

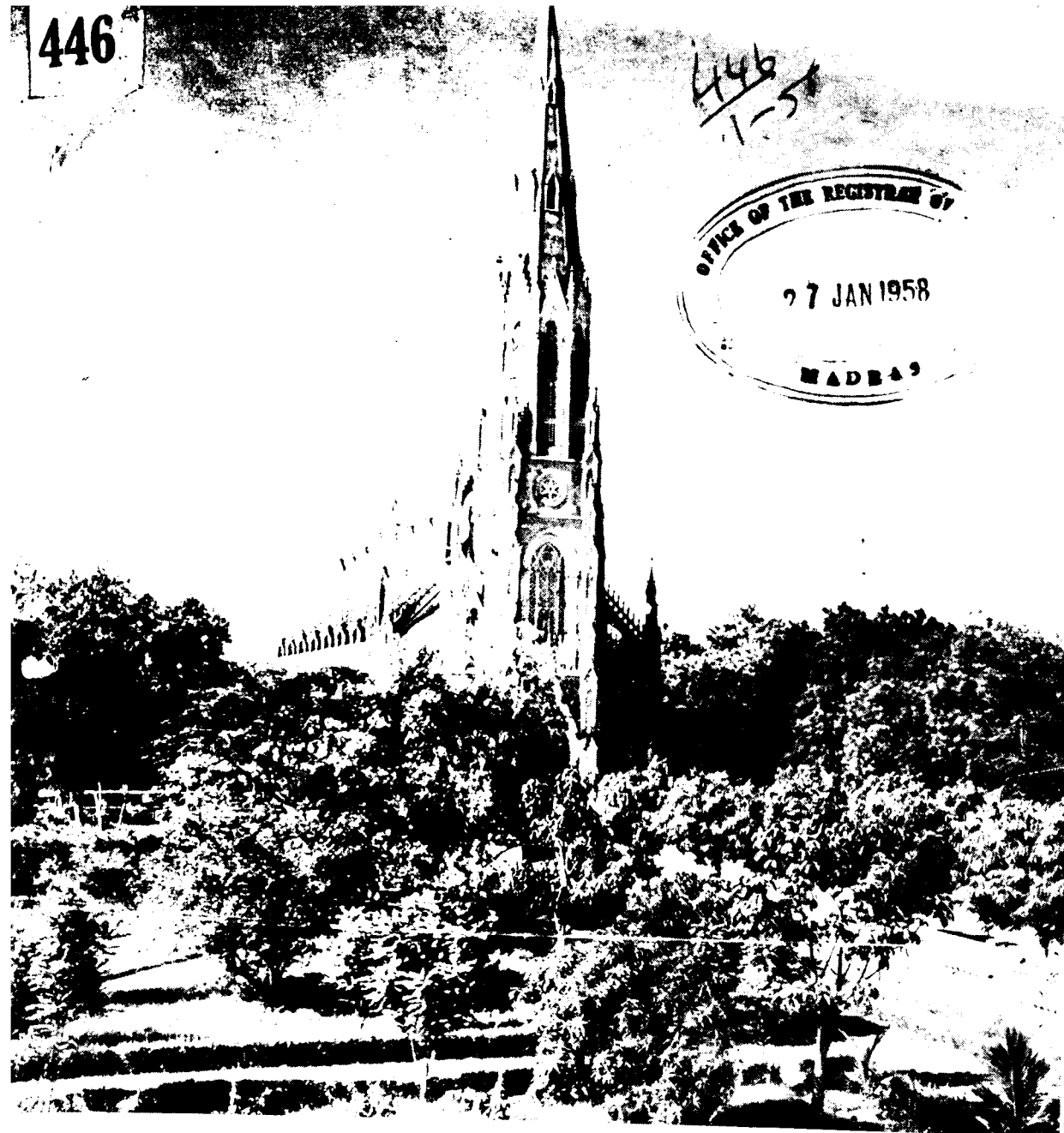
South rail news

1957 - December

VOL - 4, No - 1



X415 m 21, N5.
N-7.4.1
990.5



37 Naye Pa



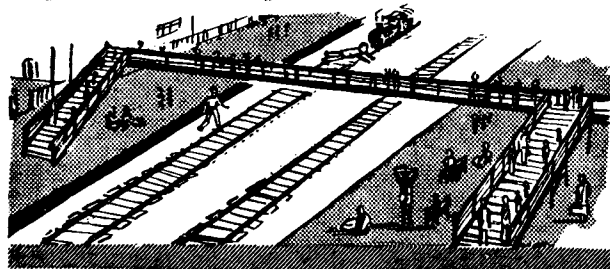
Southrailnews

PUBLISHED BY THE SOUTHERN RAILWAY

VOL. IV

DECEMBER 1957

..... IT IS FOR YOUR GOOD!



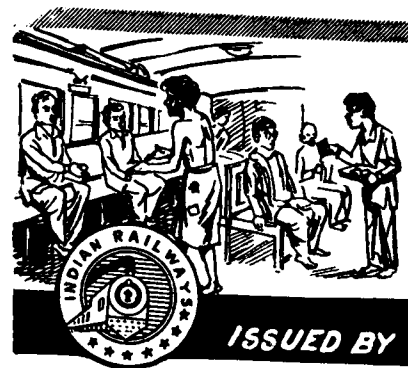
It is not safe to walk across the rails as a short-cut. It may cost your life. Make use of Over-bridges to get across.

If you travel light you will feel comfortable and make your fellow passengers also feel the same.



Station surroundings will remain clean if all unwanted things are thrown into rubbish bins provided for the purpose.

Do not risk your life by travelling on the foot-boards. It is not only dangerous but also an offence under the Indian Railways Act.

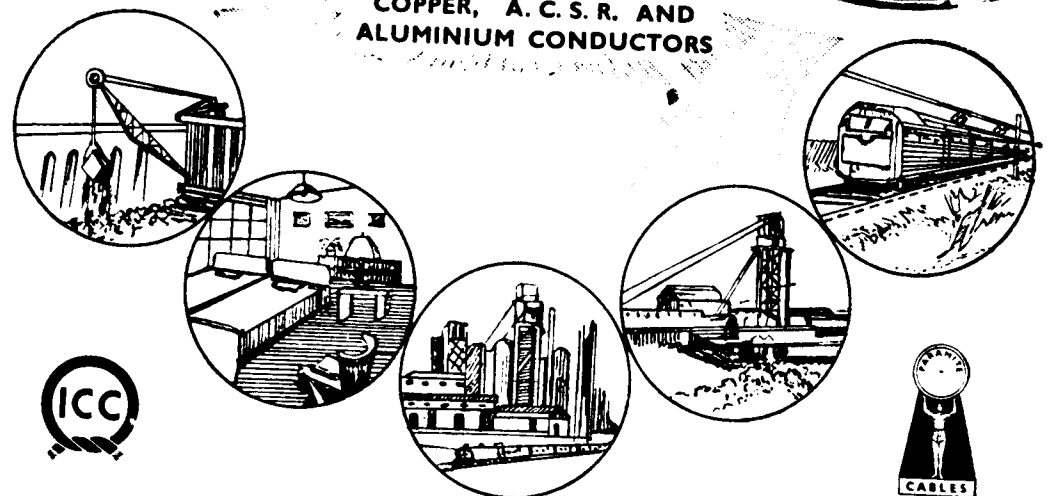


Beggars and hawkers besides indulging in ticketless travel add to overcrowding. Discourage them as best you can.

ISSUED BY SOUTHERN RAILWAY

PARAMITE
CABLES
PARAMEX
SYNTHETIC ENAMEL COVERED
WINDING WIRES
CABLECO
COPPER, A. C. S. R. AND
ALUMINIUM CONDUCTORS

OFFICE OF THE REGISTRAR OF BOARDS
27 JAN 1958
MADRAS



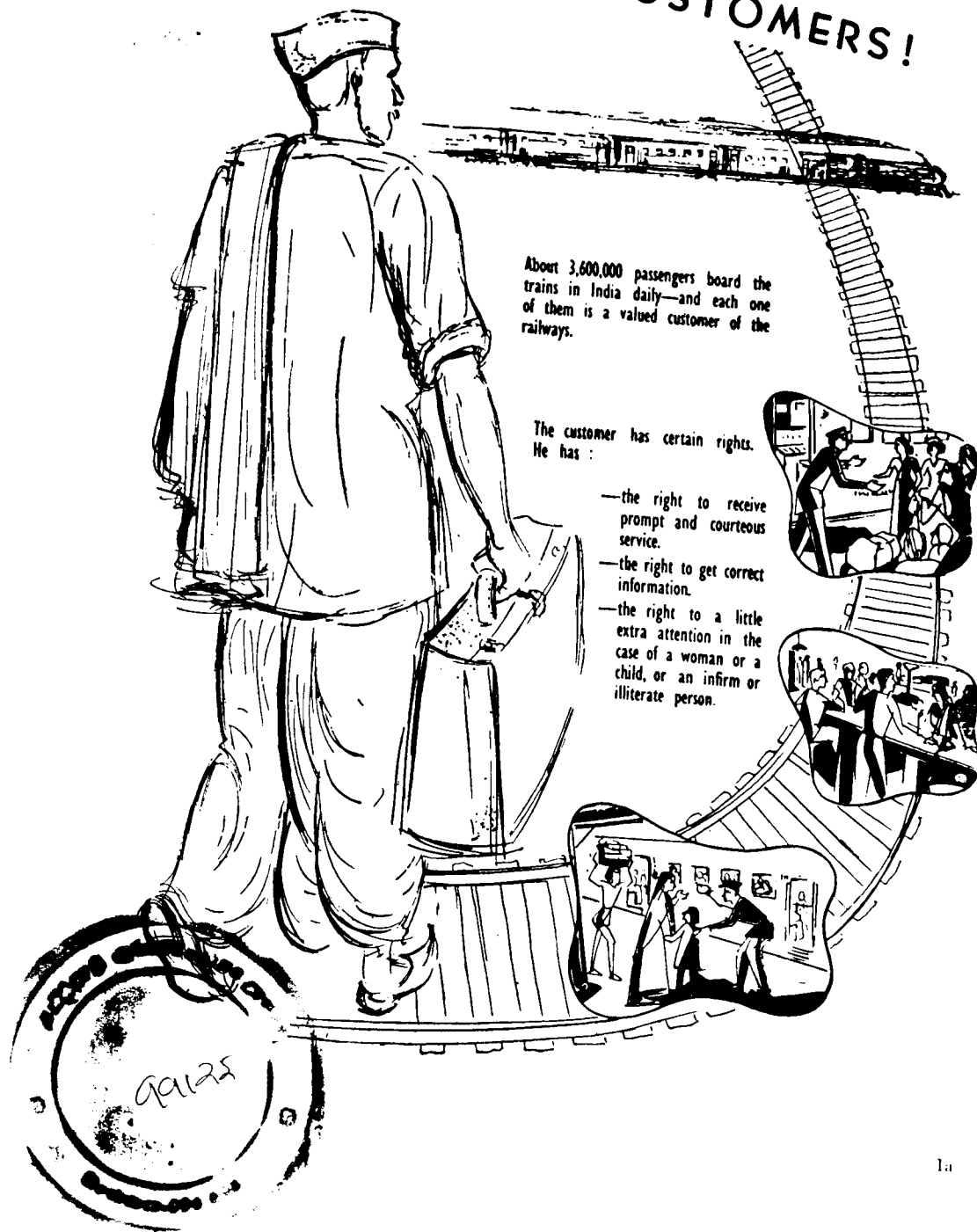
MADE IN INDIA BY
THE INDIAN CABLE CO., LTD.
9, HARE STREET, P. O. BOX 514, CALCUTTA
REPRESENTATIVES IN INDIA FOR
BRITISH INSULATED CALLENDER'S CABLES LTD.
AHMEDABAD AMBALA BANGALORE BRANCHES :
MADRAS NAGPUR NEW DELHI BOMBAY COIMBATORE JAMSHEDPUR KANPUR
AND SECUNDERABAD

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.



1a

STS



symbolises a free service to Indian Industry which is unique in this country. Our Sales Technical Service offers you :-

- ★ **ADVICE**—on all your welding and cutting problems.
- ★ **DEMONSTRATION**—at any time of the most up-to-date welding and cutting processes.
- ★ **TUITION**—to welding operators in a modern well equipped school.

**THE INDIAN OXYGEN
& ACETYLENE CO PRIVATE
LTD.**



10-7-408



HCC-43

COTTON YARNS
OF ALL DESCRIPTIONS FOR HANDLOOM, POWERLOOM & HOSIERY FACTORIES
MADURA MILLS COMPANY, LIMITED
Phone: 250 (5 Lines) **MADURAI** Telegrams: 'HARVEY'
MILLS AT MADURAI, TUTICORIN & AMBASAMUDRAM
5,00,000 Spindles Counts up to 80s

WE SUPPLY:
WARP YARNS, COMBED YARNS, HOSIERY YARNS
CONE, CHEESE & HANK YARNS SINGLE & FOLDED

SPECIALITIES:
YARNS FOR THE MANUFACTURE OF
ROPES - HEALDS - CANVAS - TAPE
BELTING DUCK - TYRE CORD - SEWING THREAD
MULTI-PLY & CORD YARNS

MANAGERS:
A. & F. HARVEY LIMITED
'PANDYAN BUILDING'
MADURAI S. INDIA Telegrams: 'HARVEY'
Phone: 420 (4 Lines)

SOUTHRAILNEWS

(Official Organ of the Southern Railway)

EDITORIAL NOTICE

VOL. IV

No. 9

Editor:

K. SRINIVASAN

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.

Manuscripts and photographs, not accepted for publication, will be returned only if the sender so requires and encloses the usual stamped, addressed envelope.

Contributions should be addressed to the Editor, not by name, and reach him not later than the 10th of the previous month.

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	Single
	Subscription	copy
	Rs. nP.	Rs. nP.
Railway Employees	... 3 00	...
Others	... 4 50	0 37

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

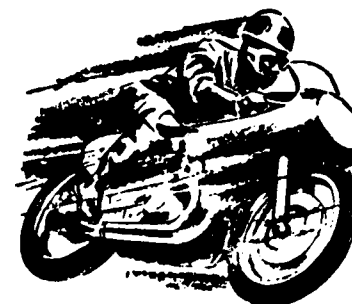
Railway employees drawing a salary of Rs. 200 and over, can pay the subscription through their salary bills, and others should remit the full amount by M.O. to

THE EDITOR

"Southrailnews"

18A, Mount Road, Madras-2

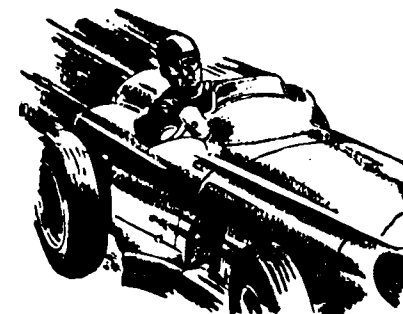
CHOICE OF THE CHAMPIONS



Racing and trial drivers whose success depends on absolute reliability in the oil they use are unanimous in their choice of Castrol. Year after year Castrol goes on adding to its enviable record of successes. Let Castrol protect your engine and improve its performance.



THE MASTERPIECE IN OILS



C. C. WAKEFIELD & CO. LTD.,

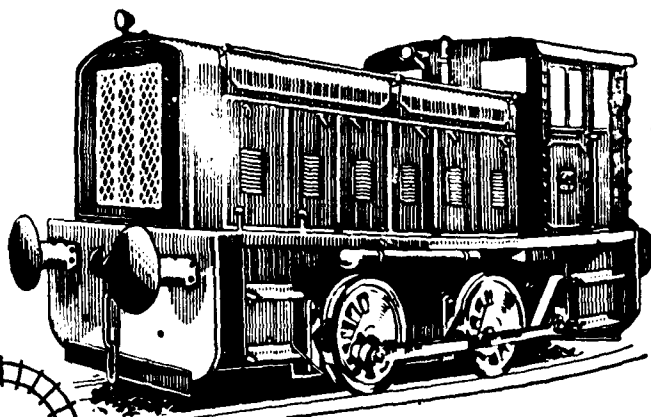
Incorporated in England
Liability of Members being Limited

Q-125

Mighty 'work horses' for a growing nation

The benefits of diesel loco haulage are to be observed readily at industrial works sidings, harbours, docks etc., in countless situations throughout the world.

Clean and economical running, easy maintenance, low costs, no stand-by losses, always ready to get on with the shunting job from cold, and ready to demonstrate fuel economy...these sum up the Ruston diesel shunting locomotives...but may we send you more details?



RUSTON

DIESEL LOCOS

Sold & Serviced by:
**GREAVES COTTON
& COMPANY LTD.**
1, Forbes Street, Bombay 1.
Branches: Ahmedabad • Bangalore
Coimbatore • Kanpur
Madras • New Delhi



GC-4

SOUTHERN RAILWAY

Tender for supply of wooden sleepers (Track and Specials)

Separate sealed tenders will be received by the Chief Engineer, Southern Railway, Madras, upto 3 p.m. on 23rd December 1957 for the supply of wooden sleepers (Track and Specials).

Tenders should be submitted in the prescribed forms obtainable from the Chief Engineer, Southern Railway, Madras, on production of a receipt for Rs. 10 (Rs. Ten only) from the Chief Cashier, Southern Railway, Madras, or from any Station Master on the Southern Railway, towards the cost of one set of tender forms (one for track sleepers and one for specials). The tender form is not transferable and the cost thereof not refundable under any circumstances.

Earnest money deposit required is Rs. 1,000 (Rs. One Thousand only) for each tender and to be deposited before 3 p.m. on 20th December 1957.

Tender forms will be issued upto 3 p.m. on 20-12-1957.

Tenderers offering sleepers from the areas lying in the States of Madras, Karnataka, Andhra and Kerala only will be considered.

Further particulars can be had from the Chief Engineer, Southern Railway, Madras 3.

CONTENTS

DECEMBER 1957

Editorial	9	A. E. I. Equipment for First 3,000 volt D. C. Rly. Electrification in India	66
Notes on Current Rly. Topics	11	The Cup that cheers	70
World of Railways	17	Free clothing to Rail Staff	71
Tiruttani	23	Sage of Sabarmathi	75
Railway Out-agencies	31	Discipline, Duty and Dealings of Rly. staff	77
Edakka - A musical instrument	39	Tourist Week in Madras	83
Our fellow passengers	41	Advantages of Electrification	87
The need for more wagon assemblers and wagon builders in India	44	Towards better working of Rly. Rates Tribunal	91
Christmas	48	Women's Page	93
Some famous passenger and goods Terminals	55	Children's Corner	97
Motherly influence	63	Book Review	101
		S. R. News	105
		Cover: The church in Loyola College.	

Delapena

Precision Honing Machine MODEL No.301

(Range : $\frac{1}{4}$ " to $3\frac{1}{4}$ " dia)

1. The machine accommodates one of a series of interchangeable mandrels which carry two guides and an abrasive stone, the work being held in the operator's hands and stroked backwards and forwards over the mandrel.
2. Errors of ovality and taper corrected.
3. Special chuck provided to compensate natural run out of mandrel.
4. Torque reaction bar to facilitate honing operation.
5. Separate stone pressure control.
6. Built-in wet honing.
7. Low voltage lighting system incorporated.
8. Generous storage space for mandrels and accessories.

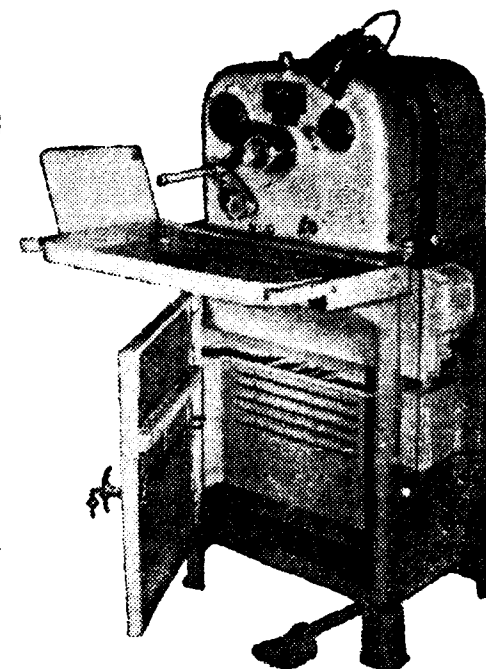
Agents in India

MACHINE TOOLS (INDIA) PRIVATE LTD.

CALCUTTA
BOX 585

BOMBAY
BOX 522

BANGALORE
BOX 697



Southrailnews

VOL. IV

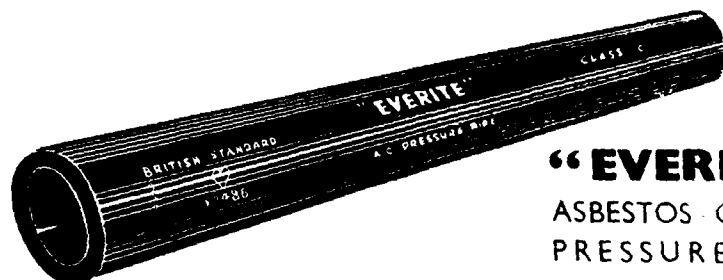
DECEMBER 1957

No. 9



talking of pipes...

The hookah and narghile are smoking pipes of the East, in which tobacco smoke is cooled by passing through a bowl of water. Another famous pipe is the "Everite" Asbestos-Cement Pressure Pipe for the conveyance of water. Manufactured to the highest standards, they are light but strong and easily and rapidly laid. They are bitumen-dipped for added safety. They cannot rust or corrode. Specify "Everite" pipes; they have been in use in India over the past 20 years. This long experience, combined with our unequalled service, is your assurance of satisfaction.



"EVERITE"
ASBESTOS-CEMENT
PRESSURE PIPES



ASBESTOS CEMENT (Private) LIMITED

BOMBAY, CALCUTTA, MADRAS, PODANUR & NEW DELHI

PENSION SCHEME FOR RAILWAY EMPLOYEES

IT is a matter of jubilation for railwaymen to know that the Union Government has decided to make its pension scheme applicable to Railway employees. All persons who were in service under the Ministry of Railways on April 1, 1957 and those who join service upto the date of issue of orders introducing the pension scheme will be given as option to elect for the pension scheme or to continue, if they so prefer, under the previous system of Contributory Provident Fund.

ANTECEDENTS :

The National Federation of Indian Railwaymen with which the proposals were discussed has on the whole welcomed the pension scheme which met a great demand made by it on several occasions. The scheme which will apply to the Railway servants is identical with that applying to other employees of the Central Government. However, the compulsory subscriptions to the Provident Fund by Railway servants will continue even after the introduction of the pension scheme. All new entrants to railway service from the date of issue of orders will come under the pension scheme.

BENEFIT TO CLASS IV STAFF :

In order to benefit Class IV staff who have put in more than 30 years service to whom the existing retirement benefits under the pension scheme might not be so favourable as the Contributory Provident Fund Scheme, the pension scheme has been modified to equalise the retirement benefits by providing that such employees shall receive an additional gratuity of Rs. 200 for every year of qualifying service beyond 30 years subject to a maximum of Rs. 1,000. This improvement in the pension scheme will apply to all pensionable staff retiring as Class IV staff. Since a large number of Class IV employees started subscribing to the Provident Fund only from 1941, their retirement benefits have been improved considerably by the introduction of the pension scheme, all permanent service and half their temporary service will count for the pension.

FINANCIAL IMPLICATIONS :

It is rather difficult to assess the financial implications of the scheme since the cost of Provident Fund System and of the pension system is influenced by several factors such as, rate of interest, expectation of life

after retirement, rate of casualties in the course of service, the advancement of the individual in the service, etc. The scheme may be considered to be a kind of social security measure for the Railway sector.

When one looks at it as an impartial observer, the following thoughts occur :

Human nature as it is, when a man gets a lumpsum as Provident Fund or Gratuity in a country like India especially Class IV or Class III staff, he is more inclined to be lavish than to be prudent. It is noticed that when the salaries rose as a result of the Pay Commission's recommendations from Rs. 20 to that of about Rs. 70, standard of life did not correspondingly increase. Now it is to be borne in mind that prices have increased. The significance is, if a person with a particular income gets a sudden rise in his income, there are more chances of his spending on luxuries

and lavishly rather than improve his standard of living. The long run benefit of the pension scheme depends upon the individual longevity of the employee but the fact remains that the pension scheme checks lavishness and also ensures a fixed sum every month after retirement of the employee for his lifetime.

People who are likely to think twice before accepting pension scheme will be those who have accumulated quite a large amount of Provident Fund and correspondingly the bonus will be high and also those whose gratuity has been raised on account of some recent changes. If they opt to the pension scheme, they may stand to lose. But, on the whole, the majority of railwaymen in India have got adequate reasons to welcome the scheme as one which is a beneficial social security measure for the railway sector.

Sri Jajjivan Ram launched the 200th Coach at the Integral Coach Factory on 15th October 1957



NOTES ON CURRENT RLY. TOPICS

CHEAPER TRAVEL FOR CLASS IV EMPLOYEES

Centre's Class IV employees will pay only ten per cent of travelling fare when they go on leave if their posting is more than one hundred miles away from home. The balance will be borne by the Union Government.

The concession to benefit about nine lakhs of employees and their families from January 1, 1958, will not, however, be available for the first hundred miles of journey. Also, the employees should have put in at least one year of service and the leave, once in two years, should be other than casual for not less than fifteen days.

Earlier, the minimum limit was 250 miles but the Class IV employees benefiting from this concession have been comparatively small. It has been found that most of them have their homes within 250 miles of the headquarters.

In the case of other Government employees, as announced earlier by the Union Ministry of Home Affairs, the Centre will meet 90 per cent of the actual fare for these servants whose homes are more than 250 miles away. Here also, the entire cost of the journey for the initial 250 miles will be borne by the Government servant himself.

The scheme is meant to enable the Central Government to draw their employees from all parts of the country. In the absence of such facilities, it is felt, the possibility of long-distance postings from home has deterred

persons from seeking employment under the Central Government.

DIESEL ELECTRIC LOCOMOTIVES FOR INDIAN RAILWAYS

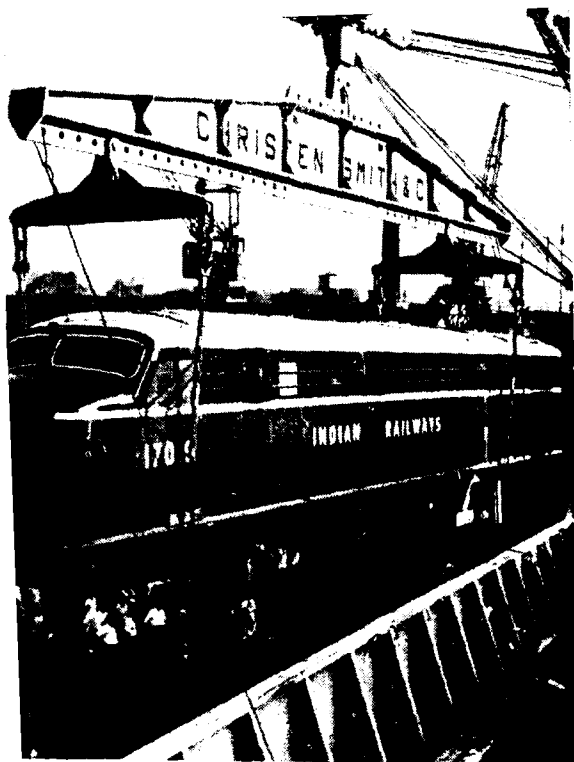
The unloading of the first consignment of 20 diesel electric locomotives out of the hundred ordered by the Indian Railways in March this year with an American firm commenced at the Calcutta Port on November 12, 1957.

When the consignment left the U.S.A. by the S. S. "Belkarin," it was described at a formal ceremony as the "largest single shipment of diesel electric locomotives ever to leave the Port of New York".

The 1,800 h.p. locomotives, each weighing 110 tons, will be unloaded at the Calcutta Docks by the Ships own derricks, after which they will be transferred on their own power to Gaya, where a new shed has been built to house them. After a thorough check there these locomotives will be utilised to work goods trains between Gaya and Dhanbad on the Eastern Railway.

Known as Alco World Locomotives these engines are capable of hauling heavy loads at fairly high speeds: and consequently the number of engines required for working the same number of trains will be reduced. Moreover, two units can be worked together with one set of engine crew.

The locomotives will help the Indian Railways to get over the bottleneck that is likely to occur as a result of the increased flow of traffic as the second Plan progresses.



The ALCO 'World' DL 500 locomotive being unloaded at Calcutta

The remaining eighty locomotives to be delivered next year are expected to be used in the regions of the three steel plants for carrying ore and coal traffic and also the finished steel. When electrification upto Moghal Sarai is completed, the diesel electric locomotives will be transferred to some other sections of the Indian Railways where increased traffic will have to be handled with the existing facilities.

These locomotives will be the first broad gauge main line diesels ever to be used in this country.

A team of engineers representing the manufacturers have already arrived in India from the U.S.A. to put the engines into commission and to train up the running and technical staff.

NEW NAME FOR RAILWAY STANDARDS OFFICE

The name of the Central Standards Office (Ministry of Railways), New Delhi and Chittaranjan, has now been changed to Research, Design and Standardization Organisation. The public is requested to address communications in future as follows:

Correspondence regarding civil engineering work, i.e., civil, signal and tele-communications and architectural matters including specification for civil wing should be addressed to the Director, Standardization (Civil Engineering), Ministry of Railways, Research, Design and Standardization Organisation, Baroda House Annexe, New Delhi.

Correspondence relating to carriage and wagon subjects including specification for mechanical items should be addressed to the Director, Standardization (Mechanical Engineering), Ministry of Railways, Research, Design and Standardization Organisation, Baroda House Annexe, New Delhi.

Correspondence relating to loco and railway cranes subjects should be addressed to the Director, Standardization (Mechanical Engineering), Ministry of Railways, Research, Design and Standardization Organisation, Chittaranjan.

TRAINING IN HINDI MORSE

The Railway Board has decided that training in Hindi morse should be made compulsory for signallers in railway telegraph offices.

This step has been taken in order to provide adequate staff to meet the

December 1957

NOTES ON CURRENT RLY. TOPICS

13

growing demand for telegraph work in Hindi. Training in Hindi morse would, in future, be a part of the training given prior to appointment as signaller.

To encourage the telegraphists already in service, the Railway Board has authorised the railway administrations to offer an honorarium of Rs. 50 to every selected telegraphist in service who acquires a knowledge of Hindi morse.

RAILWAY OFFICER'S CONDUCT CENSURED

The Railway Board has censured the conduct of a Railway Officer whose insistence on his inspection carriage being attached to a particular train led to a heavy detention to the train.

The officer was travelling in an inspection carriage by the Howrah-Moghalsarai passenger train. At Bhadreswar station, while starting the train, the coupling at the trailing end of his carriage snapped. The station staff, therefore, decided to detach the carriage and advised the officer to travel in a first class compartment or to stay behind and travel by a subsequent train when the defect was put right. As the officer was travelling with his family and his child was running high temperature, he asked that his carriage should be attached to the rear of the train, which was a practical possibility.

After some discussion with the staff this was done but in the process the train was delayed over an hour.

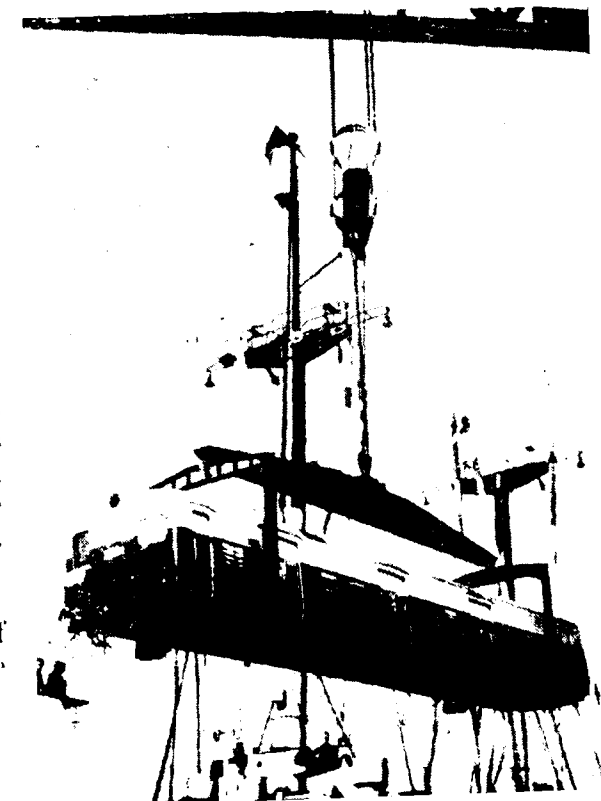
INDIAN RAILWAY FOREMAN LEARNS BRITISH TECHNIQUES

STUDY COURSE UNDER COLOMBO PLAN

Various aspects of the construction and maintenance of rolling-stock are being studied by Mr. Anil Kumar Ghosal, engineering foreman of the Western Railway, who is now in the United Kingdom as an advanced trainee under the Technical Co-operation Scheme of the Colombo Plan.

In the first six weeks since he arrived in Britain at the end of September, Mr. Ghosal has been studying design work with the Metropolitan-Cammell Carriage & Wagon Co. Ltd. at Birmingham.

The first electric multiple unit coach to be used on the Calcutta suburban railway electrification scheme being unloaded at Calcutta



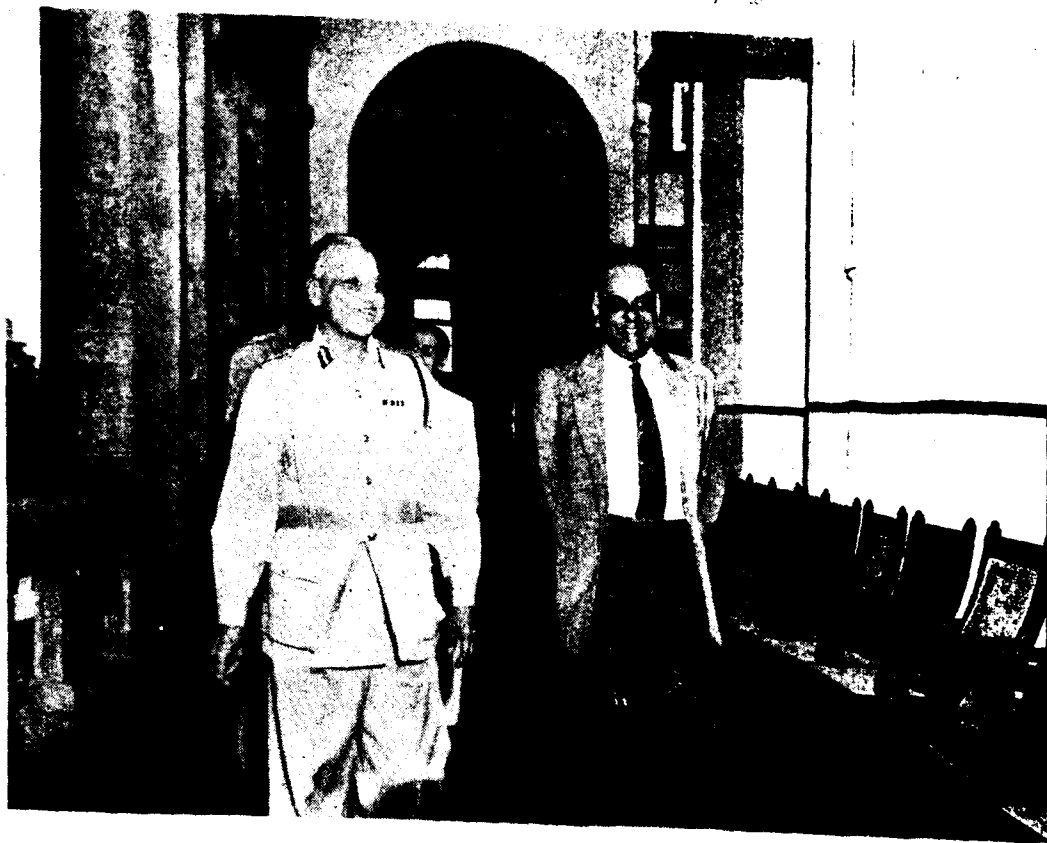
December 1957

"I have already seen a lot and learned a lot," Mr. Ghosal said in an interview. "Rolling stock in the future in India, both imported and indigenous, will be of modern design, necessitating a thorough knowledge of construction, repair and maintenance. It is, therefore, most valuable to me to come to Britain to study new techniques on the spot. I can only say again that the experience I am gaining wherever I go is extremely valuable."

From Birmingham Mr. Ghosal has now moved to Luton, Bedfordshire, where he is attached to the Skefko Ball Bearing Co. Ltd. There he is studying rolling contact bearings and also lubricants.

After finishing the Luton section of his Colombo Plan course, Mr. Ghosal goes on to the Estleigh carriage and wagon works and will spend three months in this Hampshire construction and maintenance section of British Railways' southern region.

Sri S. Parthasarathy Iyengar, I.G., Railway Protection Force and Director, Vigilance and Security and Sri T. A. Joseph, General Manager, at our Headquarters Offices, on their way to attend the half-yearly conference of Chief Security Officers



December 1957

NOTES ON CURRENT RLY. TOPICS



The I. G. addressing the conference of Chief Security Officers of Indian Railways

Sri T. A. Joseph, G.M., addressing the conference





Kakkai, Minister (Works), addressing the meeting of the Co-ordination Committee for safety of Railway Bridges and Railway Track and other Public Works on 8-11-57 at Madras

A section of the Railway Officers who attended the meeting



The diesel-hauled East Coast "Champion" Express of the ACL

WORLD OF RAILWAYS

ARTHUR L. STEAD

Our London Correspondent

A main-line railway with only one tunnel on its entire system is truly a novelty. That is the unique situation on the 5,400 mile long Atlantic Coast Line Railroad, one of the most interesting and progressive of American systems, with a principal trunk route stretching right down the Atlantic seaboard, from Norfolk and Richmond, in Virginia, through the States of North and South Carolina and Georgia, to Jacksonville and St. Petersburg, in Florida.

Actually, until January 1, 1946, this outstanding American railway did not possess a single tunnel. It was only when the Atlantic Coast Line

acquired the former Atlanta, Birmingham & Coast Railway on that date that its one and only tunnel came into the picture. The tunnel in question is 495 feet long, and is situated between the stations of Lineville and Talladega, in Alabama.

One of the oldest railways in the United States, the A. C. L. has a history going back to the eighteen-thirties. The A. C. L. of today represents a merger of more than 100 separate small railways, the oldest constituent being the Petersburg Railroad, opened in 1833, and running from Petersburg, Virginia, to Blakely, in North Carolina.

The most significant of the modern A. C. L. constituents was the Wilmington & Weldon Railway, whose main-line, when opened in 1840, represented the longest continuous stretch of railway in the world—161 miles. Later, the Wilmington & Weldon became the nucleus of a group of lines in Virginia, North and South Carolina that were operated under unified management for some years, until in 1900 they finally evolved into the present Atlantic Coast Line Railroad. Headquarters of the enlarged system were—and still are—at the General Offices of the former Wilmington & Weldon in Wilmington, North Carolina, the present-day direction of the Atlantic Coast Line there being installed in commodious offices.

No American railway today possesses a finer road-bed and track than the A. C. L. The throughout Richmond-Jacksonville main-line consists of 132 pound rail, while less important lines have 115 and 110 pound steel. Before World War II, most A. C. L. tracks were ballasted with gravel. Today, crushed limestone or granite is employed on main routes. In common with other American railways, the A. C. L. has introduced many long stretches of welded rail, butt-welded by the gas-pressure process in the railway's own plant at Rocky Mount. Usually, sixteen 39 ft. rails are welded into a continuous length of about 624 feet.

Most modern signal equipment is employed on the Atlantic Coast Line, this including up-to-date automatic block signals, automatic train stop, centralised traffic control and new-type interlocking. The entire Richmond-Jacksonville main-line is protected by

automatic block signals *plus* automatic train stop. Centralised traffic control has been installed at points on the main-line which were formerly bottlenecks.

Semaphore signals have entirely disappeared from the Richmond-Jacksonville main-line. They have been replaced by modern long-range searchlight signals, spaced out for trains running at up to 100 m.p.h. Coded track circuits have replaced the conventional polarised circuits. Throughout the A. C. L., telephone train dispatching is the general rule, and to facilitate operations ten Teleprinter circuits have been installed. These link up all important traffic centres, and also give long-distance communication with off-line offices in New York, Washington and Atlanta.

The Atlantic Coast Line was a pioneer in the employment of radio in train working. V. H. F. radio was installed in the Jacksonville Terminal in 1949, and this proved such a success that yard radio was introduced at 18 other important stations during the following years. All shunting locomotives are equipped with radio to contact yardmasters and other officials, and many goods trains are equipped with end-to-end radio giving easy communication between locomotive crews and guards.

For all practical purposes, the Atlantic Coast Line Railroad has finished with steam locomotives, and become 100 per cent dieselized. This changeover has produced great economies. Under steam operation, there was a locomotive roundhouse at every division point, where train engines had to be changed. Today, main-line diesels, both passenger and

goods, run through all the way from Florida to Richmond, and *vice versa*, without change, and over the whole system there are only a handful of locomotive dispatching and exchange points. Twenty-five years ago, the A. C. L. had over 1,000 steam locomotives in main-line service. Today, it moves more traffic—and moves it faster and more economically—with little over half that number of diesel locomotives.

For seventy years, the "Florida Special" has symbolised the highest standard in passenger comfort for travellers between New York and Florida. This A. C. L. train was the first all-Pullman, electric lighted, vestibuled and steam-heated train in the world, and the first through train

ever operated between New York and Florida. Completely re-equipped with post-war room sleepers, new diners and lounge cars, the "Florida Special" remains today a top favourite. A less luxurious, but equally popular, A. C. L. train is the "East Coast Champion," an all-coach New York-Florida express offering cheaper travel for the multitude.

Actually, the Atlantic Coast Line operates about twenty "top-line" expresses linking Florida and other Atlantic Coast centres with the principal U.S. inland cities, the system handling in all about 200,000,000 passengers annually. All the streamlined expresses run at fast speeds and carry modern lightweight cars. Unlike some American railways, the A. C. L.

Ballast cleaning machine in operation on the ACL



manages to make a profit on passenger traffic handling, and has not to depend upon goods exclusively to bring in the dollars.

Standard A. C. L. lightweight passenger coaches for main-line service are most attractive vehicles with wide, non-clouding picture windows, rubber-tiled floor and rotating reclining seats having adjustable backs and adjustable head-rests. Each coach seats 54 patrons. Individual reading lights are provided and illuminated seat numbers, and the latest type heating and air-conditioning is installed. The exterior is painted royal purple.

The Atlantic Coast Line handles about 45,000,000 tons of goods traffic annually, and movements are nicely balanced over the system, with a slightly heavier movement north-

wards than southwards. Busiest freight artery is the Richmond-Jacksonville main-line, portions of this route carrying as many as 20 express goods trains daily, in addition to slow and pick-up services.

Average length of freight haul on the A. C. L. is about 200 miles, but many freight runs are much longer, some reaching 1,000 miles. On all its important routes, the A. C. L. operates at least one, and in many cases, several super-fast goods trains daily, these trains being spaced out about twelve hours apart. They run regardless of the traffic available, and have been an immense asset in combating road competition. To handle the important Florida fruit and vegetable traffic, many special trains are operated to the north and west at high speeds.



Modern track and signalling on the Richmond-Jacksonville main-line

All the principal A. C. L. goods yards and stations have been modernised in recent times, and this modernisation has greatly speeded up working. For example, the through freight run between Richmond and Jacksonville has recently been shortened by 16 hours. Some of that improvement must be credited to better track and dieselization, but much of it is also due to changes in the physical lay-out and operating techniques at the intermediate yards.

In practically all cases, the yard improvements that have made fast running possible have consisted primarily of lengthening tracks in the yards to accommodate longer trains, and increasing the number of classification tracks to eliminate "doubling up" and waste motion in the formation of trains. All yard shunting has, of course, been dieselized, and radio and flood lighting have also helped. Unlike many American railways, the A. C. L. has not spent large sums on hump

yards, and in practice it is felt that hump yards would not be especially suited to the characteristics of the system's traffic flow, many of the company's goods trains carrying perishable and other high-class commodities being handled very much like passenger trains with very little classification needed *en route*.

Many of the leading American railways today themselves operate large fleets of road motors for the movement of goods of all kinds. The Atlantic Coast Line was early in this field, and today it handles a considerable proportion of its "less than carload" freight by road motor. Highway services have taken the place of rail movement for freight over 33 different A. C. L. routes, and merchandise loaded in far-away Chicago and the Mid-West and Western States is delivered to consignees on all these motor routes within seven days of dispatch.

(Continued on page 30)

SCHUEMANN

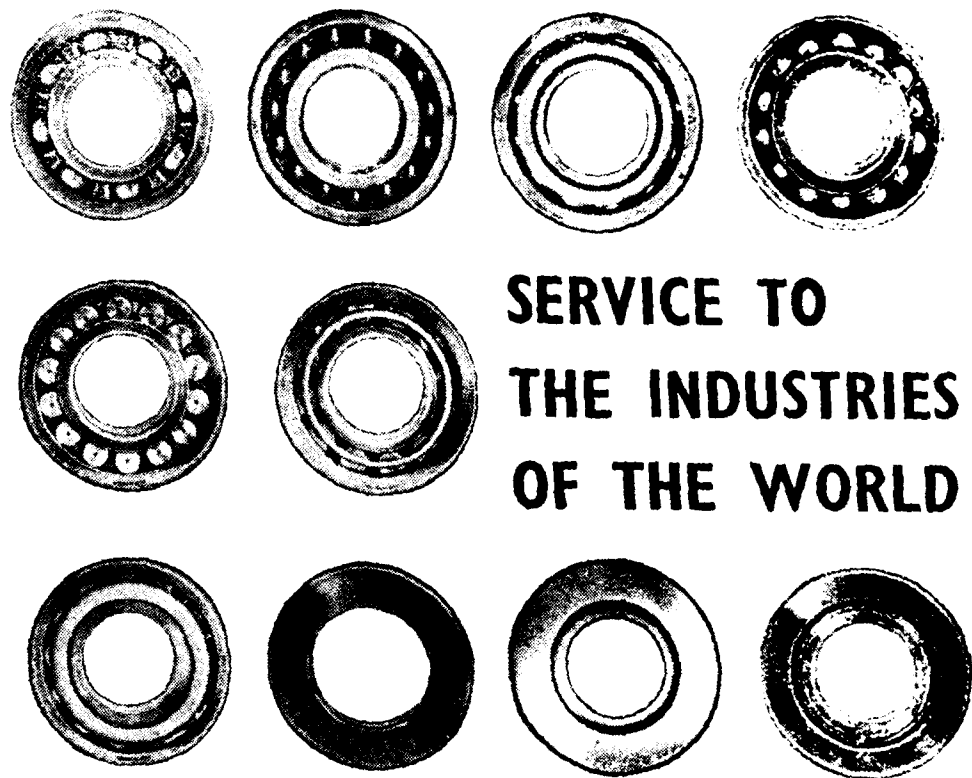
SELEKTA 221

HEAVY COILWINDER with STEPLESS CONESPEEDER FOR MOTOR AND TRANSFORMER COILS

The illustrated machine, with two winding shafts, is highly suitable for Railway and other large repair shops. Transformer coils can be wound between the face plate and the tailstock. The second winding shaft may be fitted with a coil-winding and stretching machine for the production of armature coils.

The main machine (without machine bed and tailstock) with mounted coil-winding and stretching machine is suitable for the production of armature coils for heavy motors of electric trains, self-propelled cars, trams and cranes etc.

Sole Representatives
FRANCIS KLEIN & CO. PRIVATE LTD.
 1, ROYAL EXCHANGE PLACE, CALCUTTA-1
 SHOWROOMS: 13A, GOVT. PLACE EAST



SERVICE TO THE INDUSTRIES OF THE WORLD

that has been the aim of SKF from the very beginning. An all-embracing service like this demands a comprehensive range of bearing types to meet each particular need. Of these different bearing types SKF has designed :

- the self-aligning ball bearing, which can accommodate slight misalignment of shafts or bearing housings.
- the spherical roller bearing, also self-aligning, and with a higher radial carrying capacity, size for size, than any other type of bearing, as well as a high thrust carrying capacity.
- the cylindrical roller bearing, which is able to carry heavy radial loads at high speeds.

- the spherical roller thrust bearing, which is able to carry heavy thrust loads at relatively high speeds.

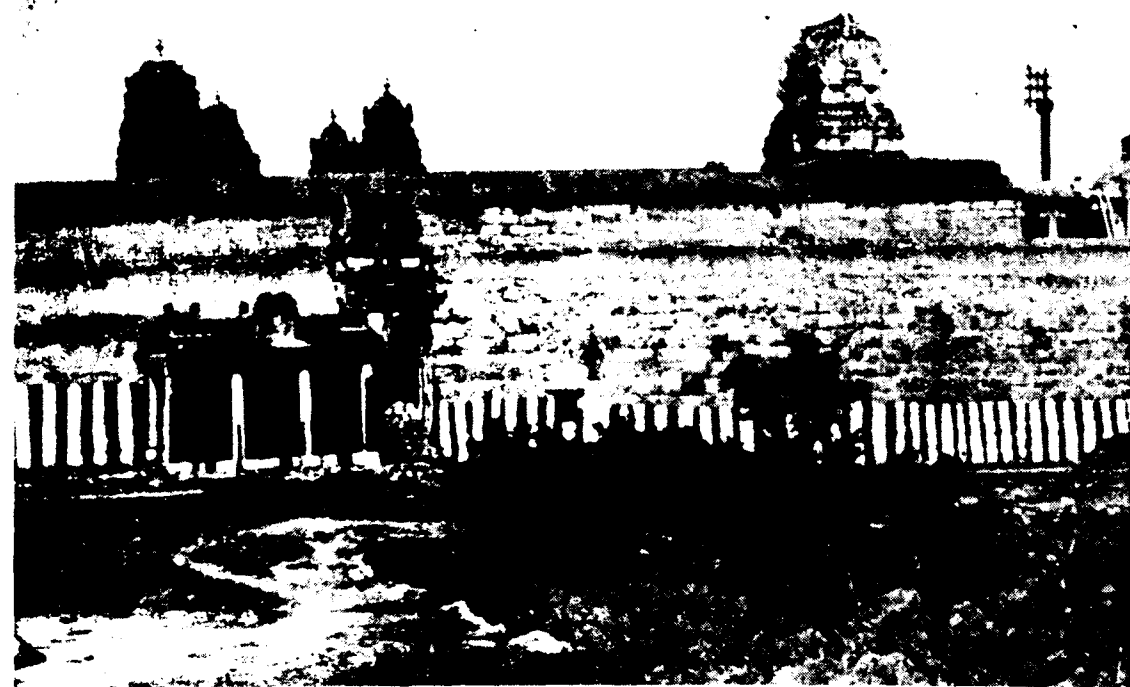
In addition, SKF manufactures single row, deep groove ball bearings, angular contact ball bearings — many of them incorporating improvements introduced by SKF over the original design. SKF manufactures bearings in sizes ranging from 10 mm in outside diameter to over 1100 mm; bearings which can operate at speeds of over 100,000 r.p.m. and bearings with a carrying capacity of over 2000 tons at low speeds. Now and in the future, you will find that the 8,000 types and sizes manufactured by SKF ensure the use of the right bearing in the right place.



FIFTY YEARS OLD...AND LOOKING AHEAD!



THE SKF BALL BEARING CO. PRIVATE LTD.
BOMBAY - P. O. BOX 71. CALCUTTA - P. O. BOX 588. MADRAS - P. O. BOX 66.



A view of the Temple

TIRUTTANI

T. N. SRINIVASAN

OUT of the six hallowed spots held sacred for the worship of *Sri Subrahmanya* or *Kanda* as He is more popularly known in South India, as envisaged in the "*Tiru-Murugatrup-padai*" of Nakkirar, "*KUNRUTHO-RADAL*" is one of them and indicates the modern place of pilgrimage, well known by the name "*TIRUTTANI*." The Sanskrit name of this place is *Sri Santhipuri*, which has the geographical setting of the place rightly indicates, means the place for *santhi* or mental repose and quietude. Saint Appar in his *Tevaram* songs calls the place as '*Kazhuneer Kundram*' — the hills with lilies.

This town humming with life and activity is in the Chittoor district on the main Broad gauge line between Arkonam and Renigunta junctions, about 50 miles north-west of the city of Madras. It is very easily accessible by rail as the trains connecting Madras and Bombay *via* Raichur stop here. It is also accessible by road. This town is surrounded by hills on all sides and in fact, round this place there are three distinct hillocks which are in the shape of a gigantic garland, with the sacred hill which contains the temple forming the pendant. The main attraction of this place is the famous temple of *Sri Subrahmanya*, which is

old in antiquity and famous in literature of the South.

The temple of Sri Skanda, whom the Telugu people call by the endearing name of *Sri Chengalvarayan* is situated on a small hillock just about three-quarters of a mile from the station. Actually there are two hills that go to form this sacred mount, the one on the northern side being a bit whitish in colour and hence called the *Paccharisi Malai* in Tamil or as *Pachabiyam Konda* in Telugu, since it resembles a huge heap of white rice, while the other half of the hill on the southern side is known as *Pinnakku Malai* or *Ganugapindi Konda*, for it is black in colour resembling a pile of sesame cake. The entire hill range is barren but for some scant vegetation on the western and northern sides and hence the situation of a small but elegant temple on a clean hillock gives a very picturesque appearance to this sacred hill, when the hill is sighted from a distance. In fact one of the numerous other names of this place—'*Kshanikachallam*', which later became the more well-known name—'*Thanikachallam*' really connotes the satisfaction that the devout can get by staying here at least for a *kshana* or minute by time.

The other word '*Thanikachallam*' too has its own significance. According to the *Skandhapuranam*, in which the genesis of this place is narrated, it is stated in detail that Sri Subrahmanya, after killing the demon *Surpadmasura* at the sea-girt Tiruchendur, retired to this cool spot for a short repose. In that purana, it is narrated that this asura monarch *Surapadma*, by his severe austerities obtained the blessings of Siva, by which he robbed

the wealth of the devas and made them his slaves. Indra and other gods were made to serve him and to vanquish this foe of the devas, Siva created Sri Subrahmanya through the Krittika goddesses and made him the *devasenapathi*—the commander of the divine forces. In a fight that ensued between the valiant Skanda and Sura, the demon was killed by the *sakti* or *vel* that the Lord threw at him, which broke the body of the demon into two halves. Out of one half came a cock, which Skanda took as his ensign, while the peacock that emerged out of the other half of the demon's body became Skanda's vehicle. Skanda, out of his infinite compassion, gave salvation to the demon and brought all the treasured wealth of the gods to Tiruttani. All the hills round about this sacred shrine are now said to be the fossilised remnants of that divine wealth and hence the place acquired the name '*Paripurnagiri*' in ancient literature. Since Muruga rested here, the place became *Thanikai*—meaning the place of rest and the hill on which he stayed became to be known as '*Thanikachallam*'.

There is also another significance to this place. Just on the banks of a small rivulet known as *Nandiyar*, north-east of the hill, is a small unimposing shrine of Siva, referred to as '*Veerattakesam*' in ancient Tamil works of literature, now popularly known by the name *Arumugaswami Koil*. This was the place, as the puranas narrate, that Siva himself was initiated into the mystic significance of the *Pranavam*—the holiest of the manthrams, by his own son, Skanda. Based on this incident, the place came to be known as '*Mooladri*'; for the *moolamantra* was imparted to

even the *Moolapurusha*—Lord Siva himself.

All the mythological incidents connected with this sacred place were later collected together by a great Tamil scholar of the 18th century—Kachiappa Munivar, to make up the reputed '*Thanigai Puranam*', which forms the sthala puranam of this place. The original Sanskrit—'*Kalhara Mahatmyam*' was also translated into Tamil by Kandappa Desikar, which also gives a wealth of information about the mythological significance of this place. Against this background of rich literary fabric, it is better to go round this place now and see what remains at this place of hoary antiquity.

A straight road from the station leads to the foot of the hills. Nearby on the right side stands the ancient tank called the '*Kumara Theertham*' or '*Saravana Poigai*'! It is customary for the pilgrim to take a bath in the tank and then only proceed to the hill for worship. On the south-western bank of this tank starts the newly-laid pathway to the hill. Though the hill is not very steep, the finely worked out 365 steps enable the most infirm even to ascend the hill with hardly much exhaustion and fatigue. *En route* there are quite a number of mandapams in which the pilgrim can rest for a while and continue the journey easily.

Half-way up the hill is a small tank on the right-hand side and is called the '*Brahma Theertham*', with a small shrine having the lingam known as '*Brahma-lingam*' and an image of Vinayaka. Brahma, the creator, was rather arrogant in that he paid his salutations

only to the divine couple Siva and Sakthi and ignored Skanda, taking him to be a youngster. This infuriated the youthful Lord, who caused Brahma to forget the manthrams connected with his job of creation. So the continuous process of creation had to stop and in his dismay, Brahma prayed to Siva for help and restoration of his last faculties. But Siva explained the folly of the Creator and advised him to worship Skanda, who alone could withdraw the effects of his curse. It was here that Brahma did *tapas* to invoke the blessings of Skanda and hence the tank came to be known as '*Brahma Theertham*' which is also known as '*Brahma Sonai*' in Tamil.

Going up, the top of the hill is soon reached and the pilgrim enters the '*Rathaveedi*'—the street along which the temple car is drawn at the time of the annual Brahmotsavams. The entry is through a gateway, which is crowned by a small gopuram called the *Kizha Gopuram*. Here is the huge metal receptacle in which the pilgrims burn huge blocks of camphor. On kirtigai days, maunds of camphor will be burning continuously. This outer prakaram is about a thousand feet in length and on coming to the southern side of this prakaram, there is a small receptacle of water known as '*Indra Theertham*'. No one is allowed to step into this tank, as the water here is taken exclusively for the abhishekam and daily rituals of the Lord. Indra, the God of Gods, worshipped the deity at this place, using the fragrant *Nilotpala* flowers—the blue lily, that once grew in abundance here and which made Saint Appar to call the hill as the Hill of Lilies. Hence this tank came to be called after Indra and as

the Tamil name of this sacred water spot is *Chengaluneer Odai*, the Lord got his name *Chengalvarayan*.

On coming round this prakaram, the pilgrim enters the first prakaram of the main shrine through the eastern gateway. On its right side is a small shrine of Vinayaka, and it is in this prakaram where the pilgrims perform the quaint vow of '*angapradakshinam*' when the pilgrim after a purificatory bath prostrates before the deity and then rolls round this shrine along the four sides of this prakaram, all the while keeping his hands over the head in the attitude of *anjali* or prayer. On the south-western corner of this prakaram is the shrine of '*Sri Uma-maheswarar*' and adjacent to that is the mandapam known as '*Sarva Vadhya Mandapam*', wherefrom the pipers play at the time of the festivals.

After worshipping the Vinayaka at the *Dwajasthambam* and the image of the elephant *Iravadam*, the pilgrim now reaches the second prakaram of the temple. After passing the flag staff and the hundi there, the pilgrim moves along the kitchen of the temple at the south-eastern corner, the shrine of *Sri Ekambareswarar* with *Sri Kamatchi Amman*, the abhisheka-mandapam, enshrining a small utsava image in it. On the northern side of this prakaram, there is a small hole in the roofing to enable the pilgrim to get a glimpse of the Vimanam of the main shrine, when seen through it. Near the *yagasalai* on the north-eastern side of this prakaram, no one will miss the huge sandstone block, over which the temple servants rub sandalwood stumps to prepare sandalwood paste for daily worship. The massive appearance of this stone shows no

signs of diminution, even though it had been in constant use for quite a long time. The belief is this stone was presented by Indra as a *Streedhana* gift to Devayanai, when she was given in marriage to Sri Subrahmanya. Hence much sanctity is attached to the sandal paste that is prepared here and which is anointed over the body of the deity everyday after the abhishekam. This paste is called the '*Sripadareenu*', which is considered as a very sacred prasadam of this deity. The devout keep a small quantity of this sandal paste with them and take the same by mouth in small pellets every day after their daily ablutions, for it is considered to be an efficacious remedy for many ailments in which ordinary medication may prove ineffective. It corresponds to the famous refined camphor prasadam of *Sri Srinirasa-perumal of Tirumalai*, which is also known as '*Sripadareenu*', which forms the huge *namam* that decorates the face of the great deity.

Near the north-western corner of this prakaram is the famous '*Rudraksha Vimanam*', which houses the big utsava images. As the name indicates, the top portion of this vimanam is made up of innumerable *rudrakshams*—the sacred Saivite beads used for worship. Nearby on the eastern prakaram is the shrine of *Sri Shunmughamurthi*—the utsava deity to whom the daily *Pradosha Puja* is first offered in the evenings. Adjoining this deity are *Sri Apath-sahaya Vinayakar* and *Sri Veerabhadra-swamy* with his nine warriors and an image of saint *Sri Arunagirinathar*, who had immortalised this deity in his famous "*Tiruppugazh*" hymns in Tamil.

To reach the inner and the last prakaram, one has to climb five steps—which are known as the '*Panchakshara Padigal*', representing the five letters that go to make up the mystic manthram sacred to Siva—"*NAMA SIVAYA*". Passing the arthamandapam, the pilgrim now reaches the main shrine of Lord Sri Subrahmanya-swamy. The charming standing image of the Lord with his bewitching smile captivates the hearts of every one and draws them all towards Him. He is adorned with costly jewels and a stone set *Vel* or spear is placed against His right hand, which had given Him the special name of '*Gyana-saktidharan*'. The famous poem *Tirumurugatruppadai* referred to earlier, has numerous references to the physical beauty of this image and one of them, as freely translated extols Him as :

"God Velan crowned with garland
of leaves and flowers,

And fragrant wet scented sandal
paste well smeared,

Swinging quick to the lilt of
kuravai dance,

Plays over all these hills and
shows his endless grace."

The very name *Kunruthoradal* means sporting on all these hills.

On either side of the main deity are images of Devasenai and Valliammai, who are the consorts of this deity. These two goddesses have also separate shrines in the eastern side of this prakaram. Passing these shrines the small sannidhi of Sri Balasubrahmanya is reached and the shrines of *Chandeswarar* and *Bhairavar* are seen in the northern side of this prakaram.



The utsava image of Sri Subrahmanya with
Devasenai and Valliammai

The existence of *Apathsahaya Vinayakar* shrine has a special significance here. It indicates the important role that Vinayaka played to help his brother Skanda in getting Valli as his consort. It was in the neighbourhood of this place at *Vallimalai*, that Valli was born as the daughter of a local *Veda* (hunter) chieftain. Her inexhaustible faith in Subrahmanya and her desire to marry Him only, is the theme of the famous Tamil folk-ballad known as '*Valli Kalyanam*', which forms the popular subject for stage and screen.

During the last stages of courtship, when Valli rejected the amorous

ACC HONOURS THE CODE

3

"Employers owe it to labour to recognise that welfare is not conceived in terms of philanthropy, but as a social obligation. Men and women engaged in production shall do so with dignity, honour and a sense of security. Fair wages should be paid for work done. Working conditions shall be as pleasant as possible."

Code of conduct—FORUM OF FREE ENTERPRISE

As an employer of labour the ACC can well point with satisfaction to the salary/wages and other emoluments paid to its employees and to the many welfare activities voluntarily undertaken over the years.

To take salary/wages first, compare these figures of ten years:

	1945-46	1955-56
No. of employees	17,500	29,000
Salary/wages & amenities	Rs. 127.3 lakhs	Rs. 421.5 lakhs

Thus while the increase in the number of employees was 66%, the increase in the salary/wages, etc. for the same period was over 230%!

As for welfare activities, employees of the ACC's 17 factories and two collieries have for a long time been enjoying a large number of amenities for their security and social welfare, namely: provident fund and gratuity; schools, hospitals and dispensaries, creches, canteens, cinemas, clubs, playing grounds; welfare and benefit fund, and co-operative societies.

All these benefits have been provided out of a consciousness of social obligation. The ACC believes that a well-paid, well-looked-after, happy and contented employee is the best employee.

THE ASSOCIATED CEMENT COMPANIES LIMITED
THE CEMENT MARKETING CO. OF INDIA PRIVATE LIMITED

December 1957

TIRUTTANI

29

approaches of Subrahmanya in the form of an old man, the God became very despondent. To crown his efforts with success, he sought the help of his elder brother Vinayaka, who appeared immediately as a wild elephant. Young Valli become frightened and beseeched the old man to drive away the animal. In that she clasped the old Skanda and later began to abuse him. To put an end to all these interludes, Skanda revealed His true form to Valli and married her to the rejoicing of all. For the help rendered by Vinayaka in time, he is known as '*Apathsahaya*'—the one who helped at the critical moment. The marriage of Valli with Subrahmanya is celebrated in the Tamil month of *Masi*—February-March, when on the Pusam day, the *Kalyana Utsavam* is conducted on a very grand scale here. The other Brahmotsavam, which is celebrated in the Tamil month of *Chitrai*—April-May, signifies the marriage of Subrahmanya with Deva-senai, his other consort, whom he married at Tiruparankundram near Mathurai in the South.

The *Skantha-sashti* festival during the Tamil month of Aiypassi, connotes the incident connected with the destruction of the asura Surapadma. This festival is a very religious one with intense puja for the deities and abhishekam on all the days. As in the case of all the other Subrahmanya shrines, the *Surasamharam* festival is not observed at Tiruttani, for Skanda came here after slaying the asura for rest and solace. The other important festival here is the Mahasivaratri festival when a grand abhishekam is done to the deity here with conches called '*Sankhabhishekam*'.

Tiruttani is one of the most famous *Prarthana Kshetrams*—where the innumerable vows taken by the devotees are scrupulously carried out by them. Besides the usual modes of divine obligations that one may take to perform, there are some quaint forms of these vows. Some of them are the carrying of *Kavadis*, the tonsoring of head, the circumambulation known as *angapradakshinam*, the another known as *adidandam*—the stepping the sacred hill foot by foot and burning camphor at every stage.

Architecturally this temple does not boast of high class workmanship in sculpture. Though this temple had been in existence from the earliest Chola period, much of it had been renovated in the centuries that came after, whereby many of the old relics might have been obliterated. Yet there are some fragmentary ephigraphical references that throw light on the munificence of past ages. Among them, one is a Tamil verse which records the fact that in 890 A.D., in the 18th year of the reign of King Aparajitha Verman, one Nambi Appi renovated the Veeratteswara temple with stone slabs. Later records show that till 1680 the worship of this temple was vested in the family of Karuneega caste of the Kapila rishi gothram and was then transferred to the gurukkals by the rulers of the Karvetnagar Zaminthari. Recently in 1948, extensive repairs were done by donors and the entire temple was given a new look. The temple has a fine collection of rare jewellery and among them, the most significant are a large emerald padakam, the 1008 *vilva-leaf* gold garland and the stone-set *rudraksha* garland.

Tiruttani is also a place of business, for here congregate the folks of all the neighbouring villages every week for public *santhais*, when the several commodities are offered in open auction. It has all the modern amenities that the present day traveller needs and as such a visit to this place any week-end will be well enjoyed and appreciated.

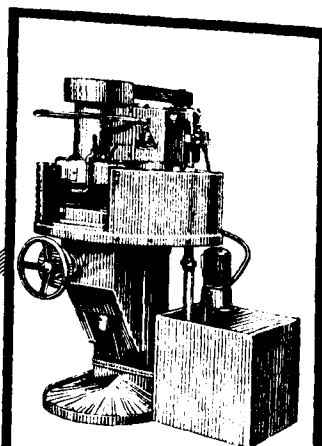
World of Railways

(Continued from page 21)

Conditions on the American railways, of course, differ in many respects from those ruling in India, but the operation of the progressive Atlantic Coast Line—a typically efficient system in the “land of big railroading”—presents a truly interesting study for the Indian railwayman.

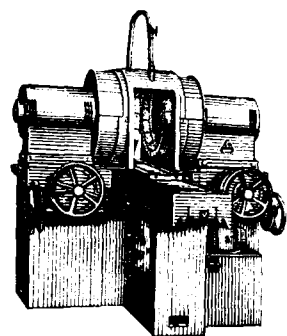


DISKUS
(GERMAN MAKE)
**GRINDING
MACHINES**



DISKUS German make Surface grinding machine

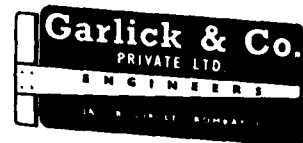
Type DV Vertical spindle with manual and hydraulic wheel head swivel, available in two sizes with 12 & 24 dia. segmental wheel.



Type DD for double sided simultaneous grinding of parallel faces.

Example of application: Ball bearing ring faces, typewriter keys, universal joints, connecting rods, roller end faces, piston rings etc.

Besides above our Principals range also includes Surface Grinders for various other applications and we solicit your enquiry.



COX STREET, CHENNAI
BRANCHES: 24, ERABALU STREET, MADRAS
10-B, NIZAMUDDIN WEST, NEW DELHI

Railway Out-agencies

S. K. MUKERJI

Chief Commercial Superintendent

FROM a glance at any large scale map of India it is at once evident that inspite of a wide network of railway lines, extensive areas of rural territory are still poorly served by rail transport. In fact, there are nearly 5 lakhs of villages uncovered by the railway system. If the route miles of Indian Railways are reckoned against the area and the population of the Country and the results are viewed in the global perspective, the comparative meagreness of our railway system stands out as shown below:—

Even allowing for the fact that within the vast area of our Country there are considerable tracts of low productivity not capable of supporting a railway and large blocks of forests and hilly country, it will appear that on the basis of the population of our land, the extent of railway development has been low in comparison with other advanced countries.

Railway Route Miles

	Per 1,000 Sq. Miles	Per lakh of population
India ..	27	9
Japan ..	87	14
France ..	120	60
U.K. ..	204	37
U.S.A. ..	74	138

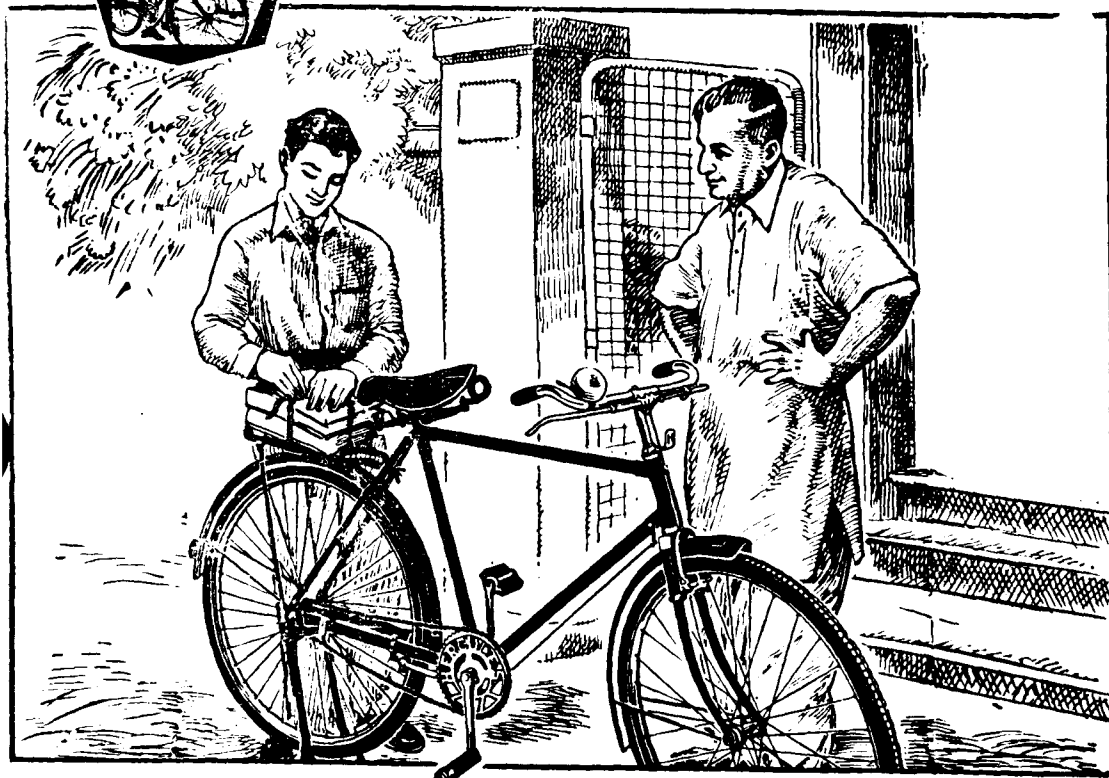
The position varies, of course, from State to State and the following statistical picture, showing also the area and the population which on the average are dependent upon one mile of railway in each State, will be of interest:—

	RAILWAY ROUTE MILES		PER MILE OF RAILWAY	
	Per 1,000 Sq. Miles	Per lakh of population	Area (Sq. Miles)	Population
Andhra Pradesh ..	25.9	8.8	38.6	11,398
Assam ..	11.9	11.2	84.3	8,928
Bihar ..	45.0	7.8	22.2	12,822
Bombay ..	33.9	13.4	29.4	7,468
Kerala ..	32.6	3.6	30.7	27,551
Madhya Pradesh ..	17.2	11.3	58.0	8,838
Madras ..	43.7	7.3	22.9	13,705
Mysore ..	22.5	8.6	44.5	11,616
Orissa ..	13.4	5.5	74.4	18,069
Punjab ..	47.1	13.9	21.2	7,194
Rajasthan ..	26.5	21.9	37.8	4,573
Uttar Pradesh ..	46.0	8.2	21.8	12,124
West Bengal ..	51.8	6.9	19.3	14,530



1936

At the age of 20 Gangadhar is the proudest man in his town—he has a wife, a job and a Hercules cycle. What more can a young man want?



TODAY

How the world has changed! The old dependable Hercules which carried Gangadhar to his office is now taking his 20 year old son to the college!

Hercules is more than a cycle, it's a lifetime companion



Ask the man who owns one. He'll tell you that HERCULES lasts a lifetime. Backed by the experience of people who have made top quality cycles for nearly 50 years, this precision-built HERCULES cycle is now made in T.I. Cycles' ultra modern factory. You'll admire its streamlined beauty, its smooth, effortless drive. HERCULES is the finest cycle you can buy, and yet it is so moderately priced.

Your cycle is an investment- **HERCULES** is the best value for your money

Manufactured in India by: T. I. CYCLES OF INDIA LIMITED, Madras.



movements of raw materials and manufactured goods. From the rural to the urban areas, from the fields to the production centres, and from the factories to the consuming points, rail transport will assume tremendous importance in the task of revitalising our national economy.

An essential requisite for this is that railway expansion should reasonably keep pace with the economic development in the country so that rail transport facilities, indispensable for long distance movements, are available over as wide an area as possible.

The smallest area per mile of railway is in the West Bengal where there are on the average only 19.3 Sq. Miles for every mile of railway. If the railways were exactly evenly distributed over this State, the position would be that no place in the interior would be more than about 9.6 miles from the railway. At the other end of the scale is Assam, then Orissa and Madhya Pradesh, with 84.3, 74.4 and 58.0 Sq. Miles of area respectively for every mile of railway. The States in which not only the area per mile of railway but also the population dependent upon one mile of railway is high are Orissa, Mysore, Andhra Pradesh and Kerala.

There has never been any doubt that railway transport is an extremely vital link in the chain of economic improvements we are attempting to forge in this Country and the success of our Second and successive Five-Year Plans will depend to a considerable extent on the adequacy of our rail facilities. Increased production in the agricultural and industrial spheres will necessitate increased

It is now well known that during the Second Five-year Plan financial resources will not be available to meet the entire demand for expansion of railway facilities by way of construction of new lines except for 850 miles mainly in connection with Steel and Coal industries, with the result that a large portion of the countryside will continue to remain unlinked with the railways.

A part of this gap can be filled by opening more and more railway out-agencies in interior places not at present connected to the railway system. These out-agencies can serve in an indirect way to take the facilities offered by the railway system to areas far removed from it by providing not only suitable collection and delivery centres for traffic of such areas, but also the ancillary transport required between such centres and their railheads. Hill stations and other places to which a railway link cannot be constructed except at considerable expense may thus be afforded facilities for booking and receipt of traffic as at railway stations,

In the early stages of railway development, out-agencies were very few in number. In fact, the policy of railway construction through the agency of foreign capital at high rates of guaranteed interests was hardly conducive to establishment of out-agencies as a more economical alternative to the venture of extending the railway line into its outlying areas. Moreover, there were very few all-weather feeder roads and commercial vehicles to supply the ancillary transport. With the change in the policy of railway construction in which the terms of guarantee were drastically modified or withdrawn—railway administrations became interested in the establishment of out-agencies as a means of exploring further sources of revenue. Thus in the South Railway out-agencies came into existence in the eighteen-nineties at Trivandrum, Palni, Narsapur and Palakol—centres which were subsequently connected to the railway system. Establishment of out-agencies by other railway administrations continued from about this time though the pace of progress remained slow. After the First World War, commercial motor transport commenced operation in this Country on an extensive scale with vehicles released from the War and the pace of growth in the motor transport industry in the latter half of the twenties was so quick that it developed as a formidable competitor to the railway. It was at this stage that as a result of the investigations of the Jayakar Committee and those of Messrs. Mitchell and Kirkness, a definite policy of future road development with particular emphasis on the construction of feeder roads to railways was adopted

and the following measures calculated to bring the railways into closer link with the interior of the country were taken :

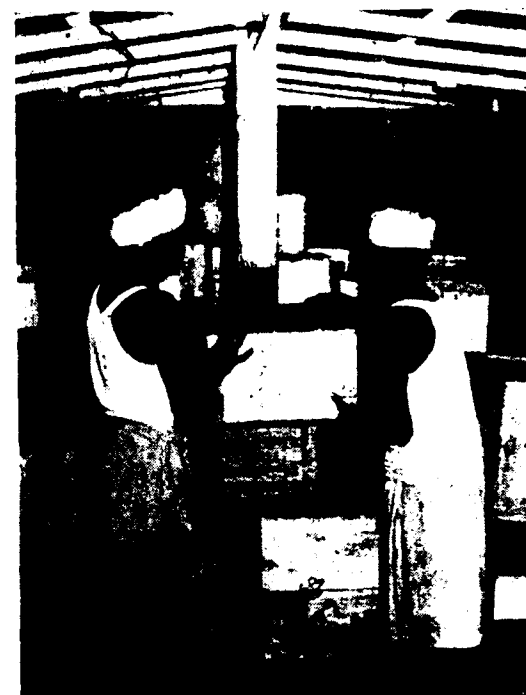
(a) the employment, to a greater extent, of motor contractors to bring traffic to the railway ; and

(b) the opening of more out-agencies for booking and delivery of traffic in conjunction with the railway.

These decisions marked a significant step forward in the growth of railway out-agencies in this Country. As against a total of 83 out-agencies in 1928, the number increased to 208 in 1956, their State-wise distribution being as under :—

	No. of out-agencies
Andhra Pradesh ..	20
Assam	7
Bihar	4
Bombay	31
Kerala	10
Madhya Pradesh ..	8
Madras	33
Mysore	17
Orissa	1
Punjab	25
Rajasthan	25
Uttar Pradesh ..	19
West Bengal ..	8

It is pertinent to note that the number of out-agencies is large generally in those States in which either the area or the population per mile of railway is large. Orissa is, however, a singular exception notwithstanding the fact that in this State an area of 74.4 Sq. Miles and a



Stacking operation at an out-agency

population of 18,069 are, on the average, dependent upon one mile of railway.

The distribution of out-agencies for each Railway Zone, as given below, shows that the largest number is on the Southern Railway :

	No. of out-agencies in 1956
Southern Railway ..	80
Central Railway ..	17
Western Railway ..	44
Northern Railway ..	38
North-Eastern Railway ..	20
Eastern and South- Eastern Railways ..	9

These out-agencies play a very important role in the economy of the South as the volume of goods traffic handled therein is of the order of 2.5 million maunds with a freight value of Rs. 34 lakhs per year. They deal with one or more of the main items of traffic, viz., Passengers, Parcels or Goods, depending on the actual needs of the area and the conditions prevailing thereabout. The number of passengers booked from the out-agencies every year is about 2,20,000 and the earnings on that account amount to about Rs. 6.5 lakhs.

Traffic from and to the out-agencies is booked in the same manner as at railway stations, but each out-agency is allotted one or more railway stations known as the "serving station/s" and the traffic between the out-agency and the serving station/s is generally arranged by a means most prevalent, convenient and economical. Road vehicles provide the commonest form of ancillary transport, but in certain areas boats and country crafts are the essential means of conveyance. For

Unloading from a hand-cart of consignments intended for booking at an out-agency



example, in the Godavari Delta region of the Southern Railway, there are 4 out-agencies which are approached by the river and its canals, viz., Amalapuram and Delta Gannavaram, served by Rajahmundry Railway Station, Razole, served by Narasapur and Maruteru (Penugonda), served by Nidadavole. The traffic which consists mainly of coconuts, rice, tobacco and sundries are carried by boats between the out-agencies and the serving stations. On the West Coast, movement of both passenger and goods traffic by backwaters is very common. These backwaters are connected to one another by canals of varying depths. Movements through these backwaters take place in country crafts known as 'Vallams' which are either poled or rowed, sails being used only when there is a favourable breeze.

There are four out-agencies on the Southern Railway, viz., Alleppey, Kottayam, Kayankulam and Cochin, for which the ancillary mode of transport is through coastal backwaters. Alleppey is the most important out-agency of this type and has two serving stations, viz., Cochin Harbour Terminus and Quilon. It deals with fairly heavy inward traffic in metals, manganese, provisions, salt and other commodities. The outward traffic mainly consists of provisions, oils, spices and miscellaneous goods. The volume of traffic carried and earnings therefrom are of the order shown below:—

		Inwards	
		Mds.	Rs.
1952-53	..	52,256	52,360
1953-54	..	47,654	41,252
1954-55	..	49,192	55,252

Outwards

		Mds.	Rs.
1952-53	..	480,445	12,23,729
1953-54	..	508,408	14,39,559
1954-55	..	542,651	11,40,259

An important out-agency in the South served by motor transport is at Nagercoil, for which the serving station is Tinnevely Junction. This is open for passenger, parcel and goods traffic. It deals with about 29,000 passengers per year and the volume of goods traffic handled is of the order of about 50,000 mds. (inwards) and 39,550 mds. (outwards), with total freight amounting to about Rs. 1.1 lakhs.

For providing the facilities at an out-agency, an additional levy is imposed on traffic booked from and to the out-agency in addition to the rail fare or freight, from or to the serving stations. This levy is known as "out-agency charge".

In the early days of railway working, most of the out-agencies would appear to have been kept open for dealing with goods traffic only and the working of the out-agencies was done departmentally by staff appointed by the railways. Transport of traffic between the out-agencies and the serving stations was entrusted, however, to contractors under an agreement and the contractors were paid at mutually agreed rates. The position has now altered. It is now recognised that the principal object of establishing out-agencies is to tap the traffic at the source by developing outlying areas and to provide suitable scope for the co-ordination of rail and other transport services. Financial justification as such has therefore ceased to be the



A front view of Nagercoil out-agency

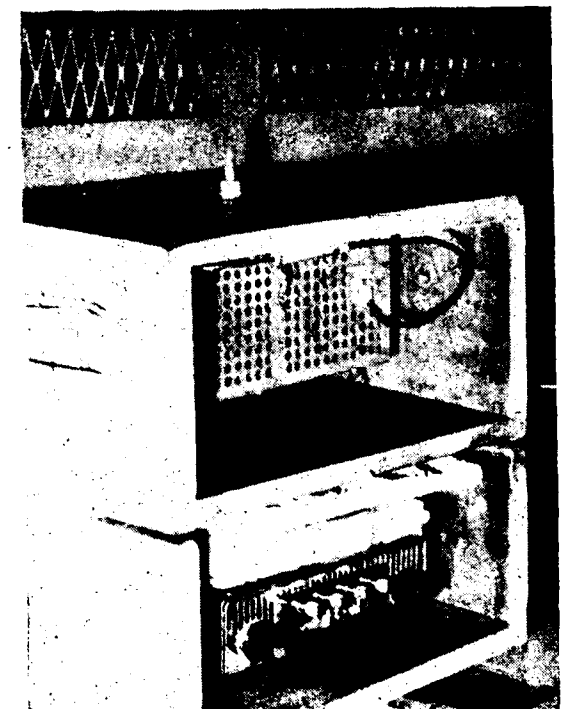
primary basis for opening an out-agency. This, however, imposes the obligation to see that the cost of working out-agencies is kept as low as possible. The departmental system of working out-agencies not being suitable for this purpose, it is now the general practice to appoint contractors to do this work. The contractors are required to provide their own building and staff and also the ancillary mode of transport between the out-agency and the railhead. The Railway Administrations supply the books and forms and weighing machines, etc.

The selection of contractors for working out-agencies is made by calling for tenders and a good deal of care is required in selecting these men as they virtually function as the canvassing agents of the railway and are required to provide all facilities at the out-agencies for the customers and have to maintain regular transport

services between the out-agencies and the serving stations, employing the requisite number of vehicles or boats: they have to be in the custody of tickets and goods of considerable value while the security deposit taken from them can only be nominal. Persons of integrity and standing with no competing interests with the railway are generally chosen for this purpose.

Where out-agencies are open for dealing with parcels and goods traffic only, it is, however, not necessary, that the persons applying for the contract should own vehicles and other appliances necessary for the satisfactory discharge of the contract as long as care is taken to ensure that the person selected is in a position

Inside of an out-agency bus provided with wireless set as an amenity to passengers



to arrange the necessary transport. The position of an out-agency intended to be open for passenger traffic stands, however, on a different footing. Permits for operating buses are granted only for specific routes. The regulation and control of the operation of buses, opening of routes for bus traffic, fixation of the number of buses to be plied on each route, and the number of trips to be made by each bus are determined by the Regional Transport Authorities under the relevant provisions of the Motor Vehicles Act and the rules made thereunder by the State Governments concerned. These Regional Transport Authorities are quasi-judicial bodies and their discretion may not, therefore, be fettered in any manner by the railways

making recommendations to them for granting permits to their nominees for operating on that route. In the circumstances, the award of a contract for working an out-agency for passenger traffic in conjunction with the operation of a bus service by the contractor between the out-agency and the serving station has to be subsequent to the grant of permits for the route by the Regional Transport Authorities and not in anticipation thereof.

A correct appreciation of the position as sought to be explained herein can be of considerable assistance in minimising the irksome delays that are otherwise liable to occur in finalising the arrangements for opening of out-agencies.

Interior of
a railway
airconditioned coach
featuring
linoleum flooring



**Linoleum
on the
move**

Linoleum floorings in railway coaches make travelling an added pleasure. Their resiliency, sound absorbency and insulation against heat, all make for greater comfort of passengers; and, easy-to-clean attractive linoleums brighten railway compartments. Furthermore, light-weight and durable linoleums protect the original floor structure against excessive wear and tear and are inexpensive to install and low on maintenance.

INDIA LINOLEUMS LTD., 8, India Exchange Place, Calcutta



Edakka—A Musical Instrument

V. S. NAMBUDIRIPAD

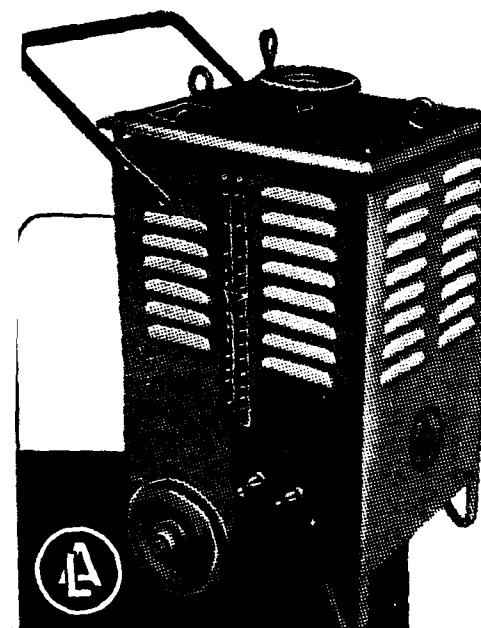
SOUTH India has a rich treasury of musical instruments. We can see various types of instruments emphasising the melodious and rhythmical aspects of music. Some of these are getting rarer: because they seldom get opportunities for their use and display. Though they were in vogue in the past presenting classical and highly exclusive types of musical and intricacies of rhythm, lack of encouragement is driving some of them into oblivion. Even in cases where some have managed to continue in existence, they are treated only as the exclusive product and heritage of one particular part of the country or the other. Such an attitude towards these instruments prevents the wider public from knowing about them.

Edakka, a popular and unique musical instrument found only in Kerala is made use for accompaniment in the presentations of devotional songs of Marga Music. It is an example of a compound musical instrument. It has its own series of graded exercises for practice and for attaining perfection in playing. Its tone is the product of combined vibrations of the membrane and two parallel guts running along the diameter of each head. The clever manner in which a performer on Edakka is able to produce the notes of various pitches by varying the tension of the drum-heads, deserves special notice.



Though Geetham and Thalam (rhythm) can be maintained simultaneously, its musical capability is almost ignored in these days. The fact that it has a range of more than one octave reveals the musical scope inherent in it. Mention must be made that Edakka can be developed into an accompanying unit in the orchestral presentations of devout, pure classical Music. According to tradition now existent, Edakka is used almost as a rhythmical accompaniment by the singer himself. A proper appreciation of the intrinsic beauty and musical charm of Edakka has yet to come to the efforts of the sponsors of music and musical instruments.





VADIAL I & 2
AIR-COOLED TRANSFORMER
WELDING SETS
FOR 220 VOLTS 40/60 CYCLE SUPPLY.

These sets are engineered specially to meet the present requirements and exacting demands of modern welding processes and ensure complete satisfaction to the discriminating user. The sets have a large co-efficient of dispersion resulting in a continuous regulation of the welding current throughout the welding range. Maximum capacities of these Transformers are :
Vadial 1—180 Amps. Vadial 2—320 Amps.

THE ASIATIC OXYGEN AND ACETYLENE CO., LTD.
8, DALHOUSIE SQUARE EAST, CALCUTTA-1

MANUFACTURED BY :
L'AIR LIQUIDE, PARIS
BELGIUM DIVISION

AOAF-2157

THE AMATEUR RAILWAYMAN

OPRAIL

LET us call him Mr. AR. When he comes to the ticket barrier and the ticket collector asks him to show his ticket, Mr. AR will produce it promptly with a smile of triumph and say, "There's no need to remind me, my man, I know my duty as a citizen."

The ticket checker in trying to be helpful, will scrutinize the ticket and say, "Going to Lucknow. Your train is the Punjab mail, platform No. 7." Mr. AR, instead of saying a 'thank you' will reply, "You don't have to tell me that. 5 Up mail is my train, departure 19 hours." He grins triumphantly again and thinks to himself: fancy trying to teach me, and I can talk the railwayman's language and say 19 hours instead of 7 p.m.

Mr. AR walks up the platform until he finds his compartment. He glances at the reservation slip tucked into a bracket outside. The railwayman doing reservation duty walks up, but before he can say or do anything, Mr. AR exclaims heartily, "Nice to see you railway fellows doing your job so well. My name's on the reservation slip, and my berth is a lower. And you don't have to ask me to show my ticket, I know the rules just as well as you. Here you are." Saying which he offers his ticket for scrutiny of the reservation man.

When the porter has put Mr. AR's baggage into the compartment, and before he has a chance to ask for his fee, Mr. AR swiftly produces a four-

anna coin and slips it to the porter with the firm remark, "Four annas is your fee from the taxi to the train, and that's all you will get. Now be off and don't start your whine for a tip." However, the porter by force of habit adds his request for something extra, but he is ignored. Eventually he accepts defeat and moves away.

After Mr. AR is settled in the compartment he surveys his fellow travellers. Then he looks around and observes quite a lot of luggage under the berths and in other parts of the compartments. He directs a quizzical look at the passengers on the other berth and enquires of him, pointing to the luggage: "Yours?" The other man nods in the affirmative. Mr. AR advises, "I hope you've had all this stuff booked otherwise these checking fellows are likely to get nasty. Their duty, you know."

By the time the train moves out of the station Mr. AR has got on speaking terms with all the other passengers in the compartment, and they form the impression that they have a pleasant travelling companion. But what they do not know is that this is Mr. AR's travel technique, so that he can display his wide knowledge and live up to his reputation.

Before departure Mr. AR keeps looking at his wrist-watch. A couple of minutes to go and he pops his head out of a window looking towards the engine. No green light yet. He draws in his head, turns towards the others

NATIONAL BANK OF INDIA LIMITED

(Incorporated in the United Kingdom. The Liability of the Members is limited)

OPEN SAVINGS BANK ACCOUNTS

IN THEIR BRANCHES AT

Calcutta
Calcutta, Chowringhee
Bombay
Madras
Madras, Mount Road
Bangalore

Amritsar
Kanpur (Cawnpore)
Delhi
New Delhi
Tuticorin
Cochin

WITHDRAWALS BY CHEQUE

MADRAS AND MOUNT ROAD BRANCHES
PRESENT RATE OF INTEREST 2½% PER ANNUM

RATES AT OTHER BRANCHES OBTAINABLE ON DIRECT APPLICATION

Main Office: 3, North Beach Road

Sub-Office: 158, Mount Road

J. M. LAMBERT
Manager

and remarks, "Departure 19 hours." One of the other passengers raises an eyebrow. Mr. AR explains, "19 hours according to railwaymen, you know and 7 p.m. to you and me."

Mr. AR then continues as if he is muttering to himself. "Well, I expect this train will have a late start. Quite the usual thing at times, and if you ask them why, they'll tell you they have extra packages to load, or loco trouble or line blocked ahead."

The train moves off with a late start of about five minutes. Mr. AR has checked this with his watch and comments, "Five minutes late. Nothing to worry about however. Powerful locos hauling the mails and the driver can always make up lost time."

The train has been on its journey for a few hours. The occupants of the compartment are getting ready for a night's sleep. Mr. AR before he retires goes round the compartment making sure that all the safety catches, bolts, etc., of windows and doors are secure. During his tour of inspection he tells the others: "Must see that we are all secure, you know. After all, we can't leave ourselves open to strangers walking in and pinching our stuff or murdering us in our sleep. These train thieves are enterprising rascals."

It is the morning after. The mail has stopped at a large junction station. Mr. AR and his fellow passengers are busy eating their morning breakfast. As soon as the plates and teapots are

cleared, the refreshment room staff produce their bills for payment. Mr. AR carefully checks his bill and with a gleam in his eye exclaims, "Ha! I thought so. Overcharging as usual." He then asks the other passengers for their bills, saying, "I hope you don't mind, but these bearers have a habit of overcharging and one cannot be too careful to see that one is not being cheated. But they cannot put it over me, as I know the tariff rates like the palm of my hand." But sometimes Mr. AR may be wrong, and when the Refreshment Room Manager is summoned and the situation explained Mr. AR growls a grudging apology saying, "I didn't know the rates had been changed. However, it's good to be careful."

The mail is on its journey again. Mr. AR now offers what he considers to be valuable information. "Do you know, gentlemen, this train now has one of the longest non-stop runs, if not the longest, of any train in India—about 100 miles." The answer to this is "Well, it's nice to know we can move so fast." But on this occasion there is an interruption. After about 50 miles the train slows down and stops at a wayside station. Mr. AR promptly pokes his head out of the window, looks ahead and sees the signals at danger. The train continues its halt for about fifteen minutes. Mr. AR again pokes his

head out, looks ahead and pulls it in again. "Ah, I know what's the trouble. We're on a single line section and there's a train coming from the opposite direction. So we must stop here until the other train is received on the other line. After all, it wouldn't do if our train moved on and had a nice head-on collision. Where would we be then? On our way to kingdom come." But Mr. AR is right. When the other train pulls up on the opposite track, the mail starts again on its journey. Mr. AR glows with satisfaction at his expert railway knowledge.

A few hours later Mr. AR reaches his destination. Cheerily he bids his fellow passengers good-bye, calls a porter to carry his baggage, pushes his way through the crowds on the platform and works his way through the ticket barrier. Suddenly, he stops short, turns and walks back to the barrier. He makes over his ticket to the man at the gate for collection, and admonishes him. "Ticket Collector, you're not doing your duty. You know you shouldn't let anyone through your gate without collecting his ticket." The Ticket man apologizes, "Sorry, Sir, but there was a big crush pushing through, and I must have missed you."

Mr. AR smiles paternally and gives his parting shot. "It's all right this time, but don't let it happen again."

STEEL CASTINGS

up to 4 tons each
FROM OUR MECHANISED
FOUNDRY

WAGON COMPONENTS
LOCOMOTIVE PARTS
MACHINERY PARTS
BRIDGE BEARINGS
WHEELS & GEARS

and others to customers'
specifications



The need for more Wagon Assemblers and Wagon Builders in India

A. B. LAXMAN

Asst. Works Manager, S. Rly., Hubli

PREAMBLE :

INDIAN Railways, from small beginnings, today own approximately 251,000 wagons, some of them over 40 years old. These old wagons require periodical heavy repairs and get condemned almost at their age of 40. The replacement of such wagons is mostly done by purchase of wagons built abroad. This is not helpful for Independent India today.

From the comparative revenue earnings of Goods traffic in January 1956 and 1957, it will be seen that the Goods traffic has registered an increase both in the B.G. and in the M.G. last year. This increase continues to go on swelling month by month without proportion. They carry mostly loads of cement, iron, iron-ore, salt, coal, coke, sugar, etc. Figures for January 1956 and 1957 are indicated below—for Southern Railway.

YEAR	Wagons	
	B. G.	M. G.
1956	24,747	45,303
1957	25,367	48,117

It will be noticed from the above, that the services are heavy and the earnings proportionately are also good, with the result that the wear and tear of

these wagon parts and the wagons as a whole is much faster than normal. These wagons require replacement as and when such wastage takes place so that there is no hold up to raw materials being carried to places where they are finished.

The builders or assemblers of wagons in India are not many. The time has now come for such builders and assemblers to come forward with their capital to undertake this industry, and if they do so, they will be helping not only themselves but also the nation, very largely.

WHAT IS WAGON ASSEMBLING :

Broadly speaking, wagons can be got prepared in two easy and economical workshops, namely, the Assembly Workshop and the Manufacturing Workshop. The assembly workshop deals with putting the manufactured parts already given to them to specification and drawing together, riveted, or welded or bolted, as the case may be, thus making the wagon complete by itself ready to go into service. The Manufacturing Group of Shops consists of manufacturing of materials that are required for such an assembly in the Assembly Shop and they mainly require heavy and light machinery. At present India cannot afford to run assembling and manufacturing shops by one firm. It is, therefore, evident that India should have two different types of

December 1957

MORE WAGON ASSEMBLERS

45

Firms for such large out-turn of wagons demanded by the Railways, year by year, both B. G. and M. G. A general idea of what a wagon assembly shop requires is as under, so far as machinery is concerned :—

1. Air Compressors.
2. Drilling Machines.
3. Pneumatic Drilling Machines.
4. Pneumatic Riveting Machines.
5. Light Forges.
6. Light Plate Bending Machines.
7. Vacuum Testing Machine. and
8. Overhead Cranes of about 10 Tons capacity.

In other words, a small machine shop with the above machines and a small forge shop with at least 3 to 4 forges attached to this machine is also necessary. The assembly shop should be very close to a B. G. Station, if it is a B. G. Assembly Unit : or a M. G. Station, if it is a M. G. Assembly Unit. It is preferable that these places are spotted around or close to an Industrial area so that the required skilled or semi-skilled personnel is available to the Capitalist very easily.

The accommodation is not after all very much. Three to four North Sky-lighting sheds with a dimension of 200' long and 50' broad will be the main requirement for such an assembly shop for an out-turn of 200 to 300 wagons a month, and about 250 to 300 Artisans which include semi-skilled categories also.

WHAT IS WAGON BUILDING OR MANUFACTURING :

The building of the wagon is to be done with complete materials manufactured in India for which heavy

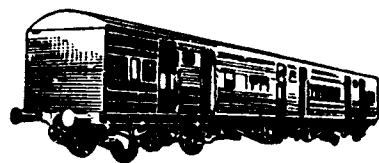
machinery are the main requisites. A general idea of what purchases are made and imported is given below for the Capitalist, who ventures to take up such an enterprise. As a result of the increased activities during the First Five-year Plan, the annual Railway purchases, so far as Locomotives, Carriages and Wagons are concerned, which stood in the neighbourhood of Rs. 45 crores in 1944-45 crossed the Rs. 100 crores mark in 1954-55. The figure, it is noticed, is still rising and it is estimated the Railway's annual purchase towards the end of the Second Five-year Plan will exceed Rs. 200 crores, i.e., about 400% over the 1944-45 level.

Rupees in crores.

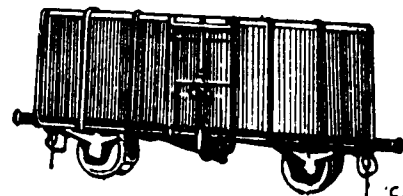
YEAR	Indigenous	Imported
1951-52	68.33	29.32
1955-56	93.65	32.63

These figures do not, however, include items manufactured by the Railways in their own workshops, but only show purchases from the open market.

It would be interesting to note that whereas Rolling Stock purchased in the country are estimated to rise from 90 crores (in the First Five-year Plan) to Rs. 220 crores (in the Second Five-year Plan), the Railways would only need to import Rolling Stock worth Rs. 158 crores during the Second Five-year Plan period, other items likely to be imported being a large tonnage of rails, sleepers, fish plates and other categories of steel.



'B.G.' STEEL COACH BODIES



'C.R.' TYPE WAGON



DESIGNERS AND BUILDERS OF
ALL TYPES OF RAILWAY
ROLLING STOCK AND SPRINGS

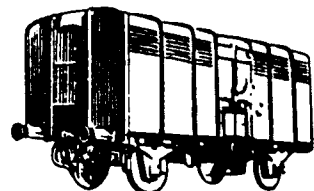
INDIAN STANDARD
WAGON CO. LTD.

SANTA
BURNPUR

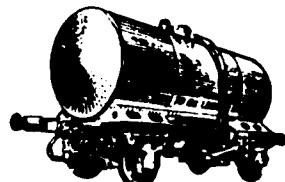
Managing Agents

MARTIN BURN LTD.

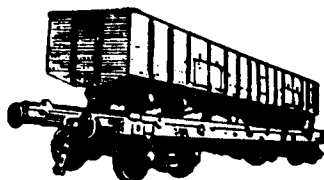
12, Mission Row, Calcutta I.



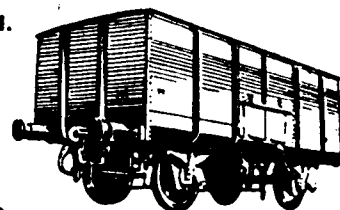
'C.M.R.' TYPE WAGON



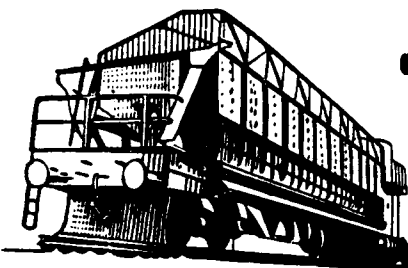
'T.P.R.' WAGON



'M.B.O.C.' TYPE WAGON
LOADED ON A 'BFR'
TYPE WAGON



'O' TYPE WAGON



'HOT COKE' WAGON

MSWC-4

December 1957

MORE WAGON ASSEMBLERS

47

From a close study of the above, the intending capitalist will see how much he can benefit himself as well as the common man, if he only ventures to start a Wagon Assembling or Manufacturing Shop.

A Wagon Building or Manufacturing Shop will broadly require the following machinery :—

1. Heavy Duty Lathes.
2. Heavy Duty Wheel Lathes.
3. Heavy Duty Compressors.
4. Heavy Duty Hydraulic Pressing Machines.
5. Steel Rolling Mills.
6. Plate Bending Machines.
7. Drilling Machines of different capacities.
8. Heavy Forge Shop.
9. Drop Stamps.
10. Steel Smelting Machines to produce steels of all sections.
11. A Foundry to give heavy and light types of alloy castings.
12. A Millwright shop to maintain these machinery and to keep the shop alive right throughout the year without failures.

13. A laboratory with a specialist on Metallurgy, so that the specification given by the Government on such Steels and Cast Iron parts are well maintained.

GENERAL :

It will thus be seen that by a close co-ordination of the assembly set of workshops, and manufacturing set of workshops, working under planned conditions will be economical in turning out required quantity of wagons, both B. G. and M. G. every year without depending on foreign supplies. The owners of big cloth mills and ginning mills will give their attention to such Wagon Manufacturing and Assembling Shops, slightly directing their capital towards this direction, as the Popular Government of India is more interested in getting more wagons and moving the raw materials from one place to another with ease and introducing handlooms in place of mill-made goods. As such, the Capitalist entering this new industry will be benefited by way of his capital being raised ten-fold every year and the common man being helped at large, resulting also in the general question of 'unemployment' existing in the country being solved to the maximum degree possible.



CHRISTMAS

Mrs. TRUESTORY

THE very word Christmas spells magic—the magic of happy memories, of joyous days just around the corner, of colourfully wrapped and beribboned gifts, of a poignantly beautiful carol service held in a hushed but triumphant Cathedral, and above all, to Christians, the magic of the advent of the Light of the World. It is this miracle, namely, the birth of Jesus Christ, whom Christians worship as the Son of God, that millions, all over the world, celebrate in December. The actual customs of celebrating this unique event may vary from country to country, but in essence, it is the expression of gratitude by Christians all the world over, for God's unspeakable gift.

The coming of the Messiah had been foretold in the books of the Jewish Prophets, Isaiah, Jeremiah, Daniel, Ezekiel, etc. This was an everliving hope to the Jews who had been a great and prosperous nation under such great and wise kings as David and Solomon, but were now, a scattered and downtrodden people under Roman tutelage. They were so eagerly looking for a saviour in the guise of a mighty conquering hero, who would deliver them from the hated Roman tyranny, that most of them failed to recognize Him when He came to them making a bid, not for might or earthly glory, but for the heart of every man. But the circumstances relating to His birth were certainly miraculous. About two thousand years ago, the angel Gabriel

appeared unto a Jewish maiden, Mary, in Nazareth, and announced that, she, a virgin, would bear a son who should be called Jesus, for He would save His people from their sins. After a few months, Mary and Joseph, her espoused husband, went to Bethlehem to be taxed, and it was there, in a lowly manger (because there was no room for them at the inn) that Jesus was born. The shepherds watching their flocks on the hills nearby, were told of this, by the angel of the Lord and they hurried to the manger to worship the Child. So also were three Wise men of the East led to this wondrous Child, by a star in the east. They brought with them gifts indicative of His Divinity, gold signifying His kingship, frankincense indicating how He would be a High Priest for his people, and lastly myrrh pointing to His crucifixion. Herod, the king of Judaea, hearing of the Wise men's quest, sought to kill the Child, but the angel of the Lord led the family away to Egypt, where they remained till Herod's death. Apart from the fact that Jesus stayed with His parents in Galilee and was a carpenter, little is known of Him, till His thirtieth year when He began His public Ministry. He went about preaching the kingdom of God, doing good, and waging a constant war against hypocrisy in any form. The basic precepts He set forth were, the love of God with all one's heart, and mind and soul, and the love of one's neighbour as one's self. He had many disciples, among whom twelve consisted of the innermost circle. The miracles



"Bethlehem at home"

He performed such as healing the sick, cleansing the lepers, giving sight to the blind and hearing to the deaf, feeding the five thousand with seven loaves and two pieces of fish, raising the dead, were as nothing, compared to the revolutionary ideas He propounded—overcoming evil with good, service as the only passport to greatness, a poor widow's mite as a more valuable offering in the sight of God than the precious gifts of a rich man, extolling meekness and gentleness as against the barbarism of physical or armed might, etc. But the World has a way of silencing the truth, and in this instance, it did its best to do away with Jesus by crucifying Him like a common felon in His thirty-third year. But His enemies had not reckoned with His triumphant resurrection from death, the third day after His death. This amazing phenomenon, galvanised His frightened and demoralised followers into brave action, so that they went forth to the ends of the world, preaching Jesus, as the propitiation for our sins, and belief in Him as the way to eternal life. Therefore, it is of His wonderful life of sacrifice as well as of His miracle birth that the devout think of, when they celebrate Christmas.

Christmas is considered a family festival, hence all the members of a family, if they are not already together, try to be home for Christmas. Preparations, for it will have been started as early as November. Christmas shopping usually done in the first week of December is a pleasure, since most of the shops would be gaily decorated and goods tastefully displayed. The main items of shopping

are new dresses for every member of the family, gifts for each other as well as for friends, decorations for the house and the Christmas Tree, and lastly Christmas Cards, merry messengers of good wishes to be sent to all one's acquaintances. Shopping over, the members of the family settle down to decorating the house, trimming the tiny Christmas Tree with coloured balls, tinsel, silver stars, balloons and tiny toys, parcelling the gifts and posting the Christmas Cards in time to reach one's friends on Christmas morning. The mother of the family would usually have her hands full, with the making of enormous Christmas Cakes, sweetmeats, pies and puddings, etc. By Christmas Eve, when the actual celebrations start, every family likes to have its house look beautifully clean and gay, every member having contributed to make it so. The angel referred to the birth of Jesus, as "tidings of great joy" and therefore it is in an atmosphere of quiet joy and cheer that every Christian family prepares to celebrate on Christmas Eve. As an expression of joy, singing plays a leading part in all the festivities. On Christmas Eve, groups of people with musical talents, go from Christian house to house, singing carols, songs relating to Christ's birth, and expressing thanks to God. There will be services in all the Churches which all Christians make it a point to attend. There usually is a carol service, held in all the cathedrals, sometime, during the Christmas week, when carols alone are sung by the choir and the congregation in unison. There is a carol which ends thus —

.. All glory be to God on high,
And to the earth be peace ;

Good-will henceforth from
Heaven to men

Begin, and never cease !"

The coming together of so many people to honour God in peace and goodwill, is, indeed, a lovely thing to see.

Another indispensable feature of Christmas is the giving of gifts. This custom, I suppose, endears Christmas to the hearts of children, more than all the new dresses, the plentiful supply of cakes and sweets, and the ever recurring bell of the postman, with another spate of Christmas Cards. In homes which can afford Christmas Trees, the tree would be lighted with coloured candles, or bulbs, on Christmas eve, and an uncle or an eldest brother might dress up as Santa Claus, and dispense gifts benevolently, from the tree where they would have been hung up. The sight of the glittering tree, the slightly frightening figure of the Santa Claus, the excitement of opening the gifts, all these invest Christmas with a magical quality, for the children. There is also a custom of children hanging up their stockings near their beds on Christmas night. The sight of them filled with small dolls, whistles, marbles, handkerchiefs and odd toys, is a minor miracle of Christmas morn, for the children. But it is really after breakfast, that the big gifts are given. Nothing in life, ever after, can equal the eager anticipation and the delightful wonder with which a child opens its present. Not only the children, but the adults also come in for a share in this present giving. All the members of a family wish each other a happy Xmas and give each other gifts. This gift giving is in

memory of God's great gift of His Own son to mankind. The more discerning of the followers of Jesus, however, realise that God's gift was given to men who could never be worthy of His gift, who could never hope to repay Him. Therefore true Christians everywhere, give alms to the poor, help the needy with financial gifts, remember widows, orphans and poor relations by suitable gifts on the birthday of One who lived the precept, "It is more blessed to give than to receive." This, to my mind, is the worthiest way to commemorate the coming of One who loved all men, rich or poor, great or low, equally.

After the excitement of the giving of presents, Christmas day is usually spent quietly at home. Wishing friends and relations would have been done either at church after the service, or through Christmas cards. If you happen to visit a Christian home, during Christmas week, you are sure to find it decorated with multicoloured paper festoons, balloons, garlands of fresh green leaves, Chinese paper lanterns and perhaps a tiny Christmas tree in the living room. You would be almost certain to hear a carol being sung or hummed by a child or a grown up. You might be called upon to admire a longed for gift, and you are sure to be served with cakes and sweets. This air of festivity carries on till New Year which falls on the seventh day after Christmas. There is a midnight service on New Year's Eve, when, perhaps, the feelings of peace and goodwill, pervading the Christmas week crystallize themselves in the minds of most, into New Year resolutions to lead better lives in the coming year. With the passing of the New Year's Day, the decorations are



Christmas Tree—Santa, they go together

taken down, the tree is put away, and there is a general feeling of coming down to the mundane earth, after a brief sojourn in a happier and better world. But, the true significance of Christmas lives on, in the hearts of the devout as it did in the case of Zacchæus. Zacchæus, though a Jew, was a tax-gatherer in the pay of the Romans. He had used his position to enrich himself by extortion and bribery. Therefore, he was universally detested and his short stature was an object of ridicule. One day Jesus, passed through his town. Being short Zacchæus could not see Him amidst the milling throng, so he climbed up a sycamore tree, to see

Him. As Jesus came to where Zacchæus was looking upon Him, He looked up and said, "Zacchæus, make haste, and come down, for today I must abide at thy house." Zacchæus came down, and received Him joyfully, and as Jesus left, he announced publicly that he would give half of his goods to the poor and would also restore fourfold to all from whom he had unjustly extracted anything. Coming face to face with Christ for a few hours transformed Zacchæus, from a sinner into a righteous man, and it is this newness of life that Jesus expects in the life of every follower of His at Christmas.



Motherly Influence

(Continued from page 64)

for the work you do and would even go to the length of offering her assistance in advocating your cause personally to the boss. Any amount of your argument with her that there are many others who do much more

work for lesser emoluments, would not convince her.

Where then is the doubt that your entire official career is shaped and moulded by the impact of your mother's personality.

LINKS IN INDIA'S INDUSTRIAL CHAIN

ABMTM

Precision Machine Tools

Selling Organisation in India for

- Clifton & Bald Ltd.
- Crow, Hamilton & Co. Ltd.
- Fairbank Borehole
- Hayes Engineers (Leeds) Ltd.
- Incandescent Heat Co. Ltd.
- Metalelectric Furnaces Ltd.
- Fielding & Platt Ltd.
- Butterworth British Automatic Machine Tool Co. Ltd.
- W. H. A. Robertson & Co. Ltd.

PLANER, SHAPER & SLOTTING

CAPSTAN LATHES & CONVERSION TURRET LATHES, STATIONARY TURRET LATHES

PARALLELS

DRILLING MACHINES, BORING MACHINES

VERTICAL & PLANO MILLERS, SCREWING & BROACHING MACHINES

CHURCHILL

PRECISION GRINDING MACHINES

LANG

S.S. & SCREW CUTTING LATHES, BORING & BORING LATHES, PROFILING EQUIPMENT

ASSOCIATED BRITISH MACHINE TOOL MAKERS (INDIA) LTD.

TEMPLE CHAMBERS, OLD POST OFFICE ST., PO BOX 2050, CALCUTTA

Telephone : 23-5676

Telegrams : BRITTOOLMAK, CALCUTTA

SOME FAMOUS

PASSENGER AND GOODS TERMINALS

T. S. PARTHASARATHY

Deputy Chief Operating Superintendent (Coaching)

A RAILWAY station that is very busy need not always be of exceptional size: nor does it follow that a large station deals with trains in great numbers. Much depends upon the nature of the traffic and whether trains require to occupy platforms for long periods or can be dealt with in rapid succession.

Many London "underground" and tube stations pass a thousand trains or more at two platforms only: this is possible because each train may leave within thirty seconds or so of the time of arrival and the next train can run in within the next sixty or seventy seconds. Our suburban stations on the electrified section between Madras and Tambaram deal with a 6-minute service during the peak period and pass more than 100 trains each way during 24 hours with only two platform faces. On the other hand, we have grand station buildings like those at Egmore, Mysore and Lucknow, which suggest palaces, but at which only a light train service is dealt with.

BRITISH TERMINALS AND JUNCTIONS:

Clapham Junction in Great Britain is probably the greatest junction station in the world. It has more than 20 platform lines and of these, 12 are used by trains which either make only an ordinary station stop or do not stop at all. Nearly 2,000 trains can pass this junction daily

with ease, for few of them occupy a platform for more than a minute or so. A remarkable feature of this famous Junction is that, on all the 12 lines used for through traffic, electric trains can also run.

It is, however, the great terminal stations which are necessarily the largest if there are many trains. Euston—the historic Doric archway of which has probably been illustrated more frequently than any other station building in Britain—is perhaps the best example of a terminus which is big because of the large number of main line trains dealt with. At 15 platforms about 300 trains can be accommodated daily but only some of these are locals so that most of the others required platforms space for anything from twenty minutes to an hour, loading and unloading passengers, luggage, mails, milk, etc. Liverpool Street, on the other hand, has a great proportion of suburban trains and though these may occupy a platform for ten minutes or so before going out again, there is not the work entailed by main line and express trains. Therefore, at its 18 compact platforms a daily total of about 1,250 trains can be dealt with.

At Waterloo, a considerable proportion of the trains are suburban (steam and electric); hence the 1,400 trains or so in twenty-four hours. Waverley Station, Edinburgh, the biggest in Scotland, is also a busy suburban

terminus dealing with about 1,000 trains daily.

The following table will give an idea of the number of trains dealt with at some of the largest stations in the United Kingdom. (The figures are, however, not the latest) :

STATION	No. of plat- forms	No. of trains daily.
Waterloo ..	21	1,400
Waverley ..	19	1,000
Liverpool Street ..	18	1,250
Clapham Junction.	17	1,800
Victoria (Manchester) ..	17	780
Central (Glasgow) .	13	600
New Street (Birmingham) ..	15	760
Victoria (London) .	16	700
Central (Newcastle)	15	950

In Ireland there are no really big stations, though some of them especially in Dublin, are splendid buildings—for perhaps 2, 3 or 4 platforms and 60 or 70 trains daily. Belfast and Cork are the two other busy stations in Ireland.

All the great English, Scottish and Welsh stations deal with a great amount of traffic on small areas and there is not room for splendid grounds and gardens. The best they can manage is an hotel, and this most of them do very well, but even then it is often combined with the buildings of the station proper. In other countries, however, there are many big stations which have enormous grounds and gardens attached. Thus

the "Southern" station in Vienna, one of the massive stations in the world, appears to be more garden than station.

IN THE UNITED STATES :

Washington Union Station, in the United States, seems to be in much the same class. It is, however, big in a very real sense, for, it has no fewer than 32 platforms, of which 9 are through, passing underground below the buildings and gardens in front, and the others terminal. A notable feature of this station is that all 32 platforms are reached through a splendid circulating area or "concourse" 760 feet in length and entered by 32 gates in one long barrier of ornamental iron work. This station, is peculiar, too, in that it has a "state" entrance and a de-luxe suite of waiting and reception rooms for the use of the President of U.S.A. It is, in fact, the "royal" station of the United States. It was built so artistically and with such pleasing grounds in front because of the importance of Washington as the seat of the government and it was made so large chiefly because of the enormous crowds to be dealt with when the Presidential elections are on—once every four years—and perhaps on a few other special occasions.

But two of the largest and most magnificent stations in the world (with the exception of Rome Terminus which will be described later in this article) are undoubtedly the Pennsylvania Terminal of the Pennsylvania Railroad and the Grand Central terminus of the New York Central Railway, in New York. Both are veritable palaces; both include wonderful arcades

of shops and public dining rooms; and hotels and huge office buildings, these being necessary to cover the enormous cost of the sites in the heart of the most congested and expensive city in the world.

The Pennsylvania Terminal also accommodates Long Island trains and it is connected with the mainland under the Hudson East River by means of tube tunnels. Necessarily the trains are worked electrically. The station proper covers 8 acres and has frontages of 784 and 430 feet but underground yards and sidings increase the area to 28 acres. From the various entrances the main waiting-room is reached, 225 feet by 45 feet, leading into the great colonnaded hall, with shops, dining rooms, restaurants and so on. There are escalators and a hospital for public use.

The concourse leading to the platform is 340 feet and 210 feet broad, covered by a lofty roof of steel and glass. Below are 11 through and 21 terminal platforms. All sorts of modern conveniences are provided, both for passengers and the visiting public. The exterior is of beautiful stonework, with stately Ionic and Corinthian columns along each frontage. About 16 miles of track are provided within the 28 acres of the station and yards. Adjacent are connected stations of the New York Overhead and Subway lines. This station can deal with 200 trains hourly although this figure has not been reached so far.

The Grand Central Terminal is even larger. Here also there is a palatial building 600 feet long, 300 feet wide and 105 feet high. Below, the station

is 745 feet long and 480 feet wide. Alongside are blocks of sky-scraper office buildings and hotels. The main concourse in the great hall is connected by inclines (instead of stairways) with 29 express platforms and 13 storage lines. Below is the suburban concourse, giving access to 15 low-level platforms and 15 other lines. There are thus 44 platforms in all. Some of the low-level lines are extended right round the station to form a loop, thus avoiding reversing. The total area of this station is 79 acres.

There are many other splendid railway stations in the United States, for it is usual there for several railways to join forces and build a fine big station for all, instead of each constructing for itself. Usually shops, arcades and restaurants are included, and help to justify the stately buildings. Hence the numerous "Union" stations in the States. One of the most expensive and luxurious was that of the Chicago and North Western Railway which is said to have cost nearly 5 million pounds in pre-war days. Virtually, it is a huge hotel, everything incidental thereto being provided, with the exception of sleeping accommodation. There are private suites of apartments for ladies and children, comprising boudoir, tea-rooms, bath and dressing-rooms, dining-salons and emergency rooms, with full staff of skilled nurses, chemist's shop, etc., and also a well-equipped garage.

THE ROMA TERMINI :

The Roma Termini in Italy presents the most modern design and high-grade station facilities. The buildings occupy an area of 55,000 square

Round-the-clock worker

that gives you fast action with
unerring accuracy

In any industry, Coles mobile Cranes save costly materials-handling time because of their versatility and extreme manoeuvrability.

Full-circle slewing in narrow aisles, extra-long reach of the jib coupled with the smooth sustained power from the unique Diesel-Electric Transmission System gives every Coles Crane pin-point precision in handling and positioning.

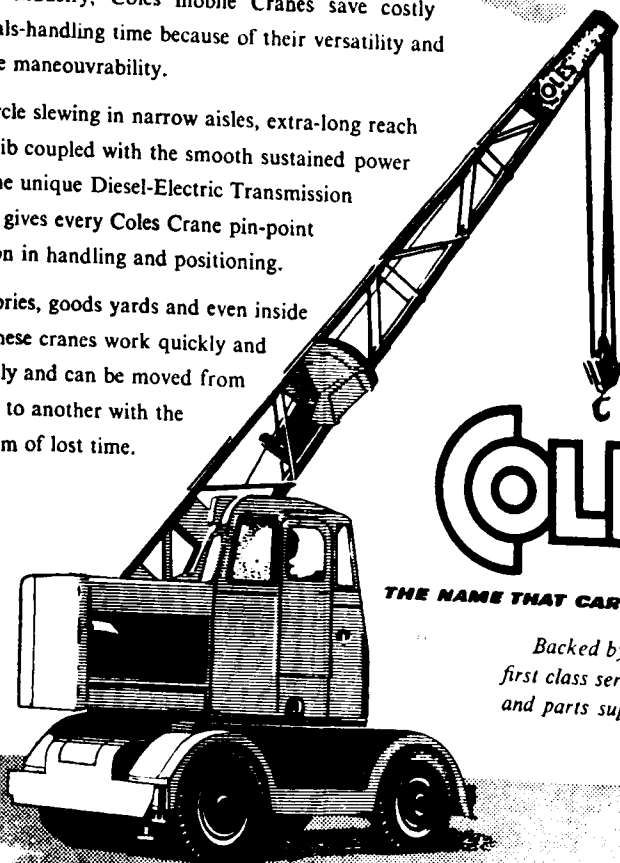
In factories, goods yards and even inside sheds these cranes work quickly and efficiently and can be moved from one job to another with the minimum of lost time.



COLES

THE NAME THAT CARRIES WEIGHT

Backed by
first class service
and parts supply



TRACTORS (INDIA) LIMITED
Post Box 323 Calcutta
Post Box 66 Lucknow

LARSEN & TOUBRO LIMITED
Post Box 278 Bombay
Post Box 5247 Madras

WILLCOX (BUCKWELL-INDIA) PRIVATE LIMITED
Post Box 289 New Delhi
New Colony, Jaipur

TRACTOR & EQUIPMENT CORPORATION (PRIVATE) LIMITED
P.O. Box 279 New Delhi
TE/P/76

December 1957

PASSENGER AND GOODS TERMINALS

59

metres, the passenger platforms 54,000 square metres and the station yard 150,000 square metres with 20 miles of yard tracks. The frontal buildings of 4 units comprise the main frontal structure, the ticket hall, the restaurant and the concourse.

The station embraces an internal yard with 22 tracks (of 11 sets of double track) which are served by platforms 1,400 feet long. This inner yard handles from 320 to 400 trains a day. Below the ground surface are underground storeys of the building which joined together by superimposed tunnels, stairs, lifts and elevators to the rail level. Three underground floors are occupied by roads, workshops and means of transport. In brief, this type of station resembles an upside down city where the roads are the top and buildings (3 storeys) at the bottom.

Some of the striking features of the Roma Termini station in respect of the handling of passengers and packages are briefly outlined below :

(a) Packages, mails, etc., in transit from one train to another are transferred to different tunnels by means of 44 elevators.

(b) Six transverse tunnels are connected together by two longitudinal tunnels to facilitate underground movement of traffic.

(c) Two rail subways are used to transfer passengers in transit from one train to another and by the railway staff for crossing the station. In these subways are bars, waiting-rooms, toilets, etc.

(d) Conveyor belts and sorting machines have been provided for the distribution of mails and parcels.

(e) A small electric commanding clock conveys the impulse to 318 clocks scattered all over the station but which show the same time.

(f) The tele-communication system includes teleprinters, selective telephones, automatic telephones and loudspeakers.

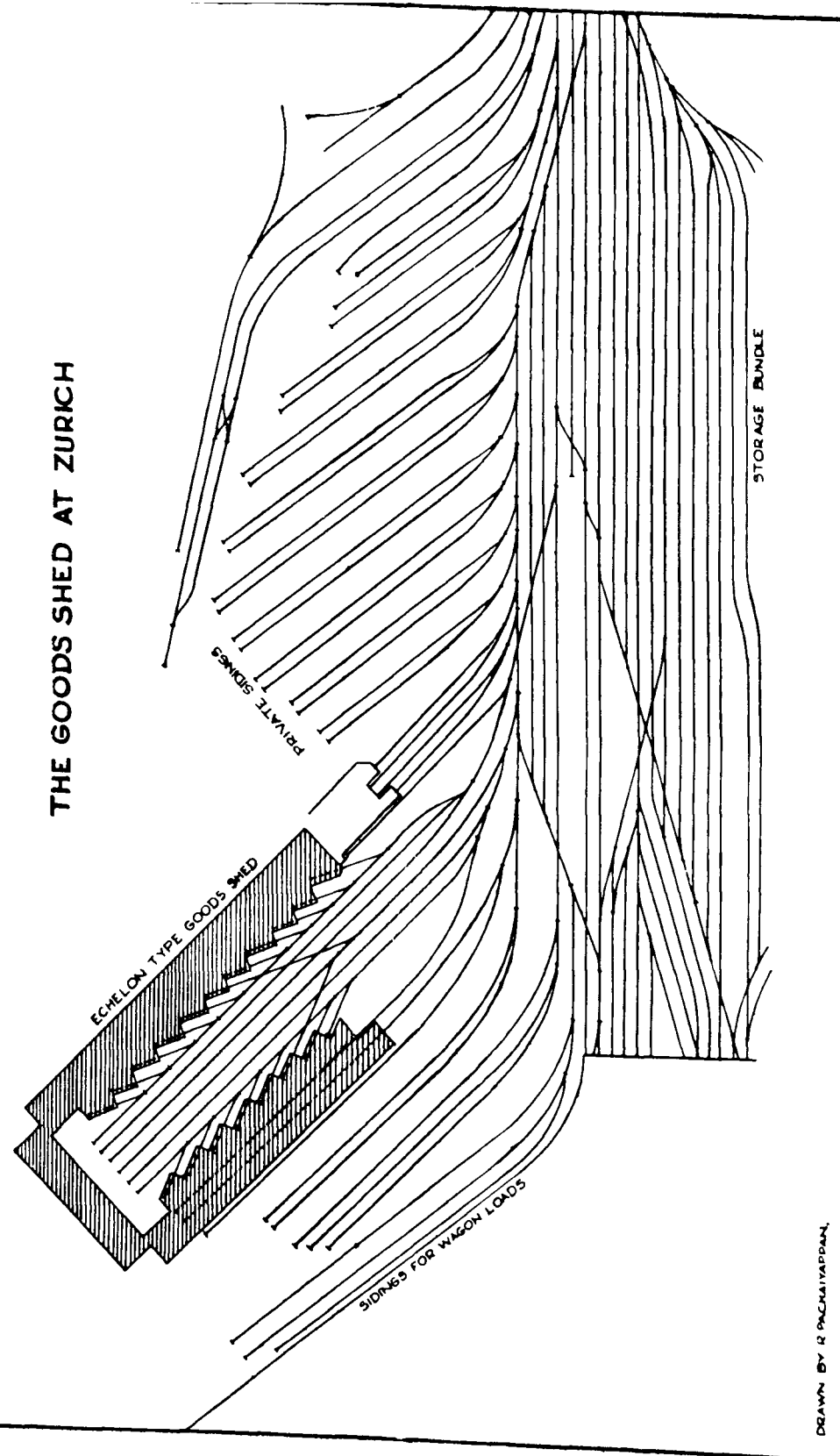
JAPAN :

The Japanese National Railways are undertaking extensive remodelling and rebuilding schemes for station buildings and yards in large cities. The station buildings are now being made of concrete or ferro-concrete instead of wood.

The Tokyo Central Passenger station dealing with 3,60,000 passengers per day, covers a total area of 215,000 square metres the station building itself being 1,200 feet wide and 120 feet deep. It is a junction of six different lines and deals with 1,621 train movements on 7 platforms.

At Kyoto, a new modern station building was completed in 1952. This was the first stage of the big project which includes, besides the construction of the station building, the erection of a post office, a hotel and a " sight-seeing building " around the great station plaza. Two special waiting-rooms, an information office for foreign travellers, station master's and assistant station master's rooms are situated in the tower group, so called from the tower 100 feet high which affords a vista of the Karasumaru

THE GOODS SHED AT ZURICH



DRAWN BY R. PACHAIAAPPAN.

Avenue running right through the heart of Kyoto. The tower has a variety of restaurants. In designing this station building, every effort was made to give it an agreeable appearance and it is one of the elegant structures of Japan.

GOODS TERMINALS :

Most of the big railways in the world earn much more from goods traffic than from passengers and probably the ordinary goods train, lumbering along and shunting here and there to let an express train pass, is actually doing more profitable work than the train to which it has to give right of way.

It is also profitable for railways to deal with as much of the larger traffic as practicable in complete wagon-loads and discourage the booking of smalls otherwise known as sundries and L.C.L. traffic in some countries. Goods terminals are usually separated from passenger terminals and careful thought is bestowed on the designing of the former.

The Zurich goods shed in Switzerland is considered to be one of the well-planned goods sheds in Europe and an illustration of the shed has been reproduced in this article. This shed deals with 2,500 tons of smalls per day in addition to a large amount of wagon-load traffic which is dealt with in the various sidings without being brought into the main shed. The goods shed proper is of the echelon type (we have this type at Bezwada) of two rows and as soon as wagons are released in a bay, the empties can be pulled away without affecting any other movement.

This goods shed is fully mechanized with tractors, elevator trucks and pallets. Door-to-door delivery and collection of railway wagons is arranged even for firms without private sidings and the wagons are physically conveyed to the premises of the party on low level road tractors. Some firms have provided short rail sections near their premises in order to take up railway wagons.



	REFRACTORIES for all industrial purposes firebricks, mortars, insulating bricks in all hand ranger and shapes.	When quality counts Dalmia Products Stand Supreme
	R. C. C. SPUN PIPES for irrigation, culverts, water supply and drainage: all classes and sizes.	
	STONEWARE PIPES for drainage purposes: perfectly salt glazed, acid-resistant and tested to standard specifications.	
	PORCELAIN SANITARY WARES Indian and European style closets, wash basins, and other toilet fittings, Also insulators, acid-resist- tant tiles etc.	
		PORTLAND CEMENT for general construction.

DALMIA CEMENT (INDIA) LIMITED
DALMIAPURAM (TIRUCHIRAPPALLI)



BATTERIES are our business

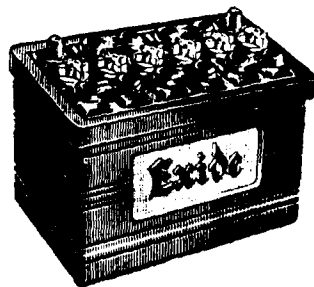
For over 60 years Chloride have been making batteries and nothing else. Our products provide an unfailing source of power in Generating Stations, Sub-Stations, Telephone Exchanges, Industrial Factories, Railway Coaches, Aircraft and Exide Batteries are fitted on more motor vehicles in India, new and old, than any other make.

Industries, Electric Supply and Development Projects, Railways and Transport Operators depend on Chloride and Exide products as do India's motor vehicle manufacturers. They are thus assured of a quality product unequalled in performance and reliability and backed by an efficient and comprehensive Service Organisation.

Manufacturing more than 150,000 Storage Batteries per year of all kinds, the Exide Factory near Calcutta, is India's largest and foremost producer and ranks with the world's leading and best equipped Storage Battery Factories. Continuous research and development keep us consistently ahead of the times in all that is new in battery development.

Exide

Chloride & Exide Batteries (Eastern) Private Limited



MOTHERLY INFLUENCE

V. R. RAMANUJAN

MANY of you would be under the impression that there is absolutely no connection whatever between your mother and your going to the office. Surely, then you are under the mistaken idea that the influence of a mother is confined to the four walls of the home and cannot transgress those limits. I would assert that nobody influences your official career more than your mother—not even your favourite boss.

I do not know how many of you still enjoy the privilege of taking your mother's permission while leaving home for office. To some it may appear strange as to why a mother's permission is necessary at all to proceed for duty. The word permission is of course used here to denote intimation in a respectful way. But why this intimation? Is she a subsidiary official authority at home to mark the time of your leaving home. There is of course no fundamental rule requiring you to get a clear signal from your mother to proceed to office. No ethical code can be traced providing for such a duty towards your mother. If you had only listened or overheard her, proclaiming to her neighbour counterpart with pride how her son never goes to office without intimating her, you would never have put this question. Would you then dare to slip away to office without her knowledge? No! You won't. Thus begins her first contact with her son's office life.

Then you enter the next stage. The stage of journey from home to

office. Transport is a problem to Governments. At peak hours the Government are spending anxious moments and all the resources are geared up to meet the situation. All sorts of circular instructions go from the Head office to meet the ever-changing situation and to avert possible accidents. But these are nothing when compared to a mother's thoughtful instructions to a son as to what to do and what not to do to avoid violent contact with the rushing peak hour vehicular traffic. If you cover the distance by cycling, you will have a set of instructions from her. If you ride a motor-cycle another set of stringent instructions will she give. She will have suitable instructions for a bus, taxi and for every type of vehicle. Even if you walk the distance you will have useful guidance from her. You can ignore them only at your peril. However, if you want to act up to the very letter of her instructions, you have to start hours ahead. It chanced one day that my mother and myself had to go in the direction of my office during peak hour traffic. The heavy rush of traffic, cycles, motor-cycles, auto-rickshaws, buses, baby taxis all madly rushing in all directions, escaping catastrophe by a hair's breadth, should have made her heart sink with fear and the net result was that from the very next day I was forbidden to cycle the distance from home to office. Poor soul! how did she know my many narrow escapes so far? So, this way a mother asserts her influence on you.

Now you are in office. Don't run away with the idea that you are free from her influence since you are miles away from her. I would swear that her influence gains the greatest momentum when she is away from you. Even if you have the boldness to ignore her standing instructions as to how to conduct yourself in the office, they will be staring at your face all the same. Had she not advised you to obey your superiors, to worship your equals and surrender to your subordinates. You cannot chide an unruly subordinate, correct an erring equal and protest against the injustice of your superior in office. You have to take down everything calmly and coolly with a smile. Self-effacement would be the key note of her golden advice. How can she afford to see her son entangled in troubles which would otherwise be caused.

You cannot, certainly deny the impact of her personality when you open your tiffin box to take the mid-day tiffin and find the curd-bath staring at you. You may have a little freedom in other matters but in the matter of diet, she is the supreme authority. Simply you do not know what is good for you. Anything she disapproves, cannot enter your throat. Your tongue may water, when your friends give more freedom to their tongue and embarks upon a programme of devouring *jelabies*, *badam halwa* and all those nice sweet dishes. But your mother and physician has prescribed for you only curd-bath, the nectar and cure for all ills and for all seasons! You cannot deceive her by throwing away the stuff. Your face will betray you in the evening.

Now your office is over and you start for home. Friend, have you

the liberty to return home at any hour you choose? Certainly not. How dare you forget her injunctions to return home before the lights are on? If you dared to disregard this for a day what will you find when you return home? A broken up figure crouched in the pial of your house with an anxious face remaining there for the last few hours without taking even a drop of water. So it is settled that you have to take her prior permission when you want to return late. Her authority over your movements to and from the office is thus established beyond a shadow of doubt.

Alright. You are back home early. But wait! Answer her array of questions. "Why do you look so weak today?" "What happened in the office? Did your dori chide you? or Have you thrown away the curd-bath and starved?" Poor mother! How did she know the adventures of your tongue that day?

Many of you would now have been convinced beyond any doubt of the manifestation of a mother's personality in the official life of her son. But she would be at the summit of her influence if she just happens to see you sitting beside the lamp in the night with an office file requiring urgent disposal that you have brought home. Words cannot adequately describe her reactions. She would start extolling you as the most sincere and hard working man in the whole office. Then she would resort to cursing your superiors in office for extracting so much work from you. Finally, you will be dubbed as incapable of presenting your case fully to your officers and getting adequate reward

(Continued on page 53)

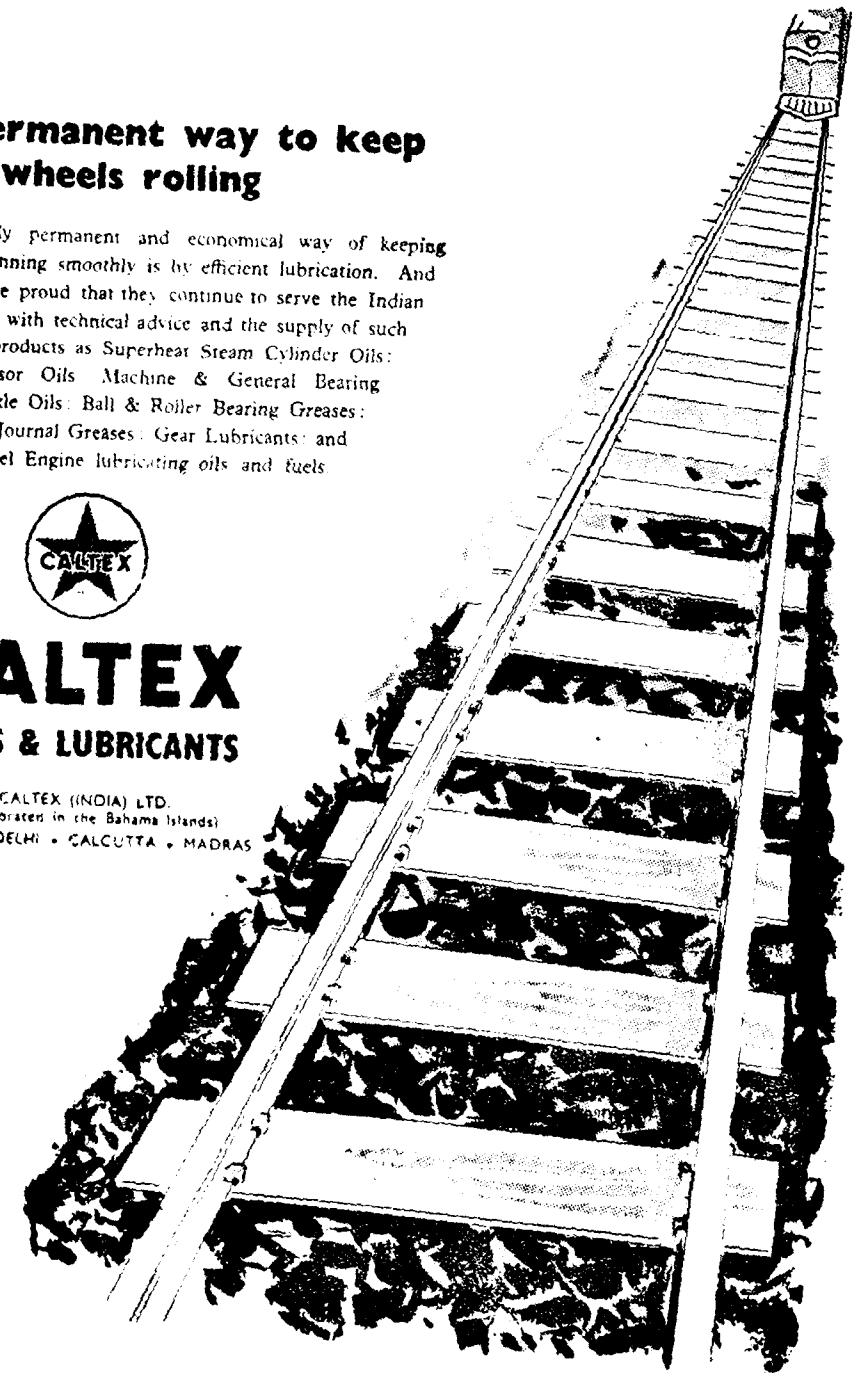
a permanent way to keep the wheels rolling

The only permanent and economical way of keeping trains running smoothly is by efficient lubrication. And Caltex are proud that they continue to serve the Indian Railways with technical advice and the supply of such proven products as Superheat Steam Cylinder Oils: Compressor Oils: Machine & General Bearing Oils: Axle Oils: Ball & Roller Bearing Greases: Driving Journal Greases: Gear Lubricants: and also Diesel Engine lubricating oils and fuels



CALTEX
FUELS & LUBRICANTS

CALTEX (INDIA) LTD.
(Incorporated in the Bahama Islands)
BOMBAY • DELHI • CALCUTTA • MADRAS



A. E. I. EQUIPMENT FOR FIRST 3000 VOLT D.C. RAILWAY ELECTRIFICATION IN INDIA

R. SUBRAMANIAN, B.Sc. (Hons.), D.I.I.Sc.,
Associated Electrical Industries (India) Private Ltd.

THE electrification of the Howrah-Burdwan Main Line of the Eastern Railway has the distinction of being the first 3000 volt D.C. Electrification on the Indian Railways. Associated Electrical Industries (India) Private Ltd. are proud of their contribution to this important suburban electrification which is calculated to bring much-needed facilities to Calcutta's travelling public after a century of steam locomotion. Their role in this scheme includes the supply and erection of substation and track cabin equipment, electric traction equipment for the multiple unit stock and electric signalling equipment. All the equipments incorporate the accumulated experience, aggregating over a century, of the A. E. I. Group of Companies in the design and manufacture of all classes of electrical plant for use all over the world.

The 66-mile Howrah-Burdwan Main Line is equipped with 6 rectifier substations and 3 track cabins, the entire equipment for which, with the exception of the outdoor 33000 volt A.C. Switchgear, has been supplied by A. E. I. This large installation uses pumpless steel tank air-cooled rectifiers which have now become well-established for traction service.

The installed capacities and other basic details of these stations are as follows :—

STATION	Installed Capacity	No. of Outgoing Feeders
Belur Substation ..	3—2500 KW units	10
Sheoraphuli Substation ..	3—2500 KW units	7
Bandel Substation ..	2—3000 KW units	6
Pundooah Substation ..	1—3000 KW unit	4
Memari Substation ..	1—3000 KW unit	4
Gangpur Substation ..	2—2500 KW units	8
Howrah Track Cabin ..		11
Konnagar Track Cabin ..		6
Burdwan Track Cabin ..		4

The Substations receive power from the Damodar Valley Corporation system, over the Eastern Railway's transmission lines, at 33000 volts, 3 phase, 50 cycles A.C. It is then transformed and rectified to 3000 volt D.C. by the transformers and rectifiers in the sub-stations. The outgoing D.C. supply to the overhead equipment on the tracks is controlled by 3000 volt D.C. high speed circuit breakers. At the track cabins, similar high speed circuit breakers are provided to sectionalise and parallel the overhead equipments of the various tracks.

The rectifier transformer is of the outdoor, oil-immersed naturally cooled type and weighs approximately 34 tons. The 33,000 volt primary is connected

December 1957

A. E. I. EQUIPMENT . . .

67

in star, while the 3000 volt secondary is a 12-phase quadruple zig-zag winding. The transformer tank also houses a tertiary winding to provide a 400-volt 3-phase A.C. supply for the rectifier auxiliaries, a no-load voltage rise suppression unit and special current transformers for protection of the rectifier against back-fire.

Each rectifier unit consists of two pumpless, steel tank, air-cooled, six-anode mercury arc rectifiers. The tanks are mounted on withdrawable trucks on wheels, and are housed in steel cubicles. Underneath each tank, and forming part of the truck, is mounted a motor-driven fan to cool the tank. The rectifier cubicle also houses the ignition and excitation unit, grid control apparatus and other auxiliaries for the rectifier. The complete rectifier unit occupies a floor space of only 8 ft. x 5 ft. 6 ins., which has been possible due to the use of a most compact design of rectifier tank so far developed for Railway service.

The rectifier tanks are provided with grids, which are used for arc suppression in the event of a back-fire. Voltage control on the rectifiers is by means off-load tap-changing switches on the rectifier transformers.

Adjacent to the rectifier cubicles, and forming a continuous panel with them, are the two cubicles which house the control and protective gear for the rectifier and its associated oil circuit breaker. In these cubicles are contained various instruments to measure the voltage, current and power being supplied by the rectifier, switches to start and stop the rectifier, indicating lamps and protective relays.

All the 3000 volt D.C. circuit breakers are of the high speed type, working on the "rate of rise of current" principle, which enables discrimination between overloads and short-circuits. The breakers are mounted on trucks on wheels, which are housed on concrete cells. Shutter mechanisms, with padlocking arrangements, are provided which ensure perfect safety for personnel working inside the cells with the breakers racked out. The rectifier breakers are rated at 1600 amps. and are set to trip on a reverse current of 500 amps. The feeder breakers are rated at 1000 amps. and can be set to trip on forward currents in the range of 1500 to 2500 amps.

The operation of the entire equipment is automatic, and can be controlled either from the control board in the substation or from the supervisory remote control board in Howrah. Operation of one switch will in succession, close the 33000 volt A.C. oil circuit breaker, start the rectifier fans, put on the ignition and excitation circuits in the rectifiers and close the 3000 volt D.C. rectifier high speed circuit breaker. Protective devices ensure that the set is shut down and re-started (for a pre-determined number of time) in the event of any type or fault or incomplete sequence.

A noteworthy feature in the equipment is the comprehensive scheme of interlocking provided. Before access to the rectifier equipment could be obtained, a series of operations in a definite sequence have to be done; this is aimed at isolating the A.C. and D.C. sides of the equipment.

For quicker transport, increased traffic load and operational efficiency, electric traction sets the pace of India's fast expanding economy. The electrification of Howrah-Burdwan Main Line is a significant step in the development of the Indian Railways. For the first time it connects by electric traction a busy suburban area to the busier Calcutta.

ELECTRIC TRACTION SETS THE PACE



It marks the beginning of electrification of 1300 route mileage of India's railways in the Second Five year Plan.

We are proud of our contribution of a wide range of equipment to this scheme. Behind our equipment lies an experience of more than a century in the design and manufacture of electrical equipment for use all over the world. As we greet India's venture to progress, we place at her service our experience and technical knowledge on all traction needs.

ASSOCIATED ELECTRICAL INDUSTRIES (INDIA) PRIVATE LTD.

Head Office :

Crown House, 6 Mission Row, Calcutta

Branches at

Bombay	New Delhi	Madras
Bangalore	Coimbatore	Nagpur

A.E.I.

Equipment for the scheme through its member companies include:

B. T. H. Rugby

Complete indoor equipment for rectifier substation and track cabins

Ferguson, Pailin Ltd. Manchester

11000 volt A. C. Switchboards

Metropolitan-Vickers Manchester

Electric Traction Equipment for 840 h.p. driving motor coaches.
Electric Traction Equipment for driving trailer coaches

Metropolitan-Vickers GRS—London

Colourlight signals Route Indicators Point machines AC—DC Relays AC Track Circuit equipment

and earthing all live parts : conversely, these operations in the reverse sequence must be performed before the equipment could be energised.

Other items of equipment inside the substation are an L.T. A.C. D.C. board, which provides power at 400 volt 3-phase A.C., 110 volt single phase A.C. and 110 volt D.C. for the control circuits and auxiliary services, a negative recording cubicle to record the current drawn from the substation and to provide protection against an excessive rise in voltage of the rails above earth, a lead acid station battery and a charging equipment.

The entire equipment, with the exception of the batteries and charging equipments which have been supplied by two well-known battery makers, has been designed and manufactured by the British Thomson-Houston Co. Ltd. of England, a member of the A.E.I. Group of Companies. A portion of the 3000 volt D.C. switchgear has also been manufactured in India by Associated Electrical Industries Manufacturing Co. Ltd., to BTH designs.

Associated Electrical Industries (India) Private Ltd. have also on order the complete traction equipments for 36 motor coaches and 68 trailer coaches to operate on the Howrah-Burdwan Main Line. These equipments which will be installed on coaches built by Jessop & Co. Ltd. are being designed and manufactured by Metropolitan-Vickers Electrical Co. Ltd. of England, another member of the A.E.I. Group of Companies. The design of the equipment will be generally similar to the 450 sets of 3000 volt D.C. motor coach equipments

successfully manufactured by Metropolitan Vickers for railways in South Africa, Brazil and Poland.

Each 3-car train will comprise one motor coach and two driving trailer coaches, the motor coach being in the middle. The train will be powered by 4-210 H.P. traction motors, mounted in the motor coach. The motors will be of self-ventilated, axle-hung, nose-suspended type, driving the wheels through solid gear-wheels. Current at 3000 volts D.C. will be collected from the overhead line by either of two light-weight pantographs and fed to the motors through the standard form of resistance control. The motors will be connected permanently in series—pairs, and the control gear will be of the modern electro-pneumatic unit contactor type. A motor-generator set, mounted on the underframe and driven off the 3000 volt D.C. supply, will provide low tension power at 110 volt D.C. for train lighting and ventilation, operation of the control circuits and of the brakes.

The equipments are designed to permit a maximum speed of 65 m.p.h. on level track with a fully loaded train, and a starting acceleration of 1.2 m.p.h. per second upto 25 m.p.h. Upto three 3-car trains can be coupled together and operated by one driver in the leading cab, which facility will be required during peak hours. Provision is also made to cut out half the motor power and run the train at reduced speed, in the event of a fault in any one motor.

Worthy of particular note is the fact that approximately 15% of the

(Continued on page 96)

THE CUP THAT CHEERS

Start your day with a cup of Tea,
On Land, in the Air or at Sea,
A Beverage of the finest kind,
It soothes your nerves and clears your mind.
Choicely blended with expert care,
Delicious with a flair that's rare;
Decide today on Tea to drink,
From this good habit do not shrink.
Tea! the easiest drink to make,
Little time or trouble you take:
Pour boiling water o'er Tea in the pot,
With milk and sugar serve when hot.
Symbol of friendship and good cheer,
For all those who are far and near,
Tea is the great uniting link
O'er which all differences will sink.
Whether in sickness and in health,
Be it in poverty and in wealth,
'Tis the cup that's ever been giving,
New hope that life is worth living.
When life's hard problems crowd and throng,
And everything seems to go wrong,
A cup of Tea will give you light
To know how best to set things right.
Students after years of hard toil,
Who do not want their plans to foil,
By drinking Tea they always tell,
In their Exams. have done so well.
Sportsmen and athletes ever say,
That they do drink Tea every day
For strength, energy and vigour,
So as to stand any rigour.
Tea in Office gives you that zest
For hard work without frequent rest;
Experts have found from careful test
That Factory hands give of their best.
Employers who are wise and good,
Provide Tea Canteens with nice food
For Staff, to secure lasting peace,
That discontent may ever cease.
If Industries should always thrive,
Tea will put that energy and drive
Into workers and make them yield,
Large and quick profits in every field.
Tea has given courage to fight
To our brave troops, with all their might
In the late War, to make a name,
Bringing India honour and fame.
On the Country's sunny Hill-sides grown,
As India's Envoy, Tea is known
All o'er the World, by every Race,
Growing popular at a fast pace.
With the proud Tricolour at mast,
And Prohibition spreading fast,
To "FREE INDIA," every Indian's boast,
With INDIAN TEA is raised the TOAST!

—G. I. B. COLACO.

Free Clothing to Rail Staff

N. V. R. SWAMY

YOU would have noticed, while travelling on any Railway, so many line staff throughout the length and breadth of the Railway system, belonging to the different departments of the Railway, doing different kinds of duties. They are easily distinguished by the type and kind of garments or uniforms they wear, supplies of which are regulated by the Railway.

It is of course worthwhile conceiving for a moment how the type of uniform or clothing is prescribed for a particular category of staff and supplies arranged systematically at regular intervals. The type of clothing prescribed for each category of staff is based on factors, such as the nature of the duty to be performed, vicissitudes of the weather, if open to weather conditions, climatic conditions of the area served and not but the least, the need for decency, neat and tidy clothing wherever the staff's duty is closely associated with the moving public, i.e., on Railway platforms, Refreshment rooms, etc. Further, the staff entrusted with public duty should have to be easily distinguished by the public, as in the case of a Station Master, Guard, Ticket Collector or a Platform Guide whom the public may have to contact, for any assistance required or information, etc. In all such cases, the head-dress is also a significant factor! With these outfits, a smart turn-up on the part of the staff can discernibly be noticed, and it results in the effective discharge of the duties expected of them.

To ensure supplies of various kinds of clothing to the varied staff at periodic intervals, is no small problem facing the railway and this responsibility, as with the supply of the general stores requirements for the entire railway, rests with the Controller of Stores of the Railway.

In grappling with this problem, firstly is the question of acquiring the required basic cloth in huge quantities after ascertaining the approximate annual requirements of the railway. On this Railway, the supply of clothing to the staff is centralised at the Clothing Factory situated at Perambur, working under the control of the Controller of Stores. According to the estimated requirements furnished by the various Indenting Officers spread all over the railway for the garments required for the staff under them, the total requirements of basic cloth have to be assessed and obtained and stocked in the ward attached to the Clothing Factory.

The procurement of these cloths, particularly of the approved quality like khaki, blue and white drill, khaki matty, black satin, blue and khaki serge and blue khadi, etc., in such heavy quantities has necessarily to be obtained through Governmental channels, i.e., by placing Indents on the Textile Directorate (Ministry of Works, Housing and Supply), on a phased programme, who arranges for the supply through various textile mills in this country.

As for stitching these cloths into garments for the required patterns



Marking the cloth for cutting

and sizes, annual contracts are entered into with clothing contractors for stitching only in some cases, while in

some others—both cutting to the required pattern and stitching have got to be done by the contractors themselves as will be seen in the following paragraphs.

In the case of supplies to Madras, Bezwada, Guntakal, Hubli and Mysore Divisions, the cloth is cut into standard designs and sizes by means of Cutting Machines which are electrically-operated at the Clothing Factory. It will be of interest to readers to know that cutting operation is completed for 100 or more shirts or trousers at a time. The cloth is so arranged in layers and after marking out the size and design of the garment by means of chalk on the top, according to the standard unit prescribed, so as to allow for minimum wastage, the cloth layers are dexterously introduced into the cutting machines and in less than a couple of minutes, the cutting operation for about 100 shirts or trousers is over. Then these are bundled up

COOPER

SHAPING MACHINES FOR HIGH SPEED • HEAVY DUTY

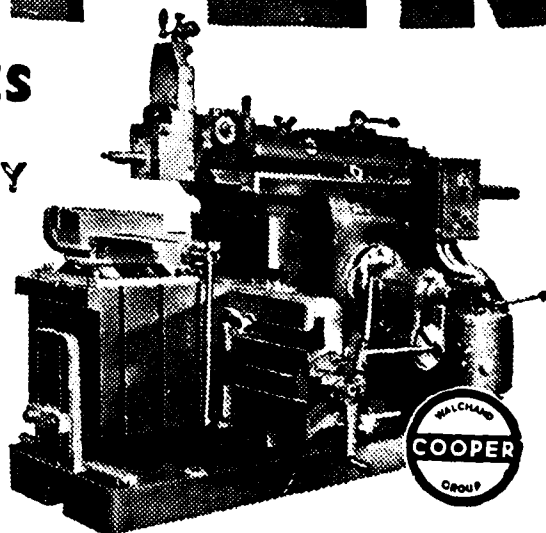
This latest model of improved design incorporates many refinements combined with extreme ease of operation. It withstands heavy duty with efficiency and speed without impairing accuracy or alignment. Four other models available.

Write for free literature

COOPER ENGINEERING LTD.
SATARA ROAD, DIST., SATARA

DISTRIBUTORS:

BATLIBOI & CO., FORBES ST. BOMBAY 1



Type GP 24" with Plain and Universal Tables and self-contained Motor Drive

A "WALCHAND" GROUP INDUSTRY

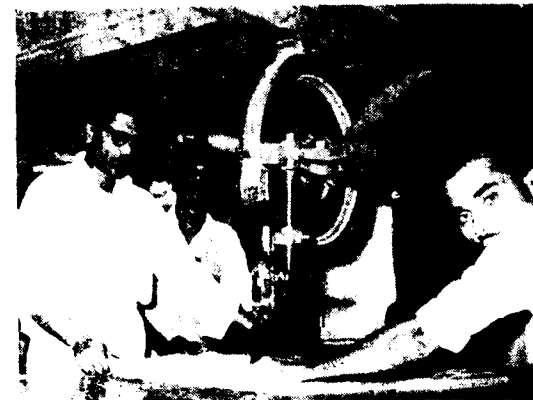
and, after being checked by the Accounts Stock Verifier, who also witnesses their delivery, handed over to the contractors for being stitched into garments in accordance with the terms and conditions of the contract.

It is only in the case of supply of clothing to staff on the Trichinopoly, Madura and Olavakkot Divisions that the basic cloth is supplied to the contractors *uncut* and the contractors' charges include for cutting as well stitching into garments in such cases.

Although standard sizes of clothing are laid down for general supply, special types and sizes have also to be supplied to certain individuals and this purpose is served on the ex-S.I.R. Regions through the agency of Tailor Clerks attached to the Clothing Factory who visit the various divisions at intervals to take measurements of the staff. On the ex-M. & S.M. Regions, the measurements of such out-size staff are recorded in a "Self-measurement" form which is forwarded to the Clothing Factory for supply of out-size garments.

On a rough estimate, about ten lakhs of rupees worth of garments are

Cutting with electrical handcutter after marking



Cloth being 'cut' by the electrically operated cutting machine

supplied to the staff of this railway. It will also be seen that increased use of Khadi has come into existence in major undertakings like the Railway and Postal Departments, thus giving a good impetus to the Khadi industry.

Any railway system may extend to varied geographical belts and the vicissitudes of climatic conditions, demand the particular type of clothing required for the performance of the duties of Railway staff. For instance, a Fitter, Pointsman or a Porter of the Railway working on the Nilagiri Mountain Railway, is supplied with woollen garments to withstand the cold weather, notwithstanding the value involved and these seasonal clothing have to be supplied by a particular time of the year, consistent with the lifetime of the clothing supplied. In rainy areas, overcoats are supplied, if the performance of the Railway duty warrants it.

As soon as the Clothing Factory is expanded to the desired level, which is expected shortly, it will undertake the cutting of garments for the entire Railway.

That leisurely bath...

...may have started Archimedes thinking—
but it took years of expert, scientific
investigation to establish *The Law of Specific
Gravity*. So too, MOBIL products started in
a small way — but have grown to leadership
through 91 years of research and experience
in the field of industrial lubrication.
Our experience and advice are available
to you — FREE. Why not call us?



STANVAC — the name that stands for progress

STANDARD-VACUUM OIL COMPANY
(Incorporated in the U.S.A. with Limited Liability)

Bombay - Ahmedabad - New Delhi - Lucknow - Jaipur - Chandigarh
Calcutta - Madras - Bangalore - Secunderabad - Madurai

V. 4854



SAGE OF SABARMATHI

Although there is a flood of books,
(yet methinks fit for may be I nooks)
On dear Apostle of unbiased truth,
To loudly thank him lying in HIS booth.
Wise Socrates of wistful Greece,
Serene Siddhartha who soiled under trees,
Father Abraham of foreign land,
A host of best of our soils band.
Of these perhaps He creamed in one,
And sent us a Saviour without Bren-Gun,
Anointing with oil of "NON-VIOLENCE"
To aid our struggle for Independence.
Of slender frame and tenderest heart,
Devoted to Truth and dedicated to part,
The pleasures of life. Ever lived in love,
Preaching Ahimsa with palms raised above.
Krishna, Christ or Ram or Rahim,
As all in one he prayed to Him,
Spread our Lord's Gospel of Love for hate,
Cowed our Nation's distrust in spate.
"Hang old Gandhi on the sour apple tree"
Of them so mused he endeared in glee,
Weeded off Harijan's woes and wail,
And pleaded human liberties tooth and nail.
With groundnut diet and goat milk drinks,
Half naked, abandoning silks,
Travelled in III Class though "Reserved" could afford
Led a simple life as a poor Indian could.
Courtied jails for our country's cause,
Fasted times for Hind-Muslim peace,
Feasted best of fine Ram Dhun,
And met his last in Martyr's "Run",
Khadi of Charka a Cottage industry,
Cleverly he developed, quite a mystery,
And rid of the layman's sheer requirements,
Making both ends meet at dire moments.
"History repeats itself" is the saying,
But history of ours is queer in having,
Wrought our freedom in ruthless measure,
By Bapujee's lead—Our bemoaned treasure!
Dauntless he marched to Dundy on foot,
Defied British rule and shook its very root,
When the sea of salt was coveted as own,
A fantastic fun to be credited by none.
His courteous slogan of "quit India"
Has done a great miracle DEO GRATIA,
It spread like wild fire in the ruling hearts,
That withdrew the yoke at these passive resorts
Asked once when in alien land,
Was he Mahatma with a magic Wand,
Softly he replied in subdued tone,
Such names he had none save "Daridranarayan."
Of the name Gandhi is truth manifest,
Saint Statesman yet simple of rest,
Lived in our age but died for us,
What a sinful lot! To have lost him thus!
Second October of every year,
Sacred to us all far or near,
To offer prayers in solemn mute,
And crush our ego with fresh resolute.
Though hard to practise what we preach,
But let us love to try to reach,
His footsteps leading to God of Truth,
Thus please his soul for ever in sooth.
Oh! Father of the nation! that shown us the way,
Sovereign of heroes! Selfless ever and gay,
The grief at our hearts knows no arrest,
Yet, peace unto thee; for praise thou detest.
Oh, Beloved Kasturbhai's Pathee!
Sagacious sage of Sabarmati,
In honour of your service to our country,
Permit to dedicate this petty poetry.

CONTRIBUTED BY: V. E. THIRUVENGADIAH,
Sub-Head, Accounts Branch,

FELCO HOISTS LTD., ENGLAND

**ELECTRIC
CHAIN
BLOCKS**



Capacity $\frac{1}{2}$ Ton & 1 Ton

Please write for full particulars
to the Agents :—

JESSOP & CO LTD
ENGINEERS

63 Netaji Subhas Road, Calcutta

**ELECTRIC
WIRE ROPE
PULLEY
BLOCKS**

Capacities 5 Cwts., 10 Cwts.,
1 Ton, 2 Tons

HEATLY & GRESHAM LIMITED

(INCORPORATED IN ENGLAND)

CALCUTTA - BOMBAY - MADRAS - NEW DELHI

SOLE AGENTS IN INDIA FOR

GRESHAM & CRAVEN LTD., MANCHESTER } S.J. Loco Vacuum Ejectors & Automatic Steam
GRESHAM & CRAVEN OF INDIA LTD. } Brake Valves, R. C. W. & Simplex Injectors,
Ross Type Safety Valves, Vacuum Brake Equipment & Components, Vacuum Exhauster Sets, etc.

HASLER TELEGRAPH WORKS LTD., Locomotive & Carriage Speed Indicators & Recorders
Revolution Counters.

JOHN LEVICK LTD., Rolling Stock Internal Fittings, Commodes & Flush Tanks, Wash Basins
& Bathroom Fittings.

OXYCHLORIDE FLOORING PRODUCTS LTD., Elephant Brand Composition Flooring.

BECKETT LAYCOCK & WATKINSON LTD., Railway Rolling Stock, Road & Marine Windows.

CLYDE BLOWERS LTD., Clyde Patent Scot Blowers for all type of Locomotive Boilers.

THE EVERLASTING VALVE CO. (G.B.) LTD., Blow off Cocks & Valves for Locomotives
& Industrial purposes.

AND OTHER MANUFACTURERS OF RAILWAY MATERIAL AND EQUIPMENT

Also for **MACHINE TOOLS & GENERAL ENGINEERING EQUIPMENT**

DISCIPLINE, DUTY AND DEALINGS OF RAILWAY STAFF

LAUGHING DIPLOMAT

WHAT is discipline? The principle of discipline is unless there is a head to lead and hands to follow, no work can be turned out. Each man must have his charter of duties along with the charter of rights, if any. Breach of discipline is a serious matter. It may be in the form of an offence, the omission or a commission. If it is a sin of omission, it has to be noticed. Even if it is a sin of commission due to over doing which is generally less serious, that is also to be noticed. The basis for railway working is originated by the Operating Department. Railways have to move passengers, luggage, parcels and goods and that is transportation (transportation of coaching and goods traffic) which has to be achieved. During the Five-year Plan, special priority has to be given to goods traffic in order to move the commodities which have increased on account of the increased production of agricultural products, etc., resulting from the Planning Commission's first plan projects. Now emphasis is laid on heavy industries and heavy and bulky goods have to be transported with high priority. Steel gets the pride of place. Such goods as cement also get priority. *The Railway operating formula is to work the largest necessary number of the small feasible variety of the heaviest workable train in the shortest possible time with the highest standard of safety with the lowest economic cost for the fairest annual revenue. This is an ideal for operating staff which is also to be observed by all the departments of the Railway. The lowest economic cost and*

the fairest annual revenue concern the Accounts Department also apart from being of interest to the Commercial and Administrative Departments. This may be colloquially described as Railway Operating Bible.

During the Second Five-year Plan period, it is incumbent on railwayman irrespective of the department to which he belongs to be saturated with this idea and try to contribute his mite to the realisation of this ideal. The attention of the Railwaymen has to be devoted to the achievement of this ideal. In the case of Railway working, various irregularities may occur. The principles of punishment and reward are that an efficient man should be properly appreciated and rewarded and slack men and negligent men ought to be suitably dealt with. Punishment as well as reward should be given promptly.

Offences can be classified roughly under four heads minor, major, serious and grave. The trifling or a minor offence consists of minor omissions such as leaving out commas in writing, some negligible delays in dealing with papers, casual late coming to office by a few minutes, etc. Such major offences as absents oneself without permission and then sending a chit informing the administration, temporarily using office furniture for private purposes, etc., constitute a major offence. Serious offences may be considered to be the following: giving wrong private number to the adjacent station in line clear working or not clearing the line and not marking

the entries after the previous train had cleared the section, leaving the station or the office without permission of immediate superior or other superiors etc. Grave offences are giving line clear without ascertaining whether the line on which it is intended to receive the train at a station is clear, misappropriating railway cash, forgery, etc.

Punishments :

Minor offences are generally let off with a warning. If they are repeated, then caution will have to be recorded and more severe punishment inflicted, if necessary. For major offences, increment has to be withheld or a severe caution has to be recorded and increment withheld for a few years according to the nature of the offence. For serious offences, it is necessary to withhold increment for a long time or reverting the wrong-doer to the lower grade, if necessary. In the case of grave offences, reverting him to a lower grade or depriving him of a few places in the seniority list or removal from service will have to be resorted to. Before starting punishment, one must consider whether the man cannot be suitably dealt with by making it not worthwhile to commit the mistake or do the wrong. If the person is not suitable in a particular job, say in a Tranship Shed or where transhipment of parcels and goods have to be dealt with, whether he cannot do well in a Telegraph Office in which he may not be in a position to commit the same irregularity provided he is suitable in the Telegraph Office.

The principle of punishment is that punishment should be a little too heavy and must have a deterrent effect. Here one is reminded of one

of the leading men in the French Revolution like Robes Piere. He would not doom any of the strange sons of Adam to die. When criminals and offenders were brought to him for passing judgment on them, he adhered to the logic formula mentioned above and refused to give them adequate punishment. The result would be that the offenders when they are liberated will start committing more offences and become a nuisance to society. By trying to sympathise with an undeserving offender, the culprits are let loose to do more havoc to the society which is undesirable. When there is a case of proved offence, punishment should be meted out. In Carlyle's French Revolution there is also a reference to blowing hot and cold on the part of General Delauni of the French Revolution (who was one of the important persons during the period). When the situation was confusing, "plank resting on parapet, balanced by weight of patriots but of musket on pit of stomach, Everyman his own Engineer, Smoke as of Tophet, confusion as a Babylon, noise as the crack of doom," Delauni was hesitating to open fire on the crowd which was besieging Bastille. He also felt that the crowd could not be pacified by speeches. Carlyle described the situation in a humorous manner. "Soft speeches will not serve. Hard grape shot is questionable. Hovering between the two is unquestionable. Blowing hot and cold in such a situation is a sign of weakness. Quick decisions are necessary and strong actions also.

At the same time it has to be remembered political action is the blind alley for government servants. Government servants are concerned with carrying out orders which are issued in the



Do you say "Please excuse me", "Thank you",
"I am sorry", to passengers

interest of the public and the administration. Government servants should not have a party label or party ticket. The reputation of any one should be such that the faintest breath of scandalous suspicion will perish because of its absurdity. It shall be the duty of every Railway servant to endeavour to prevent any member of the family from taking part in, subscribing in aid of, or assisting in any other manner any movement or activity which is or tends directly or indirectly to be subversive of the Government as by law established and where a Railway servant is unable to prevent members of his family from taking part in, or subscribing in aid of, or assisting in any other manner any such movement or activity, he shall make a report to that effect to the Government. No railway servant shall canvass or otherwise interfere or use his influence in connection with, or take part in, an election to any Legislature or Local Authority provided that (i) A Railway servant qualified to vote at such election may exercise his right to

vote, but where he does so, he shall give no indication of the manner in which he propose to vote or has voted. No Railway servant shall, except with the previous sanction of the Government or any other authority empowered by it in this behalf, or in the *bona fide* discharge of his duties participate in a radio broadcast or contribute any article or write any letter, either anonymously or in his own name or in the name of any other person to any newspaper or periodical : Provided that no such sanction shall be required if such broadcast or such contribution is of a purely literary, artistic or scientific character.

Further, no Railway servant shall, in any radio broadcast or in any document published anonymously or in his own name, or in the name of any other person or in any communication to the press, or in any public utterance make any statement of fact of opinion which has the effect of an adverse criticism of any current or recent

The customer has the right to a little extra attention in the case of a woman or a child



policy or action of the Central Government or a State Government, provided that any statements made or views expressed by a Railway servant is in his official capacity or in the due performance of the duties assigned to him. No Railway servant shall, except with the previous sanction of the Government, take part in the registration, promotion or management of any bank or other company registered under the Indian Companies Act, 1913 (VII of 1913) or any other law for the time being in force, provided that a Railway servant may take part in the registration, promotion or management of a Co-operative Society registered under the Co-operative Societies Act, 1912 (II of 1912) or any other law for the time being in force, or of a literary scientific or charitable society registered under the Societies Registration Act, 1860 (XXI of 1860) or any corresponding law in force.

Reverting to the main point, during the second plan period, one must be intent on contributing his mite to render service in the job in which he is placed and thus assist in the realisation of the Railway's achievement targets. The Railways, are, working under some handicaps such as heavy repairs and renewals, having to construct double lines, new lines, station buildings, extend platforms to accommodate longer trains and to provide many new amenities with the available material and so on. It is one of the greatest single commercial State undertakings in the world. Railway is an industry among industries. It has to take raw materials to the industrial centre and manufactured goods to the markets.

It is declared an industry according to the Industrial Policy Resolution of the Government of India. It has to be developed extensively as well as intensively. It has to function under public criticisms. While thousands of services rendered by the Railway and several achievements of the Railways will be conveniently forgotten, a few small blemishes, (incidental to such a big organisation consisting of more than 34,000 miles spread out throughout the sub-continent of India) will be mercilessly criticised. India being an independent nation should goad the people in service to render more meritorious service for their own motherland rather than make them think that licence is liberty. As judged by the achievements of the Railways during the First Plan period and during the first year of the Second Plan, we have to take pride in how the Railways have made up leeway. Everyone has got a duty list or a charter of duties. He should carry out the duties of the station in which he is placed. He must put his heart and soul into his work which he is doing. The Second Five-year Plan is an opportunity for railwaymen and also a challenge. It is gratifying to note that during the period ending with 31.3.1957, railways conveyed about 125.5 million tons of goods as against 114.1 million tons of goods during 1955-56 or an increase of 10 per cent in a single year. The strain is more on the goods traffic though passenger traffic also has been on the increase.

Regarding appreciation of outstanding work is more essential during the plan period and emergency than during ordinary periods. For example,

a genius like Robert Burns, the poet during the time of the French Revolution, was given the job of measuring the barrels of ale. This was during the time of King George III. This shows that ability and games was not properly recognised.

It is not true that emergencies always bring able men to the top. That depends partly upon the proper schemes for promotion and partly upon the capacity for judging men possessed by those with whom the power of promotion lies: and yet nothing makes so much difference to the efficiency of a country as the thinking power and efficiency of the twenty men at the top. One Bonaparte is, for administrative purposes, more than equal to one hundred fairly capable heads of departments.

In order to get the best out of Railway staff, the Railway Ministry has introduced the system of CASH YOUR IDEAS SCHEME. Besides, the railway magazines (official organs of Railway Administrations) and the "Indian Railways"—the Railway Board's magazine, gives good publicity to those of the staff who have rendered outstanding service.

Ralph Waldo Emerson used to say, "Love as a factor in administration has never been tried." It is rather difficult in cases of punishment to try this experiment. One should administer justice tempered with mercy. Emerson also used to say that if you can write a better book, if you can preach a better sermon or if you can make a better mouse trap than your neighbour, the world will make a beaten track to your door even if you live in the woods. This is true but the other side of the picture is that there

are cases in which worth is not realised. As said in Gray's Elegy,

" Full many a gem of purest
ray serene
the dark unfathomed
caves of ocean bear
Full many a flower is born
to blush unseen
and waste its sweetness
in the desert air."

Unless opportunities are given and there are men at the top with proper judgment and the schemes of promotion are such that efficient and worthy people have adequate chances of getting their deserts, eminent persons cannot come to eminent positions.

It is one of the marks of efficiency to know what one should do himself and what he can allow others to do. If the man at the helm of affairs devotes long hours to the completion of his work it shows that there is something wrong somewhere. The person who claims that he disposes of the largest number of cases and keeps himself busy always without time for reflective thinking is the inferior workman. The mind that is enchanted on minute particulars resembles the lees of wine that has neither flavour nor strength. One must adhere always to the main point and confine himself to his job without any interference to other people's job or commenting on other people's job which does not pertain to him. It is one of the fundamental principles of administration that one should not indulge in idle talks about administration or official matters outside the office. In a country like England, which is an advanced democracy with a very supple constitution, people know how

to be reticent while talking about official matters and how to keep official secrets. So also in America. One must have the motto that official matters may not be made the subject for any talk in the public or anywhere else. God has given double fortification for the tongue. A pair of lips and the two rows of teeth are fortifying the tongue so that a man may have a check of what he talks. This is applicable to every railway servant and any government servant.

It is said in the scriptures what comes out counts and what goes in

does not matter. What a man eats does not matter what he speaks matters. Therefore, we should be careful about guarding official secrets and talking about official matters. We, as citizens of the sovereign democratic republic of India should take pride in belonging to the Railway, an industry of industries and rear to the most perfect vigour and maturity every sort of generous and honest feeling that belongs to our nature and bring the dispositions that are lovely in private life into our conduct in the Railway and the Republic.

KUMARDHUBI ENGINEERING WORKS LTD.

for

FABRICATING STEELWORK

including

**STEEL FRAMED BUILDINGS,
BRIDGES, CHIMNEYS,
WELDED AND FABRICATED
PIPING & SPECIALS from 18" upwards,
TANKS AND STAGINGS ETC.**

Consult :

KUMARDHUBI ENGINEERING WORKS LTD.

Managing Agents :

BIRD & CO., (PRIVATE) LTD.

Chartered Bank Buildings, Calcutta-1

B 1500

Tourist Week in Madras

Miss K. C. ANNAPURNA

THE Tourist Week was observed in Madras in collaboration with the travel agencies, transport authorities, hoteliers and other members of the travel trade, from November 9 to November 15, 1957.

The Tourist Week was inaugurated by Sri Raj Bahadur, Minister for Shipping, Ministry of Transport and Communications, Government of India, with the Chief Minister of Madras, Sri K. Kamaraj in the Chair. The Tourist Week celebrations began with a Moonlight dinner on the starlit roof gardens of Dasaprakash Hotel on the 9th evening and concluded with a Tourist dinner and dance night at Hotel Oceanic on the 15th. A Tourist Week "India" Exhibition was kept open throughout the Week with many interesting and attractive photographs, posters on India, Indian handicrafts and textiles on display. Participants in the Exhibition were the following:— Air India International, Handloom House, Department of Khadi, Southern Railway, Kishinchand Chellaram, Department of Archaeology (Southern circle) and the Regional Tourist Office. On November 10th, a Motor-car Scooter rally was organised by the Madras Motor Sports Club to Mahabalipuram with 43 cars and scooters participating. Sri K. P. R. Rao in a Citroen was adjudged the 1st prize winner. That same day an Excursion Luxury coach to Mahabalipuram was inaugurated by Bharat Travel Services Ltd.

During the Week three Radio talks were broadcast on All-India Radio on

Tourism in Telugu, Tamil and English and four special tourist supplements were brought out. The Films Division also arranged for screening special documentary tourist films at seven important theatres in the City. The Madras State Information Centre also arranged for screening daily (11th to 15th November) tourist films.

Special full day concessions were given on the 12th, 13th and 14th November 1957 respectively on State transport buses plying between Madras, Mahabalipuram, Kancheepuram and Tirupathi. Dr. C. P. Ramaswamy Iyer addressed a large public on "Tourism and India" on November 11th. The Regional Tourist Office conducted an essay Competition on Tourism as a two-way exchange of culture and currency. The competition was thrown open to all undergraduates of the City Colleges and three prizes were announced.

1ST PRIZE.—Sri D. Ratnasingh (Presidency College). (*A free trip to a tourist centre in South India and return.*)

2ND PRIZE.—Miss Rajam (S.I.E.T. College) and Mr. S. Satyam (Vivekananda College). (*Handloom textiles.*)

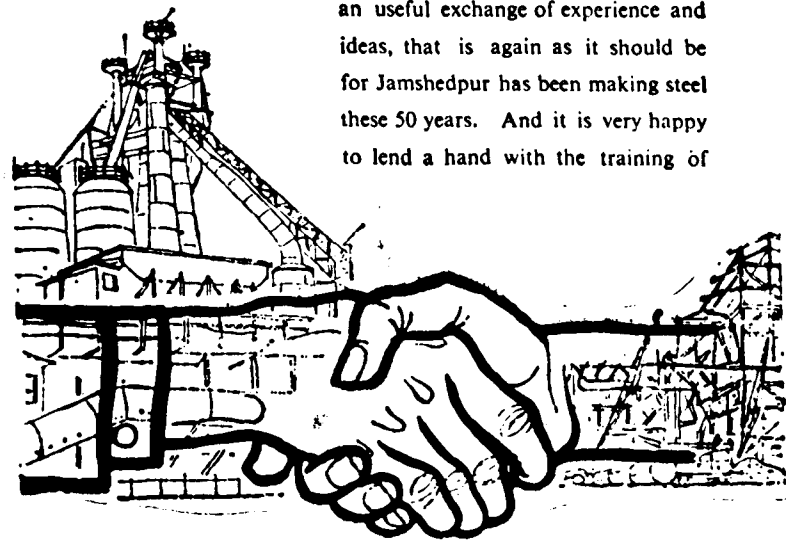
3RD PRIZE.—Sri G. Sundaram, IV B.A. HONS. (Econs.). (*A complete set of Tourist literature.*)

The highlight of the Tourist Week programme, however, was the joy

From a Neighbour

If there is a lot of comings and goings between Jamshedpur and Rourkela, that is only as it should be. Of all the steel plants, the one coming up at Rourkela is closest to Jamshedpur, India's first steel city.

If these comings and goings lead to an useful exchange of experience and ideas, that is again as it should be for Jamshedpur has been making steel these 50 years. And it is very happy to lend a hand with the training of



Good Wishes to Rourkela

engineers and technicians for Rourkela. There are nearly 150 of them at Jamshedpur—from key personnel to artisans.

Strengthening these ties of friendship are the surprisingly large number of old Jamshedpur faces that one sees at Rourkela. To them and their colleagues, Jamshedpur sends neighbourly greetings and good wishes.

THE TATA IRON AND STEEL COMPANY LIMITED

TN 1500



The Regional Tourist Officer and the Asst. Regional Tourist Officer, Madras, receiving Sri Raj Bahadur

flights in a Dakota over Madras City arranged for by the Indian Airlines Corporation. It was open to the public throughout the Tourist Week.

The Tourist Week was also celebrated simultaneously in Bangalore and Ootacamund.

The Vice-President, Dr. S. Radhakrishnan has sent the following message to the Regional Tourist Officer on the

occasion of the Inauguration of the Tourist Week in Madras :

"I am glad to know that you are observing a Tourist Week in Madras from 9th November to 15th November 1957. I hope your venture will be a success and you will be able to interest people in travelling in this country which is one of the ways by which we promote understanding among our people."

The audience at the inaugural function



ADVANTAGES OF ELECTRIFICATION

ANAND MOHAN

Chief Commercial Superintendent, Eastern Railway

'DULUX'

it's an



paint

MANUFACTURED IN INDIA

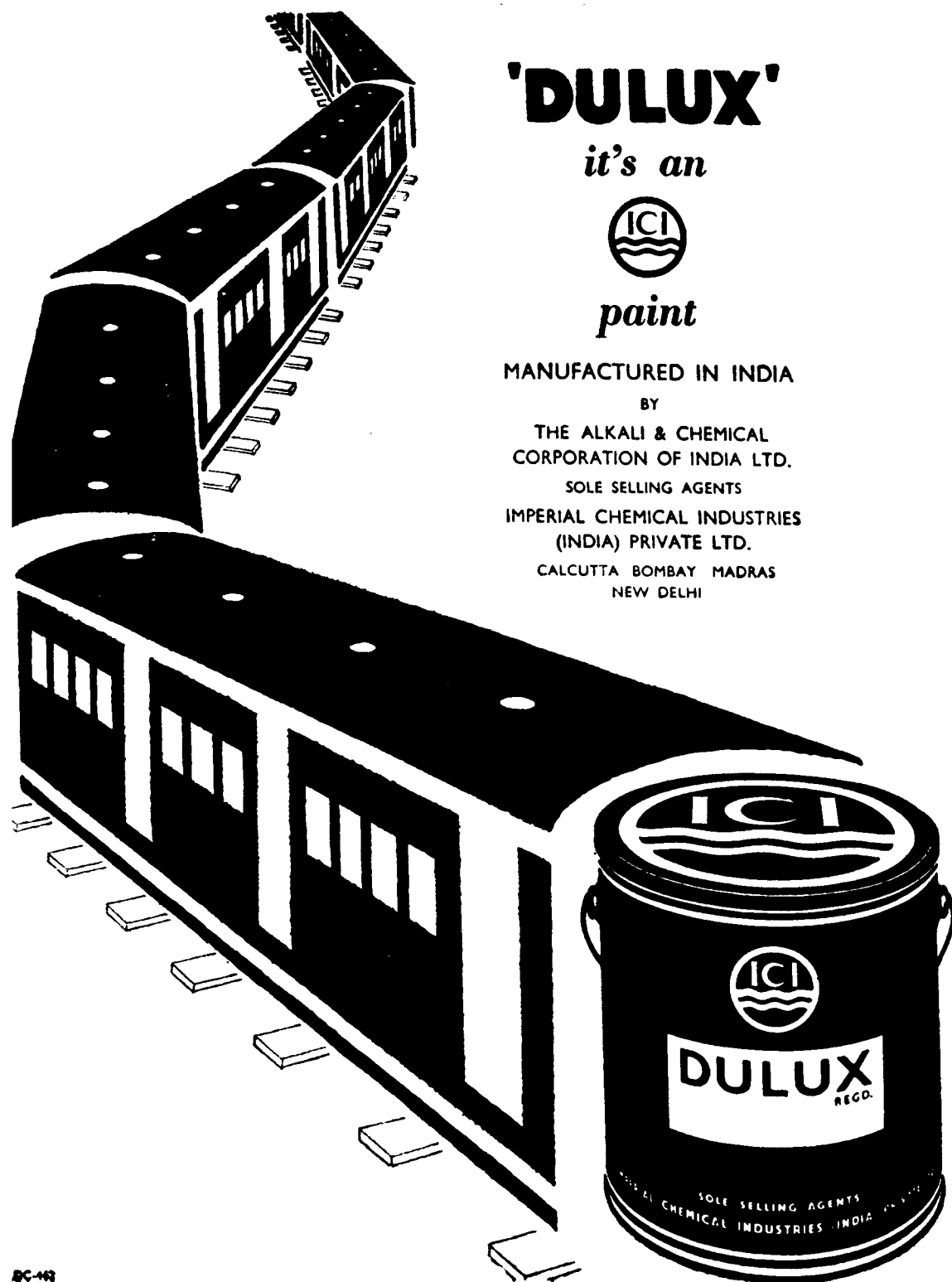
BY

THE ALKALI & CHEMICAL
CORPORATION OF INDIA LTD.

SOLE SELLING AGENTS

IMPERIAL CHEMICAL INDUSTRIES
(INDIA) PRIVATE LTD.

CALCUTTA BOMBAY MADRAS
NEW DELHI



ON the 14th of December at Howrah, largest railway terminus in East India, the Eastern Railway presented to its patrons electric suburban train service (initially worked by electric engines, to be replaced later by electric multiple unit stock) on the section between Howrah and Sheoraphuli, a distance of about 14 miles. This, of course, is only a modest beginning—a precursor of extensive electrification, e.g., over the entire Calcutta suburban area and from Howrah to Moghalsarai via the Grand Chord, etc.

That Calcutta, the premier city in this sub-continent, had not, unlike Bombay and Madras, received the benefits of electrification all these years was not due to any lack of sympathy or enthusiasm on the part of the authorities, as will be clear from the number of reports on the subject produced from 1914 onwards.

In these previous investigations, however, economic factors alone had been considered in deciding whether electrification of a section was justified or otherwise. The aftermath of the World War II, however, led to a complete transformation in the conditions of suburban traffic in the Calcutta area, which was further accentuated by the effects of the partition of the country in 1947. With passenger traffic nearly three and a half-times the pre-war level, the Saturation point was reached, both at Howrah and Sealdah, in regard to the capacity for moving passengers by steam trains.

ELECTRIFICATION A 'MUST':

There could be no appreciable improvement, without electrification, in the conditions of overcrowded travelling even under the existing level of suburban traffic and the position was an impossible one to contemplate when one visualised the future. The growth of population and the travelling habits and the rising trend of traffic were a clear pointer to the likelihood of suburban passenger traffic doubling itself in 10 years. It would be an impossible task to cater for it by steam trains and electrification was just a *must*.

A clear realisation of the problem led to the appointment in 1953 of Sri Sarangapany as Project Officer to prepare in detail a comprehensive scheme for electrification, and it was on the basis of his preliminary reports that the execution of the first phase of Calcutta suburban electrification was sanctioned on June 4, 1954.

ADVANTAGES OF ELECTRICAL MULTIPLE UNIT:

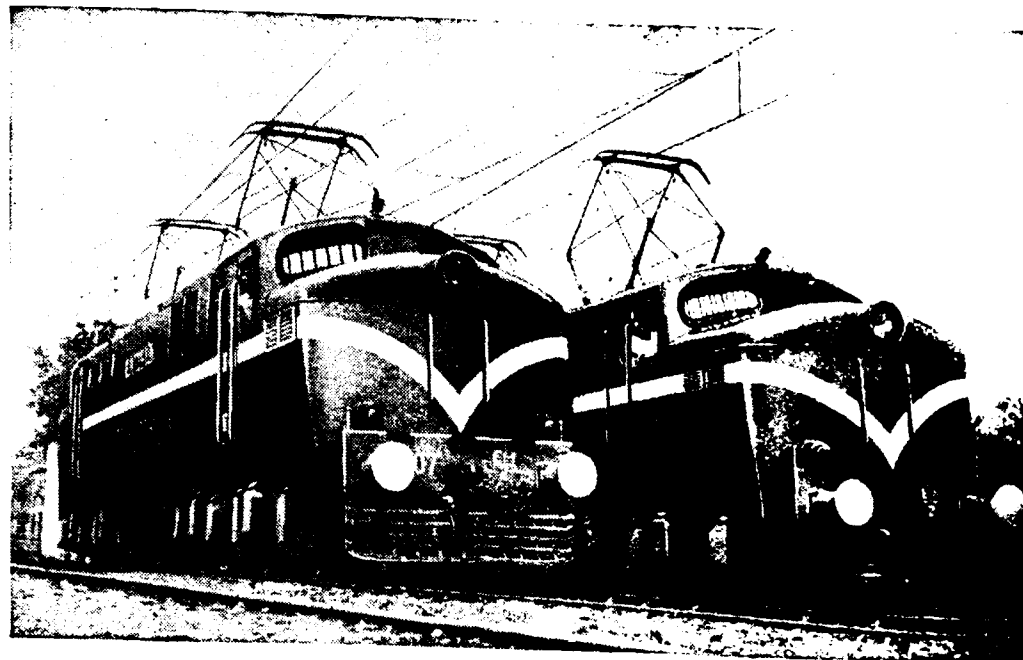
The main instrument under electrification which makes possible the vast increase in the handling capacity of suburban passenger traffic is the use of the electric multiple unit stock. A multiple unit train consists of one or more units; each unit usually consisting of two, three, or more coaches which are coupled together and one or more of which are equipped with

'ENGLISH ELECTRIC'

Locomotives for Calcutta Electrification Project

Twelve 3120 H.P., 3000 volt D.C. mixed traffic locomotives have been supplied to the Eastern Railway for the Calcutta Electrification Project. The locomotives are capable of hauling a 630 ton passenger train at 70 m.p.h. and a freight train of 2600 tons at 43 m.p.h. on level tangent track.

India's first electric line, the Bombay suburban line of the Central Railway, was equipped by "English Electric" in 1925. Since then the Company has built electric locomotives and traction equipment for trains totalling over 150,000 H.P. for Bombay, Madras and Calcutta. The Vulcan Foundry, now a member of the "English Electric" Group, supplied the first locomotive for India in 1853 and since then has built over 2,750 locomotives for this country including the mechanical parts for these magnificent, new, beautifully finished locomotives for the Eastern Railway.



THE ENGLISH ELECTRIC COMPANY LIMITED

(Incorporated in England. Liability of Members Limited)

New Delhi Calcutta Bombay Madras Lucknow

Manufacturers of the famous "ENGLISH ELECTRIC" Canberra Jet Bomber

electric motors. This motor equipment provides sufficient power to act as the locomotive of the train unit to which it is attached.

The train unit can be operated from either end and so there is no necessity to reverse the train engine at the end of each journey as will be the case if trains are hauled by locomotives. The train can, therefore, leave terminal stations on its return journey within two or three minutes of its arrival, the exact duration depending on the time required by the motor-man to walk from one end of the train to the other.

Further, as the motive power is divided over a number of units, a very much greater number of axles is driven than is the case with trains hauled by locomotives. Consequently, a much greater percentage of the total weight of the train is available for adhesion. This explains the high starting acceleration which is characteristic of the electric multiple unit operation and enables much higher scheduled speeds being attained on suburban trains than can ever be visualised under steam conditions. These advantages place electric traction in the unique position of being the only effective answer to the mounting needs of suburban passenger traffic.

BENEFITS OF ELECTRIFICATION :

The West Bengal Government has been taking active steps to develop townships in the outer suburbs of Calcutta to relieve congestion in the city. In the development of these, electrification has a great part to play. Unless the residents are assured of a cheap, rapid, and reliable trans-

port system, it will be difficult to induce the city's floating population to settle in healthier surroundings in the suburbs. This is what electrification will ensure, as with the electric services, it will be possible for passengers from the more distant stations to complete a journey by rail to Calcutta during the peak periods at almost double the present speeds and under conditions of better cleanliness and comfort.

The benefits of electrification are not confined to suburban traffic but are reflected, even to greater advantage in the trunk line electrification.

Taking the section Howrah to Moghalsarai *via* the Grand Chord, for example, the Grand Chord line between Asansol and Moghalsarai short circuits the main line route (*via* Patna) between the same stations by 51 miles, and therefore, forms the main artery for the flow of the cross-country traffic between the Calcutta area and the northern, central and western parts of the country.

The presence of the Raniganj and Jharis coalfields of this section has further contributed to its importance and the density of traffic borne by it. For maximum economy in operation, this section is, therefore, used up to its full capacity. For many years, the actual goods traffic for stations above Moghalsarai has been far in excess of its capacity necessitating diversion of the overflow over the longer route *via* the main line without fetching any higher income because of the increased mileage, as transport by the longer route is done for Railway's convenience. Electrification will enable all the goods traffic which

offers being conveyed by the normal and shorter route instead of the longer route thus making operating economies possible.

TRAFFIC DURING SECOND PLAN :

Not only is the present traffic to be considered, but also the additional load, particularly in goods traffic, expected to result during the Second Five-year Plan. Apart from the normal growth in the population of the areas and the consequent increase in the consumption of essential commodities there will be considerable increase in agricultural production as a result of the major and minor irrigation and industrial projects now in hand or planned for in the two Five-year Plans. This will lead to considerable increase in goods traffic to be conveyed by rail. Similarly, there will be considerable additional requirements of coal for industries. There will also be additional requirements of coal for export and bunkering. These will mean considerable increased coal movements, principally *via* Moghalsarai and to a lesser extent down country.

The electrification of the Howrah-Moghalsarai *via* Grand Chord route will make all these movements possible by an increase in line capacity consequent upon electrification. This increase in line capacity as a result of electrification is principally caused by :

(i) Better acceleration of electric locomotives which reduces the additional time required for starting passenger and goods trains after each halt.

(ii) The higher average speed obtained with electric locomotive. While the difference in the average

speeds is marked even on level sections, it is particularly noticeable on grades.

(iii) The increase in average loads of trains brought about by the bigger capacity of the electric locomotives.

(iv) Cutting out of halts at the watering stations required at intervals for steam locomotives.

(v) The comparative independence from the human element in the case of the electric locomotive in its day to day performance. It is well-known, that the average speed of the steam trains is often reduced by the inability of the crew to maintain steam. This difficulty is not shared by electric locomotives.

(vi) Less chances of goods trains being stopped *en route* for giving precedence to passenger trains. Due to the higher average speed of the electric locomotive, it should ordinarily not be necessary to stop through goods-trains to give precedence to passenger trains.

The benefits of the electrification of the Grand Chord route will thus be very substantial. The diversion of the above Moghalsarai traffic *via* the Grand Chord will lead to a welcome saving in the working expenses on the existing traffic.

In addition, due to the curtailment in the average turn round time of wagons, a large number of them will be released for carrying the anticipated increase in traffic and, to this extent, capital expenditure on additional wagons will be reduced.

(Continued on page 124)

TOWARDS BETTER WORKING OF RAILWAY RATES TRIBUNAL

(Philosopher Diplomat)

THE present Railway Rates Tribunal was established in 1948. The Members of the Tribunal are : Messrs. N. S. Lokur (*President*) and Mr. L. M. Roy and V. Subramanyam (*Members*). As at present constituted, the Chairman and members of the Tribunal are appointed either from the judiciary or from the legal profession.

It is understood the amending bill will seek to introduce an element of commercial experience as a qualification for at least one of the members of the tribunal, to ensure that the view point of the commercial interests are represented. As rates is a commercial matter, it is considered fitting and proper that a high grade expert in commercial matters is associated with the working of the Railway Rates Tribunal. It seems, however, that the Chairman will be a person with considerable legal and judicial experience. It goes without saying that the amending bill will seek to simplify the procedure of the Tribunal's work so that complaints by the commercial community are disposed of quickly. Here, one is reminded of the terms of reference to the Freight Rates Structure Committee to revise the jurisdiction and composition of the Railway Rates Tribunal.

It is possible that the new legislation will do away with the system of assessors. So far the tribunal has been assisted by two assessors, one representing the commercial community and the other the railways. A bill to amend the Indian Railways Act is proposed to be introduced to

provide for improvements in the working of the Tribunal to satisfy some of the demands of the commercial community.

Inter alia the Freight Rates Structure Committee's reference included a clause pertaining to simplification of the procedure for conduct of cases before the Tribunal so as to ensure more expeditious disposal of cases and to reduce the cost involved to the parties, questions such as, whether the tribunal have to quote wagon-load scale for a commodity for which none exists, also the question from which date the decisions of the tribunal should take effect, and whether retrospective effect was contemplated by the statute were examined. Ambiguities lead to litigation between the Railways and the interests concerned. The Committee has presumably examined these questions and in the light of the recommendations, it is proposed to bring a legislation which will do away with the system of assessors and also suitably revise the procedure for the conduct of cases by the Railway Rates Tribunal.

In this connection, another inference can be drawn. Sri Lokur is the Chairman of the Railway Rates Tribunal and also the Sea-rail Co-ordination Committee. The advantage is before quoting special rate in competition with steamer traffic detailed investigations have to be made to find the quantity of traffic actually moving by the sea, the steamer freights, the incidental charges at the Ports and from and to the Ports and to or from the merchants' godowns

and Insurance charges, etc., to arrive at the total cost of the sea route. From the larger national point of view, it is necessary to have the closest co-ordination between the railways and the road services and the coastal shipping services so that the resources of all the three could be geared up to suit the transport requirements of the nation. Railways cannot be permitted to compete at one point and decline to compete at another point where all conditions are the same. Now that Sri Lokur, Chairman of the Sea-rail-Co-ordination Committee is also Chairman of the Railway Rates Tribunal, he can incorporate this case-law quoted above

in the decisions. He will be in a position to utilise the case law for his guidance. It is only when the person is in charge of the railway rates tribunal, the principle will not be lost sight of. Presumably the Freight Rates Structure Committee has commented on such intricate aspects of rates questions which have to be looked at from the long range point of view keeping in view that road, rail, sea and air should severally fulfil the function for which each is individually best fitted to perform in the country's transportation and made recommendations on the simplification of Railway Rates Tribunal's procedure.

Best in the long run—

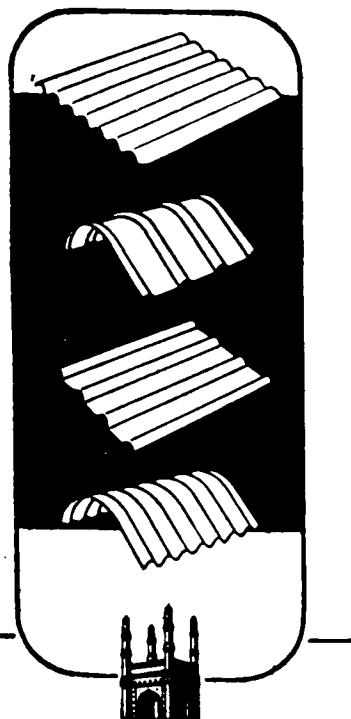
CHARMINAR

PRODUCTS ASBESTOS CEMENT

For durability without maintenance and amazing economy "Charminar" asbestos cement products are preferred by many Indian engineers and contractors. See your nearest dealer, or write in to us.

Sheets • Accessories
Ventilators • Flue goods etc.

HYDERABAD ASBESTOS CEMENT PRODUCTS LTD.,
SANATHNAGAR, HYDERABAD-18



Chief Agents for: Madras, Mysore and Kerala States excepting Madras City, Coimbatore and Bangalore

M/s. Hindustan Dealers Ltd., 4, Stringer Street, Madras-1.

Dealers at: Udumalpet, Pondicherry, Madurai, Trichy, Sivakasi, Tinnevely, Salem, Trivandrum, Kottayam, Trichur, Cochin, Calicut and Ernakulam.

Chief Agents for: Madras City, Coimbatore, Bangalore, Kakinada and Vizagapatam

M/s. Best & Co. (Private) Ltd., Post Box No. 63, Madras.

WOMEN'S PAGE

THE MODERN ENGLISH KITCHEN

V. S. SHANTHALAKSHMI

THE Kitchen is one of the most important rooms of the house: it is the centre of the family well-being, since the cooking and much of the cleaning and management are conducted from it. But a tacit acceptance of its importance is not the same as a lively interest in its possibilities and it is this change from the old apathetic acceptance, to present day intelligent and critical interest in it, that has turned this room, once the drudge of the house, into its mistress.

Yes, I am full of admiration for the modern English kitchen, which is all the heart of a housewife can desire. It is so planned that the various appliances used for one operation, such as cooking and washing are placed next to one another, so that the housewife can perform her task with no more movement and walking than is absolutely necessary. For example, the table for cooking is placed next to the kitchen cabinet or cupboard, the gas or electric cooker is within easy reach and beyond this, the sink, the draining board, and the China cupboard: the pantry and store-room being within a few paces of the cooking equipment. Where the kitchen is used for laundry work, (in most of the homes it is used) the electric washer or gas boiler is placed next to the sink, if necessary with a detachable draining board above, in order that the clothes may be easily passed for rinsing into the sink. The space beneath the sink is used for

laundry equipment and cleaning materials. And there is always some form of heat in the room, either a small closed stove, burning coke or anthracite, heating the water, or, if the house is all electric, a radiator fitted into the wall. In this case an electric water heater or an immersion heater provides the hot water.

The kitchen sink is placed against the outside wall under a window, and where it is possible to have more than one window, the work-table is placed near it in order that the housewife may get the benefit of the light and the view.

The walls are usually either tiled or half-tiled, and the junction of the walls and the floors are rounded to facilitate easy cleaning. Only in old-fashioned houses do they have wooden floors as it is not very easy to clean. Moreover, wooden floors, I believe, require a ventilation space beneath, and this may encourage mice and insects to congregate. Some of the kitchens that I saw had rubber flooring—a rubber composition supplied in 9 inches by 9 inches tiles, in plain colours or with patterns.

Good windows throwing light on sink, stove and work-table are another feature of these kitchens. Large kitchens have separate lights, I mean artificial ones for sink, stove and the work-table. The cooking stove is either a gas-stove, an electric cooker or sometimes one of the new type

SOUTHERN RAILWAY GUNTAKAL DIVISION

TENDER NOTICE

The Divisional Superintendent, Southern Railway, Guntakal, invites sealed tenders for the work of Fuel Handling at the following Locomotive Sheds for the period shown against each :—

Shed.	Period of Contract.	Earnest Money required.	To be remitted to.
NANDALUR	1-1-1958 to 31-3-1959.	Rs. 1,000	Divisional Accounts Officer, Southern Railway, Guntakal
RAICHUR	Do.	Do.	Do.

2. Tender forms with conditions of contract, etc., can be had from the Divisional Superintendent (Mechanical), Guntakal, from 9th December to 18th December 1957, both days inclusive, on production of a receipt for Rs. 3 (Rupees three only) from the Divisional Pay Master, Southern Railway, Guntakal, which will not be refunded under any circumstances. Money Orders for tender forms will not be accepted by the Divisional Pay Master, Southern Railway, Guntakal, after 18th December 1957.

3. Earnest money deposit for each station should be remitted to the Divisional Accounts Officer, Southern Railway, Guntakal, not later than 12 hours on 20th December 1957. No cheques or demand drafts should be sent along with the tenders. The receipt obtained from the Divisional Accounts Officer, Southern Railway, Guntakal, should be sent along with the tender.

4. Tenders should be submitted to the Divisional Superintendent (Mechanical), Southern Railway, Guntakal, before 12 hours on 23rd December 1957.

5. The tenders should be sealed and superscribed "TENDERS FOR FUEL HANDLING CONTRACT AT.....DURING 1958-59."

6. Tenders should be supported by current Income-tax Clearance Certificate, failing which they will not be considered for acceptance.

7. Tenders will be opened at 15 hours on 23rd December 1957 in the Office of the Divisional Superintendent (Mechanical), Southern Railway, Guntakal.

8. The Divisional Superintendent, Southern Railway, Guntakal, reserves to himself the right to reject without assigning reasons any or every tender or part thereof and does not bind himself to accept the lowest or any tender or part thereof.

Guntakal. }
13-11-57. }

DIVISIONAL SUPERINTENDENT.

December 1957

THE MODERN ENGLISH KITCHEN

95

burning smokeless fuel kept permanently alight. The gas-stove is usually placed against an outside wall, with a pipe inserted in the wall to remove fumes, steam, etc., from the oven. An electric cooker is the one found in most of the modern houses for it is really clean and neat to use it. And you will be surprised to know that some of the country districts in England, even now, do not have either gas or electricity. In places like that, the new type of cooker consuming coke, or some smokeless fuel is used. This is, I believe, very economical in use, and can be used for water-heating and for large-scale cooking too. Hence in country districts it is preferred even where other types are possible. In many small houses, I find grates with an oven over the top and a hot water boiler behind, and these they say, are good if they have been properly fitted and if the somewhat intricate flues are cleared regularly. Another ingenious method of heating is obtained by placing the living room and kitchen grate back to back, the living room fire providing heat which is conveyed to a small oven in the kitchen.

The modern kitchens have sinks made of stainless-steel, and draining board made of the same metal to match. The older porcelain ones have sycamore draining boards. Usually deep sinks are preferred to shallow ones, for not only the washing of utensils but also that of clothes are done here. The height of the sink is also of importance, the tendency being to place it too low for the housewife's comfort. A collapsible draining board on either side of the sink is really of great convenience in washing-up.

Another fascinating thing which I admire about these English kitchens, is the number of lovely kitchen cabinets or cupboards they have. Built-in cupboards are getting scarce. But on the oven side of the kitchen they have a row of cupboards fixed on the walls, just within easy reach of the house wife when she is cooking and at such a height where even the tallest one may not bang against when bustling about busily.

The storeroom or larder is conveniently placed with regard to the position of the cooking stove, sink, and work-table and greatest care is taken to see that it is dry, cool, and well-ventilated, as a dark, damp and stagnant conditions encourage the growth of moulds and fungus and food will be contaminated if kept in such a room. It is really a lovely sight to see the dry foods, such as flour, rice, oatmeal, sugar, etc., in plastic containers (canisters), clearly labelled on one side, glass store-jars with colourful screw tops containing jams and preservatives in another shelf; vegetables are stored in mesh-racks. And of course there is the meat-shelf at one corner where meat, milk, butter, etc., are kept.

The modern English kitchen is frequently supplied with an electric or gas refrigerator. In this case the perishable foods are stored in it and only dry goods and vegetables are stored in the larder. The refrigerator, is usually set at a temperature of from 35 degrees F. to 50 degrees F., which does not freeze food but only chills it.

Last week, I happened to visit an 'Ideal Kitchen Exhibition', at Birmingham. In addition to various

types of electric stoves and refrigerators they had a few other very useful appliances too for the kitchen. The dishwasher is one of them and really takes quite a load of drudgery off the house-wives' shoulders. The Dishlex dish-washer is fully automatic and when you press the button it washes the dishes, rinses and dries them too. The electric waste-disposer is another very useful thing about the kitchen. With this, you need no more collect all the dirt and filthy waste of the kitchen in a bin and take the trouble of transferring it to the main bin outside. It just crushes and minces all the waste garbage of the kitchen into very tiny bits, thus enabling them to be washed away in the sink easily. And Kenwood Chef which mixes, grinds, powders, beats, whisks, extracts the juice, sieves, peels, shreds and liquidises, needs a special mention of course. The electric bread toaster, kettle, washer, drier, and vacuum cleaner are of course found in almost all homes.

Thus you see that an English kitchen is almost 'automatic'. "Automation in our homes has been nearly achieved," announced the organiser of the exhibition very proudly. Yes, of course it is true, and in this age of 'Sputniks', I won't be surprised if they do invent an automaton too, to run the automation.

A. E. I. Equipment

(Continued from page 69)

traction equipment is being manufactured in India. The manufacture is being carried out by Associated Electrical Industries Manufacturing Co. Ltd., to the designs of Metropolitan-Vickers. This is the first time when manufacture of traction equipment is being carried out in India, and represents a substantial and welcome saving in foreign exchange.

The electrification of the Howrah-Burdwan Main Line also involves provision of automatic signalling between Howrah and Serampore, and manually controlled colour-light signalling beyond. Well over 350 colour-light signals of the multiunit type, 50 electric point machines, and considerable numbers of junction direction indicators, A.C. and D.C. relays, and other signalling equipment have been supplied by Associated Electrical Industries (India) Private Ltd. These equipments have been designed and manufactured by Metropolitan-Vickers—GRS. Ltd. of England, also a member of the A.E.I. Group of Companies.



"THE BLUE LIGHT"—A Christmas Story

TOM and Jim were two burglars who made a living by sneaking into other people's homes and stealing things like money, jewellery and other valuable articles. They had been living this thieving life for many years. Both had even been sent to prison for their crimes. But this made no difference to them. As soon as they were out, instead of living an honest life and doing a proper job, they would again start their old habit of stealing.

On one occasion a few days before Christmas, they had been planning to break in and rob from a rich man's house. They knew that he was living alone, and that he was quite an old man, all his sons and daughters having grown up left their father's home. Tom and Jim had been scouting round the old man's house for several days, seeing how best they could open some door or window to get in and then get out again during a dark night. They had planned to do their robbery on the night before Christmas Day. They knew that the old man had only one servant, and that he would always send the servant away quite early. They also knew in which room the old man had his wall safe in which he kept all his valuable things.

On the night before Christmas at about an hour before midnight Tom

and Jim crept up to the house, opened a window, climbed in, and were creeping stealthily up to the room in which the safe was kept. There was not a sound to be heard anywhere, so they thought that both the old man and the servant must have gone to bed and were sound asleep. With the thin beam of light from a pencil torch to guide them the two thieves crept up to the door of the room they wanted to enter. When they reached the door they tried the knob, and found it turned easily.

They pushed the door inch by inch and found it was opening easily and without even a creak. Tom poked his head in to look around. They had come to the right room, but it was dark except for a faint blue light that glowed in one corner of the room.

But wait, what was that? Both Tom and Jim were now inside the room and looking at the blue light which seemed to come from a kind of little shrine in the wall. But what really worried them was what they saw below the blue light. For there was the dark form of the old man, who was on his knees praying. No sound came from the old man's lips, but his head seemed to be lifted up as if he were gazing into the blue light.

For a moment both Tom and Jim thought they should turn and get out

SOUTHERN RAILWAY

TENDER NOTICE

Tenders will be received by the Divisional Superintendent (Works), Olavakkot, up to 16-00 hours on 26-12-1957 for the following works :

Serial No.	Description of work	Approximate value of contract	Earnest money
		Rs.	Rs.
1	Construction of 8 Nos. Type V Quarters at Olavakkot	1,60,000	4,800
2	Construction of a type VI Quarters at Olavakkot	30,000	900
3	Construction of a dispensary type II-A and quarters at Karur (Type I-4 Nos., Type II-1 No. & Type IV-1 No.)	69,500	2,100

Last date for issue of tender forms .. 15 hours on 21-12-57.

Do. for payment of earnest money to the Divisional Paymaster, Olavakkot .. 15 hours on 23-12-57.

Date of opening of tenders .. 12 hours on 27-12-57.

Further particulars and tender forms costing Rs. 10 each (not refundable) can be obtained from the Divisional Superintendent (Works), Southern Railway, Olavakkot, on production of a receipt for Rs. 10 either from any Station Master on the Southern Railway or the Divisional Paymaster, Olavakkot. Tender forms are not transferable.

of the room and out of the house as quick as possible. But they were both greedy and keen to open the wall safe which was at the other end of the room. Now, Tom and Jim did not want to hurt the old man or kill him and then rob him, so they decided to try and open the wall safe while he was praying. Perhaps he would not hear, but if he did and tried to stop them, they could easily overpower him and then gag and tie him up. Quietly they worked around the room until they came nearer and nearer to the wall safe. When they were in front of it they shone their tiny pencil flashlight on to the locking arrangement to see what was to be done to open it.

They were experts in opening safes and within a few minutes could open almost any small wall safe. They were so intent on twiddling the knobs on the safe to get it open, that they did not know what was going on behind them. For the old man had softly crept up behind them, and stretched out his hand to the safe-knob.

"Allow me gentlemen." Tom and Jim were so startled at the old man's voice, that they stood rooted to the floor and could not say or do anything. Within a few seconds the old man had swung wide the door of the safe, reached in a hand and pulled out two bundles of notes. Turning to Tom and Jim he said with a smile, "May I offer you gentlemen a little Christmas present."

Suddenly Tom and Jim were amazed to see that each of them were clutching a bundle of notes in their hands. Could this be true? They had come to steal from the old man

and here he was giving each of them such a large sum of money as a gift?

The old man saw their amazement and said pleasantly, "Yes, it's all yours, gentlemen. And now may I wish both of you a very happy Christmas and say God bless you."

Tom and Jim just could not believe what they were hearing. Surely it must be a dream. Both of them stammered out, "B-b-b-but sir, we came to burgle your safe.....and you are giving us all this money."

The old man smiled. "Why not, I don't need it, and for you to have to steal from people must show you are in great need.....Take it, and go and have a really happy Christmas."

Tom and Jim were still astonished at what was happening. "But, sir, aren't you going to call for the police and hand us over. After all, you have caught us red-handed." Again the old man gave that rare smile. "No, you're free to go."

Tom and Jim wondered if the old man was bluffing and laying a trap for them. As soon as they walked out he would telephone the police and they would be caught with all that money. They hesitated to move off. The old man seemed to have read their thoughts. "Don't worry, I have no intention of telephoning to the police. I've told you before that you're free to go."

The old man now held out his hand to each one of them and gave them a warm handclasp. Tom and Jim then seemed to wake up. "Thank you sir, and please forgive us for what we were going to do. We never knew there were such kind people in the

world. And now we too want to say a Happy Christmas to you."

Tom and Jim then walked out through the door and out of the house, but as they were passing the hall door, they saw a small table and there each of them put down his bundle of notes before they left. When the old man returned after locking the door, he saw the bundles of notes and smiled. He then went back to the blue light to spend the early hours of Christmas in thanking God for what had happened.

It was exactly a year later, the same day and the same hour, when Tom and Jim once again climbed into the same house through a window and entered the same room. Yes, there was the blue light shining forth from

the little shrine and there was the old man kneeling before it and praying silently. This time Tom and Jim did not go to the wall safe, but softly crept up to the blue light and there knelt down, one on either side of the old man.

From that night a year ago Tom and Jim had never stolen again. They had found themselves honest jobs and were living a straight life again, and all the happier for it. They were no more afraid that every policeman they saw was waiting to arrest them for burglary.

That night there were three men thanking God, two of whom were never to become thieves again.

UNCLE TELLATALE.

SOUTHERN RAILWAY

MYSORE DIVISION

TENDER NOTICE

1. Tenders are invited for the purchase of engine ashes and cinders exclusive of half inch in size and over on Sections B, D, E and F of this Division for accumulations from 1st April 1957 to 31st December 1957 and further collections upto 30th June 1958.
2. Tender forms with conditions of contract, etc., can be had from the Divisional Superintendent (Mechanical), Mysore, from 16th December 1957 to 21st December 1957 on payment of Rs. 3 per set (not refundable under any circumstances). Money orders will not be received after 19th December 1957 for tender forms.
3. Earnest money deposit of Rs. 1,000 for each section will be received from the tenderers by the Divisional Accounts Officer, Southern Railway, Mysore, upto 3 p.m. on 23-12-1957.
4. Tenders are to be submitted to the Divisional Superintendent (Mechanical), Southern Railway, Mysore, before 12-00 hours on 24th December 1957 in sealed covers superscribed: "TENDERS FOR PURCHASE OF ENGINE ASHES AND CINDERS".
5. Tenderers should submit current Income-tax Clearance Certificate in original along with the tenders.
6. Divisional Superintendent reserves to himself the right to reject any or every tender without assigning any reason and will not be responsible for any time lag in communicating the acceptance of tender.

MYSORE.)
20th November 1957.)

Divisional Superintendent.



INDIAN RAILWAY TECHNICAL BULLETIN

Published by the Director, Research, Railway Board

This quarterly Bulletin contains articles on recent developments, projects and other matters of current interest to Railwaymen in India, Research Reviews, Brief reports on interesting developments on foreign Railways, a Digest of Indian Railway Standards Committee Reports, Notes and Comments including answers to the questions asked by Railwaymen, etc. The Review pertains to the August issue which contains informative articles written by eminent writers. The article 'Sands for Grey Iron Castings in Chittaranjan Locomotive Works' by Mr. K. C. Choudhuri is very informative and interesting. Sri S. S. Varma in his article 'Design of Guide Banks' discusses the different methods for the design of various elements of a guide bank—length of guide banks and their shape, shape and thickness of apron, etc. and gives his own views for guiding the judgment of a designer. 'Some Problems on Bridge Foundations and Well Sinking Encountered in the Quilon-Ernakulam Railway Construction' is another interesting article contributed by Sri G. P. Warriar. The Quilon-Ernakulam metre gauge link has on its length a number of bridges crossing perennial rivers and channels. The construction of these bridges presented

some special problems due to the geological structure of the terrain traversed. Well foundations were used for most of the bridges and pre-cast R. C. C. pipes for some others. The method of sinking wells in different soils, precautions taken, some special problems encountered in the sinking of wells and the methods adopted in rectifying tilted wells during the sinking operation are described in this article. A rate analysis for the sinking of wells in different soils for different depths is also given. 'Research Review' and other regular features are also very interesting. In short the Bulletin under review is uniformly maintaining its high level of excellence. It is gratifying to note that the Railway Board have sanctioned a grant of two annual cash prizes of Rs. 400 and 200 for the best and the second best articles published in any calendar year in this Bulletin.

"THE PORT FARE"

A monthly bulletin on men and events of Calcutta Port, published by the Commissioners for the Port of Calcutta

This is an interesting publication about the Calcutta Port and its achievements in the field of Transport and Staff welfare. The port of Calcutta is the life line of eastern India and is one of the biggest local bodies of our country and a news bulletin of this type is quite necessary from the

X

SOUTHERN RAILWAY

TENDER NOTICE

Sealed tenders will be received by the Divisional Superintendent (Works Branch), Southern Railway, Madura, upto 16-00 hours on 24th Decemler 1957 for the following works : —

Sl. No.	Description of work	Approximate value of contract	Earnest money to be paid
		Rs.	Rs.
1	Madura Junction—Construction of staff Quarters Type II—16 units and Type III—4 units (Storeyed type)	1,14,000	3,420
2	Madura Junction—Construction of 24 units Type II Quarters (Storeyed type)	1,20,300	3,610
3	Madura Junction—Construction of 56 units Type I Quarters (Storeyed type)	1,26,100	3,780
4	Virudhunagar Junction—Construction of new Type II - A Dispensary with staff Quarters	70,000	2,100
5	Collection and training out of stone ballast in connection with relaying 10 miles from mile T. 387½ to T. 397 ¼ in Tuticorin Section	87,500	2,625

Last date for payment of earnest money to the Divisional Paymaster, Southern Railway, Madura : 15-00 hours on 23-12-1957.

Last date for issue of tender forms : 15-00 hours on 20 12-1957.

Date of opening of tenders : 12 00 hours on 26-12 1957.

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

point of view of the general public, who are usually quite in the dark except for occasional news items in the press. The inaugural issue under review, contains the messages of the Chief Minister of West Bengal, the Minister for Transport Government of India and the Chairman, Calcutta Port Commissioners. Sri Lal Bahadur Shastri in his message stresses the need for hard work and self-discipline of both officers and workers. The bulletin contains interesting features regarding the activities of the Calcutta Port staff. Printed on art paper, the bulletin is nicely got up with excellent photographs. It is gratifying to note that this bulletin is published in Bengali and Hindi languages also.

“ INDIAN INDUSTRIES ”

(Annual Number)

*Published by Mr. Krishna Srinivas,
“ Industries Press,” Madras-17*

This bright Number is luxuriously got up, printed on art paper, containing as usual, many interesting articles well written on varied topics by eminent writers. Dr. Radhakrishnan in his foreword stresses the need for educating the public, the different aspects of the Five-year Plans and that the Plans should also help in raising the standards of our educational system and improving the quality of the students who are turned out of the Universities. “ The Village Self-Government ” is an informative article. India is a land of villages and our planning chief and the admirable administrator himself powerfully pleads for village autonomy, the ideal state the Father of the Nation conjured up. Mr. Ellsworth

Bunker in his article ‘India’s adventure’ says that India’s Five-year Plans which form the charter of her economic development programme, are undertakings of great scope and magnitude, developed with imagination and courage and are being pursued with industry and enthusiasm. These magnificent words of cheer from a great ambassador of a great country will enthuse the builders of the New India to be steadfast in holding the course until success is in sight. “ American Industry ” is another interesting article written by Sri R. A. Padmanabhan. Success comes to those who take a few steps in advance of others and this the author remarkably argues in this article. In India gigantic dams are built and these River Valley projects will usher in an era of prosperity and plenty to millions who sweat and toil today. Sri M. R. S. Narayan brilliantly portrays this fact in his article ‘Tractors and Projects’. Sri P. K. Sivaprakasam in his article ‘American Co-operatives’ says that the Co-operatives will prove a good harbinger to score a phenomenal increase in agricultural production and he hopes that our farmers will benefit tremendously by emulating the Americans. The articles ‘Indian Machine Tool Industry’ and ‘Automotive Diesel Engines’ are also interesting. ‘Aluminium Industry in India’ is another interesting article. Aluminium is one of the most recent among the major industries of the world. It pervades human activities. Its future lies in the economic future of India. Sri P. S. Visvanath in his article ‘Hard Facing’ excellently analyses how the hard facing techniques increase the efficiency of engineering parts and reduce maintenance costs.

The prosperity of India is very closely linked up with the development of cement industry whose gigantic expansion is excellently portrayed in the article 'Cement Industry in India'. The articles 'Indian Cotton Industry' and 'Coir Industry' are also very informative and interesting. The article 'Cottage Industries' by Shrimati Kamaladevi Chattopadhyay is specially illuminating the magazine. The learned writer says that our traditional treasures can survive only when we respect our own heritage and our capacity, skill and genius to adapt these products to present day life. The article 'Road Transport in India' by Sri S. N. Ramaswami is also interesting. The author's solution to Road Transport problems may seem dynamic, but it brilliantly suits the genius of our land. The articles Tourism and Indian Railways are also informative and interesting.

"Indian Shipping" is also an interesting article contributed by Sri Dharmasey M. Khatau. Let us also hope with the author that the day is not far off when Indian ships, owned and built by Indians will carry the national flag to all parts of the world as they did in olden days.

The magazine under review is outstanding in many ways. Its design and get up are very good, the photographs are well reproduced and for the mind it contains inviting food and serve as an *aper journal* reflecting the national role of the industries of India in the life and economy of the country. In short, this sumptuous well got up magazine is a good presentation of many good things and sets up a standard for journals of its kind.

S. VEDANTAM.



* S. R. NEWS *

CO-OPERATIVE WEEK CELEBRATIONS

NEW GENERAL OFFICES, MADRAS :

The Southern Railway New General Offices Employees' Co-operative Stores Ltd., Madras, celebrated the All-India Co-operative Week. The celebrations started with flag hoisting on 2-11-1957 by Sri T. V. Ramana Reddy, President of the Stores, in the presence of a large gathering.

On 7-11-1957 a public meeting was held under the presidentship of Sri M. K. Krishnamachari, Statistical Officer, Southern Railway. He complimented the Board of Management for the splendid way in which the Stores was managed.

Sri A. Palaniappa Mudaliar, Registrar of Co-operative Societies, Madras, addressed the gathering and exhorted the staff to become members in large numbers.

There was a musical entertainment by Messrs. T. P. Vaidyanathan and K. S. Vaidyanathan with the accompaniment of Sri Chittoor Thyagarajan, Violinist and Sri Conjeevaram Veeraswamy, Mridangist.

TAMBARAM :

Railway Employees' Co-operative Stores Ltd., Tambaram, celebrated the Co-operative Day on a modest scale on Sunday the 3rd November 1957 at Tambaram National School, East Tambaram.

After prayer Sri R. K. Selot, B.Sc. (Engg.), District Electrical Engineer

Traction, Tambaram, hoisted the Co-operative Flag.

Sri S. A. Padmanabhan, President of the Stores, welcoming the guests and the audience, dwelt on the principles of Co-operation and the various schemes by which the Development of Co-operation can be achieved. He also stressed on the need for the existence of the Consumer Co-operative Societies, which will alone bring down the soaring prices.

Presiding over the function Sri R. K. Selot, in his introductory speech, appealed to the Railway employees to join in large numbers as shareholders and keep the Stores running.

Sri R. Renganathan, Co-operative Inspector, Railway Board, traced the growth of the Consumer Co-operative Societies on Railways and dwelt on the various aspects of the working of the Societies.

RAILWAYMEN CELEBRATE NEHRUJI'S BIRTHDAY

A public meeting under the auspices of Station Committee, Salt Cottaurs, Southern Railway, was held to celebrate Nehruji's Birthday.

Sri K. Srinivasan, Public Relations Officer, Southern Railway, released a Peace Pigeon and in his Presidential address, said that in formulating "Panchshila" Nehruji has established peace in the entire world. He advised the Railwaymen to follow the footsteps of the Prime Minister to establish Peace in the country and to promote cordial relationship between the Public and Railway.

SOUTHERN RAILWAY

TENDER NOTICE No. 11

Scaled tenders in the prescribed forms, separately for each of the following works, will be received by the Divisional Superintendent (Works), Guntakal, upto 16-00 hours on 11-1-1958 and opened in his office at 15-00 hours on 13-1-1958:

Serial No.	Name of the work	Total approximate value of the contract	Earnest money to be paid
		Rs.	Rs.
1	Supply of 1½" and 1" stone ballast for complete track renewals from mile 69½ to 101½ of Arkonam-Raichur Section	2,50,300	7,510
2	Guntakal—Construction of 85 Units Type I Quarters with Cuddapah slab roofing	1,79,500	5,385
3	Ichchiputtur—Conversion into a crossing station—Station building Type 'C' in lieu of existing one to be dismantled	11,000	330
4	Ichchiputtur—Conversion into a crossing station—Passenger Platform 1,000'-0" long	15,100	475
5	Ichchiputtur—Conversion into a crossing station—Construction of Staff Quarters Type I—7 Units, Type II—2 Units and Staff Well 6'-0" dia.	19,600	590
6	Gooty—Construction of Staff Quarters Type II 4 Units and Type I—10 Units with Cuddapah slab roofing—Stone type	33,120	995
7	Raichur—Construction of Staff Quarters Type II 4 Units and Type I—5 Units with Cuddapah slab roofing—Stone type	24,615	740

Tender forms (not transferable) can be had from the Divisional Superintendent (Works), Guntakal, on production of a receipt for Rs. 10 per copy (not refundable) paid to the Divisional Paymaster, Guntakal or to any Station Master on this Railway.

Last date for issue of tender forms 15-00 hours on 10-1-1958.

Last date for receipt of earnest money by the Divisional Accounts Officer, Guntakal 12-00 hours on 9-1-1958.

Further particulars can be seen in the tender form.

December 1957

S. R. NEWS

107

Sri K. Ramadoss, Deputy Mayor, Corporation of Madras, unveiled Nehruji's portrait. He expressed that every Indian should take the maximum efforts to ensure internal peace in our country. He said that everyone should try to put an end for Caste and Communal feelings in our country.

Sri S. Bhakthavatsalu, Divisional Secretary, S. R. E. Sangh expressed that Railwaymen should be more united and work hard to implement the Second Five-year Plan in a successful manner.

Sri M. Thyagarajan praised the valuable services rendered by Nehruji

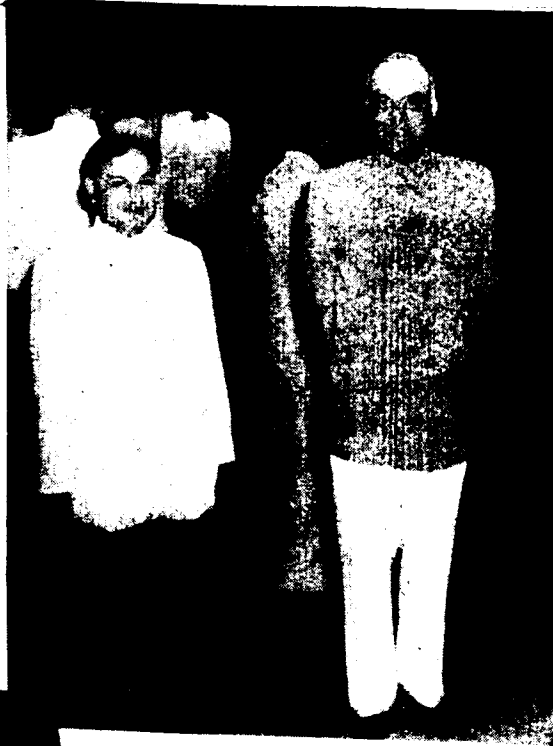
and prayed the Almighty to bless him with long life and good health.

Sri T. R. Kuppusawmi, President of the Station Committee, while welcoming the Public Relations Officer, Deputy Mayor and other speakers expressed that the Indians in the entire world could not forget the yeoman services rendered by Nehruji to get freedom and to establish Peace and Prosperity in India.

Sri M. N. Sivaramakrishnan, Secretary of the Committee, proposed vote of thanks. With the singing of "National Anthem", the celebration came to an end.

M. K. Srinivasan, Stenographer, S. Rly. and Bhanumathi were married on 8-9-57

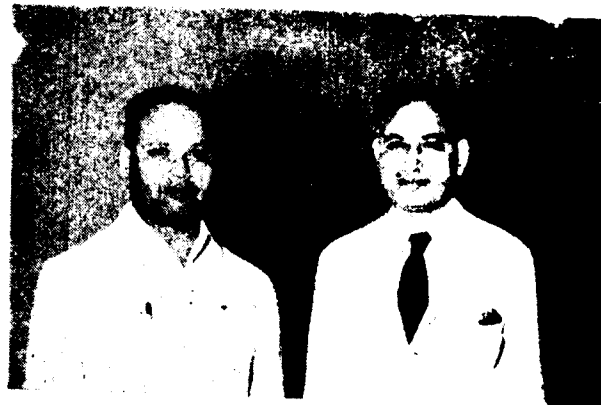




Sri B. G. Balakrishnan, SAO (Finance), giving the Presidential address at the Annual General Body Meeting of the Association on 28-9-57

Sri T. P. Ramakrishnan, APO-S II and Secretary of the Association reading the Annual Report

Ratan Lall, COPS, who was appointed Director, Traffic (Transportation), Railway Board and Sri T. A. Joseph, GM, at the farewell party held early in November. Right: A section of the guests Smt. Ratan Lall is on extreme left



Sri P. H. Sharma, our new COPS and Sri Ratan Lall

CLASS II OFFICERS' ASSOCIATION

Sri S. Ramamurthy, Treasurer, reading the Statement of Accounts

A section of the officers who attended the meeting



The guests at the farewell party





The staff of the Chief Engineer's Office arranged a party on 19th October to bid farewell to Sri G. Ramulu Reddy after a service of 30 years



Sri M. Singaravelu, our new Chief Security Officer



Sri B. G. Balakrishnan, Chairman, Executive Committee of the Central District of Bharat Scouts and Guides addressing the Annual Meeting of the Central District. Right : A section of the gathering



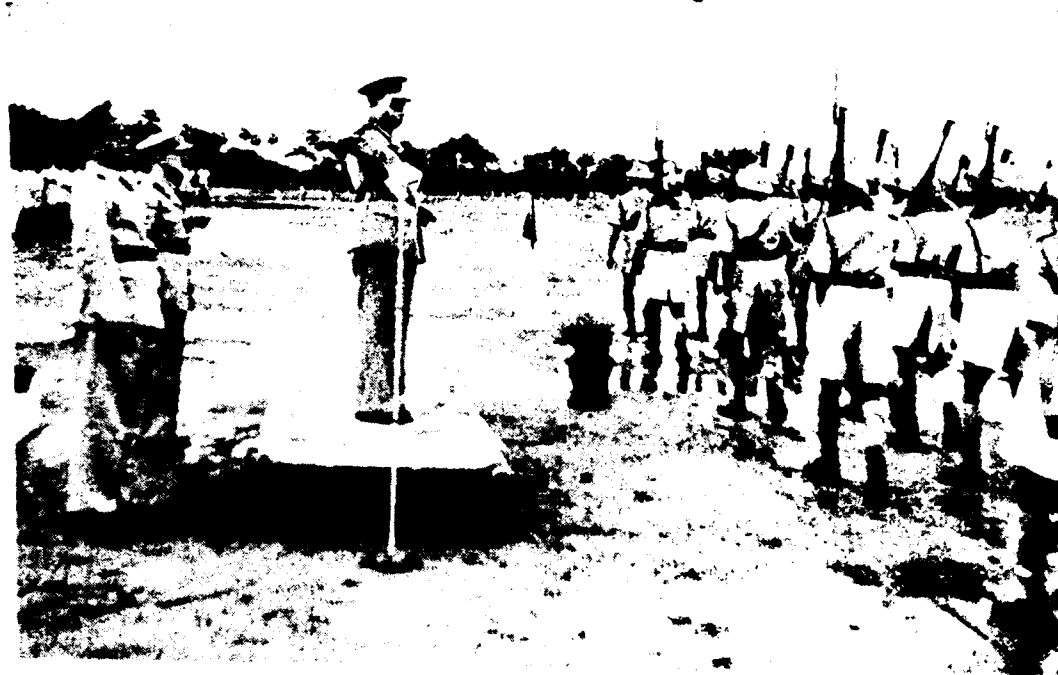
Sri S. Mantharam, Vigilance Officer

Members of the Central District Association



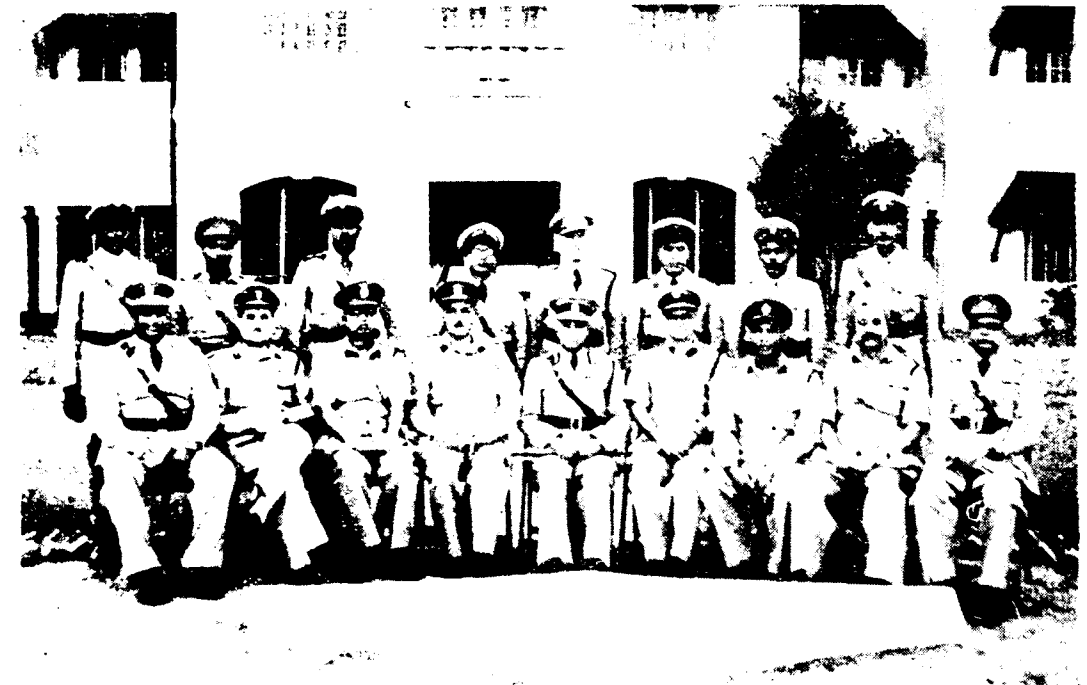
Sri S. Bashir Ahmed, Security Officer

INSPECTOR-GENERAL, RAILWAY PROTECTION FORCE, AT KIMBER GARDENS



Sri S. Parthasarathy Iyengar, I.G., R.P.F., taking the salute at a march-past by the Sainiks of the Training Centre at Kimber Gardens, Trichinopoly, early in November

The I. G. inspecting the parade



The I.G. with Security Officers who attended the ceremonial parade

Sri M. Nataraja Iyer, Officiating Office Supdt., DS's Office, Trichy, was honoured at a party held on 14-10-57 on the eve of his retirement. Photo shows Sri P. K. Madhava Menon, DS., speaking on the occasion



ANNOUNCEMENT

It has been decided to hold the Third All-India Cost Accountants' Conference on 18th and 19th January 1958 at Taj Mahal Hotel, Bombay.

Delegate Fee is Rs. 30 (inclusive of soft drinks and dinner at Taj).

All those who are interested in attending or participating in the proceedings of the Conference are requested to contact The Bombay District Society of the Institute of Cost & Works Accountants, C/o R. Nanabhoy & Co., Cost Consultants, Ballard House, 14, Mangalore Street, Fort, Bombay-1. Telephone No. 26-2571.

Open to all. *Not* restricted to Cost Accountants.



M. Prabhakar, CCS's Office (Rates Section) and P. Chandra Leela were married on 23.8.57

SOUTHERN RAILWAY TENDER NOTICE

1. The Divisional Superintendent, Southern Railway, Madras Division, Rayapuram, Madras-13, invites SEPARATE Sealed Lumpsum-cum-percentage Schedule tenders for Item 1 and Percentage Schedule tenders for Item 2 below to reach him NOT LATER THAN 16 HOURS ON 23RD DECEMBER 1957.

Serial No.	Name of work	Total approximate value of the contract. Rs.	Earnest money to be paid. Rs.
(1)	PERAMBUR—Provision of 4 units of Type III and 12 Units of Type II Staff Quarters (Storeyed Type)	80,000	2,400
(2)	MADRAS-ARKONAM—Relaying existing 90 lbs. B.H. rails on C.I. Pot sleepers with 90 lbs. 'R' rails on CST/9 Sleepers for 23.6 miles (UP and DOWN lines from Mile 2½ to Mile 6 and from Mile 34 to 41/22)	2,16,000	6,500

2. Last date for Sale of Tender Forms: 15 hours on 19th December 1957.

3. Cost of Tender Form EACH: Rs. 10.

4. Last date for receipt of earnest money by the Divisional Paymaster, Rayapuram, Madras-13: 12 hours on 20th December 1957.

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



The Railway Institute, Mysore won both the 'Doubles' and the 'Fives' at the Mysore Regional Badminton Tournament (1957-58). Photo shows Sri P. T. Padmanabhan, DS., Mysore, distributing the Trophies

The Sportsmen of the Railway Institute, Guntakal with the Divisional Supdt. (seated centre) in the foreground are the Trophies annexed by them in various events



SOUTHERN RAILWAY

TENDER NOTICE

Tenders in the prescribed form will be received by the Chief Engineer, Southern Railway, Madras-3, upto 16-00 hours on Monday the 30th December 1957 separately for the following two works :—

Serial No.	Name of the work	Amount of earnest money	Last date of payment of earnest money	Approximate value of contract
		Rs.		Rs.
1	Stone ballasting in lieu of existing sand ballast for 25 miles from mile 291/6 to 314/18 between MOLAGAVALLI and KUPGAL Stations, Guntakal Division.	19,900	15.00 hours on Tuesday, the 24th December 1957.	6,63,750
2	Stone ballasting in lieu of existing sand ballast for 20 miles from mile 314/18 to 334/18 between ADONI and MATMARI Stations, Guntakal Division.	15,800	Do.	5,26,350

II. Tender forms can be obtained from the Chief Engineer on production of a receipt for Rs. 10 paid to the Chief Cashier, Southern Railway, Madras-3 or to the Divisional Paymaster, Guntakal or to any Station Master on the Southern Railway towards the cost of EACH tender form for EACH work. Under no circumstances will the amount paid for the tender form be refunded. The tender form is not transferable.

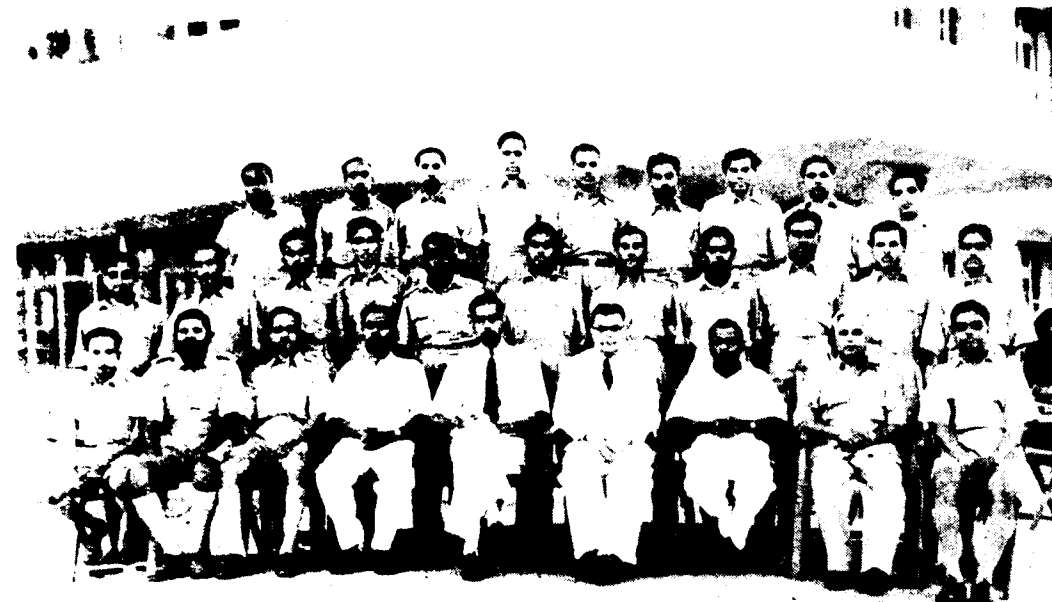
III. The tender forms will be issued only upto 15.00 hours on Monday, the 23rd December 1957.

IV. Further particulars can be had from the Chief Engineer, Southern Railway, Madras 3.

December 1957

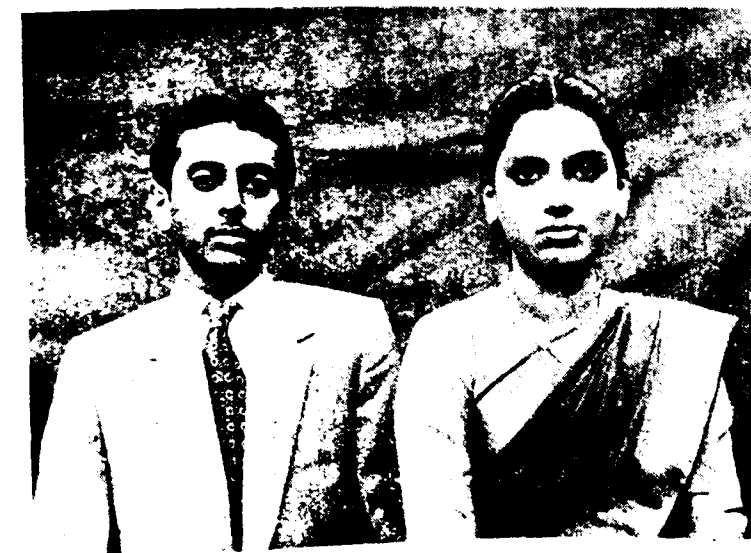
S. R. NEWS

117



The Madura Ambulance Division (S. Rly.) bid Farewel to Dr. R. S. Padaki, Divisional Surgeon and DMO Madura, on the eve of his transfer to Perambur, Madras. Dr. Padaki is succeeded by Dr. P. R. Balakrishnan at Madura

M. Venkateswara Rao and Venkatasatyamani, daughter of Sri T. Venkateswara Rao, PA to CSO/MS, were married on 10-11-57



BREACHES BETWEEN NAYUDUPET AND AKKAMPET

December 1957

S. R. NEWS



Railway Track washed off the bank near Dhoravani Chatram

A view of the main road near Nayudupet Railway Station



Photos : C. V. B. Menon



The bridge at the outer signal of Nayudupet Station with the embankments on either completely washed away by flood waters. The damage to this bridge was similar to that which occurred at Ariyalur

The Divisional Supdt., Bezwada, accompanied by the Collector and DSP., Nellore, inspected the damages caused by the floods



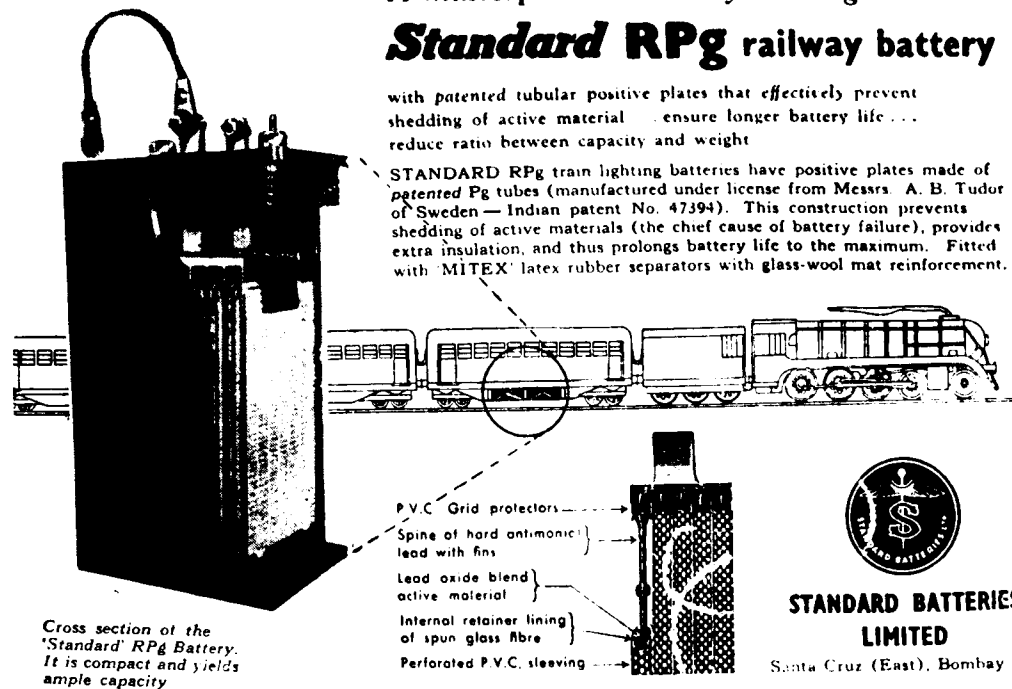
Photos : C. V. B. Menon

A masterpiece in battery making!

Standard RPg railway battery

with patented tubular positive plates that effectively prevent shedding of active material... ensure longer battery life... reduce ratio between capacity and weight

STANDARD RPg train lighting batteries have positive plates made of patented Pg tubes (manufactured under license from Messrs. A. B. Tudor of Sweden—Indian patent No. 47394). This construction prevents shedding of active materials (the chief cause of battery failure), provides extra insulation, and thus prolongs battery life to the maximum. Fitted with MITEX latex rubber separators with glass-wool mat reinforcement.



SOUTHERN RAILWAY TENDER NOTICE

Tender No. S/236/VII/F2/M/434.

Sealed tenders are invited for the supply of component parts of 150 sets of Single Line Token Block Instruments and will be received by Controller of Stores, Southern Railway, Ayana-varam P.O., Madras-23, before 3 p.m. on 26-12-1957 and will be opened by him at 3 p.m. on 27-12-1957.

Copies of the Drawings required can be obtained direct from the Joint Director (Signal & Tele-communication), Research Design & Standardisation Organisations, Baroda House, Annexe, New Delhi, on payment of the prescribed price.

The prescribed form of tender is obtainable on payment of Rs. 5 per copy in cash or by M.O. Remittance by any other means will not be accepted.

The last date for the receipt of earnest money, viz., Rs. 500 by the Chief Cashier, Southern Railway, Madras-3 is 24-12-1957.

Tender forms will not be issued after 3 p.m. on 23-12-1957.

P. N. TALATI,
Controller of Stores.

Our Commercial News Letter

EARNINGS :

The approximate earnings for the month of September 1957 compare as under with the corresponding period in 1956.

	Rupees in lakhs	
	Sept. 1957	Sept. 1956
Passengers ..	1,54.62	1,51.19
Other Coaching ..	31.71	30.36
Goods ..	2,22.96	1,92.42
Sundries ..	8.51	9.46
Total ..	4,17.80	3,83.43

TICKETLESS TRAVEL :

65,083 persons were detected travelling without tickets in the month of August 1957 as against 66,202 in July 1957. Out of these 60,529 paid fare and penalty on demand : 2,948 were prosecuted and 1,662 were imprisoned. The total fare and penalty realised from them amounted to Rs. 1,20,357.

At 7
this morning
take tea
and start
the day fresh

I am Tea -
I am
your friend
in your
worst and best
moments

PST 180

SOUTHERN RAILWAY

TENDER NOTICE

Tender No. S/235,1 GB4/F/1525 of 5-12-1957.

Sealed tenders are invited for the supply of 130½ tons of Steel Class IV to IRSM4 Rounds of sizes and will be received by Controller of Stores, Southern Railway, Ayanavaram P.O., Madras-23, before 3 P.M. on 2-1-1958 and will be opened by him at 3 P.M. on 3-1-1958.

The prescribed form of tender is obtainable on payment of Rs. 5 per copy in Cash or by M. O. Remittance by any other means will not be accepted.

The last date for the receipt of earnest money, viz., Rs. 500 by the Chief Cashier, Southern Railway, Madras-3 is 31-12-1957.

Tender forms will not be issued after 3 P.M. on 26-12-1957.

P. N. TALATI,
Controller of Stores.

SOUTHERN RAILWAY

TENDER NOTICE

The Deputy Chief Engineer (Construction), Southern Railway, Egmore, Madras-8, invites *separate* sealed tenders upto 13-00 hours on 24-1-1958 for the following works on the Renigunta-Gudur Section—Conversion into Broad Gauge.

Sl. No.	Particulars of work	Approximate value	Earnest money	Cost of tender forms
		Rs.	Rs.	Rs.
1	Collection and training out of granite stone ballast	2,92,500	8,775	10
2	Collection and training out of hard stone ballast	1,91,500	5,745	10

Earnest money and cost of tender forms are payable to the Chief Cashier, Southern Railway, Park Town, Madras-3 and will be received by him upto 12-00 hours on 20-1-1958. Tenders will be opened at 15-00 hours on 24-1-1958 by the Deputy Chief Engineer Construction in his office.

Further particulars can be had from the Deputy Chief Engineer Construction, Egmore, Madras or the Executive Engineer, Renigunta-Gudur Conversion Works, Renigunta.



Sri Jagjivan Ram speaking at the closing day of the Inter-Railway Meet

INTER-RAILWAY ATHLETIC MEET

The Inter-Railway Athletic Meet was held at the Railway Stadium, New Delhi in the middle of last month. The record-breaking meet set up Nine new Railway records and Six National records.



A. Ramachandran cleared 12 in the Pole Vault a new Rail and India Record

Sri Karnail Singh, Member, Engineering, Railway Board, winning the Officers' Race of which he is the holder for several years





The Regional Railway Users' Consultative Committee met at Bangalore on 4th December

Advantages of Electrification

(Continued from page 90)

Due to the increase in line capacity consequent on electrification, it will be possible to cater for additional transport requirements of the Second Five-year Plan.

HELP TO PLAN ACTIVITIES :

The expansion of electrification under the Second Plan will reduce the requirement of loco coal at a time when a huge increase in coal production is anticipated for the development of industries and thus result in a corresponding reduction in the capital investment in the public sector.

Railway electrification under the Second Plan is, therefore, not merely

a financially attractive proposition in itself but will also have a beneficial effect on many of the activities sponsored in the Plan.

The 14th of December marks the beginning of electrification and promises to be the starting point of a great advance in transport and economic progress of the country.

The happiness of the constituents and the prosperity of the people are the greatest rewards for all classes of railwaymen whose enthusiasm and efforts of yesterday and today are ushering in a bright tomorrow. This reward will continue to urge them to even greater efforts in the service of the nation in future.



F.C. 229 / D

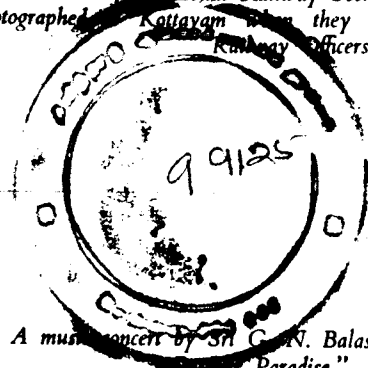
In deep dream of peace
I lay on my bunk —
I woke with a start
When down came this chunk.
Of paint from the ceiling,
Of workmanship revealing :

An F.C. is it
Or on wheels just a junk ?
One less than two thirty,
Compartment D,
Lest I should be curty
Let others also see.

S. K. M.



The members of the Zonal Railway Users' Consultative Committee with the GM and other Heads of Departments photographed at Kottayam when they held a meeting there on 28th November. Right: The members with Railway Officers at Edapalayam near the Periyar Game Sanctuary



A musical concert by Sri G. N. Balasubramanyam was arranged at Hotel Dasaprakash on 13th October by the name "Paradise", S. Rly., Madras. Right: A section of the gathering



TRAVEL MANNERS

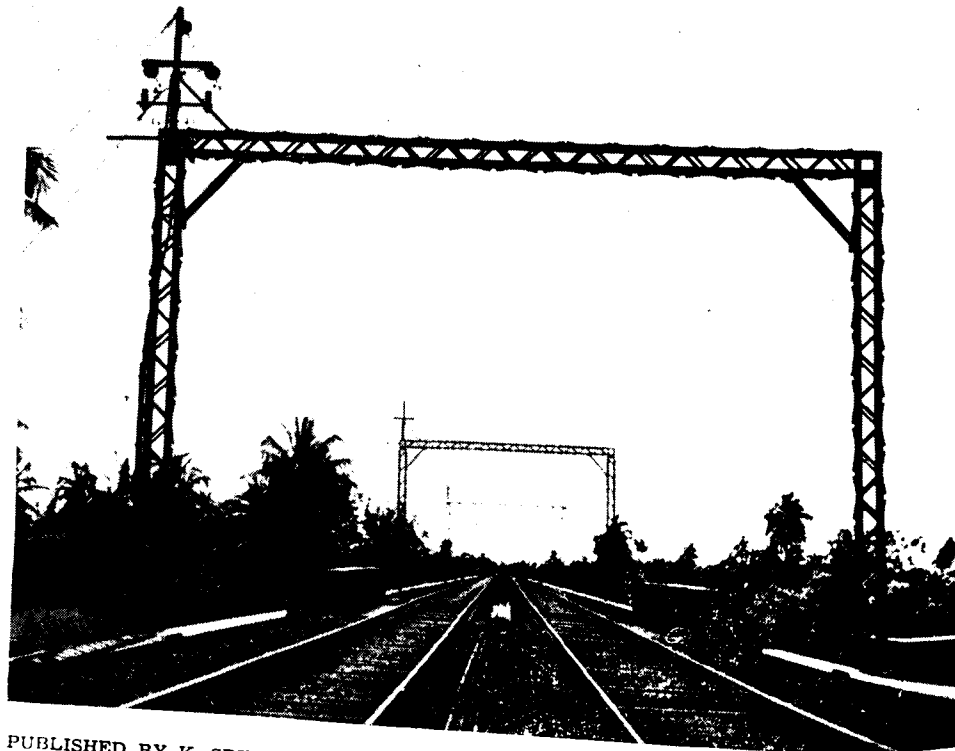
- * CLEANLINESS is next to Godliness. Let us cultivate the habit of cleanliness. We can help by not throwing scraps of food, skins and peel of fruit and water on platforms or in compartments. These should be consigned to the dustbins.
- * SPITTING indiscriminately on platforms is unhygienic. It is also bad manners. Let us use spittoons.
- * Let us not use cooled and filtered drinking water for other purposes.
- * Let us avoid sitting with the feet on the seat. This is annoying to others in the compartment, and is not good manners either.
- * Booking our heavy luggage in the brake-van will give our fellow passengers and ourselves more room in the compartments.
- * It is an offence to smoke in a railway train when requested by a fellow passenger not to. Let us avoid smoking when requested, or when the compartment is crowded or the doors and windows are shut.
- * Railways are the Nation's property. We can help to safeguard these by apprehending persons pilfering or causing damage to railway property. They should be pointed out or turned over to uniformed Railway Staff on duty. Unsocial elements indulging in unauthorised alarm chain pulling could be dealt with in like manner.

ISSUED BY THE CENTRAL RAILWAY



This 3000-volt D.C. double purpose electric locomotive with a tractive effort of 3120 h.p. being put into use on the E. Ry. will be the most powerful to run on Indian Railways

A view of the track structures on the main line section of E. Railway



EDITED & PUBLISHED BY K. SRINIVASAN, PUBLIC RELATIONS OFFICER, SOUTHERN RAILWAY
AT 18-A, MOUNT ROAD, MADRAS-2 AND PRINTED BY V. ANANDA KRISHNA CHETTY, B.A.
AT HOE & CO. THE 'PREMIER PRESS', 31 STRINGER'S ST., MADRAS-1