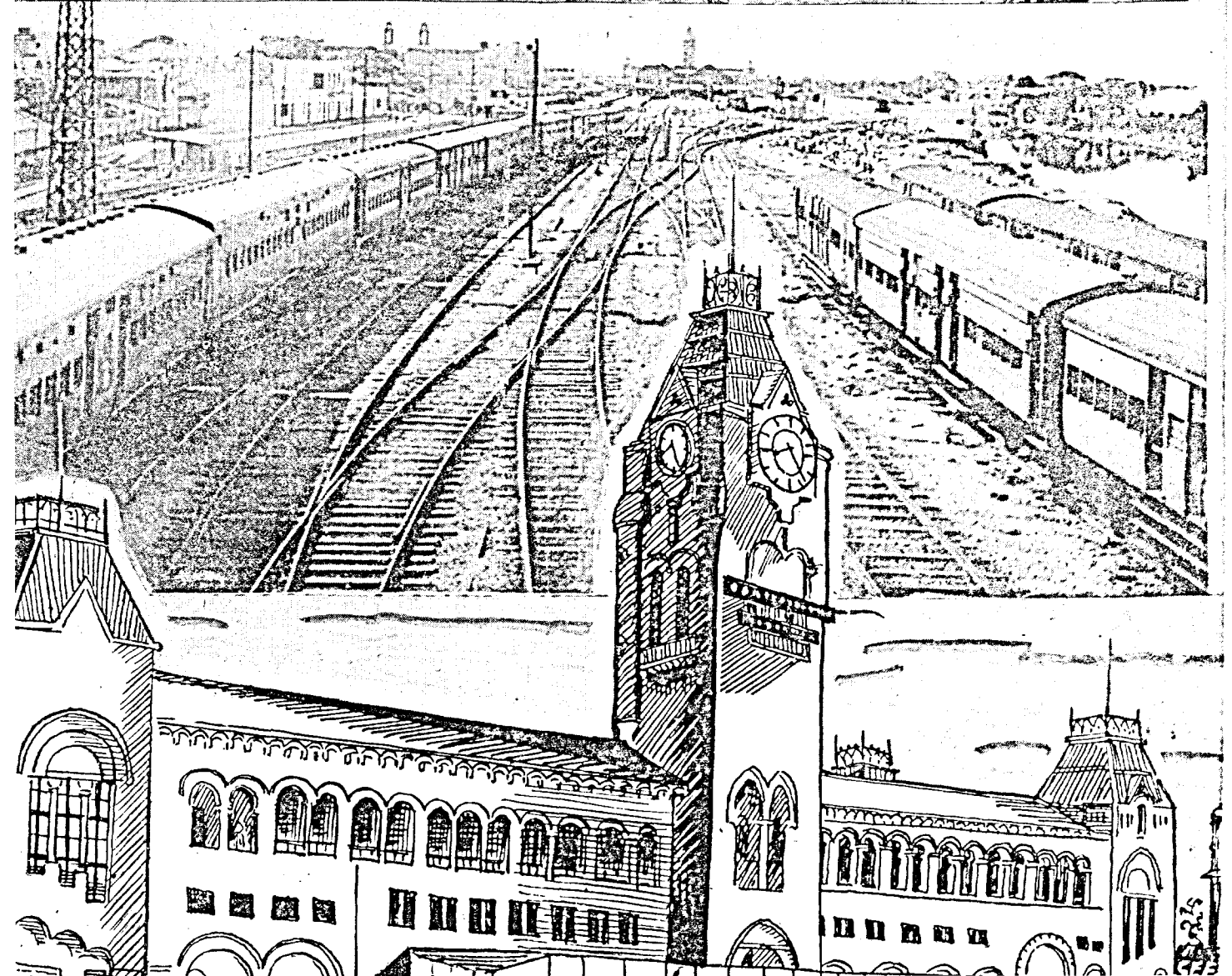


Southrailnews

MAY, 1961



137229
RAILWAY ROLLING STOCK & COMPONENTS

POINTS & CROSSINGS

STRUCTURAL STEELWORK

PRESSED STEEL TANKS

STEEL, SPHEROIDAL GRAPHITE & GREY IRON CASTINGS

MACHINE PARTS & COMPONENTS

FORGINGS, STAMPINGS & PRESSINGS

SLUICE VALVES

TWIST DRILLS

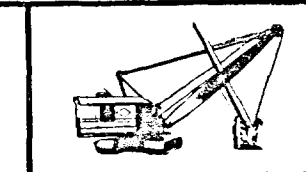
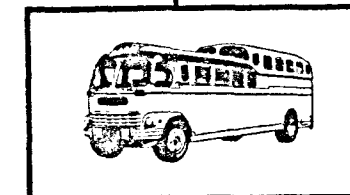
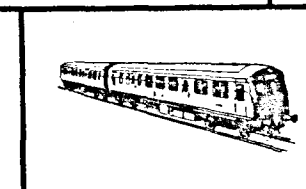
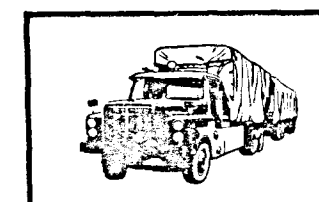
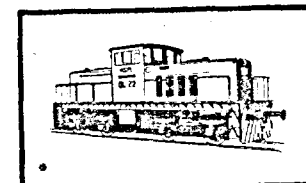
CRANES & PULLEY BLOCKS

BURN & CO. LTD.
HOWRAH WORKS

Managing Agents: MARTIN BURN LIMITED MARTIN BURN HOUSE 12 Mission Row, Calcutta 1
Branches: New Delhi Bombay Kanpur

Agents in South India: THE SOUTH INDIAN EXPORT CO. LTD. MADRAS 2

SPECIFY ROLLS-ROYCE DIESELS



FOR EVERY INDUSTRIAL PURPOSE

- Absolute reliability
- Competitive price
- Lightweight, compact design
- Simple maintenance
- On-the-spot after-sales and spares service

Production in the 70-700 b.h.p. range has now been doubled. As a result Rolls-Royce are able to offer their engines at increasingly competitive prices.

Ask Jacks about it!

WILLIAM JACKS & CO. LTD.

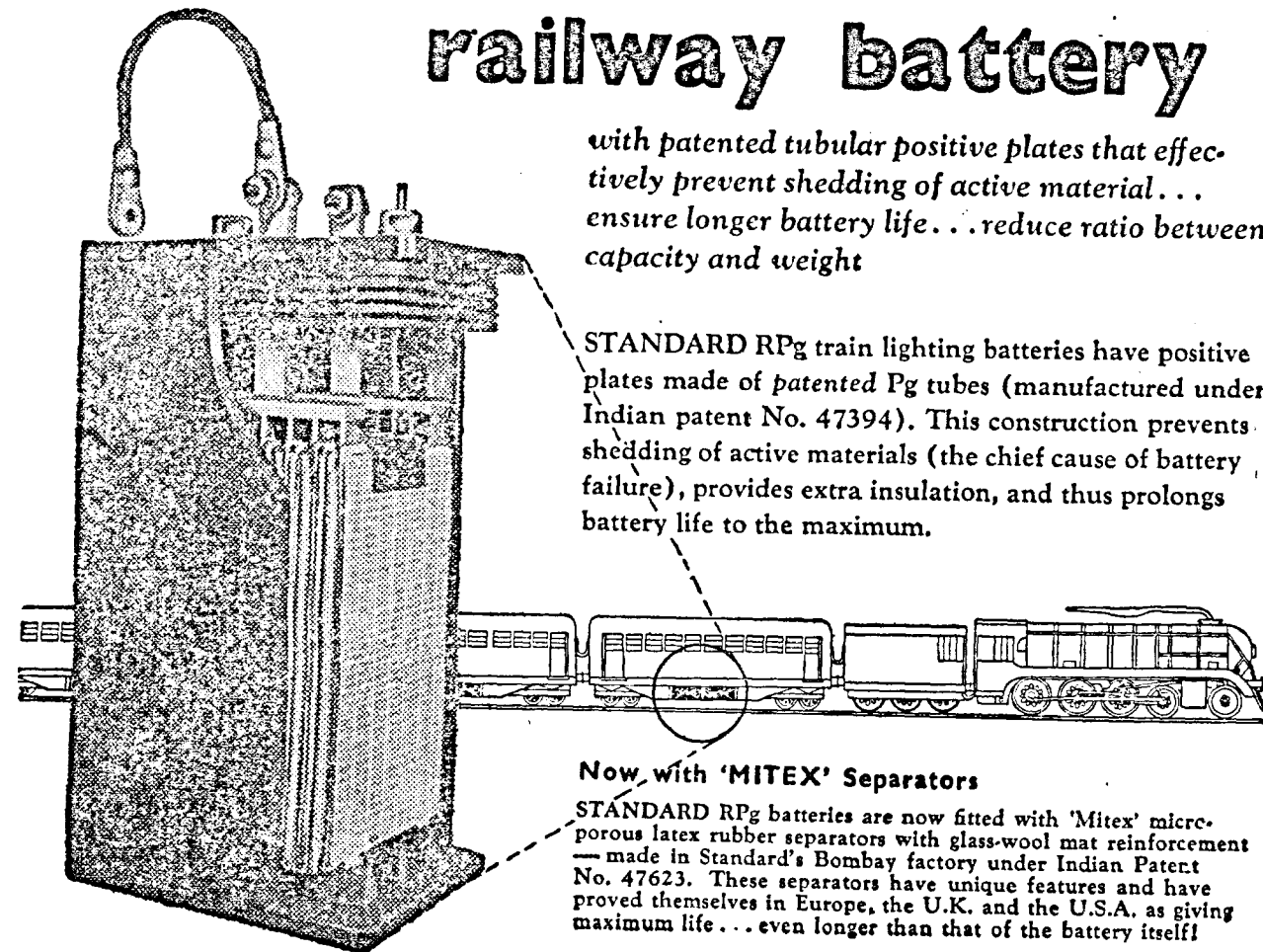
(Incorporated in England. Liability of Members Limited)

CALCUTTA • BOMBAY • MADRAS • NEW DELHI

Our experience and advice are available to you at all times.

A masterpiece in battery making!

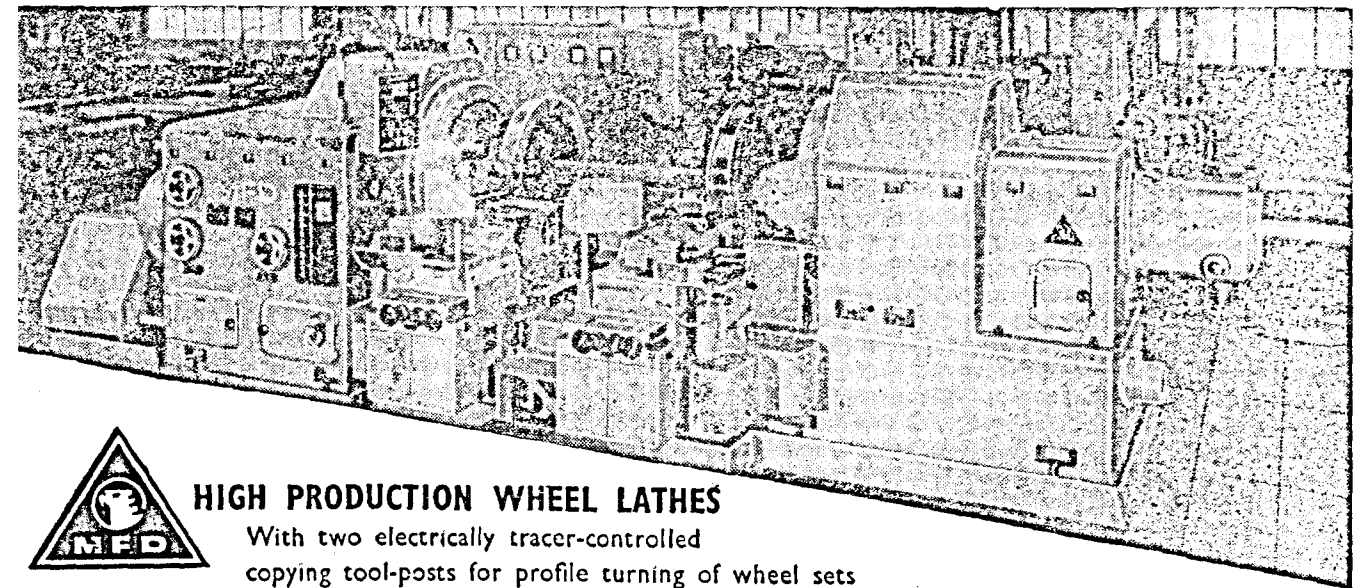
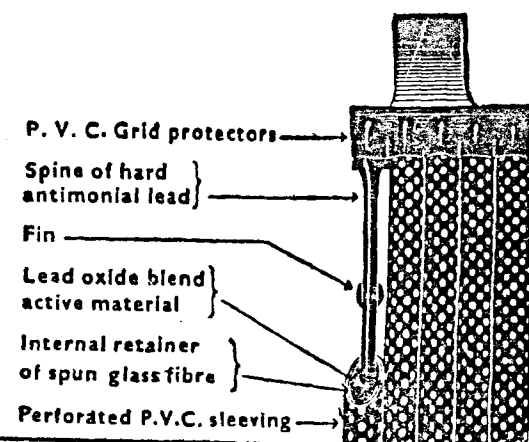
Standard railway battery



**STANDARD BATTERIES
LIMITED**

Santa Cruz, Bombay 23

WT-579. 6050 (R.)



HIGH PRODUCTION WHEEL LATHES

With two electrically tracer-controlled copying tool-posts for profile turning of wheel sets

MASCHINENFABRIK DEUTSCHLAND AG • DORTMUND

MFD MANUFACTURING PROGRAMME ALSO INCLUDES:

Axle journal turning and burnishing or grinding machines	Spring bundling presses
Hydraulic wheel presses	Centre lathes
Spring eye rolling machines	Facing lathes
Spring winding machines	Roll turning lathes
	Rail bending machines
	Hydraulic Rerailing Equipment



CONTACT:
**FRANCIS KLEIN & CO.,
PRIVATE LTD.**
1, INDIA EXCHANGE PLACE, CALCUTTA-1
SHOWROOMS: 13A, GOVT. PLACE EAST

Resident Engineer in South India:

I. S. SOMASHEKAR, "Kalpana" 325, 2nd Block, Jayanagar, Bangalore-11

SOUTHRAILNEWS

(Published by the Southern Railway)

VOL. VIII

EDITORIAL NOTICE

NO. 2

K. SRINIVASAN, Editor

All contributions must be clearly typed and double-spaced on one side of the paper only, and signed, not necessarily for publication but as a guarantee of good faith.

The Editor does not assume any responsibility for the accuracy of the news supplied by correspondents or for opinions expressed by contributors. Opinions expressed in the *Southrailnews* whether editorially or by contributors should be regarded as having no official authority.

Annual Subscription Rs. 4-50

Single copy Rs. 0-37

Subscribers are requested to inform the management of the change of address, if any, well in time to avoid misdelivery of copies.

Railway employees drawing a salary of Rs. 400 and over, can pay the subscription through their salary bills, and others should remit the full amount by M.O. to

THE EDITOR

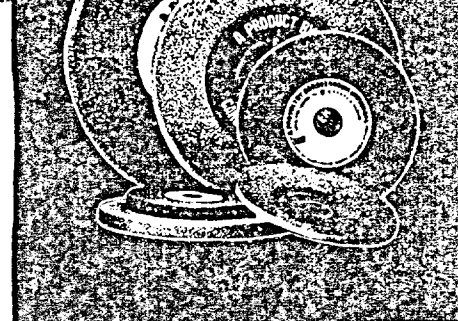
"Southrailnews" 18-A, Mount Road, Madras-2

**STANDARD MOTORS rely on
CARBORUNDUM UNIVERSAL ABRASIVES
for all grinding operations**



"The moving parts in a motor car must be ground to very close limits of accuracy and with good finishes, so as to prevent friction and so prolong the life of the parts. Carborundum Universal grinding wheels enable us to obtain the perfect accuracy and fine surface finishes so essential for the production of these moving parts. Also, the consistent good quality of Carborundum Universal abrasives, assures us of the high standard of every grinding operation."

— STANDARD MOTOR PRODUCTS
OF INDIA LTD.,
MADRAS



We now manufacture
CARBOFLEX Reinforced Depressed
Centre Wheels for foundries and for
weld dressing operations

In any industry... for any grinding operation...
you can rely on Grinding Wheels made by

CARBORUNDUM UNIVERSAL LTD.

Head Office: 52/53, Jehangir Street, Madras-1 Telephone 2941 (8 lines)
Works: Tiruvottiyur

Distributors: MESSRS. WILLIAM JACKS & CO., LTD.,
Calcutta-1, Bombay-1, Madras-1, New Delhi, Bangalore-1, Kanpur, Hyderabad.
For Specialties only: MESSRS. H. S. COX & CO. PRIVATE LTD., 24, Rampart Row, Bombay.

068-23

Contents

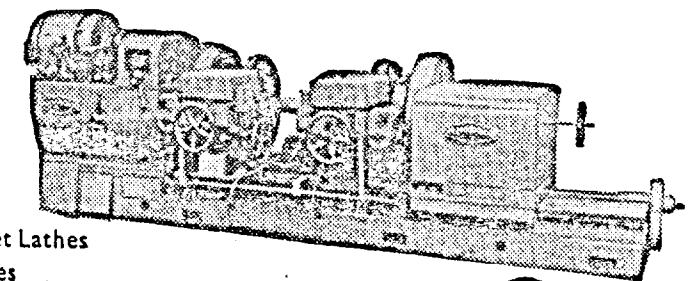
MAY 1961

Editorial	...	7	From Steam to Electricity	...	31
Indian Railways—Lifeline of the Nation	...	9	Tribute to a Patrolman	...	35
Nomenclature in Advertisement	...	14	Children's Corner	...	37
Railway Freight Rates	...	15	Book Review	...	39
Rabindranath Tagore	...	20	S. R. News	...	43
North-East Frontier Railway Does It	...	22	Cover :		
Talent Achieves	...	27	Remodelled Madras Central Station.		

WHEELSET LATHES OF Outstanding Performance

Made by:
Wilhelm Hegenscheidt, K. G.,
Germany

- Locomotive Wheelset Lathes
- Wagon and Carriage Wheelset Lathes
- Multipurpose Wheelset Lathes
- Turning & Roller Burnishing Wheelset Lathes



Agents for the whole of India

DISTRIBUTORS: **BATLIBOI & COMPANY**

PROPS: BHOGILAL LEHERCHAND PRIVATE LTD.,

Registered Office: FORBES STREET, BOMBAY-1.

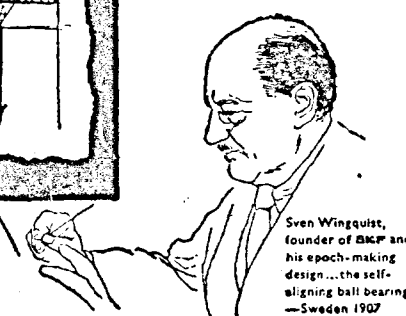
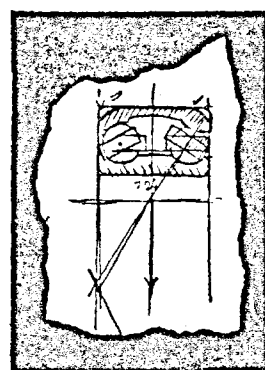
BRANCHES: AHMEDABAD, CALCUTTA, COIMBATORE, DELHI, KANPUR, MADRAS,
SECUNDERABAD AND VIJAYAWADA
ASSOCIATE: BANGALORE.

from this
little sketch

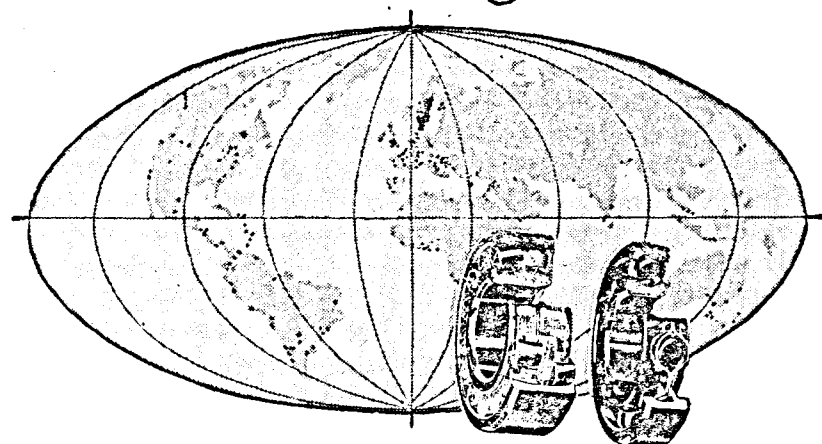
grew the

SKF

world-wide organization



Sven Wingquist,
founder of SKF and
his epoch-making
design... the self-
aligning ball bearing
—Sweden 1907



The place was Sweden—the year 1907, when Sven Wingquist invented the first self-aligning ball bearing, which revolutionized the bearing industry.

Manufacturers liked the new type of bearing and demand for it became world-wide.

With the passing of time SKF has grown with the industry it serves.

Today you will find SKF at work on all types of machinery in every industry, filling the intricate precision requirements of the jet aircraft, to the tough needs of huge construction units. Wherever a bearing is required, SKF will meet the requirement—with the finest bearing in the world.

THE SKF BALL BEARING CO. PRIVATE LTD.

P. O. Box 71, Sir Pherozeshah Mehta Road, Bombay. P. O. Box 588, Netaji Subhas Road, Calcutta.

SOUTHERAILNEWS

(Published by the Southern Railway)

VOL. VIII

MAY 1961

No. 2

TRANSPORT CO-ORDINATION

A Committee was appointed under the Chairmanship of Mr. K. C. Neogy to recommend a long term policy on transport and its co-ordination, "having regard to various economic and other relevant factors, to define the role of various means of transport in the next 5 to 10 years against the background of long term policy; and to suggest suitable mechanism for the co-ordination of the various means of transport.

The Committee has reviewed several inequalities and disabilities railways suffer through certain statutory obligations enjoined on them by the Government, increasing haulage of low-rated traffic which involve actual financial loss and other losses.

The report suggested a careful examination of the policy and practice concerning licensing of commercial road transport having regard to the long term considerations pertaining to road-rail co-ordination and against the background of the division of authority between the States and the centre in regard to regulation of road transport as stipulated in the constitution.

The report also drew attention to the recent tendencies on the part of nationalised transport undertakings in the States to introduce long distance bus services without regard to their effect on the Railways on the routes concerned.

The Committee has favoured the adoption for the present policy of securing co-ordination of various forms of transport through appropriate Government regulation in preference to free unrestricted competition and integration of the rail and road services into one single unit.

A policy of securing co-ordination of various forms of transport through appropriate Government regulation in preference to unrestricted competition and integration of rail and road services, has been recommended by the Neogy Committee on transport policy.

The Committee has expressed concern about the decline in railway earnings owing partly to competition from road transport.

On the basis of the information collected by the Committee, it appeared that a large number of commercial undertakings in the country had resorted to greater use of road transport for movement of their goods and the share of road transport in the total despatches by these firms had increased appreciably during recent years. These firms had shown preference for road transport for long distance haulage in respect of several types of traffic for various reasons. The share of rail transport in the goods moved on account of these firms had accordingly declined. On the basis of the available data, it seemed that a certain amount of traffic in commodities which had to bear comparatively higher freight rates on the Railways was being diverted from Railways to road transport.

On a comparison of the average earnings of the Railways from traffic of important commodities with the average cost of haulage, the Committee had shown that in respect of a number of low-rated commodities like coal, ores, food-grains and salt the Railways had to incur a loss both on broad gauge and metre gauge line.

Thus, it is clear that the Railways have to do a strenuous job carrying the heavy minerals and bulky goods at comparatively cheap rates and also carry costly commodities at low rates. It is incompatible for the Roadways to aspire to carry high rated commodities at comparatively lower rates than Railways and also to convey the bulky goods and heavy minerals, for which the railways are better suited.

In recent years the increase in expenditure on Railways has been higher than the effective increase brought about in the freight rates per ton-mile or fares per passenger mile. This is unmistakably a reflection of the shift in the pattern of traffic moving by rail consequent upon the preponderance of low-rated traffic coming to rail without any corresponding increase in the high rated commodities.

These factors have to be taken into consideration in arriving at decisions on the subject of co-ordination,

NEW MUSEUM OF TRANSPORT

The evolution of public transport in the United Kingdom—where the first railway engine was built and the first railway service operated—is the theme of a new museum in London.

The first section has six galleries where the main feature is the story, in picture and model, of the evolution of rail travel in Britain from the invention of the locomotive in the early years of the last century. The world's first railway service began between Stockton and Darlington in northern England, in 1825, and the first engine was built by British engineer George Stephenson. A working model of his link-motion, which controls the expansion of steam in the locomotive cylinders, is included among the exhibits.

This is the first permanent exhibition in Britain devoted entirely to the history of road, rail and water transport, it is being established in two sections by the British Transport Commission for the preservation and display of their historical treasures.

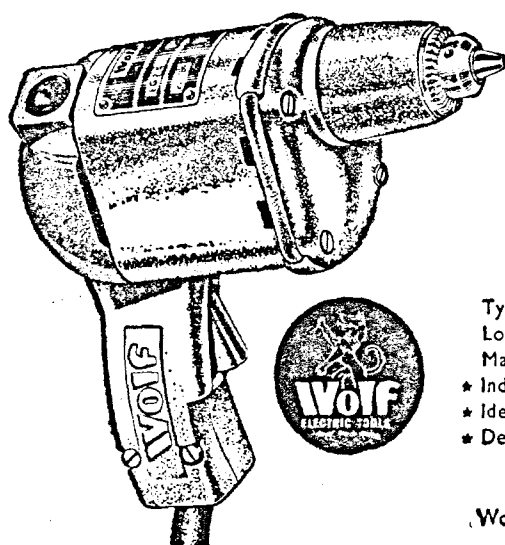
Also on display are maps, crests, time-tables, uniforms, tickets and models of steamships and barges. In an alcove off the main gallery, electrically operated

machines show films continuously tracing the history of railways in the United Kingdom.

Here will overseas people see what happened in the early years of rail travel.

Edward Pearse, one of the largest shareholders in the Stockton and Darlington Railway, was so impressed with Stephenson's locomotives and with the immense advantage to be derived by their use, that he and another shareholder, Thomas Richardson, advanced Stephenson £1,000 to assist him to commence the business of locomotive construction at Newcastle. That small workshop subsequently developed into the world famous Forth Street Works from which railway locomotives were exported to all parts of the world.

The results of the opening of the Stockton and Darlington Railway were in some respects surprising, for although the conveyance of passengers had formed no part of the original scheme, yet on the first day many hundreds of people made the excursion and soon persons insisted upon being carried by railway regularly. It thus became, as we have seen, necessary to provide carriages adapted to their requirements and thus began in a small way the story of the railway passenger traffic which now amounts to many millions of persons each year on the railways of the world.



PINT-SIZE TOOL WITH OUT-SIZE PERFORMANCE!

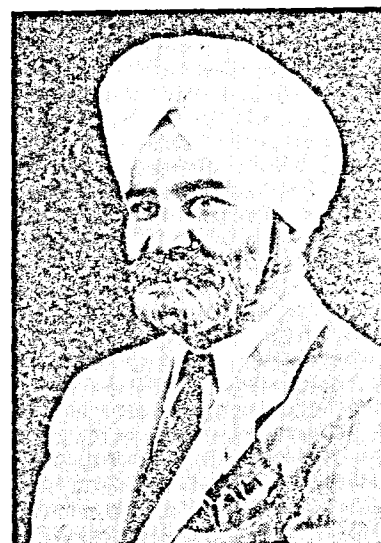
— the **WOLF** packs a lot of Power!

Type EG2C 1/2"
Low-weight production drill
Made in India by Ralli Wolf Private Ltd.
★ Industry's first choice
★ Ideal for production line conditions
★ Dependable and easy to handle

Wolf assures spares and prompt service

Sole distributors: RALLIS INDIA LIMITED Bombay • Calcutta • Madras

Write today for details of the **WOLF** range of Portable Electric Tools



Indian Railways— Lifeline of the Nation

KARNAIL SINGH

Chairman, Railway Board

THOSE of us who were born in the first decade of this century are lucky to have lived through the most exciting period of history. The two world wars, the struggle for independence and its achievements; the horror and chaos that followed partition; and finally the triumphant progress during the First Two Plan period are some of the major incidents during this period.

The Indian Railways as the nation's largest industry, have been a mirror of its fortunes through these years. The Railways in India were born 108 years ago and I am proud to have worked for them for nearly one third of this—not an inconsiderable length of time. I joined the railways in 1927 during the short-lived boom after the first world war. In those days, the term 'Indian Railways' covered a sub-continent, part of which is now Pakistan, Burma besides India proper. The Railway network itself was divided in a number of units, small and big, some belonging to the Indian Government, some to the Princely States, some privately owned and others managed by British Companies.

Joining as I did at the tail end of the boom period, it was not long before the depression swept across us from overseas and "retrenchment" and "make-do" were the watchwords. Luckily I was not retrenched but hung on somehow. Then it was not a question of replacing rolling-stock, but how to maintain it on next to nothing. More tracks could not be laid, when we did not have the wherewithal even to pay for packing the existing tracks. Far from putting up new buildings, it was difficult to find funds to whitewash them. Several new constructions were stopped half-done.

Slowly, however, things improved and by 1937, the tide had turned sufficiently to think of replenishing

our depleted stock and re-laying some tracks. Estimates were made and orders placed. There was of course practically nothing made within the country. Young people today will find it hard to believe that even such minor carriage fittings as bulbs, bolts and brackets had to be imported from abroad.

Railway Resources for War Efforts:

Before, however, any of this rolling-stock and equipment could arrive in the country, war broke out and put a full stop to our getting anything.

Instead of maintaining the worn-out locomotives and other stock, the Railway Workshops were called upon to produce ammunition and equipment for the army. Other available resources were put to military use.

At first the requirements were for the Western theatres of war, involving the extension of lines across Baluchistan into Zahidan (Iran) and supply of locomotives, coaches and wagons as also railway track to Middle East to strengthen and sustain the supply lines to Russia and North Africa.

Then almost overnight we had to reverse gear and switch over towards the East, doubling railway lines and developing the transport system to fight the enemy, who was at our door-step.

Partition and After:

The end of the war was followed closely by Independence and the partition of the country when large numbers of experienced railwaymen both British and Muslims left us. It was a time of great patriotic fervour

and we railwaymen, like every Indian, were determined to prove ourselves. Many of us spent sleepless nights, wondering whether we will be equal to our task.

I have recounted elsewhere how the great Sardar Patel called me on June 27, 1947, to enquire whether we would be able to carry on if every British officer (and there were large numbers) left all at once. I am glad Sardarji lived long enough to see that we were as good as our word. Not only did we take over without any interruption in services and efficiency, but coped with the unprecedented and unforeseen confusion of partition. I wish he was here today to see how we have grown and expanded.

Railways—a Public Utility Service:

It should be remembered here that the Indian Railways which we inherited were by no means built up as a public utility service, but primarily to meet strategic requirements and for commercial exploitation of the hinterlands around the ports. Some of the problems in regard to lack of amenities to passengers and staff that we encounter today are a direct outcome of this inheritance. With the dawn of independence, therefore, the Railways had to be integrated as a national system and re-orientated to meet the public demand for comfortable and convenient passenger travel as well as the movement of the goods required by a rapidly expanding industry.

The Railways could not and did not wait for the start of the Five-Year Plans. Before national planning began and during the difficult post-war and post-partition period, that is in the years 1948 to 1950 we carried out three of our major schemes.

The Assam Rail Link was built to join the virtually isolated and truncated Assam Railway to the rest of the national system. In the words of Sardar Patel, it "formed a very vital link in the consolidation of our country". Chittaranjan Locomotive Works were set up and the first locomotive was turned out by November 1950. For passenger coaches, plans were finalised to lay out the Integral Coach Factory as a large-scale production unit.

First Five-Year Plan:

The main objective of the Railways' First Five-Year Plan was to replenish the decrepit rolling-stock and other assets. Within an expenditure of some 432 crores, no less than 1,589 locomotives, 4,837 coaches and 61,713 wagons were acquired, nearly 430 miles of dismantled

lines were restored and 380 miles of new lines constructed.

This enabled the railways to carry 36,000 million ton miles of originating traffic at the end of the First Plan period against 27,000 million ton miles in 1950-51. Passengers carried were 1,275 million per annum.

Second Plan Achievements:

The Railways' Second Five-Year Plan can be regarded as one of consolidation and modernisation. Thus, the Second Plan had to make provision for overtaking the arrears of replacement as also to plan for an increase in traffic. Against an allocation of 1,121 crores, more than 2,000 locomotives, about 8,500 coaches and nearly 1,00,000 wagons have been added to the fleet of rolling-stock.

Some 800 miles of new construction have been completed. Important among these may be mentioned the Chandrapura-Muri-Ranchi, Bondamunda-Dumaro, Noamundi-Banspani, Bhilai-Dhalli-Rajhara and others, aggregating to some 275 miles to serve the industrial and mining areas. An important achievement has been the construction of 187 miles of MG line, connecting Khandwa and Hingoli, to link the separate northern and southern MG systems. The Broad Gauge line to Siliguri via Tildanga and Farakka is expected to be opened soon.

Doubling of track over 800 miles long has been completed and substantial progress made on another 500 miles. This has enabled the railways to carry 54,000 million ton miles of freight traffic at the end of the Second Plan, an increase of 50 per cent. The passenger traffic rose to 1,624 million.

Railway Bridges:

The Second Plan has also seen the completion of the Rajendra Pul over the river Ganga well ahead of schedule. Completion of the Jagjivan Pul over the river Gandak is yet another notable contribution towards better and speedier transport across major rivers. The work on the turbulent and yet unbridged Brahmaputra is proceeding satisfactorily. The special features in the design and construction of this bridge have aroused international interest.

Extensive dieselisation and electrification on sections which have reached the saturation point on steam traction, has been undertaken. During the Second Plan the railways have acquired 100 B.G. main line diesels which are proving extremely useful on the steel

use EVEREADY
TRADE MARK

Type No. 6-I
RAILROAD BATTERIES

**SPECIALLY DESIGNED
FOR RAILWAY SIGNAL CIRCUITS**

IDEAL FOR

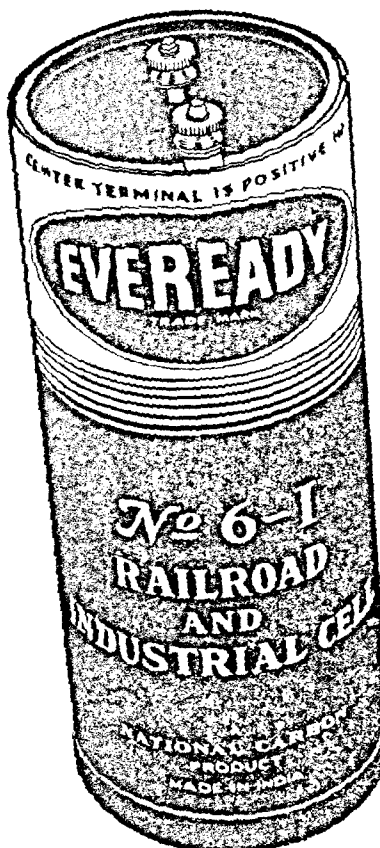
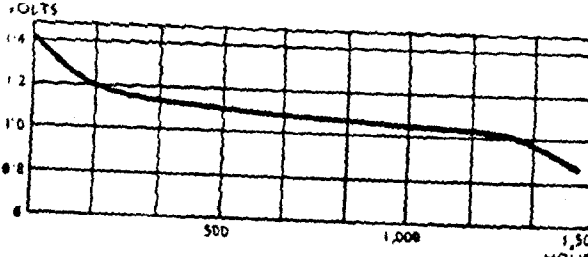
- Token and needle type Block Instruments
- Slot-reverser circuits
- Signal arm and light repeaters
- Telecommunication application

Specify "Eveready" No. 6-I Batteries for:

Ready use — no preparation necessary no cleaning, no adding chemicals

Economic service — costs less per hour of operation

Dependable long life — 25% more service than acceptance specification at 30 ohms continuous and other heavy duty tests.

Eveready Type No	Nominal Voltage	Terminals	Overall Dimensions in inches		Standard Packing	
			Diameter	Height	Quantity	Weight in seers
6-I	1.5	Screws	2½	6½	24	32

use EVEREADY
TRADE MARK

Type No. 6-I
THE IDEAL RAILROAD BATTERY

UNION CARBIDE INDIA LIMITED

and coal belt areas on the Eastern and South-Eastern Railways. Electric traction on 25 KV Single Phase A.C. System has already been introduced on a few hundred miles on the Eastern and South-Eastern Railways in the coal and steel areas.

Self-sufficiency Drive :

By far the most notable achievement during the Second Plan period has been in the sphere of indigenous production of rolling-stock and railway equipment.

This has been made possible due not only to the production of more than 1,150 locomotives from Chittaranjan since it commenced production and more than 1,500 coaches from the Integral Coach Factory, but due to a substantial contribution from a continuously developing industry in the Private Sector which manufactured vast quantities of railway equipment from wagons to pins.

Third Plan Targets :

The draft outline of the Third Plan published some-time ago has placed the tentative allocation for the railways as Rs. 1,255 crores, including inventories. According to this Plan, the railways will have to carry 93,000 million ton miles of originating traffic and a 15 per cent increase in passenger traffic.

If the experience of the Second Plan is any guide, the actual increase in passenger traffic will perhaps be much higher. To attempt the planned increase of 72 per cent in ton miles of freight with an allocation of only 12 per cent in excess of the provision in the Second Plan is a formidable task indeed.

Provision has been made for the construction of 1,100 miles of new lines out of which about 200 miles may be required in connection with the development of coal industry.

Spurt in Traffic :

A significant feature of the railway operations in recent years has been the spurt in long distance traffic. While the volume of traffic has gone up, the lead has increased from some 317 miles in 1955-56 to 348 miles in 1959-60.

Combined with the growth of originating traffic, therefore, the increase in hauls has resulted in a phenomenal rise in freight-ton miles carried by the railways.

Before closing this article I feel it would be interesting to look up statistics to indicate performance on Indian Railways, since the time I joined them. In 1926-27, Indian Railways, were a vast system with a route mileage of nearly 40,000 and carried 604 million passengers in that year, along with 20,000 million ton miles of freight.

Twenty years later, in 1947-48 just after Independence, the route mileage was reduced to 34,000 on which we carried 1,044 million passengers and the freight moved was 20,000 million ton miles. In the year 1960-61, just ended, the route mileage increased to 35,437, which carried 1,650 million passengers and 54,700 million ton miles of freight traffic. Much of this tremendous expansion and achievements made by Indian Railways are the result of unstinted devotion to duty, which is a tradition very dearly preserved by the eleven and a half lakh strong family of India's railwaymen.

Assistance from Abroad :

In recent years the rapid expansion and modernisation has come about to a large degree as a result of the generous financial assistance from friendly foreign countries and, notably, the World Bank. Comparatively we have employed very few foreign technicians to assist but the funds available through loans have been utilised to the fullest advantage.

Railways Deliver Nation's Goods :

In India there is an all round advancement, expansion of agriculture and development of industries ; many units are already working full steam, some have just started and others are in the making. Railways provide all transport requirements during the construction, reaching all raw materials and distributing finished products.

It is a matter of great satisfaction that the Indian Railways have delivered the goods and are a flourishing, rapidly expanding and, incidentally, an earning concern. In the developing economy of any country, transport must proceed production and further progress will only be possible if the railways are first developed to meet the over growing needs.

The Railways are not only a link between the industrial producer and the common consumer, but they are also the physical means of the cultural integration of the country.

Easy and inexpensive travel links all corners of the country into a network ; the railways are the lifeline

of the country in which both the people and its wealth flow as blood flows through arteries of a human body.

Much as we would wish to improve amenities for the travelling public even more rapidly than we are doing at present, it is to be remembered that movement of freight traffic has a priority because of its inherent potential towards the Country's progress. We have, therefore, to take a long range view and be content with some measures of austerity and put up with overcrowding to some extent, older type coaches and slow travel for some time longer till we are affluent and able to afford some luxury.

Checking Crime on Railways :

The task of railwaymen is very difficult indeed at the present time when ticketless travel is still rampant in certain areas, indiscipline to pull alarm chains is prevalent and vandalism in the form of petty thefts and tearing off furnishings, etc., is not uncommon. For a missing bulb, an ill-fitting bolt or a leaking tap, the Railways are deservedly blamed but a Ticket Collector attacked by ticketless travellers or a hooligan damaging a railway carriage is seldom challenged. We look up

to all our countrymen to help us carry our out task through this critical decade of our development.

Railwaymen welcome constructive criticism to be able to improve. However, in spite of all the brickbats and a few bouquets in between, the Indian Railways have done a grand job. I am happy and proud to be a railwayman. I have been rambling in my reminiscences over the past 34 years, a very long time.

Many a time, some "economists" have predicted that the railways have outlived their usefulness and other "prophets" foresaw that they will soon be obsolete. On the contrary, railways have thrived continuously and have proved their unrivalled utility.

They have grown beyond expectation in size as well as importance. Far from becoming outmoded and in spite of the rival attractions of jet planes and streamlined cars, toy railways still have a fascination for children and railway transport and train travel remain the most practical and convenient form of movement.

Living through the periods of upheaval, ups and downs in peace-time, the era of expansion has been a wonderful experience.

SOUTHERN RAILWAY

OLAVAKKOT DIVISION

TENDER NOTICE

Separate sealed tenders will be received by the Divisional Superintendent (Works), Olavakkot, upto 12-00 hours on 19-6-1961 for the following works :-

Serial No.	NAME OF WORK	Earnest money
		Rs.
1.	OLAVAKKOT—Creosoting Plant—Loading and unloading of untreated and treated wooden sleepers BG, MG, NG and Specials for a period of one year from 1-7-1961 to 30-6-1962. Approximate cost of the work is Rs. 50,000	1,250
2.	Collection of ballast between Nileshwar to Mangalore—48 miles relaying work. Approximate cost of the work Rs. 3,57,000	8,900
3.	PALGHAT—Remodelling of station building. Approximate cost of the work is Rs. 1,76,000	4,400

Last date for issue of tender form ... 16-00 hours on 16-6-1961

Last date for payment of earnest money to the Divisional Paymaster, Olavakkot ... 15-00 hours on 17-6-1961

Date of opening of tenders ... 14-00 hours on 19-6-1961

Further particulars and tender forms costing Rs. 10 each (not refundable) can be had from the Divisional Superintendent (Works), Olavakkot, on production of a cash receipt obtained from the Divisional Paymaster, Olavakkot or any Station Master on this Railway paid towards the cost of the tender form. Tender forms are not transferable.

Nomenclature in Advertisement

K. S.

IN the first place, there is the Account Executive Advertisement Officer of an advertisement concern or a management and is one who is in personal contact with the Client advertiser. The account executive directs the handling of the Client's advertising. 'A' also represents the AGATE and size of 5 points denote a unit measurement, one column wide and 1/14th inch deep by which advertisers sell space is called 'AGATE' line.

Under 'B' in advertising are included the following items :

Broad side in direct Mail advertisement, a large folder usually printed in two or more colours. When the folder is opened it becomes a large poster style advertisement. 'B' represents also a Brochure or a Pamphlet bound, stitched and folded in the form of a Booklet. Blow up in advertisement jargon means enlarged reproduction of advertisements. It should not be forgotten that black and white in advertising are shown by 'B & W.' There is also bold faced types that print heavy black and stand out prominently used for the purpose of emphasis. Body type represents 18 points or less in which the reading matter of the advertisement appears differentiated from display type which usually refers to that used in the head lines.

'C' represents capitals and lower case in printing which means that the initial letters are to be set in capitals and are to be set in lower cases 'C & IC' capitals and smaller capitals 'C and Sc' in printing means the initial letters are to be set in capitals and the rest in small capitals. Caption, the heading of a page, chapter or document starts with the letter 'C.' Caption refers to descriptive matter appearing with illustration. Column inch which comes under 'C' is a unit of measure in some periodicals and newspapers. It is one inch deep and one column wide and the width depends upon the column width of a particular periodical or Daily. Copy refers to the material to be reproduced by the Printer or Engraver and also the text of the advertisements. Copy colloquially means the draft matter or matter for advertisement or note or a piece, etc.

As for coverage, the extent to which an advertisement medium circulates among people of potential purchasing power in a given territory. The paper

having a wide coverage means not only wide circulation having purchasers and readers among people of various interests such as merchants, traders, businessmen, government servants, school-boys and the common public.

'D' deckledge is a rough edging of the sheet of a paper that has not been trimmed. The deckle edges are used occasionally for artistic effect. 'D' also represents the common delete which means 'omit' used in proof reading. Dodgers are circulars distributed by hand.

Then 'E' reminds us of embossing or printing in relief. The printing done and the service of the paper is done by the use of dyes. Etching is cutting a design in the face covering over a copper plate and subjecting the exposed part. Expanded type of letters represent types that are wider than the usual letter types.

Next for 'F' it brings us to the fourth estate of the realm. The traditional way of describing the press which is said to have originated in the late 18th century when British Statesmen like Edmund Burke pointed out to the reporters' gallery during his speech in Parliament saying—There are three estates in Parliament but one more estate the fourth estate more important than all. He was referring to the three classes of people traditionally recognised under British Law, the Clergy—the Nobles and the Commons. The newspapers became the fourth estate of the realm.

'F' also denotes Free Lance, the copy of a writer or artist who works independently and on piece work basis, i.e., he cannot be labelled under any restrictive categories. He cannot be bound to do a particular thing. He is independent and private and is not the paid servant of anybody though he may get remuneration or honorarium for the work he does.

'G' Brings us to galley proofs which is the proof from type as it appears in the galley trays before it is separated into pages. Galley sheets are usually about 20 inches long. After the galley is the page proof. Then we go to half tone, the photo gravating the entire service of which is covered with small dots that are

(Continued on page 38)

Railway Freight Rates

V. K. STHANUNATHAN

XI

WE may now discuss the general question of judicial review of the decisions of the Railway Rates Tribunal. Under the Railway Act, Section 46(A), "the decision of the Tribunal shall be by a majority of the members sitting and shall be final". This means that there is no regular appeal against the decisions of the Tribunal. The only right parties have got for judicial review is by way of a writ application before the High Court (High Court of Madras as the Tribunal is situated in Madras) or by special appeal to the Supreme Court under its extraordinary jurisdiction ; but such appeals can be resorted to only in limited cases as, for example, when

- (a) the Tribunal has exceeded its jurisdiction or has not exercised its jurisdiction properly ;
- (b) there is an error of facts or error in law or in both facts and law on the face of the record.

The Tribunal, as we have seen, has been constituted under the provisions of the Railway Act and has only limited powers—powers which have been specifically delegated to it under the Act. It is the Law Courts that have to finally say what the meaning and the construction of the statute is. We have already seen that the Madras High Court decided in a writ appeal what the powers of the Tribunal under the Act are with regard to granting refunds and declaratory reliefs. The High Court has held that the Tribunal has no powers for ordering refunds and that it cannot also give any declaratory relief prior to the date of a complaint but its decisions can be from the date of the orders.

The Tribunal's orders can be set aside if they are based on a mistake of law, that is to say for the failure of the Tribunal to apply some general rule or principle that courts consider of general applicability. Orders of the Tribunal can also be set aside if the decision is made without evidence or contrary to evidence.

The Tribunal's judgment will be given its due regard because it is an expert body. In this respect the case law with regard to the Inter-state Commerce Commission of America will be relevant and important. In the United States, in regard to the Inter-state Commerce Commission,

the Supreme Court of U.S.A. held as early as 1912 that to the findings of the Commission should be ascribed "the strength due to the judgment of a Tribunal appointed by law and informed by experience" (Inter-state Commerce Commission v. Union Pacific Rail Road Co. Ltd.—1912). In subsequent decisions also the Supreme Court has held that the Commission was particularly fitted to determine as a fact finding body whether a particular rate is reasonable or unreasonable or whether there is unjust discrimination and courts are not normally to substitute their judgments for that of the Commission in such matters.

The Civil Courts can also come in where the order of a Tribunal has not been implemented by the Railway administration. Section 46 (B) provides that "the Tribunal may transmit any order made by it to a Civil Court having local jurisdiction and such Civil Court shall execute the order as if it were a decree." Normally as the Railways are owned and administered by the Central Government, there should not be any occasion for transmission of the order of a Tribunal to a Civil Court for execution and Railways themselves will and should carryout the orders issued by the Tribunal. The law, however, does provide for execution of the order as a decree in case parties feel that the administration has not honoured the order of a Tribunal.

It may be remembered in this connection that in Complaint No. 2 of 1954, the complainants Messrs. Engineering Supplies Co. and Hindustan Materials made an application to the Tribunal for transmission of the order of the Tribunal to the Civil Court in Bombay City for execution because they felt that the action taken by the administration for implementing the Tribunal's orders did not give them the relief which they wanted to get and which they felt they ought to get according to the orders. The following extract from the judgment of Sri V. Subramanyam, Member in the Miscellaneous Application No. 2 of 1954 will be interesting :

"Before considering the reasons why the petitioners allege that the Railways have not given complete effect to the orders of this Tribunal, it is perhaps proper that I state that it should never become necessary for this Tribunal to send to a Civil Court for execution any order

STROJEXPORT
(PRAHA-CZECHOSLOVAKIA)

**CRACK DETECTORS
DEMAGNETIZERS
STRUCTURE COMPARATORS
WELD-TESTERS**

**HORIZONTAL ELECTRO
MAGNETIC CRACK DETECTOR
"INKAR DEFECTOSCOPE"**
For detecting cracks and flaws in ferro-
magnetic materials

**ULTRA-SONIC IMPULSE CRACK
DETECTOR**
For revealing internal faults in materials in
any type of metal, glass or ceramic material
independent of its dimensions

HAND DETECTOR FOR TESTING WELDS
Designed for testing welds by means of an
alternating current supplied by manual elec-
trodes through indicating liquid

**DEMAGNETIZING
APPARATUS
"INKAR-DEMAG"**

STRUCTURE COMPARATOR
Designed for a rapid structure test of ferro-
magnetic materials such as for provisional
acceptance of rods and sheets, in con-
trolling the heat treatment of work pieces
in hardening shops etc.

FOR FURTHER
DETAILS WRITE

POWER TOOLS & APPLIANCES CO.

2, DALHOUSIE SQUARE EAST, CALCUTTA-1
BRANCHES: BOMBAY · DELHI · MADRAS

Madras Office: 327, THAMBU CHETTY STREET, MADRAS-1

passed against the Administration of a railway owned by the Government. Section 39 of the Indian Railways Act enacts ".....the Tribunal may, pass such.....final orders as the circumstances may require.....; and it shall be the duty of the Central Government..... on whom any obligation is imposed by any such order, to carry it out." Section 46(B) enacts "The Tribunal may transmit any order made by it to a Civil Court having local jurisdiction; and such Civil Court shall execute the order as if it were a decree." The petitioners do not have any doubt that, if this Tribunal transmitted its order to a competent Civil Court, such Civil Court would duly execute the order. That is because Section 46-B uses the word "shall." But so does Section 39 use the word "shall" in relation to the Central Government. Why should any body suppose that the Central Government would not do their duty of carrying out any obligation that may be laid, by an order passed by this Tribunal, on a railway Administration controlled by the Government? Such delay or failure as may occur in such a Railway Administration carrying out an order of this Tribunal should ordinarily be attributed to inadvertance or incorrect understanding which should be capable of rectification in the course of a petition such as made to this Tribunal. We have hence considered it just that we ascertain from the parties the points on which they differ on the question of proper compliance with the final order passed by this Tribunal and give such directions as would ensure that the order is duly carried out by the Railway Administrations concerned."

(Italics mine)

(R.R.T. 1955-75-84)

XII

On a complaint by a party that a particular rate is unreasonable, the Railway Rates Tribunal may decide what should be the reasonable rate and the Railway Administration has to quote the rate ordered by the Railway Rates Tribunal for such movements. The Railway Administration is not authorised to alter this rate or the conditions attached to this rate without the approval of the Tribunal. Under Section 46, "a Railway Administration may in respect of carriage of any merchandise by goods train

(i) quote a new station-to-station rate; or

2.

- (ii) increase or reduce or cancel after due notice in the manner prescribed by the Central Government an existing station to station rate, not being a station-to-station rate introduced in compliance with an order made by the Tribunal; or
- (iii) withdraw, or alter or amend the conditions attached to a station-to-station rate other than conditions introduced in compliance with an order made by the Tribunal.

From this it follows that where the special rate has been quoted in accordance with an order of the Tribunal, the Railway Administration has no powers to vary the rate fixed by the Tribunal.

There was actually a case pertaining to this aspect which eventually went up before the High Court, Madras in a Writ Petition. We have seen earlier that in the case preferred by the Mettur Chemical and Industrial Corporation Limited against the Southern Railway which was heard as Complaint No.3 of 1954, the Tribunal held the tariff rate charged by the Southern Railway was unreasonable and ordered, the quotation of a station-to-station rate. Actually the order was that "with effect from 1st December 1954 the Respondents shall charge a station-to-station rate of As. 8 per maund RR; C-500; L for the transport of common salt from Adhirampatnam to Mettur Dam."

When the Central Government levied a supplementary charge with effect from 1-4-1956 of one anna in the rupee in the total freight charges, the Southern Railway levied this charge on the bookings of salt from Adirampatnam to Mettur Dam also. The Mettur Chemicals protested against this levy saying that this meant an increase in the station-to-station rate fixed by the Tribunal and was unlawful. As the reply from the Administration was not satisfactory, the Company filed a Writ before the Madras High Court which was heard as Writ Petition No. 58 of 1957. In its judgment, the High Court held that neither the Railway nor the Central Government had any power to alter a station-to-station rate duly fixed by the Railway Rates Tribunal. The following extract from the judgment of Justice Balakrishna Ayyar in the judgment delivered on 14th February 1959 clearly sets out the position:

An examination of these provisions of the Act will show that the railway administration has no power whatever to touch or alter a station-to-station rate fixed by the Railway Rates Tribunal. If it wants to alter such a rate, it must make an

application to the Tribunal and obtain from it a fresh decision. Nor has the Central Government been given any power to make any order relating to a station-to-station rate fixed by the Tribunal. As I explained before, the Central Government under the Act have powers to fix the maximum and the minimum haulage rates. They have been given power to determine, that is to say to fix the terminal and other charges which a railway administration may levy. They have also been given the power to increase or reduce the level of class rates, schedule rates, terminal and other charges.

They have also been given power to re-classify a commodity and place it in a lower class. But, nowhere in the Act have the Central Government been given power to add to a station-to-station rate determined by the Tribunal. In 1957, when the Act was amended, Section 41 (A) was introduced. Under this where a railway administration, bound by an order of the Tribunal, considers that since the date of the order there has been a material change in the circumstances on which the order was based, it may after the expiry of one year from the date of the order, apply to the Tribunal to revise its order. That is the only provision under which a railway administration or the Central Government can get a station-to-station rate fixed by the Tribunal revised upwards.

Mr. Krishnaswami Ayyar, the learned Advocate for the Railway, contended that the supplementary charge cannot be regarded as an addition to the station to station rate fixed by the Tribunal. I confess I find it difficult to understand this argument because whatever may be the set of words in which the claim or demand is wrapped there is no escape from the fact that the petitioner company was and is being required to pay 6½ per cent more than what the order of the Tribunal requires it to do. Under the award of the Tribunal the petitioner was entitled to insist that its salt should be transported from Adirampatnam to Mettur Dam at Re. 0-8-0 per maund. The petitioner is now required to pay for the same service Re. 0-8-6 per maund. And that without question is an increase. The position may have been different if the case of the railway had been that it had been furnishing the company facilities and conveniences over and above those envisaged by the Tribunal when it made its order. But that is not its case. For the very same work for which the Tribunal authorises the railway to charge Re. 0-8-0 per maund

anybody can pretend that this does not involve an increase passes my understanding.

Mr. Krishnaswami Ayyar next contended that the Central Government have inherent power to make the levy. He explained that the Central Government is the owner of the railways. And, just as a merchant can say, if you want my goods you must pay so much : just as a professional man can say, if you want my services, you must pay me so much : government, as the owner of the railways, can say, if you want to use our lines you must pay so much. On this contention I would first of all observe that the analogy does not apply. In its capacity as the owner of the railways Government is not like a trader or a professional man. When operating these railways the position of the Government is more analogous to that of a taxi driver, and in the same way as a taxi-driver is bound to comply with the terms and conditions under which he is permitted to ply his taxi. Government must comply with the requirements of the statutes relating to railways. A taxi driver cannot say, if you want to travel in my vehicle you must pay so much. If he did that he would be violating the terms and conditions of the licence issued to him and exposing himself to the prescribed penalties. Besides, it is familiar knowledge that where specific statutory provision exists there is no justification for resorting to the doctrine of inherent power. Even in the illustration of the merchant which Mr. Krishnaswami Ayyar used during the course of his argument the right of the merchant to charge what the market will bear is always subject to any statutory limitations that may be fixed. Where there is a valid law fixing the maximum price of certain goods, no merchant would be heard by the law to say that he has an inherent right to charge more. If he tried to do so and is found out the error of his ways would soon be explained to him by a Magistrate.

There is yet another important fact that must be borne in mind. There was a specific adjudication of the question as to what station-to-station rate should be charged in respect of the salt transported on behalf of the petitioner company from Adirampatnam to Mettur Dam. To that adjudication, the railway administration was made a party. In the affidavit filed by the company, it is explicitly stated that "the Union of India representing and owning the respondent" was impleaded as a party. That allegation has not been controverted. Therefore, we have an adjudication clearly binding the Central Government. Even if the Central Government had not been *eo nomine* made a party that adjudication would be still binding on them because the Southern Railway was represented before the Tribunal and the

Southern Railway was the proper and competent agent of the Central Government in a matter of this kind.

Mr. Krishnaswami Ayyar next said that the intention to impose a supplementary charge was clearly set out in the explanatory memorandum on the Railway Budget for 1956-57 and in the speech which the Railway Minister made on 23-2-1956. He also explained that the proposals were approved by Parliament. This argument is really misleading. It is not claimed that Parliament passed any formal Act authorising the levy. If Parliament had passed a regular Act authorising this levy that would have been an end of the matter. To that extent the decision of the Tribunal would have been superseded by statute. But Parliament did no such thing. The general approval which Parliament bestowed on the proposals of the Government only protected the ministry *vis-a-vis* the legislature. But, a general resolution of Parliament which does not take the shape of an Act is powerless to take away the rights of an individual.

Mr. Krishnaswami Ayyar's final argument was based on Section 32 of the Act. I have already explained that in 1957 section 32 was deleted and its provisions incorporated as subsection (2) of Section 29. The contention of Mr. Krishnaswami Ayyar was that the Power given to the Central Government to fix by general or special power "the rates of terminal and other charges for the whole or any part of a railway" is wide enough to enable it to levy a supplementary charge of the kind now levied. (I may at once make it clear that in this petition I am not called upon to consider anything more than this, viz., whether the Central Government have power to increase a station-to-station rate fixed by the Railway Rates Tribunal. I am not concerned to enquire whether this power conferred by section 32 is large enough to enable the Central Government to increase the other charges).

The argument of Mr. Krishnaswami Ayyar was that the expression "other charges" includes not merely the "rates" referred to in Section 29, not merely terminal charges, transshipment charges, siding charges, shunting charges, empty return haulage charges, demurrage charges, but also station-to-station rates fixed by the Tribunal. I am unable to accept this argument. It will be noticed that so far as haulage rates are concerned, explicit provision was already made in Section 29. After having made that separate and express provision for it, there, nobody would have thought of introducing the same subject matter in Section 32. Again, if the intention of the Legislature had been what the

argument of Mr. Krishnaswami Ayyar requires me to suppose, there was no need to say terminal and other charges. It would have been quite sufficient to say that the Central Government might by general or special order fix the rates or charges for any kind of service for the whole or any part of a railway. It seems to me that when the words "and other charges" were added to the word "terminal" the intention was to provide for the numerous miscellaneous charges which a railway is entitled to levy and some of which have been mentioned above.

Not merely that this argument of Mr. Krishnaswami Ayyar would reduce the entire proceedings of the Railway Rates Tribunal to a farce. A customer of the railway who feels that a station-to-station rate that is quoted is excessive is permitted to lodge a complaint before the Tribunal, and, the adjudication made by the Tribunal would bind the railway administration and the Central Government. If Mr. Krishnaswami Ayyar's argument were sound, the Central Government would notwithstanding the fact that an adjudication had been made, fix what rates they considered fit.

Whatever scope for argument there may have been is removed by Section 41-A which was introduced in 1957. That enables a railway administration to go to the Tribunal and ask it to revise its decision. If the Central Government had the power which Mr. Krishnaswami Ayyar claimed for it, it would have been entirely unnecessary to make this provision in 1957. In my view the Central Government had no power in any way directly or indirectly to add or direct that an addition be made to the station-to-station rate fixed by the Railway Rates Tribunal. That the levy was called a supplementary charges does not alter the fact in any way. The charge amounts to an increase in the rate and that increase is unlawful.

It is clear from this that once a rate is fixed by the Tribunal, the Railway Administrations have no power to alter or revise a station-to-station rate or the conditions attached to it. In the changing conditions with regard to the operating expenses, the economic conditions of the country, etc., it looks a little anomalous that once a station-to-station rate is fixed by the Tribunal, it should be continued for ever. There was no provision in the original Act either to go up before the Tribunal for the revision of the rates. It was, therefore, considered necessary to have a provision in the Act to enable Railway Administrations to go the Tribunal for

(Continued on page 38)

Rabindranath Tagore

K. S.



RABINDRANATH Tagore is one who believed that every new born child which comes with the news shows that God is not yet discouraged with man. He has expressed many ideas which are religious and highly philosophical with the result that one is inclined to think that he is reading Upanishads and the Bible when he is reading some of Rabindranath Tagore's works. He is one who believed that the whole world is a unit and probably the universe is a unit. It is said poets are unacknowledged legislators of this world. He was the unrecognised legislator during his times. Leaders of the country consulted him and took his views before entering into any new enterprise or starting a movement. His mind

was glowing with clear conceptions. When the mind in clear conceptions glows, the willing words and just expressions flow.

The Western statesmen who are called upon to formulate a Far Eastern Policy ought to be required to take an examination in Tagore's *Sadhana* and the *King of the Dark Chamber*.

It was not simply that he had been awarded the Nobel Prize for Literature in November 1913, and a knighthood in June 1915. Even before these events he was known in the United States as lecturer, poet, essayist, philosopher, educator, and to not a few as a warm-hearted, inspiring friend. Five months after the 1912 publication of his poems in *POETRY* there had appeared in *THE NORTH AMERICAN REVIEW* an article by May Sinclair, who had been present at artist William Rothenstein's Hampstead house the evening of July 7, 1912, when Yeats' reading had introduced Tagore's work to the English-speaking world. The article was widely read, communicating the sweeping intensity of the judgment she expressed to Tagore: "You have put into English which is absolutely transparent in its perfection, things it is despaired of ever seeing written in English at all or in any Western language."

He was honoured and discussed as the lyrical voice of Bengal, the soul of Bengal, the modern Bengali mystic, the Hindu of the Celtic Spirit. In 1915 two biographical studies appeared, one mentioned above, the other by Ernest Rhys.

Those who had already heard his 1912 lectures at Harvard University and others who knew of his reputation as a speaker and essayist could in 1913 read his discourses published in *SADHANA—THE REALISATION OF LIFE*. His versatility as a dramatist was substantiated with the publication in 1914 of *THE KING OF THE DARK CHAMBER*, *THE POST OFFICE* and *CHITRA* and as a short story writer in 1916 by *HUNGRY STONES* and *OTHER STORIES*.

Many would have better understood Tagore if they had known of his first visit to the United States. This had occurred in October 1912, in the company of his son, Rathindranath, and his daughter-in-law, Pratima. The three of them settled down unobtrusively in a modest house at Urbana, Illinois, where

May 1961

RABINDRANATH TAGORE

21

Rathindranath, who had studied agriculture and animal husbandry there from 1906 to 1909 proposed somewhat tentatively to obtain his doctorate.

In early April the Tagore family sailed for England and subsequently for India, which they reached in early September. Two months later the Nobel Prize for Literature was his.

One of the first of these in *THE NEW YORK TIMES* pointed out his similarity to Walt Whitman and characterised his writings in terms of their "singular beauty, strong and delicate and carved to the minute perfection of an ivory relief." The poet's religious verse immediately found favour in many circles; in some American homes its place was next to the Bible and family manuals of religious devotion. Outside the home a popular topic of discussion for local literary societies and community clubs was Tagore's works. The stage was being set for the poet's return to the United States.

This occurred almost immediately. For five months from September 1916 to January 1917, he toured the country lecturing or giving readings of his works from the West Coast to the East.

The time was an unsettled one—three months after Tagore's departure from the United States in January 1917, the United States was involved in World War I. One of the main purposes of his visit was to earn

by lecture fees and to collect from interested parties sufficient funds to make solvent his school at Santiniketan. As a confident member of the American family, however, and a distinguished member at that, he did not hesitate under such circumstances and in such distraught times to praise or blame as he saw fit as one commentator from San Francisco, Bailey Millard, phrased it in the November 1916 issue of *THE BOOKMAN*:

Yet if there was much he blamed, there was even more he praised. The accolades, fittingly for a poet, were given first to other poets; to Whitman: "To me his is the highest name..... Through his work I know your country and I catch its heart beat." Next came Emerson: "In his work one finds much that is of India. In truth he made the teachings of our spiritual leaders and philosophers a part of his life." He could not be expected to speak about or perhaps even to know of the agony of Emerson's self-allotted pilgrimage, the refining of his spirit, terrifying, poignant, inexpressible unless expressed by Tagore himself.

Regarding his breadth of outlook, one cannot but refer to some of his ringing lines: "Where the mind is without fear, the head is held high; where the knowledge is free, the tireless striving stretches its arms towards its perfection. The mind is led forward by it into ever widening thought and action, into that heaven of freedom; let my father and my country awake."

New York—Tagore's "*King of the Dark Chamber*" at the Jan Hus House is receiving high praise from dramatic critics and audiences here. Appearing in a scene from the play are (Left to right) Eydie Renaud, Surya Kumari, Madhur Jaffrey and Rhani Sanford





Northeast Frontier Railway Does It

SHRI RATAN LALL

General Manager, Northeast Frontier Railway

CARVED out from the unbifurcated North-eastern Railway, the Northeast Frontier Railway was formed on January 15, 1958, with headquarters at Pandu, to tackle the special needs and problems of the North-east frontier area of the country. Its total route mileage is about 1,770 consisting of 20 miles Broad Gauge, 1,698 miles Metre Gauge and 52 miles Narrow Gauge and represents about 5% of the total mileage of the Indian Railways. This Railway serves nearly 300 tea gardens of West Bengal and 800 tea gardens of Assam and constitutes their main mode of transport. Besides, it is the only outlet for petroleum and its products from the Digboi Oil Refinery. The other principal commodities carried by the Railway are coal and timber from Assam and jute from Bihar and West Bengal. Its chief inward traffic is sugar, salt, foodgrains, pulses Tea garden stores and piece-goods.

Though the N. F. Railway is the smallest amongst the 8 Zonal Railways, its problems are by no means small. During the last global war this portion of the Indian Railways, then forming part of the old Bengal-Assam Railway, became the most important theatre of operational activities and its Permanent-way and Rolling Stock suffered considerable wear and tear. In its wake came the Partition severing the rail and river link to Assam and portions of West Bengal from the rest of India, leading to the formation of the Ex-Assam Railway on August 15, 1947. As a legacy, the Assam Railway had to begin almost from a scratch. The only major workshop which was serving the area also went to Pakistan. To remedy the defect, construction of the famous Assam Rail Link was undertaken in early 1948 and completed within a record time. It was opened to goods traffic on December 9, 1949 and passenger

traffic on January 26, 1950. With the regrouping in April 1952 the Assam Railway became part of the North-Eastern Railway. The first Five-Year Plan closely followed the shock of Partition and was spent to absorb it. But just when the Railway was on its way to recovery, it received a fresh setback from the devastating floods which occurred in Assam and North Bengal in the years 1954 and 1955 ravaging the Assam Link Route considerably and interrupting communication for months together. During the successive rainy seasons also the Link Route was in the grip of floods though not so seriously but still dislocating traffic for days. Topographical conditions obtaining in the region are peculiar to itself and constitute a challenge to the ingenuity of those responsible for the maintenance of the train services. For most of its length, the line passes through sub-montane region and cuts across the drainage of the country at many places where a number of turbulent rivers from the Himalayas debouch into the plains with maiden fury, sometimes with a velocity of as much as 26 to 28 ft. per second. Due to this factor, the railway track had always been subjected to repeated breaches. But whatever might be the obstacles, stabilisation of this Link Route, which is the life-line to Assam, has been a vital condition precedent to the development of its economy.

The stabilisation done, the new zone would be able to deal promptly and effectively with the immediate as well as long term problems of the area. The economy of this hitherto under-developed far-away part of the country is expanding at a fast pace. In addition to the setting up of Oil Refinery at Gauhati, establishment of pulp and rayon factories in Cachar District is also being planned. Development programmes in the State would naturally mean increased demands on our transport resources.

May 1961

N. F. RLY. DOES IT

23

Strengthening of the Link Route :

To prevent recurrence of breaches, the Assam Link Stabilisation Committee was formed and according to their recommendation extensive work has been undertaken at an estimated cost of about Rs. 6 crores. The idea has not been to fight the rivers but to tame them. The main item of work required, therefore, is effecting improvement to about 42 bridges by providing increased water-way and deeper foundation. Guiding of some of the turbulent water courses through the bridges is another important aspect of the programme. The Bridge works involve construction of 24 spans of 150 ft., 31 spans of 100 ft., 34 spans of 60 ft., 54 spans of 40 ft. and 128 spans of 20 ft. and less. 32 of these bridges are on well foundation with sinking of 164 wells with depth varying from 40 to 60 ft. below the low water level.

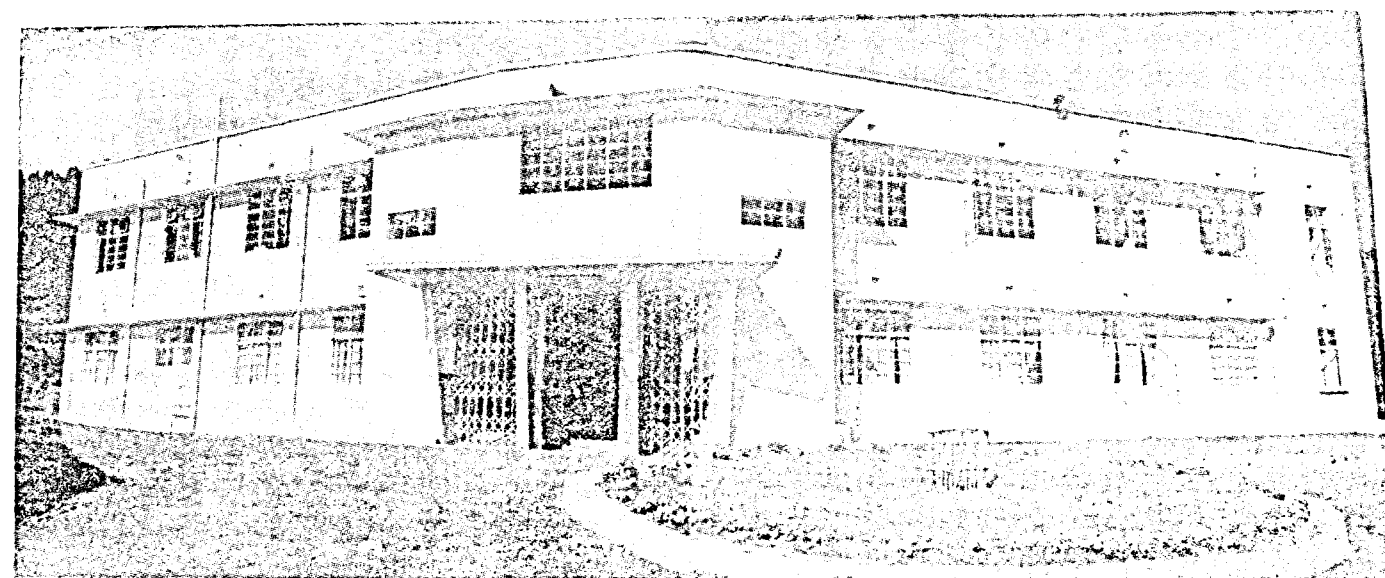
The strengthening of the Assam Link Route is almost complete except girdering of a few bridges and with it frequent interruption and continual trouble to communications on the Link Route would become a thing of the past. Following improvements over the link, there have been considerable improvements in movement of traffic East of Siliguri Jn. The daily average movement progressively increased from 132 wagons in 1955 to 148, 175, 198, 223 and 257 in 1956 onwards to 1960. Rated against 1955 performance as 100, the performance during 1956 to 1960 has been respectively 112 (1956) 133 (1957), 150 (1958), 169 (1959) and 195 (1960). During 2 months, January and

February, 1961 the daily average has been 291 wagons or 120.5% of the figure in 1955. During the months of January and February, 1961 this Railway also moved 238 and 126 coaching vehicles respectively by important Specials.

Brahmaputra Bridge Project :

At present a passenger and wagon ferry ply between Amingaon and Pandu with a capacity of about 250 wagons a day. During high waters in the rainy season this also becomes difficult. It, therefore, constitutes a bottle-neck to speedier movement of wagons and inconvenience to the travelling public. To obviate this difficulty the construction of this combined rail-road bridge at an estimated cost of Rs. 6.04 crores was undertaken in October, 1958. The foundation stone was laid by the Prime Minister on 10th January 1960. The estimated cost of the entire project is, however, Rs. 10.79 crores. The bridge will consist of 10 spans of 403 ft. 4½ inches, centre to centre of piers with a shore span of 103 ft. and 11 inches, centre to centre of piers, at each end. It will have double line railway track of Metre Gauge Main Line Standard on the lower deck and will carry a 24 ft. roadway on its upper deck with a 6 ft. wide footpath on either side. The girders are being designed suitably for conversion of the railway track to single Broad Gauge when required in future. A clearance of 40 ft. is being provided from the normal high flood level to the bottom of girders to permit free navigation. Out of 11 main piers, 8 piers have already been completed and the pier superstructures

The 50 bedded Annexe to the S. B. Dey Sanatorium, Kurseong



are ready to receive the girders. The work on the balance of 3 piers is expected to be completed soon. Fabricated materials for the girders have started arriving at the work site. The Project also covers remodelling



Tista Protection Work

of Narangi Yard (next station east of Gauhati) which will replace the yards at Amingaon and Pandu and also serve the proposed Oil Refinery at Noonmati (Gauhati) and other ancillary works. The new yard is designed to handle 300 wagons each way for the present and provision has been kept for its expansion to cater for 500 wagons or more each way.

The Bridge is likely to be brought into commission by about the middle of 1962.

Development of Line Capacity :

The single line Main Line section between Katihar and Amingaon is already saturated and will not be able to handle the increased traffic that will be offering during the Third Five-Year Plan. In order to break the bottle-neck, master plans for the development of the carrying capacity of the new Railway have been drawn up and are being progressively executed with meticulous care. Some details of these important works are enumerated below :—

(i) A new Metre Gauge route of 15.53 miles from Kumedpur to Mukuria (near Barsoi) was opened to goods traffic by Sri Jagjivan Ram, Railway Minister, on July 12, 1959 and to passenger traffic on December 16, 1959.

(ii) A 20 mile Broad Gauge line from Khejuriaghat to Malda Town with wagon ferry between Farakka and Khejuriaghat was opened to public goods traffic on December 1, 1960.

(iii) Work for provision of Broad Gauge line from Barsoi to Siliguri Junction (94) miles is in progress and is likely to be completed in a short time. Conversion of the Metre Gauge Sections from Katihar to Singhabad linking Malda Town (approximately 69 miles) and from Mukuria (near Barsoi) to Kumedpur (15.53 miles) into Broad gauge has also been undertaken simultaneously and is expected to be completed about the same time. The new Broad Gauge Siliguri Junction—the terminus of this Broad Gauge Line will provide for transshipment of Broad Gauge to Metre Gauge and Narrow Gauge and vice versa traffic.

There will, thus, be a direct Broad Gauge connection between Calcutta and Siliguri with wagon ferry across the Ganga between Farakka and Khejuriaghat. This route will provide for movement of about 100 Broad Gauge wagons per day and will serve North Bengal requirements.

(iv) Construction of metre gauge from Rangapara North to North Lakhimpur (about 107 miles), running along the stretch of the country between the Brahmaputra and the Himalayan foothills has been taken in hand. The first stretch of 12 miles including the construction of the Jia Bhareli Bridge consisting of 9 spans of 200 ft. commenced in February 1960. Railway materials have already started moving over it since December 1960 upto Jia Bhareli and across the Bridge from February 8, 1961.

(v) Construction of a new metre gauge line from Kalkalighat to Dharamnagar (19.48 miles) which will link Tripura with Assam has been sanctioned and the project is in progress.

(vi) Due to worn out rails, trains had to be run at a restricted speed and for this reason complete renewal of track for 262 miles at an estimated cost of Rs. 3 crores has been programmed. Up till now about 190 miles of track have been renewed.

(vii) Realignment between Mal and Banarhat, to reduce the gradient from 1 in 100 to 1 in 150, has been undertaken. As a result of this and other regrading works from 1 in 100 to 1 in 150 in progress the banking of trains with loads of 850 tons on this section will be dispensed with. This will increase the load capacity of the locomotives.

(viii) To increase safety and to permit higher speeds through station yards all the stations on the main line from Katihar to Tinsukia except Tinsukia, Chaparmukh, Simaluguri Junction and Sripuriagaon have already been included for interlocking in various works programmes. The interlocking work at about all the stations on the Katihar-Siliguri Junction section has been completed and that between Pandu and Tinsukia is in hand.

Centralised Traffic Control :

The Ministry of Railways has decided to introduce Centralised Traffic Control system over the 258 mile single line section between Amingaon and Siliguri, the first of its kind on the Indian Railways, at a cost of about Rs. 5 crores. The C.T.C. machine will be located at Alipurduar Junction, 100 miles from Siliguri and 158 miles from Amingaon, and is expected to be completed within about two years. The line capacity will also be increased to 24 trains each way instead of 15 trains that can be obtained with the conventional type of signalling on single line section and the existing capacity of 13 trains each way.

Dieselisation :

It is also proposed to dieselise goods train services over the Barauni—Katihar—Amingaon section and on the Lumding—Badarpur section. The first lot of Diesels is expected to be put in service about the middle of this year.

Industry in Assam :

The Oil Refinery located at Digboi with a capacity of .43 million tons was established there in 1900, about 60 years ago. The Railway has a fleet of 720 tank wagons for movement of this oil which goes to different parts of the country. The Oil Refinery at Gauhati is likely to go into production by December, 1961 with a capacity of 0.75 million tons. Additional tankwagons of 28.5 tons carrying capacity have been ordered to meet the anticipated demand. The Brahmaputra Bridge with the goods marshalling yard at Narangi, the Centralised Traffic Control system and the Broad Gauge line between Siliguri and Khejuriaghat with wagon ferry between Khejuriaghat and Farakka will be of immense value to deal with the developments as a result of the setting up of the Oil Refinery at Gauhati.

Coal Industry :

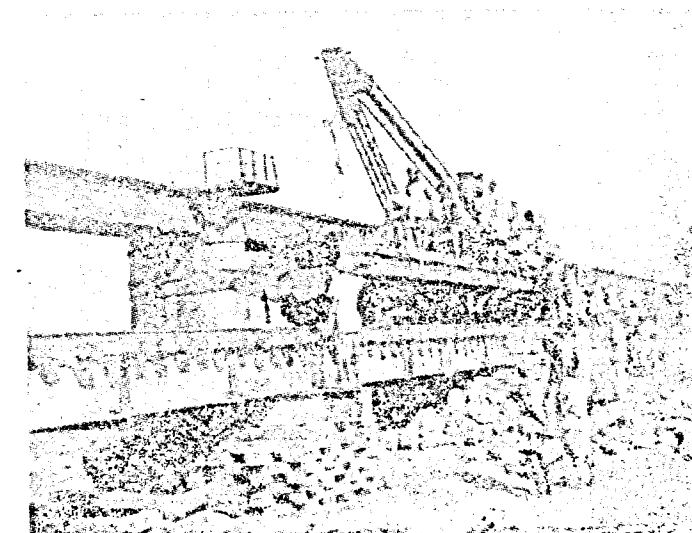
Coal is found in Margherita and Ledo areas in Assam. Coal mining process here is different to what one may have seen in Bengal and Bihar Coalfields. While in

their case, the coal seam is approached by deep vertical shaft, in the Assam coalfields, the coal seams are in the shape of hills and the approach to the coal bearing strata is through a horizontal tunnel, or more correctly, one which slopes almost imperceptibly upwards from the pit's mouth. The tunnel is driven into the hill until the coal seam is reached at which point underground roadways known as "main roads"—are driven horizontally along the seam for a distance of up to 2 miles. The seam itself being at an inclination varying from 30 (degrees) to 60 (degrees), inclined roadways are then driven up the seam. At various points on these roadways further roads are driven horizontally. Coal is brought from the working faces along those horizontal roads and lowered down the inclined roadways by means of gravity-operated tramways to the main road and so to the pit's mouth. Owing to the friable nature of the strata in roadways underground, the roof is supported by steel arches and girders, timber and masonry. On the average about 120 coal wagons have been loaded every day on this railway during 1960-61 upto January 1961 as compared to 80 and 88 wagons in 1958-59 and 1959-60.

Workshops and Sheds :

Since the partition left this portion of the Railway without any workshop worth the name, provisions have been incorporated to the setting up of carriage and wagon workshops at Bongaigaon at an estimated cost of about 5½ crores of rupees, along with expansion of the capacity of the workshop at Dibrugarh at an estimate of Rs. 10 lakhs (approximately).

Work in progress on the Kapili Bridge



Further a new Diesel Shed at Siliguri Jn. for housing 40 Metre Gauge Locos and another at New Siliguri Jn. for accommodating 25 Narrow Gauge locos are also proposed to be constructed in the Third Plan. At Narangi a diesel shed for 40 locos has been included in the Brahmaputra Bridge Project.

Amenities to Railway Users :

Since the establishment of this Railway a sum of nearly Rs. 52 lakhs has been spent towards passenger amenities which included provision of platform covering at 15 stations, foot over-bridges at 4 stations, refreshment rooms at 2 stations, tea stalls at 11 stations, waiting rooms at 6 stations, waiting halls at 13 stations and bath-rooms/cubicles at 8 stations. A sum of Rs. 1.03 crores is proposed to be spent during the Third Plan Period. Besides, 19 stations had been electrified and 6 water coolers provided at 4 stations.

Arrangements for sale of cheap food packets have been made at 11 stations. Departmental catering has also been introduced at Gauhati, Pandu and passenger ferry plying between Pandu and Amingaon.

Another important facility introduced since December 1, 1960 is the provision of one 3-tier sleeper coach on 3 Up/4 Down Kamrup Express trains twice a week.

To afford more booking facilities to the mercantile community 9 out-agencies and 1 city booking office have been opened from 1958 to February 1961. The total number of out-agencies now serving the N. F. Railway is 21. Public Address equipments have been installed at 8 stations to assist the public.

Educational Facilities :

Provision of educational facilities to the children of the Railway staff is receiving closer attention and is being made on a programmed basis. This Railway is running 5 English High Schools and 4 more English High Schools will be taken over by the Railway during the Third Plan. 32 Single Teacher Free Primary Schools have been sanctioned by the Railway Board of which 29 are now functioning. The remaining 3 will be opened shortly. Besides the Railways Schools, Capitation grant is given to non-Railway Schools situated at some important stations. Vocational training centre

has recently been started at Maligaon for imparting technical training to staff and their children.

Movement of Traffic :

The N. F. Railway's sincere effort to improve, expand and modernise its Railway system so that it might deliver the goods to the Nation has already borne fruit. From April 1960 to January 1961 our wagons loading has been about 10% more than what was done in the corresponding period of 1958-59. The movement of traffic over the Katihar-Siliguri-Alipurduar-Amingaon section showed an improvement ranging from 14% to 20% as compared to previous year. Marked improvement has, also, been noticed on the Lumding-Badarpur section to serve the Cachar district.

Other statistics of performance are as under :—

(Period April to January 10 Months)

	1958-59	1959-60	1960-61	Percentage increase in 1960-61 over 1958-59
1. Daily average No. of wagons loaded ...	960	985	1,047	9.1
2. Tons lifted (in thousands) ...	3,423	4,324	4,105	19.9
3. Net Ton miles (in millions) ...	788	774	886	12.4
4. Passengers carried (in millions) ...	27.5	25.5	29.9	8.7
5. Passenger miles (in millions) ...	1,100	1,037	1,283	16.6

The Northeast Frontier Railway is making every endeavour towards the fulfilment of the objective for which it was created. It has successfully tackled the initial and inherent problems that once beset its path and with the completion of all works on the Assam Link Route and the opening of the Brahmaputra Bridge and, also, with the coming of Broad Gauge to Siliguri it is hoped that the last trace of bottleneck on this Railway will be firmly eliminated. We are well on the velvet for development of our Railway facilities to cater for the traffic likely to offer.

TALENT ACHIEVES

CHITTI BABU



ONLY a few years back, Marunthur was a small wayside railway station, away from the main line and little known to the outside world. There was very poor traffic, both passenger and goods ; an 'up' train passed the station in the morning and a 'down' train in the evening and in between occasionally a goods train may be seen to pass by. But for the pair of stations at either end being situated more than thirty miles apart, probably no station would have been located here at all. In any case, there was a tiny village nearby whose inhabitants mainly occupied themselves in agriculture. The area, also abounded in magnificent mountain scenery, beautiful cataracts, cool springs and dense forests. The station staff consisted of one stationmaster and one porter and they were all-in-all at the station. Work, they had very little at the station and spent their days almost like convicts at a penal settlement. No wonder, that none liked to work in that station for long and appeals and representations for transfer were a common feature of staff posted there.

Today the same Marunthur presents a different picture altogether. It has become an "A" class station and a big junction. The small village has developed into a big township and tourists and visitors from far and near could be seen crowding its busy shops and bazaars all through the year. Indeed, a resident of the place who had been away from it for some years will find it thoroughly new if he were to visit it now. There is a story behind all this strange transformation.

The last in the line of station masters at Marunthur before it was upgraded as an "A" class station was Sampath. He was an efficient and able worker. He thought it was a poor recognition of his merits on the part of his superiors to have posted him to this dull and dreary station. Nevertheless, he decided to bear his lot and carry on for some time before he could present his case to the higher authorities. Whenever he was disgusted with station life, he would take long walks to the mountain tops nearby and spend several hours in solitude and communion with nature. During summer, his favourite hobby was watching the many-coloured mountain-birds and bathing in the cool and invigorating springs. Sometimes, he would stroll inside the village and spend long hours chatting with the village folk and headman. He would listen to the

simple tales and rustic talks of the villagers and in turn tell them something entertaining from his fund of book-knowledge. He acted as a communication from the outside world to the villagers and so kept himself not only useful to them but busy himself. Yet, with all these diversions and attractions he was longing to get away from the station to a more busy official life. For this a golden opportunity presented itself to him one day.

It was a very rare day and much eagerly sought for. The District Officer had come on an inspection of the station in his saloon and has camped at the station for the day. The stationmaster and the porter took full advantage of the visit. At the most opportune time during the course of the inspection, Sampath opened up his topic.

'Sir,' started Sampath, 'I've to make a small personal request of you.'

'What's that ?'

'I'd wish to be transferred to some other station in the district. It's so very dull here.'

'Why should it be so ? You can manage to keep yourself active.'

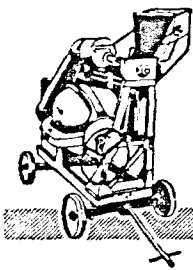
'No, sir,.....there's very poor traffic and I don't have even an hour's work a day. I should wish to have more work. At another station I may not find myself so very inactive and also I may get some promotion by showing good work, which I feel is not possible at this station.'

'Well, Mr. Sampath', the Officer replied, 'it's very difficult for me to consider a grievance of this type. At almost every station someone or other raises an issue of this nature and pleads for transfer. It's not possible to please all, but what I candidly feel is, that if you are talented enough you can turn your present situation to your advantage and there's no spot of work however humble or remote, where one cannot display, his talents and win recognition for them.'

The conversation thus ended. The porter also, a little later, tried his chance but met with a more or less same kind of reply from the Officer.

The long looked for day had come and gone. The old monotony and dreariness took their place again. There had, however, occurred one change—a significant

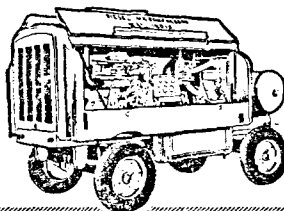
Ask Jacks about it!



Winget

concrete mixer
model 7 TH/C, 10/7 cub.
ft. capacity, for faster
output.

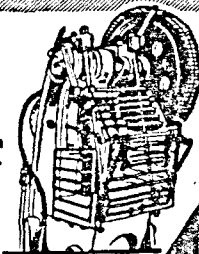
and



MAW - INDIA AIR COMPRESSORS

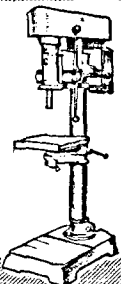
capacities
ranging from
105 to 600 cfm.

AMETEEP
POWER PRESSES
Interlock guards with
safe automatic adjust-
ments.



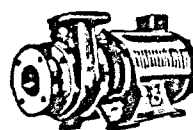
PUSCO

DRILLING MACHINES
all geared drive (bench
type) for dependability
and accuracy.



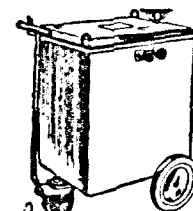
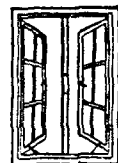
**SAVE
FOREIGN
EXCHANGE**

WORTHINGTON - SIMPSON



MONO-BLOC
CENTRIFUGAL PUMPS
for irrigation, domestic
& industrial applications

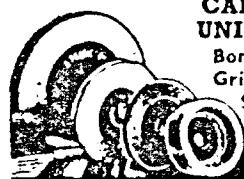
**STEEL WINDOWS,
DOORS
&
VENTILATORS**



**SUR-ARC
WELDING
TRANSFORMERS**
built for long life,
portable and eco-
nomical to operate.



**STEEL
FURNITURE** -
office tables and chairs,
cupboards with lockers
and mirror, canteen
furniture, folding
chairs etc.



CARBORUNDUM UNIVERSAL LTD.

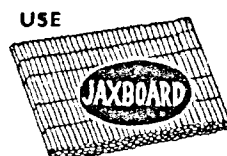
Bonded abrasives,
Grinding wheels,
Segments, Rubbing
bricks, Sharpening
stones etc.

JAXFLEX (Polyethylene) PIPE

latest medium
for conveying
water, chemicals
and other corro-
sive liquids.

ASCU WOOD PRESERVATIVES

for longer
timber life.



TO CUT YOUR
BUILDING COSTS

WILLIAM JACKS & CO., LTD.,

NATIONAL BANK BUILDING, FIRST LINE BEACH,
POST BOX No. 4282, MADRAS-1. PHONE: 21251 (3 LINES)

BANGALORE OFFICE:
SHAKAT BUILDINGS,
SILVER JUBILEE PARK ROAD,
POST BOX NO. 676
BANGALORE-2
PHONE: 4932

change it was—a change in the inner workings of Sampath. 'Talents'.....'recognition'.....these words of the District Officer were constantly flashing in his mind. Should a man's ability and talent need always a setting for them? And for that, does a man's mental happiness and agility depend always upon environments? Cannot one seek one's work and pleasure and prospects from the place where he is? These and similar thoughts often agitated his mind. He knew he had a sympathetic and understanding boss over him but unless he helped himself none else could help him. He was getting restless over such thoughts and was passing many a sleepless night over them. Gradually, at last, some light seemed to have dawned in him—a vision if it may be called so—and he was seen making himself busy in his work. He was sending frequent communications to his District Officer—most of the covers sent were superscribed 'confidential' or 'secret'. The Officer also was found to respond to those communications by sending prompt replies. His inspection of the station grew frequent. On occasions, he was getting with him other Officers, some belonging to the Railway and some to the local Government. The poor porter, who was hoping for a transfer from the station through the instance of the station master first, had lost all hopes of it. On the other hand, he was beginning to wonder what was all that was going about and why the disgruntled station master that was Sampath a few months before should have turned to such an oversenthusiastic worker by then and almost as eager to remain at the station and carry on his work as he was to get away from it a short period ago. But gradually the position unfolded itself.

A few months passed. In the Official Guide of the Railway the following insertion made its appearance. Marunthur—This small wayside station is full of promise of rapid development. There are a number of springs in the mountains nearby whose waters have been tested and found to contain excellent medicinal properties. It is certified by the highest medical authorities that bathing in some of the springs helps to get rid of impurities of blood and drinking of the water of other specified springs cures many varieties of abdominal ailments. A hospital and a sanatorium are under construction for the benefit of the public. The Railway, also, has recently constructed upper class waiting rooms and a suite of retiring rooms at the station for the use of the travelling public. Refreshment rooms both for vegetarians and non-vegetarians are functioning at the station. The public may contact the station master direct for any additional information required and for reservation of accommodation in the retiring rooms.

The latest publication in the Official Railway Guide on the same subject reads as follows:

Marunthur Junction.—This is the new Railway Junction through which the main line has recently been diverted. The town has now grown into a first class Health Resort. There are several good hotels and Government rest-houses near the station. The medicinal springs in the mountain tracks nearby have become world renowned and tourists and the sick visit the place right round the year. Besides the springs, the adjoining forests afford good game for shikaris and the climate also is considered suitable even for delicate constitutions in all seasons of the year. The hotels in the town cater to both Eastern and Western tastes. There are good motor roads to the springs and other sight-seeing spots on the mountains and taxis and other conveyances are always available. The Railway, too, is running a first class hotel adjacent to the station. Public are requested to contact the Station Superintendent for further particulars and reservation of accommodation in the Railway retiring rooms and hotel.

And so the small wayside station has developed into a big first class junction, the tiny village has grown into a big, busy and rich town, and with them Sampath also has got promoted as the Station Superintendent and allotted the rank of a Gazetted Officer, class II. All these have travelled a long and strenuous way but in a comparatively short period. Surely it is somebody's brain and talent that has achieved all these and the reader can easily guess whose it should be.

If he has any doubt or hesitation, let him walk on the platform of Marunthur Junction. He can see a spacious and well-furnished room with a name-board "S. S. Sampath, Station Superintendent" and seated underneath on a stool in immaculate white uniform the erstwhile porter of Marunthur station, now having been promoted as the Head Peon of the District and assigned to serve the Station Superintendent at the mutual request and desire of each. Inside the room can be seen seated during working hours, the same old Sampath, smart, alert and modest, as busy as ever and deeply engrossed in his work. What other scheme his mind is upto he only can tell. Right up on the wall, over his seat, is hung the imposing portrait of the Father of the Nation and underneath the portrait on the wall is painted the motto—

"Truth Triumphs; Talent Achieves"—a most apt slogan for resurgent India.

QUALITY IS THE KEYNOTE

The West Coast Paper Mills Ltd., manufacture the finest qualities of paper from their modern plant and equipment at Dandeli, which is possible due to its association with highly qualified and competent services at all levels.

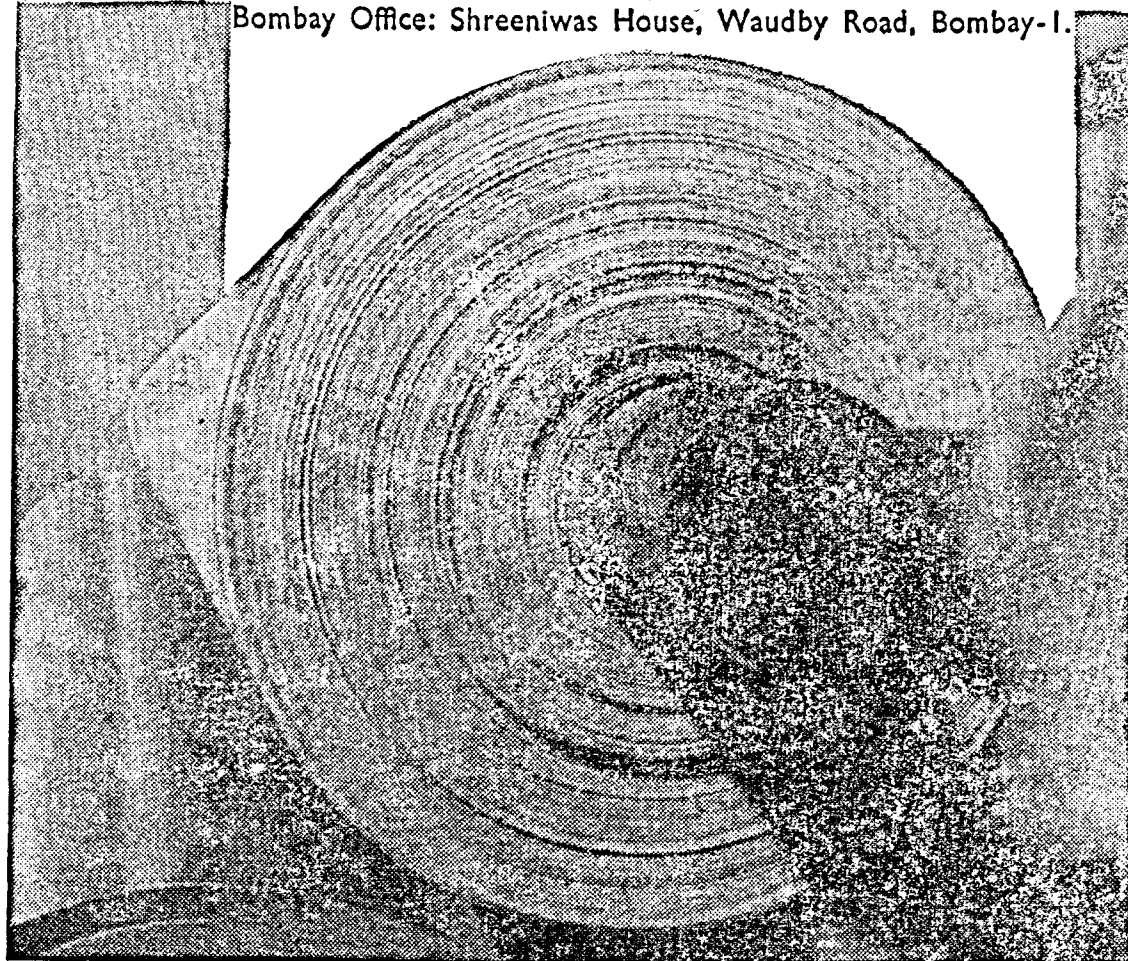
Paper, superior in texture and composition, comes to you for your personal use from the mills. Also Rs.3.50 crores of valuable foreign exchange is saved annually.

THE WEST COAST PAPER MILLS LTD.

Factory: Dandeli (Mysore State)

Bombay Office: Shreeniwas House, Waudby Road, Bombay-I.

Shilpi 1110



From Steam to Electricity

H. D. AWASTY

General Manager & Chief Engineer, Railway Electrification, Calcutta

THE Ministry of Railways have taken a bold but correct decision to replace steam with electric traction to the maximum extent possible within their financial and technical manpower resources. An independent administration known as the Railway Electrification has been set up for executing the schemes on the railways. Before describing the work done already and that proposed in the Third Plan, it may perhaps be as well to give briefly the background of the decision.

To move the growing traffic on our trunk routes, either new lines have to be constructed or facilities provided on existing lines to quicken the movement. One way of increasing line capacity is to replace steam by electric traction. Increase in line capacity means that on a given section more passengers and more goods can be carried than is normally possible in the existing conditions. Some World Railways, having large mileage under electric traction, estimate the consequent increase in their line capacity of 50%. The actual increase realised depends upon a large number of local factors, but it is accepted that electrification does bring about an appreciable improvement.

Electric traction is cheaper than steam traction in running and maintenance costs. A steam locomotive requires good coal. On the other hand, a large thermal station supplying power to electric locomotives is specially designed to use low grade coal. An electric locomotive can draw almost an unlimited supply of energy from the overhead electric conductors while negotiating a rise, whereas a steam or diesel locomotive must wholly depend on its own limited capacity. An electric locomotive makes full use of its weight for the purpose of developing adhesion between all its wheels and rails and therefore draws much heavier loads than a steam locomotive of a similar weight, but which cannot make use of its full weight for the purpose of developing adhesion between wheels and rails. A steam engine has an overall thermal efficiency of $4\frac{1}{2}$ per cent as against an overall efficiency of 14 per cent of an electric locomotive. In other words, coal consumption in steam traction is about three times more than that used to produce power for electric traction.

The cost of maintenance of an electric locomotive is generally about $\frac{1}{3}$ rd of the maintenance cost of a

steam locomotive. As regards the running costs, an electric locomotive not doing any useful work on line does not draw any electric current, but an idling steam locomotive on line cannot but use coal and lubricants. As regards the comparative cost of operation much depends on the cost of coal in the tender and the cost of electric energy from power station. This comparison is already favourable to the use of electric energy in most parts of India. As more hydro electric plants get commissioned, the cost of energy will reduce still further.

A lot of working time in a steam locomotive is spent in coaling and watering. It takes time to get up steam while an electric locomotive can pick up speed almost immediately. All things considered, the availability of an electric locomotive may be as high as $2\frac{1}{2}$ times that of a steam locomotive. Stated in another way, while a steam locomotive may on an average earn 100 miles a day, an electric locomotive on an average will earn 250 miles.

These being some of the considerations, all progressive railways in the World are replacing steam by diesel or electric traction, depending upon the availability of oil or electric energy in their countries.

There are a number of electric traction systems some using direct current, others employing alternating current. There are various voltages and in the case of alternating current, different frequencies and either single phase or three phases. We have 1500 V direct current, 3000 V direct current, 20,000 V a.c. 50 or 60 cycles per second or $16\frac{2}{3}$ cycles per second frequency and 25,000 V a.c. single phase on industrial frequency of 50 cycles per second. The last system has now been adopted as standard by a number of West European countries, United Kingdom, Union of Soviet Socialist Republic and China. The Indian Railways have also standardised on this system. We have satisfied ourselves about its technical soundness as well as our ability to take remedial measures in connection with its adverse effects on neighbouring tele-communication systems. The problem of harmonics and degree of unbalance due to single phase load on the 3 phase supply system was thoroughly investigated on net work analysers in U.K. and France and found to be well within the limits acceptable to power supply authorities.

SOUTHERN RAILWAY

TENDER NOTICE

OLAVAKKOT DIVISION

Separate sealed tenders will be received by the Divisional Superintendent (Works), Olavakkot, upto 16-00 hours on 8-6-1961 for the following works :—

Serial No.	NAME OF WORK	Earnest money	Cost of tender form
		Rs.	Rs.
1	Execution of works and supply of materials in Zones A, B, C, D, E, F, G, H and I for one year as per New Schedule of Rates 1961 ...	1,000	5
2	Collection and training out of ballast in zones P, Q, R, S, T, U and V for one year as per New Schedule of Rates 1961 ...	1,000	5
3	Complete track renewals with 90 lbs. 'R' on CST/9 sleepers for 26.75 miles ballasting between mileage E. 273/19 to E. 233/0 (9½ miles). Approximate cash value of the work Rs. 1,72,300 ...	4,400	10

Last date for issue of tender form ... 16-00 hours on 6-6-1961

Last date for payment of earnest money to the Divisional Paymaster, Olavakkot ... 15-00 hours on 7-6-1961

Date of opening of tenders ... 11-00 hours on 9-6-1961

Further particulars and tender forms can be had from the Divisional Superintendent (Works), Olavakkot, on production of a cash receipt obtained from the Divisional Paymaster, Olavakkot or any Station Master on this railway paid towards the cost of the tender form. Tender forms are not transferable.

SOUTHERN RAILWAY

TENDER NOTICE No. MAS/4 of 1961

TENDERS FOR—Line Capacity Works—Provision of Additional Loops at Kadambattur and Ambattur Stations and Extension of Loop at Avadi—Madras Division.

The Divisional Superintendent, Southern Railway, Madras Division, Rayapuram, Madras-13, invites sealed percentage schedule tenders for the above work to reach him not later than 15-00 hours on 12th June 1961.

	Rs.
Total approximate value of the Contract ...	1,63,400
Earnest money to be paid ...	4,100
Cost of tender form (each) ...	10

Last date for receipt of earnest money by the Divisional Paymaster, Madras-13 ... 12-00 hours on 8-6-1961

Last date for sale of tender forms ... 15-00 hours on 7-6-1961

Other particulars can be had at the Office of the Divisional Superintendent (Works Branch), Madras Division, Southern Railway, Rayapuram, Madras-13.

In India, upto the end of the First Plan, electric traction on 1,500 V direct current obtained on 246 route miles around Bombay and Madras, mainly to carry suburban traffic. By 1958, Howrah to Burdwan on the Eastern Railway main line together with Sheoraphuli-Tarakeswar Branch with a route mileage of 88 was electrified on 3,000 V direct current. This was thus the first section to be completed in the Second Plan.

High voltage enables conductors of small cross-section area to be used. Their own weight as well as the wind load is comparatively light. Consequently the supporting masts and their foundations are also light. An alternating current loco, weight for weight, can draw more load than direct current loco due to its better adhesive characteristics. The alternating current substations are simpler and less in number over a given length than in the case of direct current. The cost of power supply arrangements is, therefore, much less. As against this, high voltage needs better insulation between live conductors and structures. Bigger clearances for structures and better insulation cost additional money. High voltage alternating current has greater adverse effect on neighbouring telecommunication circuits which have, therefore, to be immunised by screening or removal to a safe distance. The single phase traction load, unless within certain limits, leads to unbalance between different phases of supply system. Even with regard to the choice of frequencies, there are arguments in favour of both sides. The German Federal Railways still consider 16⅔ cycles per second frequency as satisfactory but almost all other advanced railways are adopting 50 cycles per second. The main advantage of using the standard industrial frequency of 50 cycles per second is that it completely eliminates costly converting equipment at the substations. These and many other factors had to be taken into account by the Indian Railways before deciding upon the future standard. It was a most difficult decision but the growing consensus of opinion amongst the highest technical authorities favours 25,000 alternating current single phase 50 cycle per second system.

In July 1958, the Planning Commission approved of electrification on the new alternating current system of about 674 route miles during the Second Plan on the Eastern and South-Eastern Railways. The section approved on the Eastern Railway was Durgapur to Mughalsarai on the Grand Chord. The sections approved on the South Eastern Railway were Asansol to Sini; Khargpur-Tatanagar-Rourkela and Dangoaposi to Rajkharsawan. The Sealdah Division of the Eastern Railway

with about 200 route miles approximately was also approved for electrification but early in the Third Plan.

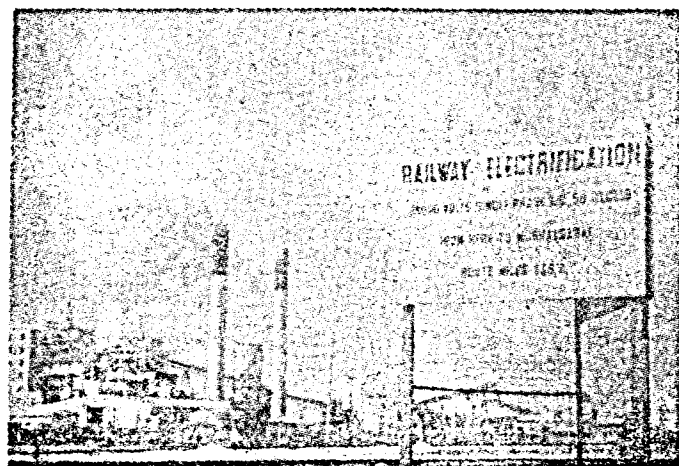
Those of you who are familiar with these parts will now readily appreciate that the main purpose of electric traction is to provide increased line capacity on sections serving our steel plants at Rourkela, Tatanagar, Burnpur and Durgapur to carry raw materials, e.g., coal, iron ore, etc., to the plants and take away the finished products. The setting up of two new steel plants, at Durgapur and Rourkela and the proposed increase in the outturn of the two existing steel plants at Burnpur and Tatanagar has imposed an appreciable strain on the transport capacity of the Eastern and South-Eastern Railways in this area. The finished products to be transported by rail from these four plants are expected to be about 4.47 million tons per annum by the end of the 2nd Plan. By the end of the 3rd Plan period, one more steel plant would be set up at Bokaro and the anticipated traffic offering would increase to 7.39 million tons per annum. Each ton of finished steel requires about 4½ tons of iron ore, coal, lime stone and other materials. The resulting strain on the two railway systems with steam traction would have been so great that electrification of the railways is the only practical and economical solution. It has been decided that for the time being only freight trains would be hauled electrically. Later, when more locos become available, passenger trains will also be run electrically.

In this colossal task, two other Ministries are closely associated with the railways. The Director-General, Posts and Telegraphs, under the Ministry of Communications, is responsible for replacement of aerial circuits along the railway lines to be electrified. The safe working of these circuits which serve the country and not only the railways is of prime importance. It is only after the Posts and Telegraphs Department complete the transfer of aerial circuits into screened underground cables that the overhead traction conductors can be energised. The responsibility for supply to the railway of power at 25,000 V alternating current is that of a number of independent power supply authorities like Damodar Valley Corporation and State Electricity Boards of Uttar Pradesh, Bihar, Bengal and Orissa Government. The Central Water and Power Commission, under the Ministry of Irrigation and Power, co-ordinates the different power supply authorities. The final progress of electrification thus depends not only on the Railway Electrification and the open line railways but also on a large number of agencies outside the control of railways.

After about two years of study by the Railway Board Engineers an organisation for carrying out field work known as Railway Electrification was started in 1958-59. The position of work, a little less than three years afterwards, i.e., by 31st March 1961, is that the Railway Electrification have completed their work on the sections Durgapur to Nimiaghat a little beyond Gomoh on the Eastern Railway; Asansol to Sini; Bondamunda (Rourkela) to Adityapur (Tatanagar) and Dangoaposi to Rajkharsawan on the South-Eastern Railway. Of these, Durgapur to Gomoh on the Eastern Railway and Dangoaposi to Rajkharsawan on the South-Eastern Railway are already in commercial operations. The sections Chakradharpur to Adityapur (Tatanagar) and Sini to Asansol and Gomoh to Gaya would be energised in stages within the next three to four months. Once this is done, the steel plants at Tatanagar, Burnpur and Durgapur would be served by electrically hauled trains.

The work is not so advanced on the remaining sections Gaya to Mughalsarai on the Eastern and Tatanagar to Khargpur on the South-Eastern Railway. However most of our ancillary works are complete including yard remodellings, staff quarters, loco sheds and remote control centres. Survey and design of overhead traction equipment and most of the layout plans of overhead traction equipment have been finalised. About 50% of foundations and masts have been put up. Stringing of copper conductors is in hand. We could have taken up stringing of copper conductors much earlier but we propose to keep this phase of work in step with power supply and replacement of aerial circuits by Posts and Telegraphs cable. There are obvious difficulties in leaving long lengths of copper conductors unenergised over long periods.

D. V. C. Power Station, Durgapur



We carry forward electrification of a number of lines to the Third Plan; for instance 400 track miles of Sealdah Division of the Eastern Railway, on which, as scheduled, considerable preliminary work has been done. The sections from Sealdah to Ranaghat and Dum Dum to Bongaon have been given priority. Similarly, civil engineering works have been carried out on Madras-Villupuram section of the Southern Railway. Igatpuri-Bhusaval section of the Central Railway has been surveyed and the question of unbalance on the supply system due to traction load on single phase is under investigation. An entirely new section is the long Mughalsarai-Kanpur section. Here too, the Civil Engineering Survey is in hand. Co-ordination between Power Supply authorities and the Posts and Telegraphs Department, both at the Ministry level and Railway Administration level has been established; our requirements having been advised. Our Chittaranjan Loco Works and the Integral Coach Factory, Madras, are energetically engaged on establishing manufacturing capacity of a.c. Locos and a.c. EMUs respectively.

Targets of completion will now be mutually decided upon but once again we shall fix for ourselves targets which will need all our capacity to attain them.

We are admittedly behind our targets of the Second Plan which were, as they should be, very high. We were out to do in three years what would have been adjudged on many foreign railways as a remarkable feat, if accomplished in 5 years! Had these targets been attained our rate of work would have been higher than any other railway in the World, including the French Railways who are pioneers in this system and who have a lead of about 10 years over us! Our country is far less advanced industrially than others with whom we tend to compare ourselves. It takes almost a year to import vital components of our equipment. Erection of overhead traction equipment needs track occupation. The proposed rate of progress in our targets would have needed about 8 hours of daylight blocking of lines which would have severely handicapped rail movement on our vital trunk routes. Another point which should be borne in mind is that progress of electrification depends on the matching of work by many independent authorities and not by railways alone. Perhaps a turnkey job by a foreign agency and under one Ministry may have made the targets attainable but at the cost of carriage of a few million tons of railway goods, crores of rupees and huge foreign exchange and at the cost of our growing indigenous industry supporting electrification schemes.

(Continued on page 38)

Tribute to a Patrolman

THE cold night was dimly lit by a well-meaning moon. Hamsa was not partial to dim lights specially not at midnight. It turned out all objects into things of horror. Though Monsoon was generous in its yearly gifts, for two days now it was restraining itself, to give the wet earth a chance to dry, as it were. This temporary lull, however, had no effect on the turbulent waters of the river from the bridge across which Hamsa was performing his nightly vigil. A Patrolman, he had a very monotonous job to do; to watch the surging waters underneath and give a warning if it rose too high or became too strong for the bridge. He carried a hurricane lantern in his hand, the dull light from it throwing a shadow twice his size. He was well-built had passable features and hair dark as coal. Leaning on the iron railings provided on either sides of the bridge he thought of his young wife and two-year-old son, his only child. Every other day during Monsoon he had to do night duty and was obliged to leave them alone in their house praying that nothing untoward would happen to them for he had built his house on the slope of a hill that belonged to no one and there was no other house for miles around. A cold chill ran down his spine for no reason he could think of. 'I am behaving like a child' he thought and started walking along to the northern end of the bridge.

The railway line, the only sign of civilization in that part of the land looked like ribbons of steel in the moonlight, stretching on as far as Hamsa could see, which was not much. The bridge was the link between two hills and the track hugged the northern hill as if it was afraid of the deep forests all around, straightened out as it approached the bridge and went swaying to the east before girdling the hill in the south. The trains coming from the north rolled down the gradient till the bridge and after the bridge had to work up the hill. Hamsa always loved to watch the trains, even as a child. And in his present job, being part of the Railway, he was proud to watch them. He used to watch with thrill the jets of white steam shooting out from the engine when it laboured up the incline. Unfortunately for him not many trains ran on the section. He was not much worried over the river. He had known it since he was old enough to remember things. He knew the steep slopes would not permit water to get dammed and so there was no chance for a flood. The river was practically a dry bed of sand for more than three months every year. Looking

at the familiar stars he was able to guess that the Two O'clock goods was due in another hour. Suddenly he felt the chill down his spine again. He thought he heard the sound of bullock-carts on the dirt road down below, the road made by lumberjacks for bringing down timber from the forests. But how silly of him! Who would be driving about in carts there at that time of the night. He kept walking towards the northern hill.

It was pleasant to walk with the strong chill breeze whipping at his face and making his eyes smart. He thought of his dear ones again curled up comfortably in bed and heaved a sigh of contentment. He had nothing to complain about. The waste land he had homesteaded on with his young wife four years ago was now "a garden in the jungle". Every inch of it was cultivated—vegetables mostly. Apart from meeting their own needs his wife used to sell them to the people who came up to cut wood. And living away from the village, their needs were not much and they never tried to buy anything they could not really afford or need. When the family became bigger, he thought, he could always take in more land, land that was his for the taking. He decided to turn back to the bridge and held the lantern up high to peer into the darkness created by a passing cloud. He knew only too well that the night always played tricks on him but he was sure he could hear some sort of sound from the northern end of the track. It was incredible, he reasoned. And then the cloud passed from under the moon and he could see well enough. There were four or five people bending down on the track. Hamsa did not know what to think. The Permanent Way Gang would not work at this time of the night without lights and if works were going on he would have been told about it. Anyway, he thought, better go and have a look. He proceeded towards the men. The nearer he got the clearer came the sound of metal on metal. When he was about twenty yards away from them he tripped over a stone and the lantern fell down from his hands. The men apparently were not aware of his arrival till then. They stopped work immediately and stood staring at him for a moment. Strangely enough the lantern was not put out or broken and Hamsa proceeded to retrieve it. With the lantern in his hand he resumed his steps towards the men who were still looking at him as if he was a ghost. When he got close enough to see their faces he realised that he had made a grave mistake in starting out to find out what was going on.

The five men were notorious in the near by village for their strange ways of living. They were suspected of being responsible for a series of robberies that had taken place in and around the village. But because there was not sufficient proof and because the ruffians would not hesitate to man-handle anyone who dared accuse them, they were going about free as air. Hamsa asked them what they were doing there at that time of the night. The words were hardly out of his mouth when the man nearest to him hit him with an iron bar. Hamsa saw the moon start a spin and then darkness enveloped him.....

Hamsa had never felt such pain before. He was not able to think for quite a while, but he was able to see the moon. He knew he was down on the ground. How he got there he did not know. He heard a familiar sound again. The sound of metal on metal. Then the whole thing returned to him again. So they were trying to wreck the train and loot the goods. The train, he realised with a start was about to arrive any moment now. He looked around him and was able to learn that he was about thirty yards down the slope. They had perhaps thrown him down from the permanent way thinking that he was dead. He tried to get up and felt a sharp jab of pain from his right ankle. Had he sprained it? Setting his teeth he decided to stand up anyway. No it was not that bad. He could walk. What now? He could not go up and fight all five of them and warn the driver of the Goods. No, if he went up to dissuade them they would certainly kill him and make sure he was dead and would not trouble them again. It would be better to warn the driver. He thought of his wife and son again. Why could not he go home and say he was not well. Or why not lie where he was and 'regain' consciousness in the morning when it was all over. He could tell those who asked him that he was hit over the head and thrown down the hill, that was all he remembered till dawn when he came to. No, that was not right; he could never forget it then. Every day of his life he would be reminded of the night and that would not be pleasant. He had to warn the driver before it was too late. Coming down the gradient would make the Goods go over the side the moment the wheels slipped off the rails. He had to warn the driver.

All of a sudden the sounds from above him stopped. So they had finished their job. He had to do his. He started climbing up the slope diagonally heading northward away from the thugs. He had taken hardly a

dozen steps when he heard the whistle and rumble of the Goods. He climbed up faster and saw the beam of the engine's light shooting out eastward as it appeared from round the bend in the track hugging the hill. He reached the permanent way and looked down the side of the hill when he again heard the bullock-carts. So they were doing a big time job and were going to take away the loot in cartloads. He could hear more men climb up the slope, way down from the dirt road. No time to waste. He stepped on to the track and started running towards the train taking the sleepers two at a time. He was very good at it being used to it since he was a child. The train was coming down the incline at a fairly good speed for a goods train. The engine whistled a shrill protest against Hamsa's hot-headedness, but did not reduce speed.

By then the miscreants had also seen him and started after him in a group trying to stop him before he could foil their plans. The driver of the Goods must have been bewildered. He kept sounding the whistle. But Hamsa ran on signalling the engine crew with both hands to stop. Hamsa wanted to run faster but the pain in his leg was getting worse. The driver at last had decided to stop. Hamsa could hear the wheels grinding against the brakes. But the train was too dangerously close, he decided to jump off the track but his ankle did not support his leap and he fell, his chest hitting the rail. He tried to crawl away from the track but he was too spent to move. Then he saw the driver leaning out of the window of the engine and shouting something. He saw the engine coming on and on; slowly, but it was coming on. He closed his eyes and saw his young wife smiling at him; his son was standing beside her hugging her legs..... The Goods came to a halt well away from the danger point. But Hamsa was under the third wagon.....

The looters were disappointed; with the Goods on the track they were at a disadvantage. But they had more than disappointment waiting for them. From the rear end of the train started coming khaki clad men with rifles, evidently a special carriage of armed police being sent out on a special mission. They had the rare chance of a bit of 'real live target' shooting when the saboteurs made a vain attempt to knock down the engine crew and break open the wagons. Most of them were taken prisoners though some took to their heels the sloping hills adding to their performance.

Hamsa's son stirred in his sleep and his mother put her protecting arm around him.....

A FEW FACTS ABOUT SNAKES

E must all agree that there are few people in the world who like snakes. As a matter of fact most of us detest and fear snakes so much that if we happen to see one, our first thought is to kill it. Perhaps this is the safest thing to do as unless one is an expert on snakes one can never say which are harmless and which poisonous. But in spite of our dislike of snakes, there is no harm in trying to learn something about them.

Everything about a snake is made around the fact that it has no arms or legs, yet it is not such a simple creature like a worm, but highly developed and complicated. It breathes by a lung, has a three-chambered heart, and nature has given it special equipment and skills to meet life.

A snake has no ears or organs of hearing. It lives in a world of silence, like one who is totally deaf. Then how does it 'listen'? The underside of a snake is very sensitive to vibration, and every tiny ground tremor is felt by its sensitive skin. Its eyes can focus easily for near distances, and some snakes have cat's eyes and can see clearly even on the darkest of nights.

A snake has no hands, but its slim tongue serves the purpose of a hand. The tongue is used for delicately touching and feeling every strange object it meets and is also a means of super-smelling. The fine forked tips can pick up microscopic particles from the air, earth or water.

From the tip of its nose to the end of its tail the snake's body is covered with convex, overlapping scales, which gives its body a strong covering. Its backbone is made for tremendous suppleness. Each joint works on a ball-and-socket arrangement. To each such joint is attached a pair of ribs, which in some snakes, runs into three hundred pairs. These ribs are the means by which a snake moves and glides over a surface.

Most types of snakes are born from eggs, but there are a few kinds which are born from the mother direct. The mother snake usually lays her eggs in a sheltered place, such as the stump of an old tree, or buried in the warm sand. She lays as many as seventy eggs at a time.

A snake's eggs when dropped from a height to the ground will not break like that of a fowl or bird. The outer covering is somewhat like rubber. And the strange fact about snake's eggs is that they grow in size after being laid. Some eggs hatch within four days, others may take as long as three months.

From the moment a baby snake pecks its way out of its egg it is ready to cope with the world around. Among poisonous snakes, the babies are already filled with poison and can strike if attacked. A baby rattle-snake two minutes old can coil and strike death at any living being. During its first year a snake more than doubles its length, and by the end of the second year it is three times as long, after which growth slows down and stops as long as the snake lives. But how long is the life of a snake? A water moccasin snake has lived up to 30 years, a boa constrictor 23 years, and the little garter snake has reached a life-span of 11 years.

Because the snake has to find its own food, and that at odd times, nature has insured that a snake can swallow such a lot of food that it will keep it going through a fast of more than a year. A snake has six rows of teeth; two rows in its lower jaw; two above, two more in the roof of its mouth. These needle-sharp teeth curve inwards, so that any small animal caught in a snake's mouth will never be able to get out.

Snakes can perform some amazing feats of eating, that to us seems impossible. Some can swallow large birds' eggs without breaking or cracking them. The slender garter snake has been known to eat 33 frogs one after another. A strange fact about snakes' meals is that they swallow the eggs, animals, or frogs whole. So we may ask, how do they digest all this food without first chewing it into a pulp? Once again, nature has given a snake such strong gastric juices that the fur, flesh, feathers and even bones are pulped into a liquid by these powerful juices.

In the mouths of poisonous snakes, in addition to its other teeth, there are two pairs of long teeth or fangs, which are grooved and hollow. These fangs are connected to tiny sacs or poison in the snake's cheeks. The moment the fangs strike anything, the snake gives a powerful squeeze to these fangs and squirts a jet of poison through the hollow in the fang and into the flesh of the victim bitten, be it animal or human. The combined speed of a poisonous snake's lunging strike, bite, poison injection and return to normal is a startling feat of swiftness in nature. The whole operation is so fast that it is completed in less than a half-second.

Now why do some snakes have poison. This helps them capture their food. Remember, a snake has no legs or arms or big jaws with which to grip its victim,

(Continued on page 44)

NOMENCLATURE IN ADVERTISEMENT

(Continued from page 14)

made keeping through a glass screen having many horizontal and vertical lines. The purpose of the half-tone is to produce different tones of the grey in the photography. The screens used vary from 45 and upwards or 120 & 133 lines screens are only used for magazine. Between 60 & 100 screen are used for newspapers in India. Half-tone, the principal pages in the picture stands alone. The background having been etched away off tone clear finish in which the background is trimmed to a definite shape by the engraver usually rectangular shape but usually oval or circular.

House organ is Railway magazine or Company magazine or newspaper or a periodical or publication that is issued by the Railway or the firm for the purpose of furthering its own interest.

Imprint represents the name of the publisher or the Printer in production. Insert is a printed piece and a leaflet placed in Mail or in package that are being sent to customers or otherwise an island position in a newspaper. The best of an advertisement having all sides adjacent to reading matter.

'L' stands for Letter-press, matter and Lithograph. Unlike letter-press, (off-set) will print screens on almost any surface provided the roughness is not excessive and this is of immense help in the making of books which contain many illustrations requiring screens treatment to produce the best results. The chief value of offset lies in an ability to reproduce type and illustration together or singly at a reasonable cost and to reproduce colour work most faithfully and beautifully through the use of very fine screen. A book or a brochure or a booklet which is subject to revision would be considered poor economy if printed by offset unless its sales were so great that the cost of pasting-up proof of corrections, photographing and the making of new plates could be comfortably absorbed on a small per copy basis.

(To be continued)

RAILWAY FREIGHT RATES

(Continued from page 19)

a revision in the rates fixed by the Tribunal, if considered necessary on account of any changed circumstances. Accordingly, Section 41-A was introduced by an Act of Parliament. This amended Section reads thus:—

"41-A. Where a railway administration, bound by an order of the Tribunal, considers

that since the order was made there has been a material change in the circumstances on which it was based, the railway administration may; after the expiry of one year from the date of the order, make an application to the Tribunal for revision of the order and the Tribunal may, after making due inquiry into the matter in accordance with the provisions of this chapter, vary or revoke the order."

This Section enables Railways to approach the Tribunal with a request to revise the rates, if necessary, but after the expiry of one year from the date of the order of the Tribunal.

(To be continued)

FROM STEAM TO ELECTRICITY

(Continued from page 34)

It may confidently be asserted that, unlike in many other projects of this nature, the indigenous manufacturers, big or small, were given full encouragement to develop themselves. Indian manufacturers have already made d.c. electric multiple units for suburban traffic. Bhopal Heavy Electricals are busy manufacturing traction equipment. India would now soon be making its own a.c. electric locomotives and electric multiple unit coaches. The Indian Telephone Industry, Bangalore, has made a magnificent effort to develop a large range of new equipment. A number of firms are making overhead equipment components of special metals. A factory has been set up in the South to make high voltage solid core insulators and Indian industry has succeeded in making contact and catenary wires of as high a quality as anywhere in the world.

Whatever some of us may have, therefore, thought before, I hope, this brief account of our work in the context of our development over the entire field will be found not too unsatisfactory. We have learnt to co-ordinate a dozen independent administrations. Courageously, all of us aimed very high. We came across handicaps in many fields and have overcome them. The Indian technicians have gained valuable experience and confidence in themselves. The progress made already in this work, involving entirely new techniques, has been most exhilarating to all the workers in this Administration, Posts and Telegraphs Department and the Power Supply Authorities.

On this happy occasion of the annual railway week when we are celebrating the 108th anniversary of Indian Railways, we railwaymen would like to share our joy with our countrymen of whom we have the privilege and honour to serve four millions every day.

THE AFFLUENT SOCIETY

By John Kenneth Galbraith—The Riverside Press, Cambridge, Massachusetts—Houghton Mifflin Company—Boston. Price \$ 5.00

Not very long ago we were treated to books like 'Poverty in Plenty', 'Ideas—People and Peace', 'American Capitalism', 'The Great Crash', etc., etc. All of them touched upon the very vitals of society, specially the inequalities in social living, *pari passu* the efforts to read and view our society from different angles of vision of the world's economists with all errors of ascensions and declinations, right or left and assumptions and presumptions *ad libitum*. If nuts were grown there were squirrels to crack and modern thinking had to deal with knuts for which no clues were easily perceptible and if perspectives varied, the readers were left to hazard themselves their guesses and probe further into the intricacies of economic revelations. Mr. Chester Bowles gave telling ideas and thoughts and tried to work them out during his term of ambassadorial responsibility and it is an agreeable surprise now the present ambassador, Mr. Galbraith gives us and the world through the pages of the book under notice, an outstanding work of fifteen months of quiet secluded thinking on the Swiss Alpine base through his 'magic way with words' and poetic as Mark Van Doren styled his style. This monumental work really reveals new phases of economic thought, unique in economic construction and reconstruction, outspoken in economic dash, and daring in its own 'uncouth note in the world of positive (economic) thinking' to use the author's own words. Readers of Goldsmith's 'The Deserted Village' could hardly forget 'Sweet Auburn, the loveliest village of the Plain' amidst 'Chill Penury and Opulence with space for his horses, equipage and tents', etc., and if one pictures it to one's mind at this juncture in juxtaposition with the economics of the age of opulence so wonderfully depicted herein one will have the true realisation of society with mixed feelings of joy and grief, wonder and sorrow and a heartless appreciation of the wand of the Arabian magician and the paroxysm of a Prometheus Unbound.

The purpose of this book is neatly hinted in the first two pages itself, starting with a significant strength of words, "beyond doubt wealth is the relentless enemy of understanding and ending with, we do many things that are unnecessary some that are unwise and a few that are insane. We enhance substantially the risk of depression and thereby the threat to our affluence itself". Though one reader described it as a practised

effort in the ripping open of stuffed shirts, the author's exposition is neither to avoid a controversy nor an exercise in polemics, amidst a heavy heart scorching criticism, irony, ridicule, and humour of high rank. The fact that this book was completed in the same month that the first sputnik took to space is reassuring as the author's treatment of The Affluent Society is based on carefully reasoned economic appreciation and approbation in between the land's end and the world's end.

The Professor said Mr. Galbraith is not giving us any arm chair perspective as he scrutinizes the diverse current ideas and attitudes of economics and its true role in the reshuffling of human society after all that Adam Smith, John Stuart Mill, Malthus, Ricardo, Marx, Voltaire, Rousseau, Taussig, The Webbs, Lloyd George, Lafollette, Roosevelt, Beveridge and Schlesinger have done before. His is not a politician's fib or fake of the hour for opportunist ends. Keeping in Mind Mr. Alfred Marshall's definition, 'The economist like every one else, must concern himself with the ultimate aim of man,' the author has marshalled out facts and theories of the experts with a sincerity of understanding and sympathy of man's obvious chances to err. In his twenty-five brilliant chapters, Mr. Galbraith has brought into play the concept of conventional wisdom to be applied at every stage, be it of the conservatives of economics of despair, uncertainty, insecurity, inequality dependency, illusion vested rights and interests, stability, social balance, investment, labour, production, distribution, etc., and its role for the survival of man in the



Mr. Galbraith

universe in the context of his position in creation. It is not irrelevant to think at this stage whether this book is not the result of the influence of British economic thought in the main or is the evolved product from a purely American economics untainted and drawn from well of iron pure and undefiled on American soil. We have on page 52 the blessed name of the unique American Economist, Thorsten Veblen (1857—1929) whose immortal "Theory of the Leisure Class dramatized the spectacle of inequality. Where Marx looked forward hopefully to revolutionary reconstruction, Veblen did not". These words are pregnant with meaning. In his later years he comforted himself only with the thought that the evolving economic society was destroying not only itself, but all civilisation as well. Such was the view of the greatest voice of the frontier (p. 54). The author deplores as it were that Veblen's thoughts were not put into text-books in competition with the 'Central tradition' unlike Carey's. In this wise the American mood and the attitudes were getting explicit through teachers of Veblen's way of thinking. Herbert Spencer's and Darwin's theories are discussed in detail through expressions like 'Social Darwinism'. The theory of survival of the fittest invented by Spencer and mistakenly attributed to Darwin gave rise to great fortunes at a time not only of heroic inequality but of incredible ostentation (p. 59) Mrs. Vanderbilt's ball costing \$250,000 was her gift in 1883 and the appearance of a guest in 1897 with a suit of gold inlaid armor valued at \$10,000 are instances in point. In Chapter VI The Marx doctrine is thrashed out under the style, 'The Marxian Pall' where in the decint from Richards, the social Darwinists were an eddy to the night while Marx was a massive eruption to the left (p. 64). After detailing on inequality the versatile author deals with a clarity all his own an 'economic security'. In this connection, it is well to ponder over the famous lines of Sir Walter Scott 'Oh what a tangled web we weave, when first we practise to deceive'. Economic thought is deceptive and illusory often till finally understood and in the right perspective for application, implementation and fulfilment. We are in a big debt due to our Mr. Professor about whom one night well say 'is a genius born'. Now comes the real crux of the problem—production for security and safety. Economic security was long considered the great enemy of production" (p. 112) which involved 'the competitive model as essential for efficiency'. Hence there is the question of 'Free Enterprise' the creed of which was well stressed by Randall. Mr. Galbraith says even in modern corporate life, the conventional wisdom gives great credit to the threat of adversity. To quote Randall, 'The Characteristic

of European businessmen as a class as distinguished from Americans is their complacency, their timidity and their instinctive looking to each other (after introduction pray!) and to government for protection against the rude shocks of the contemporary world. And the thing they fear more is *Price Competition* (p. 113).

In this context the illusion of national security is discussed and elaborated with the role of economic growth in nations playing its part with the problem of power and survival. The U.S. and the U.S.S.R. are taken as examples where the bearing of economics on military capacity was seen by man in its true colours (pp. 164-5).

On the topic of 'inflation' the following is typical of the Professor whose 'American Capitalism' and the Concept of Countervailing Power' are exhaustive. If production is at capacity, increased output will naturally require an increase in capacity. The increased investment that this implies will in the form of wages, payments for materials, returns to capital and profits, add to purchasing power and the current demand for goods. The effort to increase production adds to the pressure on current capacity and the prospect for inflationary price increases.

A cat chasing its own tail may, by an extraordinary act of feline dexterity, on occasion succeed in catching it. To overcome inflation by increasing products, while superficially similar, will not so often be successful (pp. 215-6). Look at the humour of the illustration and let us enjoy the beauty of language, style and diction of a versatile economist who happily is one link between India and America and who, we hope will surely implement all his thoughts into active fulfilment during his tenure of office with the practical solution for our debts repayable and debts—advances—unrefundable to India. This book also scores a point on dependability and dependence in the role of independence and interdependence (*vide* Cl. XI) and in relation to 'Monetary Illusion', and the application of the conventional wisdom to the monetary policy. The last para (p. 238) is telling to the core. The place of honour, integrity and character of a nation is as much important as for man.

Chapters XVIII and XIX on Social Balance and Investment Balance are highly thought-provoking being related to 'goods and services we consume' and the commitment of resources for investment in the economy. Education and mass appeal towards betterment on social living and not to get involved in creation of ever-wanting wants might produce a satisfactory effect for 'The better the social balance the more immune the economy to fluctuations in private demand': leading to a

synthesis in esoteric desires! The Transition' is the head line of Chapter XX which successfully steers clear of all plausible myths about production being the central problem of our lives! 'Social philosophy, far more than nature, abhors a vacuum' is more pithy than original (p. 281). Man must know his purpose in his efforts and thus it is that this erudite thinker of an economist truly follows Marshall's dictum.

The few remaining chapters keep up the good humour of a hilarious journey into the nettled woods of economic co-existence where decisions and resolutions to spend more for schools and streets are made daily which 'do not come to grips with the causes of the imbalance. These lie much deeper" (p. 309). The Redress Balance (Ch. XXII) discusses and considers the Keynesian system with its concentration on aggregate demand and output (p. 319). The next chapter on 'The New Position of Poverty' is interesting from start to finish dealing with case poverty and insular poverty....

The final two chapters crown the discussion of an original set of ideas based on conventional wisdom concept and takes the readers through much informative material about the 'democratic process' 'to reconcile opportunities' with 'life better'. A society has thus a higher task than to consider its goals, to reflect on its pursuit of happiness and harmony and we fondly hope our Professor Ambassador will fulfil all his wishful thinking or rather ours in his own term of office.

All told this book is highly original, valuable and worthy of economic thought for all times though in places it might be said it is all old theories in a new garb! Verily economic theories are not eternal but man's life is though his body has one day to be resolved into its elements. Our folded arms to greet him, the author, for we wear no hats. Hats may go round but our palms won't stream a begging!

Sudama.

SPAN—APRIL 1961 (No. 6) PUBLISHED BY THE AMERICAN EMBASSY, NEW DELHI 50 nP.

This is quite an interesting number with some of the healing touch to the ills of the flesh, the eye and the spirit. The very cover picture of the American student dancer, Inez Metzl is revealing an intricate pose in Bharatnatya, the speciality of India. That dire disease, cancer is being conquered in the medical laboratory, thanks to the co-operation of science and its votaries. It is a three-pronged fight the medicos are putting forth, the one from a study of the sex-hormones, the second

from an analysis of the virus and the third with chemotherapy through the sustained research work of Dr. Sidney Faber, Professor of Pathology at Harvard Medical School. The illustrative pictures of research work done at the Tata Memorial School in India show the royal front of the fight in our land. Mr. Gerald Holton's second article 'the maze without exit' is after all not a labyrinth with no escape from the stand point of the Physics Professor about the integration of science and culture. Incidentally the famous theory of relativity of Einstein is expounded both from the layman's angle and that of physics, examining Crane Brinton's statement regarding Absolute Truth and relative truths. If Metze's laurels display the modern American mind to learn India's feats in dancing, nerve straining though and to disseminate them, Swami Vivekananda's and Rabindranath's prismatic compasses of the spirit are thrilling reminders of something beyond the realms of positivist thought. These two giants of the East have been presented well by Arthur C. Bartlett and through a photo of a clipping from the New York Morning Telegraph of December 1930. The previous issues of this journal gave the readers something very entertaining about Dean Rusk and Galbraith and we are now given a pen-picture and a good portrait of Adlai Stevenson, a World figure as an apostle of peace and the objectives of the U.N.O. The other features of farming, sport and the like are educative enough.

Sudama.

ON PRIVATE INVESTMENT PROCEEDINGS OF SAN FRANCISCO CONFERENCE

It is not possible to recapitulate fully and forthfully the innumerable thought-provoking articles contained in this book which is the record of what was said and done at a gathering of historic importance—when over 600 world business leaders from 62 non-communist countries met, by invitation only, to exchange views, experience, and proposals about economic growth in the economically underdeveloped nations.

While starting to attempt a review, one notes of top businessmen, from both the capital-exporting and the capital-importing countries who for the first time came face to face and discussed the merits of Western capitalism vs. the benefits of a state-aided economy.

In addition to the view of such Americans as S. Clark Beise, Eugene R. Black, John S. Goleman R. L. Garner, Paul G. Hoffman, Edgar G. Kaiser, Henry R. Luce, George Meany, Nelson A. Rockefeller, David Sarnoff and others

here you find a wealth of new ideas from such world leaders as Hermann J. Abs, Director of Frankfurt's Deutsche Bank, proposing a new way to protect capital invested abroad; Rober Marjolin of France's Ministry of Foreign Affairs—discussing which tariffs will be lower and which higher as Europe's new Common Market Federation gets going; A. H. Ebtehaj, Director of Iran's Seven-Year Plan Organization—disclosing how that country now plans to deal with foreign investors; H. V. R. Iengar, Governor of Reserve Bank of India—explaining India's partnership approach to its steel industry, Richard M. Nixon, Ex-Vice-President of the U.S.A., proposing far-reaching changes in America's tax laws and foreign economic policies; Henry B. Sargent, President of American and Foreign Power Co., pointing out the need for managers in countries still in the early stages of industrialization, Taizo Ishizaka, a Chairman of Tokyo's Shibaura Electric Co., Ltd., suggesting new ways to exchange industrial techniques; Mercus Wallenberg, President of Stockholm's Enskida Bank—revealing untapped sources of investment capital in an era of high-cost money and many, many more.

Eugene R. Black in the chapter entitled Future of Economic Development rightly points out that Dogmas do not help. Now there are real dilemmas here, and they are not going to be solved by dogma. I am just as impatient with those theologians of capitalism who preach that private capital can meet all the world's development needs as I am with those theologians of socialism who preach that only state enterprise can satisfy today's demands. Nevertheless I think it can be shown on any realistic analysis, that there are vitally important advantages to be gained in the developing countries from the growth of a healthy and vigorous private sector.

He further states, it is an oft-repeated truth that economic development depends primarily on domestic effort and that foreign capital plays, at a best a marginal role. Yet the assistance provided by foreign capital, if effectively employed, can make a crucial difference. This is largely true and American Assistance to Indian Plans is a case in point.

First governments can reconsider their policies regarding, state ownership. It is superfluous to say private businessmen will not risk their skills and their capital where they have any reason to fear that their property may be expropriated by the state, or that state enterprises will invade their fields of production. Domestic investors may continue to function because they have no alternative but foreign investors will stay away or get out.

Mr. M. R. Masani in his chapter on Challenge to International Business deals with private capital which may not only serve as a bridge between the resources of the West and the needs of the East but may help in bringing economic stabilities and progress to under-developed countries.

Another important pronouncement of Eugene Black is no free country in history has been able to develop a healthy economy and to realize its maximum potentialities without foreign help. To exclude the foreigner in the name of nationalism is to deny one's country its maximum economic growth. Nationalism in the underdeveloped world, like state socialism there, is not the wave of the future, if these countries really aspire to industrial development within the framework of free institutions, as I recommended they do, both state socialism and nationalism are the very negation of their future.

Sri H. V. R. Iengar brings out why Government take large part of the initiative in producing steel. The private sector is not interested for two reasons. It does not have the resources, even if it had, making these items is not going to be profitable for quite some time. He also adds that we are trying to produce basic commodities and not consumer goods which are likely to have inflationary possibilities; that is the situation in India. He also refers to the tremendous experiment of community development administration, potentially the most useful thing we have attempted. Although Community Development has not worked perfectly everywhere, it has been successful over very considerable parts of our country.

In his chapter on Partnership Approach Mr. Berthhold Beitz speaks of the improved tools for undertaking economic development of any area. He stresses the balanced development of agriculture and industry. He also states that foreign aid should be put on a business basis. Financial contributions by Governments for basic development projects could be well given through World Bank. The Bank has excellent administration and experience. There is another advantage in financing through World Bank. Money so advanced loses its nationality, that is its political identity. Receiving countries could make their purchases on the more advantageous terms without regard to the nationality of the supplier country.

Excellent facts-packed publication with thought-provoking ideas in private enterprise vis-a-vis public enterprise.

S. R. NEWS



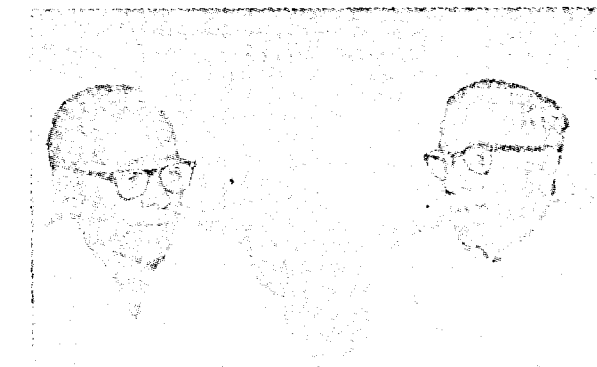
Sri H. D. Singh, G.M./S. Rly., broadcast a talk on 9-4-1961 in connection with the Railway Week

RAILWAY WEEK—BROADCAST

In connection with the Rly. Week, A.I.R., Madras, broadcast an interview with Sri S. Rajagopalan (right), Divisional Superintendent, recently

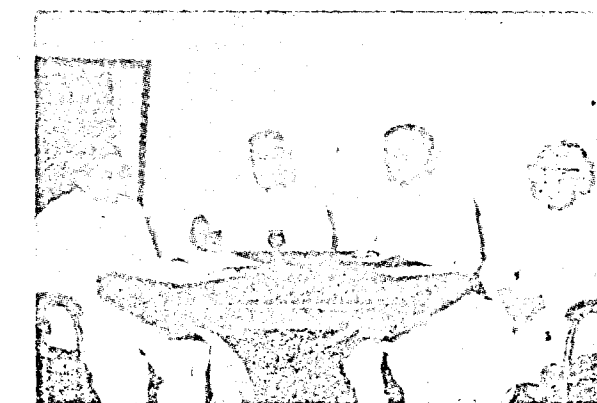


Sri D. B. Patel, S.D.G.M./S. Railway, broadcast a talk in connection with the Railway Week



Sri K. Swarup, C.A.O./I.C.F., broadcast a talk in English on the progress of I.C.F. from A.I.R., Madras

Participants in a discussion in English broadcast from Madras in connection with Railway Week. Left to Right : Sri V. K. Sthanunathan, Public Relations Officer, S. Rly.; Sri P. R. Srinivasan, Resident Editor; Sri C. Anna Rao, Z.R.U.C.C. Member and Sri R. R. Dalavai, D.R.U.C.C. Member



CHILDREN'S CORNER

(Continued from page 37)

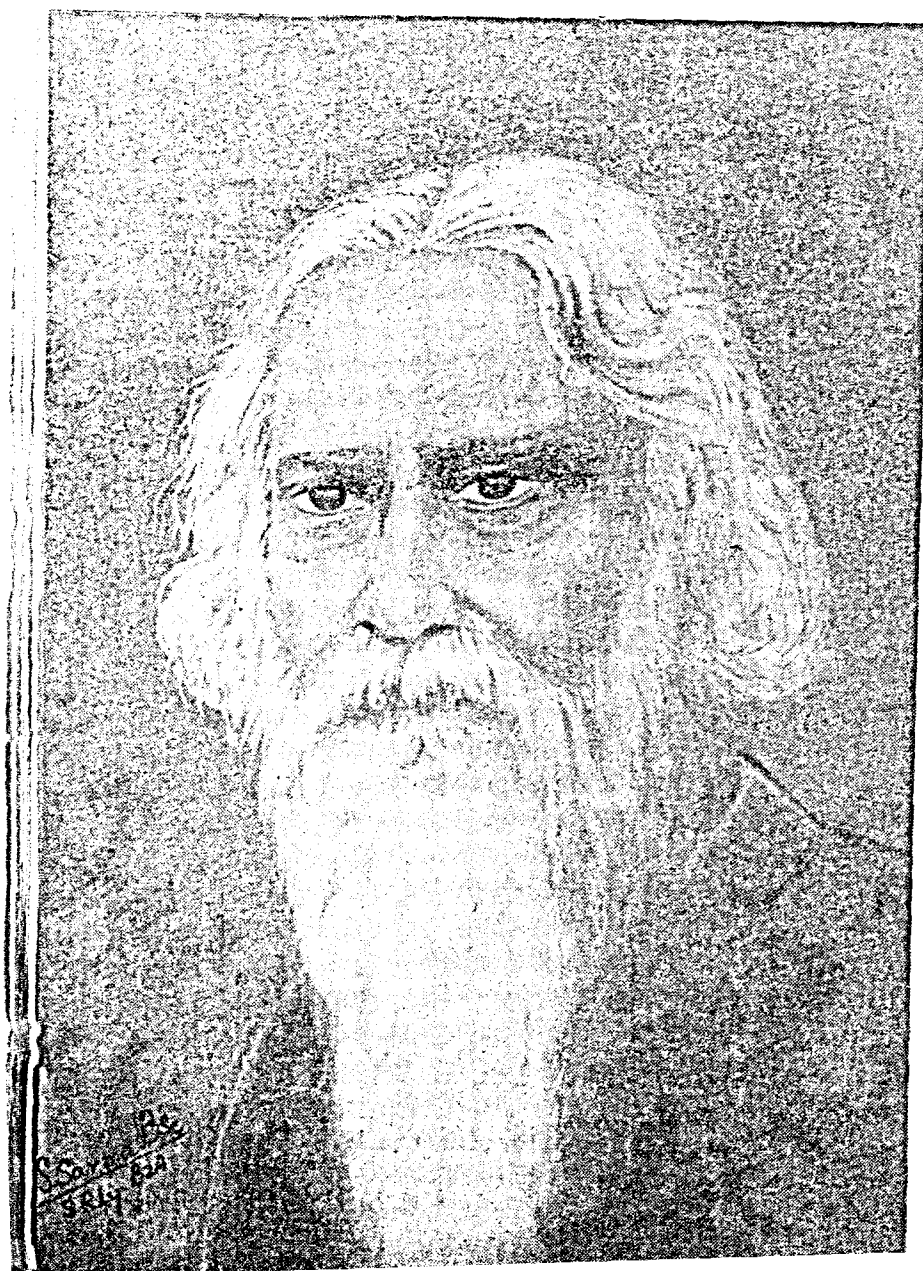
so nature has given it poison with which to paralyze a small creature which if it struggled would get away from the snake. The poison swiftly kills the animal. A poisonous snake uses its poison against big animals or human beings only in self-defence, or when disturbed. If you leave a snake alone it will not usually attack.

Some strange things are said and believed by people about snakes, but these are not true. For instance, it is not true that snakes are slimy to touch. A snake's skin is clean and dry to the touch. No snake has a poisonous sting in its tail as believed by some people;

nor does it roll like a hoop or hypnotise birds. The flicking, wicked looking tongue of a snake is actually harmless. It is the snake's fangs which are dangerous in the case of poisonous snakes. Some people say that if you kill a snake, its mate will come after you seeking revenge. This is not true. Another common belief is that snakes suck milk from cows, and that they are charmed by the music of a snake charmer. These beliefs also are not true. A snake has no ears and cannot hear sounds of any kind, so how can it be charmed by music?

Well, as much as we may dread and fear snakes because they seem to be the enemies of man, we now know as little about them.

UNCLE TELLATALE.



A crayon drawing of Rabinranath Tagore

Sow. Prema, daughter of Sri S. Rajagopal, Dy. Chief Engineer (North), Southern Railway and Sri Sitharaman, I.R.A.S., Western Railway, were married recently



INTRODUCTION OF INCENTIVE SCHEME ON SOUTHERN RAILWAY



R. N. Chaudhary, Chief Mechanical Engineer, Southern Railway

India became a free nation in August 1947 and this gave an impetus to the growth of industries. As a result of careful planning in the two Five-Year Plan periods, ending March 1961, we have reached a stage where the progress and development of industries are clearly felt by one and all. Strenuous efforts and sacrifices were called upon from people and was freely given. The good achievements and maintenance of targets prescribed in the Plan periods are mostly due to the efforts of industrial workers including those of Railways. The success so far achieved, though immense when compared with the years prior to Independence, is not sufficient to ensure the attainment of the required national prosperity and strength. Several more heavy and light industries will have to be developed, water resources harnessed and the 'nook and corner' of India linked. Then only India can become self-sufficient and the necessities for leading a happy and contented life ensured.

Industry is the back-bone for the welfare of a country. Successful industrialisation depends upon the efficient and intelligent utilisation of the assets with the willing co-operation of labour. Up till now, emphasis was laid on increase in production; efficient utilisation of the assets and productivity did not receive the attention they deserve. If our industries have to face competition from other countries, the productivity and the utilisation of the assets have to be improved. This is only possible

if harmonious relationship exists between the Administration and the Labour. The labour, it is gratifying to note, is taking active part in the increase in productivity.

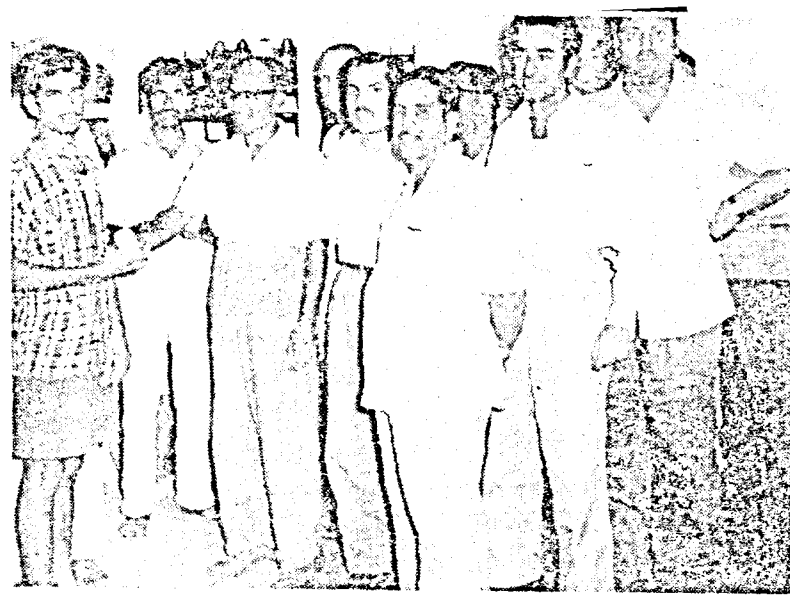
In this context it would be of interest to define productivity which is a measure of efficiency. Productivity is the ratio of the resources employed in the process of production and the output achieved therefrom in relation to time. In other words, the highest productivity will be obtainable where, with minimum resources, maximum results could be achieved in the shortest possible time.

Productivity envelopes the quality and quantity of production and happy mutual understanding between the management and the labour. The translation of the concept of productivity into reality rests on the concrete foundation of unity of purpose, sincerity of action and the vitality of human endeavour. It will thus be seen that the role played by the labour in industry is indeed the predominant factor contributing towards increased productivity, which in turn, helps labour to earn more and more, commensurate with the increased performance of human activity.

With this end in view, the Railway Board with the willing co-operation of All-India Railwaymen's Federation, have embarked on the introduction of the Incentive Scheme. This is a new venture in which labour is motivated towards higher productivity by a system of payment by results in the Railway Workshops which is otherwise known as "Incentive Scheme".

This system was first introduced in the Chittaranjan Locomotive Works with good results, and the activities are now spread to various Railway Workshops creating requisite atmosphere of efficiency. The salient feature of the system of payment by results as approved by the Railway Board for adoption in Railway Workshops, enables a workman of average ability to earn 33-1/3% over and above his basic wages in respect of periods spent on the work.

The Southern Railway Workshops responded to the trumpet call of productivity with eager and enthusiastic co-operation. The Trade Union also participated in the Scheme with enthusiasm. The Scheme was inaugurated at Perambur Loco Workshop and Carriage and Wagon Shops on 28th January 1961 and at Golden Rock Workshops on 1st February 1961 with enthusiasm and subsequently in the Engine and Boiler Sections of the Perambur Loco Works, in Wheel and Tyre Section of the Perambur Carriage Works, in the Fitting Section of the Iron Foundry and a part of the Machine Shop of the Hubli Workshop, and in the Ferrous and Non-ferrous Foundries and Wheel Section of Golden



Sri T. V. Anandan distributing the Bonus

Rock Workshop. The introduction of this scheme in Wagon Shop and Vacuum Brake Section of the Perambur Carriage and Wagon Shops, in Erection Shop, Piston and Cross-head Section and Wheel and Tyre Shop of the Perambur Loco Workshop; and in Wagon Shop and Spring Shop Sections of the Golden Rock Workshop is contemplated during May 1961 and subsequent month. With this, the number of men on Incentive will be in the range of 1,211.

The maximum bonus earned by the staff is about Rs. 40 so far, and Sri T. V. Anandan, General Secretary of the Southern Railway Employees' Sangh, associated himself with the distribution of the first bonus pay packets early in March 1961 in Perambur Workshops and also other labour representatives at Golden Rock and Hubli Workshops.

The association of the Labour Leaders with the Scheme assured the men that their fear that the surplus

men may find no work was ill-founded and without basis. It has been realised that alternative lines of production have been planned in the form of manufacture of Box Wagons, Cranes, Furniture and hundreds of other items so far purchased from outside sources. This would create sufficient work loads in shops to keep all such surplus staff engaged.

It is now left to the men in shops to take the maximum benefit of the scheme of earning 50% over and above the basic wages where the Incentive Scheme has been introduced. While this increased earning on the one hand will be a source of help to the family, on the other hand it will increase the production, thereby the Railway-men in keeping with their past tradition will contribute their mite in the building up of our Motherland. With the start that has been made, there is no doubt that our Southern Railway Workshop staff will give a lead to Railway-men in other parts of the country.



Bonus distribution

"SLOGAN" COMPETITION

In connection with the Sixth Railway Week, "Slogan" Competition was held for the employees of the Southern Railway. Out of the thirty-four employees who sent in their entries for the Competition, five were awarded first prize of Rs. 12 each and eight the second prize of Rs. 5 each.

The prize winning slogans and the names of respective prize winners are detailed below :—

I Prize Winners :

1. Courtesy Curtails Caustic Criticism—M. K. Ganesan, ASM, Ambur.
2. It pays to use but not to abuse Your Property—The Indian Railways—James H. White, Driver 'B', Villupuram.
3. **S** Safety and Punctuality are the Fruits of care and efficiency
 - L** Laziness is the symbol of backwardness
 - O** One enthusiastic servant equals many others
 - G** Guessing is dangerous. Be sure. Millions of lives lie in your hands
 - A** Alertness will reduce accidents
 - N** Nation needs all-round savings
 - S** Satisfaction costs a slight effort
 - F** For efficiency subscribe your intelligence
 - O** Offend none. Oblige everybody
 - R** Research is the backbone of production
 - Y** Your slight vigilance will minimise claims
 - O** Our prestige rests in your politeness to others
 - U** Utilise every atom. Don't waste
—K. Rangarajan, Stenographer, Bridge Engineers's Office, Madras-3.
4. Safety and Security First
Service with a Smile next
Sure these will set the Railway Bright
—S. Selvarajan, LCE Draftsman, DS(W)'s Office, Trichinopoly.
5. Charity begins at Home and not in trains
Do not encourage Beggars in trains—M. Venkateswara Rao, Senior Clerk, P.R.O's Office, Madras.

II Prize Winners :

1. The mode of travel may worry your brain there'll be no worry if you travel by Train—M. Gonsalvez, Booking Clerk, S. Rly., Coonoor R.S.
2. Ensure an efficient Railway
Insure the Nation's progress—S. L. Sharma, Lab. Supdt., CMT's Office, Perambur.
3. A Soft answer turneth away wrath but grievous words stir up anger—V. K. Yadavnavar, S.M., Saunshi, Hubli Dn.
4. Do not entrust duties to others which require your personal attention—M. M. Rajoo, Asst. Labour Welfare Inspector, DS Office, Madura.
5. Take pride in calling **OUR** Railways—P. Savarinathan, Wireless Operator, Tiruchchirapalli Jn.
6. Do not cause inconvenience to your fellow passengers by depriving them of their rights. Treat them as you expect them to treat you, if you were to be in their position—K. V. Balaram, Sr. Clerk, Transportation, Power and Fuel Branch, Madras-3.
7. Pleased passengers are assets for Railways once troubled, they abuse us always—M. S. Srinivasa Rao, Sr. Comml. Clerk, Bangalore City.
8. A little forethought will save much afterthought
—K. Vadhirajan, Ticket Collector, Chromepet.

Sri S. Jagannathan, Financial Commissioner for Railways, in discussion with Sri D. U. Rao, FA & CAO and Sri G. P. Warrier, Engineer-in-Chief (Construction)



GOOD WORK APPRECIATED

At a pleasant function held at 9 a.m. on 19th March 1961 at Railway Hospital, Perambur, Kumari Swarnakumari, daughter of Sri K. R. Swaminathan, Driver, Traction, Tambaram, who was treated there as an in-patient and who had undergone a successful major operation, presented to the hospital authorities before a large gathering, a beautiful wall-clock as a mark of voluntary appreciation by her and of gratitude to the Doctors and Staff for the successful operation she underwent there and the fine treatment meted out to her as an in-patient. Sri V. G. Naidu, Chief Personnel Officer, was also present.



Dr. N. Govindarajulu, DMO/Perambur, welcoming the guests introduced the patient and her parents to the audience and requested Sri Rajagopalan, Divisional Superintendent, Madras, to preside over the function.

Sri S. Rajagopalan, D.S., Madras, who presided over the function said that indeed it was a red letter day for the hospital of which every one of the staff should be

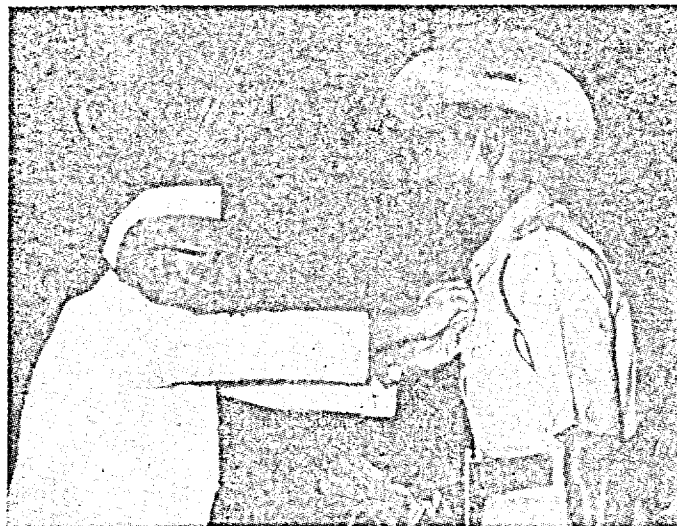


proud of and this voluntary appreciation by a patient has given the lie to the usual criticism that Railway Hospitals exist to give only fit and unfit certificates.

Certainly the Medical department of this Railway has been fulfilling its true and important role of caring for the welfare of the workers and attending to their medical needs efficiently and promptly.

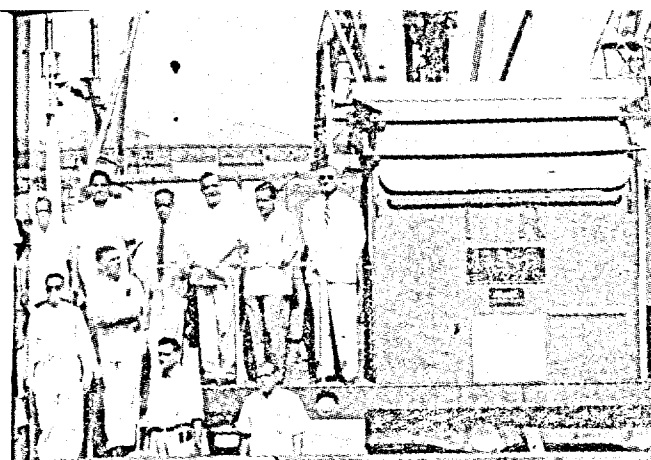
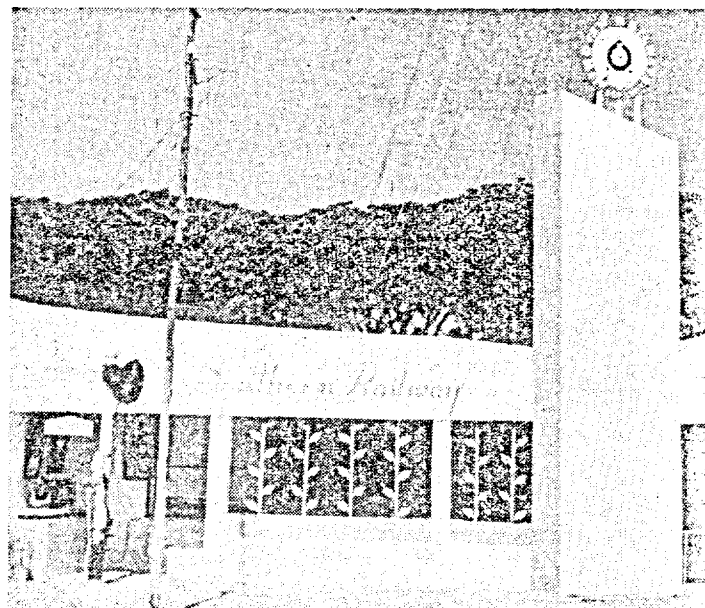
Then Swarnakumari presented the gift and Miss Lakshmikutty, Matron of the Hospital, received it on behalf of the Hospital authorities.

Dr. L. R. Parthasarathy proposed a vote of thanks.

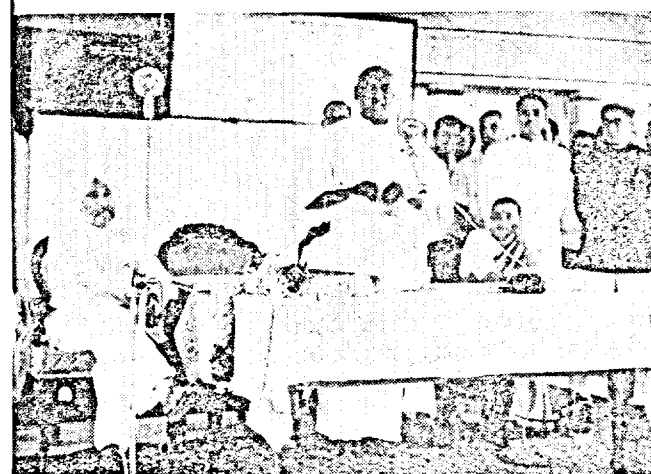


Sri C. W. Gonsalves, Head Rakshak, Southern Railway, was awarded a silver medal for outstanding service by the Railway Minister at a function in Delhi on April 16, 1961. He was also given National Saving Certificates worth Rs. 500 on the occasion.

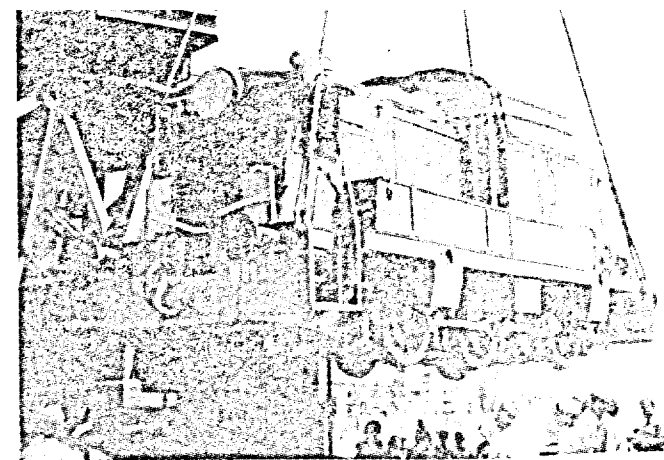
Southern Railway Stall at Bangalore City Exhibition



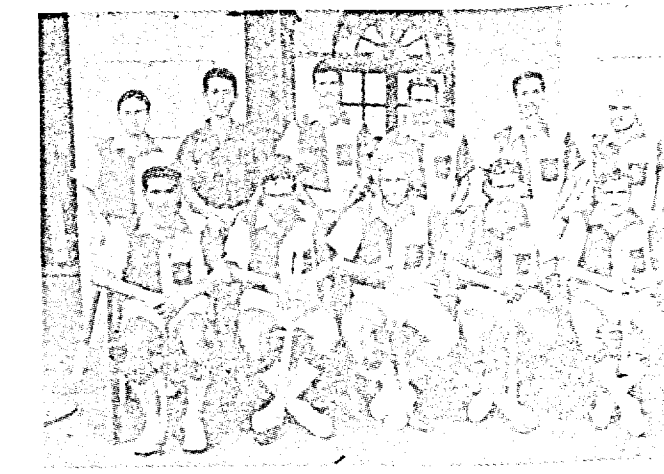
The first diesel locomotive incorporating the "Suri Transmission" principle was unloaded in the Bombay docks on the 17th April 1961 from s.s. 'Indian Trader', Pressmen witnessing the unloading ceremony



Sri K. Kamaraj, Chief Minister of Madras, opened the Remodelled Madras Central Station recently

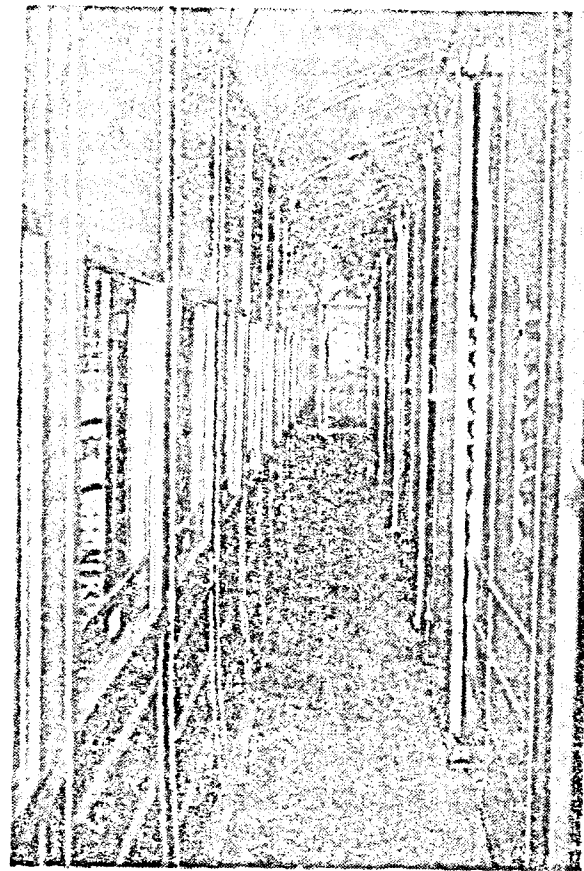


Winners of the 27th National Hockey Championship 1961 for the Rangaswamy Cup, held at Hyderabad

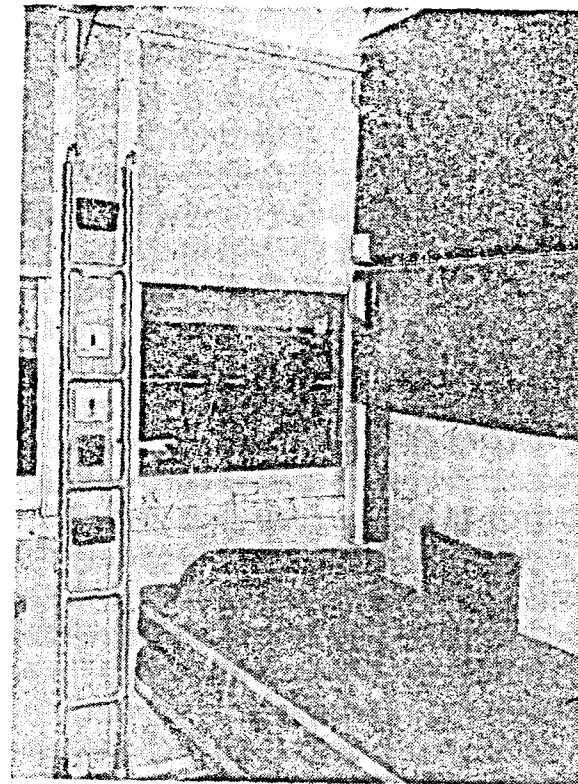


A view (right) of the performance held at Sapru House, New Delhi, in connection with the Railway Week Celebrations. Among the audience is visible the Minister for Railways, Sri Jagjivan Ram



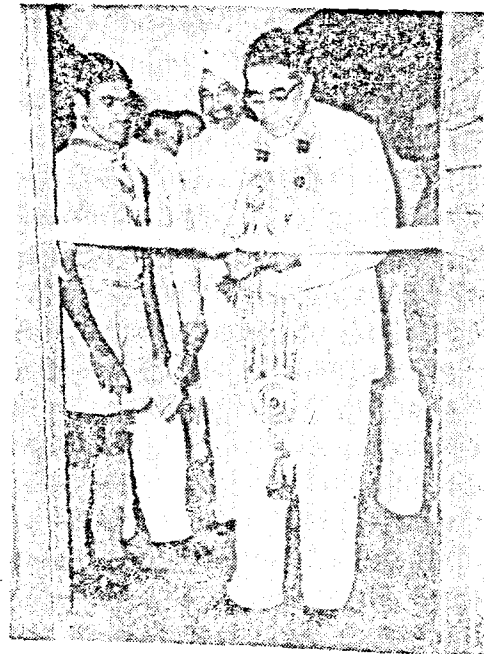


New First Class Coach built in the Integral Coach Factory, interior view showing the corridor along the entire length of the carriage on one side suitable for future vestibuling

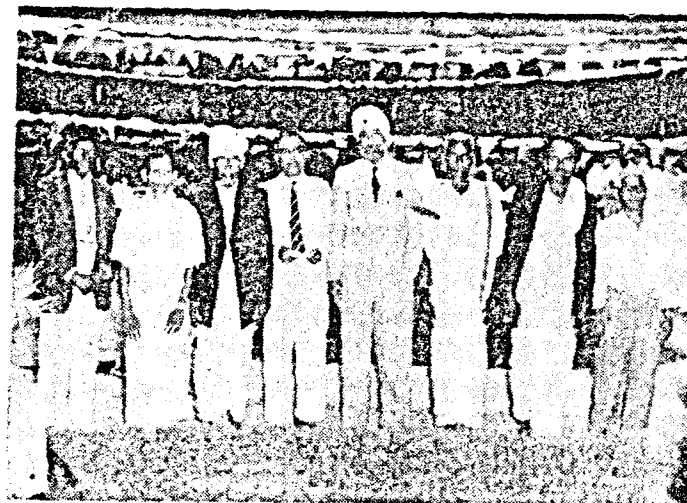


New First Class Coach built in the Integral Coach Factory —Interior view. Note the step-ladder and modern luxurious bed-cum-back rest arrangements

At the headquarters, the Railway Week was inaugurated by the Chief Justice Sri P. V. Rajamannar at the Perambur Railway Institute. He is seen declaring open the Handicrafts Exhibition



Sri H. D. Singh, G.M., and Sri V. G. Naidu, C.P.O., with employees, who have put in more than 40 years of service, at the get together tea party at headquarters



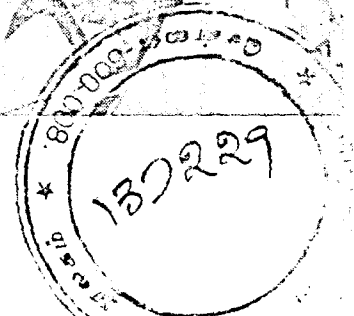
STERLING CLUB INAUGURATED

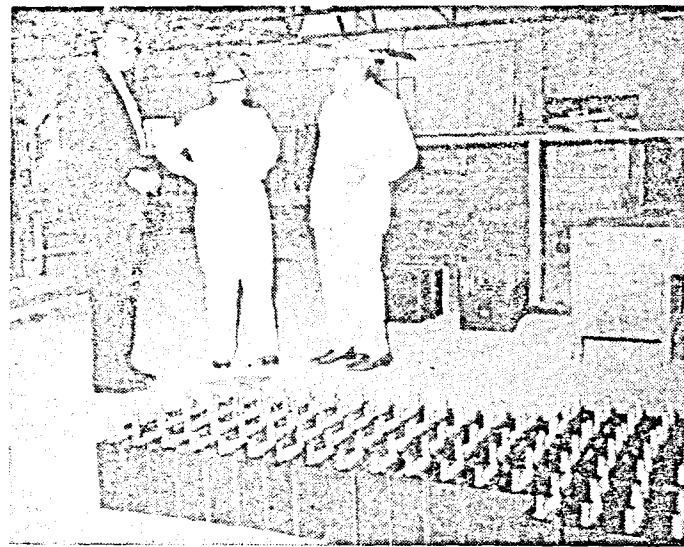
On the evening of April 11, 1961 amidst a large gathering of officers and their families "Sterling Club" was declared open by Smt. Singh, wife of Sri H. D. Singh, General Manager, Southern Railway. Welcoming the guests, Sri J. B. Rao, Chief Commercial Superintendent, Southern Railway, who is also the President of the Club, explained the need for such a club in that locality where several Railway Officers resided. The club could boast of a fine though small building and a spacious covered Shuttle-cock court. Smt. Patel, wife of Sri D. B. Patel, Senior Deputy General Manager, declared open the Badminton (Shuttle-cock) court.

Sri H. D. Singh, General Manager, partnered by Sri P. K. Madhava Menon, Chief Operating Superintendent, opened the first game on the Tennis court. Sri K. R. Ramanujam, retired General Manager, Southern Railway, partnered by Sri S. F. Braganza, Chief Engineer, faced them.

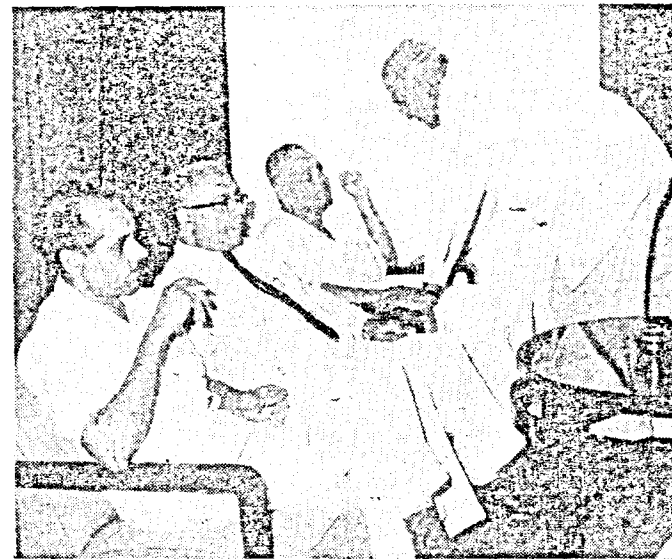
The guests were entertained to tea and light music during the function.

Sri M. G. Nair, Secretary of the Club, proposed a vote of thanks.





Members of the Railway Board and Railway Engineers visited M/s. Standard Batteries Ltd.'s Factory at Bombay, on April 19. Right to Left: Sri R. D. Char, Chairman, Standard Batteries Ltd., Sri L. N. Mathur and Sri L. D. Char



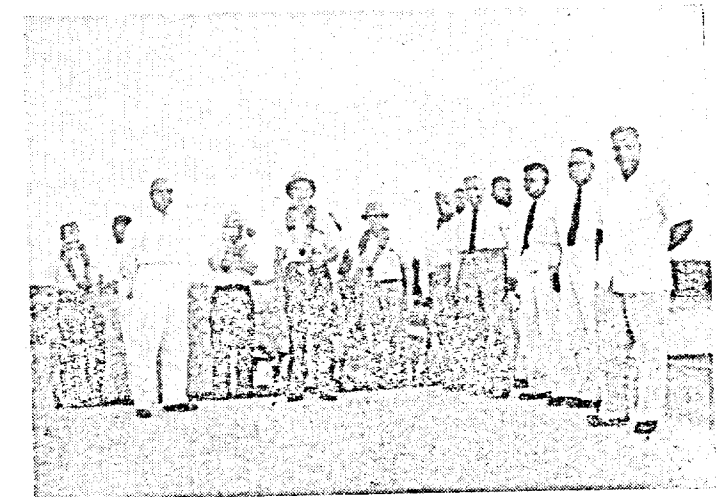
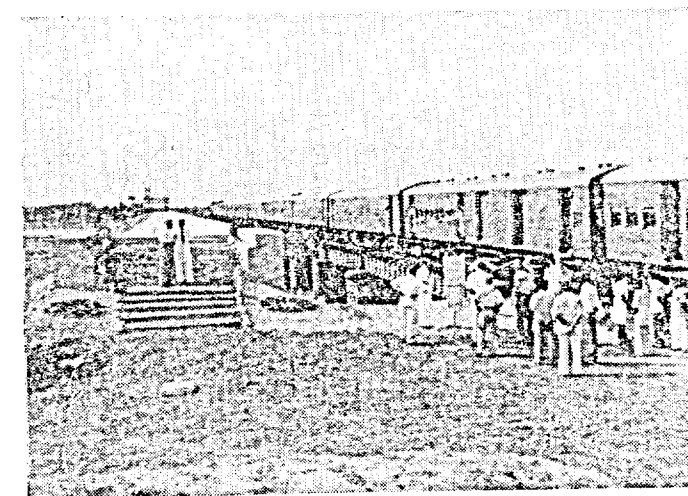
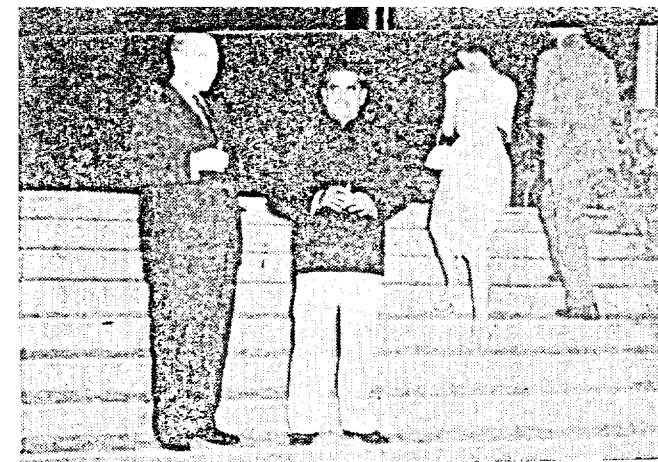
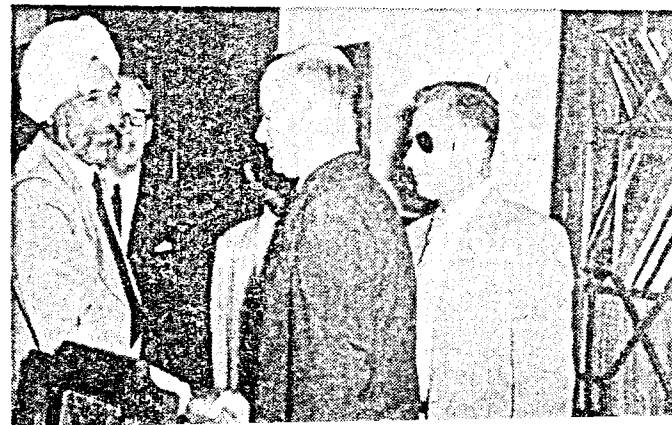
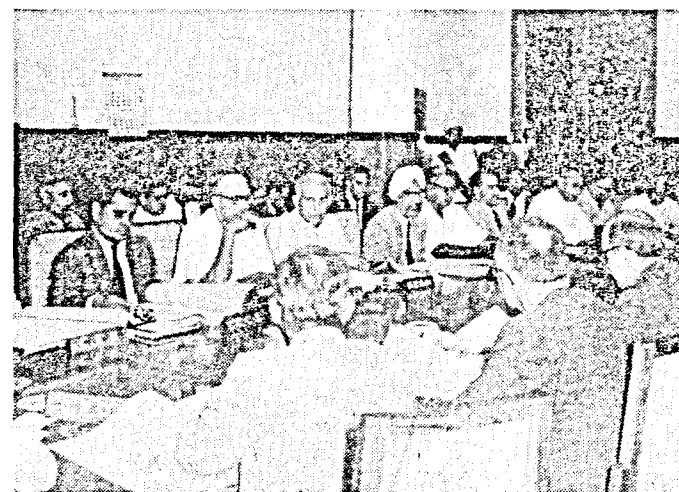
Members of the Railway Board and Railway Engineers who were meeting in Bombay were entertained to lunch at the Taj Mahal Hotel by Messrs. Standard Batteries Ltd. Right to Left: Sri R. D. Char, Chairman of Standard Batteries; Sri S. P. Tonse, Chief Electrical Engineer, S. Rly., Sri P. C. Mahree, Chief Electrical Engineer, N. Rly. and Sri D. N. Kumar, Joint Director, R.D.S.O.

WORLD BANK TEAM'S VISIT

The Technical Mission of the World Bank consisting of officers of the Canadian Pacific and Canadian National Railways, arrived in Madras on 30th March by special train from Vijayawada. They inspected the Railway Section from Vijayawada to Madras along with senior officers of the Railway Board and the heads of departments of the Southern Railway. Soon after arrival in Madras, they had discussions with the General Manager, Sri H. D. Singh and heads of departments of the Southern Railway in their headquarters office. The General Manager explained the operating position of the Southern Railway with the help of charts and maps.

They visited the Carriage and Loco Works on 1st April 1961. The C. M. E. took them round the foundry Tool Room, Machine Shop, Erection Shop, Carriage Works, Carriage Repair Shop, Paint Shop and Saw Mills and studied the performance of the various shops. They evinced keen interest in the statistics of the Workshop performance.

The Technical Mission consisted of Mr. Stanley Frederick Dingle, Vice-President, Canadian National Railways and a team of five other officers. Sri O. S. Murthy, Sri Jagjit Singh and Sri P. Sahai, Directors of the Railway Board, accompanied the team.



SOUTHERN RAILWAY

MADURAI DIVISION

TENDER NOTICE

- I. Execution of works and supply of materials in different zones in Madurai Division for the period 1-7-1961 to 30-6-1962.
- II. Collection and training out/Supply of ballast in different zones in Madurai Division for the period 1-7-1961 to 30-6-1962.

Separate sealed tenders in the prescribed forms for Items I and II above based on the revised Basic Schedule of Rates (1961 Edition) will be received by the Divisional Superintendent (Works Branch), Southern Railway, Madurai, upto 16-00 hours on 14-6-1961.

Last date for payment of earnest money of Rs. 1,000 for each tender to the Divisional Paymaster, Southern Railway, Madurai		15-00 hours on 9-6-1961
Last date for issue of tender form		15-00 hours on 14-6-1961
Date of opening of tenders		11-00 hours on 15-6-1961

Further particulars and tender form costing Rupees Five only each paid to the Divisional Paymaster, Southern Railway, Madurai, or to any Station Master of Southern Railway (not refundable) can be obtained from the Divisional Superintendent, Works Branch, Southern Railway, Madurai. Tender forms are not transferable.

SOUTHERN RAILWAY

TENDER NOTICE No. MAS/5 of 1961

- (1) Tenders for Execution of Works and Supply of Materials for Zones 'A' to 'H' for a period of one year only from 1-7-1961 to 30-6-1962—Madras Division.
- (2) Tenders for Collection and training out of Ballast for Zones 'P' to 'R' for a period of one year only from 1-7-1961 to 30-6-1962—Madras Division.

The Divisional Superintendent, Southern Railway, Madras Division, Royapuram, Madras-13, invites separate sealed percentage tenders for the above to reach him not later than 15-00 hours on Monday the 12th June 1961. The percentage will be on the rates of the revised Basic Schedule of Rates, 1961.

Cost of tender form (each)	..	Rs. 5 (Rupees Five only)
Last date for sale of tender forms	..	15-00 hours on 6-6-1961
Earnest money to be deposited for each to the Divisional Paymaster, Royapuram	..	Rs. 1,000 (Rupees One Thousand only)
Last date for receipt of earnest money	..	12-00 hours on 8-6-1961

Other particulars could be had from the Office of the Divisional Superintendent (Works Branch), Southern Railway, Madras Division, Royapuram, Madras-13.

SOUTHERN RAILWAY

OLAVAKKOT DIVISION

Tender Notice

Separate sealed tenders will be received by the Divisional Superintendent (Works), Olavakkot, upto 16-00 hours on 17-6-1961 for the following works :-

Serial No.	NAME OF WORK	Earnest money
		Rs.
1	Construction of Types I—13 units and improvements to some staff quarters at Mettupalaiyam. Approximate cash value of the work is Rs. 39,000	1,000
2	Construction of staff quarters Type I—5 units at Podanur, Type II—2 units at Coimbatore, Type I—16 units at Podanur and improvements to staff quarters No. 97 A to E. Approximate cash value of the work is Rs. 49,500	1,300
3	Tiruppur—Additional accommodation for parcels and proposed improvements to staff quarters No. SNO/6 and SNO/5 at Somanur. Approximate cash value of the work is Rs. 4,400	110

Last date for issue of tender form	..	16-00 hours on 15-6-1961.
Last date for payment of earnest money to the Divisional Paymaster, Olavakkot	..	15-00 hours on 16-6-1961.
Date of opening of tenders	..	11-00 hours on 19-6-1961.

Further particulars and tender forms costing Rs. 10 each (not refundable) can be had from the Divisional Superintendent (Works), Olavakkot, on production of a cash receipt obtained from the Divisional Paymaster, Olavakkot or any Station Master on this Railway, paid towards the cost of the tender form. Tender forms are not transferable.

The South is well-known as the home of temples which also abound in exquisite pieces of architecture and sculpture. There are also other attractions like Waterfalls, Game Sanctuaries and Hill resorts, for the tourists.

For assisting passengers desirous of undertaking tours for visiting such places, Railways have introduced Standard Circular tour tickets at concessional fares. These standard tours include visits to important religious centres and also places of historical interest, architectural interest, etc. Circular tour tickets are also issued at concessional fares for tours over 1,500 miles of the tourists' choice subject to certain conditions which may be ascertained from the Chief Commercial Superintendent, Southern Railway, Madras-3.

Well-furnished First Class tourist cars and Third Class tourist cars are available at reasonable fares. These cars can be had on application to the Chief Operating Superintendent, Southern Railway, Madras-3.

SOUTHERN RAILWAY

SOUTHERN RAILWAY

TENDER NOTICE

The Divisional Superintendent (Works), Southern Railway, Tiruchchirappalli, invites separate sealed tenders in connection with the following works :—

Serial No.	NAME OF WORK	Approximate cash value	Earnest money
1.	Talaivasal—Proposed improvements to watering arrangements	Rs. 63,000	Rs. 1,575
2.	Polur—Proposed improvements to watering arrangements—Conversion into permanent watering arrangements	1,01,000	2,525

Last date for the issue of Tender Forms 15-00 hours on 21-6-1961

Last date for remittance of earnest money to the Divisional Paymaster, Tiruchchirappalli 12-00 hours on 22-6-1961

Last date for the receipt of Tenders 16-00 hours on 23-6-1961

Date of opening of Tenders 11-00 hours on 26-6-1961

Tender forms (not transferable) can be obtained from the office of the Divisional Superintendent (Works), Tiruchchirappalli, on production of a receipt for Rs. 10 paid to the Divisional Paymaster, Tiruchchirappalli or to any Station Master on this Railway towards the cost of Tender Form for each Tender. Further particulars can be seen in the Tender Form. No refund of Rs. 10 paid towards the cost of the Tender Forms will be made under any circumstances.

SOUTHERN RAILWAY

TENDER NOTICE

The Divisional Superintendent (Works), Southern Railway, Tiruchchirappalli, invites sealed tenders for the work noted below :

Serial No.	NAME OF WORK	Approximate cash value	Earnest money
1.	Ettapur Road—Proposed conversion of temporary installation into permanent watering arrangements	Rs. 47,000	Rs. 1,175

Last date for the issue of Tender Forms 15-00 hours on 7-6-1961

Last date for remittance of earnest money to the Divisional Paymaster, Tiruchchirappalli 12-00 hours on 8-6-1961

Last date for the receipt of Tenders 16-00 hours on 9-6-1961

Date of opening of Tenders 11-00 hours on 12-6-1961

Tender forms (not transferable) can be obtained from the office of the Divisional Superintendent (Works), Tiruchchirappalli, on production of a receipt for Rs. 10 paid to the Divisional Paymaster, Tiruchchirappalli or to any Station Master on this Railway towards the cost of Tender Form. Further particulars can be seen in the Tender Form. No refund of Rs. 10 paid towards the cost of the Tender Forms will be made under any circumstances.

SOUTHERN RAILWAY

GUNTAKAL DIVISION

TENDER NOTICE No. 50

The Divisional Superintendent (Works Branch), Southern Railway, Guntakal, invites separate sealed tenders for the following works upto 16-00 hours on 9th June 1961 :—

Serial No.	Description of work	Approximate value	Earnest money	Cost of tender form
		Rs.	Rs.	Rs.
1	Piecework contract—Execution of works and supply of materials in different Zones of Guntakal Division for a period of one year from 1-7-1961 to 30-6-1962	...	1,000	5
2	Supply of 2" size hard stone ballast from Hospet to Thungabadra Dam Station	36,000	900	10
3	Supply of 2" size hard stone ballast from Thungabadra Dam Station to Vyasnakari Station	29,600	740	10
4	Supply of 2" size hard stone ballast from Vyasnakari to Gunda Road Station	44,400	1,110	10
5	Supply of 2" size hard stone ballast from Gunda Road to Ramgad Station	44,400	1,110	10
6	Supply of 2" size hard stone ballast from Ramgad to Yeshwantnagar Station	37,000	925	10
7	Supply of 2" size hard stone ballast from Yeshwantnagar to Sundaram Benchi Siding Station	22,000	550	10
8	Supply of 2" size hard stone ballast from Sundaram Benchi Siding to Thummargudi Siding Station	37,000	925	10
9	Supply of 2" size hard stone ballast from Thummargudi Siding to Samhalli Station	22,200	555	10

Last date for ISSUE of tender forms ... 12-00 hours on 7-6-1961

Last date for DEPOSIT of earnest money
with the Divisional Paymaster,
Southern Railway, Guntakal ... 16-00 hours on 7-6-1961

Date of OPENING of tenders ... 14-00 hours on 12-6-1961

Further particulars and tender forms (not transferable) may be obtained from the Divisional Superintendent (Works Branch), Southern Railway, Guntakal, on production of a receipt towards the cost of tender form paid to the Divisional Paymaster, Southern Railway, Guntakal or any Station Master on the Southern Railway.

SOUTHERN RAILWAY

GUNTAKAL DIVISION

Tender Notice No. 51

The Divisional Superintendent (Works Branch), Southern Railway, Guntakal, invites separate sealed tenders for the following works upto 16 hours on 1-7-1961 :-

Serial No.	Description of Work	Approximate value	Earnest money	Cost of tender form
		Rs.	Rs.	Rs.
1	Guntakal—Construction of Staff Quarters—35 units Type I Brick masonry with Cuddapah slab roof	87,500	2,190	10
2	Maricherthal—Proposed additional loop to hold 70 vehicles	34,600	865	10
3	Guntakal—Proposed extension to the Indian Railway Institute	25,000	625	10
4	Proposed Crossing Station at mile 319/14-15 between Panyam and Nandyal Stations	48,000	1,200	10
5	Supply of 2" size hard stone ballast from mile 401 to 412 between Tarlapadu and Gajjalakonda Stations	97,800	2,450	10
6	Supply of 2" size hard stone ballast from mile 412 to 418/10 between Gajjalakonda and Donakonda Stations	57,800	1,450	10
7	Nandalur—Construction of 20 units Type I Staff Quarters	50,000	1,250	10

Last date for issue of tender forms 12 hours on 28-6-61

Last date for deposit of earnest money with the Divisional Paymaster, Southern Railway, Guntakal 16 hours on 28-6-61

Date of opening of tenders 14 hours on 3-7-61

Further particulars and tender forms (not transferable) may be obtained from the Divisional Superintendent (Works Branch), Southern Railway, Guntakal, on production of a receipt towards the cost of tender form paid to the Divisional Paymaster, Southern Railway, Guntakal or any Station Master on the Southern Railway.

SOUTHERN RAILWAY

TENDER NOTICE

TIRUCHCHIRAPPALLI DIVISION

Name of Work : I. Execution of works and supply of materials in zones A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, I, O. II and O. III in Tiruchchirappalli Division for the period from 1-7-1961 to 30-6-1962.

II. Supply and training out of ballast in zones P, Q, R, S, T and U in Tiruchchirappalli Division from 1-7-1961 to 30-6-1962.

Separate sealed tenders in the prescribed form for items I and II above will be received by the Divisional Superintendent (Works), Southern Railway, Tiruchchirappalli.

Last date for issue of Tender Forms 15-00 hours on 6-6-1961

Last date for payment of earnest money of Rs. 1,000 for each Tender to the Divisional Paymaster, Southern Railway, Tiruchchirappalli 12-00 hours on 7-6-1961

Last date for the receipt of Tenders upto 16-00 hours on 8-6-1961

Date of opening of Tenders 11-00 hours on 9-6-1961

Tender forms (not transferable) can be obtained from the office of the Divisional Superintendent (Works), Tiruchchirappalli on production of a receipt for Rs. 5 only for each tender paid to the Divisional Paymaster, Tiruchchirappalli or to any Station Master on this Railway towards the cost of the Tender Form. Further particulars can be seen in the Tender Form. No refund of the Rs. 5 paid towards the cost of the Tender Forms will be made, under any circumstances.

SOUTHERN RAILWAY

MADURAI DIVISION

TENDER NOTICE

Sealed tenders will be received by the Divisional Superintendent (Works Branch), Southern Railway, Madurai, upto 16-00 hours on 19-6-1961 for the following works :-

Serial No.	NAME OF WORK	Approximate amount payable for the work	Earnest money to be remitted by the tenderer
		Rs.	Rs.
1	Collection and training out of stone ballast in connection with complete track renewals of existing 50 lbs. B. H. rails on CI pot sleepers with 60 lbs. R rails on CST/9 sleepers for 10 miles from 331/11 to 341/11 in Manamadurai—Mandapam Section	90,000	2,250
2	Collection and training out of stone ballast in connection with relaying of existing 50 lbs. BH rails on CI pots with 60 lbs. R rails on CST/9 sleepers N 3 for 9½ miles from 344/14 to 349/6 and 349/13½ to 354/1½ (except at station yards laid with 60 lbs. MRC rails) in Pollachi—Palghat Section	88,000	2,200
3	Collection and training out of stone ballast in connection with complete track renewals from mile Q. 218/7½ to 224/21 and 238/20½ to 248/3-16 miles relaying in Trichinopoly—Madurai Section	58,000	1,450
4	Collection and training out of stone ballast in connection with complete track renewals of exg. 50 lbs. BH rails on CI pots with 60 lbs. R rails on CST/9 sleepers in Tinnevely—Tenkasi Section— Collection and training out of stone ballast in connection with complete track renewals of exg. 50 lbs. BH rails on CI pots with 60 lbs. R rails on CST/9 sleepers in Tinnevely (Exc.) to Sermadevi (Inc.)	1,86,000	4,650
5	Collection and training out of stone ballast in connection with complete track renewals of exg. 50 lbs. BH rails on CI pots with 60 lbs. R rails on CST/9 sleepers in Sermadevi (Exc.) to Ambasamudram (Inc.)	1,27,000	3,175
6	Collection and training out of stone ballast in connection with complete track renewals of exg. 50 lbs. BH rails on CI pots with 60 lbs. R rails on CST/9 sleepers in Ambasamudram (Exc.) to Kilakadayam (Inc.)	1,27,000	3,175
7	Collection and training out of stone ballast in connection with complete track renewals of exg. 50 lbs. BH rails on CI pots with 60 lbs. R rails on CST/9 sleepers in Kilakadayam (Exc.) to Tenkasi (Inc.)	2,00,000	5,000
8	Proposed Modern Type Station Building in lieu of exg. old one to be dismantled at Kadakavur	35,300	883
9	Maniyachi—Improvements to watering arrangements at	71,000	1,775

Last date for payment of earnest money .. 15-00 hours on 15-6-1961

Last date for issue of tender forms .. 16-00 hours on 16-6-1961

Date of opening of tenders .. 12-00 hours on 20-6-1961

Further particulars and tender forms (not transferable) costing Rs. 10 each paid to the Divisional Paymaster, Southern Railway, Madurai or to any other Station Master of the Southern Railway (not refundable) can be obtained from the Divisional Superintendent (Works), Madurai. Plans for the works can be seen in the Office of the Divisional Superintendent (Works), Madurai, on all working days during office hours.

SOUTHERN RAILWAY

MADURAI DIVISION

WORKS BRANCH

TENDER NOTICE

Sealed Tenders will be received by the Divisional Superintendent, Works Branch, Southern Railway, Madurai, upto 16-00 hours on 5-7-1961 for the following works :—

Serial No.	NAME OF WORK	Approximate amount payable for the work	Earnest money to be remitted by the tenderer
		Rs.	Rs.
1.	Construction of Officers' Club and Staff Quarters Type I, II and III at Madurai	1,05,200	2,630
2.	Construction of New Station Building and Overhead Hydrants at Karaikudi station	88,000	2,200
3.	Collection and supply of Stone Ballast for track renewals from mile 316/10 to 323/10 and 327/0 to 329/10 in Ramnad Section...	77,600	1,940
4.	Collection and supply of Stone Ballast for insertion in main line and loops at stations between mile J. 307/23 and 320/18 in Madurai—Manamadurai Section	86,400	2,160

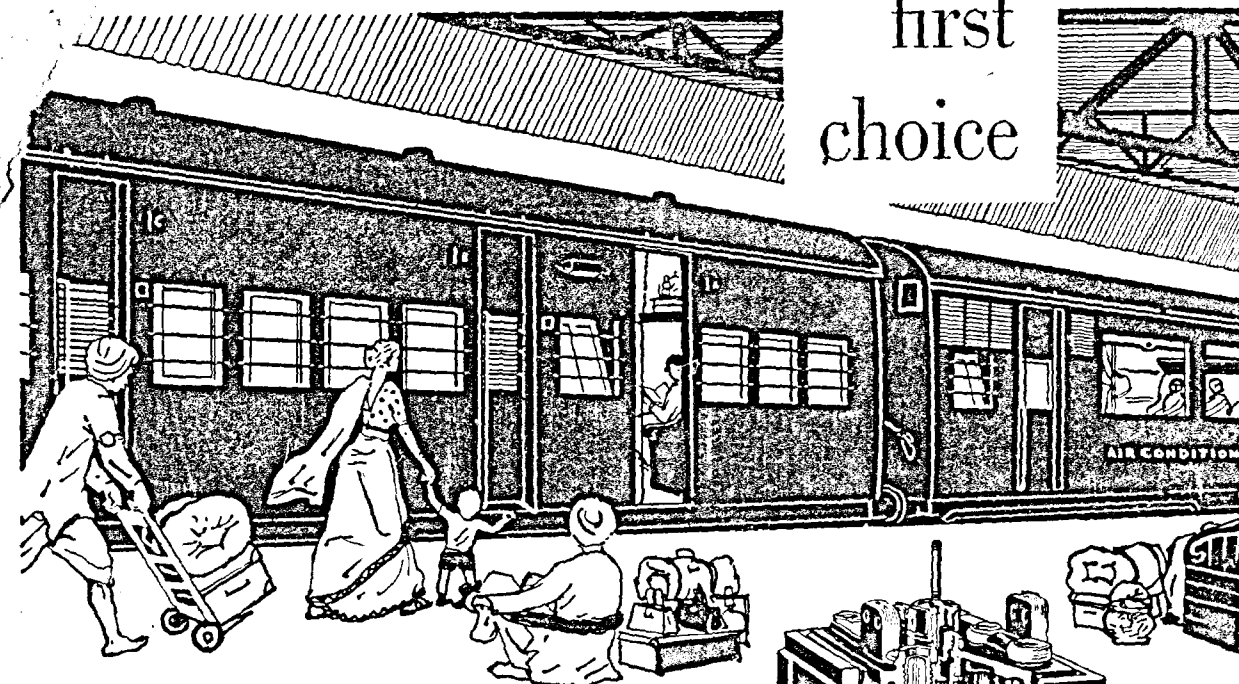
Last date for payment of earnest money .. 15-00 hours on 1-7-1961

Last date for issue of tender forms .. 16-00 hours on 3-7-1961

Date of opening of tenders .. 12-00 hours on 6-7-1961

Further particulars and tender forms (not transferable) costing Rs. 10 each paid to the Divisional Paymaster, Southern Railway, Madurai or to any other Station Master of the Southern Railway (not refundable) can be obtained from the Divisional Superintendent, Works Branch, Southern Railway, Madurai. Plans for the works can be seen in the office of the Divisional Superintendent, Works Branch, Madurai, on all working days during office hours.

the
first
choice



Proved in day and night service throughout the Indian Railways for many years now, Exide-Ironclad Batteries are the first choice of progressive railway engineers. Manufactured at Exide's modern factory at Shamnagar, near Calcutta, Exide-Ironclad Batteries are today fitted on most railway coaches to provide power for lights, fans and air-conditioning. Constant research and quality control at every stage of production make Exide-Ironclad the battery which combines long life and high electrical efficiency with light weight, ideal voltage characteristics and the minimum of maintenance requirements.

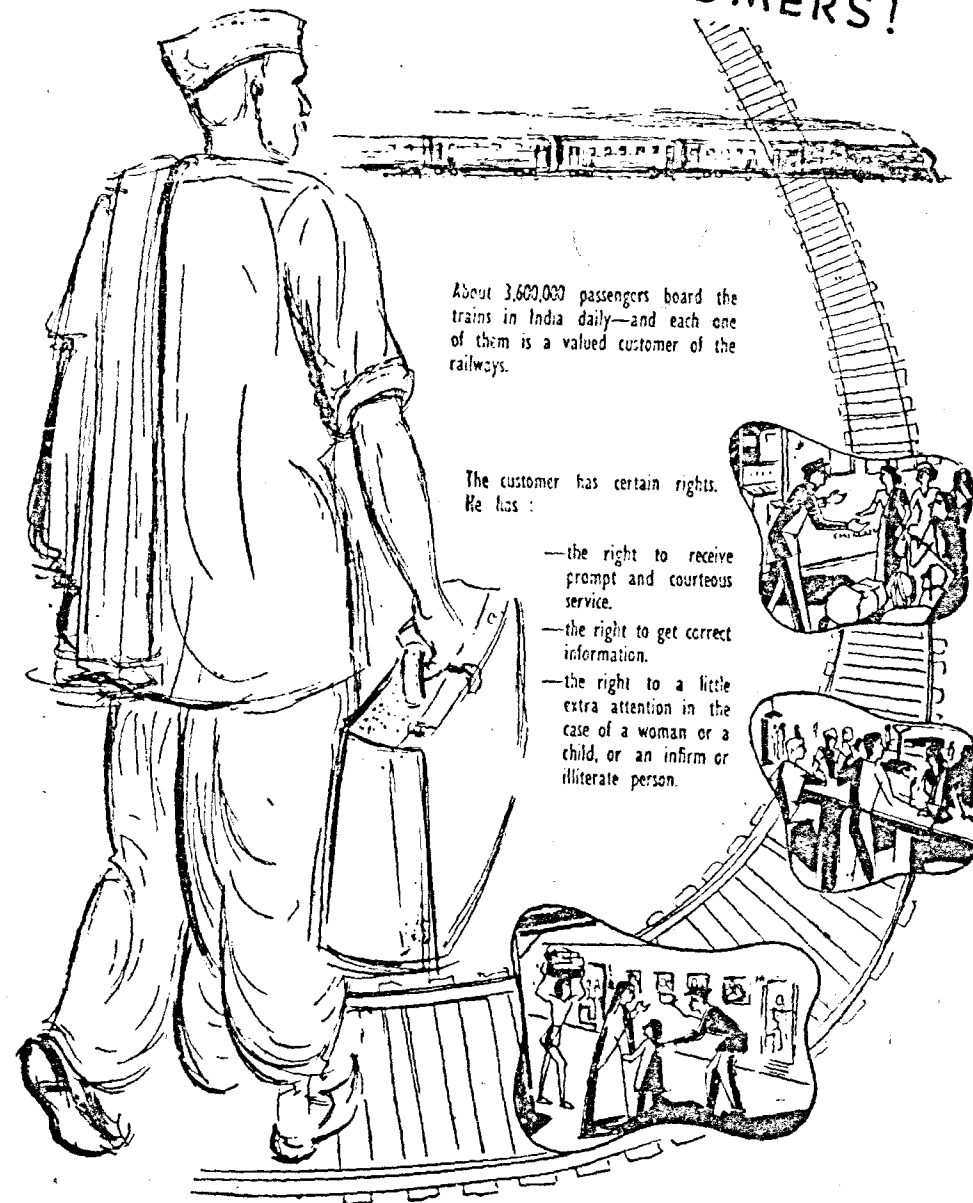
Exide-Ironclad

for train-lighting, fans and air-conditioning

CHLORIDE & EXIDE BATTERIES (EASTERN) LTD.

KBSC-26A

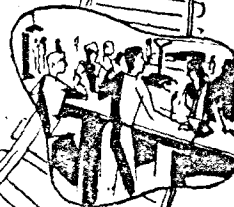
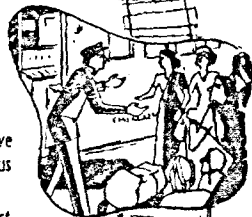
VALUED CUSTOMERS!



About 3,600,000 passengers board the trains in India daily—and each one of them is a valued customer of the railways.

The customer has certain rights.
He has :

- the right to receive prompt and courteous service.
- the right to get correct information.
- the right to a little extra attention in the case of a woman or a child, or an infirm or illiterate person.



Issued by SOUTHERN RAILWAY