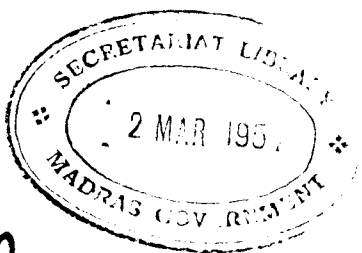


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I believe...

“ . . . that all sound advertising agencies offer substantially the same basic services: consumer research, market analysis, media and production facilities. But the fundamental qualities—the life’s blood of the organisation—are creative ability and showmanship, and it is in these that I believe Stronach’s excel.”

John Stronach

MANAGING DIRECTOR

* * *

AROUND 1910, a well-known agency coined the phrase, “Ask the man who owns one,” for a motor car they were advertising. This was a psychologically compelling slogan, because it implied the advertiser’s absolute faith in the quality of his own product. Without attempting to borrow this excellent phrase, we must admit that we do, quite frequently, borrow the idea which is inherent in it. We have a large number of satisfied clients, to the success of whose business we have contributed a small part. To our new clients, we frequently say, in effect, “Ask the man who owns one.” In other words, anybody who wishes to assess the standard of Stronach’s service is welcome, at any time to seek the opinion of clients whose advertising we already handle. Stronach’s is a growing organisation, and it is this steady growth

which enables us to consider new business without in any way prejudicing the thought, care and attention we give to existing accounts. We therefore recommend to your consideration the list of our accounts which forms part of this advertisement. A close study of this reveals the fact that, although we have been in business in the East for over twenty years, there are certain categories of consumer goods which we are still able to handle because they are non-competitive. It sometimes happens that circumstances give us the opportunity to canvass new business but more frequently, the opportunity is not revealed to us. To advertisers who consider that there is a possibility of Stronach’s being able to serve them, now or in the future, we make this suggestion: “Ask our clients about us.”

Stronachs

ADVERTISING

Head Office: L. A. Stronach & Company (India) Ltd., Warrell House, Ballard Estate, Bombay
BOMBAY • KARACHI • RANGOON • LONDON • NEW YORK

The following is a partial list of international corporations whose advertising is handled by Stronach’s:

- ANCHOR LINE • ASBESTOS CEMENT LTD • BRITISH INDIA CORPORATION LTD • CALTEX (INDIA), LIMITED • CORN PRODUCTS CO (INDIA) LTD • COLGATE PALMOLIVE (INDIA) LTD • FAYRE LEUBA & CO LTD • FIRESTONE TYRE & RUBBER CO OF INDIA LTD • GENERAL MOTORS INDIA LTD • THE GENERAL ELECTRIC COMPANY OF INDIA LTD • GEVAERT FILMS • GILLETTE INDUSTRIES LIMITED • GLAXO LABORATORIES • GOODLASS WALL LTD • GRINDLAYS BANK LTD • E. GRIFFITHS HUGHES LTD • KNOX COMPANY • MENTMORE MANUFACTURING CO LTD • MONSANTO CHEMICAL COMPANY • NORWICH UNION • S.K.F. BALL BEARING COMPANY LTD • SIMONIZ COMPANY • TRANS WORLD AIRLINE • WILLIAM HOLLINS & CO LTD •

GILLANDERS
ARBUTHNOT
AND
COMPANY, LIMITED

1819—1948

Merchants
and
■ Agents ■

CALCUTTA, BOMBAY, MADRAS, DELHI, LAHORE,
RANGOON, KANPUR, KARACHI & CHITTAGONG.

"CAPITAL"
Diamond Jubilee
Number

1888—1948

CAPITAL, Volume I, No. 1, made its appearance on the 6th November, 1888—the first financial and commercial paper in India.

Sixty years have passed, and in those momentous years CAPITAL has not only maintained uninterrupted publication but has added to its distinction of being the pioneer that of being regarded, both in this country as well as abroad, as the most authoritative, well-informed and widely-read publication in its particular sphere.

This special Diamond Jubilee Number, we hope, will serve as a souvenir of the occasion to our readers and advertisers and a mark of appreciation of their valued support. It records both the developments of the past as well as the promise that lies in the years ahead of still further advancement, political, social and industrial, for the two new Dominions of India and Pakistan.

Indo-British co-operation has achieved much in the past 60 years. It is CAPITAL's hope to continue playing a part in its even greater achievements of the future.



Symbol of Comfort and
Good Living.

THE ASSOCIATED HOTELS OF INDIA LIMITED.

Delhi	-	Imperial
	-	Maiden's
Simla	-	Cecil
	-	Corstorphan's
Lahore	-	Faletti's
Rawalpindi	-	Flashman's
Murree	-	Cecil
Peshawar	-	Dean's

ASSOCIATES

Calcutta	-	Grand
Delhi	-	Swiss
Simla	-	Clarke's
Gopalpur on Sea	-	Palm Beach

M. S. OBEROI

Managing Director.

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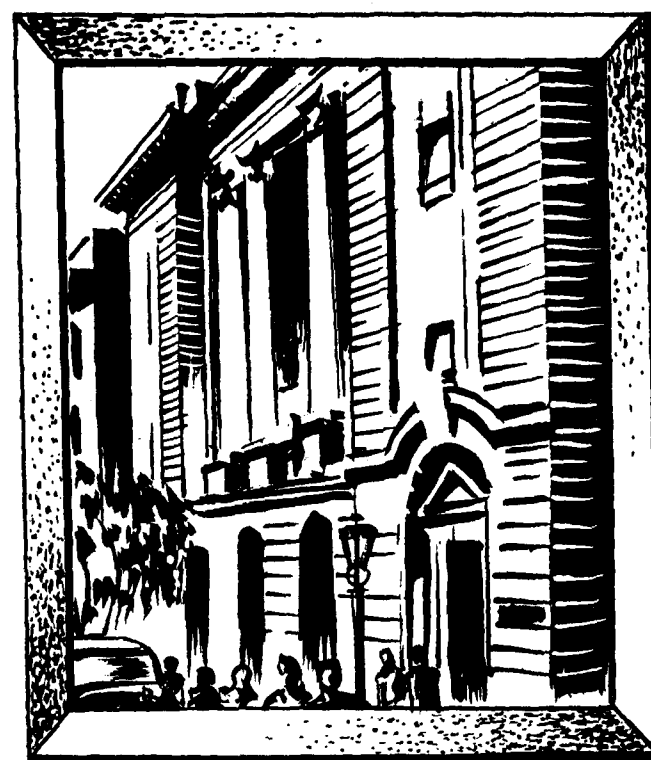


Rear Admiral Earl Mountbatten of Burma.
K.G., G.C.V.O., K.C.B., D.S.O., A.M.I.E.E.

16, CHESTER STREET,
LONDON, S.W.-1.

30th September 1948

COAL ★ DISINFECTANTS
CANVAS ★ SHIPPING
SHIPBUILDING ★ SALT
INSURANCE ★ SHELLAC
PAINT ★ TAR PRODUCTS
BELTINGS ★ WIRE ROPES



★
TURNER MORRISON & CO. LTD.

6 LYONS RANGE CALCUTTA

16 BANK STREET BOMBAY

I am very glad to have the opportunity
of sending heartiest congratulations to "Capital"
on its Diamond Jubilee Celebrations.

In the changing political and economic
scene in India, "Capital" can play an important
part by constructive and helpful criticism.

I wish the paper all good fortune in the future.

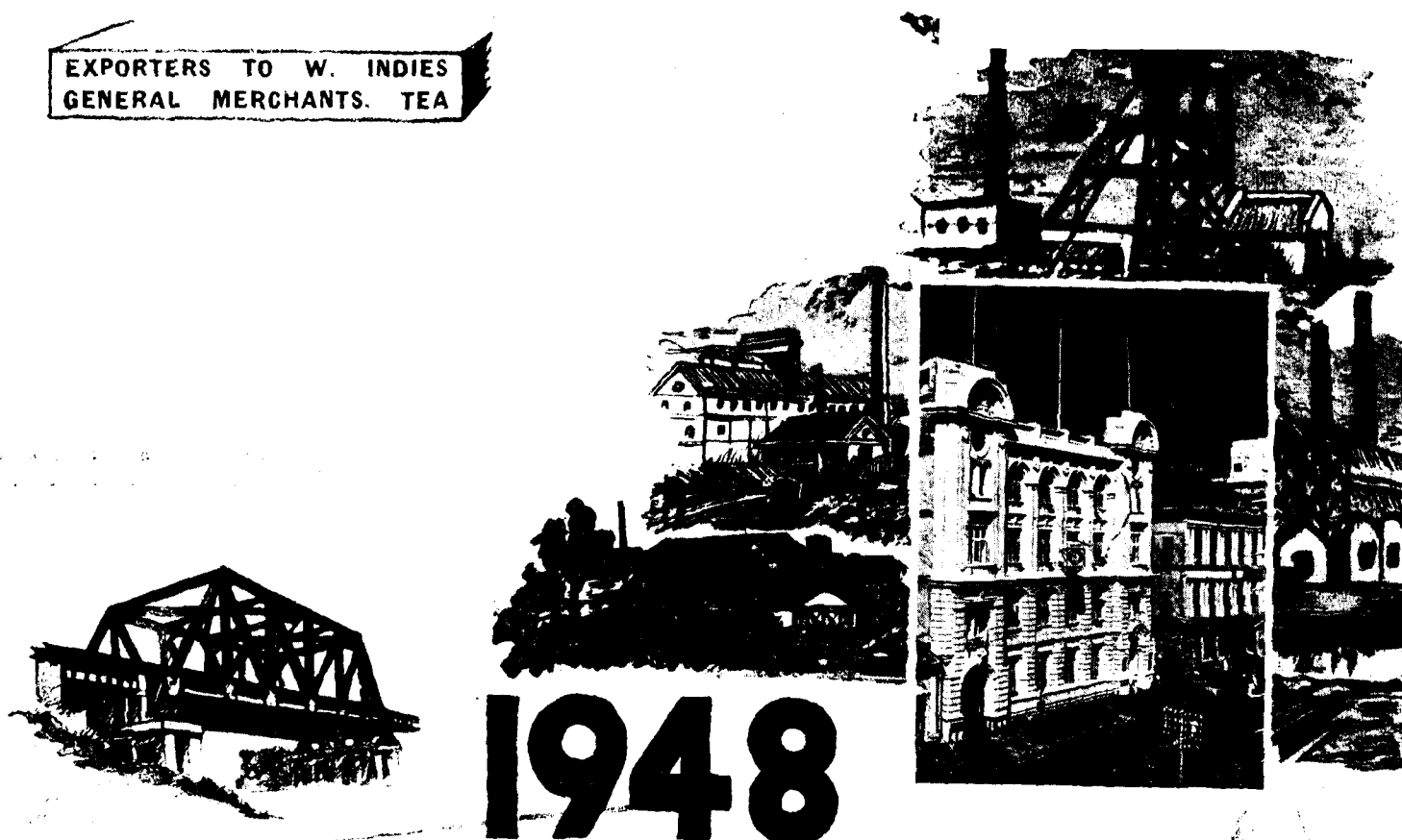
Mountbatten of Burma

82 YEARS OF EXPANSION



1867

EXPORTERS TO W. INDIES
GENERAL MERCHANTS. TEA



1948

ELECTRICAL, MECHANICAL & STRUCTURAL ENGINEERS,
METAL, CEMENT, OILS, GREASES, COAL, FLOUR, PAPER,
CHEMICALS, DISINFECTANTS, INSECTICIDES, INDUSTRIAL INSTRUMENTS,
STEEL WINDOWS & SASHES, ROOFING GLASS, PLYWOOD,
BLOCKBOARD, WALL BOARD, "PERSPEX", FABRIC ROOFING.
PRODUCERS, BUYERS & EXPORTERS OF TEA.
INSURANCE, PASSAGES & SHIPPING, GALVANIZERS TO THE
TRADE, GENERAL MERCHANTS, AGENTS AND SECRETARIES.

Balmer Lawrie & Co. Ltd
CALCUTTA BOMBAY CHITTAGONG

— GREETINGS FROM THE GOVERNOR —



GOVERNMENT HOUSE

Calcutta,
10th October, 1948.

Founded in November 1888, CAPITAL will be celebrating its Diamond Jubilee and all its numerous friends and well-wishers will tender it on this occasion the warmest felicitations and the most cordial good wishes for a continued career of public service to the people of India. These 60 years have been most eventful not only in the history of India but in the history of the world. Apart from world-shaking political issues which led to devastating world wars, they have also witnessed the adolescence and now the full growth of ideologies which render even the use of the name CAPITAL rather questionable. I do not know what led the founders of this weekly journal in 1888 to name it as CAPITAL. I wonder whether this was supposed to be a counter-version of a much more explosive doctrine—a doctrine which has during these 60 years led to undreamt-of consequences. That is however another story. CAPITAL in India has during the last sixty years played the



His Excellency Dr. Kailas Nath Katju,
Governor of West Bengal

game well and squarely. Through much of this period there was not any great conflict of interest between labour and capital and, paradoxical as it may seem, as Indian industries developed, it was the British industrialist who made the cause of labour his own. These sixty years have seen Indian industry advancing on all fronts and CAPITAL has served Indian industry well by placing at its disposal full and accurate information and statistics and dispassionate comment on industrial trends in India and elsewhere. Views on policies, of course, must differ and this difference is easily appreciated and made allowance for, particularly in the business world. CAPITAL has not altogether abstained from entering into the political arena and its weekly comments, in the Ditcher's diary, have been to me from my early days both a source of instruction and deep interest. We are now witnessing the processes of a social and economic revolution in all countries. Everywhere on this side of the Atlantic nationalisation of industries is under way, with England itself giving the lead to the world in this field of national endeavour. In India definitely the pace will be faster and CAPITAL will therefore have now to face different sets of problems and will have to justify itself as a useful and trustworthy guide in rapid economic development of the country. In this changing and much-daring world when difficult and still more difficult questions will continue to arise with almost monotonous recurrence, I trust that CAPITAL will serve the national interest by giving sage counsel and insisting on balanced judgment. Insistent advocacy merely of one particular point of view will not prove either persuasive or effective. To be convincing all elements of the problem with regard to industry, in its relation to the State and to labour, must receive adequate and unbiassed consideration. Moreover, industries, by merely becoming nationalised, should not evade severe and competent examination. It would be a national misfortune if that were to come to pass. Some of our public utilities, such as railways, posts and telegraphs, are already nationalised. I think they deserve much greater public attention and scrutiny by skilled and experienced observers. When nationalisation grows apace, it would be plainly insufficient and even dangerous to suppose that the legislatures will prove equal, or devote adequate time and attention, to a careful examination of the working of these national enterprises. That is a field in which CAPITAL can and should play an effective part for the service of the people. After all even nationalised industry flows from capital—State being the capitalist. CAPITAL has always stood throughout these years for the economic development of India, and while conditions have changed and will continue to change as years pass by, the goal shall always remain the same and so shall, I have no doubt, the determined endeavour of CAPITAL in the years to come. I wish it again all good fortune.

Kailas Nath Katju

John Brown & Co. Ltd.

AND SUBSIDIARY COMPANIES

SHIPS · SPECIAL STEELS · ENGINEERS TOOLS · RAIL-
WAY CARRIAGES AND WAGONS · HEAVY MINING AND
OTHER EQUIPMENT · HIGH PRECISION MACHINE TOOLS

★ **JOHN BROWN & CO. LTD.**
SHIPBUILDERS AND ENGINEERS, CLYDEBANK.

Builders of the *Queen Mary*, the *Queen Elizabeth*,
H.M.S. Vanguard, and ships of all types for
many countries.

★ **FIRTH BROWN STEELS LTD.**
THOS. FIRTH & JOHN BROWN LTD.,
SHEFFIELD

High Speed Steels; Alloy Carbon and Tool
Steels; Steel Forgings and Castings; Hardened
Steel Rolls; Locomotive, Carriage, and Special
Tyres; Laminated Springs.

★ **FIRTH BROWN TOOLS LTD.**
SHEFFIELD

High Speed Steel Twist Drills, Milling Cutters
and Reamers; Butt Welded and Solid High
Speed Steel Tools and Toolbits; INSTO seg-
mental saws; High Speed and Tungsten Steel
Hacksaw Blades; Engineers' MILLENICUT and
DREADNOUGHT Files; Bandsaws; MITIA
Carbide and Carbide Tools; Precision Ground
Thread Taps and Dies; Firth Brown HARDO-
METER Hardness Testing Machine.

★ **GRAVENS RAILWAY
CARRIAGE & WAGON CO. LTD.**
DARNALL, SHEFFIELD 9.

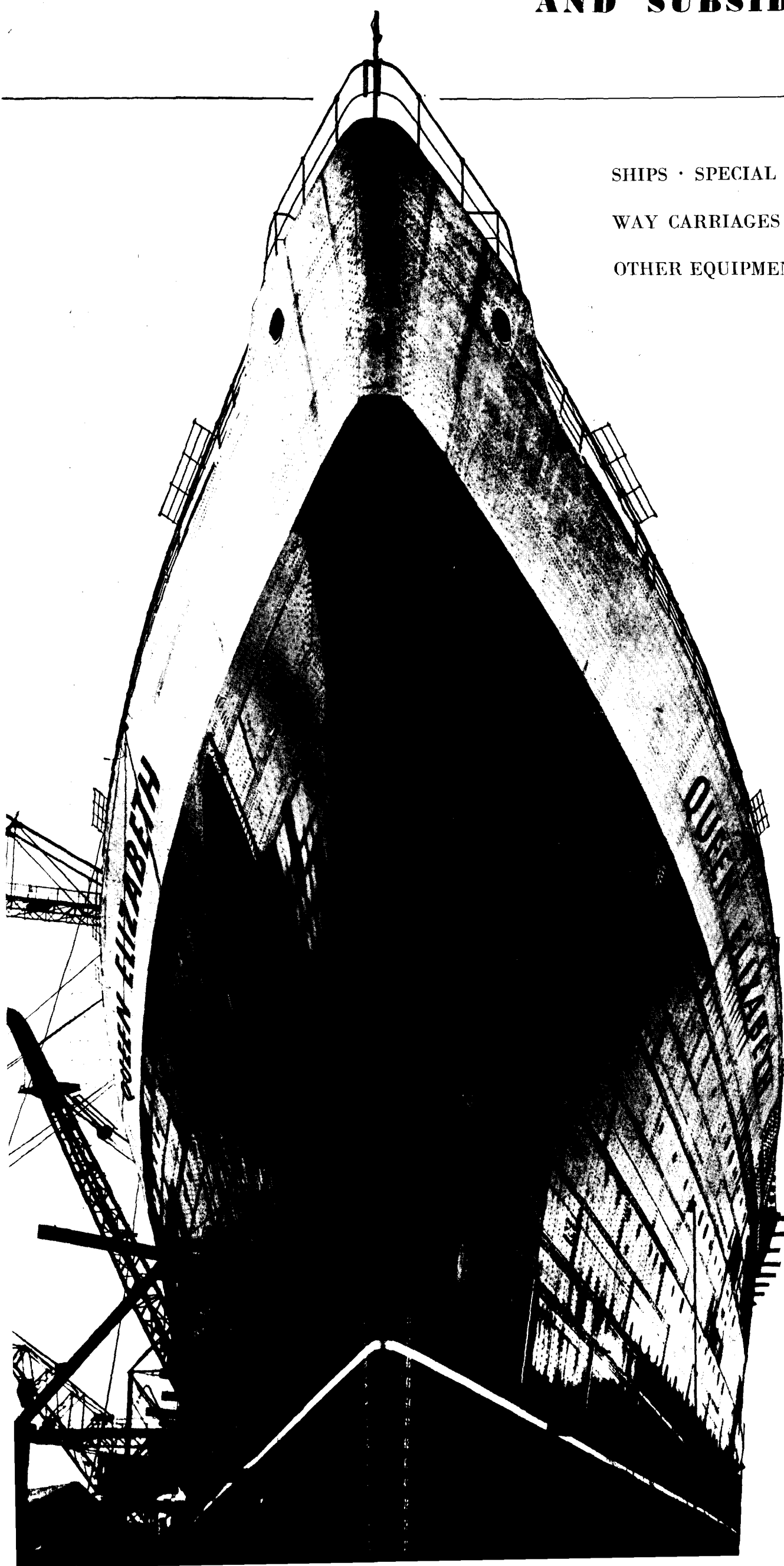
Railway Passenger and Freight Vehicles; Bus
and Coach Bodies; Electric Rail and Tram Cars.

★ **MARKHAM & CO. LTD.**
BROAD OAKS WORKS, CHESTERFIELD.

Mining, Mechanical and Constructional En-
gineers; Bridge Builders; Iron and Brass Founders.

★ **A. C. WICKMAN LTD.**
COVENTRY.

High Precision Automatic Machine Tools;
Optical Form Grinders and High Production
Machine Tools; WIMET Brand Tungsten Carbide
Tipped Tools; SPEDIA diamond wheels.



GREETINGS FROM THE U.K.

From the President



BOARD OF TRADE,
MILLBANK,
S.W.1.



Right Hon. James Harold Wilson, P.C., O.B.E., M.P.,
President of the Board of Trade

I have much pleasure in sending this message of
congratulation to "Capital" on the attainment of its
Diamond Jubilee. Ever since its foundation "Capital"
has been a fine example of vigorous editing and good
all-round journalism.

Commercial relations between Britain and India
and Pakistan are, and I am sure will remain, close.
I am glad to see the paper is keeping before its
public the value of our trade links. I hope "Capital"
will live to celebrate further jubilees.

Harold Wilson

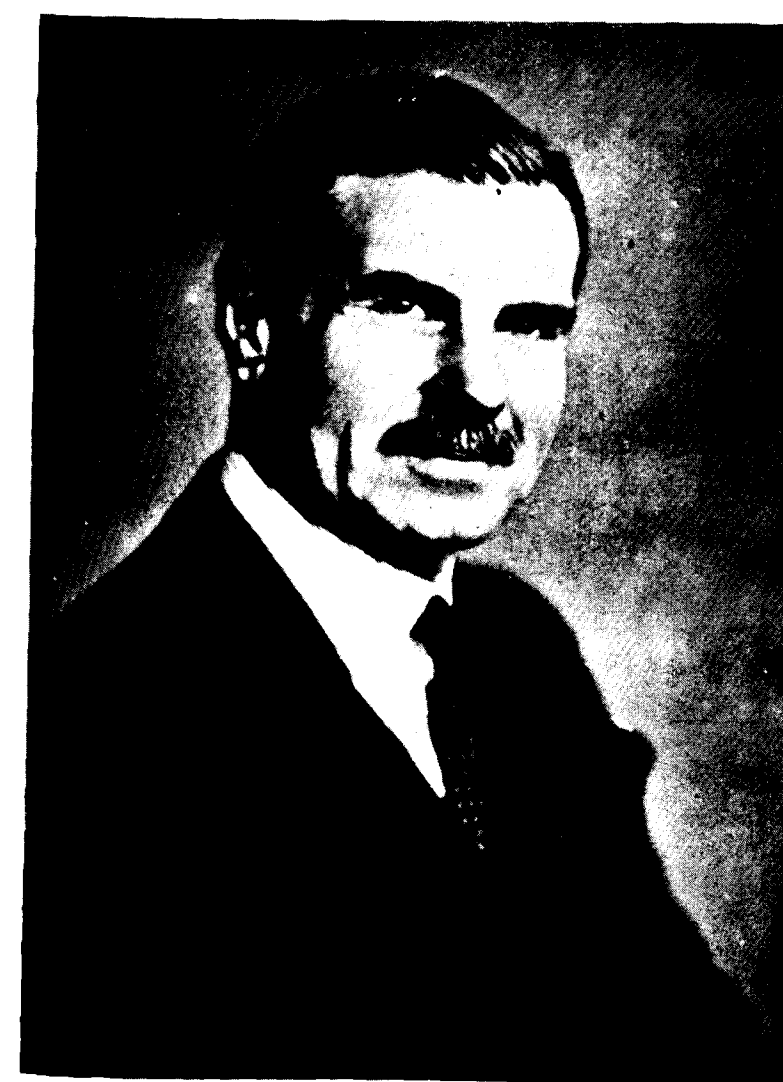
OFFICE OF THE HIGH COMMISSIONER
FOR THE UNITED KINGDOM
6, ALBUQUERQUE ROAD,
NEW DELHI

It is with great pleasure that I send you my sincere congratu-
lations on your Diamond Jubilee—the completion of sixty years
of publication.

I have known CAPITAL for some years and have long been
impressed by its high standard of production. As the pioneer in
India in the field of financial and economic journalism it occupies
a unique position. I trust that it will long continue to fulfil its
function of assisting in the promotion of economic development
in this great country.

9th November, 1948.

Archibald Nye



Lieut.-General Sir Archibald Edward Nye, G.C.I.E., K.B.E., K.C.B., M.C.,
High Commissioner for the United Kingdom in India

HUKUMCHAND JUTE MILLS LIMITED

HUKUMCHANDNAGORE

NAIHATI, E. I. RY.

(ESTABLISHED 1919)

Manufacturers of :

**HIGH CLASS HESSIAN,
SACKING,
CANVAS,
TENTS,
TWINE,
WEBBING,
WOOLLEN-BLANKETS,**

Etc. Etc.

Managing Agents :

RAMDUTT RAMKISSENDASS

4, CLIVE GHAT STREET,

Telephone :
CAL. 3594
and 3595.

CALCUTTA.

Telegram :
JUTIFICIO,
CALCUTTA.

for a co-operative attitude to replace one which in many cases can be described only as sullenly unhelpful if not actively antagonistic, is vital. At present the situation is one of peculiar difficulty. Aided by legislation which makes it possible to refer the most minor trade dispute to tribunals from whose decisions there is no appeal, assisted by an official attitude which more often than not seems violently anti-employer in its actions—whatever its professions may be—the influence and mischiefmaking powers of the labour leader have been greatly increased. Yet that increase in authority has seen no sign of developing responsibility or knowledge. The average labour leader is still separated by class differences and lack of practical knowledge from the labour he presumes to lead, and his only means of establishing contact is in the exploitation of real or imagined grievances. The difficulties of bringing about extensive technological changes, almost certainly involving the displacement of labour on a large scale, in such a situation are almost intolerable. Yet to postpone them involves serious dangers to the industry and, from the point of view of the individual worker, it is only by measures to increase individual outputs by the greater association of machinery with work that individual earnings can be permanently raised. Fundamentally what is required is the disappearance of the outlook which was willing to tolerate low wages and poor efficiency provided large numbers were employed, and its replacement by an attitude which regards the increase in individual efficiency and improvement of individual wages and conditions of work as most important. Employers in this country have in the past not been altogether guiltless in accepting the first of these, but it is essential now that both sides realise that in this export industry radical changes in outlook are necessary if great damage is not to be done. Technological change is vital, and it is the duty of all who have any influence with labour to assist in emphasising its immediate importance and its ultimate benefits.

SUPPLY AND DEMAND

Technological improvement will not, however, save the situation should there be any large reduction in the world's demand for jute goods. There are few subjects connected with the jute trade which, even throughout the war years, have been the subject of so much anxious comment and indeed apprehension. Wartime restrictions on the ordinary uses of jute goods, the slowness with which trade resumed normal trends and the rigid system of Government export licensing thereafter, followed by the rapid post-war increase in prices, have produced a situation in which it is difficult to avoid the conclusion that the jute trade is confronted with what amounts to a crisis in its foreign markets. It is easy to compare the new paper bags with the synthetic dyes which destroyed the Indian indigo industry in the course of a few years, and to liken the present position of jute with that of other textiles whose restricted use in the Crimean War gave jute its first great opportunity. The gravity of the present and immediate future is recognised. But there are some solid facts connected with the supply and demand for jute which perhaps only the longer perspective given by a survey of the history of the industry can emphasise sufficiently and which give good assurance that, if the jute industry puts its own house in order, its position as the second industrial textile in international trade may remain relatively unchallenged.

Jute markets are the child of the modern world in one of its most characteristic phases—the great development of overseas trade in raw materials and particularly agricultural products which was the most striking factor in the economic history of the second half of the nineteenth century. Western Europe was no longer self-sufficient in foodstuffs and for the first time large quantities of grain, followed by other commodities, began to be moved in bulk over the new railway systems in North and South America and then shipped by steamer to European ports. This was something new in the annals of international trade, which had been previously mainly an exchange of manufactured goods or commodities such as tea or spices, which had so high an intrinsic value that they could bear the cost of an expensive packing. Now the new trade was a cheap commodity carried in bulk over distances, often great, by varied means of transportation. There was a need for a new container to replace the wooden barrels of a previous age, which would in the first place be cheap, secondly, economical in space, and thirdly, up to any amount of hard work. The bag made of jute cloth was the answer, and the phenomenal increase in its consumption ever since has demonstrated how satisfactory it has been found for its purpose. Bearing this in mind, one could say that the continuance of jute in its present position depends essentially in the maintenance of international trading conditions which enable and require the exchange of large quantities of food and raw materials; and that beyond that the demand for jute will depend, first, on the total level of production of raw materials and commodities, particularly food, second, on population growths, and finally, on the absence of any new synthetic material with qualities similar to jute which could be produced at the same price.

FIGHT AGAINST SUBSTITUTES

As regards the maintenance of production and international trade, it seems reasonable now to expect that the former will increase steadily and the latter will be maintained. War damage in most countries is being repaired at an astonishing rate, shortages of consumer goods, stocks, and fixed capital require current output to be maintained. Before the war this was happening inside national boundaries, but at present through sheer necessity and the pressure of want in many countries which have suffered either directly or

indirectly through the war, it is marked by the large-scale international movement of goods. This is particularly true of food. Pessimists amongst us say that a world food shortage is now chronic and that the present food movements, which would have seemed unnatural ten years ago, will have to be maintained. However accurate that prophecy will be in the long run, it is certain that for some considerable time the planned disposal of food surpluses to countries such as India, which are unlikely to attain self-sufficiency for many years, will continue. Industrial production will doubtless be subject to the fluctuations which characterised it during the last three decades. Improved methods of credit control, demands for both consumer and capital goods to make up for the shortages piled up during the war, and the development of Africa and South-east Asia may, however, prevent depression from obtaining the same devastating grip on the economy which happened in 1929. Populations continue to grow and, though this may appear to have a somewhat remote bearing on the subject, it is directly connected. The new areas of swelling populations are mainly in the primarily agricultural countries. More mouths to feed means more production, and in present circumstances probably larger overseas movements of food. Though more sophisticated parts of the world may succumb to the lure of potatoes packed in paper bags or cellophane, the numbers of people for whom the jute bag is the only satisfactory method of storing and transporting their agricultural products is probably steadily increasing. In other words, the world demand for jute products is really founded on the basic need of many millions of people, mostly agriculturalists, for a cheap and satisfactory container, and nothing which has happened or is likely to happen will modify that demand in the foreseeable future.

Much has been written about substitutes for jute, but the real nature of the threat which they make to the jute markets has not perhaps been sufficiently appreciated. Jute substitutes are essentially a measure of the demand for jute goods and an indication that in certain markets, usually specialised and localised, that demand is not being met satisfactorily. The loss which they might cause to the jute manufacturing industry is the disappearance of local demands here and there. The danger of this marginal competition is that favourable developments, such as the growth of agricultural production and of population, which should naturally cause an increase in the total demand for jute goods, might be offset by losses elsewhere. It must be recognised that a great part of this is inevitable. Changes in custom, technical developments in packing, local interest in the development of the agricultural or manufacturing processes required, must give new materials or methods advantages in localised markets or specialised trades. And even if the general position of jute is not seriously threatened, they should be fought strenuously. It is by its capacity to meet new demands and needs that the jute manufacturing industry can remain alert, efficient and economic in comparison with its competitors. Part of this is the responsibility of the individual mill company, but part of it is clearly a task for organised effort by the industry, possibly with Government assistance and backing.

THE PROBLEMS AHEAD

There are serious complaints, for example, that the industry is out of touch with the developing needs of its consumers and that the methods of selling involve such a divorce between manufacturer and user that absence of contact is inevitable. Similarly, it is doubtful if the many varied types of trade and industry which might develop uses for jute are sufficiently informed of its potentialities and of the great amount of development work which has been done on it during the last ten years. It is understood that the industry now has this matter under consideration, with particular reference to the American and Canadian markets, but one has only to compare the magnificent work done by the Woollen Trade in public relations with the position of the jute industry to be painfully aware of the deficiencies of the latter. Public relations form a part of the equipment of every organised industry to-day, and it is surprising that the jute industry, which is so often the victim of irresponsible or ill-informed criticism, should not have taken steps to develop what is otherwise a deficiency in its organisation.

It is clear that all that has been said above about the demand for jute and the position of substitutes is conditioned to a greater or less extent by the level of prices of both raw and manufactured jute. It is equally certain that present prices are too high and are having a restricting effect on markets. But it is really too early to attempt to make any assessment of this in a situation still essentially fluid. Jute prices are out of line with world levels, partly because of causes peculiar to the trade and partly in sympathy with general Indian conditions. To the extent that the latter is the dominating factor, adjustment must come either by a movement of world prices into line with those prevailing in this country or by action in this country to reduce Indian prices.

The history of the jute industry over the last sixty years shows a long period of spectacular development and then a long period of consolidation. It seems certain now that, as in so many other large-scale industries which are also semi-monopolies, there has been a tendency for the rate of technical progress to be slow and the results of the depression in introducing economies in production to make the latter less efficient. The industry has now a great task before it, that of reorganising and re-equipping in order to bring back those advantages of productive economy which before characterised it. This is a problem of no mean dimensions, and to accomplish it will need every assistance from all those associated with it.

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GREETINGS FROM INDIA'S BUSINESSMEN —



Mr. A. P. Benthall, President, Associated Chambers of Commerce of India.

A Diamond Jubilee for CAPITAL is a landmark in the affairs of the whole business community in India—both British and Indian—but particularly the British business community, with whose development the paper was so closely associated in its earlier years. Like the Associated Chambers of Commerce, CAPITAL has found itself speaking increasingly on behalf of the whole business community, irrespective of purely sectional interests. This, I think, has been the reason of its success in the past and is certainly the keynote to the future. A newspaper which can present and interpret facts and opinions relating to business problems, which are as diverse as India is large, has obviously a useful function to perform for many years to come. I am sure the good-will which CAPITAL has enjoyed in the past will continue to be given to it and that, in accordance with the standards which it has always set itself, it will continue to judge the great public issues of the day in a spirit of fair, helpful and objective criticism.

President, Associated Chambers of Commerce of India.

In the modern world, where the economic interests of countries lend colour to their activities in every other sphere, a publication like CAPITAL which seeks to serve the country in the economic field deserves all encouragement and support from us. There are even to-day not many publications in India exclusively devoted to such a cause. The value of the work which CAPITAL has done during its long life of sixty years cannot therefore be over-emphasised. I take this opportunity to offer my warmest congratulations to the Managing Editor and his colleagues on this happy occasion and wish the paper a long life of usefulness.

President, Federation of Indian Chambers of Commerce and Industry.



Mr. Lalji Mehrotra, President, Federation of Indian Chambers of Commerce and Industry.

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60 YEARS
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PROGRESS

James Luke was associated with "CAPITAL" as a contributor in 1897, then joined the staff and after editing the paper for a period retired from India in 1912 and died a year later.



Shirley Tremearne, (1848-1923) founder, proprietor and first Editor. "His greatest achievement is CAPITAL, which he built on a rock that we hope and believe will defy the waves of adversity for all time."

By
GEOFFREY W. TYSON, C.I.E., EDITOR

The story of how India's first financial weekly was founded and how it has developed, and of those who have played a part in its long and successful history.

TEN years ago, when CAPITAL had completed half a century of unbroken publication, I wrote a lengthy memoir for the occasion and part of the present article necessarily repeats some of the facts which I committed to print in the earlier story. The paper has entered its sixty-first year of publication, and this special Diamond Jubilee Supplement signalises the passing of another milestone in a lengthening and eventful journey. In many ways the last ten years have been as difficult, and as stimulating, as any in the paper's long history. They coincide almost exactly with the Second World War and the post-war period, from which we have not yet clearly emerged. Throughout the decade India has acquired a new and growing significance in world affairs, and in the last year and a half she has attained to the status of a free and independent nation. There have been far-reaching changes in the structure of Indian trade and industry; British business, with which CAPITAL has always been closely associated, has also been substantially affected by the general metamorphosis. It is, for instance, indicative of the changed order that, of the entire newspaper press of the country, only two organs, *The Statesman* and CAPITAL, remain wholly under British ownership and management. The disappearance of the political nexus has resulted in a new and more purposive Indo-British partnership in trade and commerce—a development which this newspaper has consistently welcomed and encouraged. Looking back over the last ten years one realises that a revolution has indeed taken place; that for the most part it has been swift and silent and that the intellectual climate of to-day is very different from that of 1938, or the spacious days of 1888 when CAPITAL first made its appearance.

CAPITAL has had the good fortune to live and grow to maturity in stirring times, under the impact of which it has never stood still. The year in which it was born was both auspicious and prolific in new journalistic enterprise; for it was in 1888 that Alfred Harmsworth, later Lord Northcliffe, launched his original Fleet Street venture, a penny weekly under the name of *Answers*. Northcliffe quickly moved on to further conquests, and I mention his name and first newspaper project only because the event roughly approximates to the date on which Shirley Tremearne, the founder of CAPITAL, presented India with the first weekly newspaper to devote itself specifically to the trade, finance, industry and commerce of the country.

Shirley Tremearne was born at Tregenna in Cornwall in 1848. He died in 1923, within sight of his seventy-fifth birthday. Fifty-two years of an adventurous and successful career were spent in India, and forty-nine of them in Calcutta, which city, it is not too much to say, he loved deeply. At an early age Shirley Tremearne secured employment in the city of London, but his restless spirit bade him seek fame and fortunes elsewhere. He arrived in India in 1870 and soon afterwards went to Rangoon to take up a minor post in the Office of the Accountant-General of Burma. His starting salary was Rs. 80 per mensem. Calcutta, however, was where he wanted to be, and in a short time he was fortunate to be transferred to the Currency Office, where his industry and intelligence won the favour of Mr. Rivett Carnac, through whose instrumentality he got a footing in the Calcutta High Court. There he was in his element. The Law always had an attraction for him, and he became in time an exponent of it as skilful as any enrolled advocate or solicitor. On Company Law, not then as complicated as it is now, he

was an authority whose title there were few to dispute. After a short term in the English Department he became Private Secretary to Sir Richard Couch, and such was his success in that post that he was retained in it by Richard Garth and Sir Comer Petheram. In 1885 he became Assistant Registrar, but two years later, retired on a small pension to enter on a business career as managing director of the Great Eastern Hotel Company, with which he was identified for the next ten years. By this time Tremearne was nearly 40 years of age. Leaving Government service for hotel management he made his first acquaintance with Indian journalism. He contributed to the columns of *The Times of India* and *The Pioneer*, and in both newspapers there appeared a weekly financial and commercial report from Calcutta written by Shirley Tremearne. Freed from the long hours of the High Court, Tremearne enjoyed opportunities for contacts and observation which had hitherto been denied him. He turned them to good account, for in addition to founding CAPITAL, he became one of Calcutta's leading businessmen, and with men of such stature as Lords Inchcape and Cable and Sir David Yule, was a maker of modern commercial Calcutta. Sir David Yule was a signatory to CAPITAL's original articles of association when it was decided to convert the concern into a limited liability company. But I am moving ahead of events.

The hotel was an important episode in Tremearne's life. From it, and with the help of his newspaper, he passed to the boards of many companies, both great and small. The potentialities of the joint stock company were just beginning to be known in India. I have been told that at one time Shirley Tremearne held over fifty directorships in Calcutta and other parts of the country. I cannot vouch for the accuracy of the figure, but I do know that the number of companies with which he was associated was very considerable. Amongst many achievements he was the founder and first chairman of the Bengal Telephone Corporation and was on the first board of directors of the Titaghur Paper Mills Company, on whose product CAPITAL

has been printed for many years. Quite early on managing agents discovered that Tremearne could be a very useful friend; a few of them learnt also that he was an implacable enemy. In its first years Tremearne imparted to his newspaper some of that cleansing fire which was beginning to make Labouchier's *Truth* known and feared by a large commercial audience. Indeed, Tremearne was a



Pat Lovett was born in 1863 and died in 1928, after having served "CAPITAL" as its Editor for sixteen years. He started and for many years wrote "A Ditcher's Diary."

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No precise account has been left in the archives of the company as to how Tremearne came to found CAPITAL. It is a not unreasonable assumption that the weekly contributions to other newspapers gave him the idea, for which an already large and still growing commercial city was clearly ripe. Whatever Tremearne's processes of thought and action may have been the important fact is that the first number of CAPITAL made its appearance on 6th November, 1888, and was described as "A Weekly Commercial Paper Devoted to the Interests of Capitalists and Employers of Labour."

At this stage I should interpose a few lines about W. H. Targett, who assisted Tremearne to start the paper and whose name, in spite of his brief connection with the concern, is still associated with the management of CAPITAL. Targett was an Australian who had earlier experience of newspaper production and management in Melbourne. He had a varied and adventurous career and at one time had been manager to Blondin the tight-rope walker of Niagara Falls fame. I have met few people who know anything about him, and fewer still who remember him. Amongst the latter is Mr. Harry Hobbs, who himself has been an occasional contributor to CAPITAL for over half a century and who once made a sea journey in the company of W. H. Targett. Targett had come to India and founded *The Asian*, a sporting and social paper admirably suited to the tastes of the 'eighties, but which, after passing through several hands, ultimately died in later and more strenuous times. Targett knew what there was to be known about

advertising and circulation in India in those days, and these departments of CAPITAL were wisely handed over by Tremearne to W. H. Targett & Company, in which he and Targett were partners on the somewhat unusual terms that in the event of the death of either, the business of W. H. Targett & Company was to pass in its entirety to the survivor. Targett did not, in fact, live long enough to see CAPITAL's quite remarkable progress after a promising beginning, but his initial work and advice must have been of considerable service to Tremearne, who was a newcomer to newspaper production. On his death in London in 1896, the ownership of W. H. Targett & Company passed to Tremearne and afterwards to the latter's son, who on his retirement from India in 1933, relinquished it in favour of the present proprietors of the paper. Targett's connection with CAPITAL was short-lived, but his name has survived the many changes of half-a-century.

Shirley Tremearne was in no sense a profound thinker. He was no Walter Bagehot, to name a writer whose editorship of *The Economist* set new standards and gave a fresh turn to all forms of economic exposition in the mid-nineteenth century. But, like Bagehot, he was a racy conversationalist with an unusual talent for handling the written and spoken word. He shared something of Bagehot's view of the intellectual position and value of the capitalist classes. Like the famous author of *Lombard Street*, Tremearne "maintained that capitalists are the great generals of commerce, that they plan its whole strategy, determine its tactics, direct its commissariat, and incur the danger of great defeats, as well as earn, if they do not always gain, the credit of great victories" (Richard Holt Hutton's preface to Bagehot's *Literary Studies*, 1898). These words will doubtless seem strange to a later generation; but to the founder of CAPITAL they would represent a very ordinary and orthodox declaration of faith.

A study of the early numbers of CAPITAL reveals the ease with which Tremearne handled his pet subject, which was finance in all its aspects. Then, as later on, the question of the rupee ratio was of all-absorbing interest, and it was given added significance by reason of the fact that bimetalism was in vogue in certain countries and for India, therefore, was invested with more than a purely academic interest. It was clear that sooner or later, something would have to be done about the rupee, and in the end the Babbington-Smith Commission (the first of several such bodies) was constituted to make recommendations. The subject and the deliberate, if not leisurely, way in which it was approached gave Tremearne ample scope for writing on a topic on which he could truly claim to be authoritative. For the rupee ratio was regarded in those days as primarily a matter for settlement between Government and the business community. Both overseas trade and external charges on India's exchange resources were considerably less than is the case now sixty years later. The mechanism of Reverse Councils had only just been discovered. Flood and famine were looked upon as inevitable but unpredictable factors in the price structure. Quite definitely the ratio was a subject that only the more intelligent businessman and Government could properly debate, and in any case, in those days there

were no inconvenient Congress politicians to pose awkward questions, and university professors knew their place. Tremearne attacked the question with gusto, and after sixty years many of his observations are illuminating and germane to a problem that is for ever revealing some new facet.

In politics the founder and first Editor of the paper was undoubtedly a Liberal, typical of the English Liberalism of the 'eighties. Peace at home and abroad were to be striven for, but if they were unattainable, war should be carried on as inexpensively and with as little disturbance of the ordinary life of the people as possible; reform was desirable in many departments of life, but in no circumstances should it challenge the sacred rights of an Englishman; finally, any attempt by Government to penetrate into the sphere of trade and industry should be resisted to the uttermost. It was the age of rugged individualism, of which Tremearne himself was a typical product. Traditional Conservative thought regarded Government as existing primarily to preserve the life and property of Conservatives; Liberalism, whilst pursuing its programme of reform with much ardour and eloquence, insisted that Liberals should be free to run the new industrial machine without interference from Government, who were generally supposed to be incompetent in these matters. Tremearne, and thousands of others of his generation, wanted good Government as cheaply as possible. It was an honest and defensible request. Liberals, therefore, had always to be on the look-out for governmental malefaction. Tremearne was a good Liberal and he kept a strict watch on what was going on; for in those days the Indian Government

was exclusively the responsibility of the civil service and bureaucrats were notoriously Conservative and often irresponsible. Although Shirley Tremearne never heard of the word, he did a lot of "debunking" in the 'eighties and 'nineties in the columns of CAPITAL. And he loved it.

A short sketch can only glimpse the personality of this quite remarkable man growing up alongside his newspaper. Tremearne's character showed itself in his clear, pungent writing and forceful speeches. Very often he was impatient, and there were times when he did less than justice to those he criticised. He was invariably at war with the Indian Civil Service and was frequently too outspoken. Here is a characteristic piece of venom: "I make bold

to say that Messrs. Ralli Brothers have done more for the advancement of this country than all the Indian Civil Service rolled into one." This preposterous overstatement is a libel, if ever there was one, but it epitomises his strong likes and dislikes and he never complained when the aggrieved party hit back good and hard. He believed in self-government for India and he was a friend of its people. Addressing the Bengal Chamber of Commerce for the last time in February, 1918, he summarised his political faith in the following balanced statement: "We want a Government eventually 'broad-based upon the people's will,' but the time is not yet. Home Rule is at present a far cry, but it will gather force and it is for the Government and us to prepare and educate the masses for it. Now in this state of affairs our role should be the *suaviter in modo*. To quote the words of a well-known Bishop, we stand at a critical point in the history of India. It is a time of peculiar difficulty and trial. There are two points about which we specially need to be watchful. First, scrupulously to abstain from the use of language about our Indian fellow-subjects which may be in any way provocative or offensive. To use language that bites and stings is an act of political incendiarism. And second, to try to acquire a generous and sympathetic insight into the aims and aspirations of educated Indians. We can often make men loyal by believing in them, and we help to make them disloyal by treating them with unmerited suspicion and distrust."

Shirley Tremearne died in 1923, having relinquished all his business interests in Calcutta some years previously and his active connection with CAPITAL even earlier. His interest in the ownership passed to his son Thomas Fitzalan Tremearne, about whom I will say a word before passing on to others outside the family who had a hand in shaping the paper in its earlier days. "Tim" Tremearne was educated privately and at Cambridge University, after which he studied law at the Middle Temple. He had hardly been called to the Bar when he was seriously and tragically afflicted with deafness, which put an abrupt end to his legal ambitions. By nature shy and retiring, this physical disability, which remained with him throughout, served to make him somewhat of a recluse, but he found happiness and many friendships in his own way. During his long connection with CAPITAL, first as an assistant, then as a manager and finally as principal proprietor, he was also an active bibliophile and collector of objets d'art. In these matters he was regarded as one of the best judges in India, and the professional dealers came



R. W. Brock, Assistant Editor from 1924 to 1928 and Editor from 1928 to 1932. Later held the post of London Correspondent for some years.



The late Thos. F. Tremearne, who was Manager from 1919 and, after his father's death, principal proprietor. He relinquished his interest in the paper in 1933.



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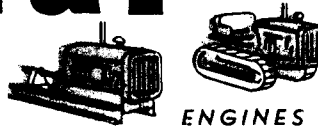
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to have a healthy respect for his specialised knowledge which was frequently sought and freely given.

Apart from his company directorships, Clive Street knew him chiefly as the head of the business side of CAPITAL. He assumed full managerial responsibility at the beginning of a difficult period which included the first world war and the hectic days of the boom which followed. Then, as now, a publisher's business was no sinecure; for newspapers facing enhanced paper and the other costs were themselves unable to increase their own subscription rates, and Tremearne carried out one of the most difficult operations known to the industry, namely, a revision of the advertising tariff. Hardly had the difficulties created by soaring costs been liquidated when the first signs of the depression began to emerge with its deleterious effects upon every branch of trade and commerce. As always, newspapers were among the first to suffer, and in India, British publications had to face the additional hazards of a long-drawn-out political agitation which culminated in fundamental constitutional changes. It was a period of growing competition. Through these years CAPITAL's goodwill and business connections remained substantially unimpaired, largely as a result of Tremearne's cheerful and tenacious personal efforts and his insistence that the paper should continue to provide the best possible fare for its readers. In 1933, after twenty-six years' service, he decided to retire and to dispose of his interest in the paper. He left India in March of that year, after having disposed absolutely of the firm Messrs. W. H. Targett & Co., the paper's managing agents, and his majority holding of the ordinary shares in CAPITAL, Limited, to the present proprietors. He was 59 years of age, when he died at St. Agnes, Cornwall in December, 1944.



Geoffrey W. Tyson, C.I.E., the present Editor of CAPITAL. Assistant Editor 1930 to 1932, in which year he succeeded R. W. Brock in the Editorship.

Among Shirley Tremearne's earliest collaborators in the columns of CAPITAL was the late James Luke, founder of a Calcutta firm which bears his name and which was later conducted by his son, Mr. Norman R. Luke. Primarily engaged in the jute trade, Luke had a number of other business connections which included a close association with the Maharajah of Darbhanga. He also found time to write for CAPITAL, and he began to contribute to its columns about the year 1896. "Current Coin" and "The Musings of Max" flowed readily from his pen, and the latter feature was frequently reproduced in the daily newspaper press, both in Calcutta and Madras. From the free lance connection came a more permanent association with the paper, and in due course James Luke joined CAPITAL as its Editor at a period when Shirley Tremearne perforce had to give an increasing amount of time to his growing business commitments. Luke remained Editor until 1912, when he left India for good. His retirement was only short, for the following year he died. He did his best work for the paper at a time when inevitably Shirley Tremearne was the dominating figure on the stage, and in the past he has perhaps not been given the credit which is due to him. "The Musings of Max" have long since disappeared from the columns of CAPITAL, but "Current Coin" and "A Ditcher's Diary" have continued as regular features of the paper for many years, the latter introducing a new, a more personal touch into Indian journalism at a time when the diarist's technique had hardly been developed in the parent British newspaper press. In some ways the youthful CAPITAL seems to have been in advance of its contemporaries in the matter of make-up and format. At a period when the long three-decker leading article was much in vogue, CAPITAL eschewed the leader and preferred to present its fare in short, succinct and digestible paragraphs. Later the leading article was assigned its rightful place in the scheme of things, but not before CAPITAL had given India her first and finest columnist, and to Pat Lovett the opportunity that comes at least once in the life of men of rare artistic or literary talent. Lovett began his apprenticeship to journalism in October, 1883, under Henry Curwen, the then Editor of *The Times of India*. Contrary to present day practice it was not an age in which young men were encouraged to believe that they had a future in a profession of doubtful respectability and few prizes. As a stripling reporter of twenty years he preferred to be assigned to a sports engagement. The early years of his career were, therefore, dull and undistinguished, and gave no clue to the vast reputation he was later to create for himself. As a writer Lovett was slow in maturing, and to the end he had the heart and mind of a child. But at his best his work passed easily from journalism to literature. He was the diarist par excellence; and this was the medium in which he lived, moved and thought. The Irish excel at gossip, and Lovett was no exception to the rule. His eye was trained to observe and record the unconsidered trifles around him. His knowledge of many of the things on which he was popularly supposed to be an authority was largely superficial, because writing as writing was the one consuming passion of his life. More than anything else Lovett yearned to turn a good sentence and it can truthfully be said that

he rarely if ever allowed a bad one, or a shoddy passage to creep into his "copy." His methods were unorthodox and his hours of work erratic, but he was a craftsman of great and unusual gifts.

Twenty-nine years after he had joined *The Times of India* as a junior reporter Lovett became Editor of CAPITAL. The intervening years had been a period of profound change in Indian politics and journalism. Old ideas were going by the board; new personalities were coming to the front. Amongst the latter was Lovett, hardly, I think, conscious of his role in the changed order. He came to CAPITAL at a time when its proprietor and his associates could claim that their work had laid the foundations of a newspaper which had attained both position and character. But the moment had clearly come for an infusion of fresh blood. With no great reluctance Lovett moved over from the old *Indian Daily News* to CAPITAL, whence the full aureole of his brilliance proceeded to burst upon Clive Street. Clive Street had at last found a chronicler worthy of its importance in the scheme of things. From the day of publication of the first instalment, "The Ditcher's Diary" was an instantaneous success. It was Lovett's personal triumph. Later others took up his pen, but I do not think they ever brought quite the same flair to the Diary as its first keeper possessed. Times have changed since he began this distinctive feature in CAPITAL, and in its early days much went into it that would be regarded as quite unsuitable now. But for sixteen years he applied his own inimitable style and wit to *The Ditcher's Diary*, and as the person who has written it for an even longer period I can sincerely say I envy the charms and talents of a man who week after week for so long, and even in his declining years, was able to keep his work fresh and clear and sparkling in every department.

Some little time before he died, in the course of a lecture at the Calcutta University, Lovett pronounced his own epitaph when he said: "Rivalry and competition, hard knocks and swift retribution, I have experienced in abundance, but no sting to leave a festering sore. Had I my time over again, with a fairy-godmother to give me a choice of vocations, I would plump without hesitation for journalism, which is the only life in spite of its strange vicissitudes." These words pretty accurately sum up to the life of a man who knew the rough and tumble and the rewards of his chosen profession, and whose long connection with CAPITAL won for it additional lustre in India and a niche in the scrolls of newspaper fame abroad.

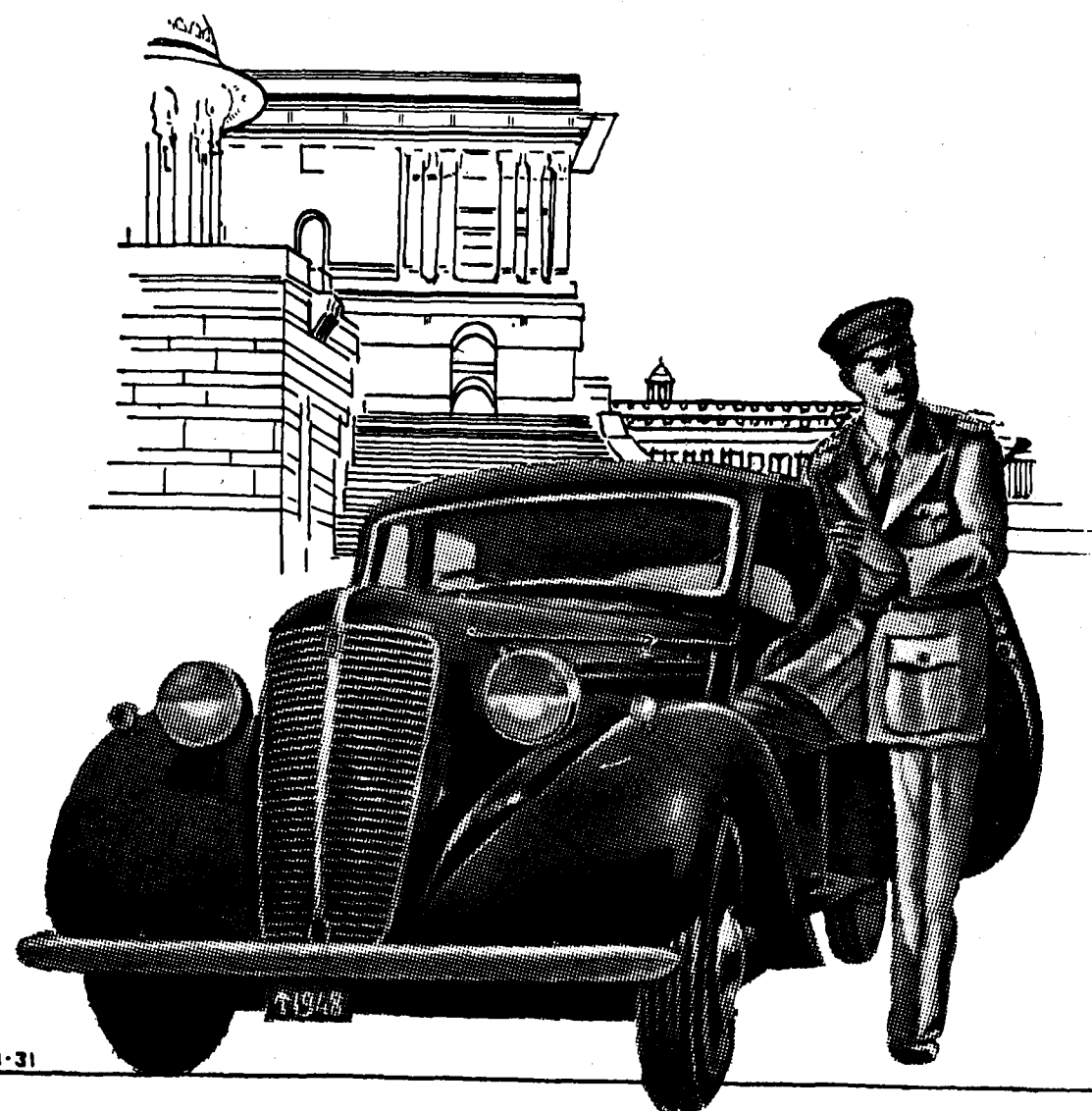
Lovett was able to devote so much of his time to one feature of the paper which ran to greater length than it now does, only because he had the help in other departments of a loyal and competent staff of assistants, chief amongst whom was R. W. Brock, who joined the paper as Assistant



Hubert E. Wouters, the present Manager of CAPITAL, which he joined in 1936

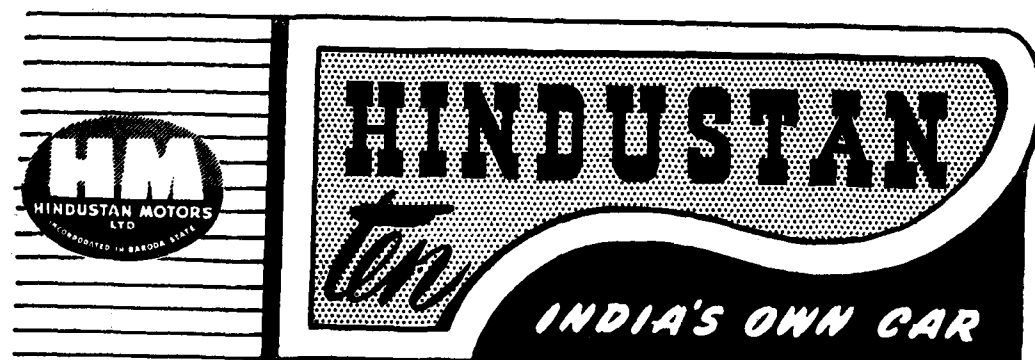
Editor in 1913, and, on Lovett's death in 1928, succeeded to the editorship which he held for four years. Another stalwart who has since passed from the scene was K. K. Sen, an Indian journalist of the old school who had been with Lovett on the *Indian Daily News*. The war years, and the decade which immediately followed, witnessed the publication of large and prosperous looking issues of CAPITAL. As an editor Lovett was easy going, relying on unconsidered trifles for the raw material of his work and rarely identifying himself with the big causes of the day. But the development of CAPITAL from a Calcutta weekly newspaper, which chronicled the events of many departments of life, into an Indian national weekly specialising and concentrating upon political, economic and commercial problems, was well advanced about this time. As assistant editor R. W. Brock played a considerable part in bringing to the paper a new scientific spirit which was in keeping with the growing interest of the public in the broad economic problems of the moment. Lovett and Brock, with their widely differing tastes, preserved an admirable balance between the old and the new. And with Lovett's passing after more than a decade and a half at the head of the paper, which included some of its most prosperous years, a new phase in its career may have been said to have begun.

Brock's editorship coincided with a period which produced many changes in the Indian scene. The years 1928 to 1932 were predominantly a period of transition, in which it can truly be said that whilst the future of British business and newspapers in India were somewhat obscure, their faith in the country was undimmed. Brock fully reflected this point of view both in his writings in CAPITAL and elsewhere. He expanded the number of signed articles that appeared in the paper, and thus added to its interest and influence. The present writer joined the staff as Assistant Editor in 1930, and on



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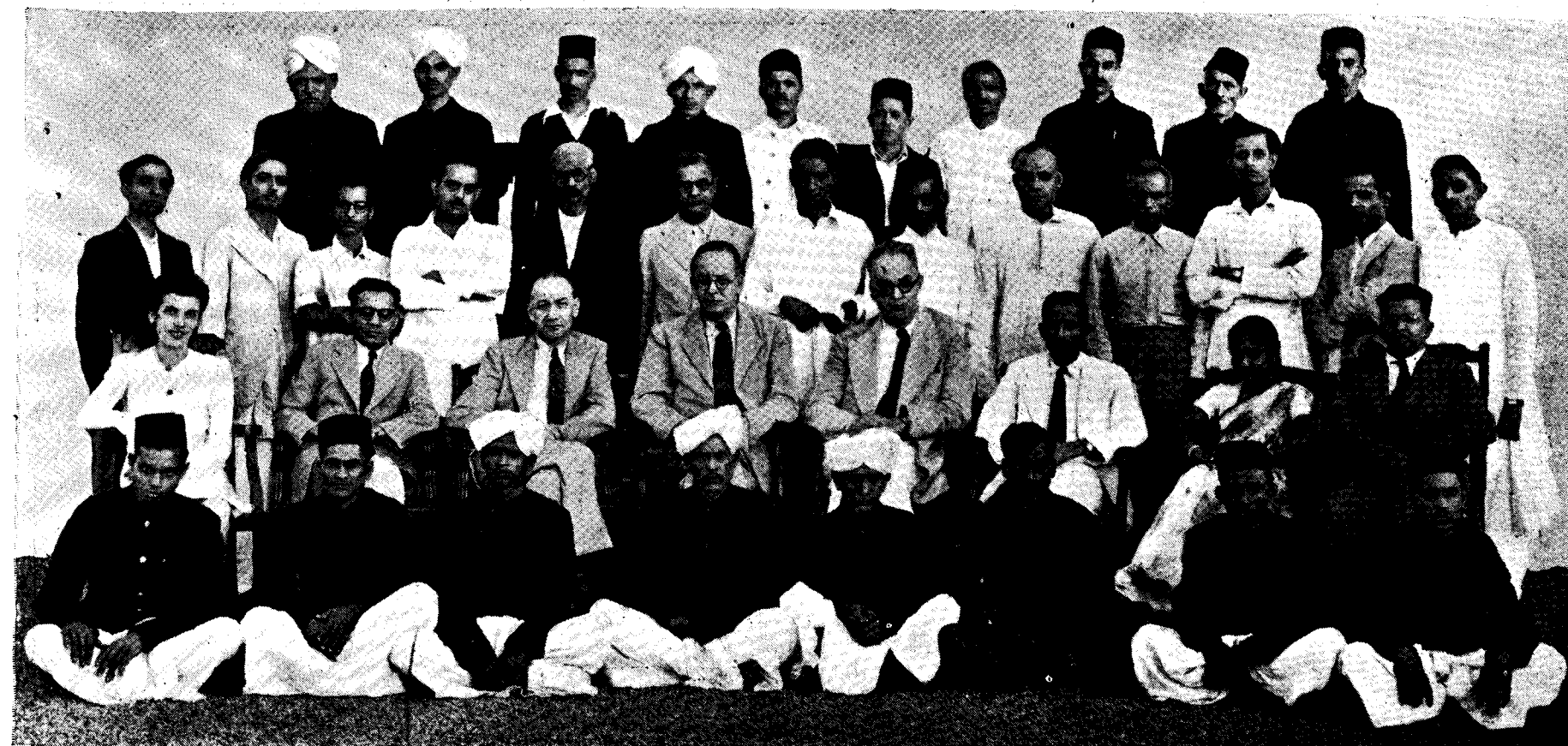
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JHARIA ..	BIHAR AUTOMOBILES.	COLOMBO ..	RUA HEROS 5 DE OUTUBRO. BRITISH CAR CO., 103, TURRET ROAD.



A GROUP PHOTOGRAPH OF THE STAFF OF "CAPITAL" IN 1948.

Back Row : Chaturi, Hait Singh, Aklas Uddin, Hari Naik, Pachanan Manna, Pasam Bahadur, Jogeshwar Ojha, Rup Narain, Nahar Singh, Nabakantha Ojha.
Standing : S. Banerjee, B. C. Chatterjee, S. C. R. Chowdhury, P. L. Motilal, N. L. R. Chowdhury, S. N. Banerjee, B. B. Ghoshal, K. P. Chakravarty, M. K. Banerjee, H. M. Chowdhury, B. N. Mukerjee (jr.), N. K. Banerjee, B. N. Mukerjee (sr.).
Seated : Mrs. B. Doig, N. Majumdar, H. E. Wouters, G. W. Tyson, J. D. Ewing, B. B. Ghosh, Miss N. Ghosh, M. D. Avatt.
Front Row : Narain Sahanee, Durjadhan Das, Bansidar Barik, Dwari Barik, Batas Kobe, Gopal Das, Atul Maji, Sital Maji.

Brock's decision to relinquish his post for personal reasons, was appointed to the Editorship in 1932. Brock became the paper's London Correspondent in the same year and continued in that capacity until he joined the Ministry of Information in 1939, since when London editorial representation has been in the hands of A. H. Byrt, C.B.E., formerly assistant editor and director of *The Times of India*. In passing it may be mentioned that amongst *CAPITAL's* earlier London Correspondents was Mr. Walter Layton, later editor of *The Economist* and now Lord Layton, managing director of the *News Chronicle*. During his Indian career A. H. Byrt had previously represented the paper at Delhi and Simla. For some years past *CAPITAL's* staff correspondent with the Government of India has been Mr. Srikrishna, one of the best known correspondents in New Delhi and a valued member of the paper's editorial department. Mr. Hubert E. Wouters joined the concern as Manager in 1936, having previously held editorial appointments on *The Times of India* and *The Pioneer* and a managerial position with the well-known firm of advertising agents, Messrs. J. Walter Thompson Company. He has officiated as editor on several occasions and soon after his arrival on the scene an entirely new format with new type was introduced giving additional scope for editorial and advertising display. So much for personnel.

During the sixty years of its existence *CAPITAL* has occupied different addresses. It was first published from No. 4, Waterloo Street, and some years later a move was made to No. 98, Clive Street. From No. 98, Clive Street, it went to No. 1, Commercial Buildings. Later a move was made to 7, Church Lane where the offices were requisitioned by Government during the war and in 1944 premises were secured at 4, Lyons Range, the present address. Whilst at No. 98, Clive Street, the concern was turned into a limited company as "*Capital*" Limited and the original Memorandum of Association of the Company, which is dated 14th January, 1905, is signed by Shirley Trehearne, David Yule, David King, Fred Siddons, Thomas Overend, James Luke and Nonilall Sen. The witnesses were L. Warlow Harry, N. R. Iyer, Shamlall Laha and Narayan Chunder Chatterjee. The last-named was Head Clerk of "*Capital*" Limited and served the Company from 1898 to 1946, retiring after 48 years of uninterrupted and faithful service. None of the first subscribers still survive. Sir David Yule later became an international figure in finance and commerce, whilst Messrs. Siddons and Overend were partners in Messrs. Place, Siddons & Gough, the well-known firm of stock-brokers.

Here it will be helpful if we break the sequence of the story somewhat and deal with the question of ownership in the post-Trehearne period. In the months preceding his departure from India the future of the paper was T. F. Trehearne's chief concern. Though it served all classes and communities, it was essentially a British paper, and he rightly felt that

it should continue to be closely identified with the community from which it had sprung. The heads of the leading British business houses in Calcutta expressed themselves as interested in the future of *CAPITAL* and on their behalf a transfer of ownership was ultimately negotiated by Mr. J. S. Henderson, the then senior partner of Messrs. Mackinnon Mackenzie & Co., and Sir George (then Mr.) Morton, partner of Messrs. Bird & Co. They acquired the ownership and rights of Messrs. W. H. Targett & Co., and the above-mentioned shareholding in "*Capital*" Limited, and W. H. Targett & Co. was incorporated as a Limited Company on 9th August, 1933. Apart from the ordinary business considerations involved, the object of the new proprietors of the paper was to secure its continued editorial independence with a guarantee that future ownership should continue to represent its past affiliations. To control the organisation, a managing committee, instead of a board of directors was created, and the committee maintains touch with the paper through the managing editor and other officers of the company. Mr. J. S. Henderson was chairman of the first managing committee, which, in addition, consisted of Mr. Alec. Aikman, C.I.E., of the firm of Messrs. Andrew Yule & Co., Ltd., Sir Walter Craddock, of Messrs. Place, Siddons & Gough, Mr. H. H. Burn, Managing Director of Messrs. McLeod & Co., Ltd., and Mr. G. B. Morton, M.C., partner in the firm of Messrs. Bird & Co. On Mr. Henderson's departure from India, Sir Edward Benthall assumed the chairmanship, which was held for a brief period by Sir Walter Craddock. From then onwards until his retirement from India in 1945 Sir George Morton occupied the chair, and the ten years of service thus given places *CAPITAL* under a considerable debt to one who was not merely titular head of the organisation but always the understanding friend of its members. In 1945 Sir George Morton was succeeded in the chairmanship by Mr. A. P. Benthall of Bird & Co., who perpetuates the close and friendly relations that have for so long subsisted between the newspaper and the firm of which he is a partner.

In effect *CAPITAL* is co-operatively owned by the British business community, and the arrangements which were made fifteen years ago are not dissimilar from the steps which have been taken in recent years to stabilise the future ownership of such well-known British newspapers as *The Times*, *The Economist* and *The Spectator*. In the case of those newspapers it was thought necessary to take precautions against the possibility of their falling into hands of large and commercialised newspaper groups. No such fears were apprehended for *CAPITAL*, but it was clearly desirable that its independent status should be maintained irrespective of whether its ownership be concentrated in a few hands or scattered over many, as is the case. When the above changes were carried out in 1933, there were those who professed to see in the new arrangements the disappearance of the independence that had been an integral part of *CAPITAL's* character and who prophesied that henceforth the paper would be the "Yes Man" of the big managing agency houses, who had acquired a share in its ownership. Nothing could be further from the truth, for from the beginning the proprietors, realising that the new set-up might lay the paper under the suspicion of being in thrall to the very interests it might sometimes have to criticise, established for the future of

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CAPITAL the principle of the maximum amount of editorial and managerial independence compatible with the responsibilities of ownership. It may here be fittingly added that the complicated financial and accountancy details of the 1933 transaction were carried out under the supervision of Mr. E. T. Cordwell, of Messrs. Bird & Co., and that he has served "Capital" Ltd., and W. H. Targett & Co., Ltd., and various managing committees ever since in the capacity of the Companies' Secretary.

The later phases of the modernisation of CAPITAL begin from the early 'thirties, which is the point we have now reached in this narrative. To go on serving its public, to progress, in fact, to exist at all, a newspaper, like any other business organisation, has continually to seek to improve its service of news and the presentation of its views. If the process runs evenly, it follows that a publication should become cumulatively better until ultimately perfection is reached. In point of fact, however, whilst the general trend is onwards and upwards to better things for the reader and advertiser, there are many stops on the way and temporary setbacks. But it is essential to survival that the main goal shall be a bigger and better newspaper. I will, I hope, therefore, be acquitted of any personal bias if I say that during the last ten or fifteen years CAPITAL has been a better newspaper than at any time during the previous forty-five years of its existence. That is not because those years happen to form part of the span of the current editorship but because, in the nature of things, they have offered opportunities for betterment that were not present in the situation before. The chronicler of CAPITAL's next Jubilee will, I hope, be able to write in the same way—to say that at 75 or 100 years, it is a better newspaper than it was at 60 years of age. But in a very real sense, the making of a better paper is a comparative term. What suits the public tastes and requirements of to-day, intrinsically good though it may be, is outmoded by the changes of to-morrow. And it is this regular change of scene and environment that keeps newspapers young in spite of the passage of time.

As a broad generalisation we can say that during the last fifteen or twenty years the tendency has been towards an increasing systematisation of trade, industry and commerce, in all parts of the world. The process was greatly advanced by the war, with its inevitable controls, and regulations and rationing of raw materials in order to achieve the maximum economic advantage from necessarily limited resources. The trend has been further accentuated since the war by the general movement, outside the north American continent, towards the collectivist state, or at least the controlled national economy. But long before either of these developments, trade, commerce and industry were tending to group themselves into ever larger concentrations, to approach the problems of production and distribution in a more scientific spirit and to pool the experience and resources of individuals and corporations for an enlarging field of common purposes. The slump of the 'thirties hastened, if it did not begin, what has been described as the managerial revolution. These developments required from a newspaper wishing to keep abreast of current developments a whole new apparatus of research, so as to satisfy its readers' demand for a reasonable measure of expertise in its pronouncements on the financial and economic problems of the day. In the conduct of a weekly newspaper, directing its appeal to all classes who have attained a certain degree of literacy and education, it is not easy to determine how far the output of the professional journalist should be reinforced by that of the professional economist, or how far the product of the latter should be diluted by the pure milk of journalism. No hard and fast rule can be laid down, and in the final analysis it is the main task of editorship to maintain an acceptable balance between the two. CAPITAL has striven, more or less successfully, to do this.

By the mid-thirties it was clear that the paper itself needed additional statistical raw material for its own day to day usage, and that there was a growing commercial demand for competent statistical services. CAPITAL *Index of Industrial Activity in India*, first appeared in the spring of 1935. The construction by this newspaper of an industrial index had been recommended by the Bowley-Robertson Inquiry into Indian commercial statistics and intelligence, and after a careful survey of the ground, a qualified Indian statistician who had worked under Professor Bowley, was recruited to the staff. The usefulness of the Index was acclaimed both in India and Great Britain, and the financial press in the U.K. referred to it in terms that were pleasurable to those responsible for its conduct. The Index was also incorporated in the series of indices published each month by the League of Nations and its successor organisation. It was a pioneer in this field of research and was followed in 1937 by CAPITAL *Stocks and Shares Index*, also widely used in India and elsewhere. Both indices survived the statistical "blackout" of the war years, and with more of the basic matter of their subjects once again freely available they continue to provide sensitive registers of two of the most important departments of national life. CAPITAL's statistical department later extended its activities to undertaking the construction of

indices and other types of statistical work for outside bodies, and in the last ten years its services have been used by government departments, chambers of commerce, industrial associations, railway administrations and other public bodies.

Both the money and the stock and share markets notes and comments have been developed so as to provide a comprehensive source of information to the general reader as well as to the special student of finance and investment. Fourteen pages of companies' balance sheets which are published each week, after the most careful preparation and checking, are a *vade mecum* to India's public limited companies and are made frequent use of in the courts of law, by trustees, government departments and other interested parties. In more ways than one the "stock sheets" may be said to be the backbone of the publication, which in each of its sections endeavours to portray the ever-changing field of Indian industry, transport, trade, commerce and finance. The tea, jute and coal industries, which make up so large a part of the economy of eastern India, and figure prominently in the trade of Calcutta itself, are subjects of special study in the editorial department. CAPITAL has for long been regarded as a leading authority on the jute industry and its regular weekly section devoted to this subject is widely read and referred to in other parts of the world. Annual Supplements have been published for the last twenty years, surveying the progress made in the preceding twelve months in numerous branches of industrial and associated activity. These Supplements are supplied free to subscribers and are filed and kept for many years as works of reference. There is always a steady demand for back numbers, which suggests that both readers and advertisers receive full value for money from them.

In no branch of newspaper production have there been bigger changes in the last twenty years than in advertising. The process may roughly be said to begin with the coming to India of the advertising agent, whose advent meant the end of many archaic practices which had hitherto prevailed in Indian advertising practice. The first attempt to provide India with agency,

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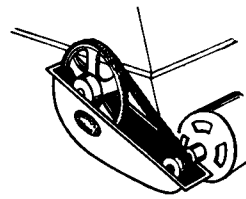
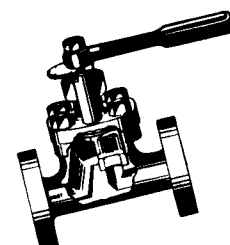
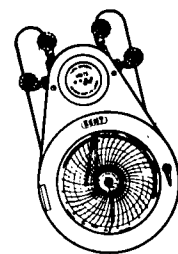
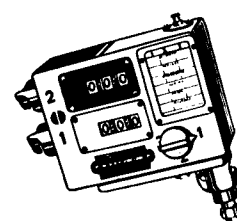
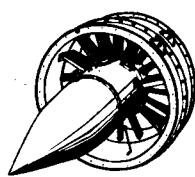
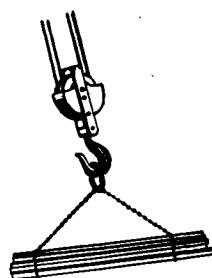
FANS AND EVAPORATIVE COOLING PLANT
STEAM AND DIESEL ENGINES

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COMPLETE SUGAR PLANTS

HIGH PRESSURE STEAM VALVES AND FITTINGS
MILL STORES AND SPECIALITIES

CHAINS FOR DRIVING AND CONVEYING
INDUSTRIAL COUNTERS

SUNDRY ENGINEERING STORES



service was made by *Reuter*, the world famous purveyor of news; but the work was found to be so little related to their main business that it was abandoned in the early 'twenties, after a period of not very successful experimentation. Thereafter, one or two British and American agencies made a cautious beginning in Calcutta and Bombay, and as their usefulness to the press, the advertiser and the public was apparent their business expanded until to-day the advertising consultant and agent has come to occupy a key position in the scheme of things. Inevitably, the pioneers had their imitators and in a highly competitive line of business those without adequate technical and financial resources failed to stay the course. Even to-day it is open to argument whether India has not got too many agencies; but there can be no question that she wants and must keep the best of them. There is scope for an enterprising researcher to produce a full length study of the contribution which the advertising consultant has made to India's economy and the progress of the newspaper press. Here and now it can only be said that their role is important and permanent, and that within the working life of the writer they have done much to facilitate the contact between a newspaper and its advertisers and have improved the visual appearance of the average Indian newspaper out of all recognition. CAPITAL has enjoyed the happiest possible relations with the advertising agents, both foreign and Indian, since their arrival on the scene, and readily acknowledges their friendly assistance in many practical matters.

There is one department of advertising in which, over the years, CAPITAL has attained a commanding position. The company notification is a field in which a newspaper specialising in financial and investment problems may fairly claim to push its advertising wares. There is to-day a growing appreciation of the need for better understanding of the affairs of big companies (whose shareholders' registers contain hundreds of names) not merely by the individual shareholder concerned but by all classes of investors and the public at large. "The Chairman's Speech" is a regular feature of the advertising columns of the daily and weekly newspaper press in other countries, for companies' executives have long appreciated its public relations value. CAPITAL has steadily developed this branch of advertising, until to-day it can claim to carry a volume of chairmans' speeches advertising which many newspapers envy and none in India exceed.

For a newspaper that believes fundamentally in free enterprise it is something to have lived and prospered in a competitive era. Rivalry is not necessarily incompatible with friendship, and CAPITAL looks back on long years of pleasant and profitable contacts with contemporaries and competitors, of which the oldest is *Commerce*. After passing its youth in Calcutta, *Commerce* moved to Bombay in the 'thirties and has been established there ever since. South Indian enterprise has frequently found the soil of Bengal fertile and receptive, and to the sponsor of *Indian Finance*, which recently celebrated its twentieth birthday, goes the credit for the first major and purely Indian incursion into the sphere of financial journalism. *Indian Finance* reflects not a little of the engaging personality and generous sympathies of its founder and managing editor. With the paper and its staff, CAPITAL has throughout had uniformly helpful and cordial relations, which have never been impaired in the slightest degree by the fact that on some important matters the two newspapers have agreed to differ. Five years ago a new star appeared in the firmament in the shape of the *Eastern Economist*, published in New Delhi. Handicapped at the start by wartime shortages of men and material, vigorous editorial direction has more recently set a high standard for the publication and notified the rest of the newspaper world that the newcomer will be a force to be reckoned with.

It was too much to expect that a few weeklies would be allowed to enjoy a monopoly of the interpretation of financial and economic intelligence in perpetuity, and three or four years ago daily newspapers in Calcutta, Bombay and Madras began to take a more active interest in the affairs of the money, stock, commodity and other markets. The result is that the principal daily newspapers now publish regular articles dealing with the affairs of the market place, which many had previously hardly dreamed worthy of notice. During and since the war there has also been a substantial addition to the number of official, and semi-official, government publications dealing directly with the economic side of life. Many of them are indispensable to the work of the professional commentator and of real value to the general public; others cannot be so justified. In every country with a properly equipped administration, the government necessarily finds itself conducting a large-sized publishing business. There is a danger in India of the government publication coming to be regarded as an end in itself, rather than as a means to an end. The aim should be to restrict official publications to what is absolutely necessary, and leave the rest to commercial publishing houses. Per contra, newspapers in the position of CAPITAL gratefully acknowledge the extension of the Government of India's information services to cover the economic Ministries and the provision of a wide range of news and views which is now at their disposal through the media of press notes, background material, conference reports and the like. This is a development of the last ten years which has greatly assisted the task of newspaper production.

These notes are being written at a moment when a new India is being shaped in the matrix of constitutional and economic doctrines, some of which doubtless appear to some to be revolutionary but, when examined against the background of the general political upheaval in Asia, reveal this country as possessed of a certain stability and maturity which is lacking elsewhere. The transition to the new order has been greatly helped by the fact that the successors to the old regime, the Nehru Government, is a government of Elder Statesmen using that phrase in its most felicitous sense. No one denies that there are grave problems still to be solved and serious internal stresses to be eased. It is clear that the drift is sharply away from the classical *laissez-faire* economy in which CAPITAL's first formative years were spent, and that the system of free enterprise will undergo considerable modification with the passage of time; though it is also not improbable that a large and profitable field of activity will be left open to private endeavour. But whether India goes to the Right or Left, or chooses to follow the middle of the road, her greatest asset is that at this important stage of the journey her Government is in the hands of men who are determined that policy shall be based on moral values. So long as the latter continue to inform an administration which has already shown its anxiety to preserve what was best in the former Indo-British connection, the stranger within the gates can go about his lawful occasions without fear. A newspaper that is proud to claim the friendship and goodwill of every community in the country, and which recognises neither caste nor creed but only the public weal, may reasonably look forward to a future that will compare in usefulness and profit with the best years of the past. CAPITAL is proud to be a member of the fraternity of British and Indian newspapers which have played a part in preparing the way for India to enter into a fuller national life. And as the new India takes shape, we realise that there still remains much to be done, of which not the least important task is to tend the ties of friendship which remain between two nations whom fate so strangely threw together for more than 150 years. The days ahead will be eventful, and probably not always to the liking of the small community to which we belong. But our interests, like those of every other British business in the country, will be served best by a happy, contented and prosperous India and to that end our policy in the future, as always, will be directed. It is in this spirit that we salute the great figures of the past—Tremearne, Luke, Lovett—in our 61st year of publication; it is in the same determination that we send our greetings to-day to our friends in India and every other country of the world.

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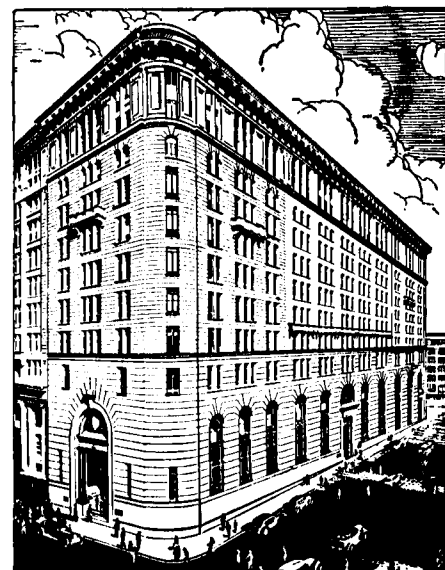
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THE STERLING BALANCES

RELEASES UNDER THE 1948 AGREEMENT

WHAT ARE THE PROSPECTS AFTER 1951?

The problem of the sterling debts owed by Britain to India is discussed in all its aspects in this interesting article from the pen of

OSCAR HOBSON,
 City Editor of the *News-Chronicle*, London

ible into any currency for current transactions, (2) balances to be similarly released by instalments over a period of years beginning in 1951, when repayments of the American line of credit were to begin, and (3) balances to be "adjusted," i.e., cancelled "as a contribution to the settlement of war and post-war indebtedness." Furthermore, Britain undertook that she would not use the dollars of the American line of credit to discharge obligations to other countries, and that if she were obliged to ask the United States to waive payment of interest in any year she would correspondingly scale down the aggregate of the releases or payments in that year of "sterling balances"

standing to the credit of overseas governments (or banks) at the date of the dollar loan agreement. Liability to pay interest becomes operative at the end of 1951, and it is from that point on that the "scaling down" obligation will come into true picture.

Now it soon became clear that the plan for the division of the balances into three parts could not be carried out. Neither India nor any other of the "sterling balance" creditors was willing to agree to an "adjustment" of the balances. That became clear, so far as India was concerned, in the exploratory talks which Sir Wilfrid Eady of the Treasury and Mr. Cameron Cobbold, Deputy-Governor of the Bank of England, had had with the Indian authorities in the course of a visit to India in January, 1947. And it was explicitly stated in a note sent by the Indian Government to the British Government on the eve of the setting out of the Indian delegation for London to enter upon formal negotiations.

EARLIER HISTORY

On the other hand, while Britain had apparently tacitly dropped, in the face of the fall in the purchasing power of sterling, her earlier contention that the debt due to India for war purchases and services should be subject to a discount on the score of the rise in Indian prices, she was meditating presenting a counter-claim for the defence of India during the war. The then Chancellor of the Exchequer, Mr. Hugh Dalton, made a definite statement that Britain reserved her right to make such a counter-claim in the House of Commons in February, 1947.

In these circumstances it became clear that nothing better than a purely temporary agreement could be attempted at the moment, and such an agreement was in fact concluded and signed on 14th August, a few days before Britain was constrained to suspend the convertibility into dollars of current sterling to which she had committed herself under the Anglo-American loan agreement and certain bilateral payments agreements. The Indian agreement covered only the four and a half months to the end of 1947. It provided that India should be entitled to a release of £35 million from the Reserve Bank balances which were taken at £1,160 million for the purposes of the agreement. (The Finance Minister, Mr. R. K. Shanmukham Chetty, said in a speech at New Delhi that the actual amount of the balances on 14th August, 1947, was £1,147 million). Following established practice in these matters the £35 million was to be placed on a drawing account designated No. 1 account standing in the name of the Reserve Bank of India, and this No. 1 account was also to be credited with a further £30 million as "working balance." The remainder of the Reserve Bank's sterling was to be placed on a No. 2 account and was not to be drawn upon except for certain special purposes, e.g., payments for pensions paid outside India or for stores transferred by the U.K. to the Indian Government.

Early this year the agreement was extended as the result of negotiations in Delhi for another six months. A further release of £18 million was granted to India alone, while Pakistan, which had been included with India in the August, 1947 agreement, made a separate arrangement which gave her a release of £6 million in addition to a transfer of £10 million for working balance and a transfer of £4 million from India's account.

REDUCTION TO DATE

The effect of all this is, that out of balances which had stood at £1,296 million on 5th April, 1946, India and Pakistan, in the two and a quarter years to 30th June, 1948, had been granted releases amounting to some £200

THE problem of the sterling debts owed by Britain to India is akin to a type of case which occupies much attention in the courts of law in all countries—the type of case in which the issue is which of two innocent parties shall suffer, or in what proportions they shall both suffer, as the result of the actions of a third guilty party. The debts represent part of the damage caused by the aggression of Germany and Japan: their existence is due to events for which neither debtor nor creditor is responsible. Throughout history debts, internal or external, arising from war have been a recurring and potent source of political and social friction, because such debts, while they originated from non-economic causes and in defiance of existing economic relations can, by and large, only be discharged by the working of normal economic processes, that is ultimately out of the labour of masses who cannot easily be brought to understand or to acquiesce in a situation which involves them in toil for which they get no current reward. The term "unrequited exports" which has been used to connote exports in discharge of past debts, as opposed to payments for current imports, is admittedly a question-begging and even provocative phrase, but it undoubtedly represents a widely shared emotion in Britain to-day. On the other hand, the people of countries which emerge as creditors under legally valid contracts at the end of a war, in which they too have suffered, naturally do not find it easy to see why they should be deprived of their full rights. Was it not a President of the powerful and wealthy United States of America who, after World War I, deemed it a conclusive refutation of suggestions for a scaling down of Britain's debt to exclaim: "Why, they hired the money didn't they?"

My excuse for opening with these rather trite general remarks is that it does seem essential that both Britons and Indians should do the best they can to appreciate each other's point of view on the matter of these sterling debts. The result of failure to do so can only be unnecessary bitterness and, not improbably, material damage to both parties. Britons must realise that to India the payment of the debt would mean an appreciable alleviation of a degree of national poverty far transcending their own. Indians must understand that Britain's debt to them is only one, though certainly the largest, of a series of similar debts amounting to a sum, £3,500,000,000, which is equivalent to over seven times the value of British exports in the year 1938. Even at to-day's enhanced prices complete repayment of the debts would require Britain to devote to the purpose the whole of her exports for three years, during which time she could import neither food (of which she normally draws two-thirds from abroad) nor basic raw materials for which, except for coal and iron, she is almost entirely dependent on supplies from overseas.

To say all this, however, is not to imply that a final settlement of the debts on terms acceptable, if not completely satisfactory, to both parties will prove an impossible achievement. Indeed, the successive agreements between the parties in the past two years, and particularly the agreement which was concluded in the summer of this year suggest the opposite conclusion.

ANGLO-U.S. BACKGROUND

Let us glance at the course of events. While India's sterling balances continued after the end of the war to increase until they reached what was apparently their maximum point of £1,296 millions, at the beginning of April, 1946, no formal discussions for their treatment were undertaken until January, 1947. In the meantime Britain had, by the Anglo-American loan agreement signed in December, 1946, but not ratified by Congress until July, 1947, committed herself to certain obligations affecting the "sterling balances." The United States, in granting the large dollar "line of credit" to Britain, was naturally concerned to ensure first that her loan should be applied to its avowed purpose of helping towards the restoration of Britain's economy and should not be diverted to the payment of outstanding debts, and secondly, to ensure that when the time for beginning the payment of interest and instalments of principal on the dollar loan came, her rights should not be prejudiced by any priority accorded to the owners of the sterling balances. In pursuance of these objects Britain undertook to negotiate settlements with the sterling creditors on the basis of dividing the accumulated balances into three parts, namely, (1) balances to be released at once and made convert-

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Chief Manager: The Honourable A. Morse, C.B.E.

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SUBSCRIBED CAPITAL	-	-	-	£2,000,000
PAID-UP CAPITAL	-	-	-	£1,000,000
RESERVE FUND	-	-	-	£ 900,000
RESERVE LIABILITY OF SHAREHOLDERS	-	-	-	£1,000,000

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Further particulars on application.

D. HAM,

Manager,

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Subscribed Capital	-	Rs. 1,00,00,000
Paid-up Capital	-	Rs. 80,70,000
Reserve Funds over	-	Rs. 31,25,000
Deposits over	-	Rs. 14,75,00,000
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million, or over 15 per cent. During the whole of this period Britain had been labouring under an adverse balance of payments, not only with the dollar area or the Western Hemisphere but with the rest of the world as well. In 1947 her aggregate payments deficit was no less than £675 million and her deficit with the Western Hemisphere £680 million. In these circumstances I do not think it is possible to argue that Britain did not treat India with sufficient generosity in the matter of releases and that she did not take sufficiently into account her special obligations towards India. Certainly she has given to India proportionately larger releases than to any other of the sterling creditor countries. There is indeed an influential section of opinion in Britain, including leading professional economists, who hold that releases on the scale which have been granted to India are quite unwarrantable, on the ground that they imperil Britain's return to economic and monetary stability, which is so important a condition of the recovery of Europe and the whole Eastern Hemisphere. Some of these authorities would have gone to the lengths of blocking all the "sterling balances" and conceding releases only for most urgent needs. The weight of opinion in the City and Whitehall has, however, been against any such arbitrary treatment of the sterling balance creditors, and the view has consistently been taken that the maintenance of Britain's tradition of fair dealing, which has been the king-pin of her position of a world banking centre, is a matter of vital national interest even if it means some aggravation of present difficulties. Even so there has, one must admit, been a certain amount of head-shaking at the size of the last year's releases. On the other hand, it is generally agreed that India has shown commendable restraint since she ceased to be a "dollar-earner" in her demands upon Britain's dollar resources. Full details of her dollar drawings have not been published, but Mr. Dalton said last autumn that in the fourteen months 1st July, 1946 to 31st August, 1947, out of drawings totalling £135 million on India's sterling balances only a small proportion, "at the very outside not more than £40 millions," had been in the form of dollars from the pool. Under the February, 1948, agreement hard currency drawings by the two Dominions were restricted to £13,300,000 while under the new agreement signed in London in July, 1948, India is allowed to draw up to £15,000,000 in the year to 30th June, 1949. Unlike the preceding interim agreements, the latest agreement runs for a period of three years, i.e. to 30th June, 1951, a date very near to what as I have indicated is a critical point in the whole "sterling balances" episode, namely the end of 1951, when the service of the American line of credit begins, and the clauses of the agreement relating to interest waivers and parallel treatment of other creditors become operative.

1951, AND AFTER

The new agreement provides in effect for India drawing off £160 million from the balances in the three years. The balances (India and Pakistan) at end June, 1948, were still approximately at the figure of a year earlier, i.e., £1,160 million, indicating that the £80 million odd released during the year and transferred to the Reserve Bank's No. 1 account had not in fact been drawn off. In view of this situation actual further transfers to No. 1 account were fixed at £40 million in each of the years 1949-50 and 1950-51 without any fresh transfer in the first year, 1948-9. Releases for Pakistan are embraced in a separate agreement. Simultaneously with the agreement on releases it was agreed that £100 million of the balances should be applied immediately in payment for military stores and assets taken over by India (and Pakistan) from the British Government, and that £175,500,000 should be paid over to the British Government in consideration of its assuming the sterling pension liabilities resting on India and Pakistan.

As against these payments, however, India is to receive from the British Government a payment of £55 million in final settlement of liabilities under normal (as distinct from wartime) defence expenditure agreements.

The prospective effect of all these arrangements would seem to be that in three years' time the balances, £1,296 million at their peak, will have been pared down by some £450 million to the neighbourhood of £850 million.

That, as I have said, is a considerable achievement in relation to the forbidding appearance of the original problem. But that is not to say that final settlement is brought within sight or anywhere near it. The latest agreement is again being vigorously criticised in Britain as involving concessions to India beyond our means: the amounts fixed for the transfer of the pensions liability and the war stores are regarded in the City as disappointing.

And the Chancellor of the Exchequer has been constrained to state in reply to a Parliamentary question that Britain's claim for compensation in respect of the defence of India is still open. Nevertheless, the prevailing sentiment in financial quarters in Britain is still as it has been all along, that we should go to the limit, even at some risk to our future financial stability and our future standard of living, in meeting India's special claims. But it would be raising false hopes to pretend that reduction of the debt is likely to be possible after termination of the period of the new agreement at the rate which has been achieved hitherto. To all present appearances releases after 1951 are likely to be on a smaller scale than hitherto, unless indeed there should be a serious depreciation of sterling before then, in which case whilst repayments might be speeded up it would be at the expense of a fall in their real value.—Copyright.

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ISSUED AND SUBSCRIBED CAPITAL	1,00,00,000
DEPOSITS as on 31-12-1947	7,96,05,729
PAID UP CAPITAL	50,00,000
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Seth Bunjori A. Billimoria
Seth Gordhadas Jadavji
Seth Bhagwati Prasad Khetan
Sri L. V. Apis

DIRECTORS APPOINTED BY THE GOVERNMENT OF JAIPUR
Rao Bahadur. Ganga Sahai Purohit, M.A., LL.B.
R. N. Dey, Esq.

HEAD OFFICE: JAIPUR

BRANCHES: BOMBAY: Hornby Road, Kalfadvi Road, Stendi and Dana Bunder. AHMEDABAD: Gandhi Road, Market Market, and Relief Road. RAJOT: JAMNAGAR: JAM KHAMBHALLA: CALCUTTA: DELHI: Aramdee Street and Sowcarpet. COIMBATORE: BANGALORE: TIRUPUR: AGRA: CAWNPORE: BAREILLY: BHALPUR: PILBHITI: INDORE CITY: RAJPUTANA: Jaunpur Bazar (Jaipur). Chand Pole (Jaipur). Gangapur. Hinduan. Newai, Dausa. Sikar. Fatehpur, Nawalgarh. Jhunjhunu. Surajgarh. Neem ka Thana. Kishangarh. Narain. Jodhpur. Kuchaman City, Tonk. Sojat Road. Sumerpur.

J. F. LOBO, Esq.
Bombay Agent



S. L. KOTHARI, Esq., B.A., B.Com. (LONDON) & C.A.
Manager

THE BANK OF JAIPUR LIMITED.
BOMBAY OFFICE: COOKS BUILDING, HORNBY ROAD

Imperial Bank of India



Authorised Capital	Rs. 11,25,00,000
Paid-up Capital	Rs. 5,62,50,000
Reserve Fund	Rs. 6,25,00,000
Reserve Liability of Shareholders	Rs. 5,62,50,000

Local Head Offices :

CALCUTTA — BOMBAY — MADRAS

AND OVER 400 BRANCHES AND SUB-OFFICES THROUGHOUT
INDIA, PAKISTAN, BURMA AND CEYLON

LONDON OFFICE : 25, OLD BROAD STREET, E.C. 2

MERCANTILE BANK OF INDIA LD.

(Incorporated in England.)

AUTHORISED CAPITAL	..	..	£3,000,000
SUBSCRIBED DO.	..	..	£1,800,000
PAID-UP DO.	..	..	£1,050,000
RESERVE FUND	..	..	£1,075,000

HEAD OFFICE: 15, Gracechurch Street, London, E.C.3.

Branches and Agencies throughout INDIA and the EAST
and at MAURITIUS and NEW YORK.

The Bank transacts banking business of every description.

Current Accounts are opened and Fixed Deposits received
on terms which may be ascertained on application.

Savings Bank Accounts opened at Delhi, Simla and
Howrah.

The Bank undertakes Trusteeships and Executorships.

Clive Buildings,
8, Netaji Subhas Road, Calcutta.

J. W. DUFFIELD-HARDING,
Manager.

BRANCHES AND AGENCIES :

INDIA:—
BOMBAY
CALCUTTA
HOWRAH
DELHI
SIMLA
MADRAS

PAKISTAN:—
KARACHI
CHITTAGONG

CEYLON:—
COLOMBO
GALLE
KANDY
JAFNA

BURMA:—
RANGOON

MAURITIUS:—
PORT LOUIS

SINGAPORE

MALAYAN
FEDERATION:—
KUALA LUMPUR
KUALA LIPIS
KOTA BHARU
KUANTAN
KUALA
TRENGGANU
PENANG
IPOH

HONGKONG

CHINA:—
SHANGHAI

SIAM:—
BANGKOK

INDIA'S CREDIT STRUCTURE

A MONEY market, which comprises the banking and credit system of a country, is necessarily intimately associated with its economic organization. As trade, commerce, and industry develop, specialized credit institutions also grow. The more elaborate the credit facilities of a country the more intricate its economic structure. A well-developed money market deals in elaborate and specialized credit facilities and is characteristic of a country whose industry and commerce are also highly developed.

In this sense, the Indian money market is still far behind its counterpart, say, in Britain or U.S.A. The beginnings of the evolution of a modern money market in India are to be traced towards the close of the last century. But it was not until the first Great War gave an impetus to industrial and banking development that the Indian money market assumed any appreciable significance. The main features in this evolution may be briefly recapitulated.

Long before the end of the last century, indigenous industries had begun to decay as a result of the policy pursued by the East India Company and the British Government. This led to an increasing ruralization of the people, while internal demand for industrial goods began to be met by imports. Towards the end of the last century, some measure of industrial development took place. But, as Dr. Knowles observes, "the new developments, that is, since 1899, of cotton and jute manufactures, engineering, railway building and coal-mining were started by Englishmen, Scotchmen or Parsees. The Parsees had, speaking comparatively, but an insignificant share of this development. This superstructure of foreign interests on Indian soil is reflected in the financial organization of the country towards the end of the 19th and the beginning of the twentieth centuries. For, at the end of the last century, there existed in India six Exchange Banks, three Presidency Banks and eleven Indian joint-stock banks, most of which were sponsored by Europeans.

PRESIDENCY AND OTHER BANKS

Before we trace the subsequent development of Indian banking, which is the most important constituent of a money market, we may note the salient characteristics of the Indian money market at the beginning of this century. In the first place, at the beginning of the century there was hardly any money market outside the Presidency towns, and even in these places it was comprised primarily of the activities of European banks, which played practically no part in internal trade and commerce. Further the operations, such as they were, of the Presidency and joint-stock banks were confined within restricted areas and as such were of little use in assisting trade between centres outside Presidency towns. As internal finance was primarily provided by moneylenders, its distribution was not impersonalized, but depended largely on whims of persons who provided it. In the second place, the money market was sharply divided into a European and an Indian section. This dichotomy of the Indian money market was largely the result of circumstances to which reference has already been made. This division continues even to-day, although its sharpness has considerably worn off. In the third place, acute seasonal stringency was one of the most serious defects of our money market. This stringency was due to two main causes. First, the absence of an automatic currency, which could be effectively worked only through a Central Bank. Secondly, the inability of the Presidency banks to expand credit in times of severe stress, which was partly due to the obduracy of Exchange Banks in opposing any proposal to invest the Presidency Banks with powers to afford relief in such a situation, e.g., by borrowing in the London money market. In the fourth place, the money market at the beginning of the century was absolutely dominated by British interests. It is interesting to observe that in 1896, a writer in CAPITAL, while condemning the attitude of certain organizations in England in interfering with the adoption of certain policies in the interests of India, added with refreshing candour that "where the interests of India are seen to clash with those of England taken as a whole, India must naturally give way." In the fifth place, even within the organized section of the money market, the Exchange Banks, which are foreign in origin, occupied an influential position. They were primarily engaged in financing the foreign trade of India. In recent years, however, and in particular since the last Great War, the differences between the Exchange Banks and the Indian Commercial Banks have been gradually wearing away. For one thing, some of the Indian Banks have been expanding their foreign exchange business. For another, the Exchange Banks, on their part, no longer confine their operations to foreign exchange business only, but have been increasingly extending their activities to the financing of internal trade and commerce.

Many of these short-comings of the Indian money market have been removed by the growth of a network of joint-stock banks, often large banks with numerous branches, and the establishment of the Reserve Bank. It

HISTORICAL DEVELOPMENT

OF

THE MONEY MARKET

ORGANISATIONAL DEFECTS

WHICH

CALL FOR ATTENTION

By BIMAL C. GHOSE

was, however, not until the impetus provided by the Swadeshi movement of 1905, and particularly the first Great War, that Indian industries began to grow under Indian auspices. This was paralleled by a similar development of Indian Joint-stock banking. The extent of this development may be gauged from the following figures:

	In Lakhs of Rupees					
	Capital & Reserves		Presidency Banks or	Deposits		Joint-Stock Banks
	Imperial Bank	Joint-Stock Banks		Exchange Banks (Indian Deposits)	Stock Banks	
1900	5.60	1.28	15.69	10.50	8.08	
1910	6.91	3.76	36.56	24.30	25.66	
1914	7.64	4.48	45.66	30.14	18.36	
1920	7.52	11.73	87.03	74.80	73.37	
1931	10.62	13.36	72.17	67.47	66.18	
1940	11.64	17.20	96.03	85.57	1,25.02	
1945	11.70	48.70	2,59.37	1,79.00	6,33.22	

In 1921, the three Presidency Banks of Bengal, Bombay and Madras were amalgamated into the Imperial Bank of India. It is interesting to observe that the proximate cause of this move for amalgamation, initiated not by the Government but by the Banks themselves, was the fear engendered by the reported intention of powerful banking interests in England to obtain control of certain banking interests in India, more particularly those of certain Exchange Banks, and the consequent threat it would constitute to the Presidency Banks themselves. The Imperial Bank functioned as a central bank of a sort until 1935. Government, however, was the authority for issuing currency, while the Imperial Bank, under various restrictions, was responsible for providing credit. This duality of control in respect of the currency and credit of the country was condemned by the Hilton-Young Commission and the Indian Central Banking Enquiry Committee, both of which urged the establishment of a Central or Reserve Bank in the interest as much of the growth of banking facilities in India as of her economic development generally. The Reserve Bank of India Act was passed in 1934 and it started functioning from 1935.

RESERVE AND IMPERIAL BANKS

The establishment of the Reserve Bank in 1935, marks an important milestone in the evolution of the Indian money market and opens a new era in Indian business and commerce. Two positive achievements of great value may be ascribed directly to the influence of the Reserve Bank. The first is the removal of seasonal stringency in the market, as demonstrated in a uniform bank rate throughout the year. Prior to the establishment of the Reserve Bank, Imperial Bank's rate for demand loans was not only high but also

THE UNITED COMMERCIAL BANK LIMITED

CALCUTTA

CAPITAL : (Authorised)	...	...	...	Rs. 8 Crores
(Subscribed)	...	...	...	Rs. 4 Crores
PAID-UP CAPITAL	...	...	...	Rs. 2 Crores
RESERVE FUND	...	...	...	Rs. 40 Lakhs
WORKING FUND (30th June 1948)	...	...	...	Rs. 50 Crores

Board of Directors :

Mr G. D. BIRLA (Chairman)

Mr ISWARI PRASAD GOENKA
(Vice-Chairman)

„ ANANTA CHURN LAW
„ BAIJNATH JALAN
„ GOBINDLAL BANGUR
„ MADANMOHAN R. RUIA
„ MAHADEO L. DAHANUKAR

Mr RAMANLAL G. SARAIYA
(Vice-Chairman)

„ MOHANLAL L. SHAH
„ MOTILAL TAPURIAH
„ NAVINCHANDRA MAFATLAL
„ P. D. HIMATSingKA
„ R. L. NOPANY

General Manager :

Mr B. T. THAKUR

Dy. General Managers :

Mr V. R. SONALKER

Mr S. T. SADASIVAN

With over 70 Branches at the important cities and towns in India and Burma and Agency arrangements throughout the world, the Bank is fully equipped to give best service in India and abroad.

fluctuating. The high level of the rate was partly due to the fact that aid from the currency reserve was made dependent on particular bank rates being in force. Thus the Imperial Bank could obtain loans in the busy season up to a maximum of Rs. 12 crores at the bank rate, subject to a minimum limit of 6 per cent. for the first Rs. 4 crores and 7 per cent. for the remaining Rs. 8 crores on the security of internal bills of exchange or hundis of an equivalent amount. As for the level of bank rate, that is, Imperial Bank's rate for demand loans, it has been calculated that during the ten years 1921-30, this rate stood at 9 per cent. for approximately 3 weeks, 8 per cent. for 47 weeks, 6 per cent. for 140 weeks, 5 per cent. for 129 weeks and 4 per cent. for 81 weeks. The Reserve Bank rate was $3\frac{1}{2}$ per cent. for a few months after its inception but has since been maintained at 3 per cent. The second noteworthy achievement of the Reserve Bank is a narrowing down of the divergences that used to obtain between various market rates, as the following figures will show:—

	Bank rate	Imperial Bank Hundi rate	Calcutta Bazar rate	Bombay Bazar rate
September, 1929 (Imperial Bank)	5	5	11	6
March, 1940 (Imperial Bank)	7	7	11	9 $\frac{1}{2}$
September, 1939	3	3	6.7	6
March, 1940	3	3 $\frac{1}{2}$	6.7	6 $\frac{1}{4}$

These figures reveal not merely a reduction in rates absolutely or in differences between various rates in the money market, but also a closer correspondence than before between the bazaar rates in Calcutta and Bombay. This phenomenon may be interpreted as an indication of a more intimate and organic contact between these two markets, which presumably the establishment of the Reserve Bank has facilitated. In this sense, the development of a more integrated money market in India may be dated from the institution of the Reserve Bank.

INDIGENOUS BANKERS AND AGRICULTURAL FINANCE

Although disparities in interests rates, particularly between rates obtaining in the organized and bazaar sections of the market, have been considerably reduced compared to what they were prior to the establishment of the Reserve Bank, yet they are still large enough to show that funds do not yet flow freely from one market into the other. This means that the contacts between the two markets are still far from satisfactory. Credit instruments have not developed which can be freely dealt in in both markets, thereby providing the means for a free flow of funds between them. It may be mentioned that an obligation was imposed upon the Reserve Bank under Section 55(1) of the Act to submit to the Governor-General within three years from the date on which the Act came into force proposals for the extension of the provisions of the Act to indigenous bankers. Accordingly in the Statutory Report submitted in 1937, the Reserve Bank put forward certain proposals for compliance by indigenous bankers for the purpose of linking the latter directly to the Bank. The chief conditions enjoined by the Reserve Bank required indigenous bankers to confine their business to banking proper, to wind up their other businesses within a reasonable period, to maintain proper books of account and to have them audited regularly. The indigenous bankers refused to accept these proposals and consequently the question of directly linking them up with the Bank had to be dropped. In the circumstances, the Reserve Bank suggested as an alternative proposal the development of an open bill market in which first class bills would be freely negotiated. It observed, "If such a market could be developed, it would be possible for us to extend our open market operations to trade bills as we do at present to Government securities, and this would give first class indigenous bankers the closer and possibly ultimately the direct relationship which they desire, without compelling them to modify the essential character of their business or to submit to unduly rigid restrictions." Unfortunately, such a market has not developed and the desired closer relationship between indigenous bankers and the Bank has not materialised.

Another obligation which the Act had imposed upon the Bank was in respect of agricultural finance. Under Section 55(1) the Bank was required to submit proposals for the improvement of the machinery for dealing with agricultural finance and methods for effecting closer co-operation between agricultural enterprise and the operations of the Bank. Although the money-lender was the most important rural credit agency, legislation passed by various Provincial Governments, and aimed at reducing agricultural indebtedness, has naturally had the effect of searing the usual credit agencies and diminishing the flow of credit. The Bank was of opinion that in the circumstances the co-operative movement was the best agency for the supply of rural finance. But it added that "we must also make it clear that unless the co-operative banks can put their long-term debts on a business footing and separate them from other business, the Reserve Bank will not be in a position to be of assistance to them." Unfortunately, the co-operative movement has not yet been re-organized and placed on a sound footing, as recommended by the Reserve Bank. The expectations that were entertained at

the inception of the Reserve Bank that it would be able to create conditions that will enable the ryot to obtain adequate and cheap finance have not been fulfilled.

ORGANISATIONAL ASPECT

The efficiency of a money market, as also the ability of a Central Bank to control it, largely depend upon its content and organization. In this sense, the Indian money market still suffers from certain defects. As a money market is a mechanism through which short-term funds are loaned and borrowed, it can deal safely in certain types of assets only such as trade and treasury bills, stock exchange securities and call money. What particular credit instruments will develop in a country necessarily depend upon its economic activity. Thus, in London the bill market has been the most important, while in New York it has been the brokers' loan market. But after the last Great War, in both countries the short-term Government security market became more important. Bills, however, are the ideal credit instruments for a money market. This is why great emphasis has been laid on the need for developing a bill market in India. The Central Banking Committee stated that it had "little doubt that the creation of the Reserve Bank with the resultant co-ordination of the various elements of the money market and a unified control of credit and currency should do much to develop the use of commercial bills and ultimately create an active and efficient discount market in India." Unfortunately this expectation of the Committee has not been fulfilled. One result of this is that the Indian money market has not yet become fully integrated and lacks resilience as will be borne out by the disparity in various market rates. For, although, compared to what they were before the establishment of the Reserve Bank, differences between various market rates have considerably narrowed down, yet they are still much wider than in the more developed countries of the West. In the second place, as there is no reservoir in the Indian money market for surplus funds to flow into for investment in highly liquid assets, commercial banks have to depend for the most part upon their own resources, and are, therefore, not so easily or speedily amenable to the influence of the Reserve Bank.

In view of the exceptional importance of discount and accepting institutions in a money market, some positive steps should be taken to establish

THE CENTRAL BANK

OF INDIA LIMITED.

(Established—December, 1911)

Authorised Capital	..	Rs. 6,30,00,000
Issued Capital	..	5,77,50,000
Subscribed Capital	..	5,86,05,570
Paid-up Capital	..	3,14,21,220
Reserve and other Funds	..	3,53,04,000
Deposits as at 31-12-47	..	1,23,15,37,000

Head Office—Mahatma Gandhi Road, Fort, Bombay

Chairman—Sir H. P. Mody, K.B.E.

Managing Director—Mr. H. C. Captain, J.P.

Banking Business of every description transacted on terms which may be ascertained on application.

Local Branches

Calcutta Main Office—100, Netaji Subhas Road.

Barrabazar Branch—71, Cross Street,
New Market Branch—10, Lindsay Street,
Shambazar Branch—133, Cornwallis Street,
Bhowanipour Branch—8A, Russa Road,
Hatkola Branch—75, Sova Bazar Street,
The Central Bank Executor and Trustee Co., Ltd.
YOU MUST NOT OVERLOOK THE FUTURE

The Company is at your service to assume the responsibility of administering YOUR TRUSTS AND YOUR WILLS

For particulars please apply to

The Central Bank of India Ltd., 100, Netaji Subhas Road, CALCUTTA

3 YEARS' CASH CERTIFICATES

Issued in multiples of Rs. 100, 500, 1,000, 10,000, in one or more names, repayable to either or survivor

For every Rs. 92-12 that you deposit with the bank to-day you will receive Rs. 100 after 3 years which works out at the rate of 2½ per cent. per annum Compound Interest Central Bank's Home Savings Deposit Department

"SAFE DEPOSIT VAULT"

(A NEW FEATURE)

Branches in Bengal :—Dacca, Narayanganj, Mirkadam, Jalpaiguri, Kulti, Dinajpur, Burdwan, Kalimpong, Mymensingh, Siliguri, Rangpur, Bhairabazar, Raiganj, Chandpur, Bolpur and Chittagong.

Branches in Behar :—Jamshedpur, Muzaffarpur, Sasaram, Gaya, Chapra, Jaynagar, Sitamarhi, Bettiah, Madhubani, Khagaria, Katihar, Kishanganj, Forbessganj, Raxaul, Sahibganj, Bhagalpur, Patna, Patna City, Bairagnia, Golgong, Samastipur, Naugachia, Ballia, Purulia, Banmankhi, Buxar and Deogarh.

Branches in Orissa :—Sambalpur, Balasore.
London Agents :—Barclays Bank Ltd. and Midland Bank Ltd.
New York Agents :—Guaranty Trust Company of New York
The Chase National Bank of the City of New York.

THE BANK OF INDORE LTD.

INDORE

(Incorporated in Holkar State 1920)

Head Office:—Prince Yeshwant Road, Indore City.

Branch Offices:—Siyaganj, Cloth Market and Sanyogitaganj.

Branches:—Khargone, Mhow, Sanawad and Tarana.

AUTHORISED CAPITAL	..	..	Rs. 50,00,000
SUBSCRIBED CAPITAL	..	..	30,60,750
PAID-UP CAPITAL	..	..	15,30,375
RESERVE FUND	..	..	18,50,000

Chairman: SIR HUKUMCHAND, Kt., Rai Bahadur.

CURRENT DEPOSIT ACCOUNTS opened and FIXED DEPOSITS received on terms which may be ascertained on application.

SAVINGS DEPOSITS ACCOUNTS are opened and interest allowed at 1½ per cent. per annum. Copies of Rules can be had on application.

LOANS, OVERDRAFTS and CASH CREDITS:—The Bank grants Accommodation on terms to be arranged against approved securities.

SAFE CUSTODY:—Securities and Boxes containing valuables, etc., received for Safe Custody.

SAFE DEPOSIT LOCKERS are available at Head Office, Siyaganj, Cloth Market, Indore Branch Offices and Mhow on favourable terms.

J. E. HUTTON, Manager.

INDO COMMERCIAL BANK LTD.

Regd. Office :
MAYAVARAM.

Central Office :
MADRAS.

AUTHORISED CAPITAL	..	..	Rs. 25,00,000
ISSUED & SUBSCRIBED CAPITAL	..	..	Rs. 21,25,000
PAID-UP CAPITAL	..	..	Rs. 18,75,000
RESERVE FUND	..	..	Rs. 10,00,000

Offices in Madras City :

Netaji Subhas Chandra Bose Road : Theagarayanagar : Mylapore : Periamet and Triplicane.

Branches :

Amadalavalasa, Ambasamudram, Ambur, Anakapalle, Chidambaram, Chippurupalle, Chittur (Cochin), Cuddalore O. T., Cuddalore N. T., Erode, Jeypore (Orissa), Kanchipuram, Karaikudi, Kumbakonam, Madurai, Maruteru, Nagapattinam, Palghat, Paramakudi, Parvathipuram, Pudukottai, Ramnad, Salur, Shiyali, Tadepalligudem, Tanjore, Tenkasi, Tilaru R.S., Tirunelveli Town, Tirunelveli Junction, Tiruchirapalle, Tuticorin, Vedaranyam, Vellore, Vijayapuram, Villupuram, Virudhunagar and Vizianagram.

FIXED DEPOSITS RECEIVED

For One Year at	..	..	2½ per annum
For Two Years at	..	..	3 per annum

SAVINGS BANK DEPOSITS

Interest at 2½ per annum allowed on daily balances of Rs. 5 and multiples thereof up to Rs. 10,000; Withdrawals by cheques—Rs. 250 per week.

MONTHLY DEPOSITS

For 47 months and 90 months with a deposit of Re. 1 or multiples thereof.

CASH CERTIFICATES

3 years and 5 years Cash Certificates issued.

LOANS & ADVANCES

Against Bullion, Government Promotes, Approved Shares, Securities and Merchandise.

S. N. N. SANKARALINGA IYER,
Managing Director.

THE INDIAN OVERSEAS BANK LIMITED.

Estd: 1937.

Central Office: MADRAS.

OFFICES IN INDIA.

Branches:

Alleppey	Devakottah	Negapatam
Bangalore City	Gudiyattam	Pudukottah
Bombay—Fort	Karaiakudi	Salem
Bombay—Mandvi	Kumbakonam	Sivaganga
Calcutta	Madras	Tiruvavur
Calicut	Madura	Trichinopoly
Cannanore	Mayavaram	Trivandrum
Coimbatore		

Sub-Branches:

Cochin	Ramnad	Tirunelveli Junction
Quilon	Tanjore	Tuticorin

Pay Offices.

Karaikal	P. Alagapuri	Srivilliputtur
Melapalayam	Pudupatti	Tirunelveli Town
Mysore	Purassawalkam	Vellore
	(Madrass)	

Outstations.

Koothanallur	Mennargudi	Pattukottai
Kuttalam	Muthupet	Shiyali

Overseas Branches.

Burma	..	Rangoon
Ceylon	..	Colombo
Malaya	..	Ipoh, Kuala Lumpur, Malacca, Penang, Singapore
Siam	..	Bangkok

Foreign Correspondents.

The Chase National Bank of the City of New York, London and New York.
The Midland Bank Ltd., London.
The Chase Bank, Paris and Hongkong.
The Bank of New South Wales, Sydney.
Bank of Brussels, S.A., Belgium.
The Standard Bank of South Africa Ltd., Durban, Johannesburg and Mombasa.

SOUTHERN BANK LTD.

Scheduled Bank

HEAD OFFICE: 14, NETAJI SUBHAS ROAD, CALCUTTA

Phone: Cal. 5989

Branches

Burrabazar, Shayambazar, Bhowanipur,
Bangaon, Basirhat, Khulna, Giridih & Patna.

Loans Granted on Govt. & Mercantile Bills

All Sorts of Banking Business Transacted

Dr. Amal Kumar Roy Chowdhury, M.D.,

Managing Director.

N. Banerjee, M.A. (Commerce),

General Manager.

THE UNITED INDUSTRIAL BANK, LTD.

'Gram: UNINDBANK. Established 1940. 'Phone: Cal. 1020.

HEAD OFFICE:—7, Wellesley Place, Calcutta.

BRANCHES:—BURRABAZAR, SHAMBAZAR, HATKOLA and BALLYGUNGE (Calcutta), BANKURA, NARAINGUNGE, Dacca, CHANDPUR, MYMENSINGH, PATNA.

PAY OFFICE:—MIRKADIM.

OTHER BRANCHES WILL BE OPENED GRADUALLY IN IMPORTANT CENTRES.

A SCHEDULED AND CLEARING BANK.

DIRECTORS:

JADU NATH ROY, Esq.—Partner, Messrs. Premchand Janakinath Sitanath Roy.
Dr. SATYA CHURN LAW—Partner, Messrs. Pran Kissen Law & Co.

Rai SATYENDRA KUMAR DAS Bahadur—Partner, Messrs. Revati Mohan Das & Sons.
Seth LAKSHMAN PRASAD PODDAR—Partner, Messrs. Tarachand Ghansam Das.
Kumar RAMENDRA NATH ROY—Director, Raja Janakinath Roy Ramendranath Roy & Co., Ltd.

AMIYA KUMAR SEN, Esq.—Director, Messrs. D. M. Das & Sons, Ltd., Chief Agents, Empire of India Life Assurance Co., Ltd.

GAJRAJ SARAWGI, Esq.—Partner, Messrs. Tolaram Nathmull.

PRIVA NATH ROY, Esq.—Partner, Messrs. Premchand Sitanath Roy.

CURRENT ACCOUNTS: Interest allowed at 1 per cent. per annum on daily balances of Rs. 300 to Rs. 1,00,000, provided interest amounts to at least Rs. 2 half-yearly.

SAVINGS BANK ACCOUNTS: Interest allowed at 11 per cent. per annum. Withdrawals by cheque permitted.

FIXED DEPOSITS received for one year or less at favourable rates.

LOANS, CASH CREDITS and OVERDRAFTS allowed against approved security at favourable rates.

SECURITIES, SHARES, etc., purchased, sold and received for safe custody and collection of interest and dividends. PACKAGES, BOXES, etc., received for safe custody.

RULES, rates and terms on application.

ALL FORMS OF GENERAL BANKING BUSINESS TRANSACTED.

SRI P. N. ROY, Director-in-Charge.

Under the patronage of and largely supported by the Government of
H. H. The Chhatrapati Maharaja of Kolhapur.

THE BANK OF KOLHAPUR, LIMITED.

(Incorporated in Kolhapur, liability of members being limited.)

ESTABLISHED IN 1926.

Head Office:

SIR BIRDWOOD ROAD, LAXMIPURI, KOLHAPUR.

Telegram: BANKOP

Telephone: 289

AUTHORISED CAPITAL .. Rs. 40,06,500

SUBSCRIBED CAPITAL	..	..	Rs. 20,26,000
PAID-UP CAPITAL	..	..	Rs. 10,13,000
RESERVE FUND	..	..	Rs. 7,71,000
WORKING CAPITAL EXCEEDS	..	..	Rs. 2,88,00,000

Branches.

(1) Gujari-Kolhapur.	(2) Shahupuri-Kolhapur.	(3) Malkapur.
(4) Peth Vadgaon.	(5) Jaysingpur.	(6) Ichalkaranji.
(7) Gadhinglaj.	(8) Nipani (Dist. Belgaum).	(10) Mandvi-BOMBAY.
	(9) BOMBAY, Sir Phirozsha Mehta Road.	

Board of Directors.

1. Hon'ble Rao Bahadur Dadasaheb Appasaheb Surve, Prime Minister, Kolhapur State, CHAIRMAN.	6. Krishnaji Abaji, Patil, Esqr. (Landlord and Merchant), Kolhapur.
2. Shri Kshatra Jagatguru Maharaj, Kolhapur.	7. V. T. Patil, Esqr., B.A., LL.B., Kolhapur.
3. Rao Bahadur D. M. Bhosale, Kolhapur.	8. K. B. Desai, Esqr. (Landlord), Kolhapur.
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5. Pandurang Shivram Uplekar, Esqr. (Leading Jeweller and Merchant), Gujari, Kolhapur.	10. The Education Minister, Kolhapur State.
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them in India. Commercial Banks have been loath to develop these functions on any appreciable scale, and there are no other institutions in the money market which engage in these businesses. If the Reserve Bank or Government or both were to take the initiative in setting up a few accepting institutions in the important money markets of India, as has been done in respect of long-term financing by the establishment of the Industrial Finance Corporation, bill-discounting will speedily expand and gain in popularity. The development of the discount market will be a great boon not only to business and commerce, but also impart efficiency and effectiveness to the money market.

A BILL MARKET WANTED

The need for developing a bill market derives special importance from the lack of an adequate supply of alternative assets or credit instruments germane to the short-term money market. The call money market is unimportant. In spite of the efforts of the Reserve Bank, an active market in treasury bills has not developed. And although loans are offered to stock-brokers, a brokers' loan market does not exist in India in the same way, for example, as in New York. Even in New York, loans by banks secured by stocks and bonds to others than banks and stock brokers and dealers constitute by far the greater part of such collateral loan outstanding, and amount to about 75 to 80 per cent. of all collateral loans made by member banks. In New York, loans to brokers and dealers only, which alone constitutes an integral part of the operations of its money market, form but a comparatively small portion of total collateral loans in the country's credit structure. The brokers' loan market in India must be even less important. In passing, the absence of an active brokers' loan market need not be deplored inasmuch as it is likely to be a highly speculative one.

POWERS OVER COMMERCIAL BANKS

All the important constituent sections of a money market are still ill-developed in India. In the absence of a properly organized and active money market, the Reserve Bank's control over it, and through it, over the commercial banks, cannot be as effective or efficient as is the case with central banks in well-organized money markets. This may be the reason why over the last few years the Reserve Bank has been seeking to extend its influence directly over the activities of commercial banks. Fairly wide powers over commercial banks are proposed to be acquired by the Reserve Bank under the new Bank Bill which is now pending before the Dominion Parliament. The Bank also issues circulars to commercial banks from time to time embodying its opinion on various matters bearing upon their operations. It also asks from them periodical information on various matters including, for example, certain types of advances.

In view of the fairly extensive control which the Reserve Bank is gradually acquiring over the operations of commercial banks, there should devolve upon it a corresponding obligation to render them every assistance in times of difficulty. The commercial banks feel that the Bank is, generally speaking, unsympathetic to their needs and its behaviour towards them step-motherly. The rôle that the Bank played at the time of the Travancore National and Quilon Bank crisis and in subsequent similar instances is responsible for this opinion. It must be admitted that the statutory definition of eligible paper, i.e., securities against which the Reserve Bank can make advances to scheduled banks, is, in the Indian context, much too rigid. In view of the nature of the Indian money market, a fairly large portion of any commercial bank's resources has to be invested in collateral loans, which cannot be self-liquidating within a short period of time. In a time of crisis, a commercial bank will have drawn upon not only its cash balances, but also easily realisable assets such as bills, if any, and its own investments. If these resources fail to meet the emergency, it will be left with no other assets but its collateral loans, a large portion of which is not readily realisable. Unless in a grave crisis affecting a particular bank or banks, Reserve Bank accommodation is available against the repledge of collateral loans, or such of these as by some standards to be set up by the Reserve Bank are considered good, the latter's assistance to commercial banks in serious difficulty will have little practical value. To this end, it is necessary to amend the Act and invest the Bank with the requisite powers. It is encouraging to learn that measures along this line are already under contemplation.

RESERVE BANK NATIONALISATION

A recent development of great significance deserves brief mention. In February last, the Finance Minister announced in the Dominion Parliament that the Reserve Bank would be nationalised as soon as possible after September, 1948. In the latter month a Bill was passed by the Dominion Parliament and the Bank will be taken over by the State on 1st January, 1949. The following observation from the Report of the Central Board of Directors for the year ended June, 1948, is interesting: "The Board, after careful consideration of the issues involved, were of opinion that the decision to nationalise the Reserve Bank was premature at the present stage of the country's

political and economic development and that such a step may be fraught with very great danger which cannot be fully foreseen at present, and passed a resolution accordingly which was forwarded to Government. Government intimated that, after very careful consideration, they had come to the conclusion that the balance of advantages lay in nationalising the Reserve Bank and saw no reason to modify the policy to which they had committed themselves." The mere nationalisation of the Reserve Bank need occasion no misgiving provided there is no undue interference by Government in its working and through it in the activities of commercial banks. Thus, the nationalisation of the Bank of England has not as yet brought about any material change in the working of the banking system or money market in England. But it cannot be gainsaid that the nationalisation of the Reserve Bank coupled with a tendency on its part to acquire extensive control over the activities of commercial banks and the reported intention of Government to nationalise the largest among them, viz., the Imperial Bank, does place in the hands of Government very large powers which have a direct bearing upon our trade, industry and commerce.

BOMBAY AS FUTURE CENTRE

In contrast to other financial centres, the money market in India is not concentrated in any one city. That is why we have spoken of the Indian money market and not of the Bombay or Calcutta money market; for there is in India as yet no single preponderant business or financial centre such as London in England, New York in U.S.A., Paris in France or Amsterdam in Holland. There are, however, only two important money markets in India, viz., Calcutta and Bombay. Of these two centres, Bombay has been steadily growing in importance since the first Great War. Various factors are assisting this development. The important among these are: first, the increasing importance of Bombay port; second, exceptional facilities which indigenous bankers in Bombay are able to offer to merchants; third, the fact that both Bombay and Calcutta have two important markets, viz., cotton and bullion and in Calcutta jute and tea; fourth, the greater importance of the Bombay Stock Exchange compared to the Calcutta Stock Exchange. The partition of India and Bengal will further have the effect of depriving Calcutta of a large hinterland as also of a substantial amount of the trade in raw jute. Like New York in the U.S.A., Bombay is, therefore, likely to develop in course of time as the predominant financial centre of India.

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U.K. TRADE COMMISSIONERS IN INDIA

THEIR WORK AND FUNCTIONS

By
ROWLAND OWEN, C. M. G.,
Senior United Kingdom Trade
Commissioner in India.



The author (centre) talking to His Excellency the Governor-General, Mr. C. Rajagopalachari, with Mr. L. Harrison, Principal Trade Commissioner at Delhi, at a reception at Government House.

I AM grateful to the Editor of CAPITAL for providing on such an auspicious occasion as the issue of this special number, an opportunity for a description of the purpose and functions of United Kingdom Trade Commissioners and the Department which they serve—the Board of Trade. I trust that this description, however imperfect, will lead to a better understanding of the scope and implication of these functions and that in consequence the United Kingdom Trade Commissioners may be able more effectively to play their part in giving service to the commercial communities in India and the United Kingdom—an objective pursued with such skill and distinction by CAPITAL itself for the last 60 years.

The export drive of the United Kingdom has given many industrialists a new interest in overseas markets, in the same way as many Indian business men are now establishing contact for the first time with external sources of supply. In the United Kingdom there are many industrialists to whom overseas trade represents a new field of exploration, and starting perhaps without the advantage of wide experience they may feel at first that they are rather groping in the dark. Not all firms have a background of pre-war Indian or Continental or world trade, and even the frame-work of an already existing trade may need overhaul and adjustment to meet new conditions. For the information and advice required, firms in the United Kingdom call on the Board of Trade.

EXPORT INQUIRIES

An exporter will require, for example, up-to-date information about:—
Prospects for United Kingdom trade in overseas markets and requirements of particular markets.

Tariffs and duties on his goods, and other legislation affecting trading in the countries in which he seeks to sell.

Methods of trading in overseas countries.

Goods most likely to sell.

Local tastes and preferences, particularly in the design of goods.

Import regulations of overseas countries.

Reliable reports on the standing and influence of firms with whom he contemplates entering into business relations.

A ready means of making contact with the best agents or importers overseas for the sale of his goods.

The Export Promotion Department of the Board of Trade draws upon its overseas officers, whether they are members of the Foreign Service or Trade Commissioners, for all such information. In addition, the Department undertakes in collaboration with its overseas officers:—

Maintenance of records of importers in overseas markets.

Notification to United Kingdom exporters of opportunities for the sale of their goods and of overseas calls for tenders.

Production of booklets, etc., conveying in a convenient form information about trading methods in individual countries, hints to business men travelling abroad, etc.

Another important part of the Department's work is the organisation of the British Industries Fair in London, and of Government participation in and assistance to exporters to participate in overseas exhibitions and fairs. Advice and information for the Indian business visitors contemplating a visit

to the Fair are provided and general publicity for the Fair arranged by the United Kingdom Trade Commissioners and British Information Services in close collaboration.

A DAY'S EVENTS

An indication of the nature of the work which the procurement, preparation and presentation of this material requires in an overseas post may perhaps be best gathered from the following diary of a normal day's events in a Trade Commissioner's office—for obvious reasons the precise names are obscured, but the incidents are facts. (Mercifully not all these things happen every day.)

—Visit from Managing Director of United Kingdom manufacturing Company seeking assessment of the current economic situation, estimate of probable trend of development, examination of the nature and strength of factors at work.

—Letters from United Kingdom firms for lists of importers of textiles, hardware, motor car batteries, radio sets, bicycle parts and accessories and glass eyes.

—Letters from firms in India desiring to import from the United Kingdom hosiery, knitting wool, stationery, sewing needles, cork sheets, chaff cutters and buttons.

—Letters from firms in India desiring to extend exports to the United Kingdom of ham and bacon, hides and skins, sports goods, porcupine quills and peacock feathers.

—Letters from Departments of Central or Provincial Governments asking regarding supply of equipment for a Provincial Rehabilitation Programme, performance data of roadmaking machinery, development of refrigeration industry in the United Kingdom, machinery for the manufacture of safety fuses, name of manufacturer of new mobile safety saw.

—Call on a Ministry to ascertain facts regarding a proposed scheme of development.

—Telegraphic enquiry from Board of Trade regarding rumoured alteration in system of allocation of jute goods export quotas.

—Visit from export Manager of a United Kingdom firm interested in veterinary supplies and in making contact with Ministers and policy making officials.

—Letters from United Kingdom firms seeking agents, requesting interpretation of Tariff schedules, enquiring regarding future industrial policy or seeking information regarding legislation under consideration in India.

—Lunch with representative of Society of British Aircraft Constructors: discussion regarding I.C.A.O. Standards and other implications, prospects for the sale of aircraft, air-field lighting equipment and radio aids to aerial navigation.

—Visit from firm of Consulting Engineers, anxious to review current situation before establishing Branch office in India.

—Letter from firm in the United Kingdom interested in hospital equipment and enquiring regarding probable pace of execution of Bhoire report.

—Call on senior technical official newly returned from deputation to United Kingdom to enquire regarding results of tour.

—Letter from firm in Calcutta seeking assistance in overcoming difficulties in securing sea passages from the United Kingdom to India for staff on leave.

—Visit of representative of a United Kingdom firm who is investigating the possibility of starting manufacture in India. Apart from a general assessment of economic conditions he wishes to know specifically:

1. The application (a) to the product (b) to such raw materials as may have to be imported of the customs duty and import and export regulations.
2. The availability of indigenous raw or semi-manufactured materials.
3. The condition of transport and the operation of the railway priority system.
4. Recent pronouncements of the Tariff Board on the industry in which he is interested or on allied industries.
5. The way in which his scheme will fit in with Central and/or Provincial Government plans.
6. The effect on retail prices of local octroi, toll and sales taxes.
7. The best location of his factory with reference to (a) labour rates (b) availability of raw materials and power, bearing in mind possible developments such as the extension of existing, or the creation of new ports and power schemes, railway lines and canal navigation systems.
8. Details of labour legislation, both Central and Provincial.
9. Legislation, actual or in prospect, to which the capital structure of his venture may have to conform and regulations governing the remittance of profits to the United Kingdom.
10. The rate of taxation and the availability of local capital investment.
11. The standing and technical skill of possible associates already established in the country.
12. Specifications or standards to which his product will have to conform.
13. The history of similar recent ventures, if any, which may give him an indication of possible difficulties.
14. Suggestions on possible demand for and popularity of his product.

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The emphasis of the work of the Export Promotion Department of the Board of Trade is primarily on the urgent need to extend United Kingdom exports of goods and services. For this reason the Export Promotion Department is mainly in contact with individual traders in the United Kingdom or overseas who are engaged in the actual work of export rather than with other Government Departments. But in addition to these activities it is also responsible for providing the policy-making Departments with the economic, commercial and in many cases financial data on which policy decisions relating to external trade can be based. These decisions involve several Departments of State. The general relations of the United Kingdom with (a) Foreign and (b) Commonwealth countries are a special responsibility of (a) the Foreign Office and (b) the Commonwealth Relations Office. The trading interest of the United Kingdom is a special responsibility of the Board of Trade. The financial position of the United Kingdom in relation to Foreign and Commonwealth countries is the special responsibility of the Treasury. Ultimate responsibility for any matter of major policy is that of His Majesty's Ministers collectively.

The formulation of commercial policy towards Commonwealth and Foreign countries, and the conduct of trade negotiations with other Governments, are thus primarily the responsibility of the Board of Trade. And within the Board of Trade, of the Commercial Relations and Treaties Department. Within this Department in the Board of Trade, in addition to sections dealing with special matters, there are a number of officers who devote their time to the study of commercial relations with particular countries or groups of countries, and are serviced with information by the Overseas organisations of the Board. They keep in close touch with the relevant geographical and economic Departments of the Commonwealth Relations Office and Foreign Office in order to ensure that commercial policy is in line with general Commonwealth and Foreign policy, and also with the Treasury who have an Overseas Finance Department. There are in addition a number of other Departments (e.g. Food, Civil Aviation, Fuel and Power) which are associated in their respective spheres with the three Departments principally concerned in the formation of economic policy towards Commonwealth and Foreign countries.

INTER-DEPARTMENTAL CONTACTS

In Foreign countries (for example, in Burma) economic work is conducted through the Commercial Secretariats of United Kingdom Diplomatic Missions abroad, who are responsible to the Foreign Office and staffed by members of the Foreign Service. These officers are the chief sources of information on economic developments in Foreign countries: they are also responsible for handling trade questions as defined above with the Governments to which they are accredited, under instructions from the Commercial Relations and Treaties Department of the Board of Trade.

In Commonwealth countries (excluding the Colonies), the allocation of responsibility for commercial relations follows a similar pattern with the differences firstly, that the Commonwealth Relations Office and not the Foreign Office is generally responsible for relations with those countries, and secondly, that the United Kingdom Trade Commissioners stationed in Commonwealth countries, unlike the Commercial Secretariats in Foreign countries, are primarily responsible to the Board of Trade. But in the Dominions, the Senior United Kingdom Trade Commissioner is in each case also the Economic Adviser to the United Kingdom High Commissioner and thus keeps in touch through the latter with the Commonwealth Relations Office. Although the nomenclature varies and the Departmental chain of command also varies, the duties carried out by members of the Commercial, Diplomatic and Trade Commissioner Services are broadly similar: the duties of a Senior Trade Commissioner equivalent to those of Minister (Commercial), those of Principal Trade Commissioners (at Calcutta and Delhi) equivalent to Commercial Counsellor, and those of Trade Commissioner to Commercial Secretaries.

RELATIONSHIP TO U.K. HIGH COMMISSIONER

Members of the business community in India are sometimes puzzled by the relationship between the organisations of the United Kingdom High Commissioner and that of the Senior United Kingdom Trade Commissioner. In brief, while the High Commissioner is responsible to the Secretary of State for Commonwealth Relations for the general conduct of all matters affecting United Kingdom policy in relation to India, the Senior Trade Commissioner and his officers have specific responsibilities to the Board of Trade in respect of commercial policy generally, and in respect of the provision of the economic information on which commercial policy must be based. But political policy has economic implications, and commercial policy has political implications. In a country like India, in which the United Kingdom has interests of diverse character and wide scope, there are few situations or policy developments the interpretation of which do not call for the study of commercial as well as political implications. The relationship between the duties of members of the staff of the High Commissioner and the Senior Trade Commissioner must, therefore, always be close and co-operative. At the capital the arrangements under which the Senior Trade Commissioner

acts as Economic Adviser to the High Commissioner reflects the relationship. In the provinces, the relations between Deputy High Commissioners and Trade Commissioners are similar, although they have not been embodied formally in titles. This might indeed be deduced from the location in the same building in Calcutta and Madras of the local representatives of the High Commissioner and the Senior Trade Commissioner. Shortage of suitable accommodation alone has temporarily prevented a similar arrangement in Delhi and in Bombay.

Another relationship which the business community sometimes finds confusing is that between the Trade Commissioners and the members of the staff of British Information Services who handle trade information. Broadly speaking, the Economic Information Officer at Delhi and the Trade Information Officers at Calcutta, Bombay and Madras are concerned with providing general information to India regarding such commercial and industrial developments in the United Kingdom as it is thought will be of interest. Frequently, information issued by British Information Services results in enquiries of a character which might lead to the establishment of commercial relations between a buyer and a seller. Enquiries of this kind are diverted by the British Information Services to Trade Commissioners.

"TWO-WAY" INTERPRETATION

It will now I hope be clear from what has been said above that the role of the United Kingdom Trade Commissioners is generally to play a part in interpreting to India the commercial policy of the United Kingdom, equally in interpreting to the United Kingdom the commercial policy of India; specifically, they assist organisations and firms in India who wish to make contact with suppliers in the United Kingdom, they assist Indian business visitors to the United Kingdom with advice and information, they assist United Kingdom business visitors to India similarly, and generally seek to knit closely the commercial relations between the two countries. These duties, especially the "two way" interpretation, cannot be discharged without knowledge and appreciation of the problems which face the British business community in India. The quest by United Kingdom Trade Commissioners for wide knowledge leading to exact appreciation—for news and views—is and must be constant and unremitting. For without the results of this quest no Trade Commissioner can be in a position adequately to

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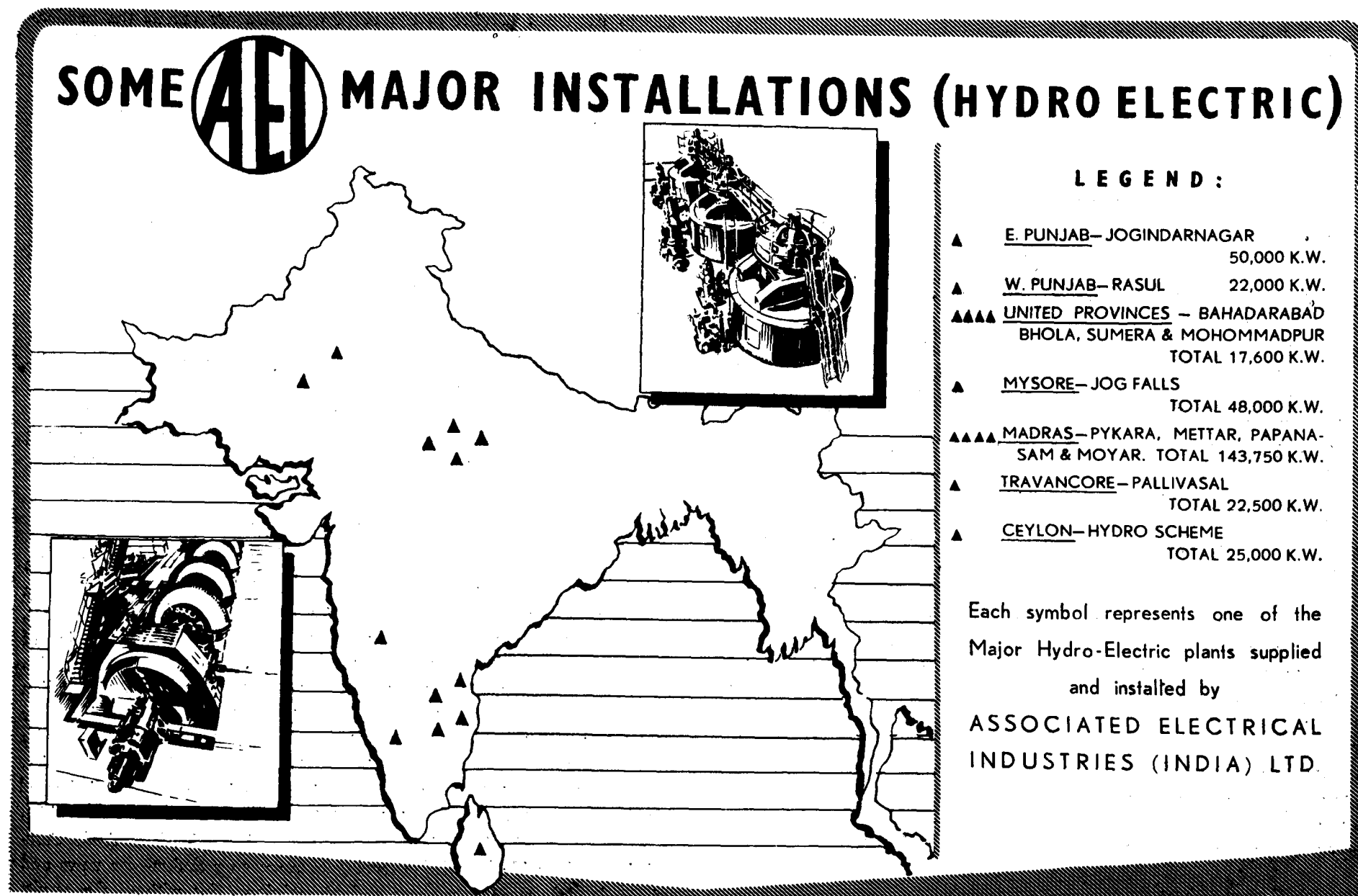
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play the role for which his post has been established, and discharge his responsibilities either to his own Government and his own business community, or to the Government and the business community with which he is accredited. In the changed times in India and with the machinery of Government both in India and the United Kingdom heavily involved in commercial and industrial questions, the United Kingdom Trade Commissioners have a useful interpretative and developmental rather than restrictive part to play.

ADVISERS AND EXPERTS

A question often asked, although less frequently now than in the '20s and '30s, is why so few Trade Commissioners have technical qualifications or industrial experience. I should be the first to admit that in dealing, for example, with matters relating to chemicals, the services of a chemist would be extremely useful. But the range and variety of subjects with which we have to cope is such that the organisation in India would have to be multiplied almost a hundredfold to enable us to provide technicians for even the more important aspects of our work. A study of the trade returns of the United Kingdom or of India will give a clue to the range of technical skill which would be required. We should have to have not only chemists, but chemical engineers, electrical, civil, mechanical, aeronautical, marine and railway engineers, textile and leather technologists, geologists and mineral, metallurgical and transportation experts, experts in medical and veterinary practice, in banking and insurance, patents, trade-marks and standards. None of these experts would be interchangeable: each of them would be individually probably costly and in the aggregate extremely so. Even if such an organisation were to be provided, I doubt whether, in view of the strength and skill with which United Kingdom firms are represented in the commercial world in India, it would represent good value for the United Kingdom tax-payer's money. It must not be forgotten that even such a glittering array of experts would help us very little to cope with our commercial policy responsibilities towards the Board of Trade, the United Kingdom High Commissioner and the United Kingdom Government. In any event the High Commissioner has on his staff a Financial, a Shipping and a Labour Adviser and others may be added later. We can, I think, justly claim as civil servants special knowledge and experience of those aspects of the machinery of Government which touch the commercial world. And that training and experience will be, I feel, of special value unless and until the surface of contact between Governments and commerce is drastically reduced. A United Kingdom Trade Commissioner, therefore, has to be in fact a jack of all trades. He cannot, indeed must not, if he is to maintain his impartial status in the business community in which he moves, be expected to sell goods. That is a function the manufacturer must perform for himself or employ others to perform for him.

ENLARGED ORGANISATION

The United Kingdom Trade Commissioner Service in India which has been considerably expanded in the last three years, now includes in addition to the old familiar posts opened thirty years ago by Sir Thomas Ainscough in Calcutta and Bombay, posts at New Delhi (since 1945 the Headquarters post) and Madras. The New Delhi post, which I opened on my own arrival in India in January, 1945, is now staffed—apart from my own post—by three Trade Commissioners, one of whom is equivalent in rank to Commercial Counsellor, two being First Secretaries, and four Second or Third Secretaries. The staff at Delhi is more numerous than at any other post in the Trade Commissioner Service anywhere in the world. It is only paralleled by the numbers in the Commercial Departments of the British Embassies at Washington, Buenos Aires, Rio and Paris. It is made necessary firstly, because on the Delhi post falls the responsibility for Central Government contact, the giving and receiving of information, reporting on the economic situation generally, on commercial and industrial policy, relations affecting trade and commerce, and on industrial development plans, for the guidance of Government Departments in the United Kingdom which require this information and for those elements in United Kingdom industry which rely on official sources. Secondly, the staff at New Delhi has to provide economic advice to the High Commissioner to enable him to discharge his general responsibility to the United Kingdom Government. And thirdly, the headquarters post has to handle questions of general organisation relating to Trade Commissioners all over India. The work in the Provincial posts is necessarily of somewhat different character.

The greater part of the work at a provincial post lies in the search for and the provision of the information necessary to enable the Export Promotion Department of the Board of Trade to carry out the responsibilities implied by the duties described at the beginning of this article. Reports for the Board of Trade and United Kingdom firms on market prospects, recommendations regarding methods of representation and the provision of information to Indian enquirers about sources of supply in the United Kingdom make up the major part of the day's routine. But the provincial post has to maintain contact with the Provincial Governments and States Governments in its area, with branches of the Central Government and with commerce and industry generally. Officers such as the Principal Trade

Commissioner at Calcutta who are in charge of provincial posts, rely on the Headquarters post for overall policy direction and also for a flow of information derived from the Central Government. They are then responsible for assessing the commercial implications of Central Government action. Officers in the Headquarters post rely mainly on their provincial colleagues for knowledge of what is going on in the commercial world, of its hopes and fears, its problems and plans. On the basis of the knowledge they reach their conclusions, make recommendations regarding commercial policy and play whatever may be the appropriate part in its execution in India.

TEAM WORK

In an attempt to produce real team work between officers of all four posts, Trade Commissioners are transferred from post to post with what I am afraid the business community will be tempted sometimes to regard as disconcerting frequency. But it has produced a situation in which most of the officers at the Indian posts to-day have had experience of one or more of the other posts. For myself, I seek to pay visits at regular intervals to all posts as well as to parts of the country where there is no permanent Trade Commissioner representation, and my colleagues and I in Delhi welcome visits from businessmen in Calcutta, Bombay, Madras and elsewhere.

Arrangements exist for Trade Commissioners to visit the United Kingdom and tour the various centres of industry. The tours are arranged by the Export Promotion Department of the Board of Trade in close collaboration with Chambers of Commerce and representative industrial organisations. United Kingdom tours are specially valuable because they give the Trade Commissioner an opportunity to learn at first hand the manufacturer's view of the problems facing exporters to the territories in which Trade Commissioners are stationed. During such tours, United Kingdom manufacturers and exporters receive in exchange, in the intimate atmosphere of a discussion—which can never be reproduced in correspondence—information and advice from someone with wide general experience of the market. To gain that experience, to keep it soundly based and constantly fresh is a continuing task for the Trade Commissioners, so that they may provide the best service possible for the commercial communities in India and the United Kingdom, for the Government which they serve and the Government to which they are accredited.

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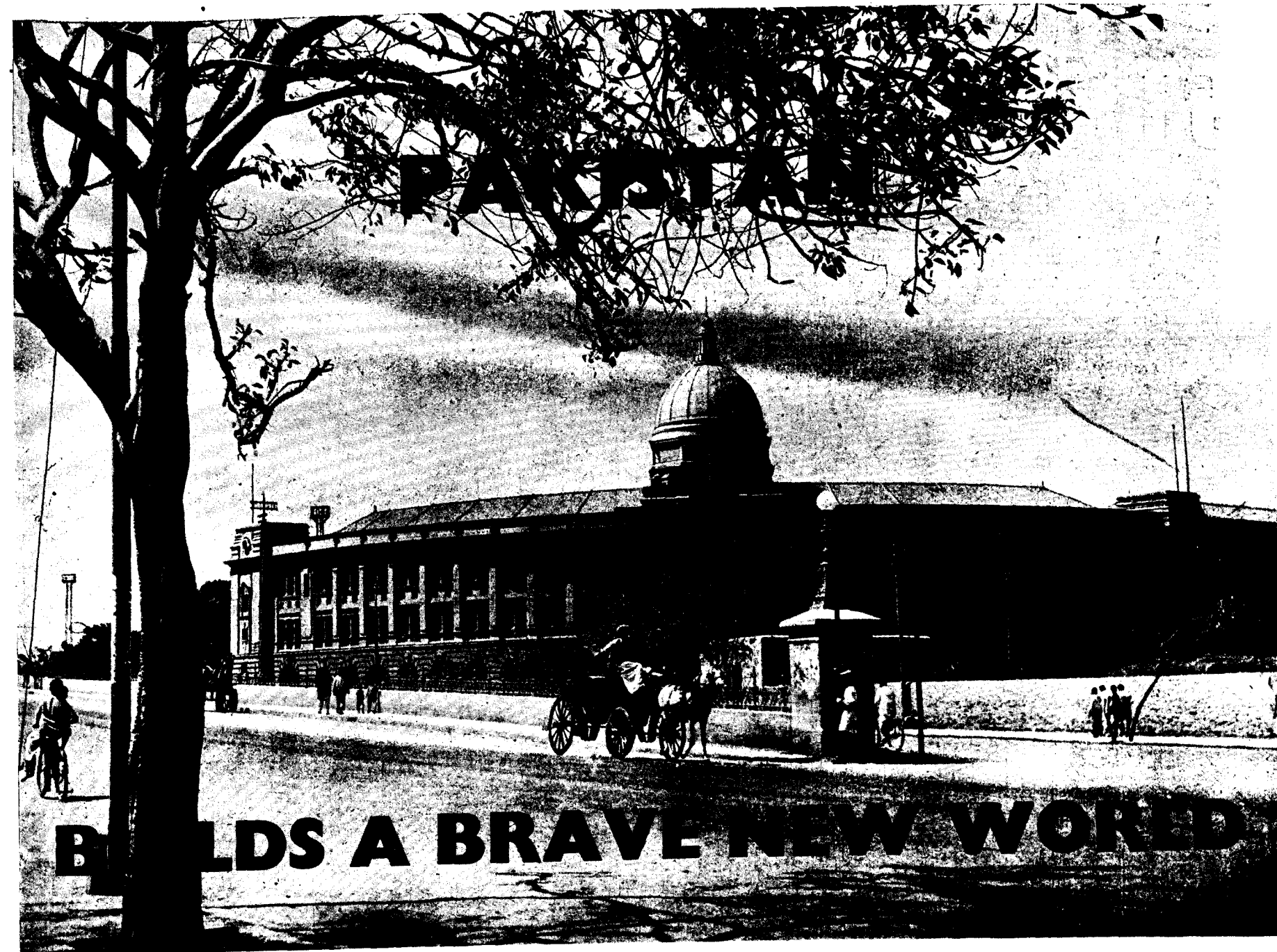
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It will be some time before the history of the first storm-tossed year of Pakistan's existence can be written with a proper sense of perspective and proportion; the purpose of the present article is not to attempt anything of the sort, but to survey—necessarily rather superficially—the commercial, financial and economic progress and prospects of the new State. Looking back over an eventful year, saddened at its close by the death of the great founder and leader of the State, one could describe the main landmarks on the road to progress as the financial settlement with India, the Central budget, the Industrial Policy Statement, the achievement of currency autonomy with the inauguration of the State Bank, the agreement with India for the exchange of essential commodities, and the sterling balances agreement. Of these more hereafter. The outstanding fact, in the view of most observers, is that Pakistan's administration has, at the policy level, handled its financial and economic problems wisely and well. This is not to say that the administrative machine has functioned smoothly or efficiently; execution has lagged behind policy and the administration, which is fortunate in possessing senior officers whose sagacity, adaptability and unflagging zeal have done much to lay the foundations of the economic stability of the new State, is woefully weak at the lower levels and has been handicapped from the start by the absence of statistics, lack of records and even shortage of material office equipment. When we consider the vastness and complexity of the multifarious problems with which the newly fledged Government has had to deal since partition, the surprising thing is that the administration did not break down altogether. How easily in the calamitous days of the close of 1947, could it have taken a plunge into chaos! Far from this happening, few will now be found to deny that Pakistan has not only established herself firmly, but moved forward to an ordered pattern along lines which should lead in the not distant future to a fair measure of economic stability and prosperity.

wheat, and main cash crops jute and cotton. About 25 million acres are under rice, the yield of which is 33.7 per cent. of the total rice yield of pre-partition India. About 10 million acres are under wheat, the yield being 3½ million tons or 40.8 per cent. of the total. In normal years, the country is not merely self-sufficient in these foodgrains, but produces a substantial surplus. Nearly 1.4 million acres are under jute, the yield being about 4 million bales or 73.4 per cent. of the total of pre-partition India. All the long staple cotton of the sub-continent is produced in Pakistan and 3.2 million acres were under this crop in 1946-1947, the yield being 1.7 million bales valued at Rs. 45 crores. The agricultural economy of Pakistan is thus extremely well balanced, since the country has not only ample food for its people, but valuable export counters which will produce the foreign

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A YEAR OF TRIAL AND SOLID ACHIEVEMENT

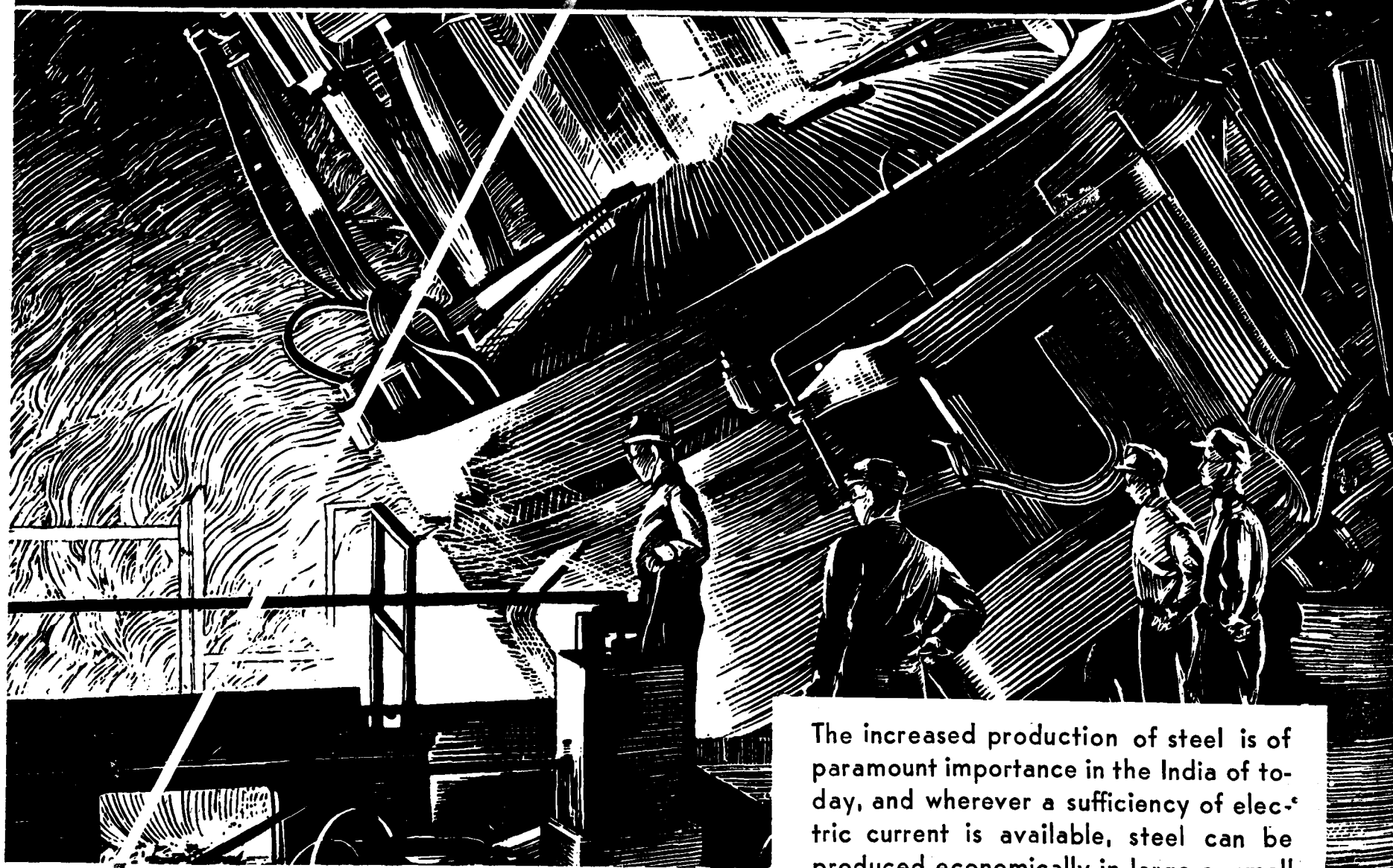
By
 F. M. INNES, C.I.E., I.C.S. (Retd.)

ECONOMIC BALANCE SHEET

Let us now, at the risk of repeating what is already familiar, consider some figures illustrating the main features of Pakistan's economic assets and deficiencies. On the basis of manpower, the new State can claim to be easily the largest Muslim State in the world, the population at the last census being recorded as 65.6 million; but an obvious weakness lies in the fact that Eastern Pakistan, comprising 54,100 square miles and a population of 41.8 million, lies separated from Western Pakistan (179,000 square miles, population 23.8 million) by a distance of over a thousand miles. Both segments are predominantly agricultural, the main food crops being rice and

exchange required for essential purchases from abroad. Pakistan has something near a world monopoly in raw jute, now that India has agreed to limit her exports of this commodity to 900,000 bales per annum, and the demand for her long and medium staple cotton far exceeds the supply. It is only in the industrial sphere that the new Dominion's weakness is apparent. At partition, she found herself in possession of 14 cotton mills, 9 sugar mills, 5 cement factories, 4 glass factories, 1 woollen mill, 2 petrol refineries and very little else in the way of industrial installations. The total number of workers employed in factories was only 26,000. The most critical shortage has from the outset been that of coal; out of its total requirements for railways and industries of 3.4 million tons a year, Pakistan is able to produce

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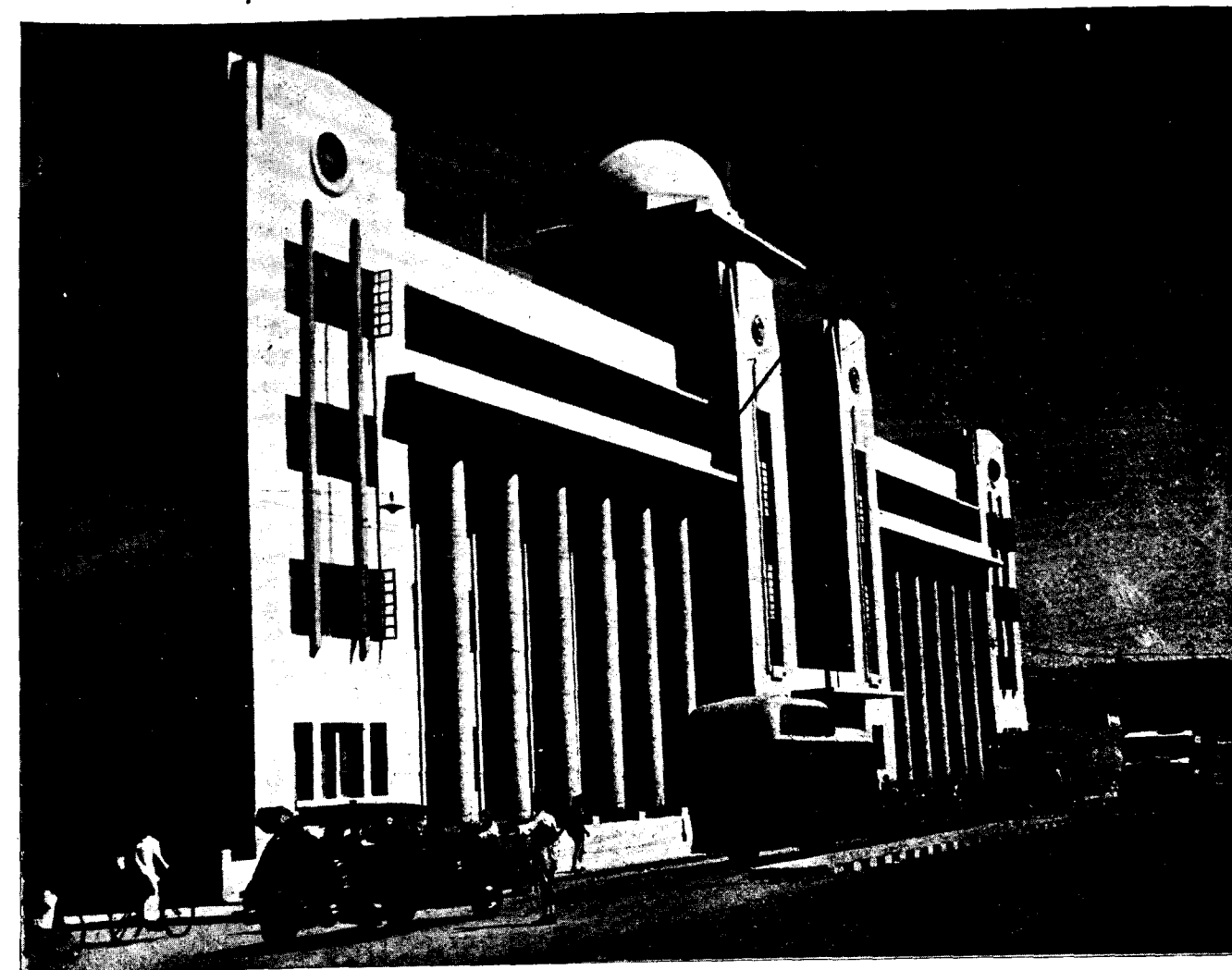
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only about 300,000 tons of poor quality coal. Lack of a steel industry is also a serious handicap. Pakistan requires at least 200,000 tons of iron and steel annually, and neither produces any, nor has any prospects of being able to establish this industry. Mineral resources are generally undeveloped, with the exception of salt, gypsum and chromite. The Punjab oilfields produce about 15 million gallons annually, and there is hope that both Western and Eastern Pakistan may prove to be important oil bearing regions. In the consumer goods field, cotton cloth, paper and sugar are the main deficiencies, but there is no intrinsic reason why these industries should not be built up successfully. Requirements of paper, other than newsprint, are 27,000 tons per annum and production is nil, although ample supplies of the main raw material, bamboo, are available. Requirements of sugar amount to 245,000 tons per annum, of which Pakistan at present produces only 25,000 tons; a large new factory is, however, in process of construction and a considerable increase is in sight. The most serious deficiency is cotton cloth. Minimum needs are 7 lakhs bales or 1,040 million yards, while the existing production is 51,000 bales, or 76½ million yards—if handloom production is included, the latter figure should be increased to 90 million yards.

INDUSTRIALISATION

These statistics present, therefore, an overall picture of a sound agricultural economy counterbalanced by grave industrial weakness. Yet, so long as the existing trends in the world economic situation continue, Pakistan may congratulate herself on her strong position. Few countries are so well supplied with the wherewithal both to feed their own population and to earn the foreign exchange necessary for importing goods to make up deficiencies. Indeed, an arguable case could be made out for the Pakistan Government contenting themselves for the present with the developing of these assets rather than struggling to remedy the deficiencies. In this view, industrial progress could be left to look after itself, while Government would devote their attention to schemes of land reclamation, irrigation, improved cultivation, electrification, and improvement of transport facilities. The present time is, indeed, a particularly difficult one to embark on an industrialisation programme. Capital goods are enjoying high scarcity value, manufacturers' order books are filled for several years ahead, land values are inflated, building costs are high and materials scarce, and it will be some years before technical training schemes will have produced a skilled labour force. The Pakistan Government are, however, determined to press on rapidly with their industrial programme, and strategic considerations are of sufficient importance to outweigh any arguments in favour of a "go slow" policy. They are rightly paying most attention to industries based on Pakistan's own raw materials and, if the initial practical difficulties can be overcome, the prospects are manifestly good for the jute, cotton textiles, paper, soap, sugar, wool, and leather industries. Pakistan is already self-sufficient in cement.

POWER AND PORTS

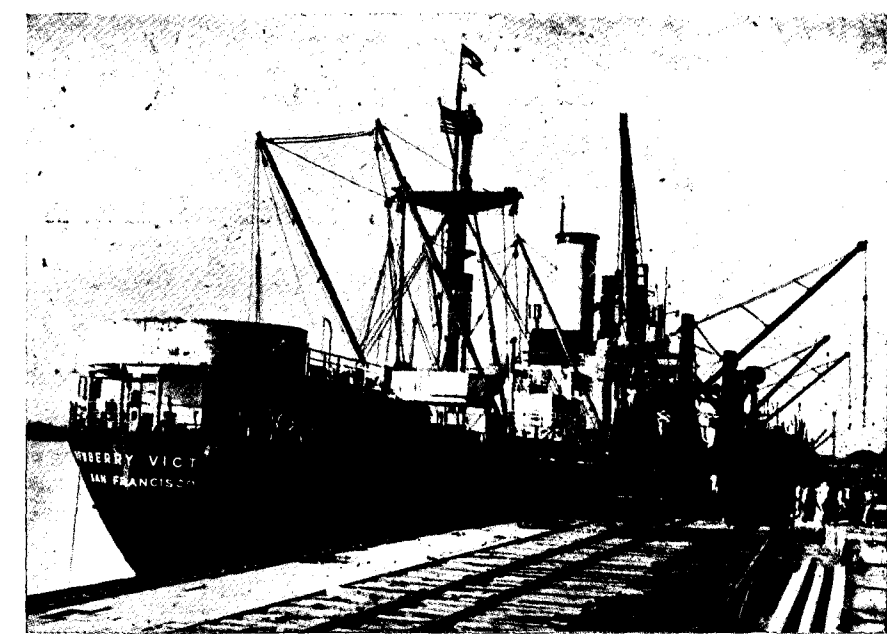
Power development is the first *sine qua non* and Government lost no time in obtaining the services of an expert to draw up a scheme for

hydro-electric expansion which, in the absence of sufficient coal, must provide the power for Pakistan's industries. The hydro-electric scheme at Rasul in the Punjab, which will generate 22,000 kW, is already under construction, and another West Punjab scheme in the Mianwali District, which will produce 26,000 kW, is also to be taken up. In the North West Frontier, a hydro-electric installation at Malakand is already in operation, but it is proposed to increase its capacity from 10,000 to 20,000 kW; and work is starting on a new multi-purpose scheme at Warsak which will irrigate 650,000 acres as well as providing power for the West Punjab and the North West Frontier. Both the Central and the Provincial Governments are also anxious to get the Dargai scheme, which will generate 20,000 kW, started as soon as possible as some of the preliminary work for this has been done. The Sind canal hydro-electric scheme is also to be proceeded with, while in East Bengal work has already begun on the Karnafulli scheme near Chittagong, which will generate 60,000 kW. Thermal electric stations are to be set up in Karachi, Chittagong, Rawalpindi, Dacca, Lyallpur, Hyderabad (Sind) and Multan.

Development of Pakistan ports is an equally vital necessity. Karachi port requires a dry dock, but is otherwise sufficiently well equipped to handle the trade of Western Pakistan. Chittagong is in urgent need of expansion, if the port is to accommodate not only the bulk of the raw jute exports of East Bengal but also the import requirements of that area, which were previously handled at Calcutta. The highest priority is being given to the development of Chittagong port, but too much time has been wasted at the committee stage. Meanwhile the town is rapidly assuming the character of a commercial centre of considerable importance.

ROLE OF PRIVATE ENTERPRISE

The industrial Policy Statement issued by the Pakistan Government in April, 1948, came out strongly on the side of private enterprise. The railways, the posts and telegraph system and wireless and broadcasting were already State-owned, while road transport was in process of nationalisation. To these are to be added the munitions industry, generation of hydro-electric power, and manufacture of railway wagons, telephones, telegraph and wireless apparatus. The remainder of the field is left open for private enterprise, though it is possible that river services may at a later date be nationalised. Development of industries has been transferred from the Provincial Legislative list to the concurrent list; herein lies, perhaps, a weakness in the Policy Statement, for concurrent jurisdiction is likely to prove a constant source of friction. The Centre will plan the development of 27 important industries, while the Provinces will be largely responsible for implementation of the plans, except in the case of nationalised industries. An Industrial Finance Corporation is to be established, and certain taxation concessions (which, however, do not amount to substantial relief) are granted to new industries.



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Foreign capital is welcomed, provided it does not claim special privileges and is prepared to provide training facilities for Pakistan nationals. It is, however, expected that indigenous capital should be given the opportunity to participate in new ventures. In the case of thirteen specified industries, the promoter is ordinarily required to give Pakistan nationals the option to subscribe 51 per cent. of the capital, and in the remainder 30 per cent. At one time it appeared that Government proposed to apply these rules inflexibly, and this section of the Statement was received in certain foreign business circles with marked lack of enthusiasm, but the attitude of Government has since been considerably modified and a later Statement was issued clarifying some of the provisions so as to meet the more important objections. If foreign capital is still slow in coming forward, this is due more to the high taxation rates and the practical difficulties of starting new industrial enterprises in present circumstances than to any dissatisfaction with Government's policy and attitude. So much for the industrial groundwork and prospects.

FINANCIAL SEPARATION

On the financial side, the first notable landmark was the conclusion of a financial settlement with India in December, 1947. Considering the unhappy political relations subsisting between the two Dominions at that time, and the complexity of the subject, this agreement was a remarkable achievement and it was hailed as the first sign of returning sanity. The main provisions of the settlement were that the cash balances of the old Government of India were split up, Pakistan's share amounting to Rs. 75 crores or roughly 17½ per cent. of the total, while Pakistan took over 17½ per cent. of the excess of the old Government's liabilities over its assets, after deducting the liabilities directly assumed, e.g., for the railways situated in Pakistan. The agreement covered the division of military stores and included a formula for the sharing out of the sterling balances. Pakistan was to repay her debt to India in annual instalments spread over a period of 50 years from August, 1952. As far as the layman could judge, the settlement was fair to both sides and was at least a triumph of common sense.

At the time of partition, it was a commonplace to say that, while Pakistan would be favourably supplied with foreign exchange, she would be in a less comfortable position in regard to revenue and would have to face a series of deficit budgets. The Central budget for the first full year of Pakistan's existence confounded the pessimists, and was something of a *tour de force*; by maintaining the taxation measures of Mr. Liaquat Ali Khan's budget of 1947 in their full severity, centralising and enhancing the sales tax so as to yield a net revenue of Rs. 375 lakhs, increasing export duties, and stepping up the import duties on luxury articles, Mr. Ghulam Mohammed, the Finance Minister, succeeded in converting a deficit of Rs. 10.16 crores into a small surplus of Rs. 5 lakhs for the year. Nevertheless, though this achievement did much to establish the credit of the new State, it would be an exaggeration to say that the Pakistan Government have as yet succeeded in placing their finances on a sound basis. They are in a fair way to do so, but there are weaknesses which cannot be ignored. In the first place, the Provinces, with the exception of Sind, are financially groggy, and even Sind is temporarily embarrassed by the recent disastrous floods. In East Bengal, the deficit for 1948-1949, amounted to Rs. 573 lakhs, of which Rs. 383 lakhs was to be covered by fresh taxation, leaving a net deficit of Rs. 142 lakhs; in the West Punjab the gross deficit was Rs. 673 lakhs and the net deficit Rs. 160 lakhs. The North West Frontier Province also had a small deficit. Secondly, the Centre is at present placing too much dependence for its revenue on high export duties, which can only be maintained so long as the prices of primary products remain inflated and the world demand unabated; how long, for example, can raw cotton continue to pay Rs. 60 per bale? Thirdly, the high rates of direct taxation can only operate as a deterrent to industrial enterprise. These weaknesses are, of course, recognised, and new and more permanent sources of revenue are being tapped. An Estate Duty bill was introduced at the session of the Legislature held in May, 1948; the rates at which the duty will be levied are not specified in the bill, but since agricultural estates are not exempted, this duty should prove a fruitful source of revenue.

CURRENCY CONTROL

The Reserve Bank of India was to have continued as the common currency authority for India and Pakistan until the 30th September, 1948. It says much for the energy of the Finance Ministry that despite the pressing pre-occupations of day-to-day administration, they were able to advance this date, and Pakistan took over its own control of currency, banking, exchange control and public debt from the 1st July, 1948, when the new State Bank came into being. The Bank has a paid-up capital of Rs. 3 crores, of which 51 per cent. has been subscribed by Government. There is a Central Board of eight Directors, of which three are elected by the private shareholders, and local Boards at Dacca, Karachi and Lahore. Meanwhile, the Pakistan administration had already taken steps to create a gilt-edged market. Four loans were issued for development purposes in February, 1948. These consisted of a 2½ per cent. loan 1953-1954, a 3 per

cent. loan 1960, a 3 per cent. loan 1968, and 1½ per cent. income tax free bonds 1958. The loans were left on tap for several months and were officially described as fairly successful. Fortnightly treasury bill tenders were also commenced in June, 1948, in order to provide the Pakistan Banks with an avenue for short-term investment, with very encouraging results.

STANDSTILL, AND AFTER

No account of the economic progress made by the new Dominion could be complete without a reference to its relations with the sister Dominion of India, since the economic systems of the two countries naturally dovetail into one another. Reference has already been made to the all-important financial settlement; almost equally important to the business community was an agreement for the avoidance of double income tax, which was concluded at about the same time; and these two major pacts were followed by a series of agreements on minor matters. All this time, however, the commercial relations between the two countries were largely governed by the



Bales of jute on the quayside at Chittagong awaiting loading into the British ship "Forbes." Efforts are being made to expand facilities at the port and increase its capacity.

standstill agreement under which free movement of goods between the two and a unified tariff system was secured. At one time, it appeared that this agreement was in a fair way towards becoming a dead letter, and a series of mutual recriminations and retaliations began. It would serve no useful purpose, after this lapse of time, to attempt to apportion the blame. The business community on both sides of the border could only wonder what would happen, seeing that so much discord had grown up during the currency of the agreement, when the standstill arrangements were terminated at the end of February, 1948; and it was noted with alarm that the more urgent preoccupations of the two Governments had prevented them from getting together to discuss the future set-up. At the outset, when for Customs purposes the two Dominions became "foreign territory" *inter se*, the prospects looked bleak for business, and it was feared that the flow of commodities essential for industries or general consumption in either country would dry up. Fortunately, however, the very fact of complete economic cleavage brought into the open, and underlined, the sheer necessity of co-operation in matters of trade. The two Governments lost little time in coming together with this purpose, and by the end of May an extremely satisfactory settlement was reached, covering a period of one year from July, 1948. Space does not permit a detailed discussion of the terms of this document. Pakistan agreed to supply India with 50 lakhs bales of raw jute, while India undertook to restrict her export to 9 lakhs bales predominantly of the Indian variety. Pakistan further undertook to supply 6½ lakhs bales of raw cotton, 175,000 tons of foodgrains, mainly rice, 2 million maunds of rock salt, and large quantities of hides and skins and other goods needed by Indian industry. India, for her part, agreed to supply a little over 2 million tons of coal, the whole of Pakistan's requirements of cotton cloth and yarn (apart from the comparatively small amounts which Pakistan is procuring from other sources, which include the United Kingdom, Russia, Czechoslovakia and Japan), 50,000 tons of jute manufactures, 2,500 tons of paints, 1.3 million tyres and tubes, a variety of chemicals and numerous other requirements. To a great extent, this admirable agreement, if properly implemented, will have healed the economic wounds caused by partition.

CONTROLS FOR HARD CURRENCIES

The commercial community, which only asks to be allowed to get on with its job with the minimum of official interference, is especially interested in the Government's policy in regard to economic controls. In his address at the Annual General Meeting of the Karachi Chamber of Commerce, the Quaid-i-Azam declared that the intention and policy of his Government

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were, for example, the first to introduce into India the manufacture of khaki cloth, antiseptic fabrics and now a revolutionary pre-shrinkage process. All this has kept pace with and contributed to the growth of these Mills. Making the best use of all the knowledge and aids required to produce textiles has enabled them to keep abreast of all new manufacturing methods and to find fresh approaches to old and new problems in peace and in war.

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was to let the channels of free trading flow as freely as possible. In pursuance of this policy, the export control over the main commodities produced in Pakistan has been progressively relaxed. No control is exercised over wool, hides and skins, bones and cotton seed but, unfortunately, it has been necessary to retain a control, directional in purpose, over exports of the two main commodities, jute and cotton. The reason for this is that Government are obliged to ensure maximum shipments to hard currency countries and other countries which can supply capital goods and the other main requirements of Pakistan (and it should be emphasised that the mere earning of foreign exchange is of little profit to Pakistan unless she can buy something she needs with it). Government have also to fulfil obligations arising out of trade agreements with other countries, and it is obvious that jute and cotton must take a prominent place in the terms of such agreements; for example, it would not be possible for Pakistan to fulfil her commitment of supplying 6½ lakhs bales of cotton to India without control over exports. On the import side, there has been considerable, if rather tardy, relaxation of control. This has been made possible by an abundance of sterling: apart from the sterling balance releases, current earnings, thanks to a very favourable trade balance, have been amply sufficient for Pakistan's import requirements from sterling and other easy currency area countries. In the first nine months since partition, the value of exports was roughly double that of imports. Admittedly, these figures cannot be taken as a reliable pointer to the future trend of trade, since the decline in imports was partly due to the dislocation caused by the exodus of the Hindu trading community from Western Pakistan, and partly to a lamentable and wholly uncalled for delay in issuing import licences in the first half of 1948. Nevertheless, even allowing for a considerable stepping up of imports, Pakistan has no cause whatever for anxiety in regard to her resources of sterling and other, soft currencies, and a free flow of imports should help Government in its constant struggle against inflationary trends. The Open General Licence for the sterling areas has accordingly been greatly expanded and has been made applicable to other easy currency areas, which now include Sweden and Switzerland. Furthermore, import licences granted in the first half of 1948, have been automatically revalidated up to the end of the calendar year. The position in regard to dollars and other difficult currencies is not so easy, but has turned out to be more satisfactory than was at first expected, with the result that some relaxation in import restrictions has been possible.

Internal price and distribution controls have continued much as they were inherited from pre-partition India. Some of them have, by common consent, been inefficiently administered and, apart from clogging the normal channels of trade, have been prime causes of blackmarketing and corruption. At a conference held on the subject in April, 1948, the Minister for Economic Affairs made no secret of the fact that these controls were largely responsible for these evils and had given rise to acute hardship and discontent. The official representatives at the conference were inclined to proceed cautiously, while the non-official representatives argued that controls which could not be operated with any semblance of efficiency had better be abandoned. The general decision of the conference was in favour of "progressive de-control" and the first fruit of this has been the lifting of the control over imported cloth and yarn; distribution and price controls over food-grains, coal, iron and steel, paper and petroleum continue in full operation. It must be admitted that the unhappy results of India's experiments in de-control lend colour to the view that, however inefficient, controls should be maintained until conditions for their relaxation are more favourable, and it is by no means surprising that Government are having difficulty in choosing between the Scylla of control and the Charybdis of de-control.

PROSPERITY ASSESSMENT

At the outset of this article the writer, deliberately not putting it too high, predicted a fair measure of prosperity for the new State; that much, at least, is a reasonable deduction from the facts. The road may be uphill



A busy day at Keamari Docks during the refugee traffic rush. Karachi has now been declared a Port of Registry

for some years to come, but behind the bare facts are valuable imponderable assets which inspire confidence in Pakistan's well-wishers—a robust realism unclouded by ideological fog, a sense of fair dealing unhampered by prejudice or inhibitions, pride in the new nationhood tempered by frank recognition of weaknesses and defects, and determination to make a success of the new State. It is these psychological factors which have carried Pakistan through a year of unexampled difficulty; and a country which has survived such a test in the first twelve months of its existence need have little fear for the future.

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INDIAN JOINT STOCK ENTERPRISE

TREND OF DIVIDENDS IN 1946 AND 1947

● By P. C. JAIN, M.A., M.Sc. (Econ.), London, University of Allahabad ●

INDIAN industries suffered many difficulties in 1946 and 1947. The plant in most mills was already old when the war started and replacements had to be postponed during war period, as new machinery was not available in any quantity. In some but not all other countries manufacturers have been able to replace worn-out plant and equipment, even though it be only partially, but India has no machine manufacturing industry, and the import of machinery from abroad has not been possible except in limited quantities. In most cases this has further raised the cost of production per unit of output. The transport bottleneck which seriously affected industry during war period remains and factories still experience great difficulty in getting coal and raw materials and in sending their manufactured goods to markets. In 1946, for the first time in many years, Indian industry faced large-scale industrial strikes, go-slow tactics on the part of labour, and inefficiency and neglect of duty by the workers. For a number of reasons labour gave industry its full co-operation during war period, but with the end of war and the repeal of the Defence of India Rules the attitude changed drastically. High prices, agitation by Communists and the sympathy of Congress Ministries in the Provinces and at the Centre made labour intransigent and uncompromising. As shown in Table I the number of

Table II
INDUSTRIAL PRODUCTION IN INDIA

Commodity	Unit	1945-46	1946-47	1947-48 (a)
Cotton Piecegoods	MILLION YARDS	4,676	3,863	3,775
Jute Manufactures	MILLION TONS	1.11	1.04	1.03
Pig Iron	Do.	1.49	1.36	1.52
Steel Ingots	Do.	1.31	1.19	1.21
Finished Steel	Do.	1.34	1.16	1.04
Sugar (Factory)	Do.	0.94	0.92	0.95
Cement	Do.	2.15	2.02	1.63
Coal	Do.	26.50	26.22	26.77
Paper	MILLION CWTs	2.15	1.43	1.41

(a) Figures for 1947-48 are estimated and provisional.

number of industrial disputes and the man-days lost recorded a further increase.

The resulting dislocation of work was one of the most important causes of lower industrial output as is seen from figures in Table II. Moreover, the trades unions objected to the working of double and triple shifts, which were actually discontinued in many Bombay textile mills and elsewhere, leading to a further fall in output. An amendment to the Factory Act reduced the hours of work in factories from 54 to 48 per week from 1st August, 1946. This also reduced production. Meanwhile, costs of production were increased by lower output and the higher prices paid by mills for raw materials, coal, and chemicals. The wage costs per unit of output rose in all mills. When the hours of work were reduced from 54 to 48 per week wages continued to be paid at the previously prevailing rates. This, in most cases, loaded wage costs another 12½ per cent. Moreover, in every industry, wages and dearness and food allowance were upgraded in accordance with the recommendation of some industrial tribunal or special commission appointed by the provincial government concerned. While costs of production thus increased very substantially the prices of manufactured goods,

Table I
INDUSTRIAL DISPUTES IN INDIA

Year	No. of Disputes	Workers Involved	Man-days lost
1943	716	525,088	2,342,287
1944	658	550,015	3,447,306
1945	820	747,530	4,054,499
1946	1,629	1,961,948	12,717,762
1947(a)	1,811	1,840,784	16,562,666

(a) These figures exclude provinces which now constitute Pakistan.

industrial disputes in 1946 increased to 1,629 as compared to only 820 in 1945 and the number of man-days lost increased more than threefold from 4.05 to 12.72 million. This discontent continued in 1947, and both the

Table III.
1946 and 1947 DIVIDENDS

Dividend per cent. per annum (exceeding the first but not exceeding the second figure)	Cotton Mills		Jute Mills		Engineering and Metal Works 1946 (a)	Coal Companies		Sugar Mills		Tea Companies		Paper Mills	
	1946	1947	1946	1947		1946	1947	1946 (a)	1947	1946	1947	1946	1947
0-24	..	..	1	..	..	2	6	..	..	..	..	1	1
24-5	3	5	1	2	3	4	4	..	2	..	..	..	1
5-7½	3	3	1	4	2	4	2	3	9	2	1	..	..
7½-10	10	8	9	2	2	1	4	4	5	3	3	1	..
10-12½	8	8	4	4	4	2	1	2	3	4	..	..	..
12½-15	15	2	2	7	5	4	..	2	5	..	1	..	..
15-20	19	7	12	10	2	7	3	3	10	4	..	..	..
20-25	12	6	11	6	1	4	2	..	6	5	1	..	..
25-30	7	2	5	6	2	5	2	..	7	2	..	..	..
30-40	3	1	9	6	1	2	1	..	6	4	..	..	..
40-50	1	..	1	1	..	..	..	..	2	1	1	..	..
50-60	..	1	..	..	..	..	..	..	4	1	..	..	..
60-70	..	..	..	..	..	..	..	..	..	2	..	..	..
70-80	..	..	..	..	1	..	..	..	..	2	1	..	..
80-90	..	..	..	..	..	..	..	..	..	3	..	..	..
90-100	..	..	..	..	..	..	..	..	..	3	..	..	..
Over 100	..	..	..	..	..	..	..	..	1	..	..	..	..
Number of Companies	84	43	56	48	21	35	25	15	70	29	8	4	4
Average Dividend per cent. per annum in:													
1947	..	14.60	..	19.19	..	10.75	..	..	22.19	..	12.18	..	..
1946	..	18.14	..	19.96	16.66	15.67	..	10.16	31.46	..	14.37	..	..
1945(b)	..	17.70	..	14.90	15.19	15.96	..	11.37	24.79	..	13.28	..	..
1944(b)	..	17.88	..	13.09	15.87	14.02	..	14.80	22.37	..	13.09	..	..
1943(b)	..	26.82	..	12.72	12.22	11.06	..	13.91	25.39	..	15.50	..	..
1942(b)	..	27.03	..	15.07	13.00	9.48	..	10.82	26.03	..	16.56	..	..
1941(b)	..	14.44	..	18.99	13.54	10.66	..	11.58	18.79	..	13.19	..	..
1940(b)	..	10.88	..	18.92	12.96	11.90	..	10.08	15.57	..	13.75	..	..
1939(b)	..	10.50	..	9.77	12.90	12.97	..	10.16	14.60	..	15.89	..	..
1938(b)	..	11.47	..	5.79	13.66	12.21	..	8.90	13.56	..	16.25	..	..

(a) Most companies have not yet declared their 1947 dividends. Even in other cases where calculations for 1947 have been made the result is only tentative, as all companies had not declared their dividends for 1947 at the time of compilation.

(b) Vide the author's articles in the previous issues of CAPITAL's Annual Supplement.

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except in the case of tea and lately of jute manufactures and factory sugar, increased much less. This inevitably reduced the profits of most companies and consequently dividends paid to the shareholders showed a strong tendency to fall. But in spite of this pull the 1946 dividends in the case of all industries included in this survey, except coal and sugar companies, increased over 1945 levels partly because the withdrawal of E.P.T. from 1st April, 1946, reduced the sum allotted to taxation, consequently leaving more money for distribution to shareholders, and partly because the Directors of most companies did not realise the full significance of the trend and hoped for the best. Subsequently, as the Business Profits Tax was imposed in part replacement of E.P.T., and output declined still further while costs of production rose more rapidly than the price of manufactured goods boards of directors began to realise the full significance of the situation which faced them. Dividends paid to shareholders were seriously reduced. In 1947 all industries surveyed declared lower dividends than in 1946 and the fall was very marked in the case of cotton mills, coal companies, and sugar factories—although for the last named industry full information is not yet available and has consequently not been included in Table III. There was a fall in the dividends declared by paper mills in 1947 and fuller figures when they are available are expected to show a still greater decline. In each company, in addition to the general difficulties indicated above, there were special disabilities which reduced profits and dividends in 1947. It should be noted that a large number of companies capitalised their reserves and issued bonus shares and in these cases the lower average rate of dividend does not give a true picture, because the shareholders really received much more than the average figure would indicate. Some companies were undoubtedly under-capitalised in the past, but one of the chief reasons for the issue of bonus shares and increase in capital was the practice of labour in calculating net profits as a percentage of paid-up capital thereby alleging that companies were earning huge profits and claiming that labour should be paid still higher wages, dearness allowance, and bonus. Labour has always been singularly reluctant to realise that net profits must be considered not with reference to paid-up capital but the total capital employed in any company.

COTTON MILLS

The average dividend of cotton mills in 1946 increased to 18.14 per cent. as against 17.70 per cent. in 1945. The profit margin in the industry did not justify this slightly higher dividend for the industry faced serious difficulties and the dividend would have been lower but for the fact that the withdrawal of E.P.T. and reduction in Corporation Tax released some money for distribution to shareholders. This exhausted itself in the 1946 dividends, and the average for 1947 declined to 14.60 per cent. In 1946 and 1947 prices of cotton piecegoods and yarn remained unchanged and the price index for cotton manufactures (with August 1939=100) remained at 262 throughout 1946 and 1947. But the prices of raw cotton, coal, chemicals, and mill stores kept on rising thus reducing the profit margin. The price index for raw cotton increased from 186 in December, 1945, to 207 in December, 1946, and, though subsequently there was a decline, it remained above the 1945 level. But more than the rise in these costs was the rise in wages costs in all parts of the country. In August, 1946, when the weekly hours of work were reduced from 54 to 48, wages were left unchanged thus bringing about an indirect increase of nearly 12½ per cent. in wages charges. 1947 saw a much greater advance in wages. In Bombay the minimum wage in cotton mills was fixed at Rs. 30 and the wages were increased on the whole by 30 per cent. and dearness allowance by 9 per cent. from January, 1947, as a result of the recommendations of an Industrial Tribunal. Later, the minimum wage in Madras was fixed at Rs. 26 per month, and both wages and dearness allowance were increased. In the U.P. the Labour Inquiry Committee awarded a 12½ per cent. interim increase in textile wages in 1947, and subsequently recommended much higher wages which will be enforced in 1948. The C.P. and Berar Industrial Tribunal has recommended that minimum wages be fixed at Rs. 26 per month and an increase in wages and dearness allowance with effect from 1st January, 1948. The consequence of this rise in wages costs has been to reduce the profits of cotton mills. Some mills producing the coarser counts actually suffered a loss. It was only after January, 1948, when cloth and yarn were de-controlled, that the prices of cotton piecegoods and yarn recorded a rise which ranged between 70 and 240 per cent. and the profits of cotton mills improved. This temporary rise in prices is not expected to increase 1948 dividends as the Government re-imposed control on cotton cloth in July, 1948. *Ad hoc* prices have been fixed for cloth at lower than the prevailing levels, which do not exceed the January 1948 prices by more than 20 to 25 per cent. for coarse cloth and 50 per cent. for fine and superfine varieties. These prices will reduce the earning capacity of cotton mills in the future. Moreover, in the cotton mill industry, as in others, efforts are being made to link bonus payments to labour with the rate of dividend. This is also expected to hold down the future dividend rate.

JUTE MANUFACTURING

The jute industry has suffered more dislocation consequent on political changes than any other industry in this country. It is a matter of credit to

Table IV
WHOLESALE PRICES IN CALCUTTA

In the middle of:		Raw Jute (a)	Jute Bags (b)	Jute Cloth (c)
		Rs.	Rs. As.	Rs. As.
Sept. 1946	..	90	66 12	22 2
Oct. 1946	..	140	81 0	27 8
Nov. 1946	..	182	103 0	35 8
Jan. 1947	..	165	100 0	41 4
Feb. 1947	..	173	113 0	41 8
May 1947	..	173	166 0	41 12
Aug. 1947	..	152 (d)	113 12	51 0

(a) First (Calcutta). Price is in rupees per bale of 400 lbs.

(b) Twills (2½ lbs.). Price is in rupees per 100 bags.

(c) Hessians (8 oz. ready). Price is in rupees per 100 yards.

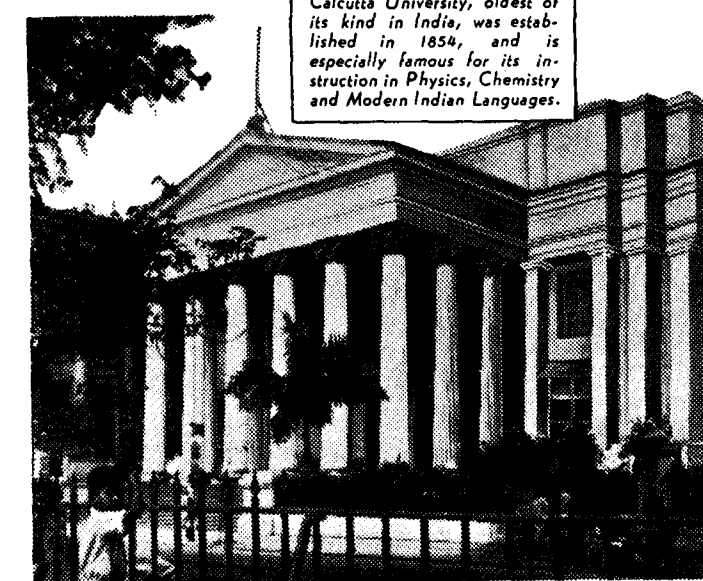
(d) The price actually varied between Rs. 149 and 154.

its efficient organisation that in spite of all that has happened the rate of dividend in 1946 amounted to 19.96 per cent. and to 19.19 per cent. in 1947 as compared to 14.90 per cent. in 1945 and the war-time peak of 18.99 per cent. achieved in 1941. The jute industry overcame great difficulties by creating the 'Industrial Pool' which remained in operation between 1st July, 1944, and 31st March, 1946. It enabled production to be maintained and distributed losses uniformly on all units rather than allow some to make substantial profits while others were ruined. The Pool stabilised the industry. But political differences between the Government of India and the Muslim League Ministry in Bengal created a dangerous situation when jute industry was de-controlled in October, 1946. The immediate reaction was an abnormal rise in prices, both of raw jute and manufactured goods. But, since, as indicated in Table IV, the rise in the price of manufactured goods was greater than that in the price of raw jute the industry gained financially, though the position has been considerably modified subsequently and the cost of raw has risen disproportionately to the price of manufactured goods.

Immediate post-war demand from foreign countries was good and high prices were obtained. In December, 1946, the export prices of jute gunny bags per piece and of jute cloth per yard were Rs. 0-10-6 and Rs. 0-5-1 respectively, as against corresponding prices of Rs. 0-3-0 and Rs. 0-1-5 in

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March, 1939. Increased production of jute goods in 1945-46 and better prices enabled the industry to declare higher dividends. Profits would have been greater but for the fact that the wage cost increased as wages were not reduced when the weekly hours of work were reduced from 54 to 48. Wages and dearness allowance were also increased in 1946. The amenity allowance to labour was increased from Rs. 2 to Rs. 3 per week with effect from 14th October, 1946, and to Rs. 4-8 per week from 19th May, 1947. Wages in the jute mill industry have increased in common with other industries and it seems likely that by the time these lines are in print there will be further increases as a result of the findings of the Industrial Tribunal. This, along with other circumstances, is bound to reduce the profit margin in the future. Another very acute difficulty which the jute industry is facing is the supply and prices of raw jute. At present nearly 71 per cent. of the jute-growing areas of undivided India are in Pakistan and only 29 per cent. in the Indian Union. This makes the Indian mills dependent upon Pakistan for their raw material. In course of time more raw jute will be grown in the Indian Union, but till then an element of uncertainty will remain. In November, 1947, Pakistan imposed an export tax on raw jute of Rs. 3 per maund which has further been increased to Rs. 4 from 1st April, 1948. This raises the cost of the raw material. In May, 1948, under the terms of the Indo-Pakistan Trade Agreement Pakistan agreed to supply 50 lakh bales of raw jute to Indian mills in the ensuing crop year. This, along with local production, should suffice to meet the demands of Indian mills and for limited exports of raw jute from India. In the future both the wages of labour and price of raw jute per unit of output of manufactured goods will be higher, but it is reasonable to expect that the high degree of organisation of the jute industry will enable it to declare, if not as high a dividend as in 1947, a higher dividend than some other industries.

ENGINEERING AND METAL WORKS

In 1946 Indian engineering and metal works declared an average dividend of 16.66 per cent., which is lower than the dividends declared by cotton, jute and tea companies. The full figures for 1947 are not yet available, but the rate of dividend is expected to be maintained. The demand for iron and steel and other products of this industry was high and companies were well booked with advance orders, but production could not be increased to the desired level because of labour troubles resulting in stoppage of work, shortage of coal and transport difficulties, and short supply of machinery and technical equipment. As indicated in Table II the output of steel ingots and finished steel has fallen, and that of pig iron has increased only slightly in 1947-48, as compared to 1945-46. While production has been low costs have increased as a result of higher wages, higher price for coal and chemicals and for stores. The labour cost per ton of steel in the case of Tatas increased from Rs. 45.92 in 1946-47 to Rs. 70.82 in 1947-48. In the case of the Steel Corporation of Bengal the cost of raw materials and stores, manufacturing expenses, salaries and wages increased from Rs. 172.3 lakhs, Rs. 25.76 lakhs and Rs. 109.58 lakhs respectively in 1945 to Rs. 235.92 lakhs, Rs. 38.22 lakhs and Rs. 135.30 lakhs in 1947. On the other hand, in spite of inflation in other parts of the economy, the prices of finished goods produced by this industry have remained relatively low and more stable. Except for a temporary flutter in the earlier part of 1946 prices have remained steady and for most part of 1946 and 1947 the price index (base August 1939) for pig iron remained at 117 and that for galvanised corrugated sheets at 229. With the withdrawal of E.P.T. the steel companies agreed to a reduction of Rs. 12-8 per ton in the price of steel from 1st April, 1946. But as the Business Profits Tax was levied and the costs of production have further increased this cut in price was restored in January, 1948. This proved insufficient. The Tariff Board has since enquired into the question of steel prices and the prospects of the industry will improve if a reasonable increase in prices is allowed. The control over the prices and distribution of iron and steel and other goods produced by this industry continues, although such control has been withdrawn in the case of sugar, and the consequence is that while prices of finished commodities are kept down costs keep mounting up. The only chance of increasing the profit margin and the dividends is a rise in production.

COAL MINING

In 1946 coal companies declared an average dividend of 15.67 per cent., which is only slightly lower than the 1945 dividend rate and exceeds that of sugar and paper mills. The rate of dividend in 1947 suffered a serious decline to 10.75 per cent. The production of coal which, after the war-time decline, recorded an increase in 1945 continued to increase in 1946-47 and 1947-48, as is evident from Table II. Output would have increased still more but for the fact that stores and equipment could not be imported in sufficient quantity, partly because of the difficulty and delay in obtaining import licenses and the long delivery dates quoted by manufacturers abroad. Moreover, the Indian railways failed to provide adequate transport facilities and coal collected at the pit heads, thus hindering further production. While raisings had about reached the peak costs of production, especially labour costs, increased and the rise granted by Government in the price of coal was not enough to cover them, thus reducing the profits of coal companies.

An interim award increasing the wages of labour was made in October, 1946, followed by a further increase in May, 1947, by the Conciliation Board. The price of coal was increased by Rs. 3-8 per ton from 9th July, 1947, to compensate the coal companies for the rise in costs. But the rise in price came too late and, in any case, was insufficient. The colliery owners demanded an increase of at least Rs. 6 per ton. The delay in sanctioning higher prices and the inadequacy of the latter handicapped the collieries and reduced the profit margin. Production also recorded a slight decline in 1946-47 and this combined with higher costs has reduced the 1947 dividends. The output of coal is still much below the target of 32.25 million tons set by the Indian Coalfields' Committee. Future prospects are intimately linked up with getting stores and equipment from abroad, of increasing the number of wagons available for carrying coal, and of reducing the costs of production or, if that cannot be done, of increasing the prices to a sufficient level to cover the higher costs. The coal industry has not benefited as much from the removal of E.P.T. from 1st April, 1946, as other industries. The future hope of this industry also depends upon being able to increase production and reduce the costs.

SUGAR MILLS

Sugar mills companies in 1946 declared an average dividend of 10.16 per cent., which is lower than the dividend declared by other industries in this survey. 1947 dividends are not yet declared by all mills, but they are expected to be lower than in 1946. In recent years the sugar industry has been faced with a number of circumstances which have seriously undermined its earning capacity. The prices paid for sugarcane and labour are important elements in the cost of production and both have increased in recent years. The price of sugar (C 28 Marhowrah) was increased by six annas per maund to Rs. 17-2-6 on 5th March, 1946, in order to compensate factories for higher wages. But this rise was not sufficient and mills were the losers. In October, 1946, the price of sugarcane was increased from annas 14 to Re. 1-4 per maund, and at the same time the price of sugar was increased by Rs. 4-4 to Rs. 21-6-6 per maund. As it takes nearly ten maunds of cane to produce one maund of sugar this meant that while the cost of cane increased by Rs. 3-12 per maund of sugar the mills obtained Rs. 4-4 more per maund of it. But this did not improve the profits of the sugar mills, though it might have been expected to do so, because in February, 1947, the U.P. Government fixed minimum wages in sugar factories with effect from the beginning of the 1946-47 crushing season at Rs. 36 per month, an increase of Rs. 13-8. Hitherto the wage rate had been Rs. 15.

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and the dearness allowance Rs. 7-8 per month. Wages in sugar factories in Bihar and other parts of India were also increased. As shown in Table II, the output of sugar in 1946-47 recorded a slight decline compared to 1945-46 and the percentage of recovery declined from 10.09 to 9.86. In the 1946-47 season the average number of days for which the mills in India worked was smaller than in 1945-46 and in 1944-45. The prices of chemicals, coal, and mill stores remained high. All these factors combined to reduce the profits of sugar factories and most factories failed to make 10 per cent. on block capital, which the controlled prices were supposed to leave them. This naturally pushed down dividends. Prospects for the future are obscure. After de-control of sugar in December, 1947, the Government and the Indian Sugar Syndicate agreed on a price of Rs. 35.7 per maund, as against a price of Rs. 20-14 for that variety before de-control, and at the same time the price of cane was increased from Re. 1-4 to Rs. 2 per maund and the wages of labour in the U.P. were increased from Rs. 36 to Rs. 45 per month. The Government of India froze the existing stocks of sugar, and appropriated the profits on this stock amounting to Rs. 2 crores. As a result of these changes the sugar industry benefited only to a limited extent. The rise in wages and dearness and food allowance, the payment of bonus and holidays with pay, and the payment of retention allowance to all permanent workers, during the off season, eats into the profits this industry can hope to make under the existing conditions. The future dividend rate, therefore, is expected to be still lower.

TEA INDUSTRY

The tea companies declared the highest dividend both in 1946 and 1947. In 1946 the average rate of dividend amounted to 31.46 per cent. which is unprecedented in the history of this or any other industry in India. Full figures for 1947 are not yet available and the dividends already declared give an average rate of 22.19 per cent., which is higher than that of any other industry for this year. It is likely that the average rate will be still higher when full information is available. The tea industry suffered from a serious shortage of tea chests and manures. There was great difficulty in securing them and high prices had to be paid. The wages and allowances payable to labour also increased in tea plantations, as in other industries. The "Block Purchase Scheme" was abandoned in January, 1947, and better prices have been available for exports than in the past. The demand for tea from foreign countries as well as from the home market has been good, and this combined with rising prices has raised the profits of tea companies.

PRICE, COST, AND PRODUCTION STATISTICS OF ONE TEA COMPANY

	Year ending 31st March				
	1944	1945	1946	1947	1948
Production in lbs.	7,30,257	7,79,204	7,51,378	8,61,283	8,05,037
Cost of production in annas per lb.	7.99	9.87	10.01	11.13	14.40
Average net price in annas per lb.	12.66	14.38	15.34	17.62	20.14

These statistics give a clear idea of conditions in the tea industry. Between 1945-46 and 1947-48 production increased by about half a lakh lbs., and while the cost increased by 4.39 annas per lb. the price increased by 4.80 annas per lb. This left a better profit margin to the companies and consequently higher dividends were declared. Prospects for the future are quite bright. In 1948-49 production in the Indian Union is expected to be maintained at 1947-48 levels, if not more, and the output is expected to be of the order of 550 million lbs. Out of this amount some 130 to 140 million lbs. are reserved for home consumption and the rest, i.e., between 410 and 420 million lbs. are allowed to be exported.

PAPER MILLS

The average dividend declared by paper mills in 1946 increased by more than 1 per cent. to 14.37 per cent. But this is an unexpected result. Costs of production have increased on account of higher wages, higher prices for bamboo and other raw materials, and higher prices for chemicals, coal, and mill stores but the price of paper was reduced twice in 1946, on the ground that the costs of production have come down. This has reduced the earning capacity of the mills. The higher dividend rate is probably explained by the slightly higher production, as shown in Table II, and the reduction in taxation. In 1946-47 and 1947-48 production has fallen and the costs have still further increased. While the industry demanded an increase of at least two annas per lb. the Government has granted an increase of less than 6 pies in the price of paper, except for such varieties as dulex, triplex, and ticket boards, etc., with effect from 1st December, 1947. This is not expected to increase the dividend rate in the future, which may well remain low until such time as production increases and costs of production come down.

War II, the cultivator has been constantly exhorted to turn from cash to food crops, and the Regulation Acts have been used to supplement this propaganda. However, it is doubtful if this official control would in fact be of much efficacy if it were opposed to the direction of the main economic influences governing jute production, and it is in these that the main explanation for the shortfall in the crop must be sought.

Jute is a commercial crop and is often the only cash crop which the agriculturist cultivates. On the other hand, all ryots grow rice for their own family consumption and also to some extent for sale or exchange. The result of this is that the relative areas of jute and rice grown tend to vary with the relationship between the market prices of the two commodities. It is undoubtedly to this relationship that a considerable part of the reasons for the decline in jute production can be traced. Normally, the price of jute is considerably above that of paddy, varying in normal years between 130 and 170 per cent. over the price of the latter. During the war, the market price for rice in the growing areas was considerably higher than that for jute, and this must have led to a diversion of acreage to rice production at the expense of jute. The rise in prices which has taken place since should have restored jute to its normal position and, other things being equal, it would seem that the time has almost come when ordinary economic forces should produce a swing towards jute cultivation which will at least make up for the existing shortfall and perhaps enable a return to be made to normal conditions of supply.

EFFECT ON THE INDUSTRY

From the point of view of the Indian industry there are, however, three unsatisfactory aspects of the existing situation. In the first place, the raw material supply of the industry should not be at the mercy of economic forces to such an extent that it is at times in jeopardy. In the second place, from the point of view of overall Indian food production, it is unsatisfactory that land growing rice should be diverted to jute production. Finally, it is a serious weakness that between two-thirds and three-quarters of the India crop should come from what is now, no matter how close the economic ties between the two areas, a foreign territory. Taking everything into consideration, it is clear that there is a strong case for the expansion of the area under jute cultivation, that it is most desirable that such expansion should take place within the Indian Dominion and, finally, that if at all possible it should be extended in areas not now cultivated.

This will require a highly organised effort and it is of the utmost importance that all concerned in the jute industry, the Central Government, the provinces, the jute industry itself and particularly the Indian Central Jute Committee, within whose sphere this matter peculiarly lies, should undertake this necessity as a joint enterprise. On the other hand, the need for co-operation with Pakistan on this question is of the utmost importance. The economic and social effects of too large an expansion in jute acreage would be disastrous in both countries.

JUTE MILLS' DEVELOPMENT

So far as the jute mill industry is concerned, the main development during the period of 60 years since CAPITAL was started was the steady advance of the world demand for jute manufactured goods and the increase in the share of this which fell to the Indian industry. To these two factors is to be ascribed the astonishing growth of the Indian jute manufacturing industry which continued right up till the late '20s. In 1888 there were 26 mills in India with a total number of 7,819 looms. By 1908 the number of mills had increased to 56 with 29,000 looms. In 1918 it was 76 mills with 49,000 looms and it is now 112 mills with 68,452 looms. This presents a picture of almost unparalleled growth in a comparatively short time and, before the war, it might have been confidently assumed that, even though the total world demand for jute was advancing less rapidly than during the boom years, the cheapness of manufacturing costs in this country would ensure a growing share in the total world manufactured jute trade. After the many and sweeping economic changes which have occurred during the last ten years, that assumption may require radical reconsideration.

Apart from developments internal to the jute industry, there are many factors arising out of the general Indian economic situation which must affect the position of the jute trade, *vis-a-vis* other countries with jute manufacturing interests. Of these, the most outstanding is the alteration in the general level of prices in this country. India is included in that group of countries which, while not the victims of an uncontrolled inflation, are still facing a position in which the whole structure of costs has been distorted by price increases. It is only now that the full direct and indirect effects can be completely estimated. The increase in the price of jute is, of course, something common to all industrial consumers of that commodity, whether in this or other countries, and consequently that is a factor which has little relation to comparative manufacturing costs. Other elements of production expenses, such as stores, coal, raw materials, are directly affected by the general increase in prices. There has also been a steady rise throughout the war in labour costs. In sum, these increases represent a formidable total and constitute what may well be a revolutionary change in comparative costs as between this country and others engaged in the production of jute.

In this, as in other industries, there is, of course, great difficulty in obtain-

ing any accurate information on this important problem, mainly because variations in manufacturing costs are very considerable between different units in the industry. It is believed, however, that operating costs in mills in this country are now either equal to or somewhat in excess of those now existing in the United Kingdom. The effects of this on the jute industry may be startling, not only in relation to competition with the United Kingdom and the other jute manufacturing countries, but also in its repercussions upon the position of sacking and hessian in comparison with other textiles.

OVERSEAS METHODS

A great deal of very valuable comparative material has been provided on this matter by the Report of the Working Party on the jute industry in the United Kingdom and an examination of this is of great interest. Generally speaking, the jute industry is one in which technical progress in equipment has not been revolutionary. Weaving machinery has made little advance over that used in the last century, though the experiments now being made with the circular loom may prove to be a major development. There has, however, been a considerable improvement in the machinery used in the spinning section, and though not radical, important savings in labour required and in productive efficiency have been secured. Although later than America and some continental countries in starting to re-equip, the United Kingdom jute industry has made very great progress and a substantial proportion of the mills are already, or are in process of, installing new plant. During the world depression some firms were driven out of business, but others though not unaffected had sufficient confidence in the future to instal new spinning plant. New machines were extensively installed by the more progressive firms after 1930, and by the beginning of the last war 39 per cent. of the spindles in the industry were of new types which require less labour than the old types. When present reconversion plans are completed it is estimated that no less than 58 per cent. of the spindles will be of improved design.

The results of this have been a considerable saving in labour costs and efficiency of a greatly improved nature. In 1930, when the raw jute cut-up was 137,000 tons the number of labourers employed in jute spinning and weaving was 28,700, while in 1937 when the raw jute cut-up was 179,000 tons the number employed had fallen to 24,200. During the recent war the number of workers fell to a very low figure and in June, 1947, had recovered to about 15,800. Production was estimated then at 99,000 tons of yarn, of which cloth production took up about 59,000 tons. It is believed that when re-equipment has taken place it will be possible to increase this figure to 160,000 tons of yarn, and 86,700 tons of cloth, respectively, with an increase of only 1,500 to the present labour force. In other words, a labour force of about 53 per cent. of employment in 1936 will achieve 94 per cent. and 81 per cent. of the 1936 yarn and cloth output.

HOW INDIA STANDS

All this represents substantial technological advance, and it is a situation which unfortunately finds no parallel in the Indian jute industry. Although India went through the depression and the crisis of over production, it was never so prolonged or so severe as in Britain and the urgent need to re-equip was not so evident. Labour continued inefficient but cheap till the middle of the war. A few firms had the foresight to instal the new machinery, particularly high speed spinning frames, but the majority let things slide. Moreover, as everywhere else, there was a very severe reduction in labour efficiency during the war. In order to maintain production many firms increased their labour complement as far as possible, and the result is that the total labour employed has increased rather than gone down. Meanwhile, labour costs were slowly but surely rising and the award of the Jute Textile Tribunal has finally put the seal on that process by awarding an increase in total remuneration which means that the lowest paid unskilled worker is getting between four and a half and five times what he did before the war and the industry's total wage bill has increased proportionately.

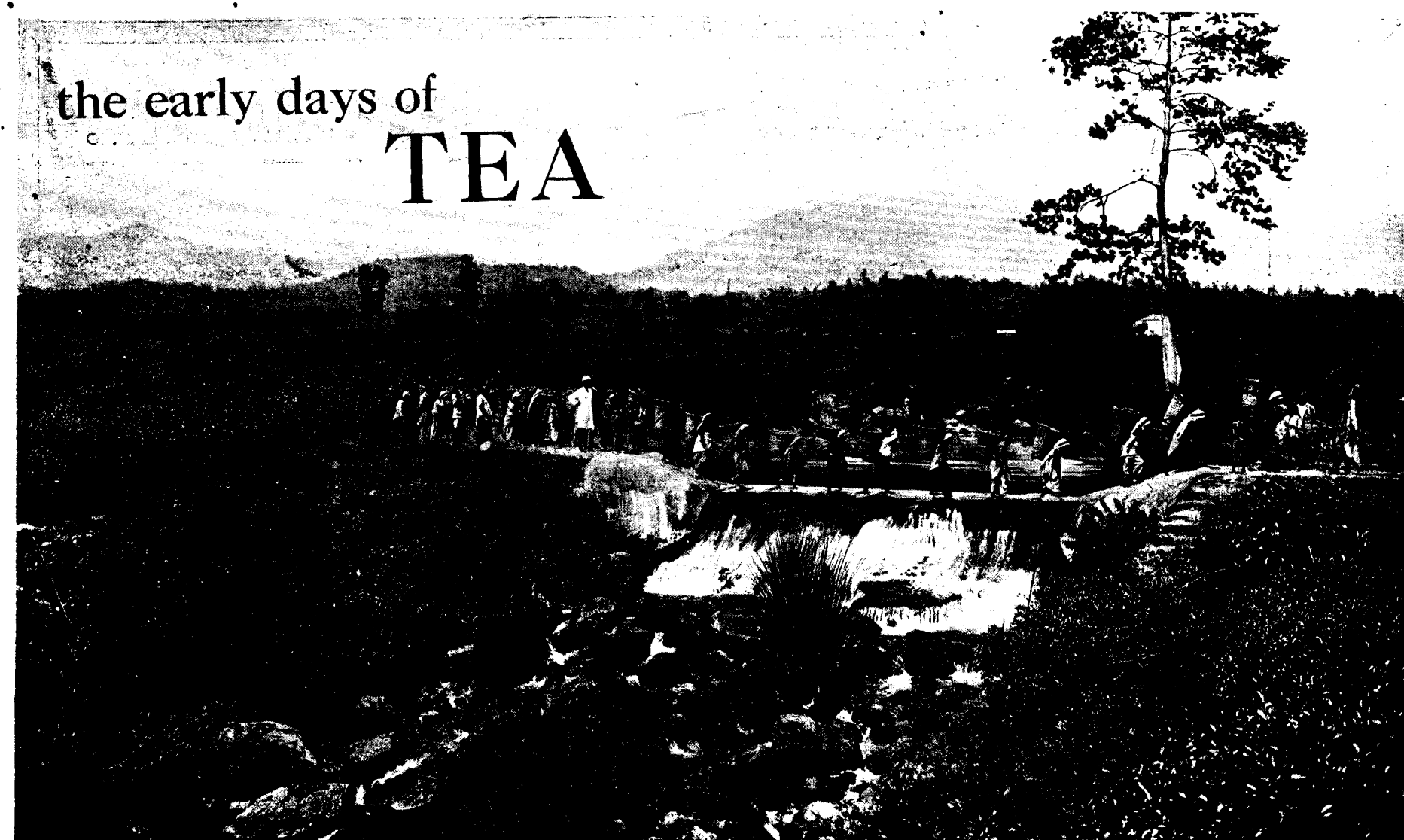
It is clear that if this situation is compared with what has been the rule during the last sixty years, a change has occurred in the competitive position of the Indian jute industry which requires careful consideration and firm action. On the whole, the Indian industry has made up for deficiencies in operating efficiency by the advantage of lower wage bills. If that is unlikely to recur, more and more attention must be given to the improvement of efficiency, not only by the installation of more modern machinery but by an examination of every possible means of reducing costs and effecting economies. Previously neither of these would have presented serious difficulties. Unfortunately, it must now be carried out at a time when new equipment is difficult to obtain, when its price has increased enormously, and when new and difficult problems of labour relations are involved in making these changes. The first necessity is to take up the slack at present existing and to reduce the numbers of labour employed to those strictly necessary with existing equipment. The second is to replace a large proportion of the existing spinning machinery by more up-to-date systems. Finally, there is the need which the high cost of new equipment brings out, to adopt a considerable measure of double-shift working.

It is to be anticipated that these alterations will be the subject of considerable opposition from labour. In this, as in other organised Indian industries, labour relations are becoming a major problem and the need



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Tea pickers bringing in their loads across a causeway dam and overflow all in one—the headworks for the power plant on a tea garden in the Doorgas

THE tea industry is to-day one of India's major industries, producing nearly six hundred million pounds of tea a year, contributing largely to Central and Provincial Revenues, earning large quantities of foreign exchange, and giving employment to more than a million and a quarter persons. How many people, when they drink a cup of Indian tea, realise that a little over 100 years ago this great industry was non-existent, or have any idea of the difficulties which had to be overcome before the industry was eventually established? The creation of India's tea industry is a story of adventure, an outstanding example of the pioneering spirit and a triumph, not only over the jungle with its wild animals and disease, but also over a strong prejudice in favour of China tea as compared with the indigenous plant.

Although a traveller to Assam had reported as early as 1815 the growth of an indigenous tea bush from which the Singpo hill tribes made a drink, it was not until 1823 that any serious consideration was given to the possibility of starting a tea industry in India. In that year Major Robert Bruce discovered tea growing in the Sibsagar district of Assam, and arranged with the local chief for a supply of seeds. The following year the plants and seeds were delivered to Mr. C. A. Bruce, a brother of Major Robert Bruce, and were subsequently planted in his garden at Sadiya in 1825, the year in which Major Bruce, the original discoverer, died. When some of these leaves and seeds were sent to Dr. Wallich, the Superintendent of the Royal Botanical Gardens in Calcutta, however, they were declared to be "Camellia" and not "Camellia Thea," and it was some time before the botanists of the day were willing to admit the identity of the Assam tea plant.

THE FIRST PLAN

There was, however, an obstacle to the establishment of a tea industry in India, even with imported seed from China, and that was the opposition of the East India Company, which had been granted a monopoly of British trade with China for a period of 20 years from 1813. The China monopoly was concerned mainly with the tea trade, and the East India Company, which no longer enjoyed the monopoly of British trade in India, was reluctant to countenance any competition with the China trade. With the possibility that the Chinese Government might close her ports to Britain when the 1813 Treaty expired in 1833, the opposition of the East India Company weakened. In 1834, the year after the expiry of this Treaty, Lord William Charles Cavendish Bentinck, the then Governor-General, appointed a Committee to submit "a plan for the accomplishment of the introduction of tea culture into India and for the superintendence of its execution," and if the discovery of Indian tea is attributable to Major Bruce in 1823, the establishment of a tea industry in this country was undoubtedly due in large measure to the appointment of this Tea Committee.

The Committee, which consisted of 11 Englishmen and two Indians, issued a circular describing the conditions favourable for tea growing, and requesting information where these might be found, and in 1835 the Secretary of this Committee was sent to China to secure some Bohea tea seeds,

which reached Calcutta later in the same year. As a result of the circular, a Captain Jenkins had obtained some specimens of indigenous tea from Sadiya in Assam, which were definitely identified at the Calcutta Botanical Gardens as identical with the China plant, and Government was so impressed by the Committee's subsequent report that they sent a Scientific Commission to Assam to report on the indigenous plant and on the best place for growing it. The Commission left Calcutta on the 29th August, 1835, and took nearly 4½ months to reach Sadiya, where they were joined by Mr. C. A. Bruce, who acted as guide. Despite the fact that indigenous tea was found in

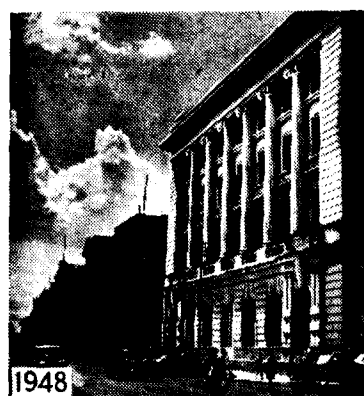
**MANY DIFFICULTIES OVERCOME
IN
ESTABLISHING THE INDUSTRY**
SPECIALLY CONTRIBUTED

a flourishing condition, the Commission was divided on the merits of the local plant, and the Tea Committee made its first mistake when it eventually recommended that "the China plant and not the degrade Assam plant" should be used for Government's experiments. More seeds were accordingly obtained from China and were sent to Upper Assam, to Kumaon and Dehra Dun, in the foothills of the Himalayas, and to the Nilgiri Hills in Southern India. In the Himalayan region the Chinese plants flourished for a time, and some also made a start in Southern India, but within two years most of them were dead.

FATHER OF THE INDUSTRY

In Assam, the first experiment with Chinese seed was hardly an outstanding success. The spot chosen for planting the seeds was on a chur near Sadiya and, unfortunately, the Commission did not realise that the chur consisted of only a few inches of soil on the top of a sandbank. In these circumstances, it was hardly surprising that the plants failed to thrive, and it was not long before the Brahmaputra flowed over the site and washed the first Assam tea garden away altogether. The next experiment was conducted at Chabua, in the Lakhimpur District of Upper Assam near Dibrugarh in 1837, and this time the tea did considerably better. The success of the experiment, however, was a doubtful advantage, because it encouraged the belief in the cultivation of the Chinese plant and delayed the general acceptance of the much more suitable Indian variety. Nevertheless, Mr. C. A. Bruce had

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Total No. of Tea Estates—77.

Total area under tea—59,134 acres.

Secretaries: Tea Districts Labour Association.

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continued his experiments with the indigenous plant at Sadiya, though even here it was considered necessary to import Chinese labourers to carry out the work. Although Bruce was not a scientist, and not even a good businessman, he possessed the pioneering spirit in full measure, he understood the climate and people, and as he was the first superintendent of tea culture in Assam, he played a large part in the eventual establishment of the indigenous Indian tea industry. When he died in 1871 he was buried in the churchyard at Tezpur, and there is still a tablet to his memory in the church there.

The first samples of manufactured tea were produced in 1837 although the "manufacture" consisted only in withering the leaf in the sun, rolling it by hand and drying it over charcoal fires, and in the following year the first shipment of Indian tea was made. The shipment consisted of 8 chests which were sold in London at prices ranging from 21 shillings to 34 shillings per lb., although the brokers valued the tea at only about 3 shillings per lb. In the following year the quantity shipped to London had increased to 59 chests, and the quality had improved. These chests were sold at prices ranging from 8 to 11 shillings per lb., and the practicability of producing tea in India in marketable quantities had thus been demonstrated.

THE ASSAM COMPANY

Hitherto tea production in India had been carried out under Government auspices, and the area in which these experiments took place in Upper Assam was still foreign territory under a local Ruler. In 1839 the administration of the Sibsagar and Lakhimpur areas was taken over by the British, and the way was thus opened for private enterprise to continue the production of tea. In 1840 Government handed over two-thirds of its experimental gardens in Assam to the Assam Company, which had been formed in the previous year, and which was now joined by Mr. C. A. Bruce as Superintendent. But even now the path was far from easy, and the Company very nearly foundered in its first five years. Chinese labourers were still considered essential, but the particular Chinese despatched to Assam knew nothing about tea, and clashed with the locals almost as soon as they arrived at the gardens. The next batch of recruits were attacked by cholera, and mortality was very high among Europeans and even amongst the Company's doctors.

Nevertheless, by 1841 more than 2,500 acres had been cleared of jungle and were under cultivation, and 29,000 lbs. of tea were produced. The venture had already cost £160,000, however, and despite the fact that the yield

was increased in subsequent years while expenses were reduced, the Company was still in debt in 1847, and several gardens were closed down. Then suddenly the corner was turned. In that year new management was introduced, in 1848 there was a profit of £3,000, the following year the closed gardens were reopened, in 1852 the first earned dividend of 2½ per cent. was paid, and by 1856 the Company was paying a dividend of 9 per cent., despite the self-imposed handicap of cultivating plants imported from China rather than the indigenous Indian variety.

RAPID EXPANSION

The success of the Assam Company, followed by the Jorehaut Company, led to a rapid expansion in tea cultivation, and by 1859 there were more than 50 private enterprises engaged in the production of tea. Upper Assam led the way, but tea cultivation—again of the Chinese variety—had been revived in the Himalayan foothills of North India as early as 1842, and plantations were started in Cachar and Sylhet in 1856; in Darjeeling in 1856 to 1858, and from there spread to the Terai, the plains district lying south-east of Darjeeling. By 1874 tea cultivation had extended to the western Dooars, where again the cultivation was of the China variety, and finally gardens were opened up in the eastern Dooars planted from the start with indigenous tea.

Meanwhile, in South India where some of the first seeds imported from China had been planted out experimentally as early as 1835, tea planting on a commercial scale began in 1853. Development in South India, however, was slower than in the North, and even as late as 1900 there were only about 3,000 acres under tea in the Nilgiri Hills, a few hundred in the Wynad and Kanan Devan Hills, and about 5,000 acres in the rest of Travancore. Indeed, of the 163,000 acres under tea in South India in 1947, more than 100,000 were planted out in the 20th Century.

To encourage tea cultivation in India, the Government in the early days granted considerable tracts of land to the pioneering companies on easy terms, but this land at the time was covered with jungle and its only value was its location in areas suitable for the growing of tea. As the industry developed, applications for grants naturally became more numerous, and more stringent rules were subsequently adopted. The Assam Rules of 1854 provided for 99-year leases with heavy clearing terms, and led to a considerable outcry among the planters and investors. The dissatisfaction became so general that in 1861 the Assam Rules were supplemented by Lord Canning's Rules which permitted the redemption of the land in fee simple, and many tea



The tally clerk, supervised by an Assistant, records the weights of the pickers' morning labours

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company lands in Assam, which are now very valuable as a result of the efforts made in these early pioneering days, are still held under grants made by the Government at that time.

SPECULATIVE MANIA

By 1860 the tea industry in India seemed to be firmly established. But just when everything seemed set for a rapid and continuous development, the industry was beset by difficulties of another kind. The established success of the early companies followed by the fee simple grants of 1861, encouraged speculators, and the most fantastic pictures were painted of the easy fortunes that could be made by tea gardens with large capital resources. An orgy of speculation followed, new gardens were recklessly opened up, existing gardens were extended beyond their economic limits, staff were selected without any consideration of their ability, and more than Rs. 10 per acre was paid for jungle tracts which previously had cost not more than Rs. 2-8. Everyone thought that to own a few tea bushes was to make a fortune; gardens were sold for ten times their real value, and tea shares boomed.

In 1865 the frenzy reached its peak and the inevitable collapse followed. Gardens which had cost many lakhs of rupees were sold for a few hundreds, and many people were ruined. Public confidence in the industry was shaken to its foundations, and but for the continued success of those companies which had kept clear of the speculative mania, the industry might have received a blow from which it would have taken years to recover, if indeed it had recovered at all. Even as it was, the situation was so serious that in 1868 a Government Commission was appointed to enquire into the industry. The Commission expressed the view that the industry was basically sound, and reported that those gardens which had escaped the effects of the wild speculation of the previous years were in a flourishing condition. By 1870 confidence was restored and the industry embarked on an era of sound and scientific development which has continued uninterruptedly to the present-day.

MANUFACTURING IMPROVEMENTS

The rapid development of the industry which followed the restoration of confidence was greatly assisted by improvements in the methods of manufacturing tea, and the adoption of mechanisation in place of manual labour. As already mentioned, in the early days of tea cultivation in India the leaf was withered in the sun, rolled by hand and dried by charcoal fires. Space will not permit of a detailed account of the progress of mechanisation, but from 1870 onwards machines gradually supplanted the manual methods previously in use, and the cost of producing tea was greatly reduced. Two of the outstanding names in this development are those of William Jackson, who first produced his mechanical roller in 1872, and Sir Samuel Davidson, who invented the Sirocco Dryer in 1877. Mechanical packers were also introduced at about the same time, and the production cost of tea which in 1872 was about 10 annas a lb., had fallen in 1913 to as low as 2½ annas.

With the rapid growth of the industry in the 1870's, it was not long before those engaged in tea cultivation felt the need to band together in an Association to further their own objects and interests. As early as 1876 an attempt was made to organise North Indian Tea Estate owners into an Association, and five years later at a meeting, held on the 18th May, 1881, the Indian Tea Association was formed. At that time the Companies and Proprietors in the membership of the Association owned a total of 103,000 acres under tea in North East India. To-day, the acreage and membership of the Association has increased to more than 535,000 acres and represents approximately 80 per cent. of the total area under tea in North East India. Branches of the Association were formed in the Assam Valley and Surma Valley in Assam



An early morning scene at a tea garden hospital. This one is at Masanga



Planting out young tea bushes eighteen months' old

and affiliated Associations of Planters were subsequently formed in Darjeeling, Dooars and Terai in Bengal.

LABOUR RECRUITMENT

Even before the formation of the Indian Tea Association, the need had been felt for some organisation to undertake and control the recruitment of labour. Strange as it may seem in a country with so vast a labour potential as India, one of the earliest problems confronting the tea industry was the inadequate supply of labourers to work the gardens. This was due to the fact that most of the local population were already fully engaged in cultivating their own rice land in the tea districts, so that even when the industry had at last realised that there was no need to import Chinese labourers, the importation of "foreign" Indian labour was still a necessity. In the early days this labour was recruited by contractors, but the contractors did not look after the recruits properly, and as a result of a Government enquiry in 1861 legislation was introduced to control the recruitment. Various Associations were formed to recruit labour for the tea gardens in Assam, and in 1892 the functions of these Associations were taken over by the Tea Districts Labour Supply Association along with the Assam Labour Association.

These two bodies subsequently amalgamated, and in 1919 the name of the Association was changed to the Tea Districts Labour Association, and although about half a million labourers on tea gardens in North East India are now settled on the gardens mostly with their own paddy land granted to them by the garden management, the Tea District Labour Association still performs a most vital function in recruiting the balance of the labour required. The labourers are recruited mostly from Chota Nagpur, the Santal Pergannas, the Central Provinces, and even from Madras and Bombay, and the principal types are Mundas, Oraons and Santals from Bihar and Orissa, and Gonds in the Central Provinces. Recruitment is on such a large scale that under the Assam Tea Districts Amalgamation Labour Act of 1932 a Controller of Emigrant Labour was appointed in Assam, and although there is no corresponding legislation in Bengal it was necessary, not very many years ago, to form a separate branch of the Tea Districts Labour Association for the Dooars. Recruitment is made principally through Sirdars, who come from the districts from which the labour is recruited, and who are employed by the Association for this purpose, and labourers so recruited receive various allowances on joining a garden, and are entitled to repatriation after three years if they so desire.

SOUTH INDIAN DEVELOPMENTS

In South India the principal Association looking after the interests of those engaged in tea cultivation is the United Planters Association of Southern India, which was formed in 1894 as a result of the amalgamation of various Planters' Associations already in existence. Unlike the Indian Tea Association, which is solely confined to the tea industry, the United Planters Association of Southern India is concerned also with coffee and rubber estates, and maintain a labour organisation with five divisional officers and agencies throughout Southern India for the recruitment of labour.

The early pioneering in the tea industry was a British effort, and the earliest record of an Indian tea garden is an estate started in Sylhet in 1876.

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Other gardens followed, and to-day a considerable acreage is owned by Indians, particularly in Darjeeling and the Dooars in North East India, in the Kangra Valley and in Southern India. Numerous Associations to look after the interests of Indian owners have been formed, the principal being the Indian Tea Planters' Association, Jalpaiguri, which was formed in 1918, the Assam Bengal Indian Tea Planters Association, the Assam Valley Indian Tea Planters Association (recently renamed the Assam Tea Planters Association) in North East India, the Kangra Valley Tea Planters Association, Dehra Dun Planters Association in North India, and the Indian Planters Association, Travancore, in Southern India.

SCIENTIFIC RESEARCH

Towards the end of the last century, the industry felt the need for scientific research, and in 1900 the Indian Tea Association took the initial step by appointing a Scientific Officer to work in the laboratory of the Indian Museum in Calcutta. A small research station was subsequently opened in the Heeleakalam in Upper Assam, and in 1911 was moved to Tocklai, where the research station has remained to this day. The station itself covers an area of 12 acres and there is also a much larger experimental garden belonging to the station at Borbhetta, 2½ miles away. From an initial expenditure of roughly Rs. 20,000, in 1900, the experimental station has expanded until the annual expenditure is now approximately Rs. 8,00,000, and although the station is maintained on a voluntary basis by members of the Indian Tea Association itself, facilities are open to the whole of the tea industry in India. The research is carried out in all branches of cultivation and manufacture of tea, and particular attention is paid to plant disease and insect pests. The knowledge gained is disseminated to the industry, partly by publication of pamphlets and partly by actual visits to the gardens, and advisory branches have been established in all the principal tea districts of North East India.

Research work is also undertaken in Southern India, where a research station financed partly by the United Planters Association of Southern India and partly by the Government of Madras was opened in 1909 with headquarters at Bangalore. The station was subsequently moved to Peermade and it is now situated at Nellapa, where the problems peculiar to tea growing in Southern India are situated. A close liaison is maintained between the research stations in North and South India, and scientific information is also exchanged with the research organisation in Ceylon.

In the early days of the industry, disease took a terrible toll both of the managerial staff and of the labour on the gardens, and the triumph of the industry over these difficulties is really a story in itself. For many years now the industry, both in North and South India, has supported the Ross Institute of Tropical Hygiene, named after Sir Ronald Ross the great Malariaologist, and thanks largely to the work of this organisation the two scourges of Malaria and Kala-azar have been brought under control.

MARKETS AND MARKETING

As has already been mentioned, the first tea produced in India was sent to London, and the United Kingdom has remained India's best market for tea ever since. In 1867, when the industry was beginning to recover from the speculation of the early '60s, nearly 8,000,000 lbs. of tea were exported to the United Kingdom and 41,000 lbs. to other countries in Europe. The following year the first shipment of 2,291 lbs. was made to America, and by the early '80s of the last century exports to America had increased to more than 100,000 lbs. In 1887 the total exports amounted to 33,000,000 lbs.; by 1900 this figure had increased to 190,000,000 lbs., and in 1914 exports for the first time exceeded 300,000,000 lbs., exported to more than fifty different countries. The importance of the United Kingdom market, however, is evident from the fact that of the tea exported in 1914, no less than 257,000,000 lbs. were sent to that country.

Tea consumption in India until the end of the 19th Century was very small, and the industry decided to take steps to increase it. At the industry's own request the Government of India passed the Indian Tea Cess Act in 1903 to provide for the levying of a cess on all tea exported from India, and the appointment of a Tea Cess Committee to administer and control the funds resulting from the cess with a view to promoting the sale and increasing the consumption of tea in India. The Tea Cess Committee consisted of representatives of the various Tea Associations and Chambers of Commerce in the tea garden provinces, and from 1903 to 1921 the cess was levied at the rate of half a pie per lb., or approximately 2 annas per 100 lbs. The Act was renewed at five yearly intervals, and the success of the Committee's operations was such that in 1921 the Act was amended to enable Government to increase the rate of cess up to a maximum of 8 annas per 100 lbs. A further increase up to a maximum of Re. 1-8 per 100 lbs. was subsequently provided for, and although the cess has never yet been levied at this figure the rate was Re. 1-6 per 100 lbs. from 1939 to 1945, and was increased to this figure again at the beginning of 1948. The efficacy of the work carried out by the Tea Cess Committee is evident from the figures of tea consumption in India over the last 30 years. By 1915 the annual consumption in India had risen to approximately 20,000,000 lbs.; during the

next 16 years, when the average expenditure on propaganda activities in India was a little over Rs. 4 lakhs a year, the annual consumption gradually rose to approximately 38,000,000 lbs.; and during the 15 years from 1931 to 1945, when propaganda operations were systematically intensified and the average annual expenditure was nearly Rs. 20 lakhs a year, consumption rose from 38,000,000 lbs. in 1930 to 150,000,000 lbs. in 1945.

REGULATION

With rapidly expanding export markets and the steady increase in consumption in India, the industry was in a flourishing condition at the end of the first World War. In 1919-20, however, a serious slump occurred in the industry, and prices were very low until 1921-22, when they steadily recovered and reached high levels in 1926-27 before the industry was again threatened by the world slump in 1929, though various measures were adopted by the producers to counteract the ill effects of these alternating periods of exaggerated prosperity and acute-depression. The first was in 1920, when the Indian Tea Association recommended that its members restrict the 1920

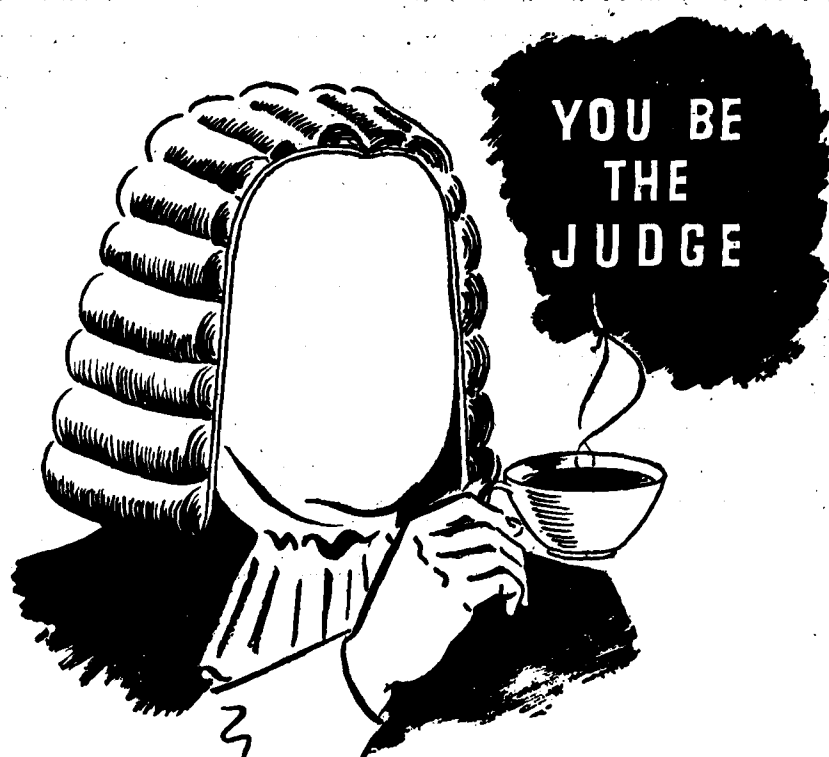


Relaxing after the day's work. A modern type of house for the labourer with a basha (right) for his cattle

crop to not more than 90 per cent. of the average crops of the years 1915-19, or as an alternative, that they cease plucking from 15th November, 1920. During the following year a recommendation for reduction to 80 per cent. failed from sufficient support to make an agreement possible, although a majority of the large producers followed the policy recommended.

To what extent this voluntary restriction in production was responsible for the prosperity of the succeeding years is difficult to assess, but the disastrous effects of over-production were not felt again until the world slump of 1929. In that year an agreement was reached between India, Ceylon and Dutch tea growers for a restriction of plucking in 1930, but this agreement was not found sufficient, and in 1933 a detailed scheme for the restriction of tea planting in, and the regulation of tea exports from India, Ceylon and the Netherlands East Indies, was instituted with a view to achieving and maintaining equilibrium between supply and demand. The scheme was brought about by the voluntary agreement between the tea producers in each country, and an International Tea Committee was formed to operate and administer the scheme. Legislation was passed in each of the producing countries to give effect to the restriction on new plantings and the limitation of exports, and the first agreement remained in force for a period of five years, 1933-1938. In the latter year the agreement was renewed for a further period of five years, and in view of the war was extended for a period of two years from 31st March following the cessation of hostilities. The second agreement thus expired on the 31st March, 1948, and a third agreement, allowing for more liberal extensions in the area of the tea cultivation in the tea producing countries, has recently been entered into for an interim period of two years, till 31st March, 1950.

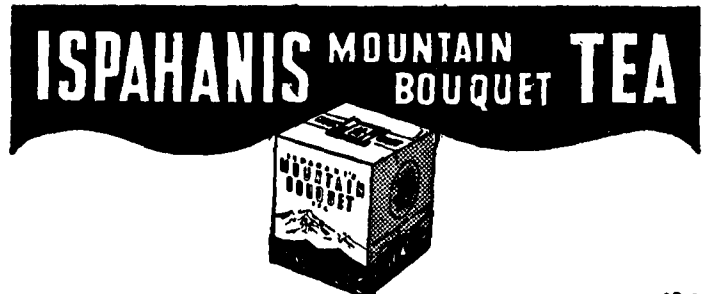
The scheme for restricting tea cultivation and exports offered a temporary remedy for over-production, and it was felt that the prosperity of the industry depended ultimately on an expansion of markets, and the International Tea Committee were therefore required to study ways and means for increasing the consumption of tea in the world. Before the formation of the International Tea Committee, the Indian Tea Cess Committee had already been engaged in increasing tea consumption in India, and similar bodies had also been formed independently in Ceylon and the Netherlands East Indies. The International Tea Committee formed the conclusion that, valuable as was the work which had been carried on by these three countries individually, greater benefit would be achieved by joint action directed to the sole purpose



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of increasing the consumption of the teas produced by the regulating countries respective of any sectional considerations, and the result was the establishment, in July, 1935, of the International Tea Market Expansion Board with headquarters in London, to organise and carry out propaganda campaigns in the various countries selected for such activities. It was agreed that the International Board would be financed from the cess levied in the three producing countries in proportion to the production of tea in those countries, and that simultaneously with the propaganda work of the International Board, the three producing countries should themselves continue their efforts to increase the consumption of their own teas in the three countries of production. To carry out this propaganda work in India the Tea Cess Committee was enlarged to include representatives of additional Associations and Chambers of Commerce, and the name was changed to the Indian Tea Market Expansion Board.

AUCTIONS

Only a brief reference can be made to the methods of marketing Indian tea but, as already indicated, all the tea produced in this country was originally sent to London for sale in the auctions there. This direct shipment of tea to London continued up to the outbreak of the second World War, the principal ports of shipment being Calcutta and Chittagong—up to 15th August, 1947, when Chittagong then became a Pakistan port—in the case of North Indian teas, and ports on the Malabar Coast, particularly Cochin, in the case of South Indian teas, although considerable quantities of South Indian teas are sold regularly on the Colombo market. Towards the end of the 19th Century, the market for tea naturally developed in Calcutta, and in the 1880s the Calcutta Tea Brokers Association, consisting of the various broking firms in Calcutta, and the Calcutta Tea Traders Association, consisting of representatives of buyers, sellers and brokers, were formed to look after the interests of the tea trade in Calcutta. Regular weekly auctions were developed in Calcutta during the period of June in one year to March in the following year, and tea was sold at these auctions for internal consumption in India, for direct export to other countries for blending and packing, and sometimes for resale. The bulk of the Indian crop, however, continued to be shipped direct for auction in London because the United Kingdom was by far the largest consumer of Indian tea and, apart from the better climatic conditions for storing the tea, there are obvious advantages in having the market where the greatest demand exists, and where buyers not only for the United Kingdom but also for other countries, such as the United States of America, which is the second largest export market for Indian tea, can actually inspect the tea which they are buying.

The second World War brought many changes to India's tea industry, and as early as the 5th September, 1939, the Government of India took over all stocks of tea on which duty had not been paid, and also requisitioned in advance all tea due to arrive after that date, paying for the teas on the basis of the prices ruling in the London Auctions held during the week starting 21st August, 1939. In 1942 the Ministry of Food in the United Kingdom, acting under the combined Food Board in Washington, became the sole purchaser of tea for the allied and certain neutral countries under contracts with the Governments of producing countries, and this system of purchase continued until the end of 1946, when the Government of India decided that private exports should be resumed in the case of countries other than the United Kingdom, which has continued to buy its tea under a contract with the Tea

Controller for India, the official appointed by the Government of India during the war to arrange for the sale and shipment of Indian tea to the Ministry of Food in London.

The entry of Japan into the war at the end of 1941 brought about still further changes. The managerial staff on tea estates was gravely reduced by the demands of the Armed Forces, and the industry in North India also sent large numbers of their labour force, working under their own officers, to build roads and airfields on behalf of the military authorities, on India's north-eastern frontier. The work of the Managers who remained was greatly increased, not only by this shortage of staff, but also by the difficulties of transport and the increase in the cost of living, which led to a radical change in the method of paying the workers. Instead of paying cash wages and leaving the workers to buy their own requirements of essential commodities, such as food-stuffs and cloth, in the open market, the industry itself arranged to supply these essential requirements and sold them to the labour at concessional rates designed to screen the workers from the effects of the ever-rising prices. When the war ended it was hoped that the industry would be able to revert to the pre-war procedure, but owing to the uncertainty of supplies and the instability of prices, this has not yet been possible, so that tea garden workers still receive a considerable portion of their wages in kind.

FUTURE OUTLOOK

Another effect of the Japanese entry into the war was the loss of the entire production of the Netherlands East Indies, which converted the world surplus into a world shortage of tea. The International Tea Committee thereupon increased the permissible exports from India and Ceylon to the other two signatories to the International Tea Agreement, but the demand still exceeded supply, and although production on a small scale has recently been started again in the Netherlands East Indies, the world shortage of tea may continue until this production more closely approximates to the pre-war level. With conditions as they are in the Netherlands East Indies, it is impossible to say how long this would take, but the Indian Tea Industry will undoubtedly have to face the problems of over-production again at a fairly early date.

In 1944 the Government of India imposed an Excise Duty of 2 annas a lb. on all internal consumption of tea, and in 1947, following the example of Ceylon, an export duty of 2 annas per lb. was introduced; the rate of export duty being raised a few months later to 4 annas per lb. The Excise Duty was collected by the Excise authorities at the factory, and the export duty by the Customs authorities at the port of shipment. This meant that in the case of teas on which Excise Duty had already been paid, and which were subsequently exported, the full export duty became payable at the port of shipment and the refund of Excise Duty due. In 1947 the difficulties encountered in obtaining refund of Excise Duty were heavy, having serious effects on overseas markets, and the industry asked the Government of India to revise the whole system of duty so that all tea would pay 3 annas Excise Duty at the factory, and tea subsequently exported would pay a further 1 anna to make up the export duty of 4 annas per lb.

How long it will be possible for India to maintain an export duty on tea it is impossible to say, but the Netherlands East Indies have recently reduced their rate of export duty to very much less than the present Indian duty, so that India teas will be at a considerable disadvantage when Java and Sumatra return to full production.



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5. Total Income for the Year ..	Rs. 10,000,000
6. Life Assurance Fund ..	Rs. 35,000,000
7. Total Assets ..	Rs. 38,000,000

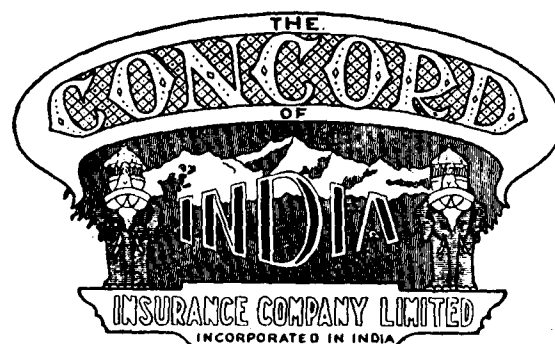
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THE ROMANCE OF INDIAN INSURANCE

EARLY HISTORY AND
DEVELOPMENT

RAPID GROWTH BETWEEN
THE WARS

● By P. R. GUPTA ●



Lala Harkishen Lal, founder of
the Bharat

THE history of the growth and development of Indian Insurance is a romantic story. As in other countries Indian Insurance has had its vicissitudes and has suffered setbacks from time to time, but on the whole it has enjoyed smooth sailing compared with most other countries. Insurance in India was started by the early European settlers in the country, but most of the earlier societies catered only for the business of their own community. Later the initiative was taken up by Parsees and Indian Christians, and the societies which they started also confined their activities to small groups. It was somewhat later that Hindus took up the business, but the companies which they started catered for the needs of the whole country so that they had a wider appeal and the companies grew rapidly, especially after the upsurge of the Swadeshi movement in the country.

Insurance business proper in this country dates from the beginning of the 19th century. The first insurance company in India was the Madras Equitable, started in 1829 by Messrs. Arbuthnot & Co., of Madras, as a mutual society to insure the lives of British officers. It issued policies payable only on death, with premiums payable throughout life. The Society was run on sound principles and for many years the profits permitted of a reduction of 75 per cent. from the full rate of premium, but as a result of the valuation made on a stringent basis in 1920, when securities were at a low value, it was found that to keep the Society solvent it would be necessary to pay premiums at the full rate. Rather than do so the members resolved to put the Society into liquidation (1921). The Society functioned for about a hundred years and the history of its growth and liquidation is most interesting.

Several other Societies were started about this time, the Madras Widows and Orphans' Fund, the Tinnevely Diocesan Council Widows' Fund, the Christian Mutual, the Bengal Christian Family Fund some of which have gone into liquidation, such as the Madras Widows and the Tinnevely, while the others are still functioning to this day. The Christian Mutual which was originally started in the U.P. subsequently transferred its business to Lahore where it remained after last year's partition of the country.

These are, however, small societies which transacted business among restricted groups. The first company to start business for the general public was the Bombay Mutual which was started in Bombay in 1871. It is the oldest surviving public insurance company in India and was established by prominent members of the Indian and European community residing in Bombay. The failure of the "Albert" and the "European" insurance companies in England, and the consequent loss brought by these failures on Indian policy holders, was the immediate cause of the promotion of this company.



Mr. Surendra Nath Tagore of the
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These gentlemen of high position and repute met together and resolved to have an association of their own, wherein they "could insure their lives as well as the lives of their friends and thus afford protection of their families in case of unexpected misfortune." Seven gentlemen came forward, resolved to have a mutual association. Each subscribed Re. 1 agreeing and guaranteeing the members that in case of the young Society being unable to meet the payment of claims they would subscribe Rs. 5,000 each. Thus the Bombay Mutual was formed and was registered on the 21st March, 1871, with the following Board of Directors:

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3. G. Gohangon, Engineer.
4. J. Rich.
5. J. F. Vaz, Asst. Military Deptt., Secretariat.
6. N. Spencer (Snr.), Judge, Small Cause Courts.

The Bombay Mutual was the first company to accept Indians on the same terms as Europeans residing in India, none of the British companies having previously done so. To-day the Bombay Mutual is one of the biggest insurers in India with an annual new business of Rs. 6½ crores and a business in force over thirty crores.

BOMBAY MUTUAL & THE ORIENTAL

In the same year as the Bombay Mutual was established another company, the Indian Life Assurance Co., Ltd., was established at Meerut in the U.P. but the concern had a brief existence and after eight years independent existence was absorbed by the Standard Life Assurance Company.

Shortly after the establishment of the Bombay Mutual another insurance company, the Oriental, was established in 1874. This was the first proprietary insurance company in India. It was decided to make the company subject to the strictest rules. To ensure this the constitution of the company strictly prohibited amalgamations and furnished the highest order of security for its investment by imposing an obligation to invest 80 per cent. of the premium income, after meeting claims, surrenders and loans, in Government of India Securities and hand these over to the Official Trustees. Apart from protecting the investments this was an effective limitation on the expenses of management. To this day the Oriental's constitution remains substantially the same. The judgment of the founders of the institution has been amply vindicated, and the Oriental to-day is the largest and most impregnable life office in the East. Apart from its size and soundness, another feature of the institution is the continuity of policy it has enjoyed and it is remarkable that in the first 72 years of its existence it had only three managers—Mr. McLauchlan Slater, the founder-manager, who conducted the affairs of the company in its first twenty-five years, Mr. Paterson Brown for the next twenty-three years and Mr. Edwin Jones for the next twenty-four years. During the latter regime the company made phenomenal progress. Mr. Jones retired in 1946 after 33 years of service in the Oriental and died shortly after his return to England.

About this time a number of already well-established British companies started business in India. Thus the Standard Life Assurance Company commenced business in 1846, the Liverpool, London & Globe in 1853, the Royal in 1860, the North British and Mercantile in 1864, the London Assurance in 1864, the Commercial Union in 1870 and the Gresham Life in 1893, all of which are still functioning in India except the Standard Life which discontinued business after the passing of the Insurance Act, 1938.

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NORTH AMERICAN ENTERPRISE

Towards the end of the century American and Canadian Companies began to do business in India. The first was the Equitable Life Assurance Society in New York, the then largest Life Assurance Company in the world. It commenced business in India in 1882, but owing to a series of misfortunes had to close down its business shortly after. The New York Life Assurance commenced business in 1885 and continued successfully till 1922 when it withdrew, transferring its Indian business to the Sun Life of Canada. The Sun Life Assurance Company of Canada which was established in 1865 commenced business in India in 1892. Of all the foreign companies doing business in India the Sun Life has been the most successful and during a period of over half a century has underwritten a considerable amount of business. Their business in force in this country at the end of 1947 was Rs. 37 crores. The success of the Sun Life organisation in India was largely due to the organising ability and the driving force of the late Sir Phiroz Sethna, who joined the company in 1901, became General Manager for India, Burma and Ceylon in 1920 and continued in that capacity till 1933. Other Canadian Companies were the Crown and the Manufacturers' Life which started operations here at a much later date. The Manufacturers' discontinued doing business in India from 1939 after passing of the Insurance Act.

During the 'eighties a number of new indigenous companies were started in India, mostly mutual, catering to the requirements of small groups, such as Parsees and Christians. Some are still in existence, but their business is very small. Among these are the Bombay Widows (1876), Indian Ordinance (1883), the Indian Christian (1884), Goanese Mutual (1885), Mangalore Roman Catholic (1888), B.B. & C.I. Zoroastrian (1888), Parsi Zoroastrian (1888), Bombay Zoroastrian (1889) and Gujrat Zoroastrian (1891).

In 1891, the Hindu Provident Fund was started in Simla to insure the lives of Hindu Government servants. The Company subsequently changed its name to the Hindu Mutual and transferred its head office to Calcutta. This is the oldest existing Assurance company in Bengal, though the Hindu Family Annuity Fund doing business among a small group was started in 1872 in Calcutta by the well-known philanthropist Pandit Iswar Chandra Vidyasagar. The company is still functioning and has been recently brought within the scope of the Insurance Act, 1938. There is also evidence that as early as 1818 a company of the name of Oriental Life Assurance Company was started in Calcutta. This has no connection with the present Oriental. India's premier company, and it subsequently went into liquidation, but very little is known about its history.

LATER INDIAN GROWTH

In the last decade of the 19th century a number of Insurance companies were started which to-day rank among the strongest companies in India. The Indian Life Assurance Co., Ltd., was established in Karachi in 1892 and ranked as the second proprietary company in India after the Oriental. Formation was on the basis of a scheme of mutual aid association, but subsequently the company switched over to the actuarial basis. The company was started under purely Indian auspices, and its early history is a story "of prodigious labour voluntarily undertaken and carefully carried out." The company was started by certain Indian Christian gentlemen of Karachi and for a long time limited its business to the Bombay Presidency and Goa. The management followed a very conservative policy and it was provided in the original articles of association that a 10 per cent. deduction in the gross premium should be made to cover expenses of the business. It was not until 1934 that the company embarked upon a plan of expansion and began to operate in different parts of the country. Mr. Duarte was the first secretary and held office for 25 years and it was largely owing to his initiative and efforts that the company built up its very sound position. After the 1947 partition the Indian Life remained in Karachi, but has started a Principal Office in Bombay for Indian business.

The next important formation was the Bharat, which was established in August, 1896, in Lahore and was the first proprietary company established outside the Bombay Presidency. This Company was also the outcome of purely Indian enterprise and owed its origin to Lala Harkishen Lal, a well-known industrialist in the Punjab. From the beginning the Bharat adopted a bold investment policy and invested freely in the shares and debentures of Indian companies. Lala Harkishen Lal's dream was to industrialise the Punjab and he utilised the funds of the Bharat for this purpose. During the depression of the 'thirties many of the industries in which the company had investments went into liquidation and the Bharat needed all its resources to tide over the difficulties, which it did successfully. The Company was unfortunate in suffering another severe strain after the partition of India, when it had to remove its Head Office to India (Delhi). Nonetheless it

remains one of the biggest life offices in India.

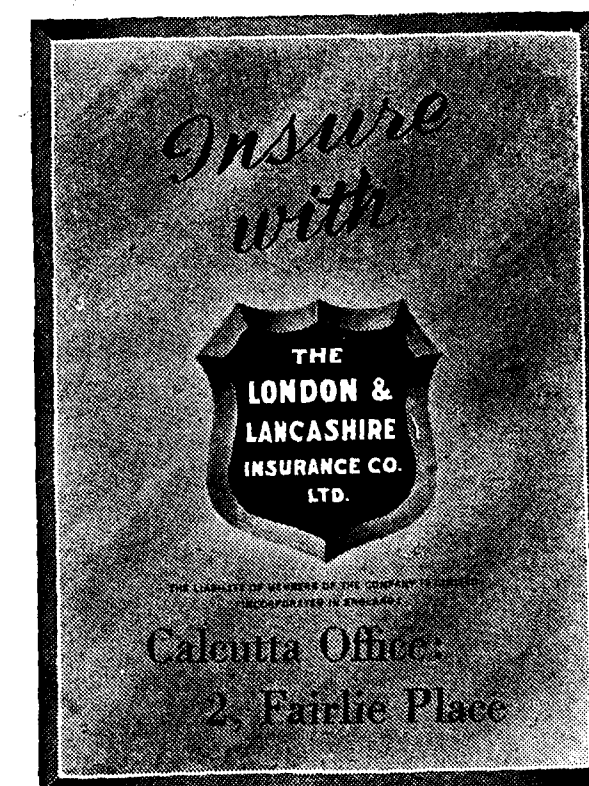
The Empire of India was established in Bombay in 1897 as a result of the joint endeavour of Mr. E. F. Allum and the late Mr. Rustomji E. Bharucha and it was through their untiring efforts that the company attained its present very sound position. Mr. Allum remained at the head of its affairs for over 40 years. Mr. Bharucha died in 1920. The sons of the founders were associated with the affairs of the company till quite recently. The first board of directors were distinguished citizens of Bombay with the late Sir Phirozshah Mehta, K.C.I.E., LL.D., as the chairman and Mr. Chubidas Lalooobhoy, Mr. Abdulla M. Dharamsi, Mr. David Gostling and Mr. Allum as Directors. An outstanding feature of the Empire is its very low premiums and it is one of the strongest life offices in India to-day.



Mr. Panna Lal Banerjee, founder of the National Insurance Co. Ltd.

THE TWENTIETH CENTURY

The real growth of life assurance business in India commenced with the advent of the new century. The intense Swadeshi movement, which commenced in India in 1905, brought with it a realisation of the powerful grip which outside agencies had on the economic life of the country and impelled men with vision and imagination to seek the means whereby indigenous interests could be developed and advanced. Several life offices and many hundreds of provident societies were started during this period, some of which rank among the best and biggest life offices in the country to-day. The first company to be started was the National Insurance of Calcutta. This company was started in 1906 by Mr. Pannalal Banerjee who was previously an agent of the North British, and Mr. W. R. Rae of the Sun Insurance Office. Both Mr. Banerjee and Mr. Rae were connected with the company for many years and built it up to be one of the strongest offices in India.





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The Oriental, the Empire and the National are excellent examples of what Indo-European co-operation can achieve. In the same year the United India Life Assurance Company, the National Indian Insurance Company and the Co-operative Assurance Society were started in Madras, Calcutta and Lahore respectively. The United India is to-day the biggest company in South India and one of the biggest companies in the country. The Hindusthan Co-operative Insurance Society was started in Calcutta in 1907, the Indian Equitable in the same city in 1908 and the Swadeshi Life (later named the Bombay Life) in Bombay in 1908. Almost all these companies rank among the first class companies of India to-day.

The Hindusthan Co-operative Insurance Society, which is now the second biggest Insurance company in India, had a romantic beginning and with its formation the names of some of the most prominent sons of Bengal are associated. Established on the first wave of the Swadeshi movement, the founders were actuated by the ideal of service and were men of imagination, devotion and organising ability. The guiding spirit was the late Ambika Charan Ukil, who had been the chief agent of the New York Insurance Company whose stimulating personality imposed the idea of co-operative insurance in the minds of such prominent men as the late Surendra Nath Tagore, Brojendra Keshore Ray Choudhury and even the poet, Rabindra Nath Tagore. The Hindusthan was actually started in the ground floor premises of the poet's Jorasanko house and the first President of the Society was Maharaja Surya Kanta Acharyi of Mymensingh. Ambika Ukil's zeal for the promotion of new industries carried him away to other organisations, but the late Surendra Nath Tagore, the poet's nephew, remained the founder Secretary of the Society for well over a quarter of a century, after which he handed over charge to Mr. Nalini Ranjan Sarkar. "our Nalini who rose from an indispensable assistant at the time when the Society was in difficulties to the chief officership when it succeeded in gloriously emerging therefrom, thanks to his initiative, untiring efforts and administrative capacity." (Surendra Nath Tagore—"A Reminiscence"). Actuated by the guiding motive of promoting the economic well being of the country, the Hindusthan pursued an investment policy which represented a striking departure from the prevailing policy of investment in gilt-edged securities. The investments of the Society were largely in mortgages and house building schemes which brought ample profits to the Society.

After this there was a steady crop of new companies and it is probable that the movement was overdone. Many in later years could not continue and transferred their business to other companies, while others went into liquidation. To-day after the partition there are 236 Indian companies. They now transact all classes of business, life, fire, marine, miscellaneous, though these latter classes of business were only taken up comparatively recently and mostly after World War I. Other British companies also came on the scene, including the Alliance, Atlas, Norwich Union, the Prudential, the Pearl and others some of which have since discontinued their activities in India. Many foreign companies other than British, viz., the China Mutual, the National Mutual of Australia, the Manufacturers Life of Canada, the Allianz und Stuttgarter Life Insurance Bank Ltd., of Germany and the Winterthur Swiss Life of Switzerland commenced business, but most of them discontinued at some time or other. There are a total of 101 foreign companies doing business in India to-day, but out of these 86 only transact other than life business.

FIGURES OF GROWTH

The growth of Life assurance business in India has been phenomenal and the following chart gives the figures for new business, total business in force and the life assurance fund since 1914:

**LIFE BUSINESS OF INDIAN COMPANIES
IN LAKHS OF RUPEES.**

Year	New Business	Business in Force	Life Assurance Fund
1914	3.19	22.44	6.36
1919	4.49	28.23	7.36
1926	10.34	53.50	13.75
1930	15.68	84.88	20.52
1934	27.97	131.69	31.87
1938	43.29	203.71	50.56
1941	36.68	256.43	68.79
1945	127.00	481.22	97.15
1946	137.16	539.40	113.00

In life business foreign companies now account for 11 per cent. of the new business and 16 per cent. of the business in force.

EARLY LEGISLATION

The need for the consolidation and rationalisation of insurance business began to be keenly felt. For this purpose insurance laws were passed from time to time. The first legislation were the Life Assurance Companies Act, 1912 and the Provident Societies Act, 1912, the former being almost a replica of the English Act of 1909. Prior to the passing of this Act there was no control on insurance business whatsoever, but this Act required Indian Life Assurance companies to make deposits of Rs. 2,00,000 with the Government and submit annual and quinquennial returns of the years' accounts and valuation respectively. This was the first attempt by Government to put insurance business on a sound footing. The Act, however, was limited to provisions

relating to life assurance as there were few Indian companies doing fire and general insurance business; neither did it call for any returns from foreign companies.

As the result of persistent demand from public bodies in the country for the disclosure and publication of the business carried on by non-Indian insurance companies in India, Government decided in 1924 to amend the law. A draft Bill was introduced and circulated in 1925, but was withdrawn pending the report of the Clauson Committee which was appointed in England in the same year to enquire and report on the changes desirable in the British Act. As Parliament did not take any action on the report of the committee which appeared in 1927, the Indian Government, as a result of further public clamour, passed stopgap legislation in 1928, which provided *inter alia* for the furnishing by non-Indian companies of statistical information in respect of business carried on by them in India. It was only in 1938 that a comprehensive Insurance Act was passed providing for effective control of life assurance companies and provident societies and the submission of returns and deposits by all insurance companies, life and general, Indian and foreign. Since the passing of the Act insurance business, particularly life assurance business, has been stabilised. Many weak companies have been rooted out or have transferred their business to other companies and some foreign companies closed down their business in India because they did not consider the extent of their Indian business called for legal supervision.

INDIAN OFFICES ASSOCIATION

The necessity of consolidating the business of life insurance also led to the promotion of the Indian Life Assurance Offices Association in 1927, the main objects of which were (a) to encourage, uphold and popularise the business of life assurance; (b) to disseminate information regarding the principles of insurance; (c) to uphold correct principles in the conduct of life assurance; (d) to promote co-operation among companies; (e) to promote uniformity in business methods; (f) to get legislation passed in the interests of Indian Insurance; (g) any other matter incidental to the welfare of its members. Membership is open to all companies registered under the Act. The Association throughout these years has shown commendable activity and has contributed considerably to the welfare of Indian Life Offices.

One other direction in which there has been welcome progress is in the matter of mortality investigations, but in this all the credit is due to one company, the Oriental, on whose initiative we now have a mortality table of Indian lives. The first mortality investigation was made in the Oriental between 1874 and 1897 by Mr. Meikle (Senior); the second period, ending with the year 1902, was made by Mr. G. W. Meikle (Junior), who later became Actuary to the Government of India; the third carried results still further and dealt with the period 1874 to 1913 and was made by Mr. Edwin Jones. The next investigation was made by Messrs. Douglas Forrest and L. S. Vaidyanathan and related to the period 1905 to 1925 by which effective comparison could be made between the mortality of the current generation of policy holders with corresponding mortality of previous years. Further investigations were carried out and now the Oriental (1925-35) Table has been published, and is being widely used by Indian insurance companies in preference to the British Mortality Tables. It may be added in passing that a valuable paper on Indian Mortality appeared in the July number of the Journal of the Institute of Actuaries in 1926, relating to the experience of the New York Life Insurance Company for the period 1885 to 1922.

NON-LIFE BUSINESS

In other than life business the progress of Indian insurance companies has been much more tardy, and it was only after World War I that the first important general insurance companies made their appearance. The reason for this is that general insurance business can only thrive where there are industries, and as trade and industry controlled by Indian interests were very small in those days, Indians found little prospect in this class of business. Indian industrialists preferred to place their business with foreign companies. It must also be said that in the earlier years the few Indian general insurance companies which were operating received very little co-operation from the foreign companies which had a virtual monopoly of the field, while foreign exchange bankers persistently refused to accept the policies of their companies. However, slowly Indian companies have been able to push their way into this field till now some 60 per cent. of the total business is controlled by Indian companies. Though their companies came on the scene late they have been able to make good headway, especially during the War Years 1940-46. There remains much to be desired, and methods of business and the cost of obtaining it are far from satisfactory. But those who have the best interests of the country at heart are giving the matter thought and legislation is also being contemplated to bring down the cost of procurement. There is no reason why these classes of business should not be placed on a sound footing, and it is hoped in the next few years this will be achieved.

The first Indian companies to start fire and general insurance on a big scale were the New India and the Jupiter General, both of which were incorporated in Bombay in 1919 with large share capital to inspire confidence among the insuring public. The former was launched under the auspices of

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the house of Tatas, while Messrs. Lalji Narainji were the managing agents of the Jupiter General. Though the earliest among Indian Companies to enter the field, both companies achieved immediate success and were able to establish their business far and wide. The New India is to-day the largest composite insurance company in India and has extensive connections in foreign countries also. In the same year the Universal Fire and General Insurance Company, the Vulcan Insurance Co., and the British India Insurance Co., were started all in Bombay and all now have sound positions among the general insurance companies in India and underwrite good amounts of business. The Indian Mercantile has been functioning in a small way since 1907. For a decade after 1919 there were no new general insurance companies in India. In 1929 the net premium of all companies doing insurance business, other than life, was nearly Rs. 3 crores of which the Indian companies' share was just over ½ crore.

In 1929 the Indian Globe was established in Bombay, and in 1931 the Concord of India was started at Calcutta by Messrs. Andrew Yule & Co. This seems to be the first important fire and general insurance company at Calcutta, except the Triton, which has been functioning since 1850 within a limited sphere. In the 'thirties there were more new fire companies. The Eastern Federal Union was started in Calcutta in 1932 and the Great Social and the Pandyan were established in the next year in Bombay and Madras respectively. In 1935 the Kaiser-i-Hind and the Bombay Fire and General were started in Bombay, and the Hercules and the National Fire and General in Calcutta. The next year, 1936, saw the formation of the Ruby General Insurance Co., Ltd. The Ruby General was sponsored by Birla Brothers and began business in a big way. The share capital was large and was further raised to Rs. 1 crore subscribed and Rs. 32 lakhs paid up. The Ruby General to-day is the second largest composite insurance company in India standing next to New India, and has already commenced doing foreign business on a big scale. The United India Fire and General was started in 1938 in Madras. The Bombay Fire and General, The National Fire and General and the United India Fire and General are subsidiary companies of the corresponding big life offices.

After the commencement of World War II a crop of new fire and general companies were established, and a large number of purely life offices started transacting Fire and General insurance business. The process might have further continued, but Government is not giving sanction to any new companies for life and fire insurance business. Of the companies started in the 'forties the following have a substantial capital backing, viz., the Bharat Fire and General (1942), Delhi; The Hindusthan General (1943), Calcutta; The New Great (1943) and the Habib (1942) both of Bombay; the Indian Trade and General (1944), Calcutta; and the Prithir Insurance (1943), Madras.

At the end of 1946 the business position of Fire and General insurance was as follows:—

	Total net Premium income in India.	Net Premium income of Indian Companies.	Percentage of Indian Companies' premiums to total.
	Rs.	Rs.	
Fire	6,01,34,000	3,82,77,000	63
Marine	2,21,65,000	1,09,58,000	49
Miscellaneous	3,32,54,000	1,76,39,000	53
Total	11,55,53,000	6,68,74,000	58

EFFECTS OF PARTITION

Before I conclude I would like to refer to the effect of the partition of the country on insurance business. Insurance business in India has received a rude shock as a result of the division of the sub-continent. As is well known, by far the largest number of insurance companies have their registered offices in territories which now form the Indian Union. Of the companies whose registered offices fell within territories now constituting Pakistan, a large number have transferred their registered offices to India. On the other hand two companies, the Eastern Federal Union and the Habib have transferred their registered offices from India to Pakistan. By the end of 1947 the position was as follows:—Of the companies that had their registered offices in undivided India, 236 have now their head offices in the Indian Union and only 9 in Pakistan. Of these also, with the exception of the Indian Life Company of Karachi, there is hardly any concern of any considerable size in the field of life insurance, whilst in General insurance the Eastern Federal Union (Chittagong) and the Habib (Karachi) are the only companies worthy of note. There is therefore a big vacuum in Pakistan which has to be filled. Insurance business being international in scope, there is nothing to prevent Indian companies from functioning in Pakistan, but in view of the decision of the Pakistan Government to treat Indian companies as foreign companies, requiring 100 per cent. of the policy liabilities to be invested in Pakistan, all Indian assurance companies, except one, have discontinued doing life business in Pakistan. High level talks have been going on between the authorities of the two Dominions for some time to come to a settlement, but up to now nothing has happened. Certain suggestions were made by the Pakistan Government which were discussed in the last meeting of the

Insurance Advisory Committee a few months ago at Delhi, but no decision has been arrived at. No doubt in the present strained relations between the two Dominions, Indian companies are not keen on operating in Pakistan till the atmosphere is friendlier. In the meantime, Indian Insurance companies are suffering as a result of the discontinuance of business in Pakistan while the public of Pakistan are being deprived of insurance facilities. Before the partition many Indian companies were doing extensive business in areas now forming Pakistan. The effect on life assurance will be apparent by a comparison of the new business figures for 1946 and 1947 of some of the leading offices in India.

LIFE NEW BUSINESS

	1947 Rs.	1946 Rs.
Oriental	20,03,00,000	28,60,00,000
Hindusthan	12,25,00,000	12,76,00,000
New India	9,00,00,000	12,39,00,000

Not that all companies have suffered equally or suffered at all; some companies have even increased their business in 1947, but there is no gain-saying that partition has had its effect on Indian Insurance. This is particularly apparent in the case of offices which have shifted their registered offices from Pakistan to India such as the Bharat and the Lakshmi.

	1947 Rs.	1946 Rs.
Bharat	2,98,00,000	4,40,00,000
Lakshmi	4,00,00,000	4,54,00,000

Though Indian companies may expect by intensive organisation (and there is much scope for it yet in India) to make up their shortage, the loss of large territories and the consequent curtailment of activity cannot but have an adverse effect. Now that Indian companies have started exploring foreign fields it is to be hoped that good sense will assert itself in the relations between the two Dominions and the companies of each Dominion will be able to operate in each others territory without severe restrictions. In conclusion a passing remark may be made on the legislative restrictions of the different Indian States, which have laws preventing the free operations of Indian companies in their territories. Now that the States have acceded to the Indian Union such laws have become anachronisms and the sooner they are withdrawn the better.

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THE PRESS

HOW THE BREAKING DOWN OF RACIAL BARRIERS AND GREATER PROFESSIONAL FRATERNISATION HAS LED TO ITS DEVELOPMENT IN INDIA

ARTHUR MOORE, former Managing Editor of *The Statesman*, discusses India's Press and its development during the quarter of a century with which he has been associated with it.



The Author.

AFTER more than a hundred and fifty years of life the Press in India has all the charm and attraction of youth. In the course of a quarter of a century I have witnessed continual growth and improvement, but I feel that it is still no more than a sturdy infant which will develop into a giant.

Circulations are large to-day by comparison with what they were in the twenties, but they are minute by comparison with what they will be when literacy becomes general. Twenty years ago the *Statesman*, with less than half its present sales, made a daily claim that its circulation was more than the combined circulations of any five papers published in English in Eastern, Northern or Central India. A contributing factor to this success was that, despite the fantastic price to which paper soared in World War I, the *Statesman* remained an anna newspaper, whereas its principal contemporaries outside Calcutta adopted the policy of voluntarily restricting their circulations and raising their price to four annas. Hence, in general the number of newspaper readers in India after World War I was probably not much greater than when CAPITAL was founded sixty years ago. The anna paper became general again before the thirties and the Bombay and Madras papers then rapidly increased the number of their readers. In Calcutta the example of the *Statesman* had been followed, but it was not till a later period that the circulations of the Indian-owned journals began to show a marked increase. The reasons for this increase lay in the technical improvements in their production.

The Indo-Pakistan public to-day in a population of over 400 millions may be compared with the public of the United Kingdom of Great Britain

and Ireland, with a population of some fifty millions, in the early years of the present century. There compulsory free education was beginning to produce its effects. The *Daily Mail* and the *Express* had inaugurated a halfpenny Press with readers running into hundreds of thousands, but long established papers of great repute, such as *The Times* and the *Morning Post*, were nowhere near the six figure mark; indeed *The Times* in its struggle against the competition of penny papers went through a bleak period when its sales were less than fifty thousand. It came down from three pence to a penny early in 1914 and its circulation immediately shot up close to 200,000 and made it a competitor of the *Daily Telegraph*. The War forced an all-round upward revision of prices and abolished, apparently forever, the halfpenny paper. London penny papers count their circulations to-day by the million, but there are still in the provinces famous and highly influential papers which have only small circulations.

IMPROVEMENTS IN PRODUCTION

The British connection is responsible for newspapers in the modern sense in India. These began in the eighteenth century when John Augustus Hicky (not to be confused with William Hickey, the lively author of the famous diaries), published his *Bengal Gazette or Calcutta General Advertiser* in 1780. John Augustus dipped his pen in vitriol and started a tradition of vehement and violent writing which lasted well into the nineteenth century. However during the same period the language of "The Thunderer" from Printing House Square was scarcely more restrained and the English Press in India, like its counterpart in England, atoned for its violence by producing some eminent and polished writers. I need not go into the early history as much has been written about it by others. In a lecture to the Royal Society of Arts last June, Sir Alfred Watson gave an admirable summary.

But the Press in India lagged far behind the British Press in technical improvement, and had to make up in liveliness of matter for dullness in presentation. The rotary press and the linotype machine revolutionised production in Europe, but took a long time to come to India. Newspapers lacked capital, and rotary presses, already common in Europe in the eighties of the last century, are expensive. It was not till 1907 that the Knight brothers installed the first rotary in India. The example was followed; and to-day the leading papers in Delhi and the three Presidency towns are printed on rotary machines, and a number of new ones are on order in America and England.

The rotary press familiarised Indian newspapers with the use of "news-print," that is to say the soft, absorbent (and cheap) paper made with an admixture of mechanical wood pulp which alone will take an unsmeared impression from a fast printing press. But when this paper was used without the rotary, which not only prints but cuts and folds, the result was often a sad mess, and copies were distributed with loose sheets upside down and in the wrong order. Indian-owned newspapers to-day seldom exhibit these defects.

Line and half tone blocks and the picture page were just beginning to come into fashion in daily papers in India twenty-five years ago. Double



At a meeting of the Indian and Eastern Newspaper Society, Mr. B. J. Kirchner points out a local feature for Mr. K. Srinivasan (Hindu), Mr. Herbert Smith (*Times of India*) and Mr. Arthur Moore. In the background is a representative of the Madras Mail.

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column headings were practically unknown, and by to-day's standards the production both of news and views was poor. Leading articles had no titles to guide the reader. If there were several leaders one started where another left off, and all that separated them was a thin line,—what printers call a 'rule.' A title for a leading article would not seem to most of us a dangerous innovation, yet such is the force of conservatism that when I introduced the practice in the *Statesman* a number of readers wrote to protest.

A factor in the modernisation of the Press in India has been the growth of professional fraternisation. The almost total absence of this struck me forcibly on my first arrival. The editors of English-owned papers in the same town, and their staffs, knew each other tolerably well, but they had no contacts with their Indian opposite numbers and no regular opportunities of meeting their fellow journalists, British or Indian, in other centres. I joined the *Statesman* in 1924, in time to attend the farewell dinner to the retiring Editor, J. A. Jones. Ray Knight was appointed to succeed him, but during the summer he had a serious illness after which he had to remove to Shillong, so that I found myself in charge till the following spring. The paper industry had applied for protection, and the Tariff Board spent the winter of 1924-25 in investigating the claim. No newsprint is made in India as yet, though experimenting has been going on for a long while and now seems about to succeed; and as newsprint is indispensable for rotary presses and is also used on flat presses it seemed to me essential to represent our case to the Tariff Board, which might otherwise recommend an all-round protective duty. I felt, however, that such a representation would have more weight if made on behalf of newspapers in general, and accordingly convened a conference. This was attended by representatives of the *Amrita Bazar Patrika*, the *Bengalee*, the *Englishman*, *Forward*, and I think of some Indian language papers in Calcutta, the *Times of India* from Bombay, and the *Madras Mail*. There was complete unanimity, and the conference empowered Herbert Watson, to whom I owe my initiation into the mysteries of newsprint and newspaper management,—and myself to give evidence before the Tariff Board on behalf of newspapers. Our representation was successful; a definition of newsprint was framed, and newsprint was excluded from protective taxation in the Act. The conference filled me with the hope of one day seeing a permanent organisation created.

INDIAN AND EASTERN NEWSPAPER SOCIETY

The distances separating great Indian cities were, however, for long held by some to be an insuperable obstacle to the formation of an All-India Society, but in 1939 my hope was fulfilled, and I inaugurated the Indian and Eastern Newspaper Society at a representative meeting in the Delhi office of the *Statesman*. The Society quickly attained a large membership and became a powerful body. Its meetings, held in different cities in rotation, have enabled those responsible for newspapers to get to know each other, and have led to a mutual understanding and to friendships formerly impossible. The Society also rapidly scored a number of material successes. Owing to its representations the Government withdrew a wartime increase in railway freight charges which had been announced, and the Government consulted us at every stage concerning the allocation of paper and the size and price of newspapers during the war. To suit newspapers the revenue duty on paper has also varied between an *ad valorem* and a specific charge. In normal times when newsprint is cheap an *ad valorem* duty is preferable, but in both world wars the price of newsprint has risen by as much as 700 per cent.

During my four years term as president we rigorously abstained from all political discussions and eschewed racial considerations. I believe that later there was some deviation into the political field, but now that independence has been attained I trust that the former practice will become absolute again.

THE EDITORS' CONFERENCE

In the autumn of 1940 Mr. K. Srinivasan, Editor of the *Hindu*, and Mr. Devadas Gandhi, Editor of the *Hindustan Times*, convened an Editors' conference in Delhi, to consider the wartime restrictions on the Press which the Government had announced. A similar conference had met in World War One which no British editors had attended. Owing to the growth of professional solidarity on the second occasion the attendance was general. The conference led to the establishment of central and provincial press advisory committees, which have outlived the war and survive to-day. The Editors' conference has become a permanent institution, and meets at least once a year.

THE EMPIRE PRESS UNION

Another indication of the breaking down of racial barriers was the growth of membership of the Empire Press Union. The India, Burma and Ceylon Section of the Union was for more than twenty years a largely bogus organisation which was called into existence to provide some means whereby those countries could be represented at Empire Press conferences, the first of which was held in 1910. Its members never met, and it functioned only

once in five years when, wars permitting, a conference was held in London or a Dominion, and the Chairmen, by postal consultation, arranged for representatives from India to attend. When I succeeded Sir Alfred Watson in 1933 as Chairman the only members were two British-owned newspapers in Burma, the *Civil and Military Gazette*, the *Englishman*, the *Fauji-Akhbar*, the *Mail* (Madras), the *Pioneer*, the *Statesman*, the *Times of Ceylon*, and the *Times of India*,—all except *Fauji-Akhbar*, an official paper, then British-owned. During my ten years chairmanship the *Amrita Bazar Patrika*, the *Bombay Chronicle*, the *Ceylon Daily News*, the *Ceylon Observer*, the *Hindu*, the *Kesari* (Poona), and the *Leader* (Allahabad), joined and we developed the rudiments of an organisation. We put twelve representatives on the London Council and from India gave our views on many matters,—such as copyright, cable and wireless communications, broadcasting advertisement programmes and broadcast news timings,—upon which the E.P.U. executive in London consulted us. On these subjects and on newsprint duties we also made representations to the Government of India. In 1937 we made a notable advance and began publication of a monthly "India, Burma and Ceylon News Bulletin" for distribution throughout the British Commonwealth, to which practically all the members contributed items regularly. Our thirty-second issue appeared at the outbreak of war in September, 1939, when publication, except for occasional issues, had to be suspended. In 1943 I had the pleasure of nominating Mr. K. Srinivasan, Editor of the *Hindu*, as my successor and he was duly elected.

NEWS AGENCIES

The E.P.U. after much campaigning secured from Cable and Wireless the tremendous boon of a reduction in press rates between the U.K. and all Dominion and Empire countries to a penny a word. This, coupled with the advent of some competition and the development of air mail, led to a vast extension of Reuter's services, and wrought a transformation in the appearance of newspapers in India. The principal internal news agency, the Associated Press of India, which was owned by Reuter, also felt the spur of competition from newcomers. I have always held that newspapers collectively are best fitted to own and control news agencies and while I presided



The Hon. J. J. Astor, President of the Empire Press Union, during his visit to India in 1934, photographed with Mr. Moore, Chairman of the India, Burma and Ceylon Section.

over the Indian and Eastern Newspaper Society I initiated negotiations for the purchase of the A.P.I. These have taken six years to come to fruition, but an agreement has now been reached for its transfer to a "Press Trust of India," representing the Indian and Eastern Newspaper Society.

Reuters, the main United Kingdom news agency supplying India with news was taken over, in equal shares by the Press Association (London) and the Newspaper Proprietors Association of Great Britain in 1941. Australia and New Zealand have since acquired shares, and at the time of writing negotiations for the participation of the new Press Trust of India to the same

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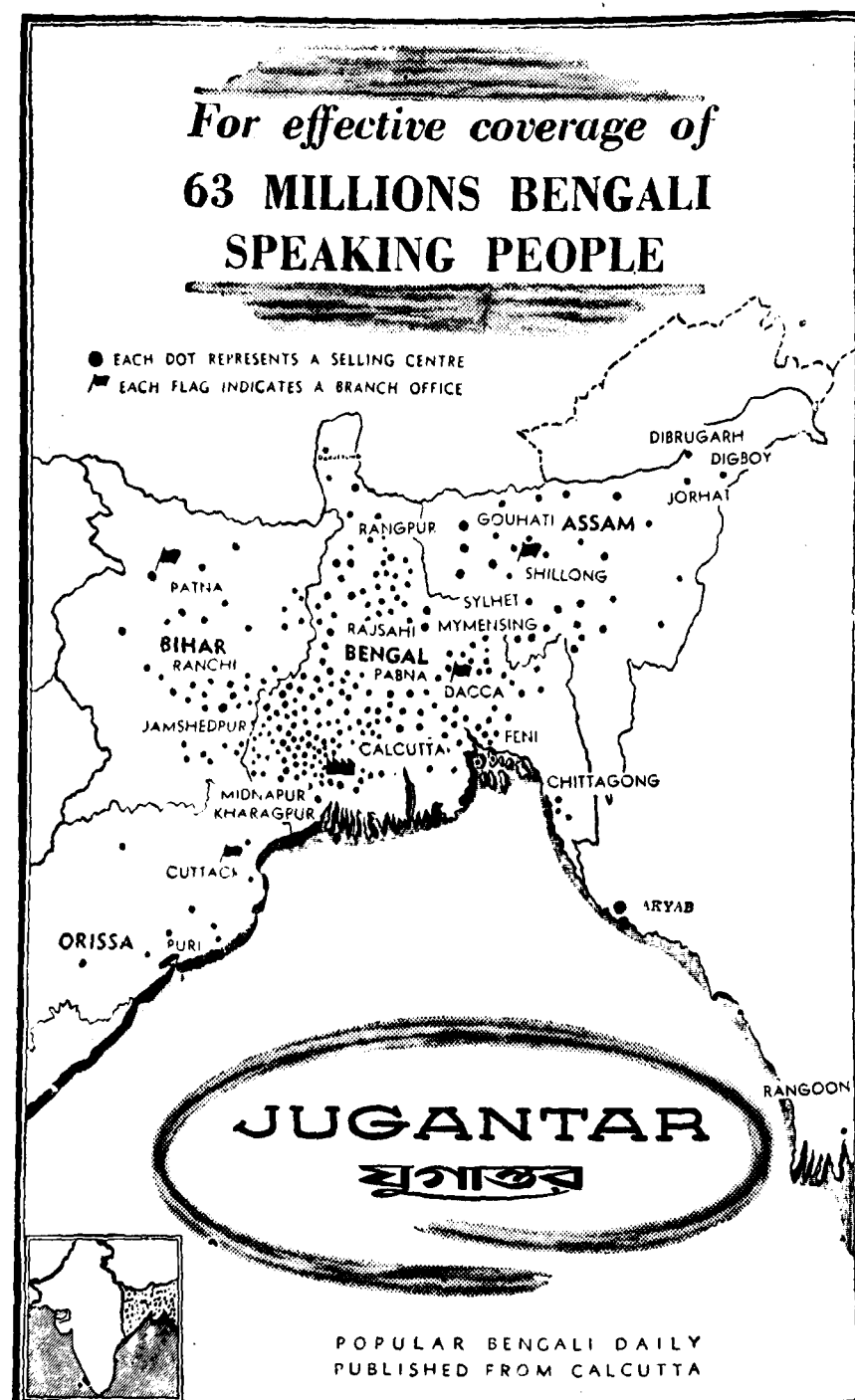
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The Paper of the masses and classes, the prince and the peasant, officials and non-officials and trade and industry. This is what the leaders of free India have to say about the Pioneer:

H. E. SHRIMATI SAROJINI NAIDU, Governor of the United Provinces: "A paper well worth reading. Apart from the technical merits of production and lay out, there is a sense of balance and dignity, and also an independence of views which, though they may not always coincide with mine, are well worth considering."

THE HON. PANDIT GOVIND BALLABH PANT, Premier of the United Provinces: "I am struck in particular by its all-round neatness, clean look, sober display of news and reasoned and dignified presentation of news. It maintains the best standards of journalism, its criticism is free from malice, its style is elegant and it never loses its balance or sense of humour."

H. E. DR. KAILAS NATH KATJU, Governor of Bengal: "I receive every morning a sheaf of newspapers, but will you believe it, my first inclination is to turn to The Pioneer first of all in the bundle, even though, owing to distance, it is just 24 hours late for the news. Your display is wonderful. Your leading articles I like greatly."

THE HON. MR. JUSTICE GHULAM HUSSAIN, Senior Judge of Allahabad High Court, Lucknow Bench: "Its fearless and zealous championship of the people's rights combined with bold and courageous criticism, ever constructive, of the policies and acts of the Central and Provincial Governments, has won universal public esteem and praise."

It pays to advertise in

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extent as Australia continue. A tentative agreement was reached at a conference held in London in the summer, but has encountered strong opposition from Mr. Sadanand of the *Free Press*.

In 1931 the *Statesman* began simultaneous publication in Delhi and Calcutta. This was a bold venture as the two cities are nearly a thousand miles apart, but it proved a success. Adopting the same methods the *Amrita Bazar Patrika* has now for some years had an Allahabad edition. For twenty years after it had become the capital of India Delhi had remained without a modern daily newspaper. The late Mr. van Renan made a gallant attempt with the *Chronicle*, but failed. To-day Delhi has three morning and two evening papers in English, and their number is likely to increase as the population has doubled since partition of the country, and the commercial as well as the political importance of the capital is much enhanced.

Political and commercial developments have also led to changes of ownership. In India as elsewhere big business has discovered that there is money to be made in and through newspapers, which confer power on their owners. The principal groups at present are the Birla, Dalmia, and Goenka combines. To the Birla group belongs the credit of having created the *Hindustan Times*, and it has acquired the Allahabad *Leader* and the Patna *Searchlight*. The Dalmia group owns the *Times of India* in Bombay, has a controlling interest in the *Civil and Military Gazette* in Lahore and in papers in Karachi and elsewhere, and publishes a morning and an evening paper in Delhi. Mr. Goenka, from his base in the *Daily Express* at Madras, is extending his activities in Calcutta and Bombay.

INDIAN LANGUAGE PAPERS

The Muslim community, long without newspapers in English to voice its point of view, has been making vigorous efforts to overcome this deficiency. The *Star of India*, *Dawn*, the *Morning News*, and the *Pakistan Times* bear witness. Papers in Indian languages are vastly more numerous than those in English. Many have short lives, but others endure and their number keeps on swelling. There is now an Indian Languages Association to watch over their interests, but they suffer from great handicaps and if big business can help to remove some of these it will in that direction at least be rendering a service. Newspapers in English, despite their vast influence, can never make up for the lack of well-produced and educative journals in mother tongues. The main obstacles are technical. No Indian script except Devanagiri has yet been adapted to the linotype machine, and for lack of capital Devanagiri's advantage has been little exploited. Indeed, this limitation of the Indian language Press applies to much of the mechanics of journalism,—shorthand, the typewriter, linotype, intertype and monotype, and of course the rotary press. The Arabic script is definitely unsuited for mechanical reproduction from types, and I think Urdu educationists would be well advised to give up the unequal struggle and to follow Turkey's example in adopting the Roman script. Romanised Urdu already has a firm root as it has always been in use in the Army and the service paper, *Fauji-i-Akhbar*, which circulates not only in the Army but in the villages of ex-soldiers, is in the Roman script. Moreover the great majority of Britons, knowing no other, have always learnt Hindustani in the Roman script, and this has familiarised many Indians with it, so that there is no lack of dictionaries and manuals.

Bengali, which can be written in Devanagiri, has provided some of the most successful examples of Indian language papers. The *Basumati* at one time had a larger circulation than newspapers in English, and in recent years the *Ananda Bazar* and *Jugantar*, allied to English editions, have notably raised the standard of production. But in general there is a lack of capital and the circle has hitherto proved a vicious one. Because of small circulations, inferior production, restricted news service, lack of agents abroad and the unfamiliarity of American and European advertisers with Indian languages and scripts, the Indian papers get little national or international advertisement revenue. The adoption of the Roman script would at once facilitate technical improvements and also make investment in Indian language newspapers more attractive in the eyes of capitalists.

Though I hope that some such great development may take place, I can foresee no decline in the popularity of English. It is the nearest approach to a world language to-day, for the impact of the United States and the British Commonwealth countries on

the international scene in two world wars have necessarily given it a lead over French. In India it is firmly established as the vehicle for political thought, and for scientific or precise study of every kind, and can no more be displaced than in Eire, where all attempts have failed. Through English, generations of Indians have had a window opening on a wider world; and they have learnt to love its poets, in particular, as they love their own. It is reasonable to expect in the next five years a tremendous growth of literacy in Indian languages, and I do not doubt that this vast army of newcomers will contain a high proportion who will be determined to learn English also.

WEEKLY PAPERS

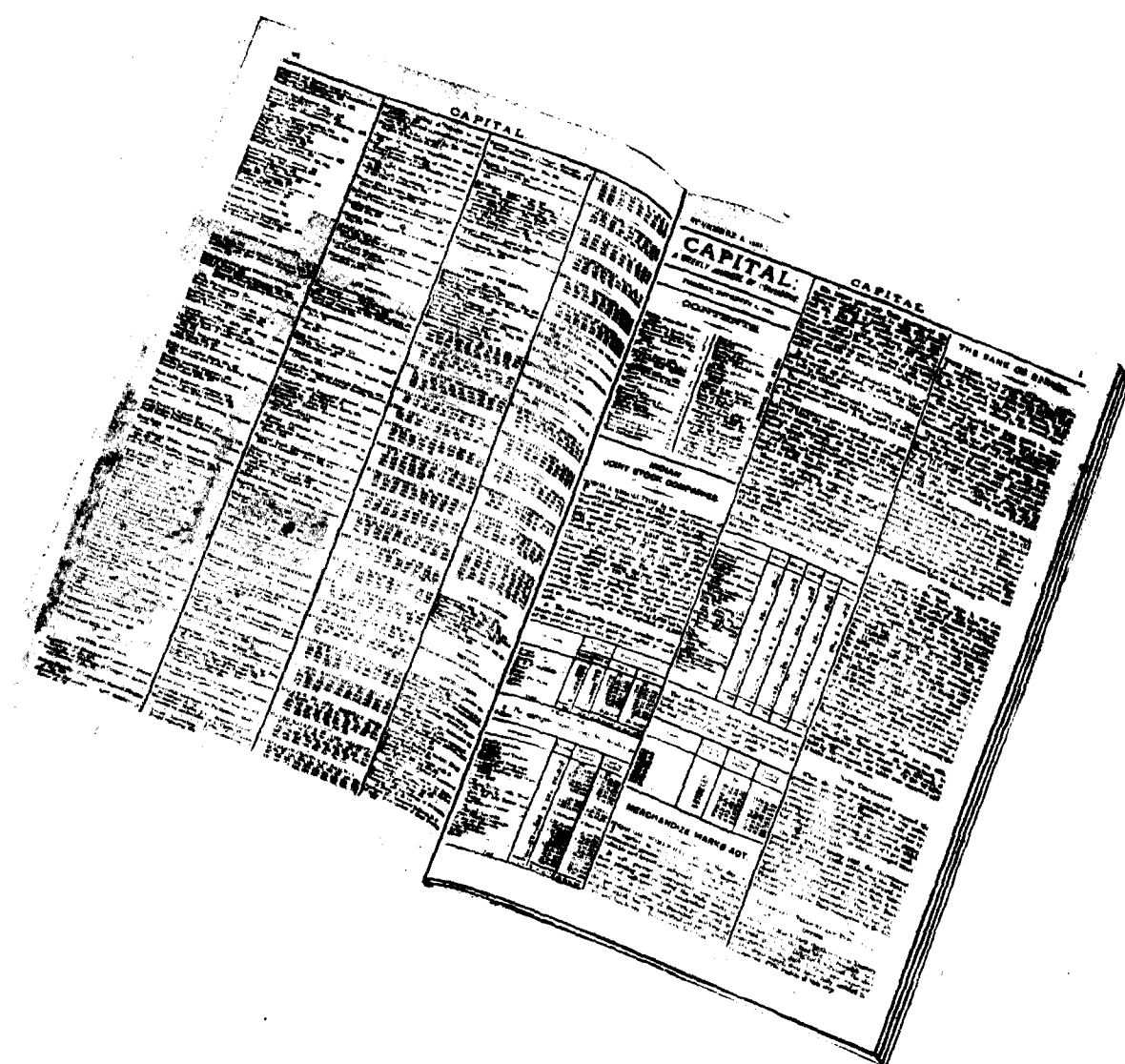
On the auspicious occasion of *CAPITAL's* Diamond Jubilee it is fitting to end this review with mention of the notable development of the specialised and general magazine Press. Weeklies and monthlies possess the advantage that they can be produced on better quality paper than the dailies, and *CAPITAL*, printed on strong, light and well-calendered paper made in India has remained true to a format which is now dear to its readers, and is associated with a Pat Lovett tradition of mixing stocks and shares with a leaven of human interest, which its present editor maintains. As Pat, who always salted the paragraphs of the Ditcher's Diary with Latin tags, chiefly Horatian, would certainly have said:—

Omne tulit punctum qui miscuit utile dulci so *CAPITAL* has naturally found imitators, and the desire to lighten the pursuit of gain with agreeable gossip and a glance at the arts is a feature of the weekly landscape.

Bombay has been active in the production of weeklies, and the *Illustrated Weekly* improved process work by introducing photogravure. The influence of the American Mr. Luce, creator of *Time*, is responsible for magazines of the "News Review" type, and here again Bombay, with *Forum*, was in the lead. The pocket magazine on the lines of *Lilliput*, in the production of Fraser Blair of the *Statesman* played a leading part, has also spread to India, which a former member of the *Statesman* staff and a daughter of the late

There is in this country no visible limit to the field for picture papers. Thanks to the genius of "Shankar" the cartoon has won wide popularity in the last fifteen years. "Shankar's Weekly" is a welcome recent addition to the magazine Press, and if he can succeed in finding literary collaborators worthy of its pictures he will render a notable service in lightening with laughter the burden of the times in which we live.

With the remarkable growth of industrialisation in the country, the dearth of a technical press is a serious handicap, particularly when one considers the fact that *The Indian & Eastern Engineer* has maintained a successful existence for as long as 90 years, while *The Indian Textile Journal* made its first appearance as long ago as in 1890. Amongst other monthly journals which have survived the years Sachidananda Sinha's *Hindusthan Review* and its socio-literary companion *The Modern Review* are both approaching the half-century mark.



A reproduction of the first page of the original issue of "CAPITAL" dated 6th November, 1888. On the left is the first six-monthly Index, as the reproduction is taken from a bound volume.



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SIXTY YEARS OF RAIL TRANSPORT

There can be no doubt that on the maintenance of the efficiency of the magnificent railway system of India depends the future economic progress of the country. How it has been built up and the problems that lie ahead are surveyed in this valuable article.

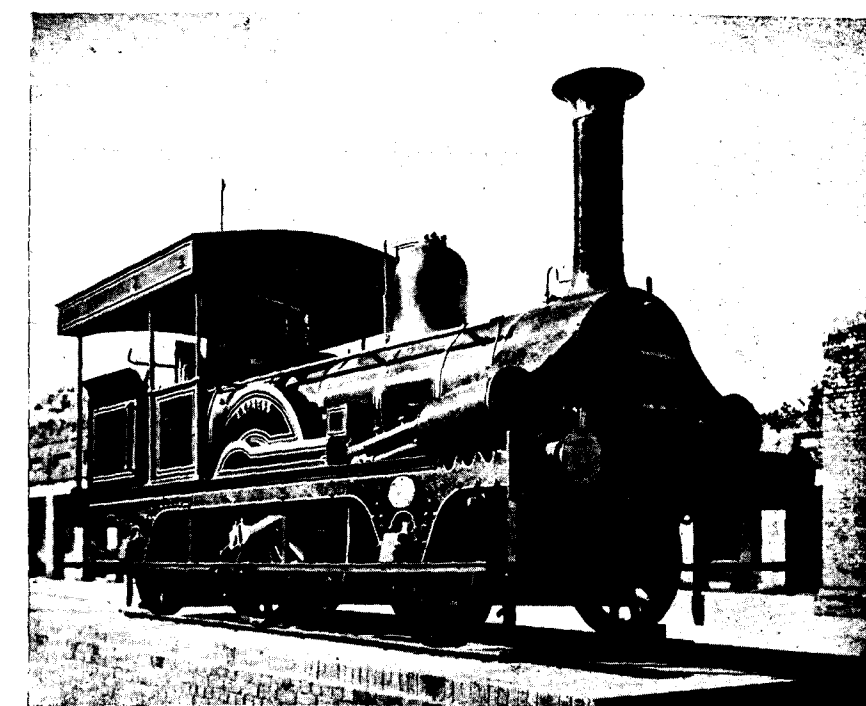
By
Prof. L. A. NATESAN

THE eighties of the last century presented a striking picture of the economic revolution that the railways even then had wrought in the country. First construction had started in 1853, and by 1880, 9,000 miles of railway had been completed. The progress during the succeeding decades was to surpass this record. This was possible mainly because the principal transcontinental arterial routes dreamed by Lord Dalhousie had been laid out. By 1875 Calcutta had been connected by rail with Delhi, Lahore and Multan. Construction to extend the lines from Lahore to Peshawar and to Karachi had begun. From Bombay radiated a railway to Nadwan, another to Allahabad meeting the Calcutta-Delhi line, a third to Nagpur, and a fourth to Madras. Madras was linked with Bangalore, Beypore on the West Coast and Negapatam on the East Coast. There was no rail communication yet between Madras and Calcutta.

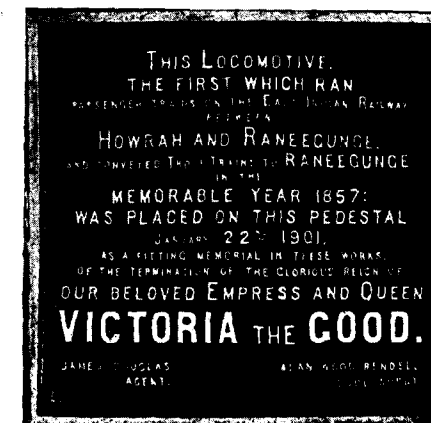
It is difficult for the present-day reader to visualise the state of communications in India in the eighties. The conditions in many parts of the country were not far different from those in centuries past. Sir John Shore, writing in May 1833, observed: "As to the roads, excepting those within the limits of the Civil stations, 16 miles between Calcutta and Barrackpore is all that we have to boast of." Roads were considered only as a means for postal communication and not for wheeled traction. River communications, where they were available as in Bengal and upcountry, afforded a great facility, but in other parts of the country, where they were non-existent, transport was exceedingly difficult. The Public Works Commissioners referred in 1852 to the roads used by carts as being for the most part tracks "never made or improved," but "such as the carts are able to strike out for themselves, winding their way as best they can through the natural obstacles of the country." On such tracks the carts could carry only a third of the load for half the distance per day as on a good road. How with the improvement of roads, the cost of carriage came down was illustrated by the Commissioners from the accounts of a Madras merchant on his trade over a distance of 70 miles between Madras and Wallajahnugger, an important centre at the time.

	lbs.	Rs. As. P.	Rs. As. P.
1823 Cart carrying	900	7 0 0	or 17 6 9 per ton
1844 " "	1,000	6 10 0	16 7 3 "
1851 " "	1,600	3 10 0	5 1 2 "

The abolition of the Military Boards, and the establishment of Provincial Public Works Departments, fortunately coincided with the commencement of railway construction. Every extension of the railway called for the building of proper metalled and bridged communications to ensure their serviceability all the year round, instead of the summer tracks connected across rivers by ferries or floating bridges for only part of the year. The railway acts as a powerful magnet attracting traffic from regions through which it passes and the steady flow of traffic provides the needed incentive to build feeder routes dependable throughout the year. "There was not a single cart in the whole district," wrote Mr. Nicholson about Coimbatore in the pre-railway era. But with the advent of the rail and the feeder routes, where the pack bullock and the coolie used to trudge their weary trek, thousands of carts had come in. By 1880, according to Sir Richard Temple, there were over 20,000 miles of metalled roads, besides a larger mileage of unmetalled and country roads. The economy of rail transport was unmistakable. The cart



The last word in railway locomotion in 1857, the first Express engine to run on the East Indian Railway now reposes on a plinth before the Office of the Jamalpur Railway Workshops with this plaque to record its history



was holding its own on a thirty-mile run against the railways. At a daily hire of Re. 1 per day, carrying a load of about 1,000 lbs. over a distance of 15 miles a day, the freight rate by bullock cart worked out at 0-2-5 per ton per mile. The cost of carriage by rail was 0-0-8 per ton per mile, or a little over a quarter of that by bullock cart. The cost of carriage by canal was about half that by rail. The comparatively lower freight charge by rail consequently imparted a great stimulus to the economic activity of the regions traversed: new industries were started, the ryots benefited from the export trade and the rise in prices, valuable cash crops, such as tobacco, increased, and the feeder routes multiplied. In other parts where construction of railways had not started, general conditions were mostly what they had been for generations past.

RAILWAYS AND FAMINES

The seventies were afflicted by the recurrence of great famines. The value of railways in moving supplies and meeting the critical situation was particularly shown in these years. A severe famine devastated Orissa in 1865 and Rajputana in 1868. In 1873 Bihar was exposed to the same calamity. The great famine of South India in 1876-78 led to a mortality of 52 lakhs. The signal assistance rendered by the railways in moving supplies to the affected areas from other places was mainly responsible for keeping the losses from reaching much larger proportions. "The railways," declared Sir Andrew Clarke in 1877 in the Legislative Council at Calcutta, "proved the saviour of South India." The lesson proved so valuable that railway extensions—called "protective" works—became an important feature of



The new station at Hardwar has a modern appearance.



THE SECOND LONGEST SINGLE SPAN ROAD BRIDGE IN INDIA—
(Prior to Partition)

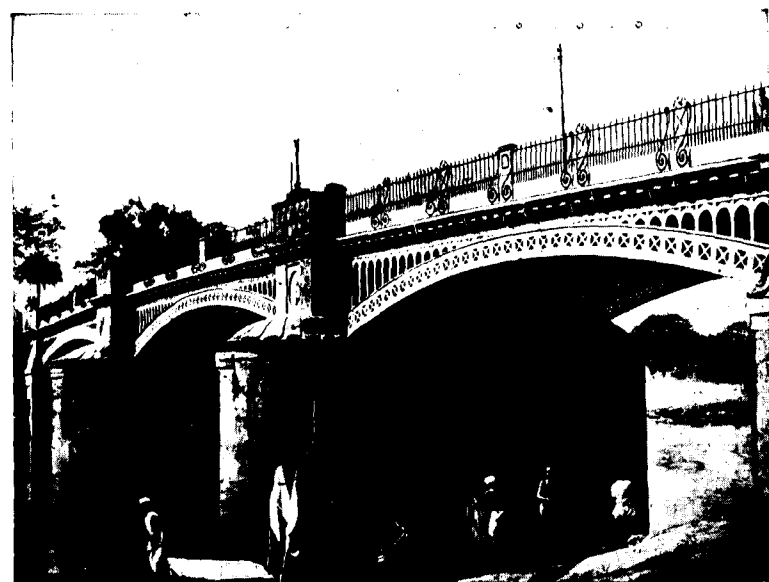
The Sri Yuvraj Karan Singh Bridge in Jammu State, with a main span of 450 feet.



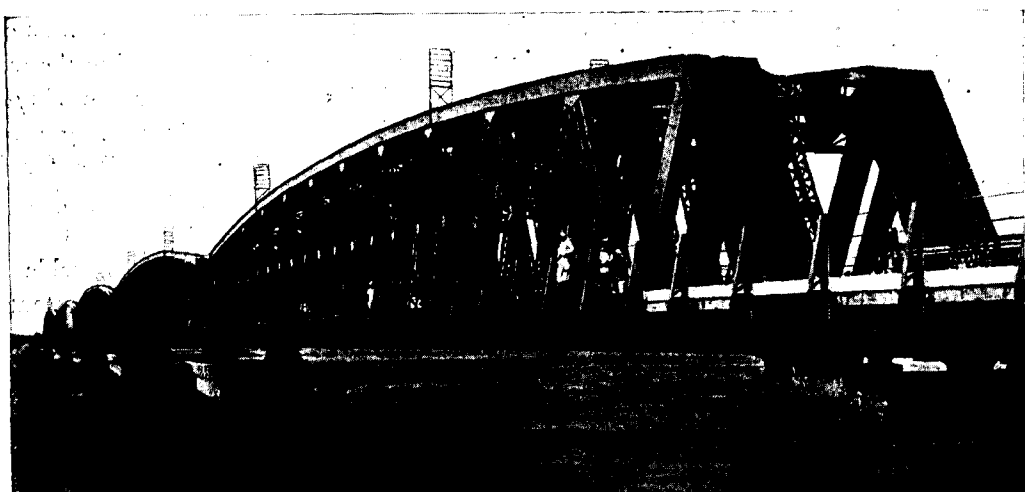
133 YEARS of

THE OLDEST IRON BRIDGE IN INDIA—

Brought out in 1815 by Henry Jessop, the "Old Iron Bridge" over the river Gumti at Lucknow is believed to be the Oldest Iron Bridge in India.



BRIDGE-CONSTRUCTION

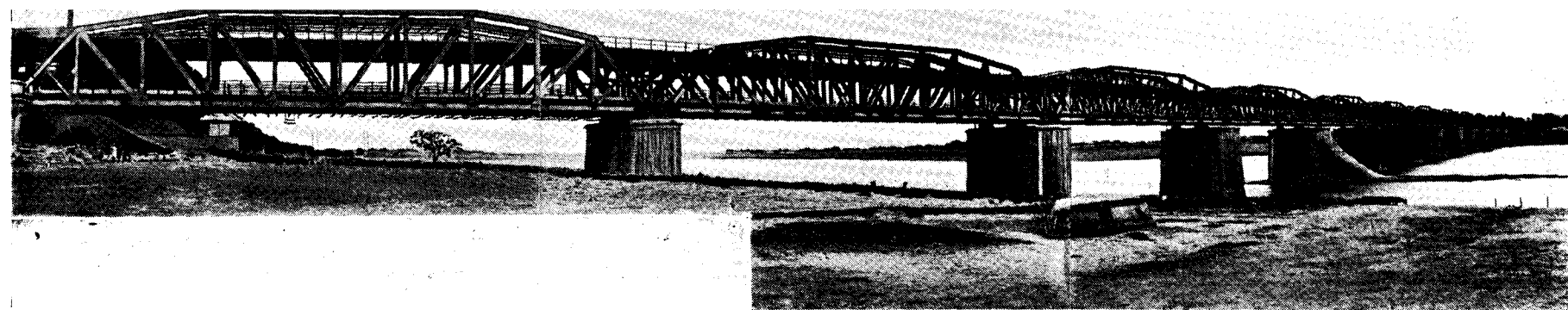


THE LONGEST SPAN GIRDER BRIDGE IN INDIA—

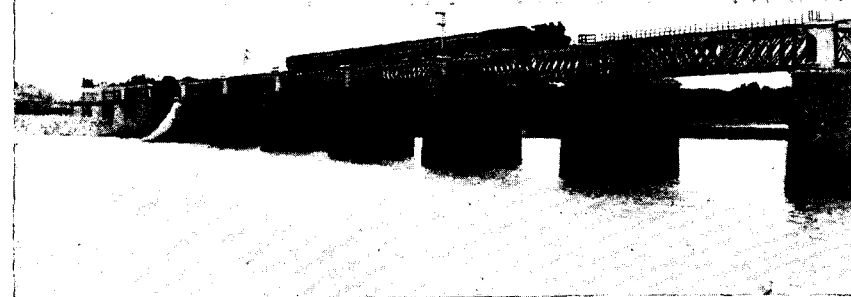
Duplicate outer girders of the Kotri Bridge over the Indus comprising five spans each of 360 feet 6 inches, fabricated in Dum Dum Works of Jessop & Co., Ltd.

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The old (left) and new (above) bridge over the Jumna at Allahabad. The railway is above and the road below.



Government policy for the prevention of famines in the succeeding years. The importance of railways and roads was clearly demonstrated. Quite apart from the cost of carriage, the knowledge that in a few days at most more supplies would be coming helped to keep down the excessive rise in prices which an increased demand would produce.

The question of railway construction in connection with famine prevention gave rise during the eighties to an acute controversy regarding public works, threatening to affect the entire future railway development of the country. Railway construction had led to prodigious losses to the public exchequer. The guaranteed system, under which original construction had started, proved a failure. The contracts with the Companies were, according to Thornton, "a perfect disgrace to whoever drew them up." Under the system there was no incentive for economy, no responsibility in the event of losses. With the guaranteed interest, as the Rt. Hon. Massey, Finance Member of the Government of India, pointed out, it was immaterial to the Companies representing their shareholders, "whether the funds lent were thrown into the Hughly or converted into brick and mortar." The unremunerativeness of the railway investment causing huge losses to the tax-payer and the need to do something about the prevention of famines in the country brought to the fore a powerful advocate of irrigation, Sir Arthur Cotton. Railways, he argued, could only help in the distribution of food supply, they could not add to it. Canals could do both. To quote his own words, "what India wants is water carriage; . . . the railways have completely failed; they cannot carry at the price required; they cannot carry the quantities; they cost the country 3 millions a year, and increasing, to support them . . . Steamboat canals would not have cost more than one-eighth of the railways; would carry any quantities at nominal prices, and at any speed; would require no support from the Treasury; and would be combined with irrigation." Had Sir Arthur's scheme found favour, the whole country would have been connected up with a vast network of canals and rivers, and the transport map of India might have been entirely different. But political opinion in Britain had little enthusiasm for irrigation works and strongly favoured rapid railway development.

CONSTRUCTION POLICY

The question of policy as regards railway construction and working was also a topic of much controversy at the time. The evils of the guaranteed system had so adversely operated against the financial interests of the country that in the seventies pressure from Lord Lawrence, the Viceroy, led to a review of the whole arrangement. Fortunately at this time the Secretary of State for India was one who could appreciate his views. The case for the State taking the initiative and responsibility for construction was stated by Lord Lawrence in a remarkably well-reasoned and vigorously expressed minute. The undesirability of the Secretary of State dealing directly with the Companies behind the back of the Government of India was pointed out, and a strong case made out for State construction and management. The prevailing circumstances favoured a change of policy which was to have a profound influence on the administration of railways ever after. Having set up the precedent of a guarantee, the prospect of attracting the British investor to railway enterprise in India without a guarantee appeared rather remote, and the only choice was for Government to assume the responsibility directly, as with their credit standing high, they could obtain the capital needed at rates lower than the guaranteed rates.

To Lord Lawrence was also due another development, that of the construction of cheaper lines on a narrower gauge. The standard gauge was too costly for many regions where a narrower gauge with less capital costs

was financially practicable. He would consider it a "matter of lasting regret, if the progress of the country, so closely dependent on its means of communications, should be retarded by the weight of administrative prescription or engineering prejudice." The policy of constructing metre gauge lines was thus approved.

These principles formulated during the early eighties for the working of Indian railways would have held good during the succeeding decades but for certain modifications which had to be introduced owing to adventitious circumstances. The cost of the war, famine, and the construction of military lines reduced the funds available for further extensions. The £2.5 million sterling fixed by the Parliamentary Committee of 1879 as the limit of borrowing for the Government of India was altogether insufficient to finance railway extensions to the extent proposed, in addition to meeting the other claims on the Government. Resort to private capital under a guarantee was thus the only course left. The question of policy was left undecided until certain definite recommendations were made by the Select Committee of the House of Commons in 1884. One of these raised the limit of borrowing to £3.5 million sterling. Another objected to railway extensions involving additional taxation. The fresh review of the entire policy of railway finance, construction and administration led to a system which influenced the management of Indian railways for more than sixty years.

STATE OWNERSHIP

What were the main features of the new system that was evolved in the eighties? Firstly, the policy of State acquisition and ownership of railways was steadily pursued. Thus, the East Indian Railway was acquired in 1880, the Eastern Bengal in 1884; the Sindh, Punjab and Delhi Company's lines were taken over in 1885-86; and the Oudh and Rohilkund came in during 1888, and the South Indian and the Great Indian Peninsula in 1890. Secondly, private companies were allowed to come in on terms of guarantee different from the old. The Companies were no longer concerned operating a commercial undertaking for profit: they became an agency for raising certain sums of money for the Secretary of State, on which he guaranteed to pay interest at rates not exceeding 4 per cent. during a fixed period. According to the contracts "all moneys paid by the company under the section shall belong absolutely to the Secretary of State, who shall not be deemed a debtor to the Company in respect thereof." The company was required to construct certain railways for which the Secretary of State should provide the funds, and all receipts were to be paid into the Government Treasury. The company was required to work the lines thus constructed, and the net earnings were divided between the State and the company at a predetermined



Interior of an air conditioned coach on the G.I.P. Railway to-day.

AS OLD AS THE HILLS AND STILL THE BEST INLAND WATER TRANSPORT

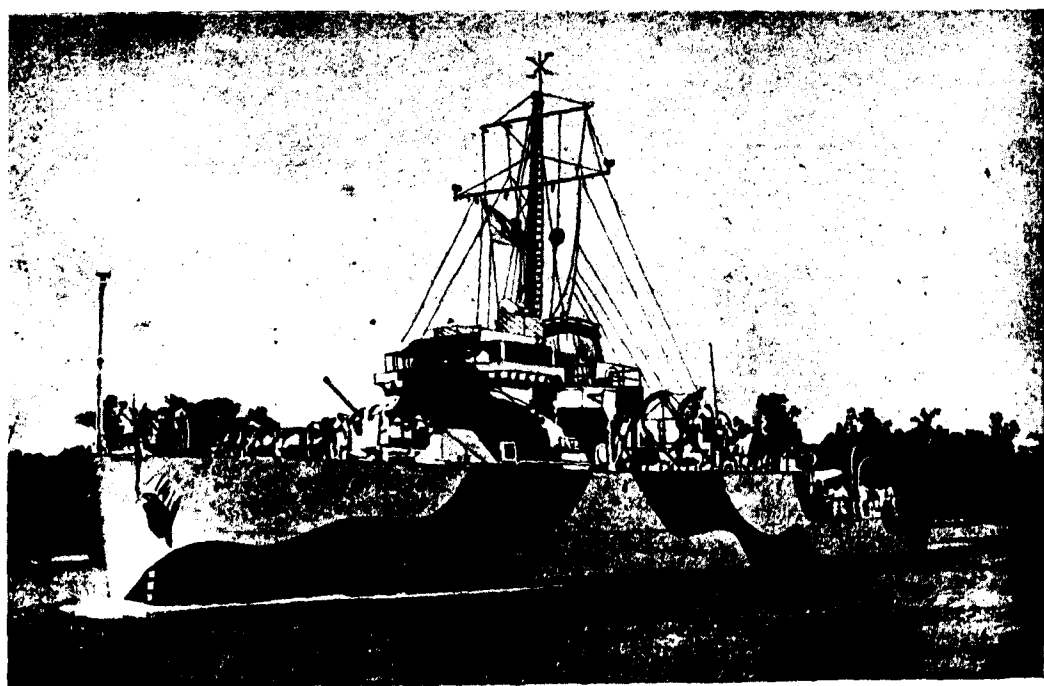
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ratio. The terms were now definitely more advantageous to the State, and the companies working the lines were merely agencies for working them under stringent conditions as to maintenance, supervision, and rates and fares.

The eighties thus witnessed the emergence of the main outlines of the rail transport system of the country. The unique feature of company-worked railways operating side by side with State-owned lines had its inception during this decade—a feature which persisted till 1944. The Bengal Nagpur Railway, promoted during this period, 1883-87, has retained its integrity to this day, and the Assam Bengal till its amalgamation with the Eastern Bengal to form the Bengal and Assam Railway in 1942. The Indian Midland (1882-85) and the Southern Mahratta (1882) disappeared by mergers, the former with the Great Indian Peninsula and the latter with part of the old Madras Railway. More rapid progress under the dual system was interrupted by the Panjdeh incident in 1885, as a result of which funds had to be diverted to the construction of costly strategic and unremunerative lines on the North-West frontier, now forming part of the North-Western Railway in Pakistan. Under special sanction funds in excess of the previous limits were granted to finance new lines and extensions.

In the meantime, the fall in exchange, as a result of the depreciation of silver, dislocated the finances of the Government of India. As the gold liabilities of the Government rose with every increase of construction through State agency, an attempt was made to continue new construction through the Companies on rebate instead of guarantee terms to keep down the gold liability. The rebate was in the form of payment from the gross earnings of the main line from traffic interchanged with the Company's line, not exceeding 10 per cent. of the gross earnings from such traffic, so as to assure

TABLE I—STATISTICS OF RAILWAY MILEAGE AND EARNINGS.
(Rs. in crores.)

Year.	Route mileage.	Capital outlay. Rs.	Gross earnings. Rs.	Working expenses. Rs.	Operation's ratio.	% of Net receipts to capital.
1860	838	26.66	0.67	0.37	56	1.11
1870	4,771	90.00	6.67	3.63	54	3.37
1880	8,996	128.57	12.28	6.48	50	4.97
1888	14,525	193.04	19.76	9.87	50	5.12
1890	16,404	213.67	20.67	10.31	50	4.85
1900	24,752	329.53	31.54	15.09	48	4.99

them pay their way. The effect of rail transport facilities on the trade of the country is made abundantly clear by the increasing tonnage handled, and also by the expanding foreign trade. The increase in the value of foreign trade in 1881 as compared with, say, that in 1851, was striking: the total value of imports and exports almost quadrupled from £34.08 million to £119.68 in 1888. If the depreciation in the exchange had not occurred, or if the transactions were judged in rupee value, the trade had more than quintupled. There can be no doubt that a large part of this increase had been brought about by rail transport and the new traffic developed. The figures for the succeeding twelve years ending 1900 recorded a further increase from the new areas tapped by railways and the additional traffic secured therefrom.

LOSSES TO GOVERNMENT

Despite the success of railway working in the field of inland transport there was still a good deal of hesitation in granting funds for further development on account of the loss to Government on railway account. Since the commencement of railway construction to 1899, the losses to Government amounted to £51 million. From 1879 to 1899, the State had to meet a loss of £26.17 million or at the rate of well over a million per year. It was only in 1900 that the tide turned and surpluses began to emerge. In the course of five years the gain to the State from its railway investment had become a regular feature which continued till the great trade depression of the thirties.

The remunerativeness of railway working was commented upon by the Mackay Committee in 1907, who enquired into the inadequacy of rail transport facilities and the urgency of large-scale construction. The Committee believed that even a total route mileage of 100,000 was "short of that which will ultimately be found to be necessary in India," and that "the steady and even rapid development of the railway system of India should be regarded by the Government as one of its most important duties." A hundred million pounds were proposed to be spent on new construction and development in eight years. These recommendations came soon after the recommendations of the Robertson Report, on the implementation of which a Railway Board was set up in 1905 to deal with railway matters.

The progress of railway construction during 1900-14 was limited to only about 10,000 route miles, despite the Mackay Committee's recommendations. As shown in Figure III, the new construction programme was pursued with some effect till 1916-17, after which it slowed down, till a further stimulus was received after World War I. The increase in new construction during the twenties was comparatively short-lived and the route mileage fell off in the early thirties. There was indeed an attempt to maintain an ambitious scale of construction with the Mackay target of 100,000, but the rapid development of road motor transport, short-circuiting railway routes, providing feeder services more economically than branch lines could hope to do, and ensuring accessibility to rural areas, rendered the prospect of new lines extremely doubtful. The battle was won by the roads. This was the main reason for the decline in fresh construction. The decision was taken none too soon, for road transport with its pick-up and delivery service, versatility and low initial capital expenditure was decidedly more advantageous than the railways could ever hope to prove in other than main-line long-distance service.

WORLD WAR ONE

It is now necessary to refer briefly to the effects of World War I on the Indian Railways. The war profoundly affected the finances and

TABLE II—STATISTICS OF FINANCIAL RESULTS OF WORKING.

	1888	1900	1910	1919-20	1929-30	1936-7	1939-40*	1946-7*
Capital Outlay Rs.	193	330	439	596	857	880	853	802
Route Mileage	14,379	24,707	32,099	36,735	41,724	43,128	41,156	40,524
No. of Passengers	103	175	372	533	634	510	530	1,139
Goods, in Tons	22	44	66	95	87	86	92	91
Passenger Miles	4,349	6,840	13,432	20,615	23,053	18,271	18,522	42,060
Ton Miles	3,577	7,132	12,093	20,402	21,525	21,435	23,492	26,981
Train Miles	50	84	162	160	183	192	192	190
Gross Receipts Rs.	20	32	51	89	118	108	112	222
Working Expenses	10	15	27	51	75	70	73	179
Net Receipts Rs.	10	17	24	39	41	38	39	43

Note.—Rs. in crores; other figures, except route mileage in million.
*The Burma Railways, separated in 1937-38, are not included in the figures of subsequent years.

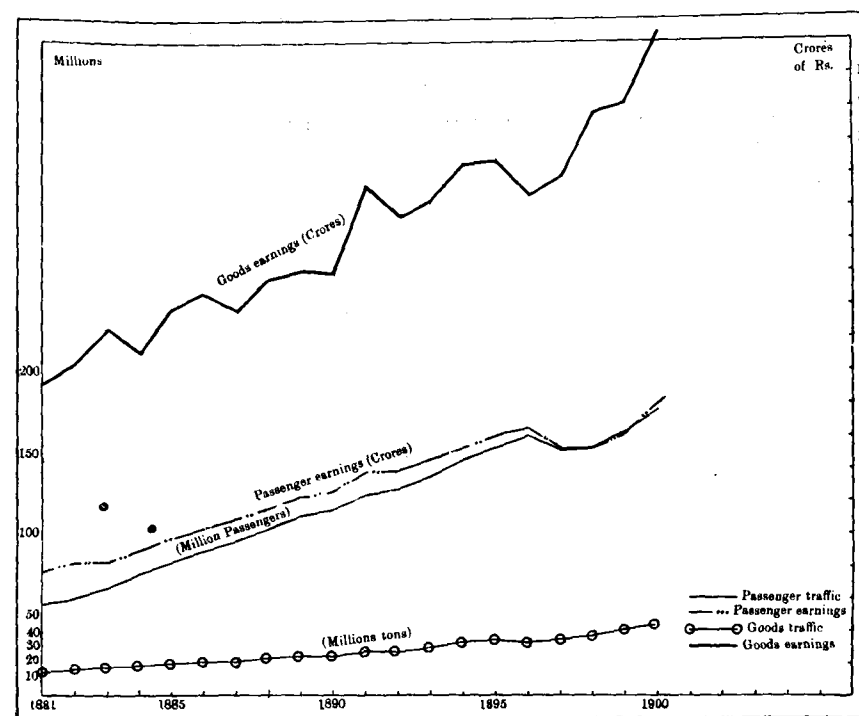


Fig. 1.—Progress of traffic earnings during 1881 to 1900.

the Company a total profit yielding a 4 per cent. dividend. As the response was not satisfactory, these terms were revised in 1896, so as to make them as attractive as possible short of a guarantee, but the response was disappointing.

TURN OF THE CENTURY

The history of the progress of railway development during the last century may be seen from the figures summarized in Table I.

The route mileage of all railways increased from 838 in 1860 to 8,996 in 1880. The heavy construction programme during the eighties raised it to almost twice the figure. In 1888, the total mileage was 14,525, from which it rose to 24,752 in 1900.

The capital outlay showed an equally rapid increase. From Rs. 26.66 crores in 1860, capital expenditure rose to Rs. 193.04 crores in 1888 and to Rs. 329.53 crores in 1900. Traffic earnings also registered a similar increase: from Rs. 67 lakhs in 1860 to Rs. 19.76 crores in 1888 and to Rs. 31.54 crores in 1900. Working expenditure was about half the gross earnings and it came down to 48 per cent. in 1900. The ratio of net earnings to capital was well over 4 per cent., in fact nearer 5 per cent.

The volume of traffic these figures represent is striking. The number of passengers carried was 55 million in 1881, the year for which detailed figures first became available. By 1889, it had more than doubled, and touched 176 million in 1900. Passenger traffic earnings increased from Rs. 3.79 crores in 1881 to Rs. 5.69 crores in 1888, and reached Rs. 8.95 crores in 1900.

The volume of goods carried totalled 13.21 million tons in 1881, from which it rose to 22.39 million tons in 1888, and trebled to 42.90 million tons by 1900. Freight earnings also exhibited an ascending curve of increase from Rs. 9.56 crores in 1881, to Rs. 12.79 crores in 1888 and to Rs. 20.37 crores in 1900. The detailed figures for selected years are shown in Table II and the progress of traffic and earnings during 1881-1900 in Figure 1.

The figures of railway performance removed all doubts entertained earlier regarding the prospects of attracting traffic to the railways, and making

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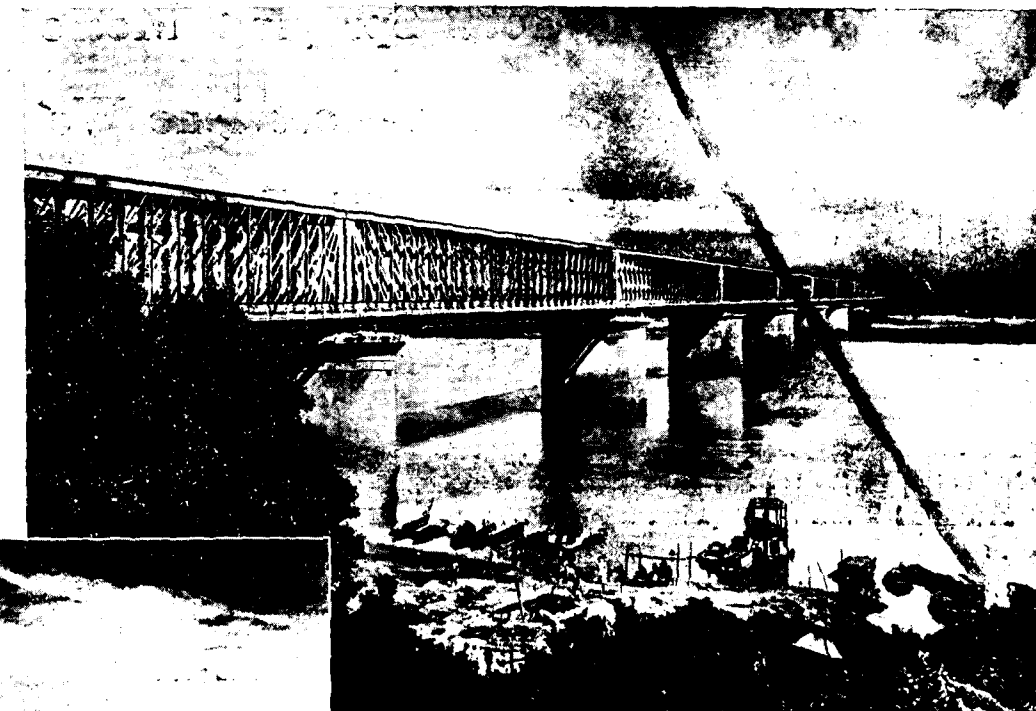
operation of the railways. As India became more and more a base for supplies to the Allies in the Middle East traffic increased to abnormal proportions. The cessation of imports of railway materials and equipment from abroad led to a lowering of maintenance. The inability of the railways to cope with the ever-increasing demand for transport, which was accentuated by diversion of traffic from the sea to the rail, called for the imposition of priority movements. The situation became so grave, particularly as to motive power, that an utter breakdown was averted only by obtaining a supply of locomotives almost as a war measure. The Acworth Railway Committee described the condition of the Indian Railways at the end of the war in these terms: "There are scores of bridges with girders unfit to carry train loads up to modern requirements; there are many miles of rails, hundreds of engines and thousands of wagons, whose rightful date for renewal is long overpast." The cost of restoring the system was estimated at Rs. 150 crores by the Railway Finance Committee in 1922-23. It took almost a decade to improve the standards of working and efficiency.

During World War I, another change was taking place which was to have a far-reaching influence on the management and organisation of Indian Railways. The prospect of political changes gave a further momentum to the demand for the State management of Indian Railways. The issue was left to be examined by the Acworth Committee in 1920-21, along with certain other questions. The recommendations of the Committee subsequently exerted a powerful influence on the railway policy of Government and the principles of working. It is, therefore, necessary to make a brief reference to the principal findings of the Committee.

On the main question of State-management, the Committee by a majority accorded their support to the policy of taking over the Company-managed lines on the termination of their respective contracts. The railways were owned by the State, and, if public opinion, as they found it, was

Indian, the Great Indian Peninsula and the North Western. In 1929, the Burma Railways were also acquired, raising the total to five State-worked systems. The progress of State-management suffered an interruption thereafter. The depression of the thirties offered an excuse to delay further acquisition. In 1937 came another change in the Government of India Act, 1935. Burma was separated from India and with it went also the Burma Railways.

The remaining systems, the Assam Bengal, Bombay Baroda and Central India, Bengal and North Western, Rohilkund and Kumaon, Madras and Southern Mahratta, South Indian and Bengal Nagpur, continued to be worked by the Companies under earlier or renewed contracts. When World War II broke out, India's sterling accumulations afforded a convenient opportunity to take them over on the due dates in some cases, and in others even ahead of the normal date of the expiry of the contracts. What was being speciously argued against by successive Railway Members—Sir



The old (above) and new (left) bridge at Benares, now renamed the Malaviya Bridge. It was formerly known as the Dufferin Bridge.



Zafrulla Khan, Sir Thomas Stewart and Sir Andrew Clow—was thus accomplished with dramatic speed which paid little heed to the difficulties raised a few years before. Thus the policy of State-management, which was contemplated in the last century and accepted in the twenties, was consummated in the forties. The operation of all the railways by the State has solved certain problems, but it has created not a few others of even greater complexity. Before dealing with these problems, it will be convenient to refer to the working of the Railway Convention which promised new hope and new order for the railways.

THE SEPARATION CONVENTION

overwhelmingly in favour of State-management, this had to be conceded. In point of efficiency there was, according to the Committee, little to choose between the State-worked or the Company-worked lines. Further, private investment amounted to hardly more than a bare fraction of the total capital at charge and with so limited an interest in the undertakings, there was no point in continuing an arrangement which had none of the advantages of private management but all the disadvantages of absentee control. The Companies themselves having a guarantee of interest on their capital, had neither the incentive of the profit motive nor a financial responsibility for loss. Recommending the policy of taking over the Company lines on the expiry of their contracts, the Committee insisted on a separation of railway finance from the general finances of the Government of India.

The acceptance of these recommendations took a year or two, during which two more committees—the Hailey (Railway Finance) Committee and the Inchcape (Retrenchment) Committee—had something to say on railway finances and working. The succession of these enquiries helped to evolve certain definite principles for the management of railways. The Government of India with the concurrence of the Central Legislature preferred to carry out the changes by means of a resolution, of 20th September, 1924, rather than by seeking to amend the Government of India Act, 1919, in the British Parliament. That resolution set up what was subsequently known as the Railway Separation Convention, effecting the separation of the finances of railways from those of the Government of India. With this change came a new era, as it were, of railway working. Almost simultaneously there was the transfer of the East Indian and the Great Indian Peninsula Railways to State management. The old State-worked Oudh and Rohilkund Railway was merged in the East Indian. With these additions there were, to start with, four State-managed railways, namely, the Eastern Bengal, the East

The institution of the Convention was followed by a number of important reforms. A depreciation fund, based upon the estimated lives of assets, was set up, and appropriations began to be regularly made from revenue every year. The gain to Government was stabilised into a definite "Contribution." Prior to the separation of railway finance the State took the entire surplus, after meeting the payment of interest charges, as its share of gain from railways. There was neither a provision for depreciation nor any reserve to meet unexpected contingencies. The resolution on the Convention provided for all these. It was laid down that a contribution to general revenues should be the first charge on the net receipts of railways. It was fixed at one per cent. of the capital at charge of the commercial lines (that is, excluding the strategic railways) as at the end of the penultimate financial year plus one-fifth of any surplus left, subject to the condition that any deficiency to meet the one per cent. in a previous year should first be made good before this division is made. Such surplus as is left will be transferred to a Railway Reserve, but if in any year the amount thus left exceeds Rs. 3 crores, one-third of such excess shall be added to the Contribution, the remaining two-thirds being credited to the Reserve.

This arrangement left the railways to deal with their affairs as best they could and without interference from the Finance Department. The procedure as regards the financing of capital works was also liberalised. The uncertainty of finance had dislocated railway programmes for years. There was no assurance of funds being available throughout the year. Materials and labour assembled with considerable difficulty might have to be left unutilised if the Finance Member found in the course of the year a deterioration in the country's finances. This affected the Revenue programmes as well. If towards the end of the year, the position eased and the sanctions were renewed, there was feverish haste to spend funds to avoid the

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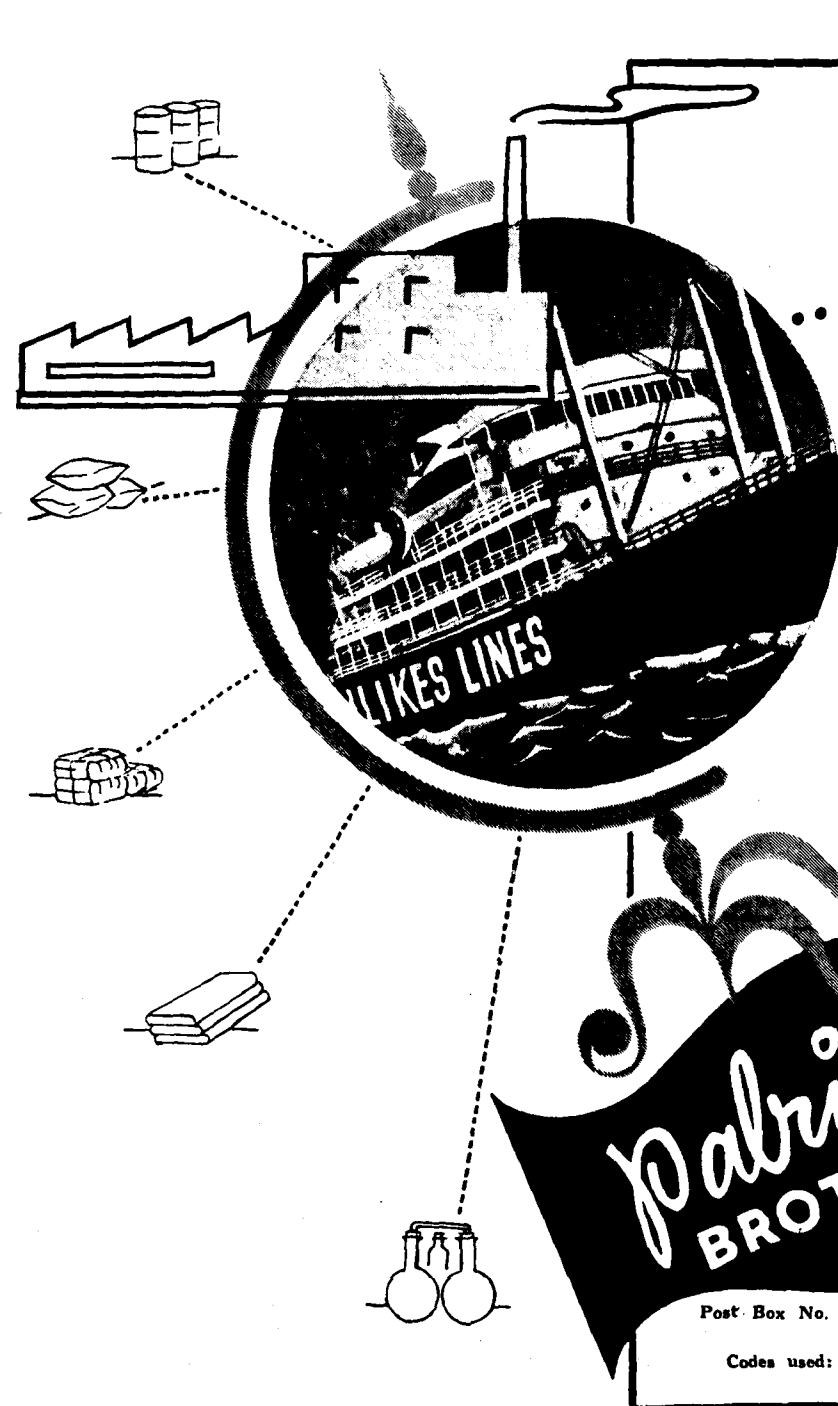
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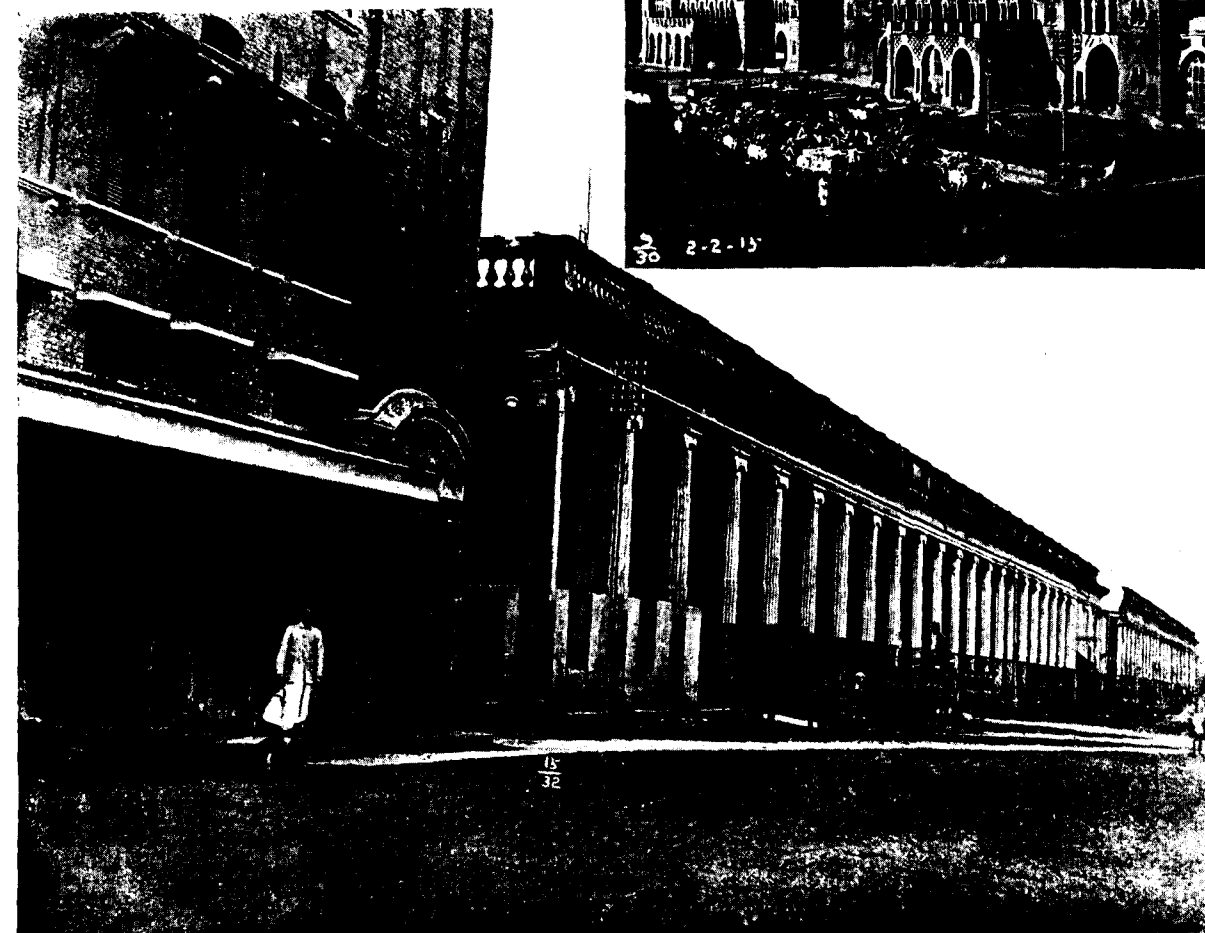
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The old time architecture of the railway terminus at Howrah (below) contrasts with its appearance (right) after being re-built. The latter picture was taken thirty-three years ago, but there have been few, if any, alterations to the general structure since.



enthusiasm and vigour in the early years of the Convention. During 1924-30 it seemed that they had been amply justified by financial results. Railways not only paid their way: after making due provision for depreciation and meeting interest charges in full, the contribution to general revenues averaged annually Rs. 5.99 crores. During the six years, payments to Reserve worked out at an annual rate of Rs. 2.79 crores. Only in the last year, 1929-30, was there a failure of net revenue to come up to the levels of the previous year.

The whole aspect was transformed with effect from the succeeding year, 1930-31. The trade depression of the 'thirties had started. Trade dropped and traffic declined. The effect on railway results may be seen in the precipitous drop in passenger earnings and traffic, and goods earnings and freight tonnage. The

"lapsing" of the grants. There was thus an alternation of activity and slackness, an aspect of railway working criticised for years and commented upon by both the Mackay and the Acworth Committees. All these defects were sought to be removed by the Rs. 150-crore Programme of Revenue Expenditure intended to finance the post-war rehabilitation schemes and overtake arrears of renewals and maintenance. These were later modified and integrated into the regular Capital and Depreciation Fund Programmes which guaranteed railways all the funds required to complete the works over a period of years. The practice of "lapses" was thus happily abandoned.

There were other innovations as well. Under the influence of the Central Advisory Council and Standing Finance Committee for Railways, railways paid greater attention to public opinion than had been the case in the past, particularly on matters concerning railway facilities and policy. A more frequent, and perhaps more useful, channel for the ventilation of public opinion has been the local advisory councils representing local interests in different parts of the country. The establishment of the Railway Rates Advisory Committee, despite its advisory status, has since 1926 been able to afford some relief to the trading community on questions involving unreasonable rates and undue preference.

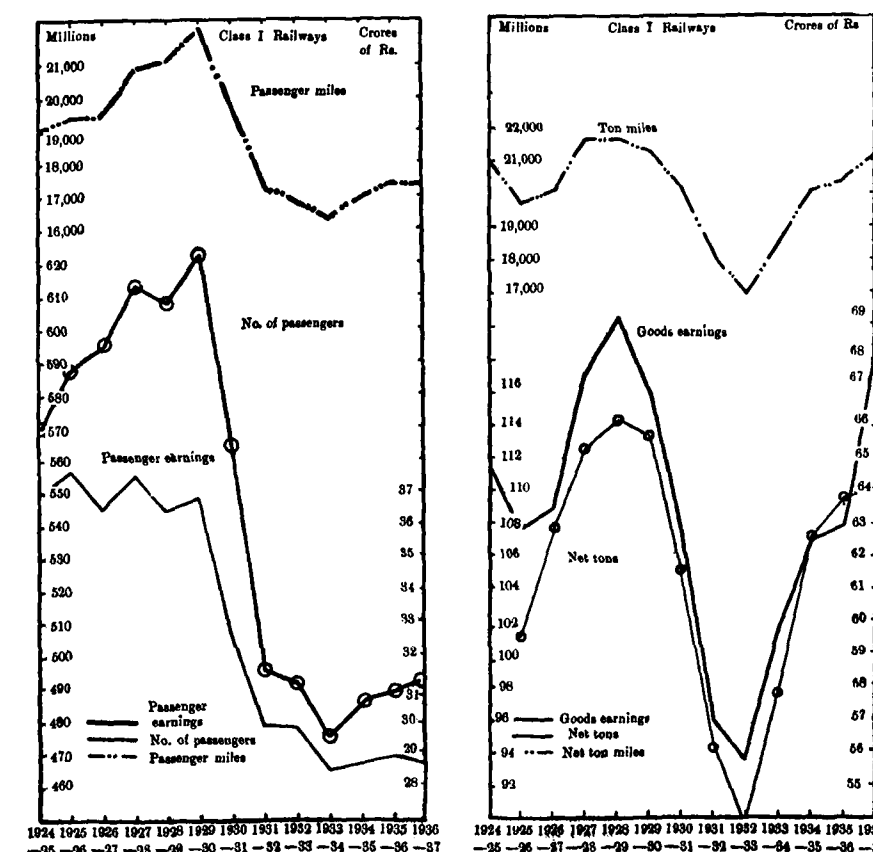
As regards internal organisation, there were many changes. The Railway Board was reorganised and strengthened with an expanded directorate. The divisional system was introduced on the North Western, East Indian and the Great Indian Peninsula Railways. A partial divisionalisation was introduced on the Eastern Bengal. A Clearing Accounts Office was set up at Delhi. A publicity organization was instituted on all the railways with a Central Publicity Office at Delhi and two overseas offices in London and New York, to develop tourist traffic to and within India.

The policy of encouraging Indian industry by granting preference to indigenous goods was pursued through the Indian Stores Department. The proportion of goods of Indian origin or manufacture in use steadily increased after 1924. Even more important was the policy towards staff. The Central Legislature and public opinion were insisting on the rapid Indianisation of the higher grades. The pace appeared to be slow, but in about a decade substantial progress had been effected. The problem of staff welfare was carefully studied, the Medical Department was strengthened, medical amenities were increased, and even sports were encouraged. The conditions of working of the lower-paid staff received continuous attention. The Hours of Employment Regulations were introduced, limiting the weekly working hours. After the report of the Royal Commission on Labour further benefits were conferred on railway labour. The payment of Wages Act ensured the elimination of delays beyond fourteen days of the close of the month, while a policy of liberal assistance to lower-paid staff for the purpose of educating children at schools away from the employees' stations was an important relief. The programme of extensions and improvements was implemented with

bottom was touched in 1932-33 for goods traffic and in 1933-34 for passenger traffic. As may be seen from Figures 2 and 3 the former recovered fairly soon, but the latter seemed to drag on for some years.

FINANCIAL DETERIORATION

Among the reasons for the financial collapse was the failure of the new lines completed during the previous decade to earn their anticipated earnings. The poor results of many of these lines were due as much to the severity of road competition as to their excessive capital cost. Their net receipts fell far short of interest on capital, and on some lines the traffic receipts were even insufficient to pay working expenses in full. If financial justification was wanting in the case of much of the new construction, it was even more dubious in the case of the open line works. During the seven years ended 31st March, 1931, the capital expenditure incurred on new construction was Rs. 42 crores and on open line works Rs. 118 crores. It is true that this immense outlay went into better stations, remodelled yards, strengthened



Figs. 2 and 3.—Passenger earnings and traffic and goods earnings and freight tonnage 1924-25 to 1936-37.



In the Beginning

Lithe brown bodies draped in white, patterned against a hillside of unbelievable colour. The rise and fall of the crowbar — eager hands filling endless baskets — here is the beginning of a great industry. Here on the surface of the earth, Nature offers readily the precious

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bridges, additional passenger amenities, new railways, etc. But the contribution to net receipts was disappointing. The capital programme of the twenties was characterised by extravagance and lack of business judgment. The Wedgwood Committee observed, "in the past fifteen years, stations, workshops, and marshalling yards have been built to be the last word in railway technique rather than on a careful calculation of probable requirements, and prestige has perhaps counted far more than prudence." Thus while net earnings dropped, the fixed charges had increased considerably.

The emergency was met by a Retrenchment Sub-Committee, which proposed large-scale retrenchments. These were pursued in a half-hearted manner, the "economies" taking the form of postponement of essential expenditure rather than a permanent reduction of recurring costs. The policy of the Government of India during the depression was a reversal of that during the 'twenties. It was the Finance Member, not the Railway Member, who took the helm. The Railway Department was not required to manage its affairs as a business concern would have been, and it assumed the status of a mere department of State. The Railway Convention lost its meaning and significance.

WEDGWOOD COMMITTEE

The deterioration in railway finance affected the finances of the Government of India. The railways were unable to meet the annual contribution, and, what was even more serious, their ability to pay the interest charges on capital also looked doubtful. The contribution was suspended with effect from 1931-32, and the payment of interest charges in full could only be secured through large withdrawals from the balances in the Depreciation Fund. By 1937 the contributions due, but not paid, aggregated Rs. 30.74 crores, and the temporary loans from the Depreciation Fund Rs. 30.28 crores. The prospect of repaying a liability of Rs. 61 crores in the measurable future looked very uncertain. The Government then conceived a plan to cancel the entire liability and start with a clean slate, a remedy which was ridiculed by the Wedgwood Committee and criticised by the public. The provocation to do something on these lines lay in the fact that Government were anxious to annex the railway surpluses which were beginning to emerge from 1936-37 onwards. This was contrary to the provisions of the Convention, which required the repayment of the Depreciation Fund Loans before the arrear and accruing contributions could be secured. A moratorium of the past liabilities was adopted for two years at first, and later extended by another year. This expedient enabled the Government to appropriate the surplus of each year without paying back the loans from the Depreciation Fund.

The railway outlook seemed so dismal that the Wedgwood Committee was appointed with very wide terms of reference. After a rapid tour of the country and the study of the facts, the Committee made a number of recommendations. Criticising the capital programme of the twenties in terms already quoted, they stressed the need for economy in all the departments. They wanted the Indian Railways to meet road competition by improved services and advocated that road transport be controlled by fair legislation. Acceleration of goods trains, abolition of first class, simplification of the goods tariff, and strengthening the supervisory staff were among other recommendations. As regards the finances, the Committee recommended the creation

TABLE III—FINANCIAL RESULTS OF WORKING (STATE-OWNED RAILWAYS).
In crores of rupees.

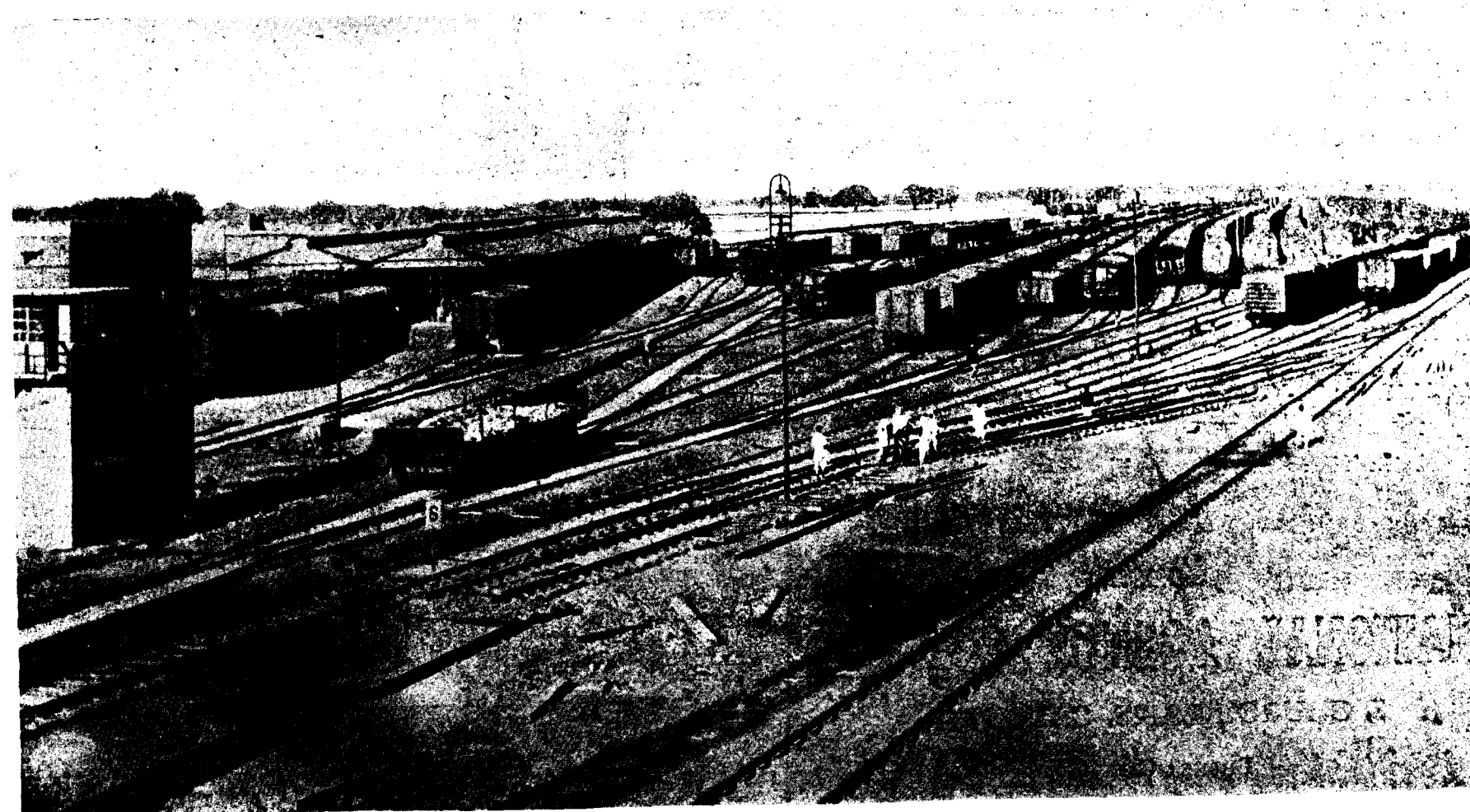
	1938-9	1939-40	1940-1	1941-2	1942-3	1943-4	1944-5	1945-6	1946-7
Gross Traffic Receipts	99.62	102.73	117.58	135.17	155.18	185.43	216.38	225.74	203.35
Operating Expenses	54.01	54.77	55.62	63.54	68.98	90.10	123.34	145.09	156.62
Depreciation Fund	12.56	12.59	12.64	12.68	12.57	16.87	17.01	17.05	13.21
Payment to Worked Lines	2.61	2.57	3.03	3.33	2.71	1.87	1.93	2.36	1.82
Net Receipts	30.44	32.80	46.29	55.62	71.22	76.59	74.10	61.24	31.70
Net Misc. Receipts	0.23	0.64	0.85	0.90	1.88	2.78	3.24	4.14	3.39
Net Revenue	30.67	33.44	47.14	56.52	73.10	79.37	77.24	65.38	35.09
Interest Charges	29.30	29.11	28.68	28.44	28.03	28.53	27.45	27.18	26.52
Surplus	1.37	4.33	18.46	28.08	45.07	50.84	49.89	38.20	8.57
Contribution	1.37	4.33	12.16	20.17	20.13	37.64	32.00	32.00	...
Railway Reserve	...	...	6.80	...	8.86	13.20	17.20	6.20	...
Depreciation Fund	...	...	...	...	...	...	...	...	...
Loans	...	...	...	...	...	...	...	...	...
Betterment Fund	...	...	...	...	...	...	...	...	...
Repayments to Depreciation Fund	...	...	...	7.91	22.38	...	...	...	15.00

of a reserve of at least Rs. 50 crores to meet future and unexpected contingencies, and asked Government to forgo the contribution till this figure was reached. Railway executives doubtless breathed a sigh of relief when the striking recovery of traffic and earnings on the outbreak of World War II began, rendering any thoroughgoing overhaul of existing methods unnecessary to attain financial equilibrium.

1939 AND AFTER

The war-time performance of Indian Railways was a remarkable record. Starting from 1939-40, gross traffic receipts began to register spectacular increases. As shown in Table III in 1940-41 itself, past records were broken, with gross traffic receipts at Rs. 117.58 crores. From this year onwards every year set up a new record, reaching the unprecedented level of Rs. 225.74 crores in 1945-46. There was a slight decrease in the following year. Working expenses did not increase very much till 1943-44, when a special charge was made to meet inflationary elements in current renewals and special appropriation to cover deferred maintenance. Net receipts after providing depreciation reflected the effects of the financial improvements. From Rs. 30.44 crores in 1938-39, net receipts rose to Rs. 76.59 crores by 1943-44. The surplus left after payment of interest charges showed a phenomenal increase—Rs. 1.37 crores in 1938-39 to Rs. 50.84 crores in 1943-44. These large surpluses not only enabled the repayment of the loans from the Depreciation Fund, but also a handsome amount, including arrear contributions aggregating Rs. 159.80 crores to the end of 1945-46. As the Convention raised a difficulty in the appropriation of such large amounts, it was amended so that the contribution each year was decided in consultation with the Railway Department, a step which was entirely retrograde and threatened to undo the very reform which the institution of the Convention had set out to accomplish.

The volume of traffic which these figures of earnings represented was no less striking. The record during the war period for passenger and goods traffic and earnings may be seen in Figures 4 and 5. The lag in the



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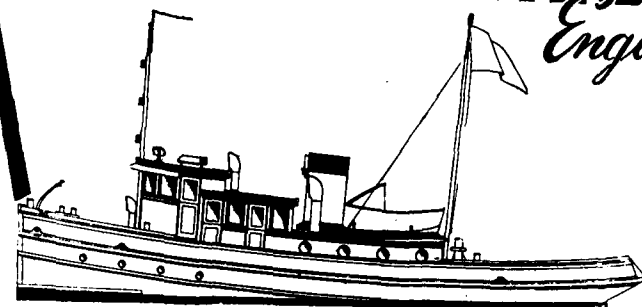
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passenger traffic during the thirties was more than made up by the phenomenal expansion after 1943. The curtailment of road transport combined with increasing military requirements raised the number and mileage of passengers to more than twice the pre-war figures. The passengers numbered 1,123 million and the mileage 40,631 million, the highest so far reached. Goods traffic showed a substantial increase in earnings and a moderate rise in tonnage from 115 million in 1939-40 to 134 million and 22,000 million to 29,000 million for the respective years in ton mileage. The pressure for rail transport against a limited capacity already overstrained by defence needs, diversion of traffic from shipping to rail, deficiency of new equipment and accelerated wear and tear, could be met only by priority movement and strict control. Before these could be tackled successfully there came the Bengal famine and a food scarcity all over the country, necessitating the expeditious movement of food to the civilian population. The tempo of the war effort rose as the battlefronts came nearer to India's eastern frontier. That the essential requirements of the army, the civilian population and industrial production were adequately met is no mean tribute to the work of the railways. The additional capacity so urgently needed was found by reducing train mileage particularly for civilian traffic.

POST-WAR EXPANSION PLANS

But the deficiency of motive power made absolute expansion impossible. The danger was not altogether unanticipated—experience during World War I had demonstrated the difficulties of obtaining supplies of locomotives from abroad. The Committee on Locomotive Manufacture in India had foreseen this contingency and urged the conversion of the Kanchrapara workshops into a locomotive production shop. The whole scheme was shelved, the public were being fed with occasional statements about plans being prepared to start manufacture shortly, blue prints being finalised, etc., throughout the entire period of the war. Even the Ajmer shops failed miserably to come up to earlier promises. A crisis in internal transport was only averted by obtaining an emergency supply of locomotives from the U.S. and Canada. The policy followed during these years has left the Indian Railways in a parlous state even three years after the end of the war.

The end of the war found the railways short of stock, power and even routine efficiency. In this respect there is hardly any difference from the

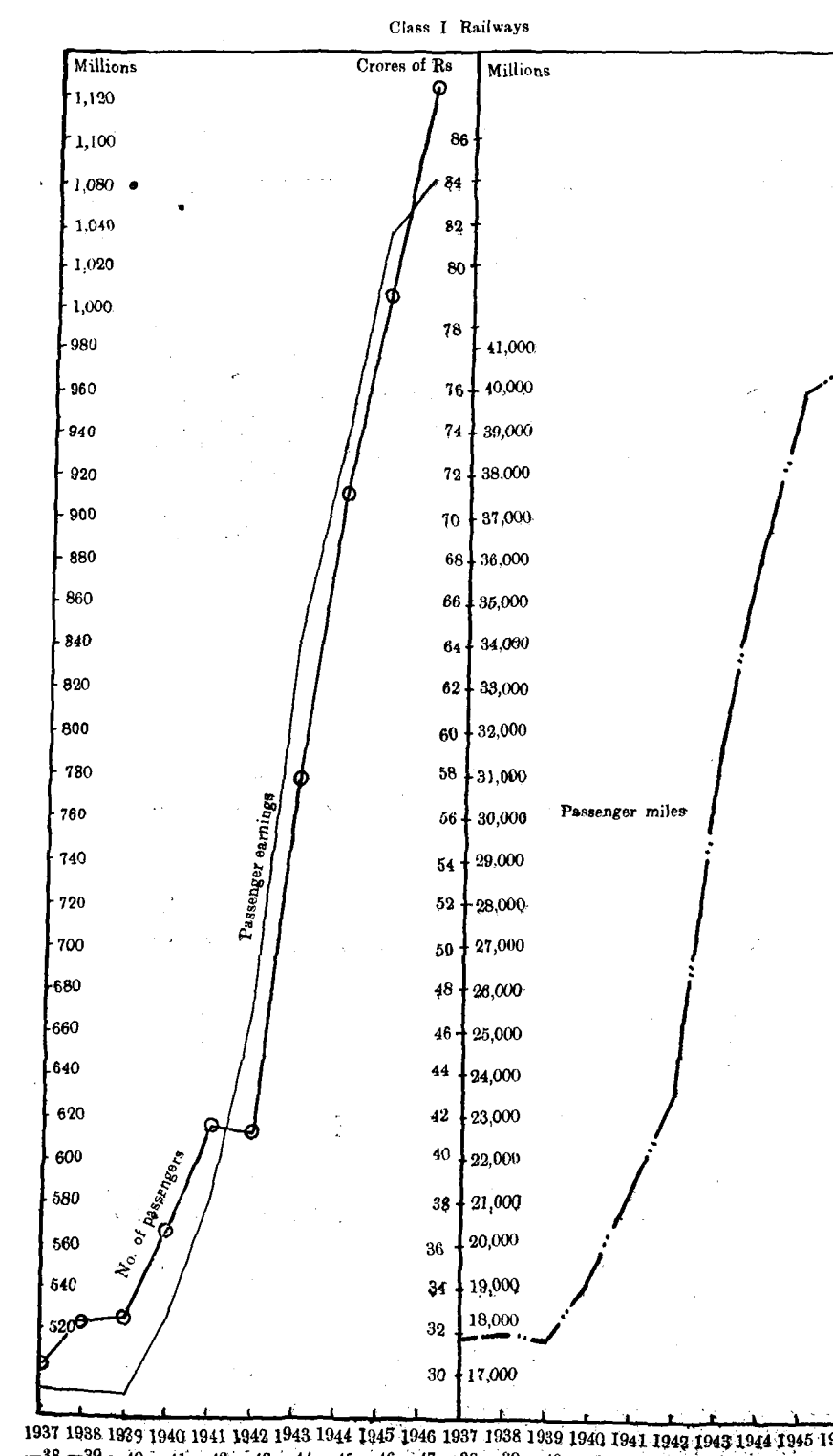


Fig. 4.—Passenger earnings and traffic over the last decade.

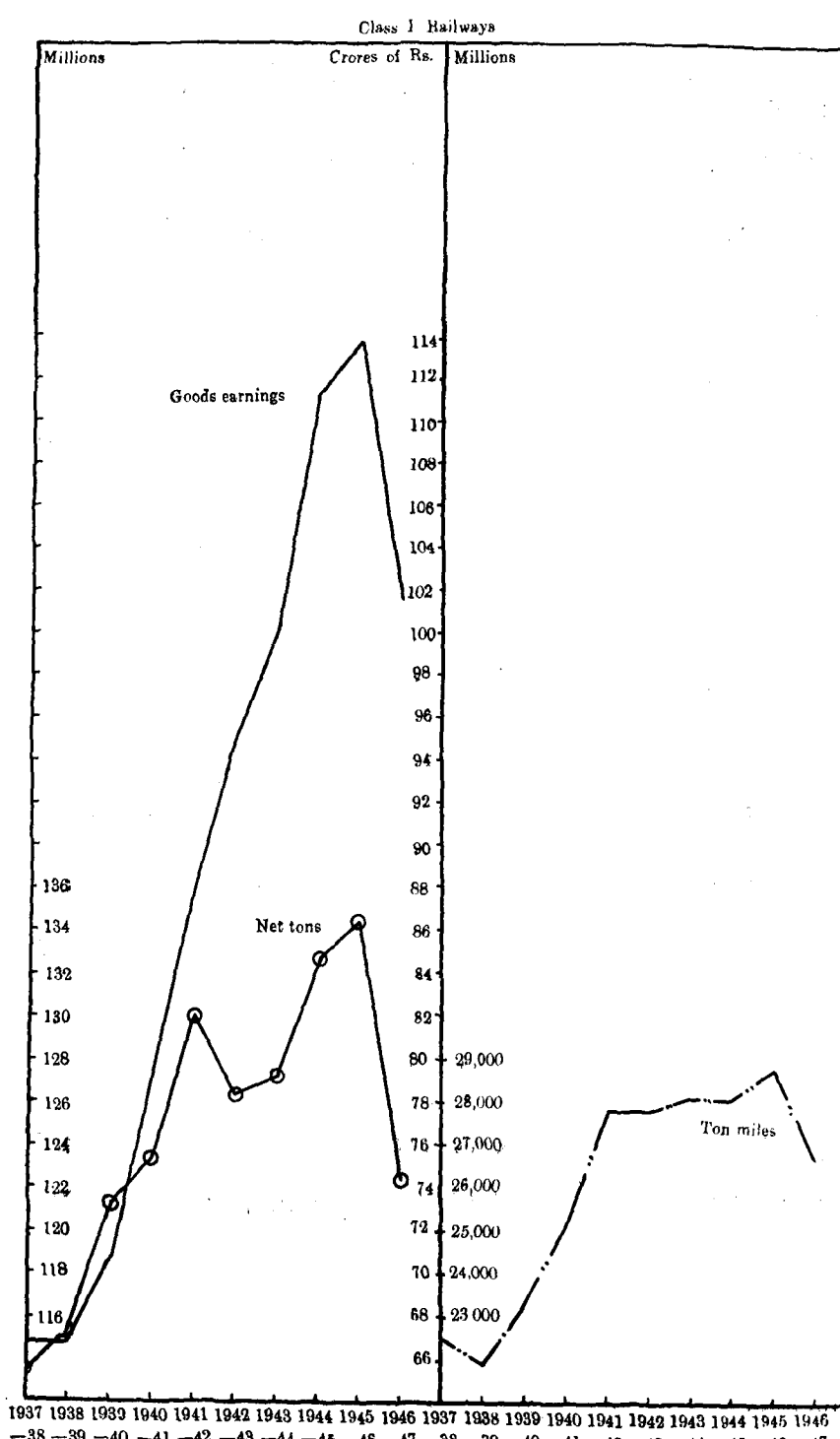


Fig. 5.—Goods earnings and traffic over the last ten years.

position at the end of World War I; but the financial policy during the recent war was sound and conservative. Whereas the railways at that time had no reserves and no money to finance a post-war rehabilitation programme, by 1945 they had in their reserves balances sufficient to meet the cost of renewals, repairs and arrear maintenance. On 31st March, 1945, the Depreciation Fund had to its credit a balance of Rs. 102.21 crores, and the Reserve Fund of Rs. 37.48 crores. A Betterment Fund was also set up in the following year to finance non-revenue earning amenities to staff and the public.

In common with other Departments, the Railway Department also produced a post-war plan of rehabilitation and improvements, costing Rs. 319 crores in seven years. It is unnecessary to discuss a plan which, for all practical purposes, has had no influence on later developments. The calculations of the planners have been upset as much by the political changes during 1946-47 as by the tactics of clamant labour. The country was set free, but the single political unit gave place to two Dominions—the Union of India and Pakistan. The political division of the country let loose population displacements, suffering and bloodshed and it may take years before the wounds are healed. The railways which were affected by the division were the North Western and the Bengal and Assam Railway. The truncated portion of the former falling to the share of India was reconstituted as the Eastern Punjab Railway. The Bengal and Assam gave rise to the Eastern Bengal Railway for Eastern Pakistan with headquarters at Chittagong and an Assam Railway, the sections on the west being absorbed in the East Indian and the Oudh and Tirhut. The task of separating the railways was far easier than that of the staff who opted for service in either Dominion. The capital account of the Indian Railways after the apportionment of the assets stood as follows:

	Capital-at-charge rupees in crores
Before division:	
1945-46	796.85
1946-47	810.27
After division:	
1947-48	677.99
1948-49	702.44

As final figures are not available, the above merely afford a general idea of what has occurred. The cataclysm on the political front would have



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upset any post-war programme contemplated earlier. The railways of the Indian Union maintained their working during this unprecedented experience remarkably well.

The above necessarily brief survey of the operation of the Indian Railways over a period of sixty years has not done justice to successive generations of men of the British Administration who planned, projected and extended the railways of India. It is true that British interests had an eye on the advantages to be obtained from exploiting India's requirements. But the fact that Indian Railways have been singularly free from the over-capitalisation and financial manipulation which have burdened the railways of the U.K., the U.S., Canada and other countries is a tribute to the sense of financial integrity which characterised the administration of the railway policy of the country for over three-quarters of a century. The railways not only assisted the economic unification of the country: they contributed also to its political consolidation. The habit of rail travel helped to break down the social barriers of caste and community in a vast population. The agriculturist as well as the industrialist expanded his business through the diverse services and facilities rendered by railways. What the railways could do to avert the threat, or alleviate the effects, of famine in the country has been as forcefully demonstrated in the forties of the present century as during the seventies and eighties of the last. The growing volume of foreign commerce during the past sixty years would never have materialised but for the cheap rates and fast transport facilities provided by railways. The importance of railways for defence was brought out during the recent war when the enemy appeared at India's gate. There can be no doubt that on the maintenance of the efficiency of the magnificent railway system of the country depends its future economic progress. With the increasing emphasis on internal production, the railways are now bending their energies to serve the new needs of the country.

THE FUTURE OUTLOOK

What of the immediate outlook? The National Government has started well with immediate problems. The fact that it commands the full support of the legislature and the confidence of the country gives the Minister of Railways a prestige and authority which his predecessors never enjoyed. This single factor should go a long way to initiate and implement overdue reforms. One of these is the Rates Tribunal, long pressed for, and the bill now before the Constituent Assembly meets some at least of the past demands. Indianisation as a principle, and later the pace at which it should be applied has ceased to be an issue. The locomotive manufacturing shop is being set up at Mihijam. Even on the financial side, where a popular Government might seem to be weakest, the Minister of Railways imposed heavy enhancements of passenger fares in January, a measure which would have deterred the boldest Railway Member in the past. Not that this was desirable, necessary or justified according to some observers, but it shows the new power of a responsible Minister of Railways in a Free India.

If these things are gratifying, railway labour has of late caused considerable anxiety. A good deal has been done to enable labour to meet the

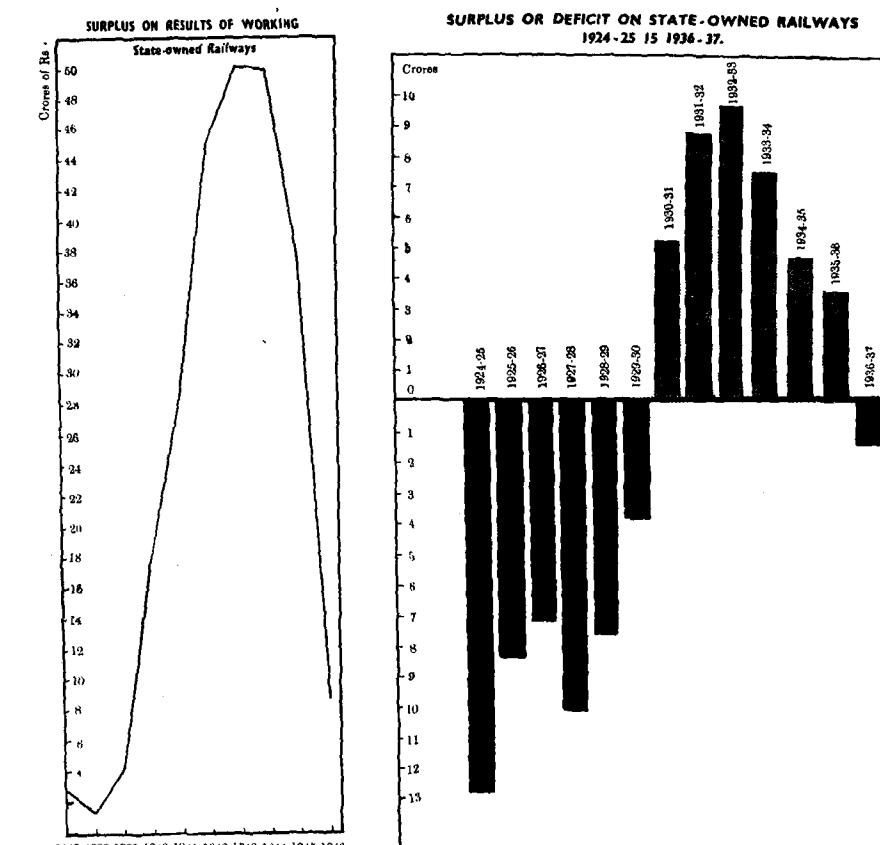


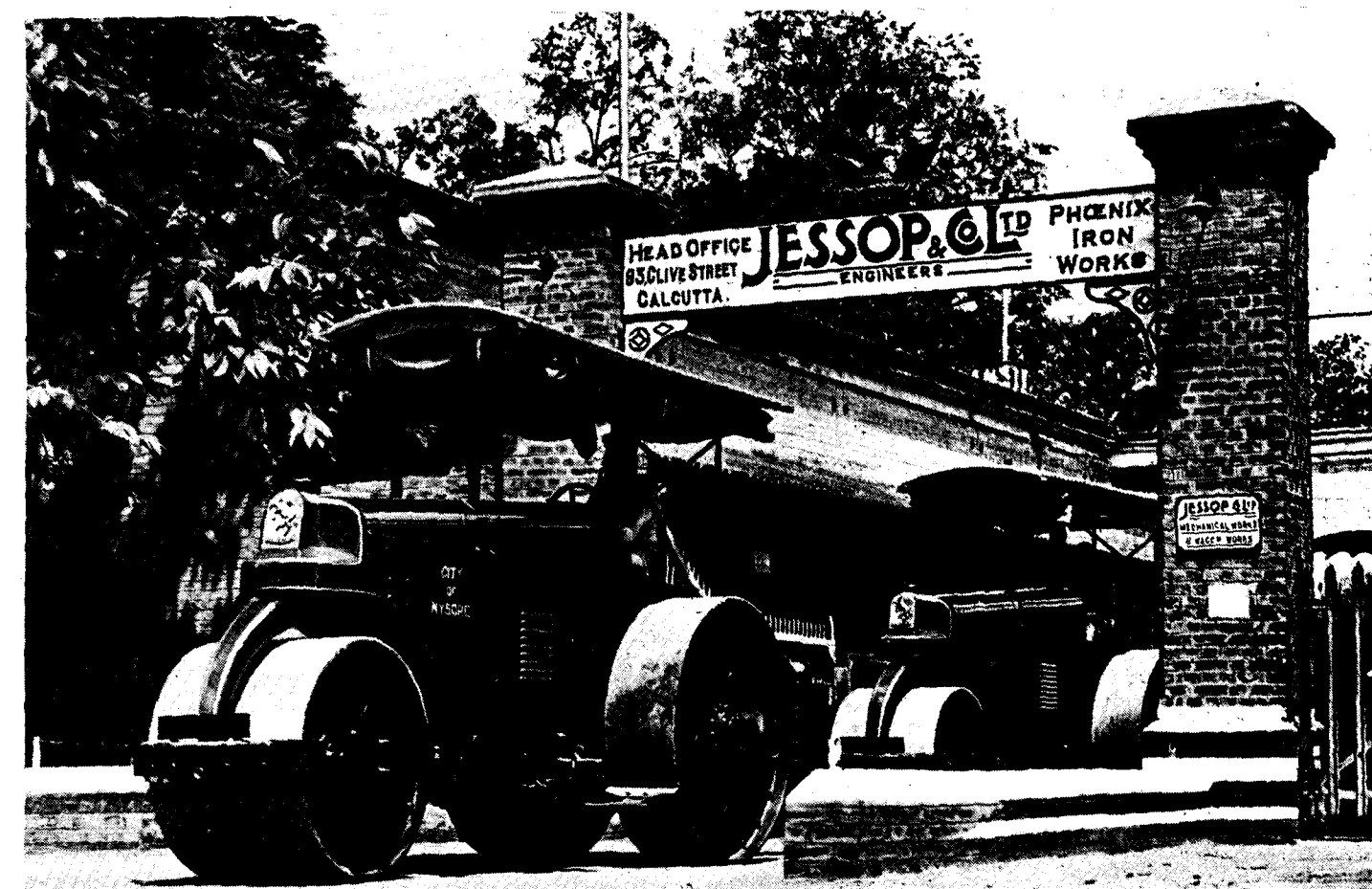
Fig. 6.—Surplus or deficit on State-owned Railways from 1924-25 to 1936-37, with (on left) the surplus over the past ten years.

increased cost of living during and after the war. Dearness allowances, cheap grain shop facilities, the Central Pay Commission's new scales, reduction of hours of work, etc., represent generous concessions to railway labour, many of which, according to some sections of opinion, the country now can ill afford. Despite these benefits, there have been strikes and threats of strikes, go-slow methods and reduced output. These, be it remembered, are not the sole monopoly of the railways. Other Departments have betrayed similar indiscipline, irresponsibility, corruption and disregard of public interest. Happily there are signs that these are being checked and attempts are being made to effect a rapid improvement. These developments raise the question of how far the present system of administration of the railways is conducive to efficient management. The Railway Convention still awaits its long promised revision. Railway expenditure which has risen to abnormal levels has to be drastically curtailed and brought within limits which the country can stand. How long the Government can retain surplus staff at public expense has still to be decided. The Kunzru Committee's report will deal with some of these questions. A Statutory Authority seems to offer the only safe guarantee to protect the railways from the worst consequences of party politics and the apparent helplessness of Government in the face of pressure from its own employees.

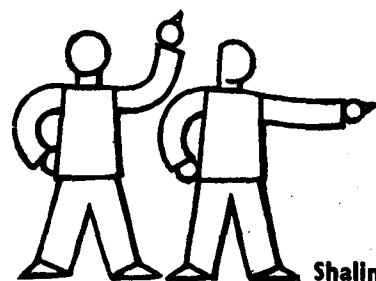
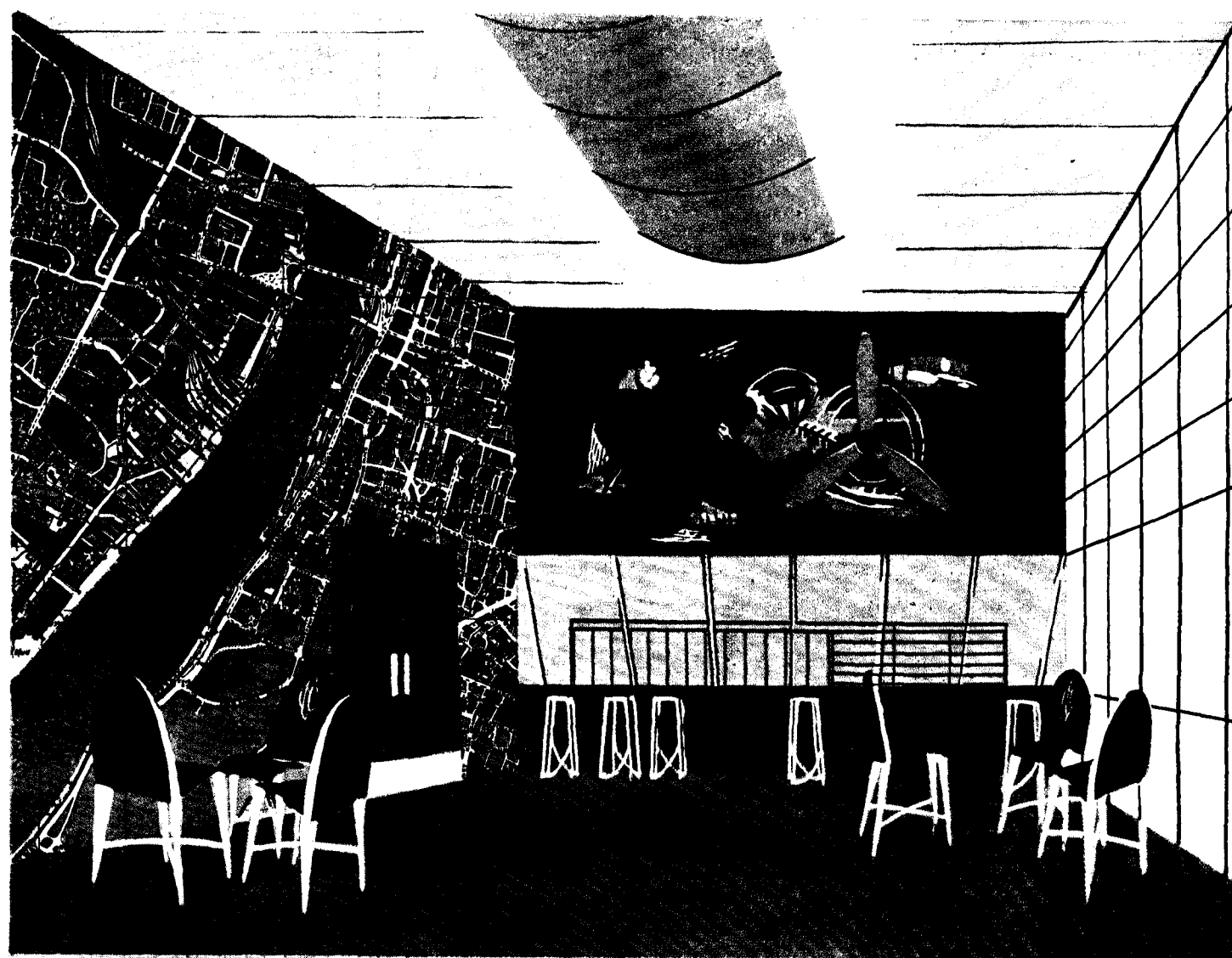
DIESEL ROAD ROLLERS NOW BEING MADE IN INDIA

THE proposal to build road rollers in quantity in India originated at the Nagpur Roads Conference in 1943. The next step was the visit of a British Road Roller Mission, early in 1946 on the invitation of the Indian Government, to investigate the facilities available and recommend the best method of putting the plan into practice. Following the mission's report, a contract for 500 diesel rollers was awarded to Messrs. Aveling-Barford Ltd., of Grantham, England, in conjunction with Messrs. Jessop & Co., Ltd., of Calcutta.

The design of roller selected, following discussions with the Consulting Engineer (Roads), was Aveling-Barford's latest 10 Ton model equipped with their patent sliding weight device, and also with special transfer weights, to allow of a wide variation of working pressure. In certain other respects, the roller has been modified to suit Indian conditions. The engines, manufactured by Ruston & Hornsby Ltd., and transmission units, have been supplied from England, while the bulk of the machined parts and assemblies have been made by the Indian Government Ordnance Factories, Cossipore, Ishapore, Jubbulpore, Cawnpore, Katni and Muradnagar. The rolls, frames and other such parts have been produced in the Dum Dum Works of Messrs. Jessop & Co., Ltd., who are also responsible for assembly and testing of completed rollers to the requirements of the I.S.D. Inspectorate.



Diesel road rollers made in India leaving the works for a road test.



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PAINT INDUSTRY IN INDIA ITS FUTURE POTENTIAL

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It is not at first readily appreciated that the paint industry, with its extensive range of products for industrial and domestic purposes, is itself among the leading producer groups, both as to capital value and proportionate turnover, in any country that is highly industrialised.

On second thoughts, however, this fact becomes more obvious as one realises that the demands of industry alone for all types of paint products must be tremendous; almost all manufactured articles, heavy goods, light machines, ships, transport equipment of every type, etc., require some form of paint product to supply a protective and, as often as not, a decorative finish. Added to that factories, if they are not to fall into decay and depreciate as capital assets, must be continually and regularly repainted. On the domestic side also, if the public are as fully aware as the paint industry should ensure they are, of the protective and beautifying qualities of paint products, there should also be a nationwide constant renovation programme guaranteeing a healthy, regular turnover for a prosperous paint industry.

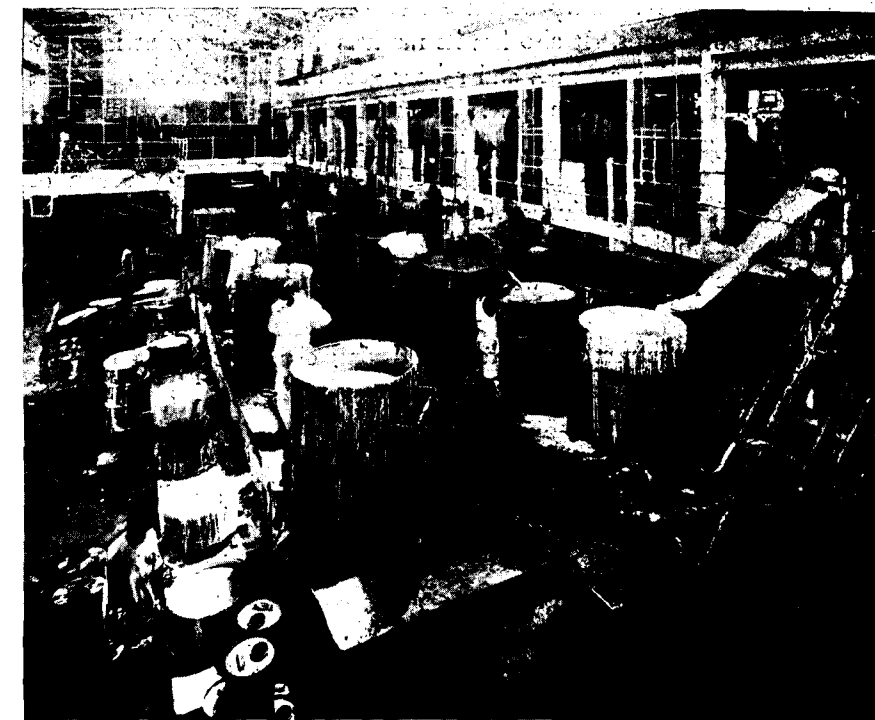
With these thoughts in mind it is satisfactory therefore, to open a brief survey of the paint industry in India with the knowledge that it has a solid foundation of experience and proven ability, is up-to-date in ideas and, allowing for war-time set backs, is well equipped. In addition to this it is capable of expansion in harmony with the overall development of industry in India. The leading paint manufacturers are well aware that they have not yet really even scratched the surface of the potential paint market of this country and have planned accordingly, subject to certain qualifying circumstances at present beyond their control, which are discussed later. Technical opinion in fact considers that India can think in terms of eventually becoming an exporter of paint products on a large scale to the group of her immediate neighbours—Burma, Cochin China, Malaya, Ceylon, Pakistan, Afghanistan. The value of such a development to internal prices requires no emphasis. Other factors apart, physical controls, exchange restrictions and shipping shortages are the present limiting conditions in the developments of an export trade in paint.

We have said the industry has a solid foundation. It was laid in 1902 in Calcutta, when production was started at Goabaria with the main objective of supplying the paint, red lead, etc., required for overhauling the ships belonging to certain lines operated by one of the leading managing agencies. That set up continues to-day. There is a similar background to another of the leading paint concerns, also operating from Calcutta, which started up in India some years later. The advantages to a production programme of having a regular outlet are obvious. Although still only a comparatively small industry, progress since 1902 has been on sound progressive lines.

It is also readily understandable that the industry should be almost entirely centred on Bombay and Calcutta for, apart from the above reason, both cities are centres of sea and rail communication. In addition Calcutta has a rich industrial hinterland, is administrative centre of the tea industry which is a large paint user. Bombay's factories are well planned and offer a large and attractive market for paint.

The recent division of the sub-continent into India and Pakistan has not appreciably affected the situation, as almost all the materials which are obtainable indigenously come from India and the Indian States. Previously there were one or two small concerns producing paint products in Lahore, but considerable expansion will be necessary if Pakistan is to manufacture her own requirements, and almost all essential materials will have to be imported. Leaders of the industry are reported to be considering setting up factories or a joint factory in Pakistan. In the meantime, Pakistan continues to import from India.

A true appreciation of the paint industry's present and potential capacity depends upon information on the availability of raw materials. This necessity has been acknowledged by the Government of India, who have already conducted a preliminary survey. It is also apparent that any increase in manufacturing capacity will depend upon a regular supply of Indian skilled workers, technicians and scientific and paint research experts. This applies equally to producers of raw materials. At present, in the higher grades, an overseas training is essential, particularly for the initial technologists to create the central research laboratories which are planned. In the lower grades, the industry itself is considering a scheme for training personnel in individual factories. But no matter how much local fabrication is contrived there can

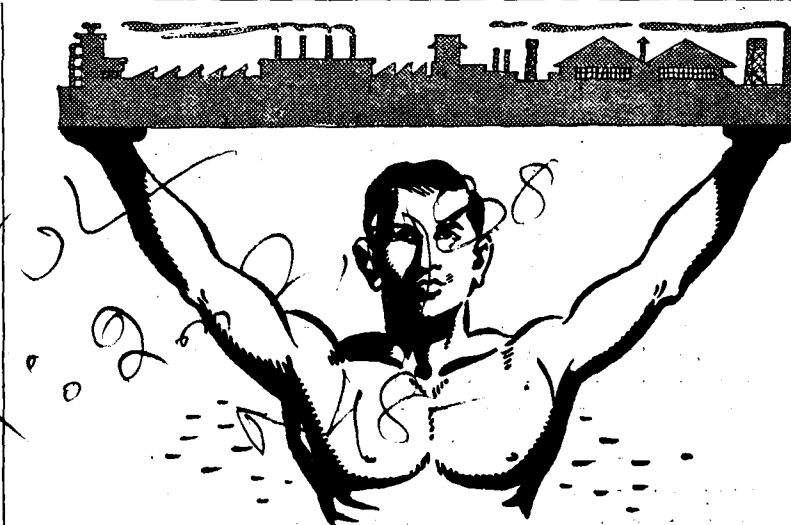


A colour mixing bay in the works of Shalimar Paint, Colour and Varnish Co., Ltd., Calcutta.

be no rapid development without much new equipment, firstly for the new plants, which will have to be started to produce local raw material supplies and secondly to replace existing machinery in paint factories which, generally speaking, was overworked and under-serviced during the war years.

The principal constituents of paint products may be grouped roughly as follows:—pigments—natural and synthetic; driers and drying oils; gums, waxes, resins and solvents.

Of the mineral pigments, gypsum (a base for water paints and distempers), barytes, and mica, for heat resistant paints, are met entirely from indigenous sources. With magnesite the mining side requires developing. In the case of titanium whites, obtained from ilmenite sands in Travancore, a Government sponsored factory is to be set up with American support to produce titanium dioxide. Three tons of the ore, for every one ton utilised in the indigenous pigment manufacture, will go to America. This will be an improvement on the past when almost all the ore was exported.



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The synthetic dye industry becomes increasingly important, because of modern production trends. It also has its markets outside the paint industry among them the plastics, ceramics and rubber goods industries each of which should develop in India in due time. Unfortunately coal tar production, so essential to the dye manufacturers, has been neglected in the past. However, the Tata and I.C.I. organisations have set out to master the problem of indigenous chemical dye production, so that there is every hope of progress. Prussian blue, lamp black, bone black, chrome green, natural ochre are but a few of the pigments for which the requisite raw materials are available in India.

The position in respect of driers and drying oils as a whole is satisfactory, although there is still need for better planning and co-ordination of effort. As is well known India is one of the leading linseed producers in the world, and linseed oil is still used as the main drying oil. Although Britain and other countries are trying to grow their own supplies and are experimenting with the sunflower seed as an alternative, India continues to export around 50 per cent. of her seed crop production which is in the neighbourhood of 500,000 tons annually (U.S.A. 1943: 1,300,000 tons. Argentine: 1,525,000 and Canada 440,000 tons). The paint industry at present calls for approximately 15,000 tons of extracted oil annually, the total extracted being about 200,000 tons.

Castor oil, when dehydrated, makes an excellent drying oil. India is second only to Brazil as a world supplier, India's share of the world crop being approximately 37 per cent., of which 20 per cent. is exported and 75 per cent. used for oil extraction. Tung oil is becoming increasingly popular in paint manufacture as it helps produce a hard, brilliant finish. A certain amount of tung plant is being grown but further investigation and production promotion is required.

The supply position of gums, waxes and resins has its good and bad features. So far as synthetic resins essential to lacquer varnishes are concerned India is unable to supply her requirements from local sources. All the copal gums needed for varnish production have to be imported from the Belgian Congo. An indigenous substitute is required. On the other hand, in the case of lac resin (shellac), India exports several million rupees worth annually. Bees-wax and paraffin wax are in satisfactory local supply. Apart from turpentine, solvents which are products of the chemical industry require considerable development if India is to become independent of outside supply sources.



Research plays a large part in paint manufacture. The Testing Laboratory at Shalimar, which also has a separate Research Laboratory and two other process testing laboratories.

The overall picture is not unsatisfactory. There is need for a concerted effort in which Government and all concerned should approach the problem on a forward looking basis, and if this is done the Indian paint industry should become an important national asset. Amongst present handicaps to development are transportation restrictions and a shortage of containers. The first problem is common to industry as a whole. An extension of road transport as a means of internal distribution would seem to offer some prospects of relief. The container problem is aggravated by the tin plate shortage and by the fact that despite repeated experiments, a substitute material satisfactory for paint packing has not as yet been found, although aluminium would appear to present possibilities. Research continues. The Paint Federation and the Indian Paint Manufacturers Association, which between them represent the leading members of the industry, are alive to the difficulties of the present and the opportunities of the future.

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THE COMMERCIAL BLOODSTREAM

A PICTORIAL APPROACH TO MODERN ECONOMIC PROBLEMS

As "civilization" progresses, world events tend to be governed more and more by economic forces. Wars are no longer provoked so much by diplomatic snubs or offences to a nation's prestige, as by struggle for access to sources of raw material, outlets to oceans for lines of commerce, or schemes of colonial expansion to support a country's economy. The ideology upon which the social and economic working system of the state is based is also a potential cause of war. This is beginning to be realized by the populace, and it is interesting to note that in Britain, where economic headaches loom even larger than elsewhere just now, the White Paper on the country's trade position has replaced the thriller as a best seller. Fifty thousand copies of the Government Economic Survey for 1948, we are told, were sold within 24 hours of publication. The British people too are right to ascribe this importance to things commercial, for they have at last realised that their very life hangs upon them. It stands to reason that as the population of the world increases, the pressure upon the limited supplies of things required for life, and the materials which go to their manufacture, must become more intense. Hence the growing pre-occupation with these materialistic considerations.

And since economics becomes increasingly the mainspring of events, it behoves everyone to take steps to understand that subject and its workings, so that an intelligent view may be taken of what happens every day and opinions may be formed independently of those supplied ready made by the daily papers.

The theory of economics, although it applies eventually to the everyday and material details which form the stuff of business and commerce, itself grapples with intangibles, with abstractions which are not easy to visualise, particularly for those who are new to the jargon of the science, and the way in which arguments are built up and conclusions arrived at.

THE "FLOW" PRINCIPLE

The idea of regarding a series of continuing transactions as being represented by a flow is not a new one, and was certainly used by Marshall, the father of modern economics and also by many of his successors. A flow is something which we can see everyday, and picture clearly. One can envisage the type of channel through which the flow takes place, the viscosity of the flowing liquid, the speed of the flow and the probable effect which it will have in exerting pressures. I have, therefore, used this idea to try and make clear some of the main workings in the economic world, and have made pictures of the ideas in terms of flow to give readers something clear and tangible upon which their minds can dwell.

Readers should remember, however, that the adoption of pictorial forms to explain and crystallise abstract ideas, has its limitations. In the science of economics certain conclusions have been arrived at, and laws propounded which are applicable subject to the oft repeated proviso "other things being equal."

If "other things" are not equal, the action of the laws varies, or may not apply at all. Again, there are many subtleties and minor influences, whose effect it is impossible to show in a picture which must be kept simple in order to achieve its explanatory object.

QUALIFICATIONS

When reading what follows therefore, the lesson which the pictures seek to impart must be accepted broadly, and not over-critically. If the more detailed action of economic laws and trends is to be studied, this form must be abandoned; as a way of clearly expressing general economic facts, however, I believe that the diagrams which follow will be of value.

There is one further qualification also which must be made in order that misunderstanding may be avoided, and that is in respect of the time factor which cannot be represented truly by pictures. For instance, the wages which Mr. Smith earns this month as a clerk will not necessarily be divided immediately as between what he buys from the grocer and what he saves. There will probably be an appreciable lag between the day when he receives his pay envelope and when he decides how much he will put into his savings account, and when he will pay the grocer's bill. The time

factor must be supplied by the reader in his own mind, as it does not lend itself conveniently to diagrammatical presentation on paper.

The three main ideas to which this paper is devoted are—

- (1) Production;
- (2) Spending and Saving; and
- (3) The Balance of Trade,

and finally an attempt is made to show the connections between the three in a unified picture.

When reading these ideas it is necessary to consider them as applying to any one country, either your own or some foreign country, for when thinking of the Balance of Trade, the world must be divided into the country you are thinking of on the

one hand, and the rest of the world on the other.

PRODUCTION FACTORS

The chief factors in production are Labour, Capital, Enterprise and Raw Materials. In order to obtain these factors it is necessary to pay wages to Labour, the cost of the raw materials needed, interest for the loan of capital and a profit to the entrepreneur who supplies the enterprise to bring all factors together and make them work. The act of production may therefore be expressed simply by the formula $\text{Wages} + \text{Cost of raw materials} + \text{Interest} + \text{Profit} = \text{Goods Produced}$, and this may be shown simply as follows, the "flow" in this and all other cases being from top to bottom.

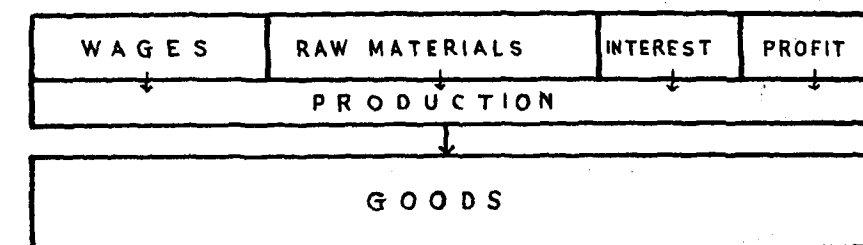


Fig. I

Looking at the above figure it will be seen that certain arbitrary shares have been allotted to the rewards of each factor in production. These proportions will of course vary in different industries; in mining for instance, wages will form a large part of the whole and raw materials practically nil; while in, say the gas industry, raw materials will account for a very much larger part of the total costs of production. If the selling price of the commodity produced is fixed either by competition or by law it would seem that an increase in the amount paid for one factor of production will mean that the others must contract. This, however, is not necessarily so, because an increase in say wages may stimulate a greater rate of production, which will offset that increase and leave the wages per unit the same as before.

The first diagram has shown production as resulting only in "goods," but goods may be classified in various ways. For our purposes the headings of interest under which they fall are—

1. Goods for the home market,
2. Goods for Export, and
1. Capital Goods,
2. Consumption Goods.

Both capital and consumption goods may be either for export or for home consumption, and we can now carry our diagram a step further as follows:

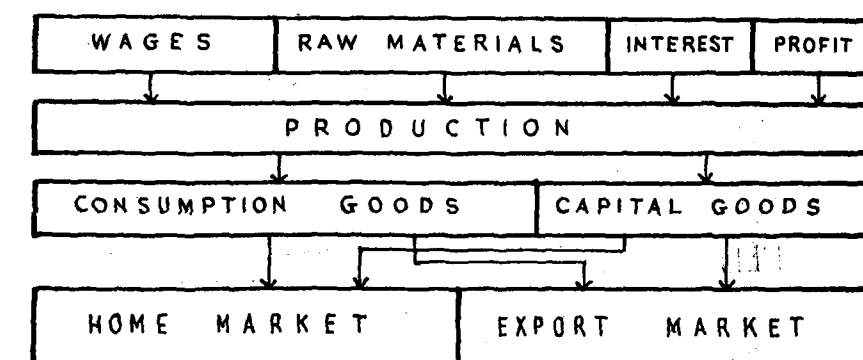


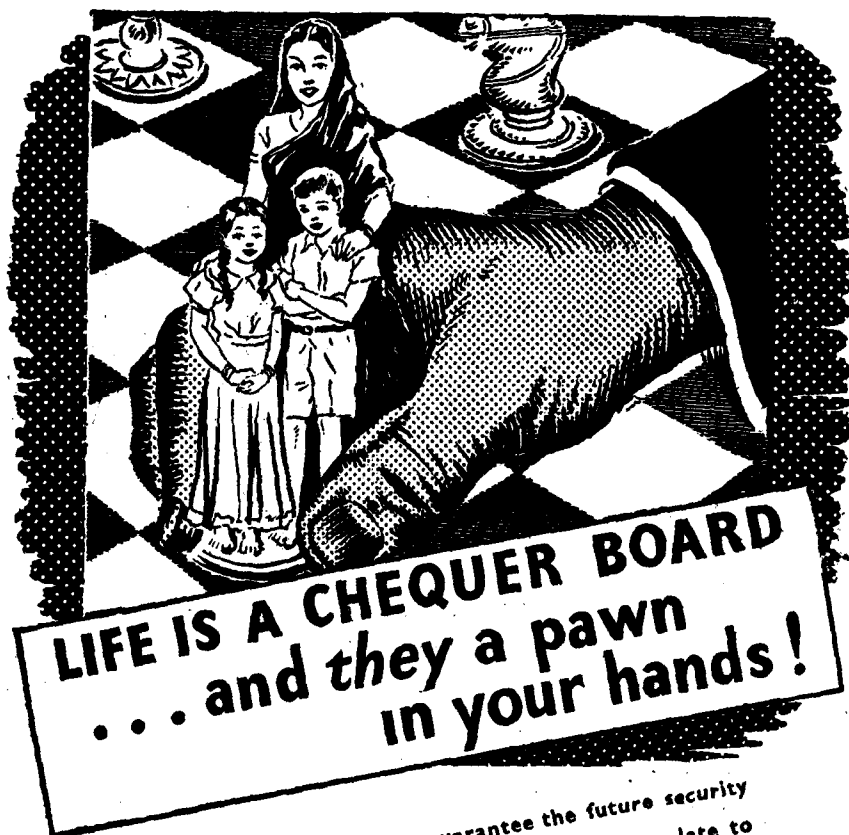
Fig. II

STEP by STEP up the LADDER

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1946	"	3,52,85,228
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This figure shows both the Home market and the Export market being divided as between consumption and capital goods. It also demonstrates that the more of a country's production is consumed in the home market, the less there is left for sale abroad. It also indicates that a country's productive capacity is not unlimited, and that if it devotes a disproportionately large part of its resources to the creation of capital goods, an inadequate capacity will remain to cater for its requirements of consumption goods. The two must be balanced, bearing in mind that the greater the effort now given to capital creation, the greater subsequently will be the flow of goods for consumption. In Soviet Russia this was early realised and by the colossal personal deprivations of consumption goods embodied in the various "plans," a certain amount of national capital was created to ensure a greater flow of goods to future generations and thus create a higher standard of living. It represented investing in the future rather than borrowing from it.

SPENDING AND SAVING

The next mechanism I wish to examine is exactly how goods are bought — by what means are they paid for. This will bring into the picture the habits formed by the people at any one time of spending and saving.

Goods and services bought are either paid for out of current earnings or out of past savings. The equation may be expressed as:—

Value of goods bought = current earnings + Savings.

For it may well happen that current earnings are greater than current expenditure on purchases, and therefore a balance is left over for investment. In order to express the idea of adding to, or spending out of, savings, I have regarded Savings in total as analogous to the water in a cistern. If current earnings are insufficient to meet the amount required to pay for current purchases, the shortfall will have to be made good out of the cistern of savings. If purchases are less than earnings, savings accrue—an amount is pumped into the cistern containing savings.



Fig. III

The diagram above shows a state of affairs where current earnings are not sufficient to pay for the goods and services being bought, the balance being made good by a flow from the savings "cistern." The opposite state of affairs, where current earnings are overplentiful for current needs, is shown below.

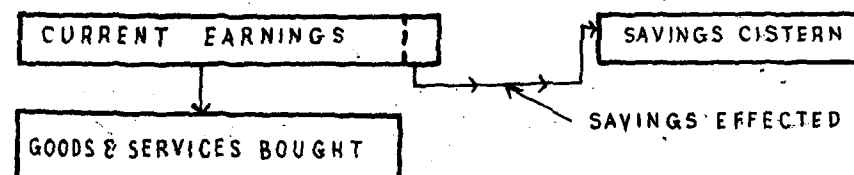


Fig. IV

Thus, Current Earnings minus Current Savings = Cost of goods and Services bought. This state of affairs is typical of the present, where the money available is more than sufficient to buy the small quantity of goods offering. These circumstances are not accompanied by a willingness to devote the surplus to saving and might be illustrated by a reduction in the bore of the pipe leading into the Savings cistern which would have the effect of making the pressure of the "fluid" earnings greater in the top compartment. This constitutes potential inflation. If the flow of goods can be increased the width of the pipe section below, showing goods on offer, will be increased, and the pressure on the funds available reduced.

If real inflation takes place the pressure above will also be reduced automatically, because the real value of each unit offering will be reduced in terms of purchasing power, though its nominal or face value remains the same. The real purchasing power above will then be less than the nominal (or traditional) purchasing power.

In Figures III and IV current earnings have simply been shown opposite "goods and services bought." Such goods and services may be, as now, artificially or, rather, purposely restricted so as to allow a larger proportion of the nation's total output to be made available for export.

During the war years the pressure of funds offering against goods available was reduced by various devices of "compulsory saving." This increased the flow of funds which had to pass back into the savings cistern and thus lessened the amount really available for purchasing goods.

One last observation before leaving this idea about the "Savings cistern." This reservoir has been looked at so far, as consisting only of personal savings, but it does in fact also include the reserves of companies and property of a wealth-producing kind amassed by other public bodies. It will be remembered that such associations compete for the purchase of goods available in exactly the same way as does an individual. Now the war saw great destruction of property belonging to a wide variety of owners, ranging from the rubber estates represented by the share certificates belonging to Mr. A to the housing property erected by the X borough Corporation, whose loan floated for the purpose was held, in part, by Mr. B. Such destruction of property, of capital, was really a reduction of savings. It diminished the amounts available to Messrs. A and B should their current financial requirements exceed their current incomes. It can be envisaged as a slice taken out of the balance stored in the savings reservoir, or a leak in the reservoir whereby a large flow of liquid has escaped.

THE BALANCE OF TRADE

Last we come to the Export-Import equation which has been so much in the forefront of national minds since the cessation of World War II. To put it simply, it is that:—Exports must equal Imports.

Exports and imports do not, however, always consist of tangible things, such as goods, but may be shipping services, banking facilities, the shouldering of insurance risks or the interest on money loaned. We may therefore carry the equation one step further thus:—

Visible Exports + Invisible Exports = Visible Imports + Invisible Imports.

But, it will be argued, this cannot always be so and it is certainly necessary to add a qualification to complete the story. In this case also there is this factor of a saving or investment cistern whose accumulated balance acts as a cushion to even out disparities between import and export balances from year to year. It would seem at first sight necessary to have two such cisterns, each representing the investment of one country in the other, but when the matter is regarded as a whole it will be realised that the investment of country A in country B can be deducted from the investment of country B in country A to find the nett indebtedness of one to the other; it must also be borne in mind that an amount left owing (in balance of trade) by B to A merely represents a further investment of B in A which can be taken into account in arriving at the nett balance of indebtedness.

For the purpose of this argument movements of gold may be taken as the export or import of goods.

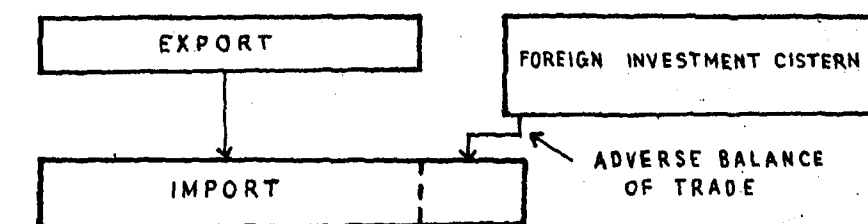


Fig. V

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Originally operating only in the United Kingdom, the Society gradually extended its influence during the first fifty years of its activities to many parts of the world, principally to the Continent of Europe and the Near East. It first began operating in this country in 1895 through its chief representatives for India, Burma and Ceylon—Messrs. Croft Mody & Co. Starting first in Bombay only, the Society developed connections in Madras, Gujerat and Kathiawar in 1898 and subsequently extended to Rangoon, Colombo and Calcutta. During and after the first World War subsidiary representatives were also appointed at Karachi, Poona, Secunderabad and the U.P. and the improved service these widened activities afforded to the insuring public was recognised and endorsed by a considerable increase in new business.

In pursuance of its determination to give still better service to its policyholders and in conformity with its reputation for progress, the Society established its own branch office in India in 1937, and, having built an imposing building in Bombay at the corner of Mint Road and Sir Pherozshah Mehta Road, moved into its new headquarters, Gresham Assurance House, early in 1940.

From 1939 to 1945, considerable expansion took place and branches were opened at Ahmedabad, Calcutta, Madras and New Delhi with sub-offices at Lahore and Lucknow. This development

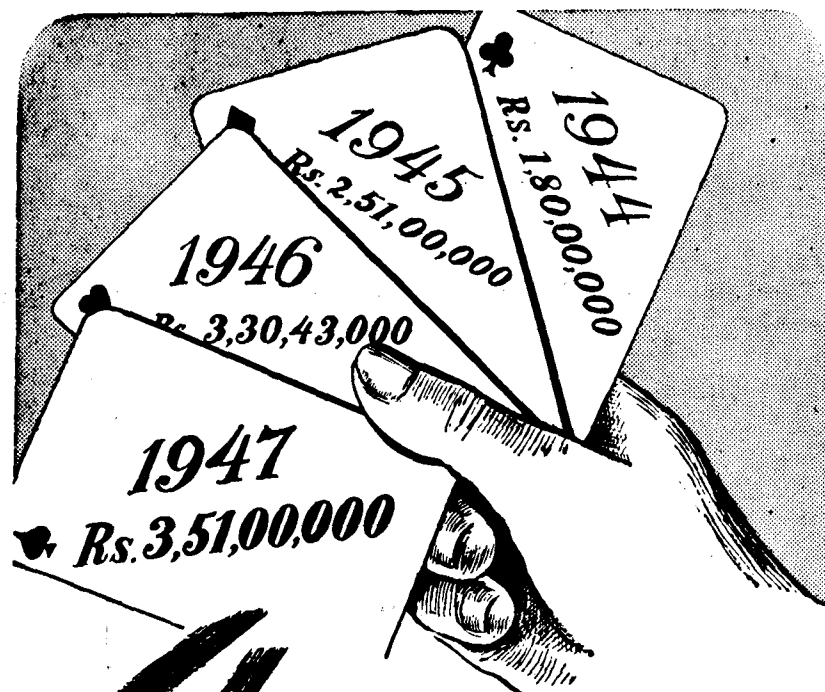
coincided with a marked increase in the Society's new business production, as the following approximate figures illustrate:—

	Premium Income of Indian Branch	Total Sums Assured in force in Indian Br.	World Premium Income	Total World Sums Assured in force	Total Assets
1937	Rs. 161 Lakhs	Rs. 31 Crores	Rs. 11 Crores	Rs. 34 Crores	Rs. 13,90,68,454
1947	Rs. 42 Lakhs	Rs. 7.69 Crores	Rs. 21 Crores	Rs. 54.68 Crores	Rs. 18,89,91,907

This development, though rapid and marked, has been achieved on sound lines and the Society has emerged from the second World War of the century even stronger than before. In proof of this, at the Valuation of the Society's business held as at the end of 1946, a bonus was declared of from 1 to 1½ per cent of the sum assured for each year of the period 1940 to 1946 in respect of all immediate with-profit policies in full force.

The Society complies fully with the Indian Insurance Act, but in view of the fact that the Society's total assets throughout the world are just as much available for policyholders' security as are those assets maintained in India under the Indian Insurance Act, the security afforded to policyholders is therefore infinitely greater than is possible for a company the scope of whose investments is more restricted. Its policyholders can therefore feel confident that the stability of the Society remains unimpaired, and can look forward to development strengthening still further a strong position. Wise management, attractive terms and, above all, first-class service to policyholders have marked the Gresham's development and are as much a feature to-day as they were the intentions of its founders a hundred years ago.

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This shows that because imports in this case exceed exports, the balance had to be made up by a withdrawal from the savings cistern. If the country under consideration has a favourable balance of trade with the rest of the world, the excess of exports over imports (if not paid for in gold) will increase the total of investment abroad—thus.

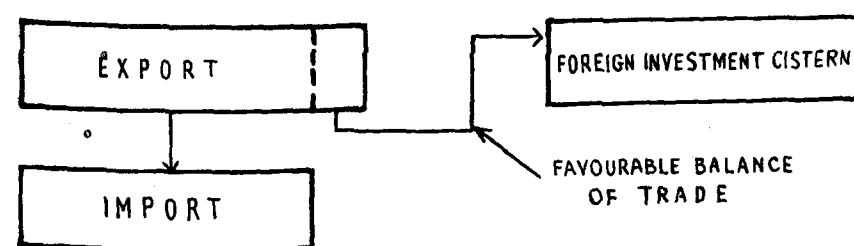


Fig. VI

Lastly, an effort is made to show diagrammatically the items of flow in each of the three systems so far examined which are common to each other.

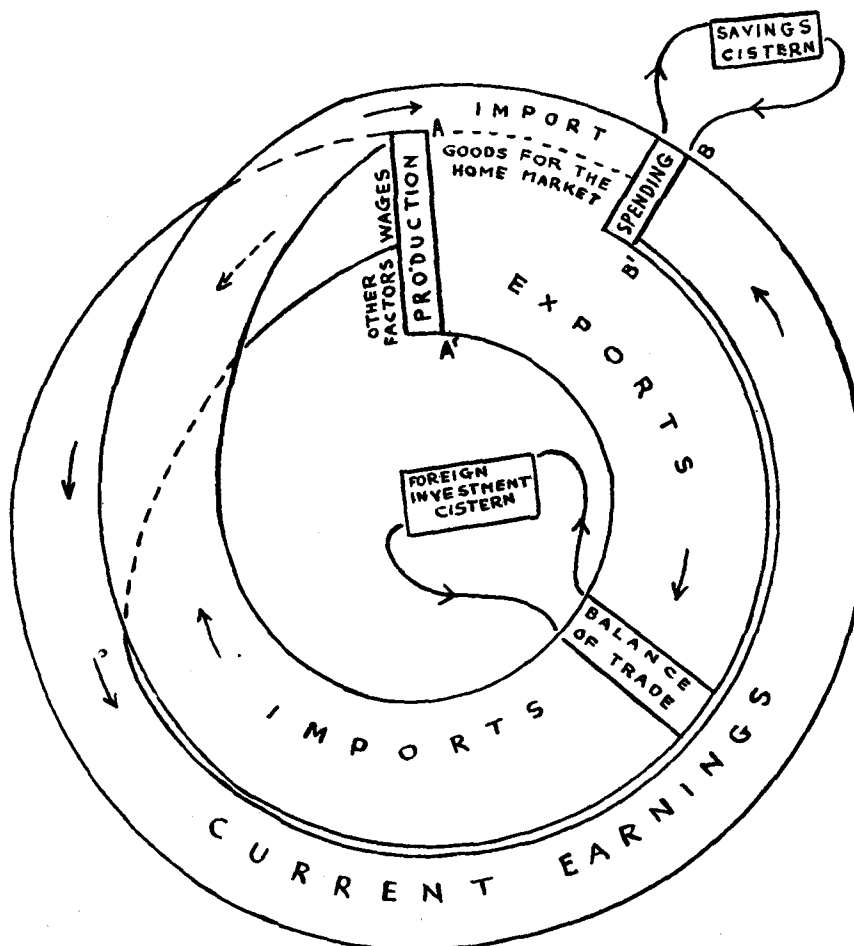


Fig. VII

In this rather complicated diagram attention should be focussed first on the line A-A' which is the point at which production takes place, then at B-B' where the purchase of goods takes place, and lastly at the export-import line, marked "Balance of Trade," the seaboard of the country.

It will be seen—

- (1) (vide A-A') that the goods produced by manufacture at home join with the flow of goods imported from abroad to form the total of goods available for purchase by the home consumer.
- (2) (vide A-A') The wages paid out for the manufacture of goods at home are used (trace round anti-clockwise to B-B') to purchase the goods available. They are supplemented if necessary from the Savings cistern or, if such wages are in excess of immediate needs, or when goods are insufficient for such needs, a stream will go into the savings cistern representing increased total savings, or capital created.
- (3) (vide A-A') Part of the flow of goods produced is diverted to export. At the "Balance of Trade" this flow is balanced against imports and any balance made up by adding to, or subtracting from, the nett balance of mutual indebtedness represented by the investment cistern.
- (4) Lastly the flow of goods imported (trace round clockwise) is added to goods produced at home for home consumption at B-B' to form part of the total of goods on offer to the home market.

If the foregoing diagrams have succeeded in making the ideas which they represent more lucid in the minds of readers, it is hoped that understanding of current economic affairs may thereby be assisted, and a clearer appreciation obtained of present events.

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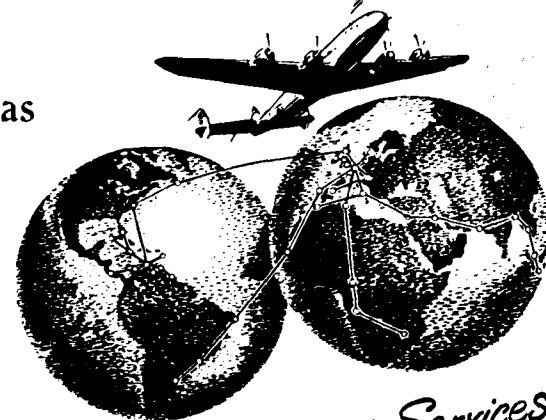


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Looking back on the development of civil aviation in India is an encouraging experience—for it is difficult not to arrive at the conclusion that a country which has made such amazing strides in the air in the comparatively short space of some fifteen or so years, even allowing for the fact that the whole tempo of air travel all over the world presents a similar phenomenon, cannot make similar rapid progress in all other directions given the necessary initiative, drive and incentive. Thinking back to the "twenties" I can remember the really early days when enthusiastic amateur airmen, assisted by the odd expert drawn from the ranks of the old Royal Flying Corps of the first World War, banded themselves together to form India's first Aero Clubs. The majority of these possessed no more than one aircraft, and it was not always in tip top condition. Indeed, more often than not it was being laid off for repeated overhaul, so that the acquisition of a flying licence was invariably a protracted process and an expensive one. The air, however, was the new milieu, and there was therefore no lack of supporters for these new ventures; for even if you did not fly, the clubs invariably offered other recreational facilities for the permanently grounded. Charter flights came into being when clubs, finding themselves faced with capital expenditure on new aircraft or other facilities for expansion, decided that this might well be secured by putting their available resources to week-day use as commercial carriers under the experienced control of their permanent staff, still leaving the week-ends available for harassed businessmen and others to get their fill of thrills, spills and bills in their conquest of the air.

BARNSTORMING DAYS

Naturally, there were commercially-minded airmen who saw in the public interest in this new experience a chance of turning an honest penny. The barnstormers of the early days of aviation in the West found their counterparts in India; indeed, some of them even included India in their world-wide itinerary, and many old-timers will remember Alan Cobham's circus and the popularity it aroused. I often wondered at the time whether these ventures paid as handsomely as some people imagined. I suppose they must have done for otherwise there would not have been so many of them, but it must have been a risky business for replacement was much more difficult than it is to-day, and the strain on pilots and mechanics must have been considerable, for they flew all day in what were obsolete aircraft—literally wooden crates with wings and an engine—and worked all night getting them fit again for their next day's ordeal. Fortunately for them, however, they never lacked a steady stream of vastly daring people who were willing to part with their ten rupees for a ten minute flip, deafened with the roar of the engine and the rattling of the fuselage, their hearts in their mouths and their fingers crossed—quite often, also, with their eyes tight shut all the time. Those flips were much more of an ordeal than a pleasure. But what satisfaction there was to be derived later, when, on being asked "Have you ever flown?" one replied, with superior disdain of the less venturesome earth-bound mortal: "Oh, yes!"

In the wake of the barnstormers, perhaps in some cases even preceding them, came the individual ex-war pilot who acquired a semi-decrepit aeroplane and set up in business as a charter pilot. I remember one such who based his operations on a provincial capital and found little difficulty in winning a satisfactory living from flights in all directions. The aeroplane was one of the early two-seaters and was almost literally held together with pieces of string, but it was quite surprisingly free from major mechanical trouble in the hands of its experienced pilot and put in a remarkable amount of hard work. Many were the trips I made in that insecure craft, and great was the excitement and awe of the villagers when an unexpected mission took us out into the wilds. Even as we passed over their fields they all stopped work and gazed wonderingly up into the sky. How different it is to-day, when the sound of an aeroplane's engines arouses so little interest that the man on the ground does not even worry to look upwards. India, indeed, has developed airmindedness.

By far the largest initial contribution to the development of civil aviation in this country came from foreign sources, and was the result of India's geographical situation as an essential link between Europe and the Far East. Early pioneers of flight used her aerodromes for their long-range record-breaking attempts, and these aroused more than ordinary interest. The names of Zanni (the Argentine), Alan Cobham, Amy Johnson and Kingsford Smith were as well known to India as they were to Britain and Australia. The empire routes also passed through India—Imperial Airways to Australia, K. L. M. to the Dutch East Indies and Air France to Indo-China. These through routes soon became popular with travellers to and from this country, and it was inevitable that ultimately there would develop a demand for feeder services from the surrounding countryside to eliminate the necessity for rail travel to the air ports at which these services called.

TATAS' THE FIRST VENTURE

And thus, on 15th October, 1932, the first regular air line service in India started operations. As in many other spheres of activity, Tatas blazed the trail. On that day Mr. J. R. D. Tata flew a de Havilland *Puss Moth* VT-ADN from Karachi to Bombay and on to Madras, carrying air mail which had been collected from the Imperial Airways England-India service at Karachi. It was a small beginning, for Tata Air Lines consisted then of two *Puss Moths* and a staff of two pilots, one licensed ground engineer and two mechanics. Despite this limitation, however, in the first year of operation they carried 7,567 lbs. of mail, and, what is even more surprising, with 100 per cent. regularity. Tatas were not alone in thinking of the development of air transport in India, and in May of the following year was born Indian National Airways, and 1st December, 1933, marked the inauguration of their first two regular services carrying passengers, mail and freight, between Calcutta and Dacca and Calcutta-Chittagong-Akyab-Bassein-Rangoon. De Havilland *Dragons*, tiny machines by comparison with those used to-day, blazed these pioneer trails. I.N.A. made rapid progress, despite the fact that in January and February practically all the



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An early civil line fleet. Third from the left is an Avro Ten and there are three D.H. "Dragons." A photograph taken at Dum Dum in 1934.

company's resources were devoted to relieving the distress caused by the Bihar earthquake disaster and every available plane was thrown into this mission of mercy—which evoked praise from all quarters and first turned the spotlight on Indian civil aviation development. By July, however, things were back to normal and I.N.A. opened their Flying School at Rangoon for the training of personnel, and in September established a number of new operation bases in Northern India and their own airfield at Alipore in Calcutta. With the close of the year the Lahore-Karachi service was inaugurated, via Multan and Sukkur, using Percival Gull aircraft.

The years 1935 and 1936 were mainly ones of consolidation rather than development. Tatas doubled the frequency of their Karachi-Madras service and inaugurated one new weekly service—outside the monsoon period—between Bombay and Trivandrum. The I.N.A. fleet had increased to ten aircraft. Christmas Day of 1936 did, however, witness another major development, the first Ceylon-United Kingdom air mail flight, Tata Air Lines flying the mail from Colombo to Karachi to connect with the Imperial Airways service. Early in the following year came another "first," this time from Indian National Airways, the first commercial flight between Calcutta and Colombo, while March of the same year saw the birth of India's third commercial airline—Air Services of India Ltd. Supported by the Kathiawar States, the company was actually incorporated in 1936, but it started operations in 1937 with a regular service linking Bombay to Bhavnagar, Rajkot, Jamnagar and Porbandar. De Havilland Rapides and Fox Moths were the aircraft used.

PRE-WAR EXPANSION

These three pioneer air lines continued to expand steadily during the next two years. In February, 1938, I.N.A. inaugurated their "all up" air mail service between Karachi and Lahore with de Havilland Dragons and Tatas extended their Karachi-Bombay-Madras service to Colombo on a four times a week schedule, while later that year Tatas inaugurated their Delhi-Bombay service, Mr. J. R. D. Tata again piloting the first plane—a "Waco." In November I.N.A. extended their Karachi-Lahore service to Delhi, using Beechcraft planes. In June, 1939, they also inaugurated fresh services between Delhi and Kalka and Lahore and Kalka, and also provided a bus service from Kalka to take passengers on to Simla. A.S.I. at this stage claimed that they were carrying 75 per cent. of the total air-borne passenger traffic in the country, which says much for the air-mindedness of the people of Kathiawar. They also started a new service between Bombay and Kolhapur.

But there was a set-back ahead. The outbreak of war put a stop to all development and Government requisitioned the air lines' multi-engined aircraft. Despite this fact, however, both Tatas and I.N.A. maintained their services by making the maximum use of such aircraft as they had available until, towards the end, Government were in a position to release further aircraft for their use. Air Services of India, however, without the aid of mail carrying contracts, found themselves in difficulties, and in 1940 were compelled to suspend operations until conditions improved. And so for five years, between 1940 and 1945, civil aviation as such came to a virtual standstill. War requirements took first place, and both Tatas and I.N.A. met them to the full extent of their available resources. It is interesting, in this connection, to mention that regular services were maintained by I.N.A. during these years, at the behest of Government, to no less than forty towns and cities—a network extending from Rangoon to Jiwani, on the Persian Gulf, from Peshawar to Colombo. I.N.A. claimed two further credits of an unusual nature during this period. Their Douglas D.C. 2's co-operated with the R.A.F. in reconnaissance sorties over Iraq during the Rashid Ali revolt and they played a big part in the evacuation from Burma during the tragic winter of 1941-42.

While the war certainly caused a set-back to the development of civil aviation in India, it also brought one benefit—a greater appreciation of the

advantages of air travel. This extended to a degree that would have taken a couple of decades to achieve under normal circumstances. The established air lines were not alone to realise the trend and were planning well in advance against the day when hostilities would cease, while there were many leading industrialists who laid plans to "cash-in" on the post-war boom when it arrived. New aircraft were ordered, new companies formed, contracts were concluded for the acquisition of surplus military aircraft and equipment, and arrangements were entered into for the employment of Air Force personnel as soon as they became available. Air Services of India Ltd. was resuscitated in 1943 under the control of the Scindia Steam Navigation Co., Ltd., though it was not until 1945 that it finally secured official sanction to resume operations, when it acquired a fleet of Dakotas to resume the daily service on the Bombay-Jamnagar-Bhuj route on 3rd May of the following year, this being extended to Karachi a month later, whilst a new service linking Bombay with Bhopal, Cawnpore and Lucknow was also inaugurated. It was in 1946 also that Tata Air Lines became Air-India Ltd. and pioneered with the introduction of air hostesses, while I.N.A. started employing women as Reception Officers.

NEW LINES AND SERVICES

With the passing of 1946 there also ended the teething stage of civil aviation in India. Air transport was well established when the Independence year dawned, and in that year it was destined not only to make considerable strides in the matter of development but to give evidence of its value to the country in times of crisis. I have already dealt above with the development of the pioneer air lines in India. By the end of 1946 their number had been increased to nine, the newcomers being Deccan Airways Ltd., Indian Overseas Airlines Ltd., Ambica Airlines Ltd., Airways (India) Ltd., Bharat Airways Ltd., and Orient Airways Ltd. The pioneer companies still served the main routes and carried the bulk of the traffic, but the newcomers furnished invaluable feeder services and made a substantial contribution to overall development. The extent of this is apparent if one examines the figures of any one of them. Deccan Airways, for instance, which started operations on 1st July, 1946, with a light twin-engined aircraft operating between Hyderabad and Bangalore, by the end of January, 1948, nineteen months later, had carried 36,255 passengers, 496,147 lbs. of freight and 64,340 lbs. of mail, and its aircraft had clocked 11,850 hours flying time and covered 1,832,473 air miles. As a basis of comparison, here are the 1947 operational statistics of Indian National Airways:—On scheduled flights they carried 62,259 passengers, 1,132,445 lbs. of freight and 423,055 lbs. of mail; and on non-scheduled a further 4,790 passengers and 524,272 lbs. of freight.

PARTITION AND AFTER

In August, 1947, came the partition of India into the Dominions of India and Pakistan. Orient Airways Ltd., transferred their activities to the latter, leaving India with eight regular air lines. Almost simultaneously, an Air-India plane flying the new Indian National Flag for the first time, carried Mrs. Pandit, India's Ambassador to Russia, to Moscow. This landmark was preceded, however, by the evacuation operations following partition and the Kashmir air lift, both of which would have been impossible without the co-operation of the air lines. Towards the end of August, 1947, when all other means of transport had broken down, air transport was the only means left for evacuating refugees from West



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Pakistan. A Controlling Authority for the Air transport of refugees was specially set up for this purpose, the Civil Aviation Department providing the necessary technical assistance. Besides Indian aircraft, which were employed to the extent practicable, about 20 aircraft from B.O.A.C. were also chartered. The cost of this charter amounted to about Rs. 70,00,000, of which only Rs. 22,00,000 were recovered from such evacuees as could afford to pay. One main objective of the charter operations was the evacuation of staff belonging to essential Indian services. About 46,000 persons including Government officials and their families and private individuals, both Hindus and Muslims, with some of their personal luggage, were transported by air. The bulk of these operations was completed by the end of November, 1947, after which it was continued on a very much reduced scale up to the first week of January, 1948.

Another demand upon Civil Aviation came on 26th October, 1947, when Government decided to send troops and armaments to Srinagar by air, in response to the appeal of the Kashmir Government. India's civil aircraft were quickly mobilised and an air-bridge to Srinagar sprang up the very next morning. It is now a matter of history how the arrival of these aircraft at Srinagar helped the Indian Army to repel the raiders, who were within four miles of the capital of Kashmir. The air-lift continued on an extensive scale up to 17th November. During this period about 6,000,000 lbs. of load were carried to Jammu and Kashmir. The total distance covered was 620,000 miles while actual flying time amounted to over 4,000 hours. This performance was equivalent to carrying 30,000 adults with 40 lbs. of luggage each, almost 25 times round the world in 22 days. The total number of return trips was over 750 and the cost to the Government was Rs. 30,00,000. In order to obtain sufficient transport for this grand effort, scheduled air transport services operating *Dakotas* were stopped from 30th October to 18th November, 1947. The operations continued on a reduced scale up to the middle of January, 1948. Weather conditions were so difficult that from time to time the air-lift was suspended for a few days. Throughout these operations there was not a single fatal accident, which redounds to the credit of the Civil Aviation Organisation, particularly to the inspection staff and the aerodrome, communications and meteorological branches.

By the end of 1947 Air services in India were being operated on 22 routes covering 13,295 route-miles by eight transport undertakings employing 166 aircraft, 229 pilots and more than 130 other aircrew personnel. There were 16 daily services and 42 weekly services. Miles flown were 4,648,155 and traffic carried 8 million ton miles, showing increases of 100 per cent.,

and 77 per cent., respectively, over the figures for the previous year. The number of passengers flown was 136,806 and freight 1,120 tons in addition to 298 tons of mails and 504 tons of newspapers. The regularity factor was as high as 95.9 per cent. in spite of the emergency operations to Kashmir and the evacuation of refugees from Pakistan. In addition to regular services, non-scheduled services were operated between Delhi and Ferozepur, Delhi and Kashmir and Calcutta and Gauhati.

Details of the services operating were as follows:—

Route	Route Miles	Frequency
Air India Ltd., Bombay— Karachi-Ahmedabad-Bombay-Hyderabad-Madras- Colombo	1,780	Daily (Two additional daily services between Karachi and Bombay and 5 additional services per week between Bombay and Madras).
Bombay-Ahmedabad-Jalpur-Delhi	750	Daily (includes one non-stop service between Bombay and Delhi).
Bombay-Calcutta	1,038	Daily.
Madras-Bangalore-Coimbatore-Cochin-Trivandrum	509	6 Weekly.
Indian National Airways Ltd., New Delhi— Delhi-Lahore	264	Daily.
Delhi-Amritsar	245	Daily.
Delhi-Calcutta	812	Daily.
Delhi-Jodhpur-Karachi	683	Daily.
Air Services of India Ltd., Bombay— Bombay-Porbander-Jamnagar-Bhuj-Karachi	620	Daily (9 weekly on Bombay Porbander-Jamnagar-Bhuj sector).
Jamnagar-Wadhwan-Wankaner-Ahmedabad	162	1 Weekly.
Bombay-Bhavnagar	210	3 Weekly.
Bombay-Gwalior-Delhi	774	3 Weekly.
Deccan Airways Ltd., Begumpet— Delhi-Bhopal-Nagpur-Hyderabad-Madras	1,155	Daily.
Hyderabad-Bangalore	316	4 Weekly.
Hyderabad-Bombay	387	Daily.
Indian Overseas Airlines Ltd., Bombay— Bombay-Nagpur-Calcutta	1,038	Daily.
Ambica Airlines, Bombay— Bombay-Baroda-Ahmedabad-Jodhpur	513	Daily.
Bombay-Rajkot-Morvi-Ahmedabad	413	Daily.
Airways (India) Ltd., Calcutta— Calcutta-Vizagapatam-Madras-Bangalore	1,036	4 Weekly.
Bharat Airways Ltd., Calcutta— Delhi-Amritsar	245	Daily.
Delhi-Lucknow-Gaya-Calcutta	809	3 Weekly.
Delhi-Kanpur-Allahabad-Calcutta	819	4 Weekly.

The total number of aircraft registered in India at the end of December 1947 was 551. Of these 139 held current certificates of airworthiness. They



Indian leaders have shown a proper appreciation of the value of air travel and set an example to their countrymen. Acharya Kripalani, Pandit Nehru and Mr. Shankarrao Deo at the end of a trip.

included 175 aircraft with more than one engine. The number of Ground Engineers holding current Indian Licences increased to 316. The total number of commercial 'B' Class pilots increased to 251 and that of Private 'A' Class pilots to 286. The number of 'AI' Class pilots was, however, down to 10.

PERSONNEL AND TRAINING

The undermentioned subsidised Flying Clubs are in operation in India, excluding those located in Pakistan: (1) Delhi Flying Club Ltd., New Delhi. (2) Madras Flying Club Ltd., Madras, (3) Bombay Flying Club Ltd., Bombay, (4) Bihar Flying Club Ltd., Patna, (5) Bengal Flying Club Ltd., Calcutta, (6) Orissa Flying Club Ltd., Bhubaneswar, (7) Hind Provincial Flying Club Ltd., Lucknow. The U.P. (Kanpur) Flying Club has been amalgamated with the Hind Provincial Flying Club, Lucknow. The total number of hours flown by all these clubs during the year 1947 was 18,582. All possible help is given to encourage private flying through these Clubs. Government assistance to each Flying Club includes a fixed subsidy of Rs. 30,000 per annum, a bonus of Rs. 250 for each 'A' pilot trained by the Club, contribution at Rs. 20 per hour for all flying done by trainees below 28 years and at Rs. 5 in the case of other trainees, a grant in aid for construction of hangars, etc., to the extent of Rs. 25,000, the loan of aircraft up to a maximum of six to each Club and free landing and housing facilities at base aerodromes. At present the seven Flying Clubs at Delhi, Bombay, Calcutta, Madras, Patna, Bhubaneswar and Lucknow receive subsidies and grants from the Government of India. It is proposed to have three more subsidised Flying Clubs at Jullunder, Nagpur and Assam, so that each Province will have one Club. A conference of Flying Clubs and Schools was held in New Delhi on 18th November, 1947, which discussed, amongst other things, the question of speeding up the training of aviation personnel. It was felt that the best way was to train selected candidates up to a stage in Flying Clubs and send them later to a Central School for advanced training. This, it was expected, would help to increase the personnel available for manning the bigger machines of air lines.

To make up for the shortage of qualified personnel required by civil aviation, the Indian Government drew up plans for starting a Civil Aviation Training Centre comprising communications, aerodrome, flying and ground engineering schools. Owing to lack of equipment and paucity of instructional staff, only the Communication School was set going. This School, which is in Saharanpur, had trained 49 radio-technicians and 147 radio operators up to 30th June, 1948. Detailed planning for the flying and aerodrome schools to be set up at Allahabad and for the engineering school and repair organisation at Barrackpore have now been completed and it is expected they will open this winter. The schools will train 280 commercial pilots, 300 control operators, 300 aerodrome officers and 300 ground engineers in the first three years. To meet the growing needs of Flying Clubs, it is also proposed to train 12 pilot instructors at the Allahabad Centre, before training for commercial pilots is started.

AERODROMES

The number of aerodromes staffed by the Director General of Civil Aviation in India during the year 1947 was 26, as against 16 in the year 1946.

The existing aerodromes are being expanded and up-to-date equipment installed in them. A number of new airports is also under construction, and some are likely to be constructed soon. There is a five-year plan of expan-

sion to enlarge Bombay Santa Cruz airport. There are good reasons to think that the plan will mature earlier. Bombay, in a very short while, will be even a better airport than Karachi was before the Partition. Similar expansion is being envisaged for Calcutta and Palam aerodromes as well. In addition to these three international airports, the other major aerodromes at Allahabad, Lucknow, Patna, Vizagapatam, Nagpur, and Ahmedabad are also being better equipped. Intermediate aerodromes at Benares, Bezwada, Cochin, Coimbatore, Kanpur, Trichinopoly, etc., are also being expanded for regular air services. The State aerodromes at Baroda, Bhavnagar, Bhopal, Bikaner, Gwalior, Indore, Jaipur, Jamnagar, Jodhpur, Junagadh, Porbandar, Rajkot, Srinagar, and Trivandrum have also been inspected by technical staff of the Central Government, and their improvement is being taken in hand in collaboration with the State authorities. Assam was practically cut off from India after the partition, and it is now regularly and systematically being linked with India by air. I am informed that preliminary work on selection of sites is also being carried out at Ajmer, Sagaur, Surat and Mangalore.

In pursuance of the programme for increasing housing facilities for aircraft at various airfields, it was decided to increase parking accommodation by erecting hangars transferred from the surplus stocks of the Defence Department. A total sum of Rs. 62 lakhs has been sanctioned for the erection of hangars and the construction of new aprons and taxi tracks at Bombay, Madras, Dum Dum, Delhi and Lucknow. This will enable the erection of 12 hangars at Santa Cruz, two at Madras, four at Dum Dum, four at Willingdon, one at Palam and one at Lucknow. Two hangars at Santa Cruz and four at Willingdon air station have already been erected. An expenditure of Rs. 32 lakhs has also been approved for the construction of permanent residential accommodation at Madras, Ahmedabad, Lucknow, Nagpur and Vizagapatam for civil aviation staff. The proposal to convert existing buildings at Dum Dum and Santa Cruz for the housing of Civil Aviation personnel at these aerodromes at a cost of Rs. 4,39,000 and Rs. 4,91,000 respectively, has also been approved.

The last of the R.I.A.F. Communication Stations (Hyderabad Deccan) was taken over by the Civil Aviation Department on 1st August, 1947, and since that date all facilities transferred from Air Force to Civil Control have been kept operative. In the month of October it became necessary to establish two Aeronautical Communication Stations in Kashmir. This necessitated flying in by air of a number of men and a quantity of equipment at short notice. Despite the difficulties encountered, the Aeronautical Communication Stations at Srinagar and Jammu were successfully installed. The closing months of 1947 saw intensive planning and the first part of the Aeronautical Communications service programme (Second Edition) was produced.

The total number of Communications Services operated by the D.G.C.A. in the year 1947 was 162, as against 45 in the year 1946.

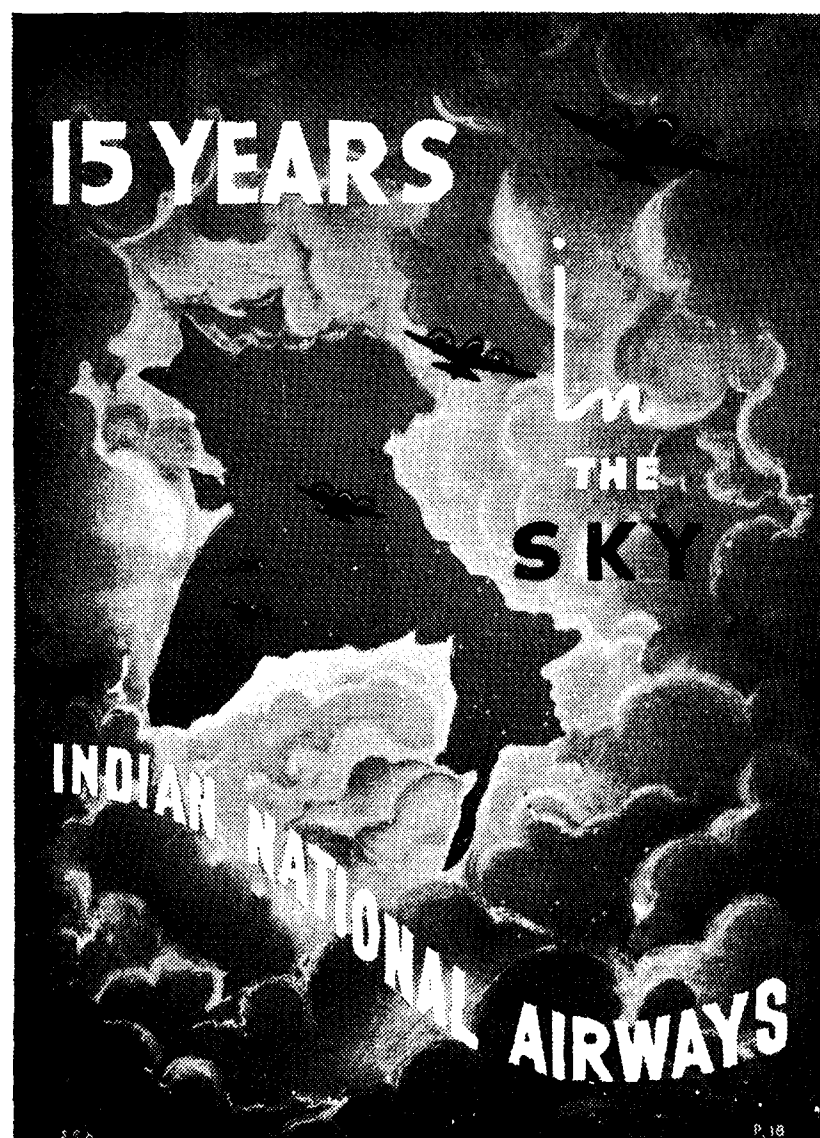
THE EXTERNAL SERVICES

It was not until 1948, however, that India finally took her place in the international air transport sphere, for it was in this year that she achieved the distinction of inaugurating her first real external service, though the separation of Burma, and the formation of the new Dominions of Pakistan and Ceylon transmuted original internal services into external ones somewhat earlier. A new company, Air-India International Ltd., was formed by the Government of India as a joint State *cum* private enterprise with an authorised capital of Rs. 7 crores, and an initial paid-up capital of Rs. 2 crores. Of this, the Government of India's share amounted to 49 per cent. with an option to acquire at any time a further 2 per cent. As the largest shareholder, the Government have effective control over the policies and operations of the company. The day-to-day management is left to Air India Ltd. The latest long-range four-engined *Constellation* type aircraft, which have a maximum speed of 300 miles per hour, were bought for the operation of this service. The first flight was made on 8th June from Bombay to London with intermediate halts at Cairo and Geneva. The service was conducted once a week at the start, but is expected to run twice weekly shortly and later thrice weekly. India's other external air services are between Calcutta and Rangoon, Calcutta and Dacca and Calcutta and Chittagong. The first began in October, 1947, and the other two services in July, 1948.

Bilateral air transport agreements have been concluded with Pakistan and Sweden. The pact with Pakistan provides to air routes to India through points in that country and nine routes to Pakistan through points in this country. Temporary arrangements have been entered into with Australia, China, Egypt and Switzerland. Negotiations for long-term agreements with these countries and with the U.K. and Iran have also commenced. India had already entered into bilateral pacts earlier with the U.S.A., France and the Netherlands. The position at the time of writing is that 41 air services are being operated on 27 routes, as against 28 services on 18 routes in 1947. There are 17 daily and 70 weekly services. Eight transport undertakings employing 167 aircraft, 234 pilots and more than 168 other aircrew personnel had flown 4,858,893 miles, carrying 124,753 passengers and freight and mail amounting to 2,573 tons, during the period January to April, 1948.

PAKISTAN'S POSITION

At the time of Partition, Orient Airways was the only air transport company registered in Pakistan and its operations were limited to the Calcutta-





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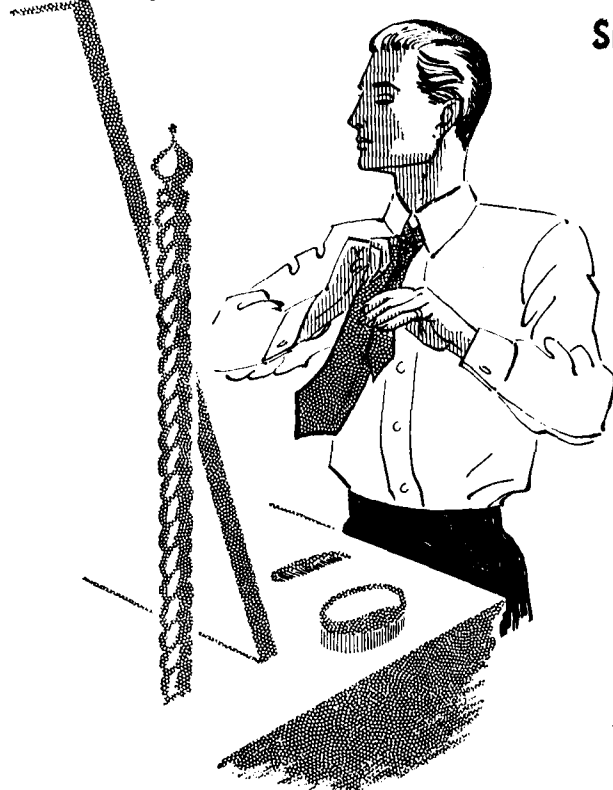
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Akyab-Rangoon service. Under agreement with India, this service was allowed to continue and new services were introduced under a temporary agreement which came into force on 1st October, 1947. Soon air services were started from East to West Pakistan and from Karachi to Quetta, Lahore, Rawalpindi and Peshawar and also between Calcutta, Dacca and Chittagong. On 11th March, 1948, a service was started from Karachi to Ahmedabad and Bombay.

These new services have meant a vast increase in air activities. The average monthly mileage covered by Orient Airways in June, 1948, was 143,983 as compared with 41,880 miles at the time of partition. This works out at an increase of 243 per cent. or just over 100,000 miles per month. Over the same period, the number of services also increased from one to seven and the total mileage of routes from 685 to 4,960, that is more than seven-fold.

In the meantime, the Government also formulated policy and tackled the long-range problems. On 4th December, 1947, the Government of Pakistan announced their decision to leave the operation of scheduled air services to private enterprise, subject to control and regulation through a system of licences and definite allocation of routes. The number of companies was limited to two only, with Pakistan capital and under the control of Pakistan nationals.

New air transport licences have been granted to Orient Airways and Pak Air Ltd. The services and the minimum frequencies to be operated in each direction by the two Companies, subject to agreement with the other Governments, are as follows:

Orient Airways Service:

1. Karachi-Quetta-Lahore (twice a week)
2. Karachi-Lahore-Rawalpindi-Peshawar (three times a week)
3. Karachi-Delhi-Allahabad (non-traffic stop)-Calcutta-Dacca-Chittagong (three times a week)
4. Karachi-Ahmedabad-Bombay (three times a week)
5. Karachi-Quetta-Zahidan (Duzdab)-Meshed-Teheran (once a week)
6. Calcutta-Dacca (daily)
7. Dacca-Chittagong-Sylhet (daily)
8. Calcutta-Chittagong (daily)
9. Chittagong-Akyab-Rangoon (daily)

These services will be operated with *Dakota* aircraft in the first instance.

Pak Air Services:

1. Karachi-Lahore (daily)
 2. Karachi-Delhi (daily)
 3. Lahore-Delhi (daily)
 4. Lahore-Rawalpindi-Peshawar (three times a week connecting No. 3)
 5. Karachi-Bombay-Colombo (three times a week)
 6. Karachi-Calcutta-Rangoon-Singapore (three times a week)
 7. Karachi-Cairo via intermediate points to be agreed (twice weekly)
- Of these services, Nos. 1 and 2 will be operated with *Vikings*, Nos. 3 and 4 with *Dakotas* in the first instance and Nos. 5, 6 and 7 with *Skymasters*.

The Government's air transport policy included the formation of a company to provide common facilities required by the air lines and by the Royal Pakistan Air Force, particularly facilities for the repair and overhaul of aircraft and for the training of aircraft mechanics and maintenance engineers. Accordingly, on 22nd June, 1948, the Government announced that it had approved the formation of a company to be known as "Pakistan Aviation Ltd." to be financed, directed and controlled by the Government and the two Pakistan

airlines in partnership. Its authorised capital is Rs. 40 lakhs of which the Government share is Rs. 21 lakhs, the balance of Rs. 19 lakhs being subscribed in equal proportion by Orient Airways Ltd. and Pak Air Ltd. The Government thus has a controlling interest. The airship hangar at Karachi Airport is being taken over by the Company for its operations and it is estimated that the organisation will ultimately be required to overhaul more than 70 air frames and 400 engines annually. This will require a staff of at least 500.

At the time of Partition, two Flying Clubs were operating in Pakistan, Karachi Aero Club and the Northern India Flying Club at Lahore. The former has continued its activities without interruption, but in the latter case operations were interrupted for a considerable period by difficulties arising out of partition. Provision has been made for subsidies to these Clubs to be continued during the current financial year, and for assistance to be given to an additional club to be started in Dacca to cater for the requirements of Eastern Pakistan. Now that the Pakistan air lines companies have been selected it will be possible to decide upon future policy for the training of personnel for careers in civil air transport, including the part to be played by the Flying Clubs and the financial assistance which may be required for that purpose.

Though the development of civil aerodromes has been retarded by financial restrictions and shortage of experienced personnel, the organisation now approved provides for the limited development and the operational manning of the following aerodromes to appropriate standards:

Western Pakistan.—Karachi Airport, Lahore, Quetta (Samangli), Hyderabad (Sind) (Bholari) and Multan.

Eastern Pakistan.—Chittagong, Dacca (Tezgaon) and Sylhet.

Karachi Airport and the Flying Boat Base, which is maintained by the B.O.A.C. at Korangi Creek, have been designated as International Airports, and it is proposed to so designate the aerodrome at Chittagong when the need arises and the aerodrome has been developed to satisfactory standards. The aerodrome at Bholari, in addition to serving Hyderabad (Sind) will provide a diversionary aerodrome when flying conditions are bad at Karachi. In addition to the aerodromes listed above, others are being maintained for future development to meet the needs of feeder air services.

The prominent position of Karachi Airport on the International trunk routes and the rapid expansion of national air transport activities require the continued development of this airport as a matter of the first importance. The shortage of domestic and other accommodation, and the need for augmenting the electricity and water supplies to meet increasing demands are under consideration, together with plans for the construction of a new hotel and a new runway designed to take the heaviest types of aircraft likely to be used in future. The average monthly traffic figures at Karachi Airport during the period January to May, 1948, were as follows:

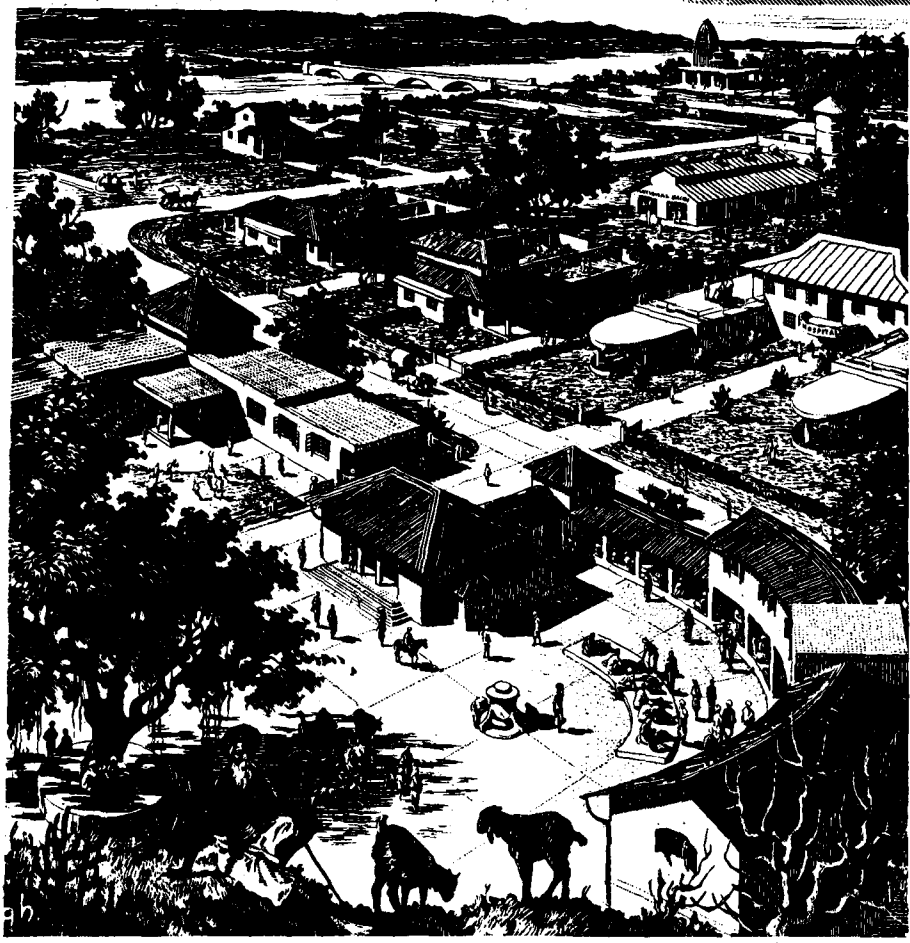
Aircraft arrivals and departures	..	979 per month
Passengers disembarking and embarking	..	8,228 per month
Passengers in transit	..	3,524 per month
Mails on loaded and off loaded	..	107,722 lbs. per month
Mails in transit	..	221,797 lbs. per month
Freight on loaded and off loaded	..	339,523 lbs. per month
Freight in transit	..	158,314 lbs. per month

Soon after Partition, the Government of Pakistan notified its adherence to the Convention on International Civil Aviation and to the International Air Services Transit Agreement and on 5th December, 1947, the new State became a member of the International Civil Aviation Organisation which has its headquarters in Montreal. Pakistan has also become a member of the Commonwealth Air Transport Council, which has its Secretariat in London.



The inaugural flight of Air-India International's "Constellation" service between Bombay and London.

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VILLAGE HOUSING



RURAL ROADS

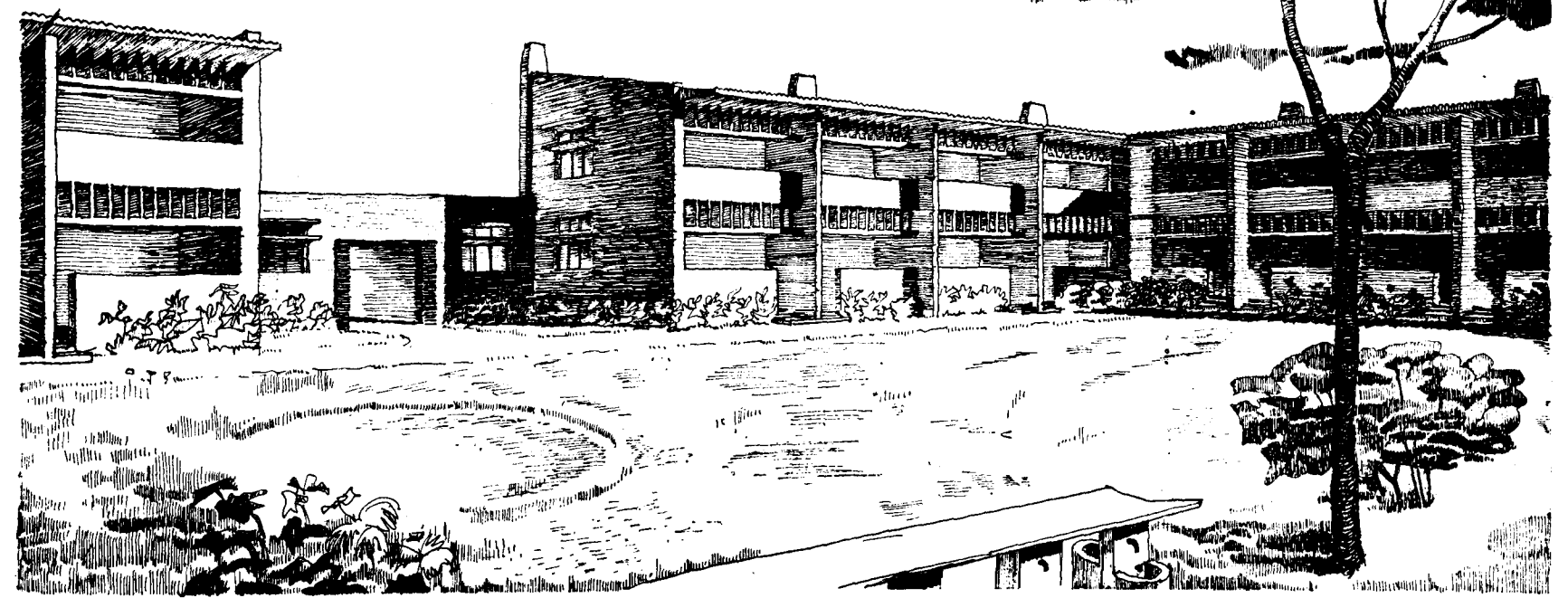


VILLAGE WELLS



GRAIN STORAGES

BUILDING FOR THE FUTURE



HARMONY & EFFICIENCY IN INDUSTRIAL CONSTRUCTION

INDUSTRIAL WORKERS' COLONY.—The blocks of tenements surround a grassed courtyard where relaxation is possible for both young and old.

WITH the present growth of population, the emphasis on development, both industrial and agricultural, and the consequent demand for more and better accommodation of all descriptions, the necessity of planning is becoming urgent. The harmonious and efficient co-ordination of elements, resources and labour towards the realisation of a worthwhile result should be the objective and function of such planning.

Man-made environment influences man as much as man influences his environment. It has been said that "Man builds the city so that the city shall build his sons." The implications throw light on one aspect of influence—the building up of character, background, civic consciousness and civic ideals, or the making of good citizens and citizenship. Looked at from

another angle, good environment is essential for the well-being of a people, for they in turn will collectively contribute to the well-being of the State.

You cannot, for instance, improve the living conditions of the masses unless you improve the living conditions of their homes. Good homes mean well-built houses, well-planned for efficient and comfortable living in, and with that atmosphere and sense of environment so very necessary in the building up of happy, healthy and beautiful lives.

You cannot improve the working conditions of the masses, and consequently the output of the nation, in a marked degree unless you improve their working environment. Be they factories, workshops, offices or any



CANTEEN cum CINEMA.—A canteen should be more than a glorified restaurant. This one has a large central all-purposes hall with complete facilities for Cinema and stage shows, indoor games, a library, etc. It is flanked on one side by the canteen with liberal service and kitchen facilities and on the other by a protected verandah, beyond which is a large storeroom.



INDUSTRIAL HOUSING.—A design of a 3-bedroom bungalow for senior staff. To the left is the guest bedroom with its own bath and a separate entrance through a lobby which connects with the living and dining room, whose five windows look out to the front. Behind this is the kitchen and a second bath, which adjoins a large bedroom at the back (also with a separate entrance) and a smaller bedroom one of whose windows looks out on the entrance verandah shown at the right in the illustration. This main entrance leads into the living room.

other places where people toil to earn a living, these have to be so planned and related in a scheme of things that work is more a pleasure than a task, efficiency is induced, output increased and labour discontent eliminated.

You cannot, further, improve the health conditions of the masses unless you provide them with wide and well-laid-out open spaces as lungs in populous cities and towns; unless you make their environment clean, sanitary and refreshing to mind and body; unless you build good hospitals not only many in number and varied in scope, but clean and efficient and cheerful; and unless you give them also clinics, homes and sanatoria and other facilities—so that not only treatment and cure but timely, helpful and sympathetic guidance may be available to the sick and the ailing in body and in mind.

PLANNING THE FACTORY

A building must be efficient in its planning and its ultimate practical reality. A factory is not just the structural erection of four walls, and a roof for the mere sheltering of machinery and labour. This, unfortunately, however, was exactly its interpretation in the past, resulting in an unfortunate legacy of strange structures handed down through the years without the slightest imagination as to what reactions such action would produce. In three dimensional form this legacy means inefficient, ugly, soul-destroying and cancerous cells that infect whole areas in the bodies of our industrial cities and towns. Slums, disease and squalor, both physical and moral, are some of the off-shoots of such infection.

By efficiency or utility is first meant a well-thought-out plan for the co-ordination of the various activities and processes of manufacture, from the raw stage to the finished product, resulting in a sequential relationship of departments giving the maximum of results and the minimum of waste in labour and output. The careful provision for future well-related expansion of units or departments without just a heterogeneous dumping of structures to suit only an immediate isolated need is an aspect of efficient planning which pays in the long run.

Environment for the workers must also be efficient. Efficiency here naturally means the creation of such an atmosphere as that already described.

New needs typical of our age are the first of the influencing factors in contemporary architecture, new materials the second. By new materials are of course generally meant materials which, though known to man in earlier days, are now found to have new possibilities with new techniques of construction in the field of building. Stones, bricks, timber and tiles are of course materials which, from time immemorial, have been greatly used in the construction of structures large or small, simple or complex. These are still usually employed structurally in the traditional way. Then, we have concrete, which is nothing else but a mixture of cement, sand and broken stone or bricks used as aggregate. When solidified it has the properties of a homogeneous mass of masonry. Mass concrete is not a new material, for it was used in Roman times with great constructive skill in some of the most daring structures then imaginable. To-day, however, concrete, reinforced with a network of steel, takes on even more daring possibilities in the field of creative construction.

VARIED MATERIALS

There is steel, which, used as a skeleton framework, forms the bones on to which the flesh in the form of bricks or stone and mortar or concrete is grown. There is glass in all its varied range to-day. Used with the freedom possible through modern methods of construction it gives a greater sense of spaciousness, of light and of lightness to the structures in which it is judiciously related. The danger here is of over-use of a material whose architectural possibilities give a thrill to the designer, but whose practical value from the viewpoint of Indian climatic conditions has to be considered with judicious caution and restraint.

Various other materials, especially patented in form, flood the market to-day. Some are good, others questionable, and the value and possibilities of each are a matter of trial and experience.

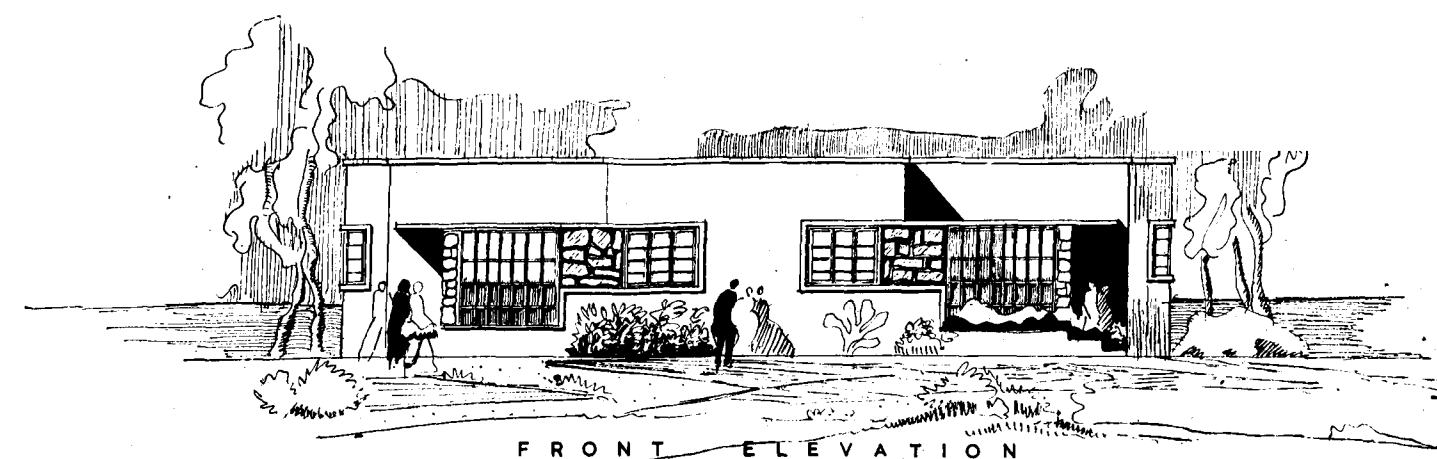
But the range of materials and their possibilities offers a fascinating field in contemporary architectural design. It follows, therefore, that modern architecture will be in a marked degree different from past work, where materials had not appreciably changed for centuries on end.

The third influencing factor in contemporary work is that of new techniques. Materials used in a new way result in new techniques or methods of construction. Reinforced cement concrete and structural steel are two which lead the field. In India, as in many parts of the world, R.C.C., as it is generally known, is a popular favourite. These techniques, symbolising as they do a lightness of construction in marked contrast to the solid walling usual in the past, have developed an architectural expression typical of this age.

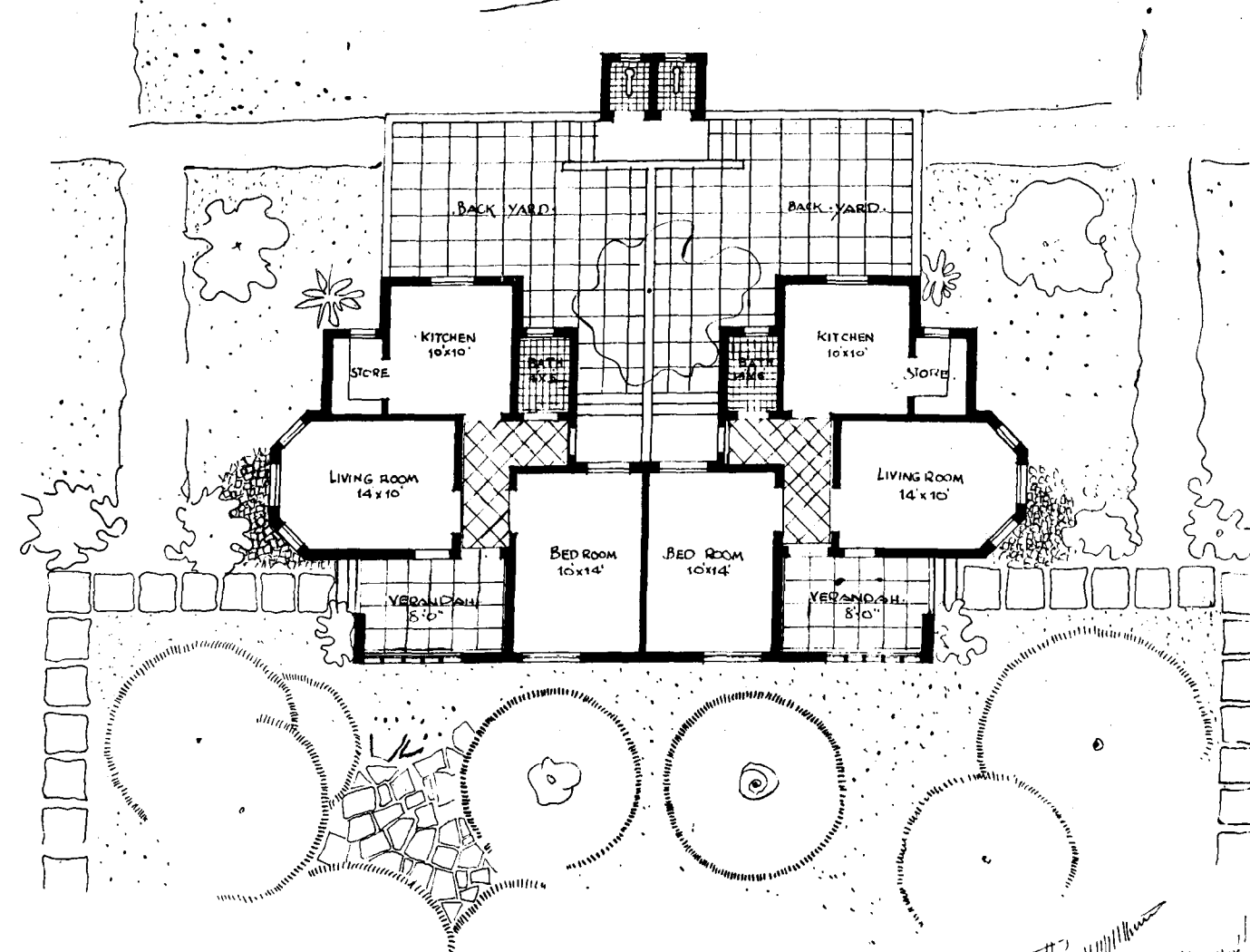
The use of R.C.C. has been extensive in the West as well as in other regions of the world. Influenced by local conditions such as climate, condi-

tions of labour, industrial development and production costs, far-reaching results have been achieved in structural technique, in intensive degrees of utility and efficiency and in the field of aesthetics. If this has been possible elsewhere it should also be so here in India. There should be no blind imitation of things that are foreign, but an outstanding architectural character should arise from a recognition and study of all local factors peculiar to India, physical as well as cultural. In this sense, R.C.C. has a significant contribution to make towards Indian architecture, which in its turn will have scope for inestimable service in the planned welfare of the country.

The purpose in presenting a selection of sketch designs in this article is

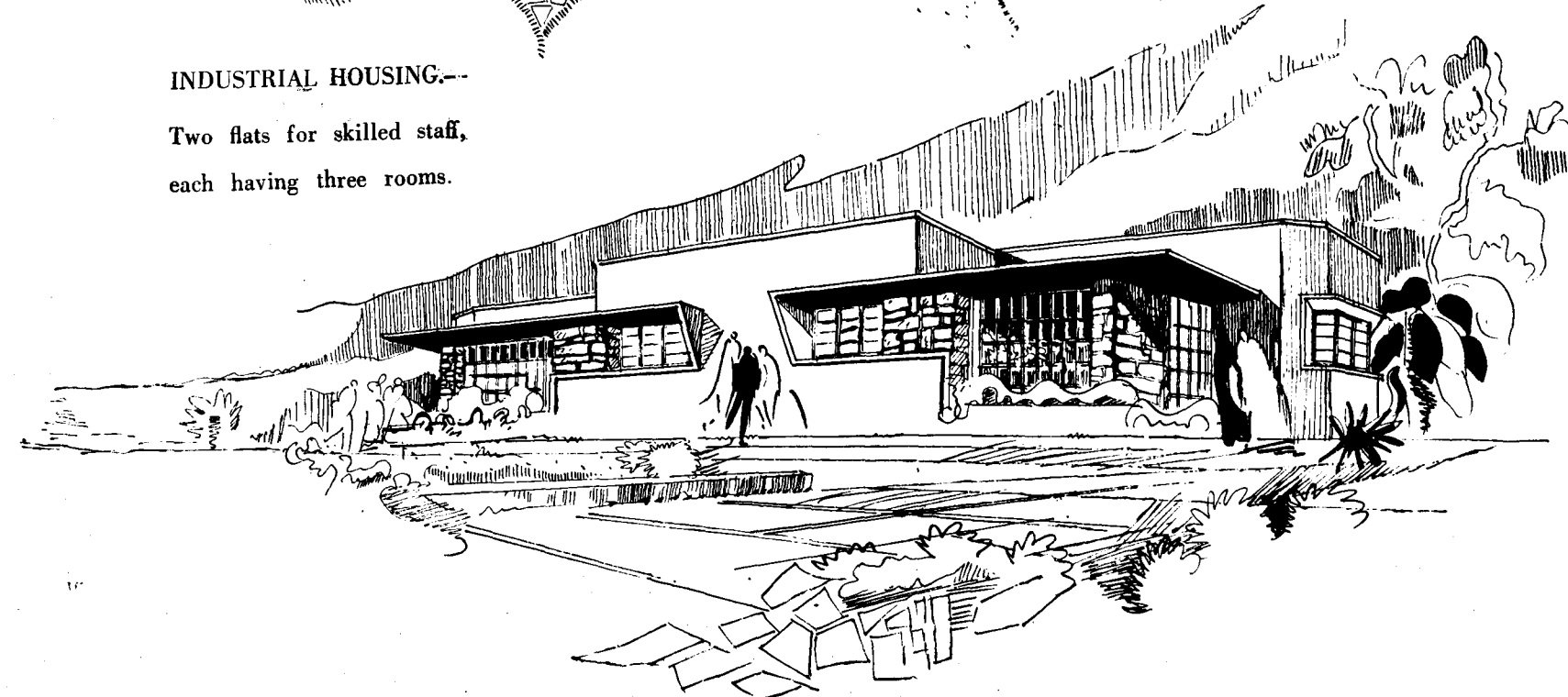


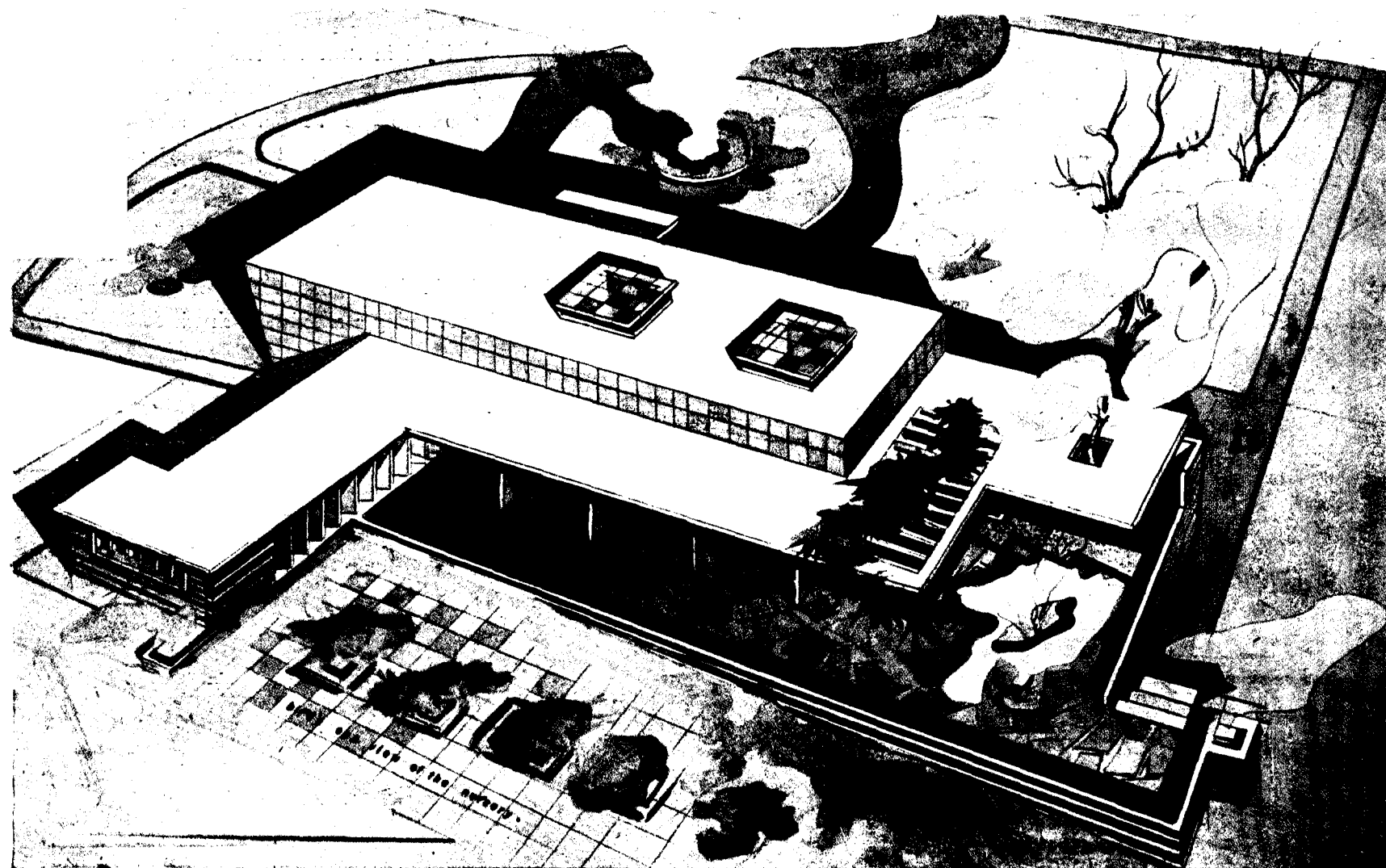
FRONT ELEVATION



INDUSTRIAL HOUSING:—

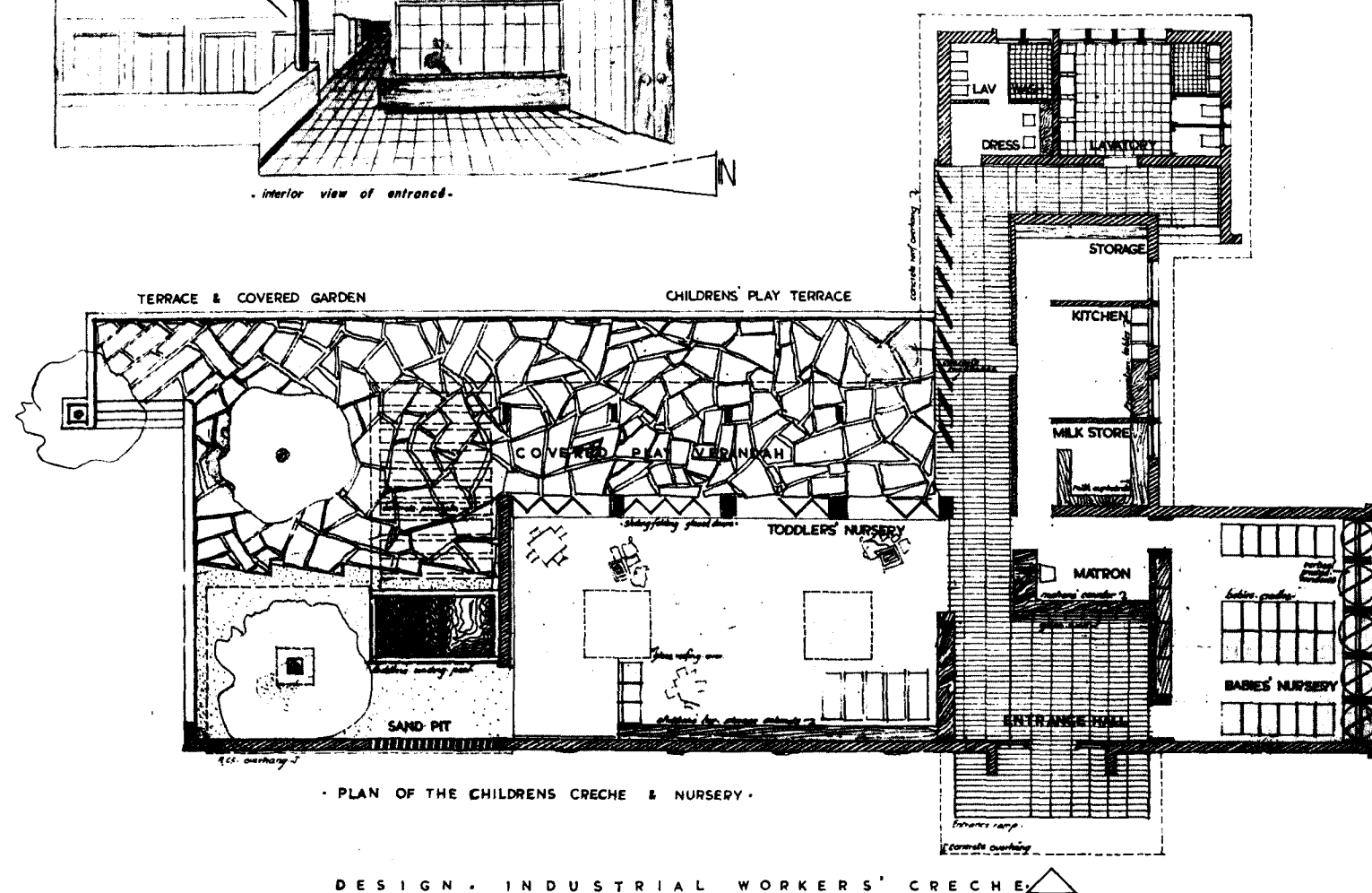
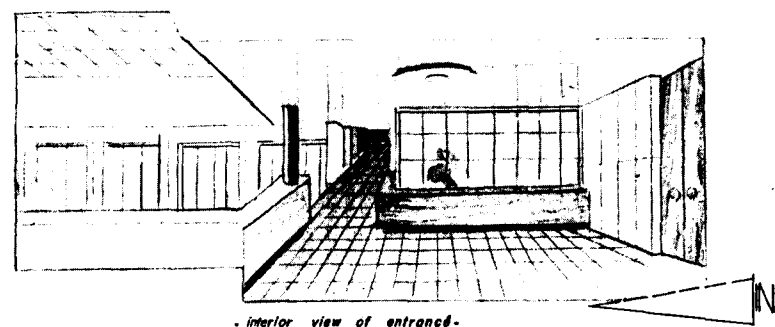
Two flats for skilled staff, each having three rooms.





DESIGN FOR A FACTORY CRECHE

A very good open plan for a type of building which is just beginning to get recognition amongst industrialists and social workers. Note the central placing of the Matron's Room. From here, each wing of the building is easily accessible and supervised by the Matron. The Babies' Nursery adjoins the Matron's Room, facilitating supervision. The kitchen and services are in a separate wing altogether, away from the children.



DESIGN - INDUSTRIAL WORKERS' CRECHE

to give readers a series of possible ideas in the field of architectural service through the medium of a suitable material. It should not for a moment be imagined that any such structure as illustrated could be successfully constructed from these preliminary sketches without the technical help of a competent fully qualified architect. Architects are to buildings and man-made environment what doctors are to health or lawyers to law. Each man is

trained to his specialised field and so is the architect in the practice of architecture. It is surprising, however, that while people are sensible enough to do the obvious thing by consulting a doctor where their health is concerned or a lawyer on a matter of law, they almost invariably think nothing of spending large sums of money on the erection of structures without ever caring to consult a competent architect.

EFFECTS of WAR on the JUTE INDUSTRY

LESSONS OF THE PAST SIXTY YEARS

● SPECIALLY CONTRIBUTED ●

WHEN the Jubilee number of CAPITAL was issued in November, 1938, the approaching preparations for war were already having their effect on world economic conditions and on the jute industry. The decade which has now run its course has seen the full cycle of war and unstable peace. This is perhaps a fitting time to survey the industry as it emerges from this situation and to compare the present position and prospects with those in the somewhat similar situations which have arisen during the last 60 years.

It is significant that in the past the fortunes of the jute industry have been affected to quite an unusual degree by war. The Crimean War, which caused a cessation of flax supplies from Russia, gave jute its first large-scale opportunity. Similarly, the restriction on cotton supplies during the American Civil War provided the chance of replacing cotton containers on a large scale by those made from burlap. The extraordinary demand during the 1914-18 war contributed to the great subsequent development of the Indian jute industry at the expense of Dundee. The economic effects of the last war may, in the long run, turn to be even deeper seated than any of these previous episodes, because it lasted for a longer period and involved a wider area of unsettlement.

DISTURBING FEATURES

The jute industry now presents a combination of features which are disturbing and even alarming. The price of raw jute is roughly four times the average for the years 1920-40. It is in fact higher by far than it has ever been before. There has been a succession of small jute harvests. Stocks of past season's jute now in the cultivator's hands in the mofussil are negligible and stocks held by the mills are probably the lowest ever recorded. The present harvest is estimated to be seriously short as a result of rain damage and other causes. Summed up, the supplies of the essential raw material of the industry are dangerously small.

As regards the mills, a labour award has just been made which will, it is estimated, increase production costs by between Rs. 30 to Rs. 50 per ton. Production has fallen as a result of a number of causes, such as the reduction of hours under the new Factories Acts, coal supplies, etc., and is unlikely to be more than 1,035,000 tons this year. The prices of jute manufactured goods have risen in sympathy with those of the raw material and the markets for jute manufactured goods have, since the end of the war, been rationed far below their needs and forced to pay very high prices. The inevitable reaction has crept in and the search by present or former users of jute manufactured goods for cheaper substitutes made from other materials has been intensified. Altogether, the situation is not one which can give satisfaction. There can have been few periods in the long and chequered career of the industry when the immediate and future prospects appeared more gloomy.

RAW MATERIAL SUPPLIES

The first main problem is the adequacy of the supplies of the raw material on which the jute manufacturing industry is based. Is there, in fact, enough jute being grown in India now, and will enough be grown in the future to meet the total world demand? That demand is made up of the requirements of the Indian mills and also those of the jute manufacturing industries in overseas countries. The need to maintain supplies for the jute mills in this country is, of course, obvious, but the vital necessity of supplying jute for overseas manufacture must also be stressed. There is no quicker way of stimulating the growth of textile materials in substitution for jute than by forcing foreign jute manufacturing industries to seek alternative fibres. On the other hand, there can be no better assurance of the expansion and development of the demand for jute manufactures than the free and plentiful supply of raw jute at reasonable prices to these overseas industries. The question, therefore, is whether the jute crop in this country is likely to attain, on an average, a figure which will meet these global requirements.

This is not a problem which arises out of the immediate shortages of the present year, though that is serious enough in all conscience. It is one which must immediately spring to attention if any study is made of the trends discernible during the last thirty years in the crop statistics of jute. During the decade from 1931-32 to 1940-41, the average acreage under jute for the whole of India was in the region of 2,914,000 acres. These years included the low crop of 1931-32 and the bumper crop of 1940-41, but on

an average a crop of about 84½ lakh bales was obtained. During the decade from 1921-22 to 1930-31, there were similar variations in the annual yield, the lowest crop being 40 lakh bales and the highest 121 lakh bales, but the average of both acreage and yield was remarkably similar to the following decade. The average acreage was approximately 2,923,000 acres under jute while the annual average yield was 85 lakhs. Compared with these figures there has, during the present period since 1941-42, been a steady deficiency in the crop. During the period from 1941-42 to 1948-49, it is estimated that the average annual crop taken has been in the region of 72 lakh bales. In other words, there has been a reduction of approximately 12 lakh bales per annum compared with the average crop of the previous 20 years.

EXPORT DEMAND REVIVES

To some extent, this situation has been masked by the fact that, during the greater part of the war years and since, shortage of shipping space made it necessary to curtail the exports of raw jute to foreign countries for manufacture there and, apart from this, during the war years the main continental European demand was, of course, entirely extinguished. That temporary situation is, it is to be hoped, now over, and India faces a demand for supplies of raw jute from all her previous pre-war markets. A situation such as exists at present, where exports of raw jute are prohibited and the Indian mills face every possibility of having to go on short time in order to economise on their demands for jute, is not a happy one. Doubtless, the immediate crisis could be overcome by the fortunate accident of a heavy crop, as has happened before. What would be more reassuring, however, would be the knowledge that it could be reasonably expected that jute production in India and Pakistan during the next ten years would be maintained at a figure which would meet all reasonable world demands.

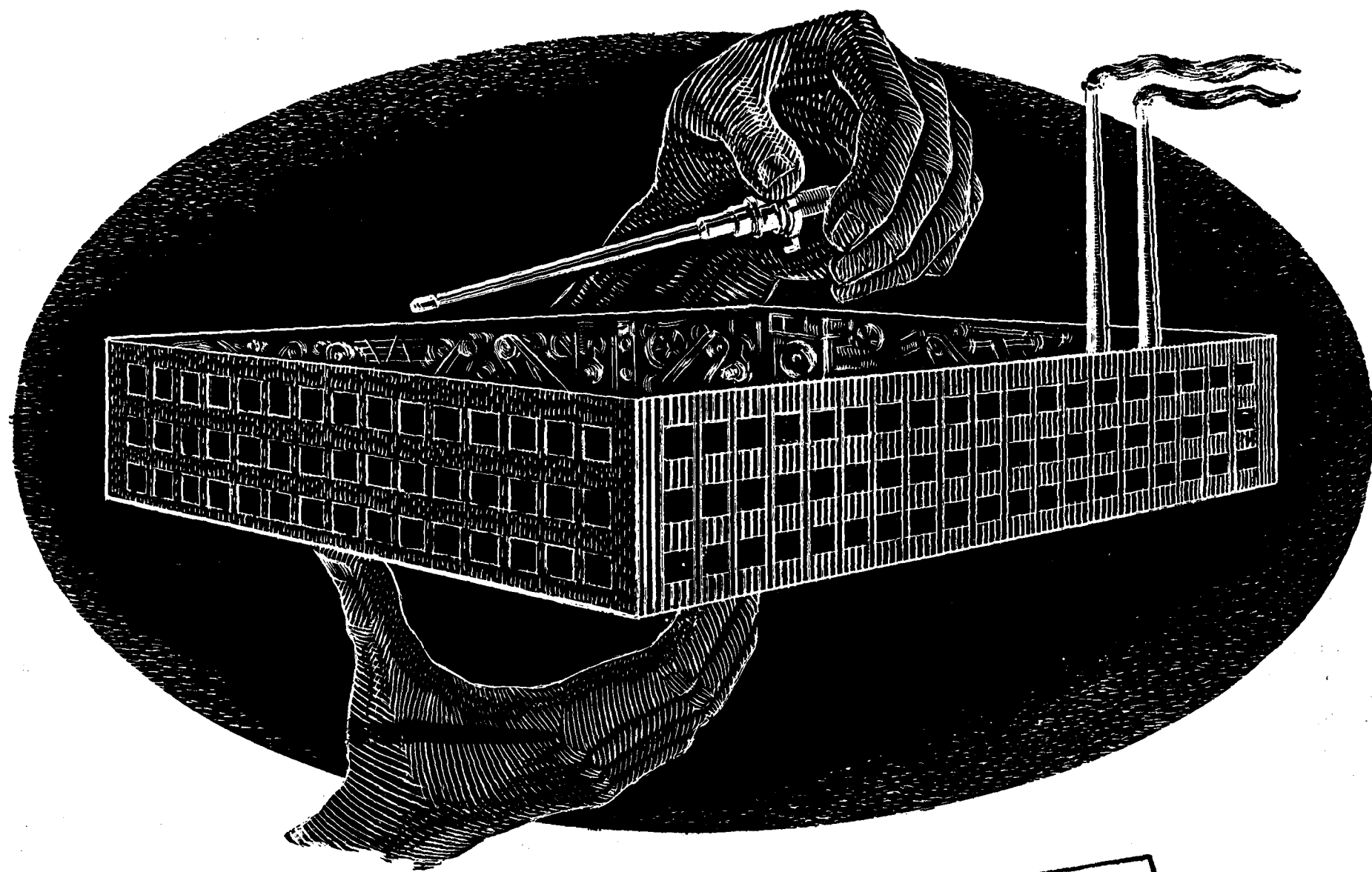
The present situation is not a new one. To some extent similar difficulties were experienced in the years immediately following the 1914-18 war. While, as stated above, the average annual output of the jute crop during the '20s was 85 lakh bales, between 1921 and 1925 there were several years of very serious shortfalls in production. In 1921-22 the yield was only 40 lakh bales; in 1922-23 54 lakh bales; in 1923-24 84 lakh bales; and in 1924-25 41 lakh bales, or an average of 55 lakh bales during these four years. Thereafter, however, the crops showed a spectacular increase, partly as the result of great increases in the acreage under jute and also following a series of favourable harvests. In four years between 1925 and 1931 the crop was over 100 lakh bales and the average for the period 1925-26 to 1930-31 was 104 lakhs. Compared with these figures, the present situation is less disturbing.

THREE FACTORS

There are three factors which might account for this failure of the jute crop to conform to previous patterns. In the first place, the political division of the country and, in particular, the separation of the main raw jute producing areas from the manufacturing centre might conceivably cause a disturbance between demand and supply which might affect the cultivation of jute. The channels of communication in every sense have, of course, been seriously affected by partition and the full extent to which this will go has not yet been experienced. On the other hand, the agricultural population of East Bengal has not been seriously disturbed by the political consequences, and there is no reason why, in the districts in which jute is cultivated on a large scale, they should, because of this, have altered their attitude to it as the main cash crop. In the second place, the extent of the acreage permissible under jute is now officially controlled both in East and West Bengal and there is some reason to believe that the machinery of control is now more efficient than it was when it was first introduced. During a large part of World



EQUIPMENT FOR THE TEXTILE INDUSTRY



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War II, the cultivator has been constantly exhorted to turn from cash to food crops, and the Regulation Acts have been used to supplement this propaganda. However, it is doubtful if this official control would in fact be of much efficacy if it were opposed to the direction of the main economic influences governing jute production, and it is in these that the main explanation for the shortfall in the crop must be sought.

Jute is a commercial crop and is often the only cash crop which the agriculturist cultivates. On the other hand, all ryots grow rice for their own family consumption and also to some extent for sale or exchange. The result of this is that the relative areas of jute and rice grown tend to vary with the relationship between the market prices of the two commodities. It is undoubtedly to this relationship that a considerable part of the reasons for the decline in jute production can be traced. Normally, the price of jute is considerably above that of paddy, varying in normal years between 130 and 170 per cent. over the price of the latter. During the war, the market price for rice in the growing areas was considerably higher than that for jute, and this must have led to a diversion of acreage to rice production at the expense of jute. The rise in prices which has taken place since should have restored jute to its normal position and, other things being equal, it would seem that the time has almost come when ordinary economic forces should produce a swing towards jute cultivation which will at least make up for the existing shortfall and perhaps enable a return to be made to normal conditions of supply.

EFFECT ON THE INDUSTRY

From the point of view of the Indian industry there are, however, three unsatisfactory aspects of the existing situation. In the first place, the material supply of the industry should not be at the mercy of economic forces to such an extent that it is at times in jeopardy. In the second place, from the point of view of overall Indian food production, it is unsatisfactory that land growing rice should be diverted to jute production. Finally, it is a serious weakness that between two-thirds and three-quarters of the India crop should come from what is now, no matter how close the economic ties between the two areas, a foreign territory. Taking everything into consideration, it is clear that there is a strong case for the expansion of the area under jute cultivation, that it is most desirable that such expansion should take place within the Indian Dominion and, finally, that if at all possible it should be extended in areas not now cultivated.

This will require a highly organised effort and it is of the utmost importance that all concerned in the jute industry, the Central Government, the provinces, the jute industry itself and particularly the Indian Central Jute Committee, within whose sphere this matter peculiarly lies, should undertake this necessity as a joint enterprise. On the other hand, the need for co-operation with Pakistan on this question is of the utmost importance. The economic and social effects of too large an expansion in jute acreage would be disastrous in both countries.

JUTE MILLS' DEVELOPMENT

So far as the jute mill industry is concerned, the main development during the period of 60 years since CAPITAL was started was the steady advance of the world demand for jute manufactured goods and the increase in the share of this which fell to the Indian industry. To these two factors is to be ascribed the astonishing growth of the Indian jute manufacturing industry which continued right up till the late '20s. In 1888 there were 26 mills in India with a total number of 7,819 looms. By 1908 the number of mills had increased to 56 with 29,000 looms. In 1918 it was 76 mills with 40,000 looms and it is now 112 mills with 68,452 looms. This presents a picture of almost unparalleled growth in a comparatively short time and, before the war, it might have been confidently assumed that, even though the total world demand for jute was advancing less rapidly than during the boom years, the cheapness of manufacturing costs in this country would ensure a growing share in the total world manufactured jute trade. After the many and sweeping economic changes which have occurred during the last ten years, that assumption may require radical reconsideration.

Apart from developments internal to the jute industry, there are many factors arising out of the general Indian economic situation which must affect the position of the jute trade, *vis-a-vis* other countries with jute manufacturing interests. Of these, the most outstanding is the alteration in the general level of prices in this country. India is included in that group of countries which, while not the victims of an uncontrolled inflation, are still facing a position in which the whole structure of costs has been distorted by price increases. It is only now that the full direct and indirect effects can be completely estimated. The increase in the price of jute is, of course, something common to all industrial consumers of that commodity, whether in this or other countries, and consequently that is a factor which has little relation to comparative manufacturing costs. Other elements of production expenses, such as stores, coal, raw materials, are directly affected by the general increase in prices. There has also been a steady rise throughout the war in labour costs. In sum, these increases represent a formidable total and constitute what may well be a revolutionary change in comparative costs as between this country and others engaged in the production of jute.

In this, as in other industries, there is, of course, great difficulty in obtain-

ing any accurate information on this important problem, mainly because variations in manufacturing costs are very considerable between different units in the industry. It is believed, however, that operating costs in mills in this country are now either equal to or somewhat in excess of those now existing in the United Kingdom. The effects of this on the jute industry may be startling, not only in relation to competition with the United Kingdom and the other jute manufacturing countries, but also in its repercussions upon the position of sacking and hessian in comparison with other textiles.

OVERSEAS METHODS

A great deal of very valuable comparative material has been provided on this matter by the Report of the Working Party on the jute industry in the United Kingdom and an examination of this is of great interest. Generally speaking, the jute industry is one in which technical progress in equipment has not been revolutionary. Weaving machinery has made little advance over that used in the last century, though the experiments now being made with the circular loom may prove to be a major development. There has, however, been a considerable improvement in the machinery used in the spinning section, and though not radical, important savings in labour required and in productive efficiency have been secured. Although later than America and some continental countries in starting to re-equip, the United Kingdom jute industry has made very great progress and a substantial proportion of the mills are already, or are in process of, installing new plant. During the world depression some firms were driven out of business, but others though not unaffected had sufficient confidence in the future to instal new spinning plant. New machines were extensively installed by the more progressive firms after 1930, and by the beginning of the last war 39 per cent. of the spindles in the industry were of new types which require less labour than the old types. When present reconversion plans are completed it is estimated that no less than 58 per cent. of the spindles will be of improved design.

The results of this have been a considerable saving in labour costs and efficiency of a greatly improved nature. In 1930, when the raw jute cut-up was 137,000 tons the number of labourers employed in jute spinning and weaving was 28,700, while in 1937 when the raw jute cut-up was 179,000 tons the number employed had fallen to 24,200. During the recent war the number of workers fell to a very low figure and in June, 1947, had recovered to about 15,800. Production was estimated then at 99,000 tons of yarn, of which cloth production took up about 59,000 tons. It is believed that when re-equipment has taken place it will be possible to increase this figure to 160,000 tons of yarn, and 86,700 tons of cloth, respectively, with an increase of only 1,500 to the present labour force. In other words, a labour force of about 53 per cent. of employment in 1936 will achieve 94 per cent. and 81 per cent. of the 1936 yarn and cloth output.

HOW INDIA STANDS

All this represents substantial technological advance, and it is a situation which unfortunately finds no parallel in the Indian jute industry. Although India went through the depression and the crisis of over production, it was never so prolonged or so severe as in Britain and the urgent need to re-equip was not so evident. Labour continued inefficient but cheap till the middle of the war. A few firms had the foresight to instal the new machinery, particularly high speed spinning frames, but the majority let things slide. Moreover, as everywhere else, there was a very severe reduction in labour efficiency during the war. In order to maintain production many firms increased their labour complement as far as possible, and the result is that the total labour employed has increased rather than gone down. Meanwhile, labour costs were slowly but surely rising and the award of the Jute Textile Tribunal has finally put the seal on that process by awarding an increase in total remuneration which means that the lowest paid unskilled worker is getting between four and a half and five times what he did before the war and the industry's total wage bill has increased proportionately.

It is clear that if this situation is compared with what has been the rule during the last sixty years, a change has occurred in the competitive position of the Indian jute industry which requires careful consideration and firm action. On the whole, the Indian industry has made up for deficiencies in operating efficiency by the advantage of lower wage bills. If that is unlikely to recur, more and more attention must be given to the improvement of efficiency, not only by the installation of more modern machinery but by an examination of every possible means of reducing costs and effecting economies. Previously neither of these would have presented serious difficulties. Unfortunately, it must now be carried out at a time when new equipment is difficult to obtain, when its price has increased enormously, and when new and difficult problems of labour relations are involved in making these changes. The first necessity is to take up the slack at present existing and to reduce the numbers of labour employed to those strictly necessary with existing equipment. The second is to replace a large proportion of the existing spinning machinery by more up-to-date systems. Finally, there is the need which the high cost of new equipment brings out, to adopt a considerable measure of double-shift working.

It is to be anticipated that these alterations will be the subject of considerable opposition from labour. In this, as in other organised Indian industries, labour relations are becoming a major problem and the need

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for a co-operative attitude to replace one which in many cases can be described only as sullenly unhelpful if not actively antagonistic, is vital. At present the situation is one of peculiar difficulty. Aided by legislation which makes it possible to refer the most minor trade dispute to tribunals from whose decisions there is no appeal, assisted by an official attitude which more often than not seems violently anti-employer in its actions—whatever its professions may be—the influence and mischiefmaking powers of the labour leader have been greatly increased. Yet that increase in authority has seen no sign of developing responsibility or knowledge. The average labour leader is still separated by class differences and lack of practical knowledge from the labour he presumes to lead, and his only means of establishing contact is in the exploitation of real or imagined grievances. The difficulties of bringing about extensive technological changes, almost certainly involving the displacement of labour on a large scale, in such a situation are almost intolerable. Yet to postpone them involves serious dangers to the industry and, from the point of view of the individual worker, it is only by measures to increase individual outputs by the greater association of machinery with work that individual earnings can be permanently raised. Fundamentally what is required is the disappearance of the outlook which was willing to tolerate low wages and poor efficiency provided large numbers were employed, and its replacement by an attitude which regards the increase in individual efficiency and improvement of individual wages and conditions of work as most important. Employers in this country have in the past not been altogether guiltless in accepting the first of these, but it is essential now that both sides realise that in this export industry radical changes in outlook are necessary if great damage is not to be done. Technological change is vital, and it is the duty of all who have any influence with labour to assist in emphasising its immediate importance and its ultimate benefits.

SUPPLY AND DEMAND

Technological improvement will not, however, save the situation should there be any large reduction in the world's demand for jute goods. There are few subjects connected with the jute trade which, even throughout the war years, have been the subject of so much anxious comment and indeed apprehension. Wartime restrictions on the ordinary uses of jute goods, the slowness with which trade resumed normal trends and the rigid system of Government export licensing thereafter, followed by the rapid post-war increase in prices, have produced a situation in which it is difficult to avoid the conclusion that the jute trade is confronted with what amounts to a crisis in its foreign markets. It is easy to compare the new paper bags with the synthetic dyes which destroyed the Indian indigo industry in the course of a few years, and to liken the present position of jute with that of other textiles whose restricted use in the Crimean War gave jute its first great opportunity. The gravity of the present and immediate future is recognised. But there are some solid facts connected with the supply and demand for jute which perhaps only the longer perspective given by a survey of the history of the industry can emphasise sufficiently and which give good assurance that, if the jute industry puts its own house in order, its position as the second industrial textile in international trade may remain relatively unchallenged.

Jute markets are the child of the modern world in one of its most characteristic phases—the great development of overseas trade in raw materials and particularly agricultural products which was the most striking factor in the economic history of the second half of the nineteenth century. Western Europe was no longer self-sufficient in foodstuffs and for the first time large quantities of grain, followed by other commodities, began to be moved in bulk over the new railway systems in North and South America and then shipped by steamer to European ports. This was something new in the annals of international trade, which had been previously mainly an exchange of manufactured goods or commodities such as tea or spices, which had so high an intrinsic value that they could bear the cost of an expensive packing. Now the new trade was a cheap commodity carried in bulk over distances, often great, by varied means of transportation. There was a need for a new container to replace the wooden barrels of a previous age, which would in the first place be cheap, secondly, economical in space, and thirdly, up to any amount of hard work. The bag made of jute cloth was the answer, and the phenomenal increase in its consumption ever since has demonstrated how satisfactory it has been found for its purpose. Bearing this in mind, one could say that the continuance of jute in its present position depends essentially in the maintenance of international trading conditions which enable and require the exchange of large quantities of food and raw materials; and that beyond that the demand for jute will depend, first, on the total level of production of raw materials and commodities, particularly food, second, on population growths, and finally, on the absence of any new synthetic material with qualities similar to jute which could be produced at the same price.

FIGHT AGAINST SUBSTITUTES

As regards the maintenance of production and international trade, it seems reasonable now to expect that the former will increase steadily and the latter will be maintained. War damage in most countries is being repaired at an astonishing rate, shortages of consumer goods, stocks, and fixed capital require current output to be maintained. Before the war this was happening inside national boundaries, but at present through sheer necessity and the pressure of want in many countries which have suffered either directly or

indirectly through the war, it is marked by the large-scale international movement of goods. This is particularly true of food. Pessimists amongst us say that a world food shortage is now chronic and that the present food movements, which would have seemed unnatural ten years ago, will have to be maintained. However accurate that prophecy will be in the long run, it is certain that for some considerable time the planned disposal of food surpluses to countries such as India, which are unlikely to attain self-sufficiency for many years, will continue. Industrial production will doubtless be subject to the fluctuations which characterised it during the last three decades. Improved methods of credit control, demands for both consumer and capital goods to make up for the shortages piled up during the war, and the development of Africa and South-east Asia may, however, prevent depression from obtaining the same devastating grip on the economy which happened in 1929. Populations continue to grow and, though this may appear to have a somewhat remote bearing on the subject, it is directly connected. The new areas of swelling populations are mainly in the primarily agricultural countries. More mouths to feed means more production, and in present circumstances probably larger overseas movements of food. Though more sophisticated parts of the world may succumb to the lure of potatoes packed in paper bags or cellophane, the numbers of people for whom the jute bag is the only satisfactory method of storing and transporting their agricultural products is probably steadily increasing. In other words, the world demand for jute products is really founded on the basic need of many millions of people, mostly agriculturalists, for a cheap and satisfactory container, and nothing which has happened or is likely to happen will modify that demand in the foreseeable future.

Much has been written about substitutes for jute, but the real nature of the threat which they make to the jute markets has not perhaps been sufficiently appreciated. Jute substitutes are essentially a measure of the demand for jute goods and an indication that in certain markets, usually specialised and localised, that demand is not being met satisfactorily. The loss which they might cause to the jute manufacturing industry is the disappearance of local demands here and there. The danger of this marginal competition is that favourable developments, such as the growth of agricultural production and of population, which should naturally cause an increase in the total demand for jute goods, might be offset by losses elsewhere. It must be recognised that a great part of this is inevitable. Changes in custom, technical developments in packing, local interest in the development of the agricultural or manufacturing processes required, must give new materials or methods advantages in localised markets or specialised trades. And even if the general position of jute is not seriously threatened, they should be fought strenuously. It is by its capacity to meet new demands and needs that the jute manufacturing industry can remain alert, efficient and economic in comparison with its competitors. Part of this is the responsibility of the individual mill company, but part of it is clearly a task for organised effort by the industry, possibly with Government assistance and backing.

THE PROBLEMS AHEAD

There are serious complaints, for example, that the industry is out of touch with the developing needs of its consumers and that the methods of selling involve such a divorce between manufacturer and user that absence of contact is inevitable. Similarly, it is doubtful if the many varied types of trade and industry which might develop uses for jute are sufficiently informed of its potentialities and of the great amount of development work which has been done on it during the last ten years. It is understood that the industry now has this matter under consideration, with particular reference to the American and Canadian markets, but one has only to compare the magnificent work done by the Woollen Trade in public relations with the position of the jute industry to be painfully aware of the deficiencies of the latter. Public relations form a part of the equipment of every organised industry to-day, and it is surprising that the jute industry, which is so often the victim of irresponsible or ill-informed criticism, should not have taken steps to develop what is otherwise a deficiency in its organisation.

It is clear that all that has been said above about the demand for jute and the position of substitutes is conditioned to a greater or less extent by the level of prices of both raw and manufactured jute. It is equally certain that present prices are too high and are having a restricting effect on markets. But it is really too early to attempt to make any assessment of this in a situation still essentially fluid. Jute prices are out of line with world levels, partly because of causes peculiar to the trade and partly in sympathy with general Indian conditions. To the extent that the latter is the dominating factor, adjustment must come either by a movement of world prices into line with those prevailing in this country or by action in this country to reduce Indian prices.

The history of the jute industry over the last sixty years shows a long period of spectacular development and then a long period of consolidation. It seems certain now that, as in so many other large-scale industries which are also semi-monopolies, there has been a tendency for the rate of technical progress to be slow and the results of the depression in introducing economies in production to make the latter less efficient. The industry has now a great task before it, that of reorganising and re-equipping in order to bring back those advantages of productive economy which before characterised it. This is a problem of no mean dimensions, and to accomplish it will need every assistance from all those associated with it.

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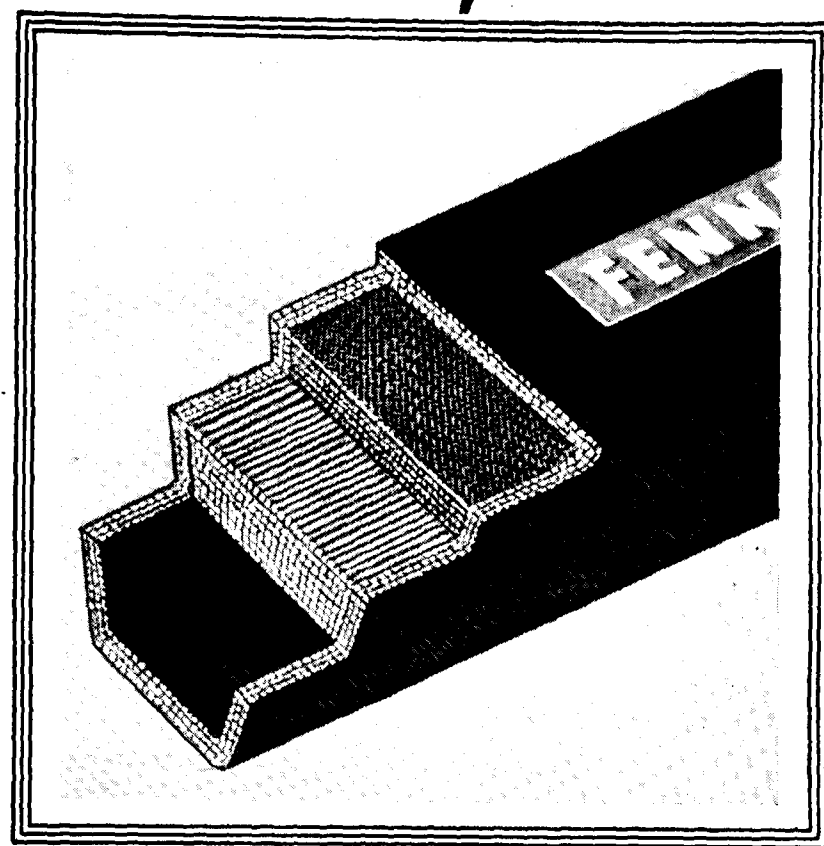
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PROGRESS OF JUTE SUBSTITUTES

COMPETITIVE POSITION IN POST-WAR PERIOD

(By D. C. SARKAR, M.A.)

DURING the war exports of jute and jute goods were curtailed by shipping difficulties, but the limited supplies were distributed among different countries by the Combined Raw Materials Board according to war needs. As the supply of hard fibres was even more difficult, part of the available jute in some countries was diverted to cordage uses. The net available supply of jute and jute goods was, again, mostly used as bags and little or nothing went into the piecegoods trade. There was thus a wide gap between the demand for and the supply of jute and jute goods for many years. Agricultural and raw material producing countries naturally suffered most. Under these circumstances Cotton, Paper and inferior vegetable fibres, whose supplies were less limited or could be raised locally without much difficulty, were drawn upon in most countries to bridge the gap. The urgencies of the situation were such that little consideration was paid to cost or the quality of the substitutes.

While scarcity was the keynote of the wartime situation, rising prices have been the main complicating factor during the post-war period. The allocations of the Combined Raw Materials Board were abolished early in February, 1946; but the Government of India's quantitative and destination quotas were introduced about the same time and continue to this date. Official price ceilings for jute and jute goods in the U.S.A., and control over the internal and export prices of the same in India were, however, done away with towards the end of that year, with the result that prices of jute and jute goods rose sharply. Jute prices have maintained their rising tendency ever since. The enhancement of export duties by the Government of India, and the imposition of new duties by the Pakistan Government have served to accentuate rising tendency.

FOUR MAIN SUBSTITUTES

Briefly, the position now is that the supply of jute and jute goods lags behind the world demand for them. The lag is greater in the case of raw jute. But, in either case, rising prices are at present the dominating factor and threaten to stand in the way of adjustment between demand and supply at a high level of equilibrium. Current high prices also tend to keep jute goods out of certain markets which have been occupied by substitute materials during the long period of shortages. The nature and extent of such substitution define the potential markets for jute in the short period. It is, therefore, most important to know the competitive position of the several jute substitutes. The latter may be conveniently grouped and studied under four categories, namely: (1) synthetic fibres; (2) inferior vegetable fibres; (3) cotton and (4) paper.

Reports on the working of the synthetic fibres industry within the British zone of Germany show that Zell jute and other synthetic products which were actually used as jute substitutes in Germany during the war were superior to but costlier than jute. In view of the fact that less costly substitutes like cotton, paper, etc., are now available in sufficient quantities, it does not seem likely that Germany's performance will be repeated in any other country in normal times.

INFERIOR VEGETABLE FIBRES

The properties of some of the inferior vegetable fibres have come to be better appreciated during the last few years, and it is now possible to form a judgment about their future possibilities.

(a) Phormium tenax, which in pre-war days was considered by the Government of New Zealand to be a worthy local substitute for jute for purposes of wool packing, does not seem to justify its earlier hopes. During the three years from 1939-40 to 1942-43 the domestic wool pack industry produced slightly more than 1/5th of New Zealand's total requirements. As a matter of fact the cultivation of Phormium tenax has not expanded since 1938-39. The inability to exploit the opportunity provided by wartime shortages of jute goods raises a suspicion that the original choice was not happy. Recently, success has been reported of an experimental cross breeding of a soft mountain variety of Phormium plant with the ordinary hard variety. But this is unlikely to make much difference so far as commercial prospects of the fibre are concerned.

(b) Similarly, Roselle was depended upon by the pre-war Government of the Netherlands Indies to provide a complete substitute for jute for

purposes of sugar bags. Progress in cultivation of roselle and manufacture of bags from its fibre was, however, halted by war and no information is at present available regarding either the condition of roselle plantations or the attitude of the Government towards it.

(c) True hemp has acquired a special prominence in some countries of eastern and southern Europe. This is due to the fact that there has been a continuing shortage of hard fibres as well as of jute in that region for many years. Being a soft fibre whose main use in normal times is as strings and twines, true hemp has been pressed into emergency service both as cordage and as sacks. For example Italy, famous for hempen strings, has been latterly using green hemp and other domestic fibres in her jute mills to produce bags and carpets. This situation is essentially due to shortage of jute, and has been unaccompanied by any kind of technical developments. It may, therefore, be safely predicted that the Italian jute industry will revert to the use of jute as soon as that raw material is available in sufficient quantity.

(d) Attempts to use linseed fibre in the making of sacks has lately been reported from Russia and Argentina. Expert opinion, however, suggests that the proper use of that fibre should be in twines and not in sacks. Flax tow, again, has been experimented with in Argentina and grain sacks have been actually made from that material. The feasibility of this latter proposition is bound up with the economy of fibre flax production, which has been thrown more and more on the defensive by the superior efficiency of rayon production. On *a priori* grounds, therefore, this new use of flax tow has no large significance.

(e) Mixed bags of jute and esparto grass were made in Spain to meet wartime shortages of jute and sacks in that country are even now so made. Esparto grass is grown on a commercial scale in North Africa, mainly for the paper industry and a small new demand from Spain's jute mills may not in the long run seriously affect its supply or price. But, as in the case of true hemp, it is still doubtful if, apart from deliberate choice, esparto grass will be able to maintain its ground against jute, if and when that material becomes available at a reasonable price.

(f) The two fibres which have better claim upon our attention than any of the fibres mentioned so far are *Urena lobata* and *Hibiscus cannabinus*. Different varieties of plants bearing these two fibres have been discovered in many parts of the world during and since the war. Both fibres were really known long before the war and both are definitely inferior to jute. If, however, they are cultivated with care they may yield fibres which bear comparison with the lower grades of jute which are mostly used in the making of sacks. A small quantity of Urena fibre is annually exported from the Congo to the U.S.A. and factories for making sacks from this fibre have from time to time been projected in the Congo, Cuba and elsewhere.

LABOUR AND CULTIVATION

This question of careful cultivation raises a number of problems. It is easier to discover a new fibre and demonstrate its physical properties than to grow it successfully as a commercial crop. The man-power requirements of fibre culture are perhaps greater than those of cultivation of any other crop. Any new commercial fibre, if it is to compete with jute, must therefore have one or other of the following combinations of advantages, namely, (a) favourable natural conditions of production and cheap labour, (b) capital, intensive technique and large-scale organisation. Since skilled agricultural labour is nowhere as cheap as in India, production of a competitive fibre crop on scattered individual holdings in any other country seems to have little chance of success. The alternative, mechanised cultivation and mechanical extraction of fibre, has to reckon with the fact that jute prices have undergone great fluctuations in the past and current high prices, being largely due to a fortuitous combination of circumstances, may also prove to be temporary. Such conditions offer little basis for investment of private capital in the cultivation of substitute vegetable fibres on a large scale.

The experience of growing jute itself in Brazil and Argentina would seem to confirm these apprehensions. In the former country an attempt has been made to grow jute on scattered individual holdings since 1937. But production of jute in Brazil having expanded remarkably for some years is now on the decline owing to inability to solve problems of labour, capital,

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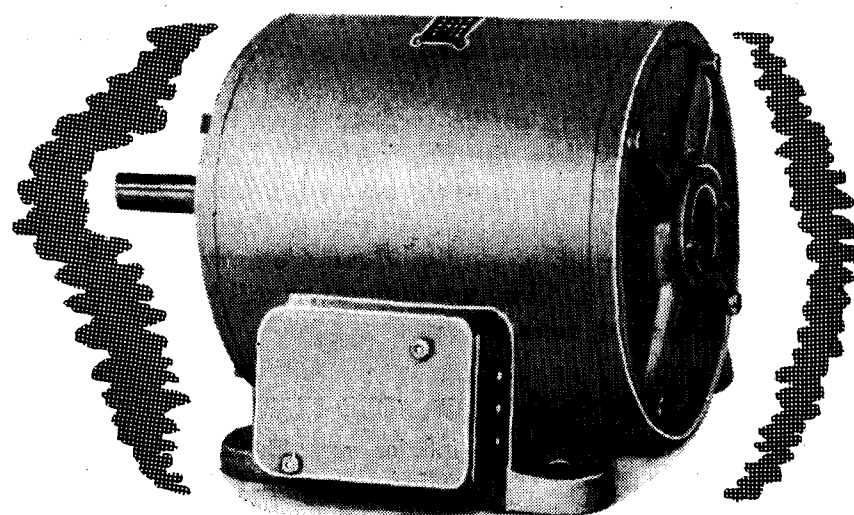
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transport, etc. In the neighbouring country of Argentina mechanical methods have been applied to all stages of production and processing, except retting; but the results there also do not so far appear to be very encouraging. The success of East African sisal production, which is perhaps the only exception in the field of rival fibre production, is explained by the fact that sisal, as a fibre, is superior to Henequen which it aspires to replace in the world market, and, as a crop, is amenable to machine process at all stages from field to factory.

FINANCIAL PROBLEMS

From the above account it appears that the growing of fibres which claim to be substitutes for jute would be hardly feasible unless the State takes upon itself the whole responsibility, namely, that of either owning and managing or subsidising all incidental agricultural operations. No State, however, will be willing to undertake such a task unless it is sure that fibre production will be comparatively less inefficient than utilisation of resources in other ways; international traffic in commodities is determined not by absolute costs of any particular commodity in different countries, but by ratios of comparative costs of different commodities of each country. Wheat and other food crops have indeed been grown during the present century in certain countries which had always imported them before. But that has been done out of a sense that the loss incurred in such uneconomic activity would ultimately be less than the starvation and death which might follow in the event of a major war cutting off world supplies of those commodities. Similar action may be justified in the case of jute or any substitute fibre also if it can be looked upon as a vital war material; "defence is more important than opulence." It does not, however, seem likely that jute fibre or its vegetable substitutes will be considered by any country in the near future to be as important as staple food.

The enthusiasm evoked by the subject of jute substitutes is often due to failure to appreciate the full implications of a policy of raising a rival supply of jute or some other fibre. The recent declaration by the Argentine Government that the growing of jute and other fibres of national interest is to be encouraged, with a view to national self-sufficiency in regard to packing materials, is a case in point. Jute production in that country is still in an experimental stage and the annual output is very small. The only other fibre which is grown to some advantage is cotton, but Argentina's share of the world's total output of cotton is about 1 per cent. only. The steps which the Government of South Africa have been taking to foster the cultivation of Hibiscus and other fibres and manufacture of bags from them again afford a nice example of how to make a virtue of a necessity. Before the war India supplied 90 per cent. of the sack requirements of South Africa, and sacks then constituted 85 per cent. of that country's jute imports; during the war practically all sacks were obtained from India. But as soon as the supply was cut off by India for political reasons the Government of South Africa came out with guarantees and subsidies for the production of local fibres and manufacture of bags from them. The interest shown by the colonial government of the Belgian Congo in the cultivation of Urena (Congo jute) fibre has been by comparison, more direct and consistent. Even so, the results after the efforts of many years can hardly be pronounced an unqualified success. It is clear from all this evidence that, whatever the present hardships of the users of jute bags, the long run solution of the problem which we are considering is unlikely to be found in bags of inferior vegetable fibres.

COTTON AND PAPER

We may now pass on to the consideration of cotton and paper, the two most formidable adversaries of jute. Cotton has always had considerable bag uses, though the ascendancy of jute bags and packs during the present century tended for a time to obliterate that fact. Cotton's greater use as an apparel fibre is also partly responsible for this misapprehension. The competition of cotton with jute has, however, been greatly intensified since 1937; in 1944, 1,035 million yards of cotton fabric were used in the manufacture of sacks for agricultural purposes in U.S.A. against 613 million yards of hessian. Also large quantities of cotton cloth were used during the war period as bale covers for raw cotton, and in the linoleum and carpet industries. The circumstances which favoured such competition were (a) cotton's own chronic over-supply during the thirties; (b) fluctuations in the relative prices of jute and cotton cloth, which considerably narrowed the margin between the two during the same period; (c) the subsidy granted by the Government of U.S.A. on the making of Osnaburg bale covers for raw cotton; and (d) the curtailment of shipments of jute goods during the war.

The world cotton output during the 1946-47 season, about 21.5 million bales, represents nearly four-fifths of the estimated world mill consumption of 28 million bales. The estimated cotton crop in the U.S.A. for the year 1947-48 is 11.5 million bales which compares with 12.7 million bales, the average for 1934-38 period. The demand and supply position makes the current prices of cotton high; in fact, cotton prices are now higher in relation to prices of both jute and paper than before the war. Consequently, the intensity of cotton's competition has lessened during the post-war period.

Though paper bags had made some headway in fertilizers, flour and

other trades even before the war, its greatest gains have been registered since. Shortages of shipments of jute goods during and since the war left large parts of the bag market, and practically all the requirements of the piecegoods trade, to be supplied by substitute materials, among which paper has turned out to be the cheapest and most successful. Considerable improvements were made in the material of paper bags and methods of paper packaging under the initiative of the U.S. Army authorities, and these have now found their way to civilian uses. Reinforced Kraft, Multiwall and Wet strength paper are not only good enough for all small and medium bag purposes but can withstand fairly heavy strain. The number of commodities handled by all sorts of paper bags now is about 300; Multiwall paper bags alone have been carrying double the number of commodities they carried before the war. According to figures cited by the officials of the Commerce Department, Government of U.S.A., 550,000 tons of heavy shipping paper were produced in that country in 1946 against 251,000 tons in 1942. Open-mesh paper bags made from twisted paper yarn are being used in sizes up to 100 lbs. for potatoes, onions and many other agricultural products. Paper wrappings are now the rule in cordage and twine, textile piecegoods, and the meat packaging industries in the U.S.A. Increase in the use of laminated paper bags and of twisted paper (Kraft Cord) backing for carpets and rugs is also reported. Naturally, the wide use of paper bags is at present confined to the main paper producing countries, viz., Canada, U.S.A. and Sweden. But other countries are also gradually becoming aware of their possibilities. Sometime ago Professor J. B. Speakman of Leeds University recommended to the South African Wool Industry the use of paper packs as a substitute for jute packs. An English paper-making firm, Thomas Owen & Company, is reported to be planning to establish two paper bag factories in Australia. The following table shows the quantities of cotton fabric, hessian and sacking paper used in bags in U.S.A.

Table I

Hessian, cotton-fabric and shipping sack paper: Consumption in United States bag factories, 1939-1947

Year	Cotton fabric Quantity (million yds.)	Hessian Quantity (million yds.)	Shipping sack Paper Quantity (thousand tons)
1939	816	674	201
1940	890	601	195
1941	927	620	270
1942	1,183	306	251
1943	1,263	393	315
1944	1,033	614	392
1945	959	826	424
1946	702	897	550
1947	...	...	571

TREND AWAY FROM COTTON AND JUTE

It will be seen from the above Table that between 1939 and 1943 the consumption of hessian bags in U.S.A. decreased by 42 per cent. but that of cotton and paper bags has increased by 55 per cent. and 57 per cent. respectively. Jute and paper bag consumption has, however, increased appreciably since 1944 but cotton bag consumption has steadily declined since that year. In other words, while the gains and losses of cotton and jute respectively are wartime phenomena the advances of paper have another significance. As regards particular industries it may be noted that shipments of cement in paper bags in the U.S.A. rose from 10 per cent. in 1925 to 40 per cent. in 1941; during the same period shipments in cotton bags in the same trade dropped from 84 per cent. to a little less than 29 per cent. Again, in the fertilizers trade jute bags carried 98 per cent. of the shipments in 1928 but by 1943 paper bags carried 43 per cent. and the trend was reported to be still towards paper and away from jute bags.

Available trade reports suggest that, in the recovery of original markets, jute goods have been meeting with less opposition from cotton than from paper. Prices of cotton fabrics in the U.S.A. were allowed under O.P.A. control to rise in sympathy with the rising prices of other commodities, but prices of jute goods remained fairly steady at a lower level under Indian control up to October, 1946. The subsequent rise in the price of jute goods has not seriously interfered with this price differential. But paper seems to be entrenched in a stronger position, and even if its further advances in bag and other markets can be halted, it may be difficult to dislodge it completely from the new uses to which it has spread during the last few years.

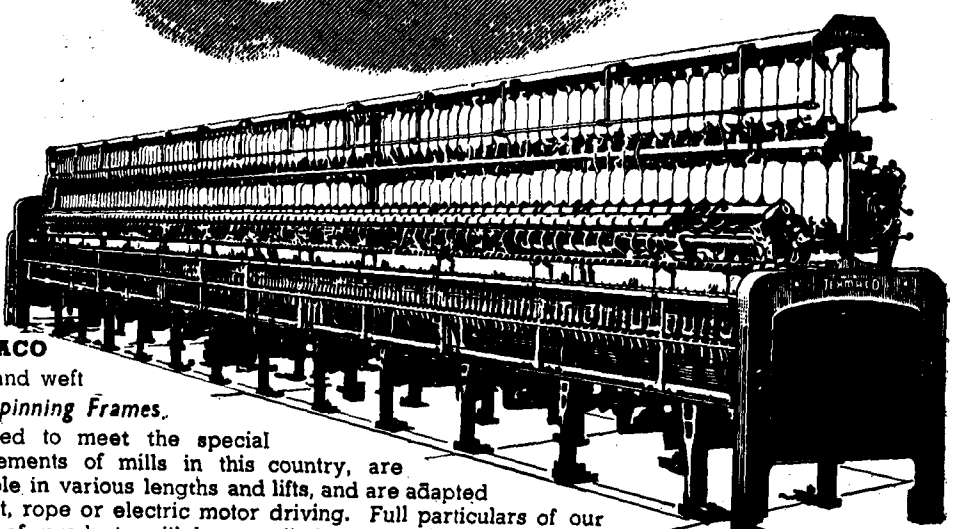
PAPER'S DISADVANTAGES

The position of paper in the packaging market is not unlike that of rayon in the apparel market. In either case technological improvements are the main foundations of competition, and the relative prices of rival commodities are of secondary importance. It is mainly because of the technological background that the gains of paper have proved to be less transient than those of cotton. Two things, however, stand in the way of unlimited expansion of the market for paper bags:

(a) So far paper bags have developed only one re-use and practically no salvage value. The ultimate cost of a bag depends upon the number

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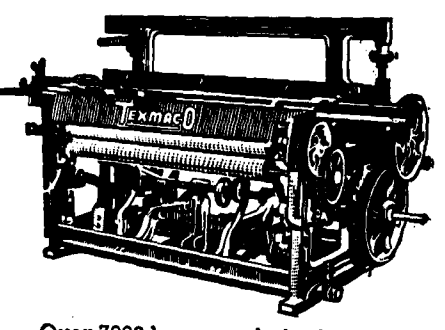
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of times it or its component yarns can be used. Both jute and cotton are superior to paper in this respect. Roughly, 40 per cent. of the total number of bags in use at any time in U.S.A. are other than new bags; the reconditioning of bags is a big business in the U.S.A. Shipment of refined sugar, flour and other food stuffs in used bags has, however, lately come to be restricted by law in some States of U.S.A. Also, increasing labour costs are tending to narrow the scope of the used bag trade.

(b) Though the same packaging machinery can handle both cotton and jute bags, an entirely different and costly equipment is necessary for handling paper bags. Hence a shift in the bag market from jute to cotton bag or vice versa may be more or less smoothly effected. But a shift in favour of paper bags has to be of considerable dimensions, or else promise to be of a more or less permanent character, before the necessary investment can be induced. There is thus a sort of natural protection for the status quo, i.e., in favour of maintenance of the type of packaging already in existence. It follows that if an industry is driven by the circumstances now prevailing in the bag market to a switchover to paper packaging it will not quickly dismantle its new equipment and revert to jute packaging, even if prices of jute goods go down appreciably in the near future. Again, though up to the present the filling rate for paper bags has been faster than that for textile bags, attempts are being made to develop a new and faster filler for textile bags.

THE PROBLEM IS REAL

The foregoing analysis suggests that the problem of jute substitutes is not as serious as it is sometimes supposed to be. Nevertheless, it is real. Parts of jute's pre-war market, which have suffered encroachment during or before the war, are unlikely to be regained. In a dynamic world such change is inevitable and ought not to cause anxiety. Against such losses should be put the gains that have been made by jute in new directions during the last few years, e.g., P.B.S., cotton-jute union canvas, laminated boards, etc. If the expansionist philosophy, which underlies the Marshall Aid programme and the International Trade Organisation agreements, is really translated into action world consumption of jute goods should increase *pari passu* the increase in world trade. The market for jute goods in absolute terms is thus likely to expand, and not contract, in the near future.

But the jute industry should not depend on world forces alone. It must also help itself. Two things seem essential in such self help. First, jute goods should be made cheap; secondly, the supply should be adequate to meet world demand.

Shipments of hessian from Calcutta during 1947 were 1,700 million yards which represented an increase of 6.5 per cent. above those for 1946. Shipments to North America (U.S.A. and Canada), our principal market, during the first ten months of 1947 amounted to 918 million yards as compared with 889 million yards during the same period of 1946. In view of the fact that the all time record for hessian exports is 1,726 million yards in 1937, the 1947 figures represent a most creditable performance on the part of the Indian jute industry which was beset throughout the period with Government controls, political uncertainties consequent on the partition of the country, enhanced export duties, etc. It may be hoped that with a better supply of raw material the jute goods industry will take care of itself.

THE PRICE FACTOR

But in the long run price is the deciding factor as between comparable products, and jute's greatest competitive advantage in the past was cheap price. That advantage has now been temporarily lost. Prices of cotton and paper have risen also, but the relative rise in the price of jute, though less than that of cotton, has been greater than that of paper. The following Table shows the extent of the rise in the prices of cotton, jute and paper:—

Table II

Prices of cotton, hessian and paper bags: 1940-1947 (Dollars per 1,000 bags)				
Year.	Cotton cement bag, 94 lb. Hessian mixed feed valve type, 30" 7 oz.	Paper cement bag, 100 lb. 40" 7 1/2 oz.	94 lb. 190 basis cut 48"	15 1/2 by 2 by 3 by 27 1/2
1940 (average)	\$100.28	\$90.55	\$38.39	
1946 (August)	247.52	143.38	48.12	
1947 (March)	300.20	237.70	61.25	

Quoted by Dr. V. D. Reed in "Jute industry faces real task in combating steady inroads by paper."

Before the war jute's competition rested largely on the price of cotton, but it is the price of paper which is now the more significant factor. It has been suggested that, even if the price of cotton cloth comes down to a much lower level, the position of jute goods will continue to be determined mainly by the price relationship between jute and paper. The current high prices of jute goods are due in part to scarcity and in part to taxation. With an estimated crop of well over 85 million bales of jute in 1947-48 season, a fall of about 10 per cent. in the price of raw jute is anticipated in trade circles. If events turn out to be as expected the position of jute *vis-a-vis* substitutes will improve. But the problem of substitutes would still demand resolute action having as its purpose the reduction of manufacturing costs on the one hand and increased distribution on the other.

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EVOLUTION OF INDIA'S SALT INDUSTRY

REMEDYING BENGAL'S BACKWARD PRODUCTION

In years gone by salt was a first class political issue in India. To-day its role in the domestic and industrial economy of the country is more important, particularly in West Bengal, which makes up its serious deficiency in this essential commodity by imports from abroad and other parts of India. Partition has reduced West Bengal's potential manufacturing capacity by the loss of important salt bearing areas to Pakistan. But the author of this article considers that local production can be greatly increased by resolute planning of readily available resources.

SALT has been manufactured from very early times in different parts of India, and the country was self-sufficient in this respect up to the middle of the nineteenth century. Production was concentrated in certain parts of India which were rich in saline deposits. The main areas of production were:—

- (a) Northern India including the Rajputana States—Sambhar, Pachbhadra, Bharatpur, Sultanpur Salt Works, Khewra and Warcha Mines.
- (b) Sind—with extensive natural deposits along the coast between Karachi and the Runn of Cutch and in the desert to the north of the Runn. The salt lakes are situated in jhils in the desert.
- (c) Assam—the salt springs of Jorhat, Sadiya and isolated localities in the hill tracts of Cachar and Manipur State.
- (d) Bengal, Bihar and Orissa—the sea coast of Bengal and Orissa.
- (e) Madras—Salt earth in saline tracts and spontaneous salt in swamps.
- (f) Bombay—Subsoil brine at Kharagoda, Gujarat, Kathiawar, Dharangadhra and other Indian States. Sea salt along the coast: salt work in Daman, Goa and Okhamendal and in most of the Indian States.

In the pre-British period the salt industry was unorganised. People geographically well situated with respect to the salt sources got it much cheaper than those further away. In general, methods were primitive and unscientific and the cost of production was high. Apart from production on a commercial scale, production of salt by lixiviation of salt earth and boiling the brine as a cottage industry was very common, particularly in U. P., Bihar, Bengal and Burma.

Although the volume of production was much less than it is to-day, excepting Bengal, Bihar and Orissa, it is certain that India did not depend on foreign salt imported into the country. One reason was the population factor. The increase in population was at a much faster rate than the increase in the volume of production, and in the eastern parts of India, excepting Burma, the industry dwindled in the face of foreign competition.

THE BRITISH PERIOD

The growth of the industry is inseparably connected with the history of Salt Revenue in India. Up to 1870 salt revenue followed different lines in different provinces. Thereafter, a general policy was followed. Examination by provinces is therefore necessary for an understanding of the situation up to 1870. In the case of Bengal under Mahomedan rule, revenue was realised by means of imposts on manufacture and by transit duties on transportation from the places of manufacture to the interior of the country. The trade was in the hands of a few monopolists. After the East India Company acquired possession of the districts around Calcutta it imposed a tax on places of manufacture (Khalaries) and also on transportation. This tax was subsequently consolidated at a rate of Rs. 40 per 100 maunds of salt manufactured. The volume of production at the time was about 25 lakhs of maunds per year. In 1765, Lord Clive wanted to establish a monopoly for the sale of salt but this was substituted by an Excise Duty in 1768. But revenue did not improve, and the agency system was introduced in 1780. Under this system Government agents advanced money to the salt boilers for a stipulated quantity of salt to be delivered to the Company's agent at a fixed price. Salt was manufactured at that time by lixiviation of saline earth, filtering brine through straw or grass and then boiling the brine in small earthen pots with fuel available from the jungles. The agents stored the salt and sold it to wholesalers at a fixed price. The cost varied from Annas 8 to Annas 14 per maund, the sale price being Rs. 2 per maund. Agencies worked in Midnapore, 24-Parganas and Chittagong districts and the salt manufactories were scattered all over the Sunderbans.

The first appearance of foreign salt in the Bengal market was in 1817 when an import duty of about Rs. 325 per 100 maunds was levied. At that time 50 lakh maunds of salt were produced annually in Bengal and the price varied from Rs. 469 to Rs. 385 per 100 maunds. By 1851-52 the foreign import had risen to about 30 lakh maunds, which was about half the annual consumption of Bengal at that time. Attempts were made to lower the price of the local salt by gradually reducing the excise duty from Rs. 3-4 to Rs. 2-8 in 1849 but this did not check the import of foreign salt. The Agencies were closed in 1863. The manufacture of local salt remained subject to excise up to 1898 when it was prohibited altogether.

There was very little salt revenue in Madras before 1805 in which year the Government established a monopoly of the manufacture and sale of salt. Production by manufacturers was subject to Government control and they had to sell all salt to Government at a fixed price. An abundant quantity of spontaneous salt found in marshy swamps and earth salt was produced in saliferous areas. The tax was on a licensing basis. In 1869, the manufacture

By

RAI BAHADUR D. N. MUKERJEE,
Collector of Central Excise, Calcutta.

of earth salt was permitted in selected places only. By 1877, about 87 per cent. of salt was produced under the excise system and sold from Annas 6 to Annas 14 per maund. A modified Excise System, under which the licensee ordinarily manufactures for his own sale, but may be required at any time before the beginning of the season to sell the whole or a portion of his salt to Government at a fixed price was also in force.

A regular excise upon salt in Bombay dates only from 1838. Some works were owned by Government which sold the salt; Government rented out other works and got rent; a duty was levied on the produce of certain private salt works; sometimes a Customs duty was levied on the import and export of salt by sea and transit duty was levied by land. The whole system was chaotic. An excise duty of Annas 8 per maund was levied in 1837. Production at this time stood at about 30 lakhs of maunds, and by 1864, the duty was further raised to Re. 1-8.

The Burma Salt Department was formed after the annexation of Burma when a duty of Annas 3 a maund was levied. From 1854 to 1888, the Customs duty was Annas 3 per maund, the excise duty the same, while the composition rates varied from Re. 1 to Rs. 5 per cauldron. The essence of the salt revenue system prevailing in Northern India up to 1870 was the levy of a duty on all salt imported into British India and the suppression of the manufacture of salt within it. In 1803, salt was taxed according to quality at varying rates. The East India Company first set up a system of monopoly by agents who advanced money to licensed manufacturers on the stipulation that the salt made would be delivered to the Company at a certain price. The salt was then sold by public auction. This system prevailed only for a few years.

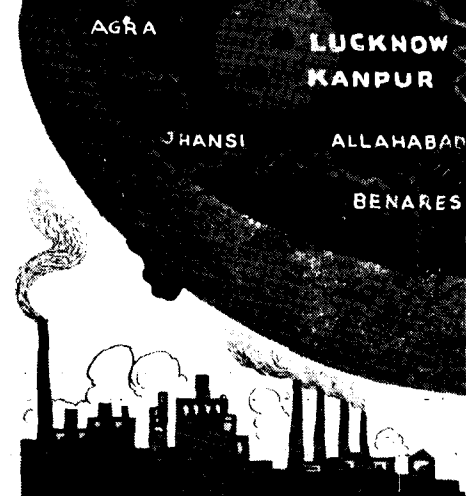
PERIOD AFTER 1870

By 1870, when annual consumption in India stood at about 230 lakh maunds, the Inland Customs line was recognised to be unsound, cumbersome and expensive. The salt works at Rajputana were taken over by Government with the object of increasing the supply of salt and reducing the price by skilled supervision and by improved communication. The Customs line was ultimately abolished in 1879 and in 1882 the Northern India Salt Revenue Department was created in its place. Efforts were made to equalise duty throughout India—by increasing it in Bombay and Madras and reducing it in Northern India. Successive changes in the rates followed till 1931 when it was fixed at Re. 1-9 per maund throughout India. This rate continued till its abolition in April 1947.

In 1931 an additional duty of As. 4-6 per maund was levied on imported salt in order to give protection to the indigenous industry. As a result imports of Indian salt increased immensely and prices were stabilised in Calcutta. The percentage share of Indian salt in Calcutta's imports of salt increased from 35 per cent. in 1930-31 to 92 per cent. in 1936-37. Consequently imports of foreign salt dwindled from 65 per cent. in 1930-31 to 8 per cent. in 1936-37. Bengal's attempts to revive the local industry were not, however, successful owing to various reasons. Before considering possibilities in Bengal some account may be given of present production conditions in other provinces in India. The salt sources now in Pakistan are not considered in what follows.

Sambhar Lakes.—The salt works consist of six groups of crystallising

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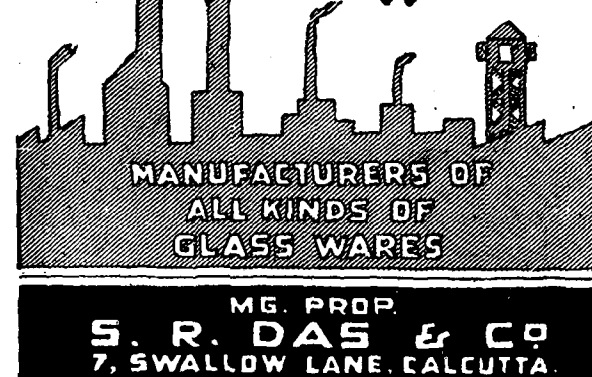
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beds, covering a total area of about 1,000 acres. Manufacture and output is mainly dependent upon rainfall and the density of the lake at the end of the monsoon in September. The lowest on record was 1.56 lakh mds. in 1876-77 and the highest recorded was 1,15,00,000 mds. achieved in 1918-19, after a systematic re-planning of the works on a scientific and engineering basis had been effected. Average production capacity is about 77 lakh mds. per annum.

Didwana.—The total area developed for salt production is 92 acres, and the production capacity comes to about 2.25 lakh mds.

Pachbhadra.—The salt area is in a shallow basin in the bed of a valley 7 miles long and 2 miles in width. Subsoil brine collects in the basin and is used for salt production. The production capacity comes to about 10 lakh mds. Rajputana salt is distributed mainly to Punjab, Delhi, U.P., C.P. and Berar, Rajputana and Central India. The average cost of production is about As. 4 per md.

Kharagoda.—The Runn of Cutch is a vast, flat sandy and salty tract scarcely above the sea level, marshy in portions and dry in others and covered during the dry months with white saline deposits. Salt is manufactured from natural brine obtained from the wells dug into the Runn. The annual production has averaged in recent years from 25 lakh mds. to 37 lakh mds. The production in 1943-44 was the highest and the figure stood at about 39 lakh mds. About 59 per cent. of Kharagoda salt goes to the U.P. and C.P. and the other half to Bombay and Central India.

Bombay Sea Salt Works.—The salt works are on a coast line of about 500 miles between Surat and Mangalore, but 95 per cent. of the works are situated within 30 miles of Bombay. There are about 400 salt works, built mostly by the side of creeks, on mud flats between the levels of high and low tides so that sea water may flow into the works without pumping. Production varies considerably according to season and demand. Average output comes to about 108 lakh mds. About 3rd of this salt is consumed in the province, one-sixth goes to the Nizam's dominions and C.P. and Malabar each and only about 5 per cent. to 6 per cent. each goes to Bengal by sea, Travancore and Cochin and Madras.

Kathiawar and Cutch.—Salt is manufactured over the 450 miles long sea coast. The littoral is the most favourable site in India for salt manufacture on account of comparatively high winds, a good tidal rise, high temperature throughout the year, good density and the purity of sea water. The salt works are scattered in small units sufficiently large to supply local demands and the markets in the interior of Kathiawar. The principal salt works are in the States of Baroda, Morvi, Jamnagar, Dharangadhra, Porbandar, Junagadh, Janjira, Bhavnagar and Cutch. Special efforts have been made in this area to enhance production in order to meet the requirements of Bengal, and since 1936 production has assumed considerable proportions. The rated capacity in 1944 stood at about 80 lakh mds.

Madras.—Salt is manufactured by the solar evaporation of sea water all along the east coast of the Madras Presidency. The salt producing districts are divided into three sections—the northern section from Ganjam to Kistna, the central section from Kistna to Chingleput and the southern section from Chingleput to very near Cape Comorin. There are in all 50 centres, divided into 65 factories over a total length of 900 miles of eastern sea coast. The total area worked comes to about 13,000 acres with an average annual production of 130 lakh mds. Fifteen per cent. of the total production goes to other provinces, the approximate quantities being:—Orissa—9 lakh mds., C.P.—3.5 lakh mds., Bengal—2.2 lakh mds., Nizam's Dominion—1.7 lakh mds. and Mysore and Coorg about 1 lakh mds. Due to the high per capita consumption in the province, which is about 20 lbs. per annum as against an all-India average of 13 lbs. per annum, the province has to import about 16 lakh mds. from Bombay, particularly for the western districts.

SUMMARY OF PRODUCTION AND CONSUMPTION

To sum up, a comparative statement of production and consumption is given below:—

A. PRODUCTION.		Annual Production.
Main Sources of Supply.		89 lakh maunds.
Rajputana	..	30
Kharagoda	..	108
Bombay Sea Salt	..	80
Kathiawar and Cutch	..	130
Madras	..	437
Total		494 lakh maunds.
B. CONSUMPTION.		Estimated Consumption.
Main Provinces.		135 lakh maunds.
Bombay & G. P.	..	147
Madras	..	31
West Bengal	..	63
Bihar	..	15
Assam	..	13
Orissa	..	80
U. P.	..	20
East Punjab	..	20
Total		494 lakh maunds.

The total requirement of India, excluding Pakistan, may now be roughly taken to be 500 lakh mds. out of which the country is now able to produce only 440 lakhs. The balance of 60 lakh mds. is met by imports of foreign

salt from Aden and the Middle East, and the whole of this import is now done in Calcutta and distributed to the provinces of West Bengal, Bihar, Orissa, Assam and to a part of United Provinces. This import would be unnecessary, if Bengal, like other coastal provinces, could develop her salt sources.

THE SALT INDUSTRY IN BENGAL

Although the salt industry in Bengal has a long history behind it there was until recently much mistaken belief about its possibilities. The result has been that while Madras and Bombay have accomplished large-scale expansion Bengal's salt industry is still groping through the experimental stage. Official patronage has been hesitant and private enterprise has been shy. More recently a number of private concerns have come into existence for the manufacture of salt and Government's views have also undergone a change. Private enterprise in salt making was in evidence as early as 1931. The Bengal salt manufacturers' Association was registered in July, 1931, and a number of licences for salt manufacture were granted.

Nothing fruitful evolved out of a number of enquiries and investigations into the possibilities of salt manufacture in Bengal, and the whole question of development was referred to the Bengal Industrial Survey Committee in 1940. The committee reported after 4 years in 1944 and concluded:—

- Bengal offers favourable conditions of manufacture of salt both by solar evaporation method and by the Burma method according to the conditions in different regions;
- In the Contai seaboard the solar evaporation method has been found successful;
- Bengal salt can compete with imported salt.

After the famine of 1943, the Government of Bengal undertook to establish warehouses in the coastal areas in Bengal as a relief measure. In this scheme, the salt produced by the villagers under the Gandhi-Irwin Pact was collected at the warehouses by contractors and was taken out by them on payment of excise duty at Re. 1-9 per md. Collection was not satisfactory and the scheme failed owing to the smallness of production. Cottage production in the ordinary sense of scraping of salt earth, lixiviation and boiling by villagers is expensive and wholly unsuitable under modern circumstances. The future of the industry does not lie that way. Only large-scale factory production not alienated from the labour of the local population can pave the way to progress.

PLAN FOR THE FUTURE

In the meantime two important events have happened. The excise duty has been abolished and India has gained independence. Independence has cut Bengal into two. This has resulted in a reduction of available saline areas. The major part of the Sunderbans and the Chittagong coast line have gone to Pakistan. In West Bengal, the 24-Parganas portion of the Sunderbans remains along with the Contai Seaboard. The attitude of Government has also changed considerably.

To-day West Bengal produces only an infinitesimal fraction of her requirements which are mostly met from imports from Aden, Port Said and the Red Sea Ports. A certain quantity also comes from the West coast of India and from Madras Presidency. Demand will increase substantially if basic chemical industries are developed in the province. An increase in production is therefore of utmost importance.

The main areas will be the Sunderbans of the 24-Parganas and the Contai sea board in Midnapore. The small-scale production by cottage industry, even though it be increased (the present quantity is about 2½ lakh mds. in the 24-Parganas and Midnapore) will be but a drop in the ocean. Production from salt earth by lixiviation and boiling will cost too much to compete with imported salt. There is also the question of fuel. The forest resources of the 24-Parganas are not great and there is no fuel on the Midnapore Coast to which coal will have to be transported at an economic cost. The conclusion, therefore, is that while it is possible to increase production of boiled salt to a certain extent, a substantial increase can only be brought about by the establishment of large factories and the manufacture of salt by the method of solar evaporation on the Madras lines. While solar evaporation must be the principal method, West Bengal will have to adopt boiling as a subsidiary process of production during certain months of the year.

Although no systematic survey of the coastal area has been undertaken, suitable sites for salt factories may be found in the Sunderbans. The other area is the coast of the Midnapore district—particularly the western part of the coast, i.e., the coast of the Contai sub-division which is situated far away from the mouth of large rivers.

The full potentialities cannot be fully exploited by piecemeal development and the establishment of small factories. Planning on a large scale is necessary and the capital cost will naturally be heavy. The solution probably lies in the formation of an Industrial Corporation with the Provincial Government as a contributor. Capital costs may have to be spread over a number of years and means found of absorbing previous cottage production into large-scale operations.

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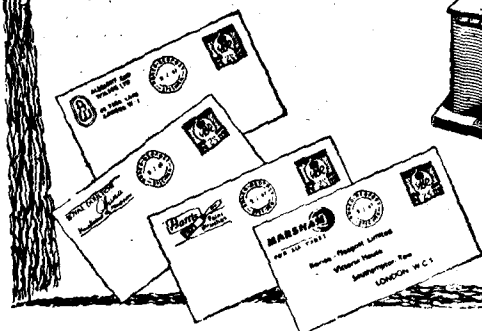
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LABOUR and PRODUCTION

CONFLICTING AIMS WHICH CAN BE MADE TO HARMONISE

THE conferences which were held in Delhi some time back between the Central Government's Minister of Industries and leading representatives of industry drew nationwide attention to the important contribution which labour and production require to make to assist in the achievement of the economic and social aims of independent India. Much of the propaganda put out by political speakers and writers to the popular Press draws attention to the existing difficulties in industry without putting forward any concrete proposals for their solution. It is the intention of this article to clarify the present situation and suggest means for meeting the demand for increased production and removal of labour grievances to encourage a more harmonious relationship between labour and management.

The cause of the present-day industrial unrest in India is well known, and still better known are the serious consequences which will inevitably follow if a corrective is not found speedily. As an illustration of one method of solving this perplexing problem some simple systems have been instituted in certain sections of a large industrial organisation in West Bengal employing upwards of 2,000 workers with creditable results. These systems and the line of approach from which they have been adopted are dealt with in the following remarks.

Considering the present situation, it becomes very clear that whatever methods are to be adopted for the solution of the problem, they must be very simple and direct and quick to prove their merit to labour. Time is the important factor in the recovery of the mutual confidence between employer and employee. We cannot afford to indulge in too highly scientific methods which of necessity require considerable time for their development. The results of the appeals to labour's civic sense of duty and patriotism are a negation of that method of approach and in plain fact the only appeal which can have any hope of success with labour is through the medium of the pay envelope. The very rapid political changes which have taken place recently in this country, and the implications of these changes, have hardly been realised even by the more educated persons and therefore, under such circumstances, it can only be logically expected that an uneducated labour force is more concerned with personal gain than with the interests of the country. In other words, it is useless to preach before them the broader aspects of community life when they find their own conditions unchanged.

EARNINGS AND PRODUCTION

It is clear that if the demands for increased wages continue to be successful, and this trend is generally indicated from Tribunal awards, the cost of production will continue to rise and thus cause inflation throughout the country. Therefore higher wages must be accompanied by higher production if we are to escape the evils of inflation. On the other hand higher wages do not necessarily give any guarantee of higher production, and the term "wages" should be substituted by the term "earnings." To this end profit sharing bonus schemes have been advocated for an industrial truce, and a reasonable measure of success might have been expected from this proposal had the relations between labour and management been less strained. It cannot be reasonably expected, therefore, that this offer will evoke any more enthusiasm than the presentation of a post-dated cheque. A further handicap to this proposal is that, being an annual scheme, immediate remuneration for higher production is delayed and the interest factor is thus lost. Rewards for higher production should be given in successive pay packets.

The conclusion thus reached suggests that one way in which to satisfy the needs of labour is by increased earnings through bonus rewards for increased production.

Incentive bonus systems are well known to industrialists throughout the world and normally are included under the heading of scientific management. Such systems involve the institution of a well organised statistical department and an application of time and motion study with quality control thrown in to complete the modern conception of scientific production control. A prerequisite, apart from a high standard of trained technical personnel, is the use of modern plant and machinery to enable the principles of all these factors to be applied.

All these proposals are sound and have been tried and proved successful, and will be needed ultimately if the standards in this country are to reach those in more advanced countries, but it is considered that this is not the right moment for their inclusion in the country's present stage of development. It is questionable whether, in the main, industry is ready to accept these advanced schemes and it is certain that the grievances of labour cannot be deferred for the length of time it will take to prepare and install such schemes.

The contention is that the standard of labour in India is not yet sufficiently high to be receptive to such advanced scientific principles. It is safe to assume that plant and machinery in many industries in India is old and

An assessment of the contribution which labour and production require to make to assist in the achievement of the economic and social aims of independent India
by
A. E. CRAWLEY

production methods therefore out of date. The work effort input per man day is probably in the region of 25 per cent., and with Trade Unions in infant stages, divided politically, the whole industrial set-up is in an unbalanced state and is surely therefore not ready to try something which can only be assured of satisfactory results under well organised conditions when the standard of labour has been raised to something in the region of 65 to 70 per cent. efficiency in terms of work effort input per man day.

100 PER CENT. BONUS

To meet all these perplexing problems it is therefore suggested that very simple forms of incentive systems should be introduced which will have a highly attractive bonus value for high production with a low basic wage; and if target production can be attained by increased work effort input the resulting saving in overheads will enable high bonus awards to be made and at the same time stabilise production costs and prevent inflation. Such schemes should offer a bonus in the region of 100 per cent. for target production to ensure their success, and that this can be afforded can only be proved by the examination of the individual production costs of any particular industrial organisation. Doubt may arise whether an accurate estimation of target production can be obtained without time study, but for those who have long association with production it will be agreed that there is not much difficulty in estimating target levels within plus or minus 10 per cent. without time study. If such a proposal could be accepted, the saving in time in preparation work for the institution of rough bonus systems of this type would be considerable, and so long as costs of production are not increased, we can proceed with these estimated targets without undue concern bearing in mind that their revision would be a matter for consideration at some future date.

It is suggested that 100 per cent. bonus or double wages would meet the demands of labour in the majority of cases and would be a big step towards restoring mutual confidence between labour and management and do away with many of the labour grievances which at present restrict development and progress in an ever-increasing vicious circle.

Such methods, resulting in a rapid increase of production, if not controlled, may cause deterioration of quality, but let us deal with first problems first and after we have obtained quantity we can deal with quality. In any case, the time factor will be favourable as workmanship can only improve provided work is done.

Many readers may argue that the principles of payment by result are not new in this country, but in reply it can only be said that they have not, evidently, produced the desired result. This is not the fault of the system but of the application, and it is clear that where such payments have been

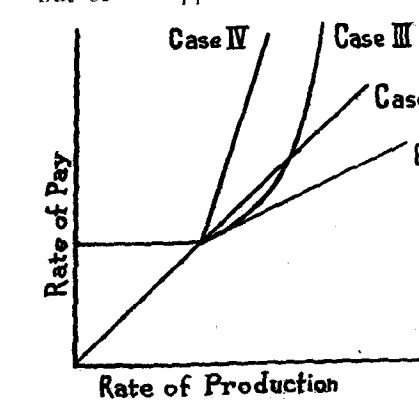


Fig. 1

tried without success it has been due to lack of consideration for local conditions and due recognition of labour psychology.

For the purpose of illustrating the foregoing principles four different incentive systems are shown diagrammatically in the attached Fig. 1 and these are dealt with in detail below with a view to selecting one most favourable to general requirements.

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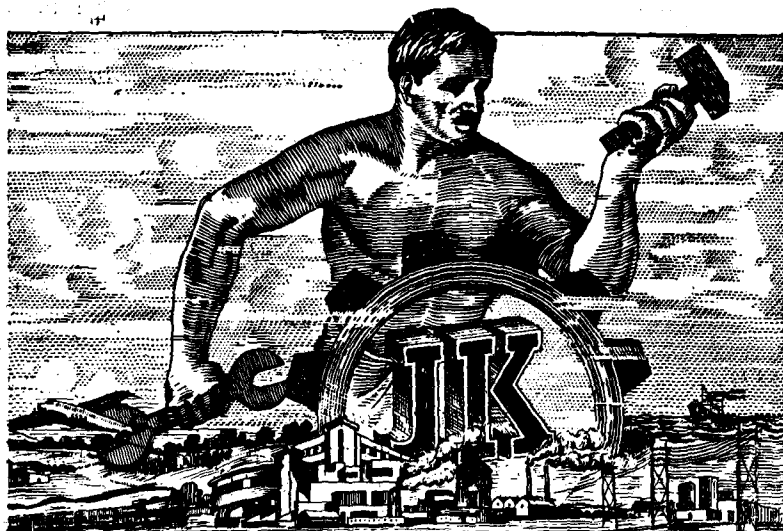
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Case I.—Straight piece rate system where pay is directly proportional to the increased production. This system is prevalent in many jobbing engineering industries. It appears that labour are gradually losing interest in the existing piece rates and are demanding a revision. Here too any increased payment should be linked up with increased production in the form of bonus. Due consideration should be given to the fact that they are already working under an incentive scheme and the scope of further increment of production is also limited. However, the majority of our industries will fall outside this system.

Case II.—Where income due to day rate plus bonus does not increase at the same rate as the rate of production. This is accepted in very highly mechanised shops where increased production is more due to the machine than due to labour and day rate of labour is very high compared with overhead charges. This is also not suitable for Indian conditions.

Case III.—The incentive system shown here rewards increased production at different rates at different levels of production. This can be only introduced when proper time study and accurate assessment of possible production can be made and therefore should only be attempted when the industrial set-up is balanced.

Case IV.—Where income due to day rate plus production bonus increases at a much more accelerated rate than the rate of increased production. Obviously this will have the greatest attraction for labour and will yield quick results. In most of the industries in India the percentage overhead is very high, ranging from 350 per cent. to 1,000 per cent., and if we take the existing cost as a base the saving due to increased production can be worked out as follows:—

Let m_1 = manufacturing cost per unit at present rate of production— R_1 per hour.

Let m_2 = manufacturing cost per unit at increased rate of production— R_2 per hour.

L = labour cost per hour.
 P = percentage overhead in terms of labour cost

and manufacturing cost per unit = $\frac{\text{Hourly labour cost with overhead}}{\text{Hourly rate of production}}$
+ material and other constant charges.

Therefore, saving due to increased = $m_1 - m_2$ (material and other cost considered to be constant and as such cancel each other).

$$= \frac{L(1+P)}{R_1} - \frac{L(1+P)}{R_2}$$

$$= \frac{L(1+P)}{R_1} \left(\frac{R_2 - R_1}{R_2} \right)$$

or saving per hour when production rate is R_2

$$= L(1+P) \frac{(R_2 - R_1)}{R_1}$$

or percentage saving in term of labour cost per hour—'L'

$$= \frac{(1+P)}{R_1} (R_2 - R_1) \times 100$$

This means, in any industry if overhead percentage is 500 and the production increases 10 per cent. over existing level, saving in terms of direct labour will be $(100 + 500) \frac{(1.1 - 1)}{1} = 60\%$.

SUCCESS FACTORS

As this saving can mainly and directly be effected by those who are on the shop floor it is quite justifiable that the bonus should be a part of this saving and the actual proportion of course will much depend on the incentive factor which is aimed at. In these schemes indirect labour should also be linked up to ensure the indirect help in terms of maintenance and provision, as these should be at the same pitch so that the production does not suffer.

Application and success of this principle is obviously dependent on the scope of increased production. If the saving is considerable, a good amount of it will be left even after paying an attractive bonus, in which case cost of production will go down. In cases where the scope of increased production and consequent saving is not much, the entire saving may have to be offered as bonus so that a status quo is maintained so far as the production cost is concerned. However, it should be remembered that higher turnover in each case will increase the gross profit. In cases where no increased production is possible, we have to give some form of production insurance bonus to prevent loss of production. This will obviously increase the cost of production, which must be accepted for the sake of the greater interest of industry as a whole. In other words, it may be necessary to subsidize a particular branch of industry at the cost of other branches, which principle is good if it can bring about a general increase in efficiency.

It may be pointed out that these schemes are meant for an interim period until the industrial house can be put in order and thus gain time for complete reorganisation of plant, equipment, methods, better educated labour and better understanding between labour and management. Our industrial set-up will then be suitable for adopting scientifically deduced wage structures,

time studied bonus schemes and quality control methods. The principle outlined has been adopted in two sections of an industrial organisation and the results obtained are given as follows:—

(1) **Manufacturing Section.**—A system of bonus was instituted prior to January, 1947, which ran until the end of June, 1947. The target production was set at 1,000 units for which the bonus offered was 40 per cent. Under the new system outlined above the bonus offered for target production was 100 per cent., which resulted in the figures given below, which speak for themselves by comparing the first half of the year with the second half of the year.

Period.	Month.	Rate of production per week.	Old Bonus Scheme.		New Bonus Scheme.	
I 6 months in old scheme.	Jan./47	700	15%	20%	100%	
	Feb./47	800	20%	33.3%	117%	
	Mar./47	900	30%	66.6%	100%	
	Apr./47	1,000	40%	100.8%	130%	
	May/47	1,100	50%	133.3%	104%	
	June/47	1,200	65%	166.6%		
Total		5,391	151.7%	82%	107%	
Average of Period I		1,074	25.3%	16.4%		

Period.	Month.	Rate of production per week.	Old Bonus Scheme.		New Bonus Scheme.	
II 6 months in new scheme.	July/47	1,529	19.2%	90%	105%	
	Aug./47	1,223 (low due to fire)	18.7%	80%	111%	
	Sept./47	1,692	12.5%	125%	106%	
	Oct./47	1,112 (Pujas)	13.5%	45%	120%	
	Nov./47	1,564	13.1%	120%	100%	
	Dec./47	2,062	16.7%	135%	100%	
Total		9,182	93.7%	875%	105%	
Average of Period II		1,530	15.5%	97%		

Comparison of Period I with I	43% more tonnage	40% less rejection	6 times more bonus	Nearly same (The reason of cost not decreasing as expected is increased overheads and raw materials).
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ANOTHER EXAMPLE

(2) **Despatch Section.**—This section operated on a system which was maintained until September, 1947, with some of the workers paid on a day rate basis and the remainder on a piece rate basis. From October onwards the whole section was placed on a day rate basis plus production bonus, and although only three months working under the new system is shown, the results again speak for themselves in favour of the principles outlined under Case IV.

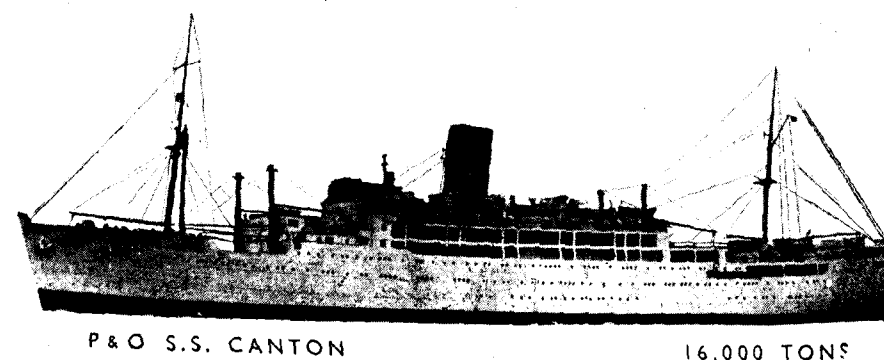
Bonus Scheme		Results.		
Fortnightly tonnage despatched.	% Bonus	Monthly despatch tonnage	% Bonus earned	Cost per ton of despatch (Jan. cost as 100%).
1,100	20%	Jan. 2,120		100%
1,200	30%	Feb. 2,118		100%
1,300	40%	Mar. 2,538		96%
1,400	50%	Apr. 3,077		82%
1,500	60%	May 2,030		120%
1,600	70%	June 2,750		89%
1,700	80%	July 1,983		123%
1,800	90%	Aug. 1,934		80%
1,900	100%	Sept. 2,711		
2,000	110%			
2,100	120%	Oct. 2,804	60%	92%
2,200	130%			
2,300	140%	Nov. 5,017	160%	75%
2,400	150%			
2,500	160%	Dec. 3,433	(Less due to wagon shortage) 70%	80%

AMPLY JUSTIFIED

In conclusion it is contended that the results of the introduction of what might be termed, the most simple form of incentive bonus system, where the rewards of bonus are high, has been amply justified, and it is notable that with these two departments many of the production and labour problems which previously existed, disappeared completely, thus proving that the major problem to be considered is the increase in productive effort per man, which only can be achieved by a thorough understanding of the psychology of the workers.

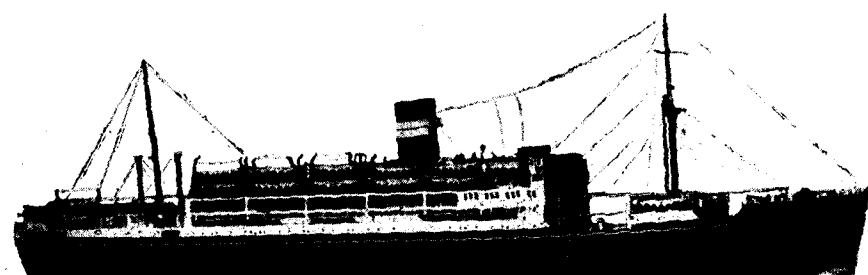
It is not presumed that the introduction of these systems was made without difficulty, but it can be stated that the difficulties were reduced to a minimum by these methods, thus giving time for concentration on the engineering problems of machinery and plant layout to further assist in the question of increased production, which is surely the most constructive procedure.

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1888 :

- Suez Canal Convention (Treaty of Constantinople) signed by 9 countries;
- Introduction of the pneumatic rubber tyre by John Boyd Dunlop;
- Process of making artificial silk discovered by a Frenchman;
- Fourth session of the Indian National Congress (I.N.C.) at Allahabad;
- CAPITAL commences publication on November 6.

1889 :

- First Pan-American Conference;
- The Panama Canal crash, due to corruption and mismanagement of the Company;
- A revolution in printing through the successful use of the "Linotype" machine, first in New York, then London;
- Bengal Iron and Steel Co. acquires the Barakar Iron Works (Estd. 1874), the first successful modern iron works in India.

1890 :

- Failure of the London banking house of Baring Bros. causes general financial crisis;
- The McKinley Tariff Act raises protective duties in U.S.A.

1891 :

- Second Indian Factory Act (first in 1881) limiting hours of work for women and children extends scope of rules;
- Census records population of India (including Burma) as 285 million;
- The five-rupee note introduced in India.

1892 :

- International Monetary Conference at Brussels, called by the U.S.A. to discuss Bimetallism, ends in failure;
- Indian Councils Act enlarging the functions of the Legislative Councils and providing for indirect election of their members;
- First commercial extraction of manganese in India at Vizagapatam.

1893 :

- Repeal of the Sherman Silver Purchase Act in the U.S.A.;
- Sir Walter Scott designs the first colour Press for the New York "World";
- Closing of the Indian Mints to the free coinage of silver.

1894 :

- Conclusion of Franco-Russian alliance, which becomes one of the main features of international relations;
- Outbreak of Sino-Japanese War over the control of Korea;
- Serious revolt in the Dutch East Indies;
- The Dreyfus Affair in France commences with the arrest of Capt. Dreyfus, a Jew, on a false charge of espionage;
- Third volume of Marx's "Das Kapital" published posthumously.

1895 :

- Marconi invents Wireless Telegraphy;
- Invention of the Diesel engine;
- India Government imposes countervailing excise duty on Indian-mill-made cotton, under pressure from Lancashire;
- The Chitral Expedition;
- Strikes in a Budge Budge jute mill and by Ahmedabad weavers—among the first working class strikes in India.

1896 :

- Russia secures the right to build and operate the Chinese Eastern Railway;
- Revival of the Olympic Games.

- Famine in India affecting 70 million people. Famine Relief Commission appointed;
- Plague spreads from Bombay to the whole of India;
- India Government appoints a Labour Enquiry Commission;
- Industrial Exhibition held along with Congress session to encourage Indian industries.

1897 :

- Conviction of Tilak for sedition;
- Khyber Pass closed by Afridis in revolt and rising suppressed;
- First registered workers' organisation in India: Amalgamated Society of Railway Servants, embracing upper grade employees.

1898 :

- Spanish-American War; Spain defeated, withdraws from Cuba. Puerto Rico, Guam and the Philippines ceded to the U.S.A.

1899 :

- First Hague Peace Conference, leading to the establishment of a Permanent Court of Arbitration;
- Outbreak of the Boer War;
- Concession for Baghdad Railway secured by a German syndicate and friction develops in Anglo-German and Russo-German relations;
- Construction completed of the Lower Chenab Canal (Punjab), irrigating 2 million acres;
- Indian Currency Act makes sovereigns and half-sovereigns legal tender.

1900 :

- Boxer Rebellion in China against the expansion of European Powers in that country;
- Bimetallism abandoned by its champions;
- Constitution of India's Gold Reserve located in London (known as Gold Standard Reserve from 1906).

1901 :

- Boxer Protocol (China) signed by 12 Powers;
- Death of Queen Victoria. Accession of Edward VII;
- Britain launches the first passenger steam turbine ship;
- Formation of the United States Steel Corporation, the first billion-dollar corporation;
- Lord Curzon estimates average annual *per capita* income of India as Rs. 30;
- Famine Commission says absence of diversity of industries in India, one of the main causes of recurring famines;
- First Indian Mines Act to protect miners;
- Irrigation Commission appointed.

1902 :

- Anglo-Japanese Alliance;
- First Hydro-electric installation in India set up in Mysore State.

1903 :

- First successful airplane flight by the Wright Brothers (U.S.A.);
- British expedition to Tibet;
- Imperial Agricultural Research Institute set up at Pusa.

1904 :

- Conclusion of the Anglo-French Entente;
- U.S.A. acquires the property of the French Panama Canal Company for 40 million dollars;

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- Indo-Japanese Trade Convention providing for mutual 'most favoured nation' treatment;
- Manufacture of Portland cement in Madras.

1905 :

- Defeat of Russia in the Russo-Japanese War;
- Insurrection in Moscow suppressed and failure of the revolution in Russia;
- Partition of Bengal with movement in protest, including boycott of foreign goods ("Swadeshi");
- 'Dominion Status vs. Complete Independence' controversy begins at I.N.C. Benares session;
- Fifty years of the jute industry in Bengal, the first jute mill having started in 1855;
- Government of India organises its Department of Commerce and Industries;
- Creation of the Indian Railway Board.

1906 :

- Liberals come to power in Britain with a programme of social legislation, including social insurance;
- Launching of the British all-big-gun warship "Dreadnought" which revolutionised the construction of capital ships;
- Calcutta session defines Congress aim as "Swaraj" or Self-government within British Empire;
- Swaraj, Boycott, Swadeshi and National Education included in I.N.C. programme;
- Foundation of the Muslim League in India.

1907 :

- Conclusion of the Anglo-Russian Entente;
- Second Hague Peace Conference called at the instance of President Theodore Roosevelt;
- Tata Iron and Steel Co. (TISCO) formed at Bokchi, later named Jamshedpur.

1908 :

- Heightened tension among the Powers, following the annexation of Bosnia and Herzegovina by Austria with German backing;
- Young Turk movement in temporary control of Turkey;

- Tilak sentenced to 6 years' for a newspaper article and general strike of Bombay textile workers in protest;
- Terrorist movement begins in Bengal following on Governmental measures against anti-partition campaign.

1909 :

- Henry Ford develops large-scale manufacture of automobiles (the Model-T chassis);
- Lt. Robert Peary reaches the North Pole;
- Formation of the Anglo-Persian Oil Company;
- Morley-Minto Reforms for India and separate electorates introduced.

1910 :

- Korea formally annexed to Japan;
- Death of Edward VII and accession of George V.

1911 :

- Turco-Italian War over Tripoli;
- The Chinese Revolution;
- Parliament Act limits the powers of the House of Lords;
- The Suffragist movement in Britain gathers strength and 40,000 women demonstrate in London for the vote;
- Capt. Amundsen reaches the South Pole;
- King George and Queen Mary visit India and Coronation Durbar is held at Delhi;
- Partition of Bengal modified by a Royal Proclamation;
- Indian Factory Act limiting hours of work;
- Census records industrial workers as 55 per cent. of total Indian population (315 millions).

1912 :

- The first Balkan War;
- China becomes a Republic;
- 6-Power agreement on Reorganisation Loan to China;
- Sinking of the "Titanic" in collision with an iceberg;
- International Radio Telegraph Convention signed in London by 46 countries;

- Second Indian Co-operative Societies Act enlarging functions of Co-operative Societies;
- Removal of the Imperial capital to Delhi;
- Tata Iron and Steel Company commences operations.

1913 :

- The second Balkan War;
- M. K. Gandhi launches "Satyagraha" in South Africa against racial discrimination;
- All-India Muslim League declares for Self-government within the British Empire;
- Steel made in India, the first in her modern history, by TISCO;
- Bank failures in India;
- Nobel Prize for Literature for Rabindranath Tagore.

1914 :

- WORLD WAR I begins on August 4;
- Panama Canal opened;
- Declaration of a British protectorate over Egypt;
- Federal Reserve Banks of U.S.A. commence business;
- Indian Congress supports the War;
- Defence of India Act;
- German cruiser "Emden" bombards Madras.

1915 :

- Italy joins the Allies;
- Japanese pressure on China (The Twenty-one Demands);
- The "Lusitania," carrying American passengers, sunk by German torpedoes;
- U.S.A. extends financial aid to Allies and Anglo-French Loan Contract with U.S.A. signed;
- Report of the MacLagan Committee on Co-operation in India.

1916 :

- American punitive expedition to Mexico under Gen. Pershing;
- The Sinn-Fein Rebellion in Ireland;
- Allied Economic Conference in Paris;
- Lucknow Pact between Congress and Muslim League;
- Home Rule League formed by Tilak.

1917 :

- U.S.A. enters the War;
- February Revolution in Russia leading to the establishment of the Provisional Government and abdication of the Tsar;
- Birth of the Soviet State after the November Revolution;
- Balfour Declaration on Palestine;
- Stimulus for Indian industries from the newly-set-up Indian Munitions Board;
- Rupee One notes issued in India;
- Super-tax, in addition to income tax, introduced in India.

1918 :

- Birth of the Czechoslovak Republic with Masaryk as President;
- Revolutionary unrest in Central and Eastern Europe;
- Civil War in Russia and the beginning of foreign intervention;
- Pres. Woodrow Wilson announces his Fourteen Points;
- Development of long range artillery: ('Big Bertha' bombarded Paris from 76 miles away);
- Kiel Mutiny of German sailors with uprising in Munich and other cities resulting in abdication of the Kaiser;
- German Republic proclaimed;
- Armistice: Nov. 11;
- Onset of influenza epidemic in India with loss of 14 million lives;
- Special Congress session rejects proposed Montford Reforms;
- Moderates part company with Congress and form National Liberal Federation;
- Report of the Indian Industrial Commission;
- General Strike in Bombay.

1919 :

- Signing of the Versailles Treaty in June;
- Foundation of the Comintern;
- Germany adopts the Weimar Constitution;
- Creation of the International Labour Organisation (ILO);
- First Trans-Atlantic airplane flight;
- Rowlatt Act in the Punjab;

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- Jallianwallah Bagh shooting and Rabindranath Tagore resigns his knighthood in protest;
- The Montagu-Chelmsford Reforms for India and era of Dyarchy;
- Congress adopts stand of conditional acceptance of Montford Reforms;
- Third Anglo-Afghan War;
- Registration of the Scindia Steam Navigation Company.

1920:

- Official birth of the League of Nations;
- First post-war economic recession begins;
- First general radio broadcast by Westinghouse station in East Pittsburgh;
- Death of Bal Gangadhar Tilak;
- Congress session at Nagpur defines aim as "Purna Swaraj";
- First Non-Co-operation Movement led by Gandhiji links up with the Khilafat movement led by the Ali Bros;
- In first six months of year 200 strikes in India involving 1½ million workers;
- Formation of the All-India Trade Union Congress (AITUC);
- Peak point of post-war inflation in India with price index double pre-war level.

1921:

- Paris and London Conferences to discuss reparations;
- Washington Conference to consider naval armaments and Far Eastern questions;
- Lenin's New Economic Policy (NEP) for Russia;
- Prince of Wales visits India;
- The Moplah Rebellion in Malabar and the Akali movement in the Punjab;
- Constitution of the Imperial Bank of India through amalgamation of the three Presidency Banks;
- Appointment of Fiscal Commission which urges "Discriminating Protection";
- Census report gives expectation of life in India as 24.75 years;
- Acworth Committee Report on Indian Railways;
- First meeting of the Central Cotton Committee;
- Royal Proclamation setting up the Chamber of Princes.

1922:

- The Fascists' "March on Rome" led by Mussolini;
- Nine-Power Treaty on China signed at Washington;
- Division of Ireland and emergence of the Irish Free State;
- Egypt declared independent sovereign State with certain reservations by Great Britain;
- Permanent Court of International Justice opened at the Hague;
- Breakdown of the Economic Conference called at Genoa;
- Chauri Chaura incident and calling off of the Civil Disobedience movement;
- Gandhiji arrested;
- Factory Act gives effect to the International Convention on hours of work, etc., in India;
- Central Government's Department of Commercial Intelligence and Statistics organised;
- East India Cotton Trade Association formed.

1923:

- French and Belgian troops occupy the Ruhr on Germany defaulting over reparations;
- Collapse of the mark. The new "rentenmark" exchangeable for one trillion old marks;
- Formal proclamation of the Turkish Republic with President Mustapha Kemal at its head;
- Swaraj Party founded by C. R. Das and Motilal Nehru;
- Mines Act regulates hours of work in mines and provides for safety measures;
- First Workmen's Compensation Act;
- Merchant Marine Committee suggests aid to Indian shipping industry but Government of India, lukewarm.

1924:

- Death of Lenin;
- First Labour Cabinet in Britain under Ramsay MacDonald;
- Great Britain recognises USSR, soon followed by other Powers;
- The Dawes Plan for German reparations adopted;
- Anglo American loan to France to help the franc;
- First circumnavigation of the globe by 4 U.S. Army planes;
- Textile general strike in Bombay involving loss of 7.75 million work days;
- Bounties and protective duties for iron and steel industry;

- India Government refuses protection to cement industry;
- Indian Cement Manufacturers' Association formed to regulate supplies and prices and formation of the Cement Marketing Company;
- Appointment of the Taxation Enquiry Committee;
- The Indian Cowl Committee appointed.

1925:

- The Locarno Conference and ensuing Treaties;
- Death of Dr. Sun Yat Sen, founder of the Chinese Republic;
- Restoration of the Gold Standard in England in the form of Gold Bullion Standard;
- Talking pictures successfully introduced;
- Countervailing Excise Duty on Indian cloth (imposed 1895) abolished;
- Protection for Indian Paper industry;
- India Government takes over E.I.R. and G.I.P. Railways for direct management and separation of Railway finance from general Budget;
- External Capital Committee reports;
- Appointment of Indian Economic Enquiry Committee;
- Formation of the Hindu Mahasabha.

1926:

- General Strike in Britain;
- Imperial Conference on the status of British Dominions;
- Germany admitted to the League of Nations;
- Revolt in Dutch East Indies suppressed with difficulty;
- Report of the Royal (Hilton-Young) Commission on Indian Currency and Exchange and Rupee ratio controversy;
- TISCO Rs. 100 shares quoted at Rs. 10—a measure of the industrial depression after the War;
- Indian Trade Union Act being first attempt to recognise Trade Unions by law;
- Completion of the Lloyd Dam in Bombay, "the largest mass of masonry in the world";
- Communal riots in Calcutta followed later by riots elsewhere in India.

1927:

- International Congress against Imperialism at Brussels with India represented by Pt. Jawaharlal Nehru;
- Tanaka Memorandum reveals plans of Japanese aggression;
- Beginning of Civil War in China;
- International Economic Conference at Geneva;
- First Trans-Atlantic telephone service opened;
- Indian Currency Act establishes rupee ratio at 1s. 6d.;
- INC protests against despatch of Indian troops to Shanghai;
- Capetown Agreement between Governments of India and South Africa;
- First May Day celebration by Indian workers in Bombay;
- Indian Tariff Act imposes nominal protective duty on imported cotton yarn;
- Preferential tariff rates for British steel;
- Federation of Indian Chambers of Commerce and Industry inaugurated;
- Radio broadcasting comes to India; Bombay and Calcutta "on the air."

1928:

- Kellogg-Briand Pact (renouncing war) adopted as an Act by the League of Nations;
- Commencement of the Five-Year Plans in the USSR;
- Deposition of King Amanullah of Afghanistan;
- 31½ million work days lost through huge strike wave in India;
- Simon Commission comes to India and is partially boycotted;
- All Parties' Conference and the (Motilal) Nehru Report virtually proposing Dominion Status as national goal;
- Congress session at Calcutta expresses readiness to accept Dominion Status if granted by 1929;
- "Independence League" formed within Congress with Pt. Jawaharlal Nehru and S. Subhas Bose as Secretaries;
- All-India Workers' and Peasants' Party formed;
- Report of the Royal Commission on Agriculture.

1929:

- New York stock market crash heralds World Economic Depression;
- Young Plan on German reparations adopted;
- Founding of the Bank of International Settlements at Basle;
- Lahore session of the Congress, under presidentship of Pt. Nehru, declares for "Complete Independence";
- Meerut Conspiracy Case against Trade Union and Communist leaders opens;

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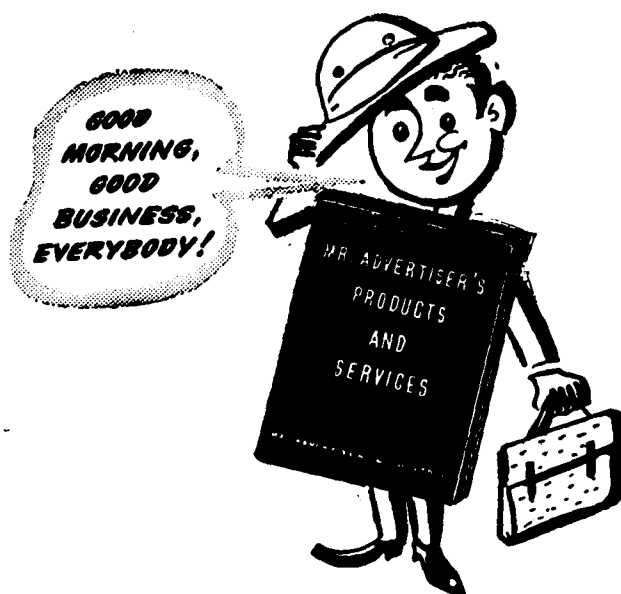
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- Establishment of the Imperial Council of Agricultural Research;
- Indian Trade Disputes Act incorporates voluntary conciliation and prohibits sympathetic strikes;
- Bombay passes first Maternity Benefit Act;
- Split in AITUC and formation of National Trade Union Federation.

1930:

- London Naval Conference adopts treaty to regulate submarine warfare;
- Colonial revolts in French Indo-China;
- Smoot-Hawley Tariff Act raises U.S. tariffs higher than ever;
- 26th Jan. observed for first time by INC as "Indian Independence Day";
- Gandhiji launches Civil Disobedience movement by the march to Dandi and his arrest;
- First formulation of the "Pakistan" demand by the Poet Iqbal;
- First Round Table Conference in London begins;
- Railways Act applies the International Labour Convention to railway workers;
- Breakdown of the Indian Shipping Conference at Delhi between British and Indian shipowners.

1931:

- Failure of the Austrian Credit-Anstalt;
- Hoover moratorium for one year on all inter-governmental debts;
- England goes off the Gold Standard;
- Japanese attack on Manchuria;
- Statute of Westminster passed by Parliament;
- Gandhi-Irwin Pact provisionally calling off the C.D. movement and Gandhiji attends the Round Table Conference in London;
- Karachi Congress Resolution on Fundamental Rights includes support for principle of linguistic provinces;
- Central Banking Enquiry Committee's Report estimates India's agricultural indebtedness at Rs. 900 crores and average annual income of the Indian agriculturist at Rs. 42;
- Report of the Royal Commission on Labour.

1932:

- Sixty-nation Disarmament Conference at Geneva ends in failure;
- Default of various European Governments in payment of war debts owed to U.S.A.;
- Ottawa Agreement inaugurates Imperial Preference to which India made party, despite adverse vote in Central Legislature;
- Gandhiji again imprisoned and Congress under ban;
- Ramsay MacDonald's 'Communal Award';
- Gandhiji's fast and the Poona Pact on Scheduled Caste representation;
- Construction completed of the Sukkur Barrage in Sind;
- Protection for Indian Sugar Industry;
- Fifty years of the Titaghar Paper Mills, largest of its kind in India.

1933:

- Adolf Hitler becomes Chancellor of Germany and soon the Fuehrer;
- Germany and Japan withdraw from League of Nations;
- International Economic Conference at London on Currency Stabilisation fails;
- F. D. Roosevelt elected President of the U.S.A. and inaugurates the 'New Deal' legislation;
- Famous Tennessee Valley Authority (TVA) created;
- India Government raises duties on non-British piecegoods and Japan boycotts Indian cotton;
- Bombay-Lancashire Textile Agreement (Mody-Lees Pact);
- Completion of the Sutlej Valley Project;
- Amendment of the Workmen's Compensation Act (1923) to widen its scope;
- All-India Organisation of Industrial Employers formed.

1934:

- USSR joins the League of Nations;
- Export-Import Bank of U.S.A. established;
- The Behar Earthquake;
- End of the C.D. movement and ban on Congress lifted;
- Gandhiji severs formal connexion with Congress, though in fact its unquestioned leader;
- Reserve Bank of India Act passed;
- Tariff Act gives substantive protection to Textile Industry;
- New Indo-Japanese Trade Agreement;

- Factory Act based on recommendations of the Royal Commission on Labour;
- Centenary of the Bengal Chamber of Commerce.

1935:

- Italy's attack on and subsequent annexation of Abyssinia;
- Germany formally denounces the clauses of the Versailles Treaty concerning her disarmament;
- Plebiscite returns the Saar to the Reich;
- Franco-Russian Mutual Assistance Pact for 5 years;
- Mutual Assistance Pact between Czechoslovakia and USSR;
- Anglo-German Naval Agreement permitting Germany to have a Navy;
- British scientists develop 'Radar' (coined from phrase: Radio detection and ranging) and first radar installation in the world set up in East England;
- Opening of the British oil pipe line from Mosul to Haifa;
- Government of India Act, 1935;
- Fifty Years of the Indian National Congress;
- Reserve Bank of India established;
- Trade Agreement between England and India extending principles of Ottawa Agreement;
- Mines Act based on recommendations of Royal Commission on Labour and Draft Convention of 1931 International Labour Conference;
- Sharp fall in raw jute prices and Jute Enquiry Committee urges voluntary restriction of acreage under jute.

1936:

- Death of King George followed by accession and abdication of Edward VII and later accession of George VI;
- German reoccupation of the Rhineland in violation of the Versailles and Locarno Treaties;
- Beginning of the Civil War in Spain and Britain and France initiate 'Non-Intervention' policy;
- The Anti-Comintern Pact (Rome-Berlin-Tokyo Axis);
- The Anglo-Egyptian Treaty;
- Lucknow Congress under presidentship of Jawaharlal Nehru marks new stage in uniting national forces;
- The Niemeyer Report on the financial settlement between Central and Provincial Governments in India;
- Indian Companies (Amendment) Act which, *inter alia*, regulates the Managing Agency system;
- Payment of Wages Act;
- Indian Central Jute Committee appointed;
- Indian Jute Mills Association completes 50 years of existence;
- General strike of 2-1¼ lakh jute workers in Bengal;
- Merger of several cement concerns into the Associated Cement Companies Ltd.;
- Imperial Institute of Sugar Technology founded at Kanpur.

1937:

- Commencement of Sino-Jap hostilities;
- Italy withdraws from the League;
- Neville Chamberlain becomes Prime Minister of Britain;
- The Moscow Trials and executions;
- Peel Commission recommends partition of Palestine;
- Death of Masaryk;
- 50 Years of the internal combustion automobile;
- Congress sweeps the Indian Elections and forms Ministries in 8 out of 11 Provinces;
- India's total agricultural debt is Rs. 1,800 crores, says Reserve Bank Agricultural Credit Department;
- Precipitate fall in sugar prices and Indian Sugar Syndicate formed to avoid internal competition;
- Government of India signs the International Sugar Agreement;
- Appointment of Second Sugar Tariff Board which urges the manufacture of power alcohol in India;
- Latest addition to India's Steel Industry, Steel Corporation of Bengal (SCOB), registered with its works near Asansol;
- Constitution of the Indian Federal Court;
- Separation of Burma from India;
- 50 years of the Bengal National Chamber of Commerce, the oldest Indian commercial association.

1938:

- The annexation of Austria by Germany;
- The Munich agreement and dismemberment of Czechoslovakia;

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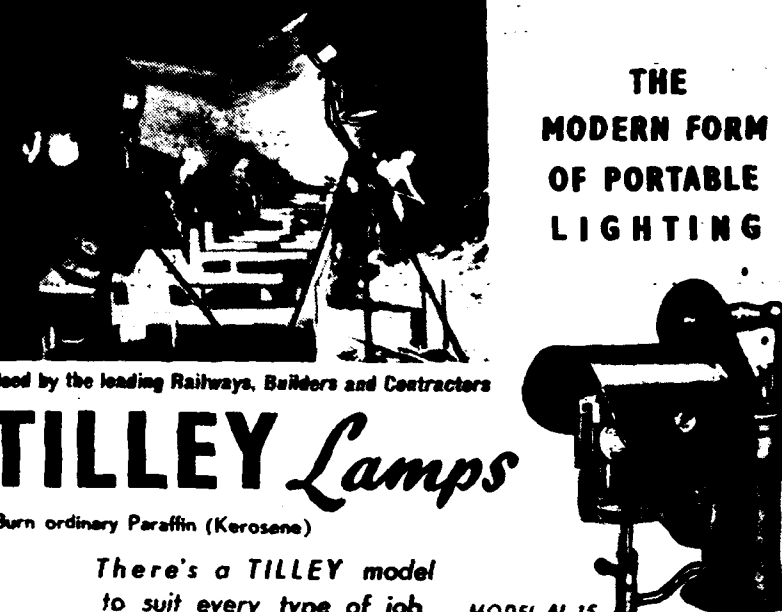
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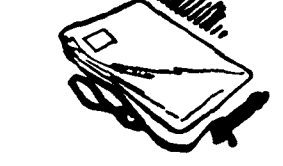
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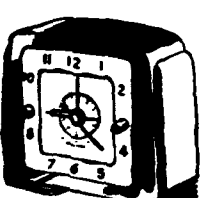
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- Anglo-Italian Pact concluded;
- End of Spanish Civil War in favour of Gen. Franco;
- Death of Kemal Ataturk;
- Conference of Industries Ministers of 'Congress Provinces' sets up National Planning Committee, with Pt. Nehru as Chairman;
- Tenancy legislation by newly-formed Popular Ministries in this and follow-
ing year;
- Bombay Industrial Disputes Act provides for compulsory conciliation and
Textile workers' strike in protest;
- Joint session of Nat'l. T.U. Federation and AITUC leading to united
AITUC;
- Ordinance prohibits Bengal jute mills from working above 45 hours a week
to check falling jute prices;
- Landlords organise first All-India Landholders' Conference;
- Death of Mohammed Iqbal;

1939 :

- German occupation of Czechoslovakia;
- Failure of Anglo-Russian negotiations followed by Russo-German Non
Aggression Pact;
- Outbreak of WORLD WAR II on 3rd September;
- USA proclaims neutrality in the War;
- Outbreak of Russo-Finish hostilities;
- Sri. S. Bhas Bose elected President of INC but subsequently resigns and
creates the All India Forward Bloc;
- Congress Ministries in India resign; Ramgarh Congress refuses support
for the War;
- Gandhiji's fast for enforcing responsible Government in Rajkot;
- Agreement between HMG and the Government of India on financing of
war expenditure in India is origin of India's Sterling Balances;
- Trade Agreement between India and England;
- Coal Mines Safety Act passed;
- Tatas begin chemicals manufacture in India at their newly established
works at Mithapur in Baroda State;
- Registration of the Textile Machinery Corp. Ltd., first important concern
for the manufacture of textile machinery in India.

1940 :

- Finland capitulates and Russo-Finish peace is signed;
- Evacuation of British troops from Dunkirk;
- Italy enters the War against the Allies;
- The fall of France;
- The Battle of Britain begins with "blitz" on London and other cities;
- Anglo-American Agreement by which U.S. destroyers are given to Britain
in return for lease of British bases in the Americas to U.S.A.;
- Lahore session of the Muslim League raises demand for separate sovereign
Muslim States in India, later called "Pakistan";
- Congress announces willingness to support war conditional on formation
of Provisional National Government at the Centre;
- Gandhiji launches individual Satyagraha campaign;
- Arrest of Pandit Nehru and other Congress leaders;
- Commencement of large-scale repatriation of India's sterling debt;
- Bengal Land Revenue (Floud) Commission recommends abolition of Per-
manent Settlement (Zemindari system) in Bengal with compensation;
- Eastern Group Supply Council formed with HQ at Delhi;
- Board of Industrial and Scientific Research established by Government of
India;
- Government of India decides to reduce silver content of rupee.

1941 :

- Lend-Lease Act passed by U.S. Congress;
- Russo-Jap Treaty of Friendship and Neutrality;
- Nazi Attack on USSR;
- Anglo-Soviet Pact signed followed by a £10 m. loan by Britain to Russia;
- Churchill-Roosevelt meeting in the Atlantic and signing of the Atlantic
Charter;
- Japanese air attack on Pearl Harbour; USA declares war on Axis;
- Death of Rabindranath Tagore;
- Disappearance of Sri. Subhas Bose from India;
- Release of Pt. Nehru and other leaders;
- Foundation of first modern commercial shipyard in India, an offshoot of
Scindia's, laid at Vizagapatam by Dr. Rajendra Prasad;
- First plane assembled by Hindustan Aircraft Factory at Bangalore;
- Indian Purchasing Mission set up in USA;

- Census records Industrial population as 4.2% of total, Indian population
(389 m.).

1942 :

- Declaration by United Nations signed by 22 countries agreeing not to make
separate peace with Axis;
- Fall of Singapore to the Japs and subsequent British withdrawal from
Burma;
- 20-Year Mutual Assistance Treaty signed between Britain and USSR;
- Thousand bomber raids on Germany commence;
- Allied landings in North Africa and recapture of Tobruk;
- Chiang Kai-Shek visits India;
- Failure of the Cripps Mission proposals for post-war Dominion Status
turned down by Indian leaders;
- The "Quit India" resolution adopted at the Bombay Congress;
- Arrest of Congress leaders and banning of the Congress initiates the August
Struggle on 9th August;
- American Technical (Grady) Mission to India submits its report;
- India's first air raid when Jap planes bomb Vizagapatam and Coconada.

1943 :

- Rout of German Army at Stalingrad after 6 months' siege;
- Mussolini resigns, succeeded by Badoglio; strikes in Italy demanding peace;
- Italy's unconditional surrender on 8th Sept.; Badoglio Government declares
war on Germany;
- Teheran Conference of Stalin, Roosevelt and Churchill records agreement
on measures to destroy Germany's military power and set up post-war
peace organisation;
- Dissolution of the Comintern;
- U.N. Food Conference opens at Hot Springs;
- U.N. Relief and Rehabilitation Administration (UNRRA) established by
delegates of 44 nations at Washington;
- General Electric (USA) announce development of 100 million volt X-Ray,
100 times more powerful than largest industrial X-Ray in use;
- Gandhiji undertakes fast for his release;
- Gandhi-Viceroy correspondence published;
- Bengal Famine. Epidemics in its wake. Official estimates of deaths are
11 millions, unofficial 3 millions;
- Formation of the 'Indian National Army' by Sri. Subhas Bose at Singapore
and setting up of the 'Azad Hind Government';
- 4th Indian Division's brilliant exploits in North Africa fighting;
- Disbandment of Eastern Group Supply Council;
- Creation of Dept. of Industries and Civil Supplies.

1944 :

- Allied forces invade Normandy on 6th June;
- Uprising in Paris and its liberation after 4 years occupation;
- Three-Power Dumbarton Oaks Conference proposes UNO;
- Franco-Soviet Pact of Alliance and Mutual Assistance;
- Beginning of Civil War in Greece;
- U.N. Monetary Conference at Bretton Woods proposes International Mone-
tary Fund and Bank for International Reconstruction and Development
(World Bank), both set up in following year;
- British Social Security Plan published in White Paper;
- Major Jap offensive at Imphal thrown back;
- Release of Mahatma Gandhi;
- Gandhi-Jinnah talks in Bombay break down;
- Publication of the Bombay Plan on National Development by Messrs. Tata,
Birla and other leading industrialists;
- Government of India sets up its Planning and Development Department
under Sir Ardeshir Dalal;
- Creation of Central Technical Power Board.

1945 :

- Roosevelt-Stalin-Churchill Conference takes momentous decisions on post-
war world at Yalta;
- Death of President Franklin D. Roosevelt;
- United Nations Conference on International organisation opens at San
Francisco;
- Execution of Mussolini by Italian partisans;
- Germany's unconditional surrender to Western Allies and USSR. With
Four-Power military occupation of Germany;
- Labour Government takes office in Britain after victory at general election;
- Three-Power Potsdam Agreement on Germany signed by Truman, Attlee,
Stalin. Setting up of Council of Foreign Ministers;

- Atom Bombs dropped on Hiroshima and Nagasaki;
- USSR declares war on Japan;
- WORLD WAR II ended with Jap signing of surrender documents on 2nd September. Occupation of Japan under Gen. MacArthur;
- Indonesian revolt against Dutch rule; Indonesian Republic proclaimed by insurgents;
- World Federation of Trade Unions (WFTU) organised;
- Truman orders halt to Lend-Lease operations to all Allies;
- Anglo-American Loan Agreement signed;
- Death announced in an aeroplane crash of Sj. Subhas Bose;
- Release of Congress Working Committee members and Bombay session of INC, the first since 1942;
- Failure of the Simla Conference called by Lord Wavell to end Indian political deadlock;
- Birla-Nuffield agreement for the manufacture of automobiles in India;
- Towards loco manufacture in India with Tata Locomotive and Engineering Co. established;
- U.S.-India agreement on disposal of U.S. surplus property in India.

1946 :

- UNO's first General Assembly meeting opens in London with 51 Nations represented;
- Breakdown of Truce and renewed civil war in China;
- Severe fighting breaks out in Viet Nam;
- Recognition of Philippine Republic's independence by USA;
- Nationalisation of the Bank of England;
- Franco-U.S. Loan Agreement signed in Washington;
- The R.I.N. Mutiny in Bombay;
- All-embracing strike wave, 2 million workers affected and over 12 million man days lost in course of the year;
- Elections in India, Congress and League sweep general and Muslim seath;
- Cabinet Mission to India leaves without any final settlement reached;
- Muslim League's 'Direct Action' threat. Riots in Calcutta, Noakhali, Bihar, Bombay, etc.;
- Formation of Interim Government at Centre, including Congress and later, League leaders;
- Constituent Assembly meets at Delhi, Muslim League and Princes abstaining. Pt. Nehru introduces Objectives Resolution, adopted next January, declaring India a sovereign Independent Republic;
- Discussion between HMG and Indian leaders in London;
- India lodges complaint against South Africa with U.N. General Assembly;
- India's first foreign loan, Rs. 5 crore loan given to Siam;
- Indo-Argentine Trade Agreement barter for Food.

1947 :

- Announcement of U.S. aid for Greece and Turkey as part of 'Truman Doctrine'; 400 million dollars voted by Congress for aid;
- Secretary of State Marshall offers U.S. aid for reconstruction of Europe: birth of the 'Marshall Plan';
- Paris Conference of 16 European nations—the Soviet bloc staying out—draws up plans for recovery and claims U.S. aid;
- U.N. Special Committee on Palestine recommends end of British mandate and partition into Jewish and Arab States;
- Peace Treaties with Italy, Hungary, Rumania, Bulgaria and Finland signed;
- 'Cominform' established at Warsaw conference of 9 Communist Parties;
- Coal Board takes over nationalised British coal industry;
- Asian Relations Conference at Delhi; 250 delegates from 25 Asian countries attend; Asian Relations Organisation set up;
- Indian Independence Bill—based on Mountbatten plan of partition—enacted by Parliament;
- Midnight of 14th-15th August Dominions of India and Pakistan born;
- The Post-partition riots in Punjab and Delhi;
- Raiders cross into Kashmir, which accedes to India; Indian Army marches to defend Kashmir;
- Standstill Agreement between India and Hyderabad;
- Nehru's condemnation of Dutch action in Indonesia and ban on Dutch aircraft landing in India;
- Government-owned fertiliser plant proposed which when completed will be largest chemical plant in Asia outside Japan;
- Industrial disputes legislation by Central and Provincial Governments;
- Formation of Indian National Trade Union Congress;
- Sixty years of Tatas, Biggest business house in India, controlling companies with a total capital of over Rs. 80 crores;
- India opens direct diplomatic relations with USSR for first time.

1948 :

- Growing rift between Western Powers and Soviet bloc expressed in

- Brussels Treaty and formation of Western Union Defence Council;
- Relations further strained by Berlin crisis;
- The February coup in Czechoslovakia put Communists in undisputed power;
- British withdrawal from Palestine; State of Israel proclaimed by Jews;
- large scale fighting between Jews and Arabs;
- Communist-led risings in South East Asian countries;
- U.S. Congress votes 5.3 billion dollars for European aid in first 12 months;
- 57 nations, India among them, sign Havana Charter for International Trade Organisation, providing for mutual tariff concessions;
- U. N. Economic Commission for Asia and Far East meets at Ooty;
- First Trans-Atlantic flights by British and American jet fighter planes;
- Gandhiji's last fast, directed against riots. Assassination of Mahatma Gandhi;
- Last British troops leave India; departure of Lord Mountbatten; Sri Chakravorti Rajagopalachari, first Indian Governor-General of the Union;
- UNO's Kashmir Commission arrives in India;
- Death of Qaid-e-Azam M. A. Jinnah;
- Indian Army marches into Hyderabad to restore internal order against Razakar depredations; Hyderabad surrenders;
- India and Pakistan Sterling Balances Agreement with U.K. covering 3-year period;
- Union Government announces industrial policy: No nationalisation for 10 years but Government to control new enterprises in key branches of economy;
- Bills to abolish Zemindari with compensation introduced in Bihar and Madras;
- Enactment of Reserve Bank Nationalisation Bill;
- Damodar Valley Corporation set up, project to take 10 years and cost Rs. 55 crores;
- Bill to set up Industrial Finance Corporation with authorised capital of Rs. 10 crores;
- Pandit Nehru at Vizagapatam, the "Jalausha," first large commercial vessel to be built in India;
- Employees' State Insurance Act;
- Measures announced to meet serious inflationary crisis in India; wholesale price index almost 4 times pre-war;
- CAPITAL completes 60 years of publication.

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