widows and peasants with work and the possibility of making some small earnings during the time they are not working on their fields. Small hand-operated machines only are suitable for this purpose, and the goods to be made are small too. Sheet-metal parts, pins, ribbons with embroideries, simple wooden articles, and all such goods as can be easily produced by unskilled people and with the aid of only one cheap machine. The German cottage industries are well-known all over the world, and India will have to look to Germany for the requisite information.

The lines along which the industries of India are likely to develop in the future have been indicated in the foregoing. The main thing to be considered in this connection is the question which of the industries are most likely to yield profits. These will have to be equipped with the best and most suitable machines and staffed with experienced men.

Eng. Progress

The Natural Resources of India

By Dr. H. W. B. Moreno, M. A., Ph. D., D. Litt., M. L.



THE poverty of the people is not due in any way to the lack of natural resources of the country. Mr. Monier Williams, M. A., C. I. E., says, "India is one of the most productive countries of the globe. Her material resources, and her potential wealth are incalculable. India is, in fact, a small world in itself. She can offer you a specimen of every form of climate. She can scorch you with heat or shrivel you with cold. She can present to your gaze every imaginable physical feature of plain and desert, river and torrent, fen and forest, hill and dale, rich field and barren waste, dark crag and snow-white peak, towering to twice the altitude of the loftiest Swiss mountains. She can excite your wonder by ten thousand varieties of animal and plant life. She can enrich you with gold and precious ores, with diamonds and precious stones, with coal and iron. She can pour out before you wheat and grain of all kinds, oil and sugar, tea and coffee, tobacco and opium, perfumes and spices, every conceivable species of vegetable and mineral produce."

The Artistic Genius of Indians.

The same author pours out lavish praises on the artistic genius of Indians. He says, "India can clothe you in soft vestments of silk, wool, cotton, cambric and embroidery. She can call forth your admiration by matchless examples of industrial and decorative art, of unrivalled manual skill, of consummate taste and dexterity displayed in every kind of manufacture—every kind of useful and ornamental article. No one could fail to admire the exquisite carvings, the delicate filigree work, the artistic feeling displayed in the fashioning of ornaments; the gorgeous richness of the kincob work, with its gold, silver and silken threads, woven into the texture of the fabric; the tasteful designs and matchless colouring of Kashmere and Delhi scarfs and shawls; the marvellous skill and taste displayed in the sandal-wood carving and inlaid wood-work; the sumptuous gold and silver plate-work and highly tempered steel weapons of Kutch; the exquisite embroidery and needlework of Amritsar and Delhi; the exquisitely fine muslin produced at Dacca. Let us not forget that India had not only attained a high degree of commercial eminence and industrial skill, but had besides made great advances in Science and Philosophy when our ancestors were half-naked savages."

The Glass Industry.

Takshasila, which was one of the oldest and wealthiest cities of the East in ancient days, was a great industrial centre. Sir John Marshall, M. A., C. I. E., writes in his "Guide to Taxilla" as follows:—"In one of the Chambers was a floor of glass tiles of bright azure blue with a few other colours—black, white and yellow—mixed with them. These tiles average 10½ inch square by 1½ inch thick and are of transparent glass, the first complete specimens of their kind

which have yet to come to light in India. In connection with these tiles, it is interesting to recall the Chinese tradition that glass-making was introduced into China from Northern India. Probably, the whole procession path was at one time paved with these stones."

Why Unsuccessful Now.

But our modern scientists, who are famous for their industrial research, have said that the glass industry is impossible on the Madras beach. It appears as if they made the experiment only to condemn it. If the work had been taken up in right earnest with the spirit of permanently establishing it in Madras, it would certainly have proved a very successful enterprise. If this industry was possible at Takshasila over 2000 years ago, why should it be impossible on the Madras beach to-day?

Antiquity of Indian Trade.

"The Old Testament affords clear evidence of the great antiquity of Indian trade. Moses, 1500 years before Christ, mentions various Indian products—bdellium, cinnamon, onyx, diamonds. Other trades and occupations are also mentioned in the Vedas; for example, those of the carpenter, blacksmith, weaver, rope-maker, leather-worker, boat-builder, ship-builder, agriculturist and physician." (Monier Williams, M. A., C. I. E.)

Industrial Occupations in Ancient India.

"Even in the days of Rama, several centuries before Christ, the procession that went out to meet him from the Capital of Oudh included metal-workers, copper-smiths, ivory-workers, crystal-cutters, glass-makers, inlayers, perfumers, hair-dressers, fish-mongers, musical instrument makers, painters, distillers, seedsmen, gardeners, basket-makers, brick-makers, plasterers, architects, clothies, potters, oilmen, washermen, with the headmen or guides bringing up the rear." (Monier Williams, M. A., C. I. E.). This long list of occupations provided work for every man according to his aptitude and so the people were rich and healthy in those days.

Patronage by Mauryan Kings.

The ancient kings of India paid great attention to the protection and development of the industries of the country. Under the Mauryan Kings each city was administered by "A Municipal Commission," consisting of 30 members, divided into six Boards or Panchayats of five members each. The first Board was entrusted with the superintendence of everything relating to the industrial arts and it was responsible for the rates of wages and enforcing the use of pure and sound materials. Artisans were regarded as being in a special manner devoted to the Royal Service and capital punishment was inflicted on any person who impaired the efficiency of a craftsman by causing the loss of a hand or an eye." (Vincent Smith).

Even by Moghul Emperors.

He continues: "Even the Moghul Emperors displayed a laudable appreciation of the fine arts, which they employed with lavish hands in the decoration of their palaces. The artists were held in high favour at Court and many of their names have been preserved." (Stanley Lane Poole.) Lack of patronage, however, at the present day is the cause of the decay of all the arts and industries of India, as a result of which, people are left unemployed and have sunk in poverty.

An Indian Emperor's Wealth.

Among the court festivities which Sir Thomas Roe witnessed, none was more curious than the process of weighing the Great Moghul, Jehangir, on his birthday. "The King at last appeared clothed or rather laden with diamonds, rubies, pearls and other precious vanities, so great, so glorious; his sword, target, throne to rest on, were full of gems; his head, his neck, breast, arms, above the elbows, at the wrists were similarly decorated, his fingers, every one, had at least two or three rings, fettered with chains on which were diamonds; rubies as great as walnuts, some greater and pearls such as mine eyes were amazed at, were found on him." (Stanley Lane Poole.)

The Kings' Munificence.

He weighed himself against gold and diamonds and had them distributed to the people. Children are taught in our Schools that we think extravagant; but, Jehangir did not think so. When the Treasury was full, what would he do with the money except pour it back into the Country for the benefit of the people. It would again come into his Treasury redoubled.

This festivity was also observed by the Kings of Vizianagar in South India as evidenced in the existence of Thulabara Sthambam among the ruins of Hampi. In a balance, the King used to weigh himself on festive occasions against gold, pearls and gems, which were distributed freely among the rich and the poor alike, so that when money had accumulated in the Treasury, it was not allowed to remain in vain.

Fostering the Peasantry.

The Padsha bathed in *Pannir* or rose water, which was indirectly helping the people. The farmers who reared the rose-gardens became rich and on account of the greater circulation of money, the Country was continuously prosperous and everybody was healthy. The money never went out of the Country, the people had everything to gain and nothing to lose by the so-called extravagance of the Indian Kings.

Moghul Treasury.

William Hawkins, who lived in the Court of Jehangir, gives the following information regarding the great Moghul. "The King's yearly income he places at fifty crores of rupees, or over fifty millions of pounds. The Royal Treasury contained an infinity of gold plates and jewels, including 500 drinking cups, some of which were made of 'one piece of Ruby.' The servants, gardeners, grooms and others, attending upon the court, he estimates at 36,000. There were

also 12,000 elephants of which 300 were reserved exclusively for the Emperor's use. The daily expenses of the Court were 50,000 rupees besides 30,000 for the harem". (Stanley Lane Poole.)

Sir Thomas Roe describes his Privy Council room as follows:—"When I came in, I found him sitting cross-legged on a Throne, all clad in diamonds, pearls and rubies, before him a table of gold, on it about fifty prices of gold plates, set all with stones, his Nobility about him in their best equipage." (Stanley Lane Poole.)

Where is the Wealth Now?

Where are the pearls that gave their name to Muthialpet and where the corals of Coral Merchant Street? In their place has arisen the Black-town of the East India Company. Where then did India's wealth go? It is drained away to foreign countries, because the country does not foster agriculture, the mainstay of 70 per cent. of the population of the country; and it does not encourage her industries.

The Indian Village System.

It is not the towns that make India what it is, but it is the prosperity of the village that counts very much. Our ancestors lived in villages, where peace and plenty reigned and even the towns were only colonies or sub-towns, built on the model of villages, each sub-town or petta or paliam serving for the convenience of all its inhabitants. "The Indian village was not merely a collection of houses but a division of territory perhaps three or four square miles in extent, with its careful distribution of fixed occupations for the common good, with its inter-twining and inter-dependence of individual, family and communal interests, with its perfect provision for political independence and autonomy, according to the original type. It has existed almost un-altered since the first description of its organisation in the code of Manu, five centuries before the Christian era." (Monier Williams).

The South-Indian Villages.

In South India, authentic records of the reign of Paranthaka I, are available showing the early development of village communal life based more or less on perfect autonomy of each village. Following is what Mr. Vincent Smith says, when he deals with the administration of the Chola Kings: "The details of the working of the ancient village associations or assemblies are especially interesting and prove that the Government was by no means a mere centralised autocracy. The village assembly possessed considerable administrative and judicial powers, exercised under the supervision of the crown officials. There were five 'great assemblies' which checked the autocracy by Tamil Kings and comprised the people, priests, astrologers, physicians and ministers."

Village Panchayats.

He adds: "The village was the unit of Government. Certain long inscriptions of the Paranthaka I are of especial interest to the students of village institutions by reason of the full details which they give

of the manner in which local affairs were administered by well-organised local committees or panchayats, exercising their extensive administrative and judicial powers under royal sanction. It is an apparently excellent system of Local Self-Government really popular in origin. Modern Governments would be happier if they could command equally effective local agency."

Deserted Villages.

The villages are now more or less deserted. An Economic Census taken of the modern villages would show that most of the intellectuals have left the villages in search of jobs, a good number of them being employed as copyists in High Courts and some others as petty clerks in Collectorate and Taluk Offices. They have left their homes never to return; and their houses have been levelled to the ground. The labouring classes,

especially in the vicinity of the cities, are also deteriorating both in prosperity and health, owing to the fact that they get their daily wages in coin, a good portion of which they spend in drink on the way to their homes. Thus, both the intellectual as well as the working classes have been ruined under present conditions. The lands have been neglected, tanks breached, temples left desolate and gardens ruined.

Village Reconstruction.

The villages now wait for reconstruction by the people of the land; and all the young men who have the advantage of modern education should pledge themselves to impart that knowledge to their village brothers and make common cause with them for the promotion of the prosperity of the Country.

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Unemployment and Industries

By K. S. Rao, L. T. M., A. T. I.

I DEEM it a great privilege and consider it most fortunate to have this opportunity of addressing the educated youngmen of Bihar on a subject which is at present receiving a great deal of time and thought of those anxious for the economic prosperity of this poor country. It was only a fortnight back when I was taking the Hon'ble Minister, Sir Ganesh Dutt Singh round the local Provincial Exhibition that it was suggested to me that I might try to enlist your sympathy and if possible active support for the industrial development of our province in which the Hon'ble Minister is so deeply interested. I therefore take this opportunity to thank him most cordially for giving me this valuable suggestion and to express my hope that at least some of you will engage yourselves in the honourable and healthy professions of industry and thus bring prosperity to the poor masses and develop the natural resources of your country.

We are just at present passing through an unprecedented economic crisis and are faced with the most calamitous consequences. Of these unemployment among the middle-class is an important one and forms the burning question of the day. The highest ambition of our youth has so far been to enter into such non-productive professions as civil service and law; for in our present social life these—though not remunerative as before—are most honoured by the public. It is therefore depressing that the best brains of the country should have thus been lost to industries, trade and agriculture, the development of which is mainly responsible for the wealth and power of the progressive nations of the world. So long, the industrial and agricultural callings are looked down upon and are reserved for those who had been failures in schools and colleges, we cannot expect advancement of our country. It is high time that we should at least in these days of unemployment abandon the pride of literary education, and like Wilkins Micawber, a character repre-

sented in David Copper Field, seriously think of professions pertaining to the production of wealth. Economic conditions similar to those, which we now experience in India are reported to have existed in Japan so long the "Samurais," the aristocratic class of people, there disdained to mix with those engaged in these so-called sordid pursuits of money-making.

It is an admitted fact that the system of education at present imparted in our schools and colleges does not satisfy the practical needs of life and that our educated youngmen are out of harmony with their surroundings and totally unprepared for the present day demands of the country. While the elevating influence of literature, art, civics and politics is universally admitted, we may well ask whether it is advisable to avoid educating our youth in a knowledge of those material things with which they are surrounded in their daily tasks. His Excellency Sir John Anderson the Governor of Bengal in his recent convocation address to the graduates of the Calcutta University aptly observed as follows:—

"Are we not now all coming round to the view that our present system of training, the somewhat narrow, uniform literary training that is given in our schools is responsible in some measure at least for the accentuation of our present economic and social difficulties, the widespread unemployment, the distress of the lower middle-classes, the failure to create and take advantage of new avenues of honourable industry and business? Many boys come to school and go on to college because they cannot find anything else to do; but when they pass out of schools and colleges they are little better off and have the added grievance of an education that proves disappointing and deceptive."

Gentlemen, it is a matter of common knowledge that the natural inclination and liking of a boy in India are also not carefully studied at present and that he is

very often given an education without any definite aim in view. It is therefore desirable that the parents should at first decide upon the careers for their boys and then select for their study in schools and colleges such subjects as would enable them to qualify themselves for the professions which they have to take up in their later life. Owing to lack of such forethought on the part of the parents and on account of inadequate preliminary training of the boys there has been many a failure in the life of our bright and intelligent youngmen. Such a waste of human intellect is disastrous to the interests of any country and should be promptly put a stop to. It is also imperative that the education of the younger generation should be so planned as to enable at least some of them to qualify themselves adequately for such vocations as those pertaining to agriculture, industries and trade.

Even in the absence of this preliminary training it would not be difficult for a young man with the education of the present-day type to have a successful industrial career, provided he avails himself of the industrial and commercial training as is made available in the various institutions started in this province and outside. The industrial advances in India are negligible in comparison with similar progress in European countries and necessary facilities for the starting of new industries and development of old ones, such as abundance of raw materials, cheap labour and extensive local markets, exist in this country. As such, industries at present offer our youngmen the biggest field for employment. As no useful purpose is likely to be served by my efforts to treat this subject of employment in industries in a general and superficial manner, I propose to be specific and practical in my suggestions and recommendations regarding the part which our educated youths with limited means can play with success in the reorganisation of some of the local industries. For this purpose, I have selected for this evening's discourse hand-weaving industry of Bihar and Orissa, not merely because I am intimately acquainted with it but because it being our largest industry, offers immense scope for enterprise.

Textile industry in any country outranks all but those connected with food production, in the service of mankind and reaches in its scope from the lowly pure utility to the height of æsthetic art. This is equally true in Bihar and Orissa in which hand-weaving industry is the most important of all, not only in respect of number of men employed but also in the value of the total output. As per census returns of looms, there are 1,63,000 handlooms in this province and these are reported to provide a living for nearly 4 lakhs of people. Even at the present low rates our annual output of cotton cloth alone, is estimated at over four crores of rupees in value which is after all only 1/3rd of our annual total requirements in clothing. Incidentally, I may remark that we in this province use only 2/3rd of the quantity of cloth which an average Indian consumes at present. I place these statistics

before you with a view to enable you to judge what a large scope there is for the development of this industry which is already of sufficient magnitude. Hand-weaving in India instead of succumbing in the face of mill competition extending over 100 years has been making steady progress, as is evidenced by the ever increasing consumption of mill-spun yarn. The statistics relating to imports and local mill production of yarn in India published by the Director of Commercial Intelligence and Statistics Calcutta show that in the course of the last decade the quantity of yarn devoted to handloom industry has increased by 23 per cent. as compared with what it was in pre-war days. Our own share of increase in this province, is estimated to be over 80 lakhs of rupees in value per annum.

The Bihar weaver is still a long way from practising the advanced forms of technique which have been devised by his fellow craftsmen in other countries, particularly of the west. It is only in recent years that improved methods and labour-saving appliances are being introduced by the Department of Industries into the daily work of the hand-weaver and it is astonishing what a large amount of success has been achieved in this direction in spite of the limited funds and staff provided for the purpose. The general tendency has been to decry such efforts but a careful survey of the province will show that there are few places, where weaving is carried on extensively, that are not materially affected by the introduction of modern innovations. It is a gratifying evidence that there is not that degree of conservatism among the weavers, which is usually said to be the reason why so many people have failed to influence them in the past. Again the primitive trade organisation places the weaver at a serious disadvantage. The weaver who has no capital of his own is very often short of work and is to be financed by the local "Mahajans" who naturally charge a high rate of interest from those, who have not any property to offer as security. The yarn purchased in an unfavourable market is woven into cloth with his crude appliances and laborious methods. The woven cloth is disposed of for any price, he can get either in his own village or in the neighbouring "hat". In trying to do so he wastes some time which he could have profitably employed in weaving. In spite of these and other serious handicaps which can be easily remedied, the hand-weaver has managed to exist after meeting the unequal competition from the well organised and resourceful cotton mills.

A vast amount of work has therefore yet to be done before our weaving industry is developed to the fullest extent which it is certainly capable of. For this purpose, our weaver who can no longer work for himself as he is doing at present should co-operate with others and be guided by men having necessary qualifications and capital. To whom can he look to for necessary guidance and leadership, he needs, but to the intelligentsia of his country? For the reorganisation of hand-weaving industry alone we need in Bihar and Orissa,

the services of at least 4 to 5 thousands of youngmen, if not more, who will not only have new openings suited to their talents but also relieve the increasing pressure of the educated classes in the more favoured fields of employment.

The local Department of Industries maintains three central institutes at Patna, Bhagalpur and Gaya and trains young men in different branches of textile industries under commercial conditions. The students are given sound practical training of intensive character and the course extends to one short year. As the marketing of industrial products is as important, if not more as the actual manufacture, a trade organisation is also being maintained for the amateur industrialists, to copy and emulate, though not on such ambitious scale. This model organisation, which is being worked for the last 6 years successfully demonstrates that our weavers with proper guidance and supervision can weave goods to satisfy even the most fastidious and fashionable people of the world. Who could believe till recently that our village weavers, accustomed to weave coarse "Motia" which they themselves would not use, would be able to produce and sell profitably cotton goods in a highly industrialised country like England? It was left to the Government of Bihar and Orissa to prove beyond doubt that such a thing would be possible provided our village industries are reorganised on rational lines. You will be surprised to hear that in spite of present acute trade depression the sale of Bihar textiles actually increased by 15 per cent. last year.

To begin with, the Bihar Government having realised the importance of design in handicrafts secured the services of capable designers and obtained a set of attractive patterns. These were sent to the selling agents for taking round the same to retail dealers and for booking orders against these samples. In the meanwhile, the local weavers were trained by the staff of the Industries Department to use improved appliances supplied to them by the latter and to weave the new designs. As the orders are now received they are passed on to the weavers in villages through agents who distribute necessary raw material and get the cloth woven under their personal supervision against the samples supplied to them. These goods are checked at Patna very carefully by the special staff appointed for the purpose, so as to make sure that they satisfy the approved specifications and are despatched to the foreign agents, through the shippers in Calcutta. In order to guarantee the genuineness of the quality of the goods, and the fastness of dyes, the Industries Department keep an effective control on the purchase of raw material and the dyeing of the same. The agents or master-weavers who deal with the weavers direct are required by the terms of agreement to use only such raw material as is supplied by the Department. Besides about 20 selling agents in India, two foreign agents are specially appointed for exploring the markets for Bihar textiles in Europe, Australia and New Zealand. In

spite of the limited facilities and staff available for conducting this business, the foreign agents alone effect sales of a value of over a lakh of rupees every year. In short, in a trade organisation of this type almost all the economic factors, which make up for the success of modern factory industries exist. So much so, that even in an experimental enterprise like this the Bihar Government makes decent profit after paying liberal commission to agents and master weavers. The hand-weavers for whose economic welfare the local Government is striving to do so much are reported to be earning twice as much as they used to do before.

A more detailed account of this unique commercial enterprise, pioneered by the Government of Bihar and Orissa to serve as a model for the prospective industrialists of this province, is given in the departmental bulletin (No. 27) "Handmade Art-Textiles".

With a view to further emphasise the importance of a sound system of manufacturing and marketing organisation for our cottage industries I am tempted to mention the phenomenal success of the hand-knitting industry in the province of Chihli in China referred to in that interesting book "China, the land of famine." These hand-knitters mostly women and girls living in villages are reported to work for capitalists who provide them with steady work, throughout the year and at the same time relieve them of the risk and responsibility entailed in the buying of raw material and the marketing of the finished goods. These workers also enjoy complete freedom of working in their houses and at their own time. The cost of production in such an organisation is reduced to such an extent that it enables these Chinese women to clothe us in India with cheap cotton hosiery after paying heavy import duties at the ports. Instances of success of similar trade organisations for cottage workers are not rare even in our own country. The present prosperity of Dodaballapur, a small weaving village in Mysore State, where the trade of the hand-weavers was organised on the same rational lines as mentioned above is largely due to the enterprise of half a dozen educated young men. Till about 1900 this place had less than 30 weavers' families weaving coarse cotton sarees and marketing the same round about the village with great difficulty. Dodaballapur is now a big industrial and commercial centre having over 1000 handlooms and producing several lakhs of rupees worth of cotton and silk goods for markets extending from Bombay in the north to Cape Comorin in the south. One of these young men who had been a clerk in the local weaving school drawing a pay of Rs. 15/- per month is now a prosperous industrialist with an extensive business in dyeing yarn for hand-weavers. The others in the course of a few years built up enormous trade in hand-woven fabrics, each of them providing 100 to 200 weavers with steady and profitable work. For this purpose these, master-weavers even now go about as commercial travellers all over southern India for 4 months in a year and secure orders for their brethren at home.

Similar development in hand-weaving is also noticeable in the silk centres of Bishnupur in Bengal and Bhagalpur in Bihar. Although the few Marwari merchants, who finance the trade and efficiently market the products of these places are unjustly criticised as exploiting the ignorant and helpless weavers, the fact remains that but for their co-operation with the local weavers, the industries of these places would not have improved. The silk trade of Bhagalpur is reported to have increased from 8 lakhs of rupees in value in 1922 to 18 lakhs of rupees in 1932, although the same is reported to have reached the figure of 25 lakhs just before the present worldwide trade depression. While these Marwaris have shown us a way of developing our decaying industries, why not we the educated classes of Bihar follow their footsteps and take to industrial and business pursuits, not only to our own advantage but for the benefit of thousands of village artisans?

Before concluding, I wish to refer to the failures of some of the public-spirited men among us, in their attempts to help the poor weavers in the past. The main reasons for most of these unfortunate failures seem to have been uncommercial methods employed both in manufacturing and marketing of the products. While trying to copy the western system of factory-

work they induced the weavers to leave their families and homes in the villages and to come and work in the factories started in urban areas. Thus, the cost of manufacture increased enormously for the reason that the weavers had to be paid very high rates of wages and additional expenditure had to be incurred on preparatory processes of weaving to which the family members of the weavers used to attend, as part of their domestic work. Again while the manufacturing side received most of the attention of the organisers of these factories, marketing of woven fabrics was neglected and was left to chance. These lessons of failures in the past are now available to the newcomers in the field and will serve as beacon lights by which submerged rocks and shoals may be avoided in our future attempts to develop these time-honoured industries.

Gentlemen, it is my earnest hope that what I have stated to-day about hand-weaving will give sufficient thought to enterprising men to engage their attention in the exploitation of this great industry. While exhorting you, the educated youth of Bihar to win fame and fortune in the development of your industries, I firmly believe that this ancient industry of hand-weaving which at present offers the biggest field of employment—will be a determining factor in the future economic advancement of our country.

Watch-making Industry in Switzerland

By K. Muthuramalingam, B. A. (Hons.)

THE elegant shape and chronometric perfection of watches made in Switzerland have given to the Swiss watches an enviable record of popularity. From a humble domestic system of production barely six decades ago, it now occupies almost the first place in the few industries of that sweet, little rugged country, the playground of Europe. There is a striking parallel between the Watch Industry of Switzerland and the Match Industry of Norway and Sweden.

It was in the sixteenth century that watch-making was first started at Geneva, the charming and romantic city of the middle ages, where the jewellery craft had already flourished. In course of time this industry spread slowly and steadily to the district of Jura, and the mountainous regions of the cantons of Neuchatel, Soleure, Basle and Schaffhausen. To-day the major part of the working population of the Jura district is engaged in this artistic and productive industry. It is estimated that watch-making, jewellery, gramophone industry, etc. employ more than 67,000 hands. Large up-to-date factories are managed by sympathetic captains of industry. Thus this industry has become as familiar to the world as the snow-mantled cliffs of the ever-enchanted Alps.

As the students of industrial development and economic progress are aware, the national localisation of this industry, the concentration in particular cantons, the steady improvement of machines and tools, the

large backing of hereditary skill of more than twelve generations and last but not least of all, rationalisation or scientific management as it is sometimes called, of the watch industry—such as pooling, merging, industrial research, psychological and physiological analysis of labour, large scale buying, market research etc. have made it possible for the manufacturers to obtain a high degree of perfection and a desirable amount of cheapness in the production. So in spite of the world-wide trade slump the Swiss industrialists are able to hold up their heads and compete successfully with the similar firms of other countries. It is calculated that about 95 per cent. of the total output is for export and hence they have so arranged their system of production that they can meet any kind of exigency likely to be foreseen in the industries designed for foreign consumption. "In 1930 exports exceeded 18 million watches, amounting to approximately 233.4 million Swiss francs—16.5 per cent. of total exports of articles manufactured in Switzerland. England, America, Germany, India, Persia, S. Africa and Australia are some of its chief customers.

The technical perfection is an outstanding earmark of the Swiss marine watches, used both for air and maritime navigation. The famous observatories of Mr. Wilson, Geneva, Neuchatel, Teddington, Washington, etc. are its principal customers in this field.

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TRADE AND COMMERCE



The Economic Position early in 1933

The Views of an Important Association of Merchants

THE Hamburg Chamber of Commerce has just issued to its members its Annual Report for 1932—a document which is of an importance far transcending that of a report dealing with the economic development of Hamburg alone, as the scope of its subject matter is of world-wide significance.

Seeing that Hamburg is the premier seaport of the European continent and the gateway through which much of Germany's foreign trade enters and leaves the country, the Hamburg Chamber of Commerce is in a position to watch the progress of events throughout the world with great accuracy. It is therefore of more than local interest to see that the Report—in contrast with its immediate predecessors—starts its economic survey of 1932 with a certain optimism regarding the future.

"There are several general considerations," the Report states, "justifying the assumption that the depression has reached its lowest point." The recent events in connection with the war-debt situation permit the inference that the views held on that subject are much more definite than they used to be and that there is a widespread recognition of the fact that the existing economic difficulties are largely due to the failure so far to solve this important problem. This is all the more remarkable because a good many of these difficulties have already been removed by the Lausanne Conference, where the reparations situation was straightened out. Moreover, "there are signs that the spirit of enterprise—which had already given way to something akin to despair—is ready to assert itself once more, provided that the political atmosphere is sufficiently calm to induce manufacturers and others to translate their plans into action."

Although "psychological factors such as these are not tantamount to an actual economic revival," they are of considerable significance all the same, because "no genuine improvement can be expected to result from material facts alone, as the effect of these latter upon development is governed—after all—by man's willingness to mould them according to his needs."

Another reason why we are entitled to entertain a quasi-optimistic view as to the world's economic future is the fact that, "—generally speaking—the retrograde movement has now ceased and that we have reached

something like a state of inertia in the economic domain." It is quite true that "the chief figures relative to the position of the labour market, the consumption of iron and the country's foreign trade—viewed as indications of the investment of capital—do not suggest that any visible revival of business has so far taken place;" but they show nevertheless that—as has been said—something like a state of inertia has been reached, which "must precede any change in the direction of the movement." It will be necessary, of course, to clear up all the economic and political questions affecting the situation before we can expect to see a rising tendency in the curve of economic development.

In this matter, too, the Lausanne Conference has done effective preliminary work, inasmuch as it has resolved upon "the indirect linking-up of the reparation agreement with all the political payments arising out of war loans raised by the Allies and the postponement of the ultimate readjustment of conditions until a new World Economic Conference is held," which latter—even though it is not likely to bring about a final settlement—is certain to pave the way for it.

Great Britain, in her interchange of notes with the United States on the subject of war-debt payments, has resorted to the same kind of reasoning which Germany was compelled to employ for a similar purpose (without, unfortunately, succeeding in her aim) for over ten years in the recent past. It is pointed out in the notes that war debts constitute a burden not only upon the debtor country alone, but also on the world as a whole, because if any country is obliged to pay back money spent in unproductive directions, its own national economy is reduced to a smaller volume, the purchasing power of other countries is diminished and the interchange of commodities is subjected to barriers constantly increasing in height.

"After making this comprehensive statement, the authors of the note naturally pass on to a discussion of the second great task embodied in the Lausanne protocol of July 9, 1932, *vis.*, that concerning the convening of an international conference which is to deal with economic and financial matters. Preliminary conversations relating to these subjects have already taken place under the auspices of the League and will be resumed in January 1933. The agenda of the forth-

coming conference comprises the following items: monetary and credit policy; transfer difficulties; price levels; the movement of capital; tariff policy; trade barriers, and manufacturers' conventions. "In view of this great variety of tasks before the Conference, it would be advisable that the latter should commence its deliberations" by tackling a problem the solution of which will be of fundamental importance to the restoration of normal competitive action and normal market conditions, i. e., the stabilisation of sterling and all the currency systems voluntarily or involuntarily pegged on to it."

"So long as this problem remains unsolved and so long as merchants throughout the world cannot be certain about the real value of debts contracted in sterling or that of their credit balances in London, the prediction contained in the British note—*vis.*, that insistence upon the continued payment of war debts must give rise to economic confusion all round—will come true. Apart from this, however, additional dis-

turbances will occur, because every economic group desirous of conducting its business on honest principles will be forced to abandon the sterling basis and to look out for a currency less liable to fluctuations. A necessary corollary is the safeguarding of the remaining currencies in so far as they have become liable on account of standstill arrangements, stoppages of payment and other encroachments upon them."

Once this fundamental problem has been disposed of, the questions centring around customs tariffs and other kinds of trade barriers will be suitable objects for discussion. The chances are that it will then be less difficult to come to agreement; because the prime cause of the artificial restrictions will have ceased to exist when the dependance of one currency upon another is again subjected to natural influences and when, concurrently with it, the violent shocks resulting from sudden interference with the price levels ruling in the world's markets need no longer be expected to affect the situation."

India's Rice Business

The Biggest Group of her Manual Activities
By H. H. Ghosh

THOUGH rice is probably the oldest agricultural crop of India, the scientific researches that are being conducted in this country as well as in other rice-producing tracts (especially in the United States of America, Java and Italy) go to show what possibilities there are for increasing its yield from the soil and expanding its use as an edible product. These investigations are of supreme importance because the growth of population everywhere makes the exploitation of staple food products (such as rice, wheat and corn) the foremost need in man's existence. Science may be able to devise concentrated foods, but these would be both expensive and unsuitable for the multitude.

Regions under rice can seldom be extended owing to climatic and economic limitations, but its outturn can be enhanced with better cultivation at an additional cost which is insignificant comparatively. According to the Bureau of Agricultural Economics of the U. S. A., the world rice-crop of 1931-32 (outside of China and the U. S. S. R.) yielded 131,000,000,000 lbs. (58½ million tons) approximately as compared with about 134,000,000,000 lbs. (60 million tons) in 1930-31. The decrease of about 3 billion pounds in 1931-32 has not yet been explained. Anyway it is certain that no fear of a glut, as in tea and coffee, can here be entertained. Besides, rice is not a rapidly perishable product, and, if there were an excess of output in any year, the surplus could always be carried over for the next year's consumption.

Statistics regarding this produce in China are not available but we have reason to think that its rice production is at least as extensive as that of India

which is by far the largest producer among all the other countries (excluding China). The Imperial Institute of London conjectures from somewhat deficient statistics that the average annual output of rice all over the world (inclusive of China and Russia) is somewhere near 90 million tons. Of this quantity, it estimates that India produces near 30 million tons, Japan with Formosa 8 million tons, East Indies and F. M. S. 7½ million tons, Indo-China 3½ million tons, Burma 3¼ million tons, Siam 2 million tons and Korea ¾ million tons approximately. The remainder of the aforesaid total (i. e. about 35 million tons) would therefore be grown in China and the smaller regions.

Though the rice output of the U. S. A. is about as much as that of Korea and of Italy far less than that of any of the aforesaid Oriental countries, these regions are advancing in rice culture remarkably. In the U. S. A. the area and yield of rice during 1931-32 were 974,000 acres and 20,352,000 centals (908,000 tons) and the forecast for 1932-33 expects a decline to 845,000 acres and 16,958,000 centals (1 cental equals to 100 lbs.). In Italy the area and yield of rice during 1931-32 were 356,000 acres and 14,428,000 centals, but the forecast for 1932-33 expects a decline to 330,000 acres and 13,733,000 centals.

Scarcely any section of economic activity in India is so extensive and important as that connected with the cultivation, milling and trade in rice. It is the premier crop both as regards area and outturn. Usually rice occupies about 35 per cent. of the total cultivated area or over 80 million acres, the largest space occupied by any crop. It takes up nearly thrice the area devoted to

wheat and twice that which yields millets. Though it is the staple food of the Eastern Provinces, Southern India and Burma, there is no province in which rice is not consumed nor grown to some extent, Bengal producing the largest quantity. Easier than most other crops, it is grown without an elaborate system of cultivation—rainfall, irrigation and sometimes drainage being its main requisites. Usually it yields two crops a year, known as the winter and autumn harvests, the former with the heavier yield.

The undernoted table gives the area and yield of rice in the different provinces in 1931-32:—

	Acres.	Tons.
Bengal	22,131,000	9,498,000
Bihar and Orissa	14,093,000	5,739,000
Burma	12,511,000	4,182,000
Madras	11,609,000	5,260,000
United Provinces	6,710,000	2,038,000
Central Provinces and Berar	7,043,000	2,257,000
Assam	4,481,000	1,542,000
Bombay	3,458,000	1,612,000
Hyderabad State	930,000	308,000
Mysore	723,000	218,000
Baroda and Coorg	315,000	116,000
Total	84,034,000	32,770,000

The above estimate does not include the smaller areas in British India and the Indian States. Compared with the above figures, the crop of 1930-31 was sown on 82,706,000 acres yielding 32,198,000 tons. The average yield of rice per acre in British India is about 8½ cwt. (12 mds.). In 1931-32 the best yields were 1,457 lbs. in Coorg, 1,179 lbs. in Bombay, 1,015 lbs. in Madras, and 1,029 lbs. in Bengal per acre. Though in particular fields, improved varieties of seed have given much higher yields, the average yield of the Indian crop is much lower than those of the U. S. A., Italy, Japan, Java and Egypt. This is the greatest shortcoming on the agricultural side of Indian rice and it must be remedied by better cultivation which the peasants can scarcely afford owing to poverty and indebtedness.

If funds were available for manuring and other cultural improvements, the Indian *rayat* could be more largely employed in husbandry itself. Since such finance is not available ordinarily at present, rice-growers could improve their profits by better milling and marketing, as will be presently indicated. Regarding the better cultivation of rice, the increase of yield by sowing heavy-yielding varieties of seed is quite feasible at present. For many years the provincial Departments of Agriculture have been engaged with extensive trials in their experimental farms for the production of such varieties by selection and cross-breeding. Seeds of the approved varieties are also usually procurable from these farms and the cheaper manures like cattle-dung and bone-meal must often be applied.

Among the improved varieties of seed may be named the *Indrasail*, *Latisail* and *Georgesail* seeds which have

out-turned 2,546 lbs., 2,364 lbs. and 2,230 lbs. per acre respectively. These were cultured by the Bengal and Assam Departments of Agriculture and are procurable from them. A variety evolved by the Madras Department of Agriculture, known as *Sadai Samba*, is a better yielder having outturned 3,771 lbs. per acre. Among an illiterate peasantry, these Departments should have demonstration farms in every district, and, if necessary, demonstrators to work occasionally with the cultivators in the fields. Sufficient funds for this purpose must be provided by Government, also for good seeds which might be freely distributed to rice-growers. So long as the yield of this crop is low, an extension of area does not seem to be called for so much as heavier yielding to cope with the growth of population.

Intensive rather than extensive cultivation may be the rice policy at present, especially in Bengal. The Burma Department of Agriculture is doing much to improve the crop of that province. In the last two years there has been a growing demand for its evolved strains and the free distribution of good paddy seeds in 1930-31 amounted to 2,827 tons. This result was made possible by the growing facilities for seed multiplication on the seed-farms under departmental control. In addition to the major seed-farms, 92 minor or grazing ground seed-farms, with a total area of 5,43,946 acres were worked for seed germination. That this work is proceeding along right lines is indicated by the favourable reports received from the Burma Chamber of Commerce on samples submitted to them for commercial opinion. During the aforesaid year, new strains from the Akyab and Mudon farms have been highly appraised.

Owing to the bulk of Indian rice being consumed in the country, the husking and cleaning of this rice is carried on by crude and laborious processes which survive because foreign milled-rice does not enter into competition with indigenous milled-rice. India never imports any rice but on the contrary exports her virtual surplus production. Doubtless, blind advocates of the machine would look upon this extensive hand industry as a colossal waster of time and energy. But in all cases the factory system is not preferable to a home industry. Certainly not in this case where the time and labour saved could not be utilized more profitably thereby resulting in more under-employment in rural areas. India has no dearth of labour because her population is fast increasing. What she needs most insistently are capital and industrial enterprise to exploit her rich forest, mineral and other resources in competition with the world.

The scarcity of machine rice-milling in India is not to be regretted. Besides, industrial reconstruction can seldom or never be brought about by direct human effort. It is usually the indirect result of various economic forces which science has helped to reshape or modify from time to time. Many of our hand indigenous industries have languished or become extinct altogether because their products could not survive the

competition of machine-made products at first imported from abroad and subsequently made here. Rice-milling by machinery is, however, conducted in India wherever rice produced here is exported to foreign countries which will seldom buy hand-milled rice. This export takes place from the ports of Burma and to a much lesser extent from Calcutta and Madras.

So long as we can foresee, paddy-husking and rice-cleaning will continue in India by the indigenous system, probably with improvements, for the vast bulk of our rice crop, and by the use of machinery, driven by steam or electric power, for the comparatively small quantity that is exported. This modern system has already been introduced in the rice mills, chiefly in Rangoon, Calcutta and Madras, mostly to mill about 2 million tons of rice that India exports to foreign countries. Still nearly 30 million tons of rice consumed in India is husked and cleaned by the indigenous system. In almost every village home in the rice-growing tracts, paddy is husked by a laborious process which has been pursued for centuries. The ancient method still continued by the very backward hill tribes consists of the *hath-masuli* which is simply a heavy wooden mortar and pestle worked by hand.

With the dawn of mechanical knowledge, the well-known *dhenki* (consisting of a 6-foot beam mounted on a pivot and worked by foot as fulcrum and lever) was introduced probably in the middle ages when also the Persian water-wheel might have been adopted here. In the intervening centuries, no effort was made to overcome the labour and fatigue, the monotony and loss of time involved in the primitive process because men then had a different philosophy of social life. Under the influences of the modern age, however, these rudimentary defects the people of India sought to remove from some of their other crafts, as evident from the use of animal power in oil-expressing and cane-juice extraction, also by the adoption of the fly-shuttle in handloom weaving.

Even in indigenous paddy-husking, the same tendency towards improvement is visible where circumstances have favoured progress. For instance, in the Kashmir and Jammu State, where electricity is cheap and the State hires out electric motors to industrialists, about 60 small husking mills have been installed in the towns although in rural areas the most primitive *hath-masuli* is continued. A circumstance which might have hastened this innovation is that the Kashmiris have several artistic crafts to pursue and pure manual labour finds little favour among skilled craftsmen. It is also significant that in the rice mills at some of the rice-exporting towns in India, the modern system is conducted by machines from Germany and the U. S. A. which have also been constructed, after these patterns, by machinists in India.

India has now come to possess about 600 rice mills, though each with very limited capacity. Roughly speaking, over 300 of these are in Burma, over 100 in Southern India, nearly 100 in the Eastern Provinces

and about 100 in the aforesaid State and scattered throughout the country. With the development of agriculture and industries, these mills should increase slowly in number though they are never likely to intensify unemployment in the densely populated regions. A wider manufacture of rice products for consumption in India and abroad is, however, a possibility that has too long been ignored by our industrialists. Products like starch, distilling and fermenting agents, crushed and parched rice, have a scope which has not yet been fully explored.

Then, the internal and external trade in rice needs more development. The internal trade is virtually controlled by money-lenders in the districts to whom the rice-growers are indebted. These usurers make enormous profits which dealers with small capitals can command if they can work in co-operation with big traders in the towns. They may act merely as the agents of cultivators and big traders or hold stocks of their own in *araths* (depots) working as merchants in principle. Co-operative unions should employ such traders as marketing or distributing agents. *Dharma Golas* and Grain Banks may also be organised for each rice growing district. Such institutions are specially needed now to serve as mediums for barter because money has now acquired a high value in relation to commodities.

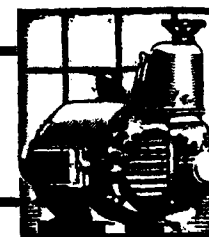
The export trade in rice may be expanded by India competing with foreign rice-growers which may be attained by better grading, cleaning and polishing of our products. At the outset, however, it must be remembered that, to have more surplus rice for export, better yielding varieties must be cultivated in India. Of such kinds, those which possess bold rather than high flavour, would be preferred in Europe as edible products. Their use as such is, however, very limited though they return handsome profits. Europe consumes rice mostly to prepare starch and confectionery, also distilling and fermenting agents. A large quantity of Indian rice may, however, be exported as food-stuffs to the Asiatic and African ports.

The volume of the world's rice which enters into international trade is about 6,400,000 tons. To this quantity, India including Burma contributes some 2½ million tons (Burma about 2 million tons and India ½ million tons), Indo-China, Siam and the Dutch East Indies contributing the balance. China and Japan export very little rice, having large populations to feed at home like India proper. At present Burma's export of rice to Europe has been largely captured by Italian and Californian rice and the post-war export has lost by severe competition. In pre-war days, of India's and Burma's exports about 47 per cent. went to Europe, 42 per cent. to Asiatic ports and 11 per cent. to Africa, the West Indies and South America. Germany and Holland then possessed the best mills for the cleaning and polishing of Indian rice, after doing which they often supplied the finished rice even to the United Kingdom.

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MOTOR AND ENGINEERING



Melting Crucibles of Graphite

WHEREVER metals, iron, steel etc. are melted in large quantities, the cost incurred by using melting crucibles of graphite is far from being insignificant. This is due to several causes; the intense heat to which they are exposed can render such crucibles unfit for use or fracture them outright. They are also particularly sensitive to the influence of moist air while the fact that they are not sufficiently diathermic involves a consumption of more fuel than ought to be necessary. When crucibles of this description are to be used, attention must be paid to quality, and brands will be selected whose good points have been proved under practical conditions. Among such are to be mentioned the "Juwel" graphite and "Juwel" glazed crucibles.

These are made from a special compound of the most suitable, first-class materials based on the experience of several years. They are produced under constant expert control with the result that when they are employed, the melting process is characterized by evenness. They are resistant to the greatest heat, and as they are unusually good conductors of heat, they can be depended on to operate most economically because they are very durable and the fuel consumption has been cut down to a remarkable degree. The contents are melted rapidly with little waste, which naturally saves time and wages appreciably.

So far as the "Juwel" glazed crucibles are concerned, all that has been said of the unglazed type is applicable here as well. In fact they are not only to be described as high efficiency crucibles, but also possess such a large number of other advantages that they will certainly be introduced in Works where economy is a major consideration. In contrast to the other crucibles previously employed, these new types require no tedious and careful preparation otherwise necessary before the first casting. Before being taken into use, such crucibles had to be annealed. If the crucible were heated too rapidly, either the whole or part of the bottom cracked off, while, when the heat is excessive, more or less large pieces burst out from the sides. If the crucible were kept too long in the fire during this preparatory annealing, the outside was liable to be burnt, and the crucible rendered useless after a few castings by the longitudinal cracks developed. Annoyance, loss of time, and expense were inevitable, however carefully the work may have been carried out.

After experimenting for many years, manufacturers have placed on the market the "Juwel" glazed crucible made of best Ceylon graphite. In doing this, they have succeeded in eliminating all the afore-mentioned disadvantages and no moisture from the air can penetrate. These crucibles are supplied annealed, and can be used immediately, and the time required for the first casting will not be longer than that subsequently claimed. Quite apart from any other considerations, this is a most important advantage, because the interruptions previously involved when a crucible began to leak and had to be replaced by a new one are now a thing of the past. Under the old system, it was inevitable that, when a crucible was being taken into service for the first time, there was a standstill in the foundry pending the conclusion of the annealing process. When the "Juwel" glazed crucible is employed, interruptions and losses of time will become impossible.

These crucibles have been found most suitable for the export trade, and for use in moist and tropical climates, because their impregnation forms an excellent protection against the ravages of such climates.

Their splendid diathermic properties are worthy of special mention, all the more so because, in this respect, they are far superior to all other graphite crucibles. It is no exaggeration to say that their use results in a 20 to 30 per cent. saving in fuel. They may further be employed for an astonishingly large number of castings which make them more economical than ever. When it is also remembered that the prices for these high-grade crucibles are no higher than those of other similar appliances, it is obvious that they will gain a very decided preference.

These crucibles may be used for melting gold, silver, copper, bronze, brass, steel, iron, antimony, zinc etc. They are accordingly of the greatest use for various industrial branches, for manufacturers of gold and silver-ware, in gold and silver parting workshops, in gold and silver mines, in mints, in the manufacture of fittings, metal goods, ammunition, and motor vehicles, in iron, copper, and zinc works, in mines, metal works, rolling mills, shipyards, carriage and locomotive works, railway and shipyards etc.

These Works, which with their highly skilled personnel, and their up-to-date machinery and equipment are one of the most efficient in the Branch, can supply

these crucibles in sizes varying in capacity from $\frac{1}{2}$ lb. to 30 cwt. and in different grades. "A" type is for metal castings, "B" for iron castings, and "C" for steel castings. They can also produce all special shapes and sizes that may be required, and deliveries are made very promptly. Lids, tops, stands, stirring rods, retorts

for the production of zinc troughs, pipes, immersion soldering baths, boxes etc. are also obtainable from the manufacturers in the best qualities.

Importers, dealers, and others who are interested would do well to consider the merits of these excellent crucibles.

A Centrifugal Clutch

An Ingenious New Design

AN ingenious centrifugal clutch with many valuable features has been evolved and patented by Mr. Noel B. Newton, a director of Newton and Bennett, Ltd., manufacturers of the hydro-pneumatic shock absorbers. The clutch has been fitted experimentally to a well-known six-cylinder car, and has since covered some 6,000 miles.

In carrying out a practical trial of the mechanism, we drove the car in London traffic and on steep hills under conditions which required frequent use of the clutch and gears (states *The Motor*). An outstanding feature is that the automatic action enables the car to be stopped and restarted solely by using the brakes and accelerator it being unnecessary to go into neutral. Furthermore, matters are so arranged that the driver can declutch at any time—as when gear-changing—simply by depressing the usual pedal.

Coasting in Gear

A third point is that if the driver declutches while the car is travelling fast, holding the pedal down for a few seconds until the engine idles, the clutch will continue to run free after the pedal has been released, so allowing the car to coast in gear.

At any time a permanent connection between the engine and transmission can, however, be regained, simply by opening the throttle; as the engine speed increases, the centrifugal action causes the clutch to pick up, and this it does without grab or shock.

We were greatly impressed by the smoothness with which this automatic device operates under all the varied conditions encountered on the road. It is, indeed, difficult to imagine that the power is being transmitted by a frictional mechanism, the take-up being so gradual and sweet. When getting away from a standstill a gear is engaged, and then, as the accelerator is depressed, the engine speed increases to about 550 r.p.m. before the clutch plates begin to make contact. Between this speed and 1,030 r.p.m. the load on the clutch plates gradually increases, slip progressively diminishes and the car moves off.

At higher revolution speeds the clutch remains fully engaged, but, as already noted (despite the rapid

increase of centrifugal force with speed) matters are so arranged that the driver can at all times declutch by using the pedal. Naturally, the speeds which we have quoted can be varied, within limits.

A detail worth mentioning is that when the clutch is disengaged at low engine speeds there is no drag, and therefore any gear can be engaged quite freely. It also follows from this characteristic that, when starting the engine in the morning there is no gearbox drag to overcome.

Not Costly

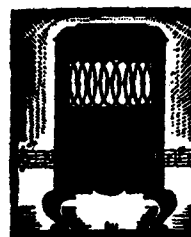
The mechanism is quite compact and it will, in fact, fit into a normal clutch housing without difficulty. It is stated that the cost of manufacture would be but little more than that of a normal clutch.

A number of frictional clutch plates is arranged between a presser plate and a back plate fitted to the engine fly-wheel. The springs which normally hold the presser plate in contact are mounted on a third plate, which within limits, can slide endwise under the control of the centrifugal force created by the weights. A second set of springs tends to keep the back plate and the controlled plate apart. At low speeds these springs have their own way and no pressure is exerted upon the driving plates.

As the speed increases, the centrifugal forces gradually move the controlled plate towards the back plate, overcoming the outward pressure of the springs. An increasing nipping effect is then produced by the presser plate until, eventually, the full force of the main springs is exerted. At this point the controlled plate comes against a stop, limiting further movement, so that, no matter how great the centrifugal force may eventually become, the clutch plates only experience the normal spring load.

From this it also follows that the presser plate can be withdrawn by the pedal at any time.

Various refinements have, of course, been employed in the actual design, including a neat oil dashpot to cushion the engagement. It is of interest to mention that the weights employed weigh only a few ounces apiece and that the clutch tested, which is fitted to a $1\frac{1}{4}$ -litre car, has an external diameter of only 11 $\frac{1}{2}$ ins.



RADIO AND FILMS



Talking Machine Records while you wait

PROBABLY no more than very few people were sufficiently optimistic to believe that a time would come when anyone would be able to make his own records even if only in something approaching a useful quality. There has never been a lack of attempts and devices to create something corresponding to amateur photography so long as the possibility of recording has been known. All these experiments, however, came to grief on one or other of the numerous pitfalls involved in the solution of such a delicate problem.

It required the production of the microphone and the valve amplifier (to which the Phonographic Industry as a whole owes its surprising prosperity) to bring such problems within measurable distance of solution.

If any "man in the street" is to be able to produce really practical records of his own voice, or extracts of the musical programmes or other interesting items from the Broadcasting Station, all the parts of the apparatus must be so made that mechanical defects will at any rate be avoided. It is also obvious that such an apparatus must be successfully operated by people without any previous experience, and that the records produced must satisfy even the trained ears of the musical. Further, the necessary blanks must be obtainable at all times, and easily inscribed.

The portable talking machine record maker fulfils all these requirements and is a complete solution of the problem of "talking machine records while you wait" so that the details given will not be without some interest.

It is almost unnecessary to say that all the electric current and voltages required for the purpose are obtained direct from the lighting mains, as an ingenious change-over switch is fitted to adapt the apparatus to the available voltage. So far as the actual wireless parts are concerned, all that need be said is that these, as well as the power amplifier incorporated, have been constructed to give the very best reproduction possible. The amplifier produces with 2 REN 904 valves and 1 RE 604 the very respectable end-output of about 2 $\frac{1}{2}$ watts. Although such an amount of energy is not absolutely essential for inscribing talking machine records, it is all to the good that it is available when records that are acoustically difficult are to be made. A reserve of power has never done any harm.

The dimensions of the "Saja-Synchron" drive are

also on the generous side. Synchronous motors are quite capable of maintaining the ordinary speed of 78 revolutions per minute, but are subjected to such a heavy load when the outer grooves of the record are being inscribed that, if braked for no more than one revolution which could easily happen, they would fail to keep time and stop. This eventuality has been provided for by the available reserve of power.

A special "box" is employed for the inscribing or recording process. If this apparatus had been designed with a view to the price only, the functions of inscribing and the subsequent "picking-up" would have been combined in one box, resulting in all the disadvantages connected with nothing better than a compromise. It is much to the credit of the manufacturers that they rejected such a possibility, and, as the writer can confirm from his personal experience, both the recording box and the "pick-up" possess all those electrical characteristics essential for their perfect performance. Measurements were taken by a Broadcasting Company to ascertain the suitability of the apparatus for wireless reporting with such satisfactory results that two were immediately ordered for the purpose.

A high-grade dynamic loudspeaker is fitted in the cover; it is not only used for the reproduction of records of all kinds but also for acoustic control during the process of recording.

The 10 inch blanks are made of a flexible foil and inscribed on both sides.

When making the records, a blank sound foil disc is firmly screwed to a turntable and the motor started. The recording box which is fitted with a tiny style is now placed close to the outside edge of the blank. The style immediately commences to cut a fine shaving from the revolving blank, and the box is gradually brought to the middle of what is now the record.

The microphone transforms the speech into electrical energy, which is increased to such a degree by means of a power amplifier that the style of the recording box is made to vibrate perceptibly. As the style bears on the revolving blank, the speech vibrations are regularly "engraved" on the surface. The shaving caused by cutting and rotating curls round the centre of the blank. As soon as the recording on one side of the blank is complete—in about 3 minutes—the recording box is swung to the side, the "pick-up" placed

The glory of life is to love, not to be loved; to give, not to get; to serve, not to be served.

on the record, the apparatus switched over from "recording" to "reproduction", and the record heard through the loudspeaker.

The possibilities of recording directly by means of the microphone are practically unlimited. (To continue our comparison with Photography, let us think of the work of amateurs not destined for the widest publicity). We may now send our own voices, or those of our family, friends and acquaintances as "spoken letters" because they have been fixed on these blanks, and use our own records for personal, educational and economic purposes. Actors and singers may now make their own records and will now have for the first time the opportunity to hear themselves, as well as to control and even improve their efforts. The same applies to all studying languages, singing or instrumental music, because by noting the results of their records they will

at last gain a first-hand idea of their progress. Mistakes that might, otherwise, escape their notice will be heard for what they really are, and they will no longer be dependent on the more or less prejudiced opinion of others. This apparatus will prove most welcome to students of languages and dialects, all the more so, as it is "portable" in the fullest sense of the word.

This, however, does not exhaust the possibilities because the "Schackto-graph" may be used for recording every item of the Broadcasting programme, and what this means need not be emphasized here. We all have our "hobbies", and some of these broadcasting items exercise a special appeal which we would fain retain.

What shall we say to such fascinating and fantastic possibilities?

Gramophone Music

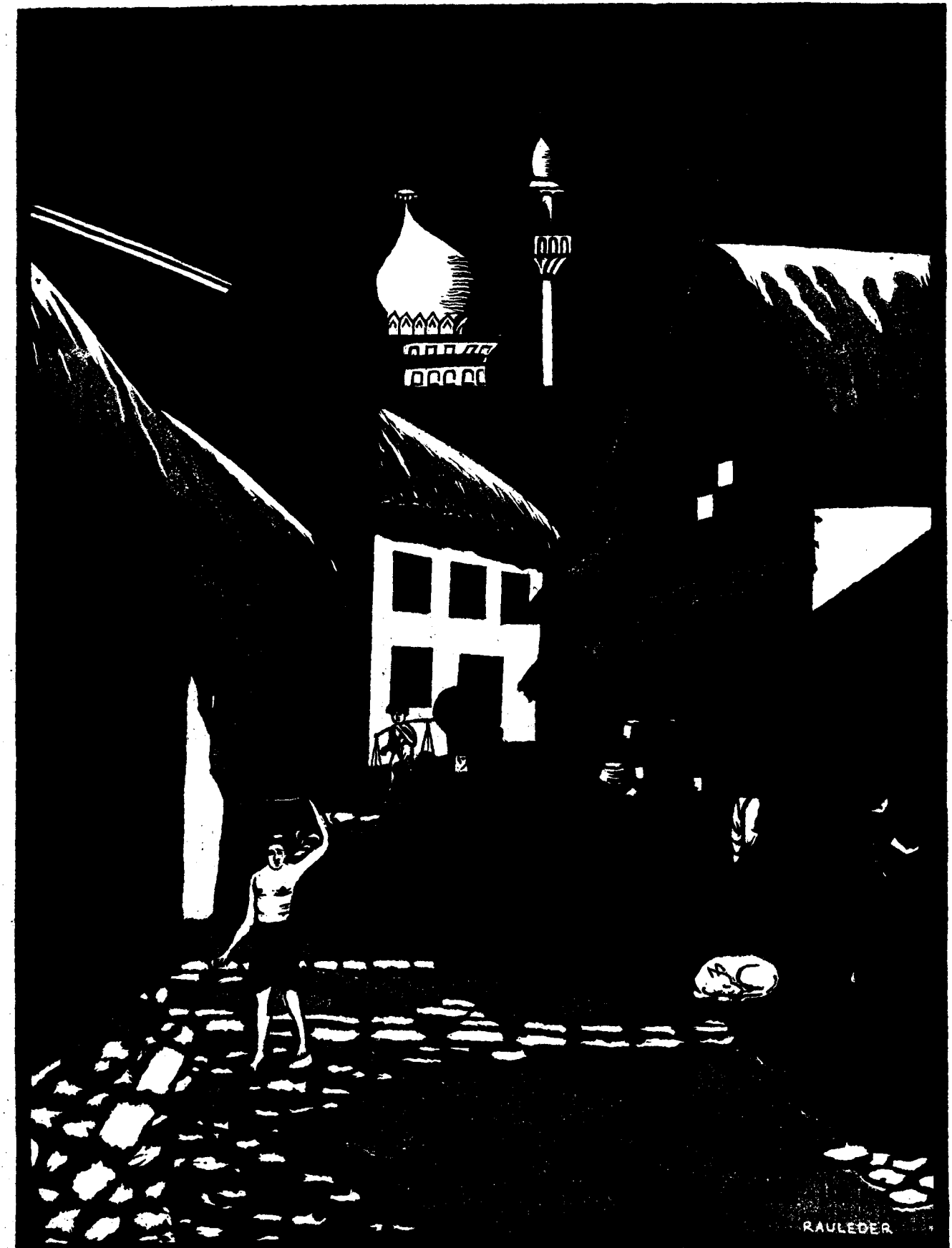
ALTHOUGH ordinary commercial records are generally run at a speed of 78-80 r. p. m. this has been intentionally reduced on the Needle Tone-film to $33\frac{1}{3}$ r.p.m., in proper recognition of the fact that, given a like size of record, this will give nearly two and a half times the playing period. Thus for example, a record with a dia. of 30 cm. and 400 grooves, will have an approximate playing period of 5 minutes at a speed of 78 r. p. m., which will be increased to a playing period of 12 minutes if the speed only amounts to $33\frac{1}{3}$ r. p. m. The industry has for a long time made it its aim to get a long playing period on records by reducing the number of revs., and it is only natural that $33\frac{1}{3}$ r. p. m. should have been selected, because this speed has already proved a success and the necessary equipments are available from the taking of films. The fact that the long-playing plate with $33\frac{1}{3}$ r. p. m. has not been brought to a higher stage of development, must be attributed to the lack of suitable movements for the lower number of revs.

But, there is a still greater demand for movements of this class among amateur takers of records. Everybody who takes up the home-preparation of gramophone records, feels that the high number of revs. and the consequent short playing period is a serious drawback. No matter whether taking broadcasting performances, or performances from the microphone, the time runs away too quickly and it is too often necessary to break off prematurely before the entire performance has been recorded. If only for this reason, all attempts to construct motors which will permit a speed of $33\frac{1}{3}$ r. p. m., in addition to the regular speed of 78 r. p. m., have been followed with great interest. Naturally, there can be no question of a solution of the problem, if the constructor and builder merely carry the relatively easy task of producing a motor for $33\frac{1}{3}$ r. p. m., and such a driving unit would probably have but a restrict-

ed sale, as a special pattern. The essential problem is, to bring out a motor which is capable of working at both speeds. This demand can only be met by a geared motor, on which the speed of the motor can be set optionally at $33\frac{1}{3}$ or 78 r. p. m. Such a motor must not, however, only be built for the work of reproduction, it must also be so amply dimensioned that it will be equally serviceable for the production of the records.

The new Dual-Motor No. 45U with two-speed gear will satisfy these requirements. It is an A. C. Induction Motor with shortcircuit rotor and regulator, the number of revs. being transmitted to the gear axle by worm and worm-wheel, and simultaneously, correspondingly reduced. The construction of the gearing is very ingenious, consisting in principle of two pairs of wheels which are constantly engaged; the precision finish of these wheels, coupled with a proper selection of the material of which they are composed, will ensure absolutely noiseless running. A head-screw is provided at the top, on the axle of the plate; if this is tightened up, the worm-wheels which form a connected whole, whereby the worm of one is in engagement on the rotor axle, will be firmly held on the plate axle, so that the worm will act directly on the same, with the result that it will be driven at a speed of 78 r. p. m. If the screw is loosened, the connection of the two worm-wheels with the plate-axle will be released, whereby the lower toothed wheel which previously rested freely on the axle, will be connected with the same by means of a spring. The worm will then act on the two connected worm-wheels, the smaller one on a second toothed-wheel, and a gearing on its axle on another wheel which will now be wedged on the plate-axle by the frictional spring. The record disc will, therefore, run at a speed of $33\frac{1}{3}$ r. p. m. This gearing has the advantages of simplicity and reliable action, whilst the owner will

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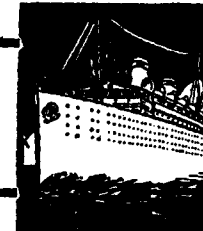


VILLAGE STREET

F. H. RAULEDER



LAND AND SEA



Road and Rail Problem in India

Comparative World Report Nearing Completion. (Reprinted from "World Trade," May 1933)

ONE of the features of the road and rail problem is its universality. Although it is naturally acuter in North America and Europe where motor transport has reached a higher stage of development, it is becoming increasingly serious in many parts of Asia and Africa and in Australia. Whereas in the case of highly developed countries such as the United States and Great Britain, the problem is mainly one of reorganisation, in these less developed countries it is the transport system of the future which is at issue, and those responsible for organising that system can take into account and correct the mistakes made by those who have gone before them as well as the mistakes they have themselves made in the first stages.

Learning from the Past.

In its world-wide inquiry into the problem of transport coordination, the International Chamber of Commerce has therefore made a special effort to obtain detailed information from countries whose future depends on their readiness to learn from the past experience of others. It has already received very full reports from thirty-two countries, and is at present drafting a general report setting out briefly the organisation and legal status of railway and motor transport in each of these countries, the specific characteristics of their competition, with each other and the possibilities of coordination, the type and extent of traffic taken from the railway by the automobile, the taxes they have to pay, and the operating results of each of the means of transport in the last ten years. In addition to this summary of information, the report will compare one country with another and show exactly where the problem is different and where it is the same.

British India.

In the case of British India, it has been possible to collect the greater part of the data required from an extremely detailed report issued by the Government of India this year on the present state of road and railway competition and the possibilities of their future coordination and development.

Although automobile transport in British India is still in its infancy compared with North America or Western and Central Europe, the report brings out the very striking point that even in its present stage a comparatively large proportion of automobile traffic is

in direct competition with the railways. As 22 per cent. of the mileage of metalled roads is parallel with the railways and 48 per cent. of the railways have metalled roads running parallel with them (in one Province the percentage going as high as 94 per cent.), and as at the same time an increasingly large part of the total highway expenditure is being absorbed by the cost of maintaining and developing metalled roads, automobile transport in India is tending to compete more and more with the railway instead of serving as a link between the main railway lines and districts outside the railway radius.

Strange Anomaly.

As a result, while a comparatively small part of India is served by too great a number of lines of communication competing with each other at the tax-payer's expense (most of the railways are run by the State and run at a loss), the greater part of the country has neither sufficient railway lines nor sufficient roads.

In the circumstances, it is not surprising that the railways are suffering increasingly heavy losses from motor transport competition. According to the railways, these losses amount yearly to 18,864,000 rupees or 2 per cent. of their total receipts. With very few exceptions, the branch lines suffer particularly keenly from motor competition, as they are usually run by small companies which have neither a sufficient mileage to secure really adequate utilisation of their rolling stock nor sufficient traffic to give the frequent and regular service needed to meet competition from the roads.

So far the roads have not competed to any great extent for goods traffic, but in the case of passenger traffic, regular and frequent bus services, sometimes covering distances of more than 100 miles, are run alongside many of the railway lines.

The report shows that, as far as the financial and fiscal side of the problem is concerned, highway expenditure due to motor transport development is practically covered by the receipts from motor taxation.

Applying to India.

The Indian report later quotes as applying to India the view expressed by the Attorney-Examiner of the U. S. Interstate Commerce Commission in his report on "Coordination of Motor Transportation" that the

transportation machine cannot function with progressive efficiency, part regulated, part unregulated; co-ordination of transportation agencies cannot reach its economic possibilities under this anomalous condition."

Thus, the trend towards a coordination of all branches of land transport exists in every country where the automobile has trespassed on the de facto monopoly of the railways. In countries such as British India, South Africa and Australia, the organisation of automobile transport by means of a general plan of highway construction should aim at serving districts where there are no railways. Even to subsidise such

automobile services would be far less costly than to subsidise railway services. As long as the volume of traffic does not justify the construction of a railway, lines of communication of recognised public utility should be set up by means of motor transport. Such automobile lines could be gradually replaced later, if necessary, by railway lines. According to the Indian Report, such a systematised transport policy presupposes a central transport body, such as, for instance, exists in South Africa where the Ministry of Transport has appointed three advisory commissions representing the railways, motor transport and navigation.

Road Transport

International Meeting in Paris

THE Road Transport Committee of the International Chamber of Commerce met in Paris recently. The meeting was presided over by Signor E. Agnelli, President of Fiat, the well-known Italian motor manufacturers.

The meeting examined the modifications in national and international economic structure which the development of road transport has been and is producing. Road transport is exercising influence in the decentralisation of big towns and the better adaptation of retail prices in provincial districts to current market rates. The rapporteur on this subject was M. Jean Guillemon, a member of Renault motor manufacturers.

On the basis of a detailed examination of the methods of calculating running and production costs in the road transport industry by Dr. Scholz, a director of the Association of the German automobile industry, the Committee came to the conclusion that these did not constitute a suitable basis for the determination of road transport taxation.

In addition to the chief international transport organisations and the League of Nations, commercial representatives from Belgium, France, Germany, Holland, Italy, Switzerland, Sweden, the United States of America and Colombia were present.

Transit of Goods by Train in South India

METHODS of conveying goods by train have in these days undergone considerable changes and with the demands for speed and safeguards necessary in the transit of goods, particularly over long distances in this country, some improvement was called for. This has been met in Western countries, and especially in England, with gratifying success by the use of containers.

The idea has caught on in India, the South Indian Railway having decided to adopt this method of transport. It is announced that as an experimental measure a regular and quick service of containers will shortly be inaugurated for the carriage of classified goods between Calicut, Coimbatore, Trichinopoly Goods and Madura Junction stations.

The approximate time taken in the transit of the containers between these stations is:

Calicut to Madura	62 hours.
Madura to Calicut	46 "
Coimbatore to Madura	46 "
Madura to Coimbatore	40 "

Small Extra Charge.

A small uniform extra charge of 12½ per cent. in

excess of the tariff rates will be levied for the use of these containers. The minimum weight for the charge for a container is 27 maunds.

Each container measures 4 feet 9 inches by 5 feet 9½ inches by 6 feet 9-1/6 inches (height) and is of 152 cubic feet capacity and is capable of carrying a net weight of 2 tons, but the gross weight when loaded with medium weight merchandise is about 2½ tons. Articles such as paper packets of tea and cigarettes, hardware, glassware, tins of coffee and other miscellaneous articles can be put into the container, thus avoiding the cost of packing.

Theft from the containers is impossible. They are also water-tight and the handling and breakage of goods at tranship stations, where there is a break of gauge, is avoided. Six containers can be loaded on a broad gauge and three on a meter gauge container truck. The containers are lifted by cranes from wagon to wagon and between wagons and lorries. Merchants who own motor lorries or vehicles capable of transporting these containers may load or unload them at their premises.

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ADVERTISING AND PRINTING



Starch Coated Papers

Some Hints for the Printer and Merchant

MANY difficulties might be avoided by the printer if he and the merchant from whom he obtains his paper knew more about the behaviour of such paper under pressroom conditions. This is most important in the case of starch coated papers, particularly starch coated arts on wood body papers. As the merchant occupies an intermediate position between the maker and the user he should make it his business to know when and for what purpose to use starch art on high esparto content or a high sulphite content body paper. By so doing much trouble would be avoided.

Starch coated arts were originally introduced to meet the desire for cheapness, and it was quickly noted that these coatings were admirable for high-speed printing, thus adding to the economy. It has, however, always been known that what constitutes an advantage in fast printing is due entirely to a physical factor, namely, a ready absorption either of ink or water. It follows quite naturally that a feature which adds to speed in printing must be a disadvantage and create difficulty in a long run on the machine. If we assume that a multi-colour job is in contemplation, there are obvious difficulties to be dealt with, owing to the lapse of time between the first and the last process. These difficulties are immeasurably increased if the atmosphere is unusually humid during the printing, especially when single sheets have to be exposed under such conditions.

A wood and starch art will run, and does run, under

the best printing conditions, and for multi-colour work; but if to the wood and starch is added a humid atmosphere, then the "register" difficulty arises and becomes more or less pronounced according to humidity.

The only known way of dealing with a physical factor is to appreciate its probable effect and meet it accordingly. Probably a starch and wood art paper, to be printed in colours in a humid atmosphere, could be brought to a suitable condition by exposing the paper in such atmosphere until absorption and consequently stretch had taken place before the first working. Simply to store paper in a machine room in a solid stack cannot be regarded as an attempt at dealing with such a physical factor as the printer is faced with. Great care has to be given to the matter. Neither paper-maker nor coater is such a magician—up to the present at all events—as to be able to neutralise varying atmospheric conditions. But they can do much to help the user. If the manufacturer is given a price sufficient to enable him to provide a matured product as far as is humanly possible, the printer will find that his troubles have largely disappeared, or at least have been greatly reduced.

It is largely a question of a better understanding between the supplier and the user. If the merchant would learn the purpose for which the paper is to be used and the printer took him into his confidence, many of the mistakes and much of the loss that now occur would never arise.

Let the Photograph Sell!

HAVE you ever watched anyone looking through an illustrated paper? If you have, you will have noticed that in both editorial and advertisement pages, it is the photograph that arrests and holds the attention.

An advertisement should be alive with human interest. It should be convincing, true, and have the touch that only a photograph of the living model can give.

Careless Advertising

To the question, "Does the advertiser get full value from his advertisements?" I reply, unreservedly, "No!" If advertising in the Press, the advertiser is

careful to ascertain the circulations of certain media and satisfies himself that the appeal is to the right class of reader. He allocates his appropriation with the greatest of pains. After settling these details it is not an uncommon practice to leave the all-important work of the layout and copy to take care of itself.

One is often puzzled as to why not all advertisers employ the services of an expert—unless it is because they are not aware of his existence, or that they have suffered at the hands of a so-called advertising agent who did not realise his obligations.

36

X:5 m2, N30

N33

We photographers are fully alive to the printer's or agent's difficulties in educating the business man away from using a stodgy unimaginative illustration of his article, which cannot look attractive in itself, or create in the mind of the reader the faintest desire to possess or even learn more about it.

The Modern Note.

The public is learning to appreciate and look for the modern note in advertisements, but one sees far too many advertisers throwing their money away on large spaces by filling them with unattractive illustrations and letterpress. Yet use could easily be made of the unusual lighting of a face, staring eyes, thrown back head, statuesque nudity, a different viewpoint, and a hundred other photographic ideas which will often replace an ordinary line illustration with a more potent selling power.

The time has come when photographs, alive with interest, attractive and imaginative, must be used if the advertiser is to get full value for money. For instance, a new perfume shown on a lady's dressing table will look much more inviting and be more compelling, than the article displayed in splendid isolation,

or surrounded only by a jumble of inelegant type. Even the introduction of a pair of hands holding the advertised article or the article itself artistically arranged with an appropriate background can be made to look most effective.

Pictureless Pages are Dull.

There are still many periodicals in which one notes a lack of interest in the advertisement pages. How such a publication can possibly maintain its advertisement revenue on such dullness is beyond me. The same journal with twenty-five original advertisement pages, illustrated by photographs of living models, would be revolutionary in its appearance and pulling power.

Many first-class commercial photographers, men at the top of their profession, are eager to show what they really can do for the advertiser. It costs nothing to seek their advice. It is high time printers and advertisers entered into a fuller co-operation with such men in the effort to introduce into their designs that live interest which is not only going to bring their clients bigger business, but to bring to the publicity producer a wider clientèle, eminently satisfied with the fruits of his service.

Is Your Shop Window Attractive

WALK down any shopping thoroughfare, and look at the shops. Some of them will seem more attractive to you than the others. Some you will like, and the others you will pass by.

It is not easy to define where the attraction lies, though we all experience its effect. There is an atmosphere about the appearance of the shop that appeals to us and makes us inclined to like it. Other shops have the reverse effect. And it is certain that we are more likely to go into the shops we like than into those we do not like.

Then there is the fact that what suits one person does not suit another, and this is very true of people who look at shops and into shop windows. And it means that those whose business depends to some extent on the impression their shops create from the outside—and the retail stationer is one of these—must make a close and careful study of the various influences that bring the onlooker into the shop.

Judging the Impression Made.

The worst difficulty is that we, as display men or shop window proprietors, find it almost impossible to judge correctly the effect of the appearance of the shop on those who pass by. We can form some opinion by the results we get, and, if we experiment sufficiently, we find that one style of appearance and display brings more business than another kind. But, on the whole, we are rather in the dark as to what effect our shop has on those who pass by it.

And let me here put in a strong word to those who have not yet discovered that there is much selling value

in the appearance of the shop when it is closed. In many suburbs people are walking past shops in the evenings who, in the day-time, do not do so; and, if they are attracted by some item they see in the window, it is probable they will make an effort to come when the shop is open and buy what they have seen. In this way the beginning of a long period of goodwill may easily be established.

Nor ought it to be forgotten that there are still a number of people who prefer to shop locally; though, owing to their being "in the city" during the hours usually given to shopping, they get into the habit of buying in their lunch hour or from the office.

What Shoppers Like.

Some of the things we can say about the average shopper is that he or she likes a prosperous-looking shop—I am, of course, dealing with the outside of it in this little article. There are shoppers who still believe that they pay more for their goods when the shop is well lit, when it is nicely painted and polished, and when it is fitted out in the most modern fashion. But these people are in the minority, and as a rule they do not buy the goods that yield a little larger percentage of profit than the "bread and cheese" lines.

Usually, as to ninety-five per cent. of your prospects who pass you by, whether when you are closed or open, they will like your shop more if it is well kept than if it is not.

And people like a certain amount of originality in a shop. The attempt to imitate some more wealthy rival should be avoided; there are still some excellent colour

schemes that can be used without your shop seeming to try to be like some other shop. The public have a liking for originality, so long as it is not carried into the realms of freakishness.

Nor do the public take kindly to what we know as "arty" colours—the colours that give the impression that they have faded badly or are "old stock" the painter has been glad to get rid of.

The Question of Colour.

It is not sufficient to have a shop unusual in appearance; it must be within a fair range of what the public like.

We know the favourite colours of most people: good rich reds and blues and brown. Perhaps because of its connection with superstition, a pale green ought to be avoided, unless it is used as a contrast to some more optimistic tone.

Something, in the colour connection, has to do with the class of trade you do and the particular lines of stationery you are likely to be showing and selling; but the good and safe rule is, use rich and cheerful colours. Vary them as your trade is exclusive or popular; the more popular the trade, the greater the use of the richest and strongest colours.

Light and Movement.

And we know that lighting and action are very great helps to making a shop attractive and remembered by those who see it. The Electric Lamp Manufacturers' Association have found by careful investigation and experiment how much more the public stop and look at a window that is properly lighted; and this is a phase of retailing that cannot be ignored even by those who

do a very high-class trade. If, by comparison, your shop looks dingy, it will not help you to get more business.

Remember, too, in this connection, that it is not so much how much light you put into and on your shop front, but rather it is how the light is arranged. Every shop-keeper who is in London or who visits London ought to make a visit to the demonstration rooms of the Association mentioned. Here, for the asking, and without any obligation of any kind, can be seen every modern device for lighting shops and shop premises by electric lights. The very finest skill and expert knowledge are at the disposal of anyone who wishes to have it.

Have Something Moving!

Action and movement helps considerably to make people take notice of your shop and there are all kinds of ways of getting this type of life into your display. Here, of course, the plan is to adjust your action effect to the type of customer you can make use of and whom you cater for. But the difference between the attraction value of those shops where some form of life motion is added is so much in excess of what it costs and what is the result without it, that this idea is strongly urged upon those who have not yet made this experiment.

Add some talk tickets if possible. See they are suitable; see they are well done. These tickets do very much towards helping the hesitating ones to come in. Remember that the short message, if it is to the point, is most effective. Get the onlooker inside; that is the mission of your shop exterior.

GRAMOPHONE MUSIC CONTINUED FROM PAGE 222

have the additional advantage of extremely simple manipulation. He will only have to tighten up or loosen the screw for the purpose of regulation to the speed selected.

This new motor is, however, quite an innovation in another respect. It has been constructed for service, both for the reproduction and taking of records, and has been built so that it will develop a torque of 2000 cmg. as reproduction motor, and a torque of 5500 cmg. as motor for the taking of records. A simple slide is provided for switching the motor on to 2000 or 5500 cmg., as well as on to the three service-voltages of 120, 150 and 220 volts. This change-over will have the great advantage that the motor, when switched on for reproduction, will only have a current consumption of about 12 watts, or of 25 watts for taking records; simultaneously, owing to the lesser magnetisation, it

will run more quietly during the process of reproduction. We have, therefore, in this type a universal motor in ideal construction which will make it possible to dispense with a special motor for the taking of records. Needless to say, the change-over of the speed for taking records, or of reproduction, is a perfectly independent movement, the first being a mechanical movement and the latter of a purely electrical character.

The new Dual-Motor No. 45U is, furthermore, characterized by low building height (only 55 mm.) and by the fact that the fitting work is done from above which will, of course, greatly simplify installation. If desired, the motor can be equipped with automatic cutout which will switch off the motor current when a record has been completed, and simultaneously exercise a mechanical braking effect on the disc which carries the record.

W. E. Z.

Never speak ill of anyone; refuse to listen when anyone else speaks ill of another, but gently say,

"Perhaps this is not true, and, even if it is, it is kinder not to speak of it."



OUR STORY PAGES

The Step-Mother

By K. Muthuramalingam, B. A. (Hons.)

AN Austin-Six, new and smart pulled up a little off the half-finished bridge over Pallar at Ramagiri. The projected railway line connecting Bhimakottah and Nagapuram was fast under construction. An elegant figure stepped out of the car. The diamond earrings twinkling in his ears and a large gem-set ring in his ring finger sparkling in the morning rays of the sun, attired in a serge coat of the latest cut and a silk trousers, newly washed and scrupulously clean, Mr. Sitaram, the rich contractor greeted Mr. Rajasekhar. The engineer, as Rajasekhar was, returned the greeting smiling. As a contrast to the contractor the engineer had very little about him by way of jewellery and rich but simple dress became the youthful officer.

After some minutes of conversation there was a silence on either party but each devouring in the sylvan breeze. "And now" began Sitaram breaking the uncomfortable silence "tomorrow will you favour me with your presence in my villa to dine and drink to the health of my niece Kamalakshi?"

At the last word the beaming face of Rajasekhar shone enlivened by a flickering smile. He promised to come readily.

During the rest of the day the engineer was exceptionally kind to the servants and obliging to the friends. He was very anxious for the next day to come. Every hour seemed a week for him. Getting up rather early in the morning he bathed and put on the finest dress possible. He referred to his watch. It was only seven. "An hour more" he sighed. Then he reclined in his easy chair, took Tagore's Chitra and read to himself the love-laden talk between Arjuna and princess Chitra. Almost an hour passed. He jumped out eagerly into his car to the contractor's bungalow.

He reached Kamala Villa—so named by Sitaram in honour, love and regard for his beautiful niece Kamalakshi—and was warmly welcomed by the host. He was then introduced to some of Sitaram's friends, his niece, his second wife, Meenakshi and his profligate son, Durairaj. All during the sumptuous feast, the gay talk of the guests and the rattle of the china plates, the eager eyes of Rajasekhar feasted on the beauty of

the fawn-eyed girl. Often the innocent eyes of Kamalakshi and Rajasekhar met one another but only for a moment like the rose of the rose plant kissing the virgin jasmine of the neighbouring plant for a moment only to be parted by the cruel winds in the garden. Then she would lower her eyes with a blush and Rajasekhar turn his attention lest his look at her should be misunderstood.

Days rolled on. The mutual innocent love between the two lovers was nourished by each other's attendance and visits, like a young shrub growing fast nourished by the rich manure of the soil.

Now Kamala, was only sixteen—sweet sixteen—and had just completed her matriculation course in the convent school. She was a rich girl. Her father had died in the Great War as a major thick with military titles and honours. His wife did not survive him long. So Sitaram became the guardian of this orphan and her riches. He had cherished the hope of uniting in wedlock Kamala and his son Durairaj, his son by his first wife.

Durairaj was only twenty-two. He thrice failed in his attempts to pass the entrance examination in Madras and had returned home an expert in fashion and a master in spending. Sitaram had failed in his efforts to reform his careless son. His wife Meena was beside herself with jealousy for this reprobate. She thought that her son Rangan,—about three years—would inherit nothing if Durairaj continued his way of spending. Moreover Kamala with all her heart could never love Durairaj except as a friend. She hated the idea of her marriage with him. The coming of Rajasekhar on the scene was a welcome step to Kamala, and she cherished him in heart of hearts as an ideal husband.

It was nearing eight in the night. The crescent moon shone in all her glory in the clear sky and shed its sector rays profusely on Kamala and Rajasekhar seated in a bench in the garden of Sitaram. There was a solemn stillness all round except the low murmuring of the leaves tossed the cool and gentle breeze.

"Now Kamala" said Rajasekhar, grasping the smooth hand of his fairy. Her face was bent down

with blushes. At this stage there was a sudden rustle among the leaves. The pair was suddenly taken back. Stillness reigned again. Kamala relieved her floral hand from her lover.

"Kamala, I can't trust myself in your company."

"So do I," she replied with the music of a pleasant laugh. Then the rosy lips red as broken pieces of coral came into contact with the ruddy masculine cheeks. A violent rustle and in an instant stood before the bewildered pair united at heart, the terrible and furious figure of Durairaj!

"You Knave! is it the way to reward friendship?" demanded Durairaj indignantly.

Then turning towards the shuddering frame of feminine beauty, "You rascally wench! you ungrateful goose!!" cried out Durairaj. Thus unable to control himself, he poured at them "rascals" and "knave" like hailstones. But Rajasekhar stood

"as motionless as rocks that bide the wrath of the advancing tide".

Durairaj departed as quick as he came sore at heart.

The lovely pair parted greatly shocked at the unexpected intrusion. Kamala locked herself in her room and buried herself in sobs. Rajasekhar was dejected. He thought to himself that the rose cannot blossom without a thorn nor the life be unchequered by the frowns of fate and so consoled himself.

CHAPTER II

A few days hence the friends of Rajasekhar assembled in his house for the party in honour of Sitaram. There were assembled, Mr. Sitaram, the guest of honour, Meenakshi, Durairaj, Kamala, Mr. Jayamani, I. C. S., Mr. Ragunathan, M. B., B. S., Mr. Nasirudeen, the Government engineer and two of the overseers. Choice dishes were served and all drank to the health of the host. All were gay except Durairaj. He was seated between Kamala and Meena. As soon as he drank his tea, Durairaj felt giddy. The tables and guests seemed to dance before him. He said he felt an acute pain in the heart. The doctor examined him and told the company that some strange poison had entered his blood and there was no antidote for it near at hand. Durairaj heard it calmly, looked with a searching stare in the anxious face of Rajasekhar. After a few minutes his soul fled away from its confinement. Great was the confusion and alarm of Rajasekhar and greater still the despair and sorrow of Sitaram. The police hurried to the place, held an enquiry and Rajasekhar and the cook were arrested.

A week passed. One evening Meena approached her husband who was reclining in a sofa and reading some

*Blow out, you bugles, over the rich Dead!
There's none of these so lonely and poor of old,
But, dying, has made us rarer gifts than gold.
These laid the world away; poured out the red*

letters. His face indicated the deep surging of tide of the pang of separation from his dear though profligate son.

"Let begones be begones. Why are you so dejected? After all he was ordained by God to meet such a death. I never thought Rajasekhar would stoop to such a plot to do away with Durairaj since he was a stumbling block in his way to get Kamala."

Thus a month passed off. Who can describe the anxiety, sorrow and misery which Kamala experienced at the imprisonment of Rajasekhar? She felt that crime and Rajasekhar had the least connection. But of what avail is the fond hope of a love-laden lass regarding the innocence of her lover? She grew pale and emaciated like a faded flower for want of nourishment and invigorating breeze. But Meenakshi was joyous. A few days hence Sitaram was reading a newspaper to keep off the memory of his past son. Then a beggar grey-bearded appeared before him saying "Master, will you grant me a few minutes so that I may tell you the story of a treacherous wife and faithless servant?"

"Yes, go on" cried the anxious voice.

"Just on the eve of the party given by the engineer your wife went over to the servant at Rajasekhar's and giving a colourless liquid to be poured into the tea to be served to Durairaj presented him a fat sum of Rs. 500. The deed was done. Rangan became the sole inheritor of your wealth. The servant was to come to-day to her for another Rs. 500. But that foolish woman refused payment saying that nobody would believe the story and only his life would be in danger."

"Alas! Where is that wretch?"

"Here I am—I am—My conscience revolted. I have told you everything. I am at ease. I will die peacefully." The beggar staggered and fell dead just when the police rushed into the garden.

Furious at his wife Sitaram hurried straight into her room and what was his eyes to spy but the corpses of his wife and Rangan, the cause of all misery. He found a note in her hand written hurriedly.

"My Dear,

Pardon me and the child. I have swallowed the same colourless liquid as I caused Durairaj to be given. Forgive and forget me completely.

Yours wretchedly
Meena."

Thoughts and fancies, agony and dismay ran into each other.

A happy day came like the calm of the sea after the storm. Rajasekhar and Kamala were united in wedlock.

*Sweet wine of youth; gave up the years to be
Of work and joy, and that unhopd serene
That men call age; and those who would have been
Their sons, they gave, their immortality.*

Rupert Brooke

Love's Recovery

By K. Srinivasan, B. A.

THE heat and glare of day subsided and the wind wafted the tang of waters. The light of the young moon faded. The long shadows of houses stretched out daintily on the dusty road.

Such stillness would have held any girl as a spell from which there was no breaking. Even then, sick with anguish, something of horror drove deeply into the heart of Leela. She never hugged the soothing thought of entrancing beauty and touch of nature.

A strange yearning was coming over her to go away. She withered in icy terror at the word 'orphan'. She an orphan! Only that morning her godfather told her. The desire for Mother expanded her soul.

The mountains—the mystery of their glacial heights! Their calls did not recreate her. Before her lay the writhing efforts to hunt the shadows of lights, the growing purple glow of love.

She stood still. Gazed at the heavens.

The string of starry sparks glimmered, struck to the mushroom of the unfathomable sky.

Where could she go? From the world? From its scintillating looks and drunken laughters?

With a rending sob, she fled down the lanes with no purpose..... no goal. She fled past the merry homes—people happy, laughing,..... lips furling kisses..... rich, splashing words. One sip from the cup would have enraptured her. One glimpse of sympathy would have enthralled her.

She ran towards the river. Her thoughts swirled in a flow of suffocating excitement.

She collapsed on the bank. Near its giddy edge. Shivered. Tears chilled upon her cheeks in the bleak, nocturnal air.

Better death than life! She rose up. Her knees trembled.

There was a sound in the night, tearing the jingling veil of stillness. A flash of torch shone in her face.

"What dost thou, pretty one!" said a comely youth, catching her in his arms.

Leela stood mute, dazed. Her eyes twinkled. She swooned away on his breast.

He carried her to a cosy little limousine and placing her in the cushion depths of the backseat, stepped on the accelerator, and let the car sizzle through the night.

"Who art thou?" Leela asked, her silky voice ringing in an elegant room. The strong odour of the River Cauvery filled the room, mingled with a sweet aroma of the neighbouring garden.

"Leave me to my fate;" she said.

"I am born to rescue you", the rolling reply came from Bashyam.

She leaned towards him and flashed luminous looks.

He enquired about her whereabouts. When she told him that she was the child of God, he pitied her and kissing her palm whispered "thou art my joy."

Time was up. He waved her good-bye and whisked off.

After his departure, she rose up and leaned out of the window. The sight of the Rock Fort delighted her.

"Merciful heavens!" she piped, laughing the pleasantest of her laughs.

"Name your choice, my child," cried his mother, eyeing the heaps of horoscopes, scattered about the floor.

Bashyam sat mute.

Divining non-chalance in his eyes she cried, "what, boy?"

"To-morrow, mother".

"To-morrow?"

"Yes, mother".

In the evening he ran to the hotel where Leela was put up.

"Dear Lilly! I am in a fix", he roared.

"What, dear," she snapped.

He explained to her everything.

A quick red mounted up her face. She took his hands into hers and lifted her quivering eyes to him.

"We must be bold now", he said.

"Too bold indeed", she added, throwing a perplexed glance.

"Our season of intimacy must not break," he continued. "I rescued you. Too lucky was the encounter. We must be bold now, Leela. Yes. We must. To-morrow follow me. I will tell mother all."

His eyes beamed. He glided off complacently.

Next evening his mother was chatting with her friend Kamala, a rich lady of the neighbourhood.

To their great surprise, Bashyam went up to them with Leela. Kamala went into raptures at the sight of her dazzling beauty.

"She is my choice", said Bashyam.

"Thine blessings, mother," smiled Leela bowing.

She embraced Leela. Kamala also caressed her. Their eyes met, alight with joy.

"My sweet darling", whispered Kamala, hugging Leela closely.

Bashyam enjoyed their companionship of silence.

Lightly and slowly the saree of Leela slipped down her milky shoulders and her petticoat was slightly pushed lower still.

Kamala was aghast when she saw a big mole on her shoulders, sparkling like the dark spot in the moon. Rapturously she kissed her and ecstatically ejaculated, "my sweetest Jaya! My darling angel! My lost beloved daughter."

She swooned away in her recovered daughter's arms.

Bashyam throbbed with ineffable glee. He attended to her recovery of senses which had sprung from the recovery of kinship.



THE MONTH IN INDIA



A burning topic of the moment in the Indian industrial world relates to the grant of adequate protection to the cotton industry against Japanese dumping. The executive action which Government was expected to take pending the expiry of the notice abrogating the trade convention with Japan, with the object of providing partial relief to the industry, has not materialised up to the time of writing. It has been freely suggested that Simla is not a free agent in this matter and that Japan has brought pressure to bear on the Government of India through the British Government. The problem presented has an international aspect and even in India there are several people, who do not see eye to eye with the millowners in this matter though their difficulties are not minimised.

MUTUAL INTERESTS

Mr. Nalini Ranjan Sarkar, the new President of the Federation of Indian Chambers of Commerce and Industry urges that a small Indian delegation representative especially of Indian manufacturing and trading interests should meet a Japanese delegation and exchange views in order fully to explore all avenues of an economic understanding with Japan. Mr. Sarkar says: The present position is that Indian tariffs are hurting Japan, and the heavy Japanese exports to India are affecting Indian industries. India is one of Japan's greatest markets and Japan is one of India's greatest customers. I cannot, therefore, understand why the two countries bound by such strong economic ties should pursue antagonistic policies in respect of their mutual trade. Does it not reveal a bankruptcy of economic statesmanship?

A GRAVE DANGER

After emphasising that Indian businessmen have no desire to hurt Japan, Mr. Sarkar proceeds to observe: At the same time I would like to tell Japan plainly that her export policy should be framed with due regard to the interests of our nascent industries. Japan would do well to understand that India is determined to resist the flooding of her markets with Japanese goods which is ruinous to our industries, especially textiles. It is not necessary for this purpose to find out whether it is technical efficiency, superior productive organization, or a deliberately depreciated exchange, or a combination of these that is really enabling her to sell so cheap. The mere fact that her sales in India are threatening the existence of Indian industries is sufficient reason to take effective steps to counter the danger.

AT SIMLA AND LONDON

The most important question suggested to Mr. Sarkar's mind by the situation is whether it is not possible for the representatives of the two countries to sit round a table and hammer out an agreement whereby the two countries can continue to be friendly customers of each other's goods. According to current reports, Japanese representatives are at present carrying on negotiations at Simla and London. The danger is that the conclusions arrived at by these negotiations may not be acceptable to real Indian opinion. "We do not want," observes Mr. Sarkar, "a trade agreement with Japan negotiated by British statesmen and businessmen or by the Government of India or by unrepresentative Indians to be hurled at us for acceptance."

JAPANESE VIEW

The Japanese point of view is expounded by a Yokohama correspondent. It would appear that the vernacular press in Japan has been asking whether the abrogation of the Indo-Japanese Trade Convention is merely to enable Lancashire to compete with Japan in the Indian market, or whether it also includes the beginning of sanctions against Japan for defying the judgment of the League of Nations. No better or quicker method could be adopted for bringing Japan into alignment with international world policy than for all nations to adopt similar sanctions. At all events the conviction seems to be gaining ground in Japan that the abrogation of the Indo-Japanese Trade agreement will affect relations between England and Japan.

ON BOMBAY MODEL

For some time past the two parent bodies had hopes that the Joint Committee would prove, but the forerunner of a further progressive step, namely, the creation of an independent cotton association, and to that end had expressed their assent. Last February, the Indian Central Cotton Committee, at its meeting held in Karachi, noted with satisfaction the desire that the Joint Committee would take early steps to fulfil the hopes originally expected from it, viz., the establishment of a cotton association on the lines of Bombay. Karachi and the local cotton trade may now congratulate themselves that the Karachi Cotton Association, incorporated under the Indian Companies' Act, has been established and will soon take over control of the local cotton market. On the first Board of Directors are representatives of most of the leading cotton business houses.



CURRENT TOPICS



SIR "MONTY'S" NEW POST

When Sir Montagu Butler leaves Nagpur for the Isle of Man, he will uphold a traditional connection between an interesting little island and the Indian Civil Service. The outgoing I. O. M. Governor is Sir Claude Hill, who served for over 30 years in India and finished by being a member of the Governor-General's Council. The Manx post is neither a gold mine nor a sinecure for the salary is £2,000 a year and the duties include, among many other things, the following:

Lord Chancellor,
Chancellor of the Exchequer,
Head of the Church,
Commander-in-Chief,
Governor of the Prison.

The Isle of Man is a very advanced little place, for its House of Keys is the oldest independent parliament in the world, having sat since the nineteenth century. Votes to women were granted as long ago as 1881.

FARIDPORE SUPERSTITIONS

Most famous of all prostrating trees was an Indian datepalm known as "the praying palm of Faridpore," a tree which for years, until its recent death, was treated with superstitious reverence, because, when the temple bells rang in the evening, it bowed its head as if in adoration. Next morning the head would be erect. Many were the miraculous cures reported, through the power of offerings made to the praying tree. The Indian botanist, Sir J. C. Bose, made a scientific study of the tree's movements, which is described in his book, "Plant Autographs," and traced the origin of the movements to changes in temperature, the ascension of the tree following a fall in temperature, its declension a rise. A successor to the fame of the "praying palm" grows by a pool, to which the trunk inclines, and every afternoon this tree dips its leaves into the water. Evidently trees are not so passive as they appear!

SCEPTICS AND PRAYING PALMS

Loud was the laughter of the unbelieving when news recently appeared about a tree which "prayed" daily. A message from Calcutta said that in Balasore district a datepalm "about midday falls on the ground and about mid-night stands erect again. Hundreds of people assemble there daily to witness this strange phenomenon." Here's the explanation. When a tree

happens to grow aslant, it is subject daily to a rising and falling movement, so slow that it passes notice, though occasionally a tree will obviously raise and lower its trunk, with the motion of a man prostrating himself in worship. Then it becomes a nine-days' wonder. A South African planter owns a whole line of coco-nut trees which stand upright in the morning, but so far incline themselves every afternoon that the coco-nuts can easily be picked. A Liverpool newspaper of more than a hundred years ago (1811) made much of a "praying tree" at Shipton, which would prostrate itself even to the ground, then rise to the perpendicular. We may sometimes observe rising and falling movements in long-stemmed flowers, or made by plants in pots which have been laid on their sides on the ground, and they suggest a combat between the force of gravity and the plant's striving for a place in the surroundings.

TRUNK TELEPHONE SERVICE

A definite stage in the development of radio-telephony was reached on the morning of 30th May when the Divisional Engineer for Telegraphs, Madras, made a number of successful calls on the Kirkee Beam Wireless Station near Poona from the Trunk Telephone Exchange in the Madras Central Telegraph Office. This means that in the next few days Madras will be linked with London and other European cities by radio-telephone.

The result of the calls made on Kirkee is stated to be very encouraging and it is said that the trunk telephone was working "remarkably well".

The trunk telephone between Bombay and Madras was declared open for public use the same morning at 8 o'clock when Mr. G. B. Power, Director of Telegraph Engineering, Madras, spoke to the telegraph authorities in Bombay.

Subscribers desirous of ringing up an address in Bombay have only to dial 2991, Trunk Exchange, Central Telegraph Office, and ask to be connected with a number in Bombay.

Deposits will not be required for the first call through the trunk exchange, but succeeding calls will not be accepted unless a deposit at Rs. 6 per call is lodged with the Telegraph authorities.

FIVE-YEAR SCHEME

The well-irrigated cambodia cotton area in Tiruppur (within the limits of the Coimbatore District) has been

estimated to range from 150,000 to 200,000 acres; its extent has never fallen below 100,000 acres. To supply pure selected cambodia seeds for the entire area the Indian Central Cotton Committee of Bombay has launched a scheme known as the Five-Year Improvement Scheme. An agreement has been entered into between the Indian Central Cotton Committee and the Tiruppur Co-operative Trading Society, whereby 20,000 maunds of selected seeds will be stocked and supplied to bona fide cotton cultivators by the Trading Society in the first year. In the second, third, fourth and fifth years it has been proposed to supply seeds to the extent of 40,000, 60,000, 80,000 and 100,000 maunds respectively. The object in view is to cover the entire area with the selected variety of seeds thus making it possible to grow only the best long staple cotton.

Calcutta.—A serious dislocation of the air services throughout Europe and the Far East is apprehended in view of the threatened resignations on July 1 of 25 out of 32 pilots of the Royal Dutch Air Lines operating between Amsterdam and Batavia as a protest against the proposed salary cuts. Besides the mails, this Company also carries passengers and Calcutta is one of the chief air ports of the Company.

Simla.—It is understood that Sir George Schuster is not being asked to attend the World Economic Conference. In fact the indications are that nobody who are at present in India will be invited. It is understood that the Secretary of State will himself invite the Indians already in London to participate in the Conference also and that the announcement of the delegation will be made in London and Simla simultaneously.

Villupuram.—About the resolutions passed by the Ladies' Club, Villupuram, condemning the method of searching of third-class lady railway passengers by the Customs Officials at Kandamangalam Chowki and the contradiction of the Customs authorities, Miss T. Krishnaveni Ammal, Member, South Arcot Dt. Board and Villupuram Taluk Board, and Municipal Councillor, Villupuram, has now issued a rejoinder to the press in the course of which she says that she was actually present in the course of the examination by the Customs authorities when ladies were stripped naked.

Peshawar.—A Muslim youth who was playing in Gramophone in his house in Peshawar City on the night of the 28th May was called upon by a neighbour to "Stop this damn nuisance or come down and you'll get something". On going down the youth it is alleged was first abused and then stabbed and killed on the spot by his challenger, who has been arrested.

The Times publishes the following message from its Berlin Correspondent dated April 20:

Herr Hitler's forty-fourth Birthday anniversary was celebrated with much enthusiasm throughout Germany

to-day. President von Hindenburg sent a telegram to Herr Hitler, who is in Bavaria, expressing his 'real gratitude for the great patriotic work you have done and have yet to do.' In the residential suburbs almost every house flew a Nazi flag. There was a parade of police, Nazis, and Stahlhelms before the Prussian Ministry of the Interior and Divine Service for the Nazis in the cathedral. Every newspaper published an article "Our Hitler," by Dr. Goebbels, who also spoke at a ceremony in the Municipal Opera House and said that Herr Hitler was "indispensable and irreplaceable." Herr Alfred Rosenberg in the Nazi Völkischer Beobachter said that "the figure of Herr Hitler closes a thousand years of German history and begins a new thousand."

The wireless began the day with a panoramic word-play of Herr Hitler's career, beginning with the exploits of Corporal Hitler among machine-gun fire and bursting shells in the trenches and ending with the pageant of Potsdam Broadcast pauses, incidentally, are now no longer filled with the ticking of a clock but with a bar of the Nazi "battle song," "A Nation in Arms." At Dortmund Nazis occupied the offices of the Dortmund General-Anzeiger and confiscated to-day's edition on the ground that a sketch of the Chancellor published on the front page maliciously distorted and vulgarized his facial expression.

To-night there was a gala performance at the State Theatre of Schlageter, the drama of the young German ex-officer shot by the French for sabotage in the Ruhr 10 years ago. The play, which is dramatically of little importance, inevitably breathes passionate resentment and hatred of the French, and the closing scene shows Schlageter being shot by French soldiers.

In celebration of the birthday the Nazi Commissioner for the Prussian Ministry of Education, Dr. Rust, has issued a decree that the three former cadet schools at Plön, Köslin, and Potsdam, which after the 1918 revolution became "State educational institutions," are to be remodelled as "national political educational institutions" in keeping with the spirit of the national revolution. The teaching staffs are to be reconstructed, the curriculum entirely reshaped, and students are to wear the Hitler uniform.

In North Germany a "high school for the training of teachers" is to be established at once, which, in the composition of the staff and the framing of its scheme of instruction, is to take "due regard for the hitherto neglected requirements of a national educational aim." Students at universities and high schools who, as members of the S. A., S. S., or military associations, fought for the national uprising are to be given preference in the grant of special benefits (such as reduced fees); these benefits are no longer to be given to Marxist or Jewish students.

At Altona the summary Court has sent to penal servitude for two years a man named Rathmann, who was alleged on March 1 to have incited a crowd to attack eight Nazis, who fired, hitting Rathmann in the

knee. He was found guilty of a grave disturbance of the peace.

Washington.—President Roosevelt has announced that Messrs. MacReynolds Democratic member from Tennesy, and Sprague will also probably be delegates to the World Economic Conference.

Berlin.—The Cabinet at the end of 5 hours' discussion decided to promulgate laws (1) providing subsidy of 20 million marks to shipping industry and (2) confiscating the entire foods and properties of the communist party and all organisations affiliated to it. The second law based on German legal principle that all funds accumulated for criminal purpose shall be forfeited.

Berlin.—Of the 647 members of the German Reichstag (including 81 Communists) 35 are members of the German nobility. The Nazi parts includes two princes, three counts, four barons; and eight of the minor nobility are representatives of the National Party (which now calls itself German National Front). The only other party including members of the nobility is the Bavarian Peoples Party with one count and one of minor nobility. The 3.5 per cent. of the Nazi, 19 per cent. of the Nationalists, and 11 per cent. of the Bavarian Peoples Party are of noble birth.

Geneva.—Japan stands firm on her demand for scaping the London and Washington Naval Agreements as a condition to any Disarmament proposal, the Anglo-American opposition notwithstanding. At a meeting of the General Commission of the Disarmament Conference Mr. Sato made a formal announcement that Japan's acceptance of the Disarmament Convention depended on the inclusion of Japanese amendment to the Naval Sections of the British Plan. Japan demanded deletion of Clauses to the British Plan which confirm maintenance of naval "statue quo."

Santiago, Chile.—While every wheat producing country in the world is suffering through surplus production Chile has an acute shortage, and is launching a 'grain battle' to obtain more home grown supplies. This object is to be attained by more scientific farming rather than increased acreage. Farmers now sow 200 different types of seeds in raising wheat, and the loss through planting infertile seed is estimated at 14,003,000 pasos (about £25,00,000) annually. It is hoped to double wheat, production in five years, build up surpluses for lean years, and even provide a surplus for export. Wheat is not the only commodity of which Chile is short. There is a 'petrol famine' although the world's oil producers are baffled to find methods of dealing with over-production. The difficulty is that there is an over-production of nitrates. Chile's principal product and of copper, another important product. Chile can sell neither of these commodities in sufficient

quantities to obtain foreign exchange to import wheat and oil products.

Poland.—A fine of £200,000 for the evasion of stamp duties—the highest of its kind ever inflicted in Poland—was recently imposed on the Prince of Pless, one of the wealthiest land owners in this country. The Prince failed to stamp an agreement concluded with a Swiss firm, says the *Exchange*.

Tokio.—Japan is making plans to purchase her entire supplies of raw cotton from the new Manchuria State of Manchukuo and thus avoid dependence on British Indian and United States supplies, according to the "Osaka Mainichi". When the programme already drafted is complete, Manchukuo will be able to provide for the entire annual demands of Japanese spinners—about 2,400,000,000 lbs. valued at about 500000000 yen (£50,000,000 at par). Cotton will be produced in twenty countries in Mukden Province and Jehol Province, where the total acreage will reach, 12,250,000 of which between 2,500,000 and 3,000,000 acres in round figures will be suitable for producing cotton of equivalent quality to United States cotton. The first step is being made by cultivating 735,000 acres in the current year raising the annual production of raw cotton from 27,000,000 lbs. to 200,000,000 lbs. one month's supply for Japan.

WHEN IN BOMBAY STAY AT THE MODERN HINDU HOTEL (Ballard Pier Tram Junc. Fort.)

Situated in a healthy locality and within easy reach of Railway Stations, Docks and all business centres.

Provides at Moderate charges well furnished rooms fitted with Electric lights and fans and excellent vegetarian food, specially suited to South Indians.

Patronised among others, by:

Palace Officers of Mysore.
Sir Vasudeva Raja, Kt. of Kollengode.
Dewan Bahadur Krishnamachariar,
Dewan of Baroda.
Sir K. V. Reddy, Kt., Madras.

Telegraphic Address:—"SOJOURN"

370 CA

WATCH-MAKING INDUSTRY IN SWITZERLAND CONTINUED FROM PAGE 214

The watches supplied to them showed a practically negligible variance of a fraction of a second in the course of 24 hours.

The Swiss Society of Chronometer Manufacturers, the Research Department of the University of Neu-

chatel and the Swiss Government, support and encourage the technical experts engaged in the various factories by means of prizes, stipends, scholarships, pensions etc. Thus the watch industry is one of Switzerland's oldest and most prosperous industries.

INDIA'S RICE BUSINESS CONTINUED FROM PAGE 218

The export trade in Indian and Burmese rice has now become re-distributed with a tendency to decline in Europe. This is due to defects in Burma rice as explained by Dr. Clouston who was deputed by the Imperial Council of Agricultural Research in India to visit the British Industries Fair of 1930. He observed that Burma rice contained much red grain and fetched a very low-price, but consumers were prepared to give better prices for selected varieties of the Burma Agricultural Department which yielded a bolder and whiter grain. In his last report (the quarterly Report of the Indian Trade Commissioner in London for July to September 1932) Mr. H. A. F. Lindsay indicates, however, the brighter prospects of Indian rice in the United Kingdom market by the conclusion of the Ottawa Agreement.

Mr. Lindsay reports that the U. K. rice market was favourable and between 11,000 and 12,000 tons of

Burma and Patna rice were imported during the quarter, about the same quantity as in the two corresponding quarters of 1931 and 1930. Though the annual British import of about 45,000 tons is small, it is important as representing the highest price usually paid for Indian rice going from Patna and Burma. Owing to the new duty of 1d. per lb. imposed on Non-Empire rice by the Ottawa Agreement, heavier shipments from India are expected and so a new rice mill is being erected on the River Thames near London.

The United Kingdom also seems to be the largest buyer of Indian Rice Bran. In 1931-32 she took 183,820 tons of it from Burma alone valued at Rs. 47,79,320 at Rs. 26 per ton. In 1931-32 Germany took 42,838 tons of this Bran and Indian shippers would do well to exploit the possibilities of all rice bye-products by communicating with the Indian Trade Commissioners in London, Hamburg and elsewhere.

TRANSIT OF GOODS BY TRAIN IN SOUTH INDIA CONTINUED FROM PAGE 224

Demonstrations showing how the containers can be used will be made at the stations concerned and merchants will be advised of the dates on which this is done.

Information of the days on which the containers are available for loading at stations will be given on application to the Chief Commercial Superintendent, South Indian Railway, Trichinopoly.

CAUVERY

By K. Srinivasan, B. A.

Chattering mysteries,
Flattering histories,
Of the deep flamboyant hyacinth blue,
Fighting the hurricanes merrily few,
Ringing the rubicund
Coins of the cloudy fund
Cauvery glides through the flickering clusters of
Tossing trees, kissing the caressing sheaf.

Cyclonic cypresses
From the dim recesses
Swim into womb of the violet tides:
Virginal fragrance on spicy wind rides.
Luminous nabula,
Reflecting naphatha,
Narcotic, myriad, glittering stars
Sizzle out slippery hyaline bars.

Fluvial plumages
Immure the ravages
Flooding the current of ferocious tide:
Silvery light on the water is laid.
Breathless the evening
Broods on the quieting
Voices from mountainous symphonies gay,
Hushed to the withering tunes of the Ray.

Murmuring coral beads,
Whispering river reeds,
Coquettish, sparkling arms Cauvery throws,
Pleasing the rapturous hearts of her beans.
Circling the sublime Isles,
Squandering many rills,
Rolls on her rhythmic pace towards the sea,
Thirsty for tumultuous kiss of her glee.

THINGS OF INTEREST

MOONBEAM TELEGRAMS

Telegrams were sent from Budapest to Prague more than 300 years ago according to a Budapest writer.—The news of a successful Hungarian Fight against a Turkish Army was flashed in 1598 from Castle Gyor to King Rudolf II at Prague, it is stated over a distance of 250 miles. Twelve large mirrors formed relay stations for flashing the code by use of moonbeams.

Reuter.

TROOPS AND PLANES IN GOLD HUNT

Gold seeking by semi-military methods is about to begin in Manchukuo. The South Manchuria Railway has fitted out an expedition of 100 mining experts to conduct a geological survey of the alluvial and gold bearing areas along with the Wuting-ho, a branch of the Sungari River 250 miles North-West of Harbin. As the area is infested with bandits 80 armed guards will accompany the party in addition to 100 coolies. The expedition will also have aeroplanes to scout for bandits and for communicating with its base. It is to start in the middle of May and work until October. It is estimated that up to £30,000,000 worth of gold exists in Northern Manchuria of which the Wuting-ho, area is the richest section.

AIRPLANE CONVERTED TO AUTO

Germany is exhibiting a windmill plane which can be used on the ground as a three-wheeled automobile. It requires a little space to land or take off and enables the owner to continue a ground trip in the same vehicle in which he has made an air journey. The auto plane consists of a steam-lined body with an articulated motor sail like an autogyro. The wings can be folded for ground travel and the motor is mounted at the front to supply lift and control. The Diesel engine is air-cooled and a driving gear links the motor with the engine supplying the power. There are accommodations for four persons and their baggages in the cabin.

TRY A NUT MEAL!

There is no need to be a vegetarian or a food-reformer to enjoy meals in which nuts predominate. Nut-butter for instance is as good as ordinary butter for pastry and nut-suet gives a more delightful flavour than ordinary suet when it is a question of boiled puddings. Pine kernels are perhaps the most appetising of all nuts and they give a fine flavour to the duller dishes. Nuts can be used also for delicious entree cutlets and omelettes. It is rather foolish to say: "I am not

a nutarian and I am not going to start being one". It is admitted that nuts form the most nourishing of all natural foods, yet many people merely serve them as dessert eating a heavy meat-meal, then further taxing their over-worked digestive organs with a quarter of a pound or so nuts, which in themselves constitute a meal. That is the reason why people get indigestion through eating nuts. You might try a nut-meal once a week. The chances are that the members of your family will not be able to tell you the difference between a nut and milled-vegetable rissole and one made from the remains of Sunday's joint. How can a rissole made from meat that has had all the nourishment cooked out of it be more nutritious than one made from fresh nuts, whole meal flour, fresh eggs and grated raw vegetables?

MACHINE MEASURES BEAUTY OF FACE

Even beauty may now be reduced to cold hard figures according to inventors of a device that is said to record the contours of a face with thousandth-of-an inch accuracy. Beauty shops might use the device, the inventors say, to learn how to change their customers' features. In the inventors' opinion the following measurements are ideal: nose, same length as the height of forehead, eyes, separated by a space the width of one eye.

RADIO IN CANE STICKS

So that a pedestrian may enjoy broadcast programmes wherever he goes, a German inventor Alfred Mintus, has devised what he calls a "Radio Walking stick". Outwardly it resembles an ordinary cane, but the interior contains a miniature receiver and batteries. The user has merely to plant the stick in the ground, adjust a pair of pocket phones to his ears and listen it. It only remains now for the inventor to perfect the apparatus so that the pedestrian need not interrupt his walk while listening in, a possibility foreseen by the inventor of the cane.

TELESCOPE EYE-GLASS

Telescope eye-glasses just perfected by a New York Optometrist, will enable forty per cent. of persons incapacitated by blindness to return to normal work, the American Academy of Optometry was told recently. The power lenses enable a patient with only two per cent. of normal vision, ordinarily classed as total blindness, to see clearly. Because of their high power the glasses distort objects slightly.

THE TALE SPINS PAGE

Liza—Ah wants a pair o' shoes foh mah little gal.
Clerk—Black kid?
Liza—You'll just mind yo' own business an' git me dem shoes.

Country Constable—Pardon, Miss, but swimming is not allowed in the lake.

City Flapper—Why didn't you tell me before I undressed?

Country Constable—Well there ain't no law against undressing.

Then there was a young lady who had water on the knee, so the doctor told her to wear pumps.

"Why, my dear man, already my poetry is being read by twice as many people as before."

"Oh, I didn't know you were married."

Bellhop (after guest has rung ten minutes)—Did you ring, sir?

Guest—Hell, no! I was telling; I thought you were dead!

"So this is the Athletic Club where you made your first appearance as a wrestler?"

"Yeah, eggs mark the spot."

"It's foolish for us husbands to try to work when we've got such bad colds."

"Why, the little colds you have won't prevent your doing good work."

"No, but the whiskey we're taking for them will."

"I think the boy who tried to kiss you was cracked."

"I'll say he was. My hand still smarts."

Talkative Lady—A big man like you might be better occupied than in cruelly catching little fish.

Angler—Perhaps you're right. But if this fish had kept his mouth shut he wouldn't be here.

Bob—Chicago people must be brave to attempt a world's fair in these times.

Bert—Well, none but the brave deserve the fair!

"Moths are the least aggressive and assertive of insects," says a London entomologist. After viewing a pair of our summer trousers, we can testify that they are willing to take a back seat.



Hullo, can you not sound your horn?
O yes, I can sound my horn, but I cannot drive.

Rastus — Say, Sambo, what time in yoah life does yo' think yo' wuz scared de worst?

Sambo—Once when Ah wuz callin' on a married gal an' her husbum come in an' caught me. Boy, wuz Ah scared!

Rastus — How are yo' suah dat was de worstest yo' evah bin scared?

Sambo—'Cause her husbum turned to dat wife ob his an' he say: "Mandy, whut's dis white man doin' here."

About the only difference between a cow chewing her cud and a girl chewing gum is that the cow looks thoughtful.

An engineer is said to be a man who knows a great deal about a very little, and goes along knowing more and more about less and less until he finally knows practically everything about nothing; whereas, a salesman, on the other hand, is a man who knows very little about a great deal and keeps knowing less and less about more and more until finally he knows practically nothing about everything.

"Are you sure," an anxious patient asked a physician, "are you sure that I shall recover? I have heard that doctors sometimes give wrong diagnoses and have treated patients for pneumonia who afterward died of typhoid fever."

Broadcasting Empire Programme

PROGRAMMES FOR INDIA (including BURMA), CEYLON, STRAITS SETTLEMENTS FEDERATED MALAY STATES and ADEN

FROM THE EMPIRE TRANSMITTER, DAVENTRY, ENGLAND

Two of the following frequencies and wavelengths will be used in the transmissions to the Indian zone. Announcements will be made at frequent intervals.

Call Sign	Frequency	Wavelength
GSC	9,510 kc/s	31.5 m.
or GSC	9,585 kc/s	31.5 m.
or GSC	11,750 kc/s	25.5 m.
or GSC	11,865 kc/s	25.5 m.
or GSF	15,140 kc/s	19.8 m.
or GSF	17,770 kc/s	16.8 m.

THURSDAY, JUNE 1.

7-00 p. m.—Time Signal from Big Ben. News Bulletin.
7-15 Liddle Clark and his Orchestra, relayed from Blackpool Abbey.
7-30 Evensong, from Westminster Abbey.
8-15 The Week in Westminster. Hotel Metropole Orchestra.
9-15 Northern Studio Orchestra.
9-45 B. B. C. Dance Orchestra.
10-30 Gramophone records.
10-45 News Bulletin.

FRIDAY, JUNE 2.

7-00 p. m.—Time Signal from Big Ben. News Bulletin.
7-15 The Week Abroad, a talk.
7-30 A Musical programme with illustrations by Sir Walford Davies. Concert by the Glinka Trio.
8-00 Northern Studio Orchestra.
8-45 B. B. C. Dance Orchestra.
10-30 Gramophone records.
10-45 News Bulletin.

SATURDAY, JUNE 3.

7-00 p. m.—Time Signal from Big Ben. News Bulletin and Announcements.
7-15 The Celebration in London of the Birthday of H. M. King George V. Trooping the Colour on the Horse Guards Parade including a commentary by Major J. B. S. Bourne-May.
8-30 Concert by the Percy Bush Orchestra.
9-00 A recital of Lancashire Songs by Dale Smith.
9-15 Harold Ramsay at the organ of the Granada, Tooting.
9-45 Geraldo and his Orchestra, followed by the Savoy Hotel Orpheans.
10-30 Gramophone records.
10-45 News Bulletin and Announcements.

SUNDAY, JUNE 4.

7-00 p. m.—Time Signal from Big Ben. A Summary of the Week's News.
7-15 A Roman Catholic Service conducted by the Most Rev. Alban Goodier, S. J. (Archbishop of Hierapolis); relayed from St. Chad's Cathedral, Birmingham.
7-45 French Music (Gramophone Records).
8-15 Percy Bush Military Band.
9-30 B. B. C. Theatre Orchestra.
10-00 A violin recital by Isolde Menges.
10-30 A Bible Reading.
10-45 Summary of the Weeks News.

MONDAY, JUNE 5.

7-00 p. m.—Time Signal from Big Ben. News Bulletin.
7-15 Midland Studio Orchestra.
7-30 Sonata Recital by Bernard Shore and Angus Morrison.
8-00 Textiles and the Empire; a talk by Mr. Albert Abbott, C. B. E.
8-15 B. B. C. Dance Orchestra.
9-00 Scottish Studio Orchestra.
9-45 B. B. C. Dance Orchestra.

TEUESDAY, JUNE 6.

7-00 p. m.—Time Signal from Big Ben. News Bulletin.
7-15 The Economist in the Witness Box, a talk by Commander Stephen King-Hall and M. N. F. Hall.
7-30 Rectical of Gramophone records.
7-45 Pianoforte Recital by Berkeley Moson.
8-30 Rene Tapponnier and his Orchestra.

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ACROSS

1. The thing, 8. Fabric.
2. While, 10. Musical composition, 12. Flower, 14. Stratagem, 15. Roman divinity, 17. Balsam, 18. Bone, 19. Charm, 22. Form of address, 23. Dull, 25. Merchant, 27. Sum, 28. Organ, 30. Whatever, 31. Yonder, 33. Utterly, 34. Present, 36. Wandered, 40. Preposition, 42. Annoyance, 43. Plant, 44. Remain, 45. Chord, 48. Hold, 50. Carriage top, 51. Submit, 53. Since, 54. On strike, 55. Bird, 57. Stamp, 58. Coin of ancient Greece, 59. Trying.

DOWN

1. Duty, 2. Famous novelist, 3. Kind of nut, 4. Preposition, 5. Mahomedan title, 6. As far as, 7. Additional, 8. Indisposition, 10. Weed, 11. Preposition, 13. Observe, 15. Brigand, 16. Minute aquatic animal, 20. Beak, 21. Vase, 24. Greek fable giant, 26. Strike (Sc.), 29. Nautical term, 32. Nymph, 34. Equals, 35. Anticlimax, 37. One of the Nornir, 38. Wrap, 39. Sugar cane, 41. Fish, 41. Up, 48. Greek letter, 47. Fictitious bird, 49. Help, 51. Large fish, 52. Became, 55. Pronoun, 56. You and I.

FRIDAY, JUNE 9.

7-00 p. m.—Time Signal from Big Ben. News Bulletin.
7-15 The Week Abroad, a talk by Mr. Vernon Bartlett.
7-30 B. B. C. Dance Orchestra.
8-00 Concert by the Serre Trio.
8-45 Northern Studio Orchestra.
9-45 B. B. C. Dance Orchestra.
10-30 Interlude.
10-45 News Bulletin.

SATURDAY, JUNE 10.

7-00 p. m.—Time Signal from Big Ben. News Bulletin and Announcements.
7-30 Harry Roy and his Band, relayed from the Cafe Anglais, London.

8-00 Wireless Military Band.
9-15 Harold Ramsay at the organ of the Granada, Tooting.
9-45 B. B. C. Dance Orchestra.
10-30 Interlude.
10-45 News Bulletin.

MADRAS SHIPPING LIST

HOMEWARD

OUTWARD

NAME OF STEAMERS	CALLING PORTS	DATE DUE	LEAVE FOR	DATE OF SAILING	NAME OF STEAMERS	CALLING PORTS	DATE DUE	LEAVE FOR	DATE OF SAILING
C. ROSS	Madras	9 June	London		TAIWAN	Madras	6 June	Calcutta	
MANELA	"	18 June	Marseilles, London, Dundee, Hamburg, Antwerp, Rotterdam, Bremen and Middlesbrough	18 June	MAHARAJA	"	6 June	Port Blair	11 June
					C. OF LINCOLN	"	9 June	Calcutta	
					ORNA	"	10 June	Bombay and Karachi via Coast Ports	
CLAN MACNAIR	"	20 June	London		DOGRA	"	10 June	Pondicherry, Cuddalore, Gallie, Cochin & Bombay.	
LUENEBURG	"	2nd half June	Marseilles, Rotterdam and Hamburg						
AZAY LE RIDEAU	"	25 June	Marseilles		GIERFELS	"	10 June	Calcutta via Rangoon	
C. OF GUILDFORD	"	25 June	U. S. A. via Calcutta		JEYPORÉ	"	10 June	Rangoon	11 June
BORINGIA	"	27 June	Genoa, London, Rotterdam, Hamburg, Scandinavian Ports	27 June	MARECHAL JOFFRE	"	15 June	Singapore, Saigon & Haiphong (?)	
C. OF ATHENS	"	28 June	London and Dunkirk		C. MONROE	"	16 June	Calcutta & Chittagong	
JEYPORÉ	"	2 July	London, Middlesbrough, Dundee, Rotterdam and Antwerp	2 July	RAJULA	"	16 June	Straits	30 June
					MAHSUD	"	17 June	Calcutta	
					OMAHICHI	"	18 June	Calcutta	
					CAROTO	"	20 June	Calcutta	
DOMALA	"	16 July	Marseilles, London, Dundee, Hamburg, Antwerp, Rotterdam, Bremen and Middlesbrough	17 July	M. V. CORTELLAZZO	"	21 June	Calcutta	
					C. OF GUILDFORD	"	25 June	Rangoon & Calcutta	
MARECHAL JOFFRE	"	26 July	Marseilles		DOMALA	"	25 June	Calcutta	26 June
NAGPUR	"	2 Aug.	London, Middlesbrough, Dundee, Rotterdam and Antwerp		C. MACGILLIVRAY	"	30 June	Calcutta & Chittagong	
MANDALA	"	18 Aug.	Marseilles, London, Dundee, Hamburg, Antwerp, Rotterdam, Bremen and Middlesbrough	14 Aug.	MAHANADA	Cocanada	1 July	Cocanada & Calcutta	
					C. MACQUARRIE	Madras	14 July	Calcutta and Chittagong	16 July
BERNARDIN DE ST. PIERRE	"	20 Aug.	Marseilles		BERNARDIN DE ST. PIERRE	"	18 July	Singapore, Saigon and Haiphong (?)	
DUMANA	"	18 Sept.	Marseilles, London, Dundee, Hamburg, Antwerp, Rotterdam, Bremen and Middlesbrough		MALAKAND	"	15 July	Calcutta	
					C. GRANT	"	28 July	Calcutta and Chittagong	30 July
EXPLORATEUR	"	17 Sept.	Marseilles		MARKHOR	"	29 July	Cocanada and Calcutta	
GRANDIDIER	"	10 Oct.	Marseilles, London, Dundee, Hamburg, Antwerp, Rotterdam, Bremen and Middlesbrough		MAHOUT	Cocanada	31 July	Calcutta	
MASHOBRA	"				C. SKENE	Madras	12 Aug.	Calcutta	
					EXPLORATEUR	"	4 Aug.	Calcutta and Chittagong	
					GRANDIDIER	"	10 Aug.	Singapore, Saigon and Haiphong (?)	
GENERAL METZINGER	"	15 Oct.	Marseilles		MANAAR	"	26 Aug.	Cocanada and Calcutta	
DOMALA	"	7 Nov.	Marseilles, London, Dundee, Hamburg, Antwerp, Rotterdam, Bremen and Middlesbrough		MASIRAH	Cocanada	28 Aug.	Calcutta	
					MAIDAN	Madras	9 Sept.	Calcutta	
MULBERA	"	5 Dec.	Marseilles, London, Dundee, Hamburg, Antwerp, Rotterdam, Bremen and Middlesbrough			Cocanada	28 Sept.	Cocanada & Calcutta	

TRAIN TIMINGS

The following table shows the times of arrival and departure of the principal trains at Central and Egmore Stations (Madras) and the times of arrival and departure of the same trains at termini elsewhere in India:

DEP:	ARR:	DEP:	ARR:
MALABAR EXPRESS	Cen. Station 8-05 P.M.	Mangalore 4-25 P.M.	Cen. Station 7-15 A.M.
CALCUTTA MAIL	Cen. Station 8-30 P.M.	Calcutta 10-20 A.M.	Cen. Station 8-15 A.M.
BOMBAY MAIL	Cen. Station 8-40 P.M.	Bombay 6-00 A.M.	Cen. Station 5-55 A.M.
BOMBAY EXPRESS	Cen. Station 8-30 A.M.	Bombay 10-15 A.M.	Cen. Station 5-10 P.M.
GRAND TRUNK EXPRESS	Cen. Station 7-45 A.M.	Delhi 10-40 A.M.	Cen. Station 7-00 P.M.
BANGALORE MAIL	Cen. Station 9-30 P.M.	Bangalore 6-35 A.M.	Cen. Station 6-15 A.M.
BANGALORE EXPRESS	Cen. Station 1-00 P.M.	Bangalore 7-40 P.M.	Cen. Station 2-10 P.M.
BLUE MOUNTAIN EXP.	Cen. Station 9-15 P.M.	Ootacamund 12 NOON	Cen. Station 6-35 A.M.
WALT AIR PASSENGER (1)	Cen. Station 7-55 A.M.	Waltair 9-45 A.M.	Cen. Station 7-50 A.M.
WALT AIR PASSENGER (2)	Cen. Station 7-30 P.M.	Waltair 9-45 P.M.	Cen. Station 8-00 P.M.

EGMORE STATION

DEP:	ARR:	DEP:	ARR:
INDO-CEYLON EXPRESS	Egmore 9-00 P.M.	Dhanushkodi 4-25 P.M.	Egmore 6-40 A.M.
TRIVANDRUM EXPRESS	Egmore 7-30 P.M.	Trivandrum 7-45 P.M.	Egmore 7-35 A.M.
TRIVANDRUM FAST PASSR.	Egmore 9-30 P.M.	Trivandrum 5-45 A.M.	Egmore 6-05 A.M.
SHENCOTTAH PASSENGER	Egmore 6-50 P.M.	Shencottah 11-42 A.M.	Egmore 7-50 P.M.
DHANUSHKODI FAST PASSR.	Egmore 11-15 A.M.	Dhanushkodi 6-15 A.M.	Egmore 2-55 P.M.
TRICHINOPOLY PARCELS	Egmore	Trichinopoly	Egmore
PASSENGER	10-40 P.M.	6-40 P.M.	5-35 A.M.



Market Report



COMMODITIES

London, May 31.
The following are the quotations at
3.30 p. m. on May 31.

Jutes.

London 1st Marks, c.i.f. Continent:
(£19-10-0 June-July paid.) £ 19-10-0
June-July sellers.
Dundee. (Not quoted.)
Lightnings. (Not quoted.)

Linseed Oil.

Naked, London, cwt.—Last: 19/9 June
paid. To-day: 20/- June sellers.
Naked, London, cwt.—Last: 20/4 Sept.—
Dec. paid and buyers. To-day: 20/7 1/2
Sept.-Dec. paid.
Market: Firm.

Rapeseed.

Toria (Hull-Continent) ton.—Last:
£11-7-6 June sellers. Today: £11-5-0
June paid.

COTTON MARKET

Liverpool Cotton.

May 31.		
Yesterday's To-day's To-day's		
Closing 10-10 a. m. Closing.		
Call.		
May, 1933	6-10	...
June, 1933	6-07	6-12
July, 1933	6-08	6-11 6-12
August, 1933	6-07	6-12
September, 1933	6-07	6-12
October, 1933	6-08	6-12 6-12
November, 1933	6-08	6-12
December, 1933	6-11	6-14
January, 1934	6-12	6-16 6-15
February, 1934	6-14	6-17
March, 1934	6-18	6-19 6-19
April, 1934	6-17	6-20
May, 1934	6-19	6-22 6-22
July, 1934	6-22	6-23
October, 1934	6-26	6-24
January, 1935	6-30	6-27
Middling Spot	6-30	6-45

Market: Was declining on American
cables and considerable straddle revers-
ing. Closed quiet but steady.

New York Cotton.

May 31.		
Last To-day.		
July	9-15	9-20
October	9-38	9-45
Middling Spot	9-20	9-35

Indian Cotton.

Liverpool, May 31.		
Yesterday's To-day's		
Closing Closing.		
Broach, fully Good	5.37	5.48
(Good Staple)		
" Fine	5.49	5.60
(Good Staple)		
" Superfine	5.61	5.72
(Good Staple)		
C. P. Oomra, Fine	5.87	5.48
(No. 1 Staple)		
" Superfine	5.52	5.63
(No. 1 Staple)		
" Choice	5.67	5.78
(No. 1 Staple)		
Bengal, Good	4.63	4.63
" Fully Good	4.73	4.73
" Fine	4.83	4.83
Scinde, Fully Good	4.73	4.73
" Fine	4.83	4.83
" Superfine	4.93	5.03

Egyptian Cotton.

Liverpool, May 31.		
Yesterday's To-day's		
Closing Closing.		
May, 1933	8.08	...
July, 1933	8.15	8.20
Oct. 1933	8.26	8.31
Nov. 1933	8.33	8.38
January, 1934	8.39	8.44
March, 1934	8.47	8.52
May 1934	8.54	8.57
Sakellaridis F. G. F.		
Spot	8.46	8.61
Market: Steady.		

RUBBER MARKET

London, May 31.		
Last To-day.		
Buyers. Buyers.		
Smoked Sheet Stan-		
dard, Ribbed Spot		
lb. ...	-8 1/4	-8 1/4
Sellers.		Sellers.
Smoked Sheet Stan-		
dard, Ribbed Spot		
lb. ...	-3 1/4	-3 1/4
Buyers.		Buyers.
Pale Crepe, Spot lb.	-3 1/4	-3 1/4
Sellers.		Sellers.
Pale Crepe, Spot lb.	-3 1/4	-3 1/4
Market: Firm.		
Latest.		
Spot (8 1/4 d. paid and buyers.)	3 1/4 d.	
paid and buyers.		
July-Sept. (8 1/4 d. paid and value.)	3 1/4 d.	
paid and value.		

PRODUCE MARKET

New York, May 31.		
Last To-day.		
Fair Rio Coffee (No. 7		
Quality) Spot lb. ...	9 1/4	9 1/4

SHARES

Bangalore, 31-5-1933		
Paid up Present		
Capital Rate		
Rs. Rs. A. P.		
BANKS		
Imperial F. P. ...	500	1208 0 0
Imperial Cont. ...	125	288 10 0
India ...	100	101 14 0
Mysore ...	100	214 8 0
Bangalore ...	10	10 10 0
Industrial ...	25	10 2 0
Devanga ...	10	8 8 0
Vyasa ...	50	50 0 0
S. M. S. A. ...	10	10 0 0

MISCELLANEOUS

B. C. Railway ...	25	20 10 0
Bangalore Press ...	100	84 0 0
Barton Son's ord. ...	10	7 8 0
Do. pre. ...	10	6 8 0
Spencers ...	10	9 2 0
Breweries ord. ...	100	94 8 0
Do. pre. ...	100	100 0 0
Tata Hydro ord. ...		145 8 0
do. pre. ...		118 14 0
Tata Iron ord. ...		50 4 0
do. def. ...		214 0 0
do. 1st ...		151 5 0
do. 2nd ...		81 14 0

INSURANCE

Asiatic ...	5	5 2 0
Orientalis ...	500	2648 0 0
Reliance ...	50	12 10 0

DEBENTURES

Kolar ...	100	96 9 0
Mysore ...	100	104 8 0
Tumkur ...	100	104 10 0
Hassan ...	100	101 10 0

In the absence of buying support prices
are receding.

Government of India Securities.

TAXABLE		
Percentage Years.		
Rate		
Rs. A. P.		
3 1/2 ...	1947-50	81 0 0
3 1/2 ...	1951-56	92 1 0
4 1/2 ...	1961-66	100 1 0
4 ...	1934-37	100 15 0
4 ...	1960-70	93 6 0
4 1/2 ...	1984	101 15 0
4 1/2 ...	1955-60	102 3 0
5 ...	1929-47	Nominal
5 ...	1936	103 10 0
5 ...	1939-44	104 9 0
6 ...	1933-36	100 12 0
6 1/2 ...	1935	106 12 0
6 1/2 ...	1938-40	106 11 0

The long dated securities are very weak
on account of the sagging tendency in
sterling securities.

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sick-rooms etc.

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P. A. 145 Bottles which cannot be refilled after being
emptied. Italian firm wishes to sell the
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P. A. 146 Removable Hub for light power-vehicles, in
particular, for perambulators, folding-boat
trucks and children's vehicles etc. A cheap
wholesale article, suitable for manufacturers
of hubs and for metal foundries. Patents and
licenses can still be granted for several
countries.

P. A. 147 High-speed Darnier "Rekord" (Registered,
German Patent, foreign Patents pending).
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bought by every housewife. Licenses still
available for foreign countries.

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and stewing. Licenses still available for
various countries.

P. A. 156 Interchangeable Tabs for Clothing. Advan-
tages: No sewing on, immediate interchange-
ability, no tearing of the material. Made
with glace thread or durable leather loops in
all colours. Low cost of production; selling
price extraordinarily low. A promising whole-
sale article. Patent for sale in all countries,
or licenses can be granted.

Wanted

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Manufacturers of Electrical and Radio Articles,
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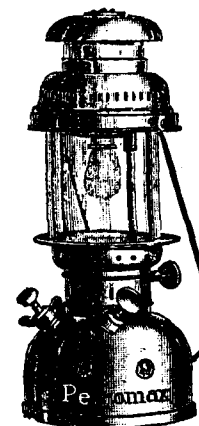
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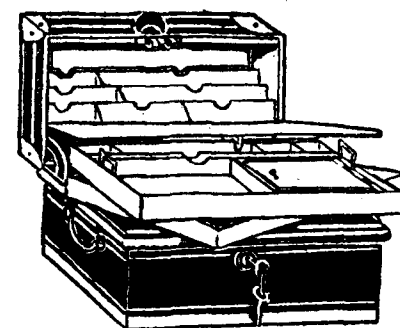
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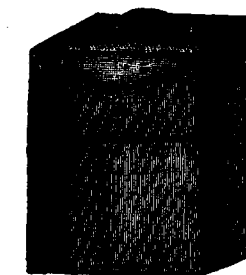
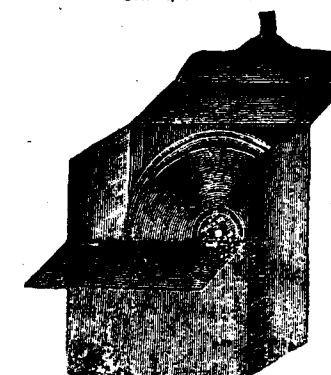
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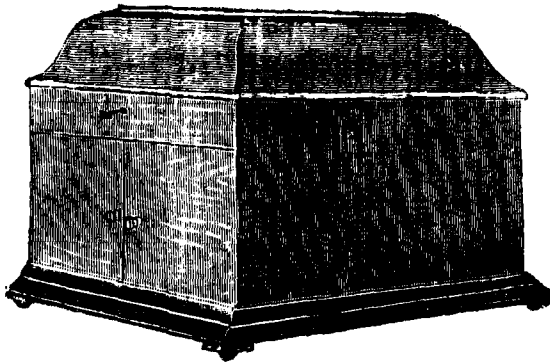
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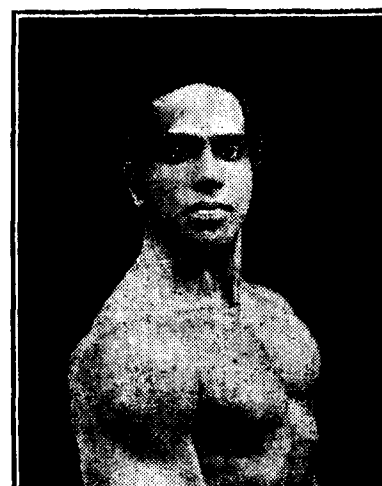
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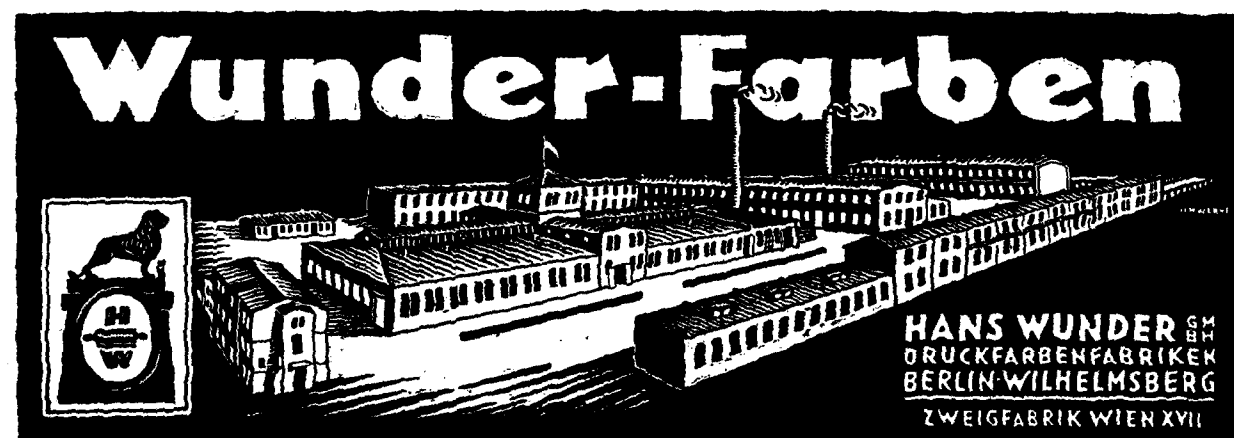
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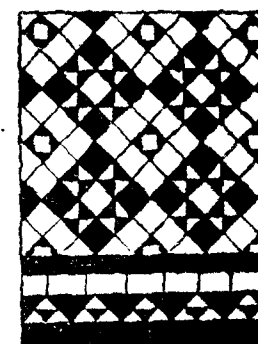
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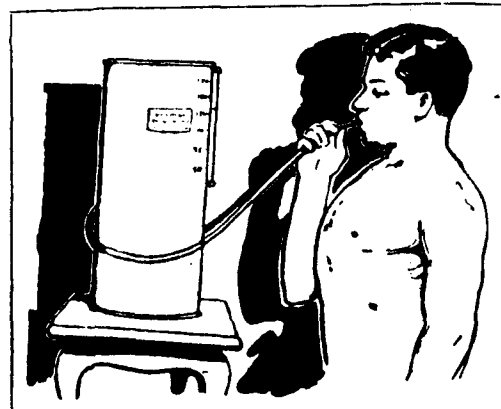
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