

Southail news

1957- June

VOL. NO. 3



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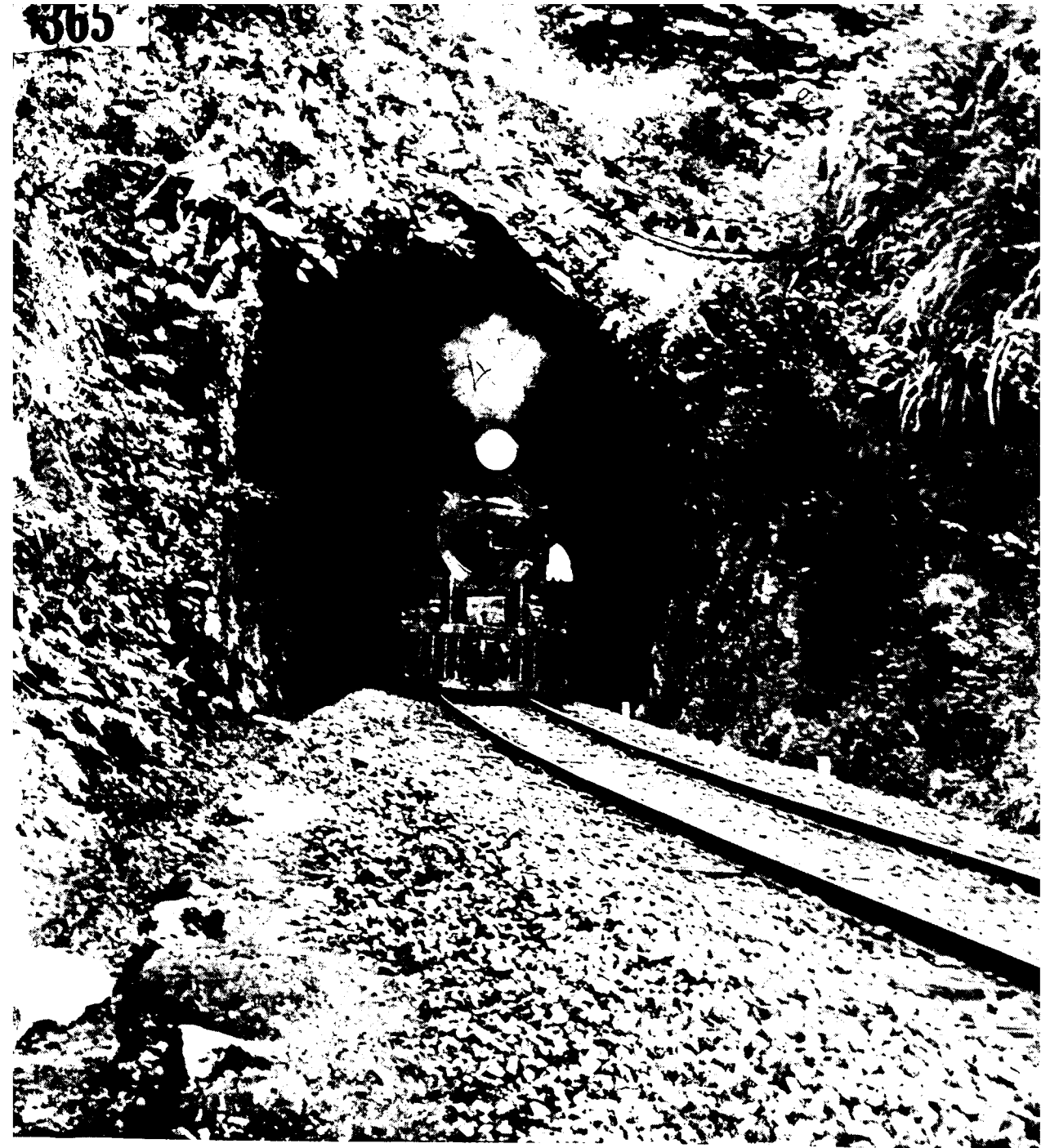
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Southern Railway

PUBLISHED BY THE SOUTHERN RAILWAY

VOL. IV

JUNE 1957

NO.

SOUTHERN RAILWAY

NOTICE

CONCESSIONAL RAIL-CUM-ROAD AND RAIL-CUM-AIR RETURN TICKETS TO SRINAGAR Via PATHANKOT

With effect from the 1st April, 1957, concessional Rail-cum-Road and concessional Rail-cum-Air Return Tickets for First, Second and Third Classes are issued from the undermentioned stations to Srinagar.

Madras Central	Devangere	Mangalore
Nellore	Kolhapur	Coimbatore Jn.
Tenali	Sangli	Salem Jn.
Guntur	Hubli	Trichinopoly Jn.
Powerpet	Belgaum	Madura Jn.
Ellore	Bellary	Tanjore Jn.
Rajahmundry	Guntakal	Chidambaram
Cocanada Town	Cuddapah	Trivandrum Central
Masulipatam	Chittoor	Tuticorin
Bangalore City	Anantapur	Tinnevely Jn.
Bangalore Cantt.	Ernakulam Jn.	
Mysore	Cochin Harbour Terminus.	

2. These concessional return tickets will be issued upto and inclusive of the 31st October 1957, available for three months for completion of the return journey, from the midnight of the date of issue of the ticket or, where tickets are issued in advance of the journey, from the date of commencement of the outward journey.

3. No break of journey on the outward trip is permissible on these return tickets but break of journey is allowed on the return trip, subject to the usual conditions governing break of journey on ordinary tickets.

4. BASES OF FARES :

(a) Rail-cum-Road Return Tickets :

First and Second Class ... 1-1/3 single journey fare over rail plus Rs. 27 for onward and return journey over road.

Third Class ... 1-1/2 single journey fare over rail plus Rs. 27 for onward and return journey over road.

Note.—Children over 3 years and under 12 years of age will be charged half the above fare for the rail portion and the full fare of Rs. 27 for the road portion of the journey.

(b) Rail-cum-Air Return Tickets :

First and Second Class ... 1-1/3 single journey fare over rail plus Rs. 76 for onward and return journey by air.

Third Class ... 1-1/2 single journey fare over rail plus Rs. 76 for onward and return journey by air.

Note.—Children over 3 years and under 12 years of age will be charged half the above fare for the rail portion and Rs. 38 for the air portion of the journey. Children below 3 years will be charged for the air portion only, at Rs. 8 per child.

5. Further information may be had from the Station Masters or from the Chief Commercial Superintendent, Southern Railway, Madras-3.

Chief Commercial Superintendent

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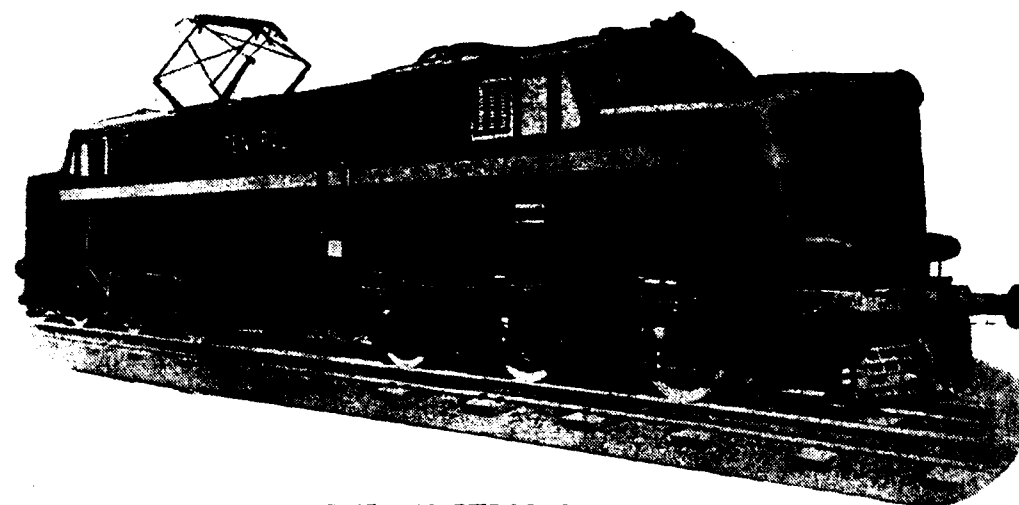
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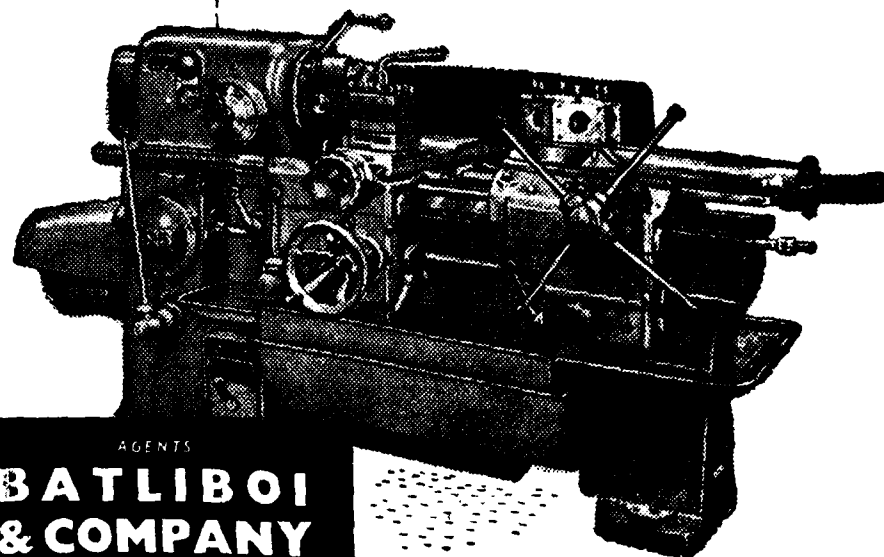
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(Official Organ of the Southern Railway)

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VOL. IV

No. 3

Editor :

K. SRINIVASAN

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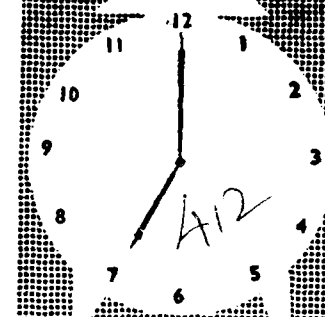
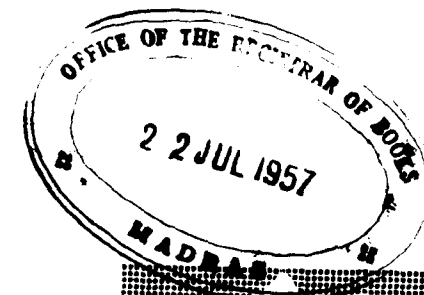
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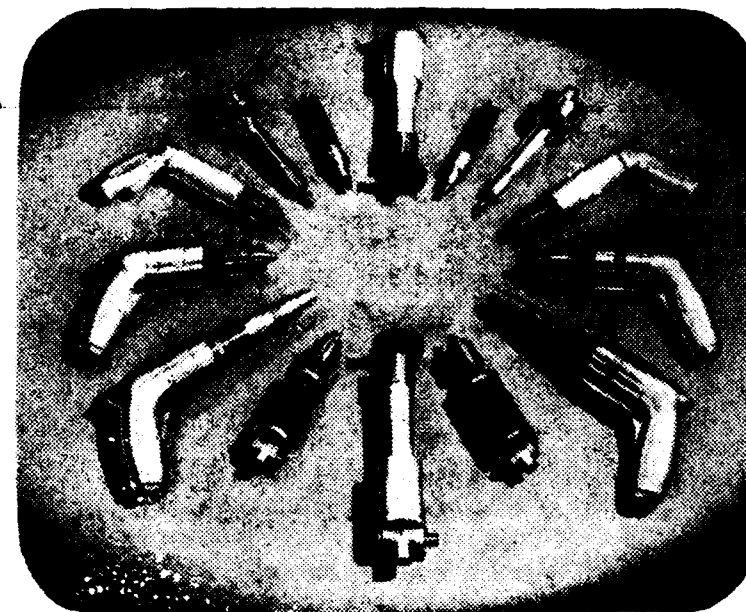
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Cover : Train emerging from the longest tunnel
on the ghat section between Ayankaru
and Tenmalai.



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SOUTH RAIL NEWS

VOL. IV

JUNE 1957

No. 3

REVISED RAIL FREIGHT MIGHT BRING IN 55 MORE CRORES YEARLY

THE terms of reference of the Freight Structure Enquiry Committee were :

(i) To review the present railway freight rate structure in all its aspects and to suggest what modifications should be made, bearing in mind the needs of a developmental economy and the necessity for maintaining the financial stability of the Railways :

(ii) To examine whether the statutory provisions dealing with the responsibility of Railways as carriers need any and if so, what modifications ; and in the light of the modifications proposed, whether any adjustment in freight rates is warranted :

(iii) To examine what changes, if any, are needed in the existing constitution, jurisdiction and rules of procedure of the Railway Rates Tribunal, so that the Tribunal might be a more effective and expeditious instrument for adjudication of railway freight matters at a reasonable cost to the litigant ; and

(iv) to make recommendations.

FREIGHT STRUCTURE ENQUIRY COMMITTEE RECOMMENDATIONS :

Regarding the first objective, modifications in the present freight structure which, in their totality of effect, may help to fill the annual plan gap of about Rs. 55 crores of the Indian Railways are believed to have been suggested by the Railway Freight Structure Inquiry Committee.

The Committee, which had the stupendous task of examining the cases of over 3,000 items of goods falling under about 15 schedules for purposes of priority of movement and classifications in the matter of fixing freight rates, is believed to have succeeded in a

large measure in the primary objectives of maintaining the financial stability of the Railways and the needs of a developmental economy.

The question of any downward revision of rates does not appear to have arisen in any case, but a proper balancing of the relative ratio as well as rationalisation of the different extra levies such as terminal, minimum short distance, transshipment and handling charges as well as the present surcharge of 6½%. In the rupee on total freight on all goods not exceeding 20 maunds are expected to afford relief in certain cases. The findings and recommendations of the Committee will be incorporated in Railway budget to be presented to Parliament during the current month.

Regarding statutory provisions pertaining responsibility of Railways as carriers requiring any modification, so far there has been no announcement by the Committee.

But as a result of readjustment of rates between commodities which need support against competition to enable the survival of particular industries and trades, the relative ratio of rates between competitive and comparable value in the Nation's economy has been sought to be so adjusted as to remove the anomalies complained of by Railway users as operating against particular interests.

Regarding terms of reference to the changes in constitution, jurisdiction and rules of procedure of the Railway Rates Tribunal, the Committee is believed to have favoured a more elastic procedure.

The Committee would have had in view the three considerations that the charges must be remunerative to the railways, that they must provide for the increase in the costs of operating

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the railway undertaking, and for its future development. It seems that the total incidence of the revised rates will be more than the present supplementary charge of 12.5 per cent, which will be withdrawn when the revised rates are brought into force. The difference will be that, whereas the surcharge is a flat rate, the revised rates will be 'selective variation' of the rates.

While introducing the Railway Budget in the Lok Sabha the Railway Minister said that the estimated additional earnings from the increased supplementary charge announced by him would be about Rs. 11.3 crores for goods traffic and Rs. 1.2 crores for parcels

traffic per year, but since the increase was to take effect only from July 1 next, the extra earnings for the current financial year were expected to be only about Rs. 9½ crores.

According to the Finance Minister's Budget speech in the Lok Sabha on 15th May 1957, there is going to be an increase of 5 per cent in the passenger fares for distances upto 30 miles, season tickets being exempted. From 31 to 500 miles, there is going to be an increase of 15 per cent in the passenger fares. For longer distances, over 500 miles, there is going to be an increase of 10 per cent. By these means, it is expected that the revenue will be 14 crores.

**GROUP PHOTO OF THE MEMBERS OF THE COMMERCIAL COMMITTEE
OF INDIAN RAILWAY CONFERENCE ASSOCIATION AND RATES
OFFICERS' SUB-COMMITTEE FOR 1956-57**



Sitting : Mr. D. Jehangir, C.C.S., W. Ry., Mr. S. K. Mukerji, C.C.S., N. Ry., Mr. S. K. Mukerji, C.C.S., S. Ry. (Chairman), Mr. R. K. Bokil, C.C.S., C. Ry., Mr. B. Mazumdar, C.C.S., S. E. Ry.
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NOTES ON CURRENT RY. TOPICS

RAILWAY FREIGHT STRUCTURE COMMITTEE CONCLUDES WORK

Sri A. Ramaswami Mudaliar, Chairman of the Railway Freight Structure Enquiry Committee and some Members of the Committee met the Railway Minister, Sri Jagjivan Ram, early in May.

The Committee, which commenced its work in August 1955, concluded its deliberations and submitted its report to Government.

Present at the discussions were the Deputy Minister for Railways, Sri Shah Nawaz Khan, Sri T. N. Singh, M.P., and Sri A. K. Basu, Members of the Committee, and Members of the Railway Board.

Thanking the Chairman and Members of the Committee for the "valuable work" done by them, the Railway Minister said that the Committee had been engaged in an arduous task and had covered a wide field during its deliberations. The Committee's report, he said, was receiving the close consideration of Government.

The Committee's other three members were: Sri D. K. Barooah, M.P., Sri V. P. Bhandarkar and Sri I. S. Puri, former Financial Commissioners for Railways.

RAILWAY COLLEGE CAPACITY TO BE INCREASED

The capacity of the Railway Staff College at Baroda is to be nearly quadrupled under a scheme of expansion sanctioned by the Railway Board at a cost of about Rs. 17.5 lakhs.

The College at present has capacity for training only 30 Officers at a time. Under the expansion scheme, the capacity will be increased to 110.

This expansion has been found necessary to meet the growing need for trained officers in connection with the railway expansion programme during the Second Five-Year Plan period.

The Baroda College, which is the only one of its kind in the country, was opened in January 1952 to train young officers in the fundamentals of the working of various railway departments. The College has a transportation model room and two other model rooms and also a demonstration railway yard, complete with signalling and interlocking.

OUT OF GAUGE "MONSTER"

In November 1956, an American ship steamed into the Calcutta port carrying an unusual piece of cargo—a giant flywheel weighing 62½ tons with a diameter of 14 feet 3 inches, and an axle 16 feet 6 inches long. This flywheel was manufactured by General Electric, U.S.A. for the motor generator set of Tata Steel's blooming mill. A specially designed truck carried the flywheel from General Electric's Works to Schenectady to Albany from where it was transported by barge to New York.

The flywheel has reached Jamshedpur from Calcutta. But behind its transportation lies an interesting story of efforts by Tata engineers, railway authorities, and personnel of the Calcutta Electric Supply Corporation, spread over months to tackle transport problems that seemed to defy solution.

As it lay on a barge on the Hooghly, four months elapsed in planning the strategy of movement. The first problem related to the removal of the flywheel from the barge to a wagon. It was not possible to transport it from Calcutta docks to Sealdah South because of its height, which was 3 inches more than the maximum vertical clearance available on the route. So it was floated down the Hooghly river to the jetty siding at Mulajore where the Calcutta Electric Supply Corporation's 100-ton gantry crane was pressed into service in transferring the flywheel to the well wagon. Care was taken to place it at such an angle that its width fell within the available railway clearance of 12 feet 9 inches. The credit for devising this ingenious angular position goes to Tata engineers. The loading was done at Mulajore under the careful supervision of the engineering staff of the Eastern Railway.

In its journey from Mulajore to Tatanagar it was found that there were at least five points where the flywheel would not pass under the railway overbridges without hitting them. At all these points the rail track was temporarily lowered from its normal level by 1 to 9 inches to enable the flywheel to pass unhampered.

AVENUES OF PROMOTION FOR CLASS IV. RAILWAYMEN

In pursuance of the announcement made by the Minister for Railways in the course of the budget debates on March 27, 1957, in the

Lok Sabha, the Government of India have appointed a Committee for reviewing the channels of promotion available to class IV staff of Indian Government Railways in their own class and to class III service.

The Committee will consist of Sri G. D. Tapase as Chairman and Sarvashri B. B. Mathur, Senior Deputy General Manager, Northern Railway, C. V. Cunningham, Deputy Director-General, Posts and Telegraphs, A. P. Sharma, Vice-President of the National Federation of Indian Railwaymen, Miss Maniben Kara, President, Western Railway Employees Union, B. N. Datar, Director, Labour and Planning, Planning Commission, S. S. Jagota, Deputy Chief Mechanical Engineer, Chittaranjan Locomotive Works and J. N. Roy, Deputy General Manager, Eastern Railway as members.

Sri P. M. Narasimhan, Deputy Director, Establishment, Railway Board has been appointed as the Secretary of the Committee.

SHORTAGE OF SLEEPERS

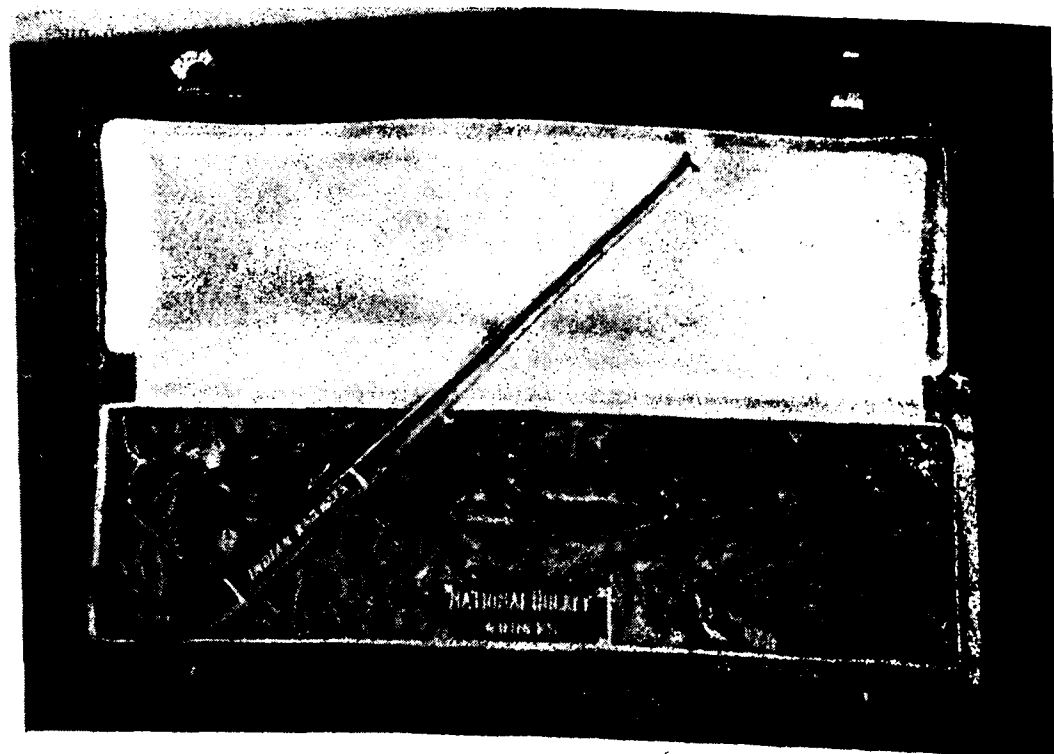
Serious shortage of railway sleepers is hampering the progress of numerous works provided in the Second Five-Year Plan of the Indian Railways.

The railways are at present using up all the wooden sleepers available within the country, but these cover only a small proportion of the total annual requirements, despite various steps that have been taken to increase indigenous production.

The balance has to be made good with cast iron and steel sleepers. There is a general shortage of these as well.

During 1956-57, the total demand of the Indian Railways was 90 lakh sleepers. However, they were able to get allotments of only 76 lakh sleepers, out of which actual deliveries amounted to no more than 46 lakh sleepers. This comprised 21 lakh wooden sleepers and 25 lakh cast iron and steel sleepers.

The miniature silver hockey stick for National Champions annexed by the Indian Railways Team



During the current financial year, railway requirements total up to 100 lakh sleepers, but the railways have been allotted only 71 lakh sleepers. Out of these, wooden sleepers account for only 25 lakhs, the balance being cast iron and steel.

RAILWAYMEN TO BE TRAINED ABROAD

Eight railwaymen drawn from the Eastern Railway and the Research Centre at the Chittaranjan Locomotive Works have been selected by the Railway Board for training in the United States of America in the maintenance, servicing and operation of diesel locomotives.

The training will be given at the works of Messrs Alco Products Inc. with whom recently the Railway Board placed an order for 100 diesel electric locomotives.

The eight railwaymen are: Sri N. Mitra, Sri R. E. P. Sinha, Sri P. G. Banerjee, Sri O. P. Mehrotra, Sri R. N. Ghosh, Sri B. K. Sarkar, Sri D. K. Bhattacharjee of Eastern Railway, and Sri O. P. Srivastava of the Research Centre, Chittaranjan.

NEW MARSHALLING YARD AT TUGHLAKABAD

A new railway marshalling yard is to be built at Tughlakabad, about 10 miles from Delhi, at a cost of over Rs. one crore, it is understood.

At present all goods traffic has to pass through either the Delhi Main or the New Delhi marshalling yards, creating heavy congestion. The existing facilities at the New Delhi yard have moreover been found to be inadequate for dealing with the increased traffic as a result of greater economic activity in the country.

An advantage of locating a marshalling yard at Tughlakabad on the Delhi-Mathura section of the Central Railway, is that the present congestion in the Delhi and New Delhi yards would be greatly relieved. When the new yard is ready all goods trains would be marshalled and routed to different directions from there.

SIGNALLING WORKSHOP AT HOWRAH

The Railway Signalling Workshop at Howrah is to be expanded at a cost of nearly Rs. 12 lakhs, it is understood.

The shortage of signalling materials at present constitutes a bottleneck in the expeditious completion of various railway works. The Howrah Signalling Workshop is at present dealing mainly with repair and overhauling work.

The expansion now sanctioned will ensure the departmental manufacture of signalling materials.

MANUFACTURE OF WAGONS

A Bombay Firm, which has recently come into the field of railway rolling-stock manufacture, has secured an order for the manufacture of 250 narrow gauge wagons, it is understood.

The firm has been asked to begin delivery in April next year.

The order is part of the drive launched by the Indian Railways to develop the maximum manufacturing capacity for railway equipment within the country in order to save precious foreign exchange.

A Calcutta Firm has received an order for supply of 300 metre gauge third class coaches. The value of the order is in the neighbourhood of Rs. 1.35 crores.

Born at Allahabad on November 14, 1889, Sri Jawaharlal Nehru received his early education at home under private tutors. He went to England at the age of 15 and, after two years at Harrow joined Cambridge where he took his Tripos in Natural Sciences. He was later called to the Bar from Inner Temple. He returned to India in 1912.

Sri Nehru took keen interest in the national movement from the very beginning and became Secretary of the Home Rule League, Allahabad, in 1919. Earlier, in 1916, he had his first meeting with Mahatma Gandhi and felt irresistibly drawn towards him. He was twice imprisoned in connection with the Non-Co-operation Movement of 1920-22.

In 1926-27, Sri Nehru attended the Anti-Imperialist Conference at Brussels and visited Italy, Switzerland, England, Germany, Belgium and the U.S.S.R. In 1929, he was elected President of the Lahore Session of the Indian National Congress, which adopted complete independence for the country as its ultimate goal. He was imprisoned several times during 1930-35 in connection with the Salt Satyagraha and other Movements launched by the Congress. In 1936, he was again elected President of the Congress. He visited Spain during the Civil War there in July 1938 and later China just before the outbreak of the Second World War.

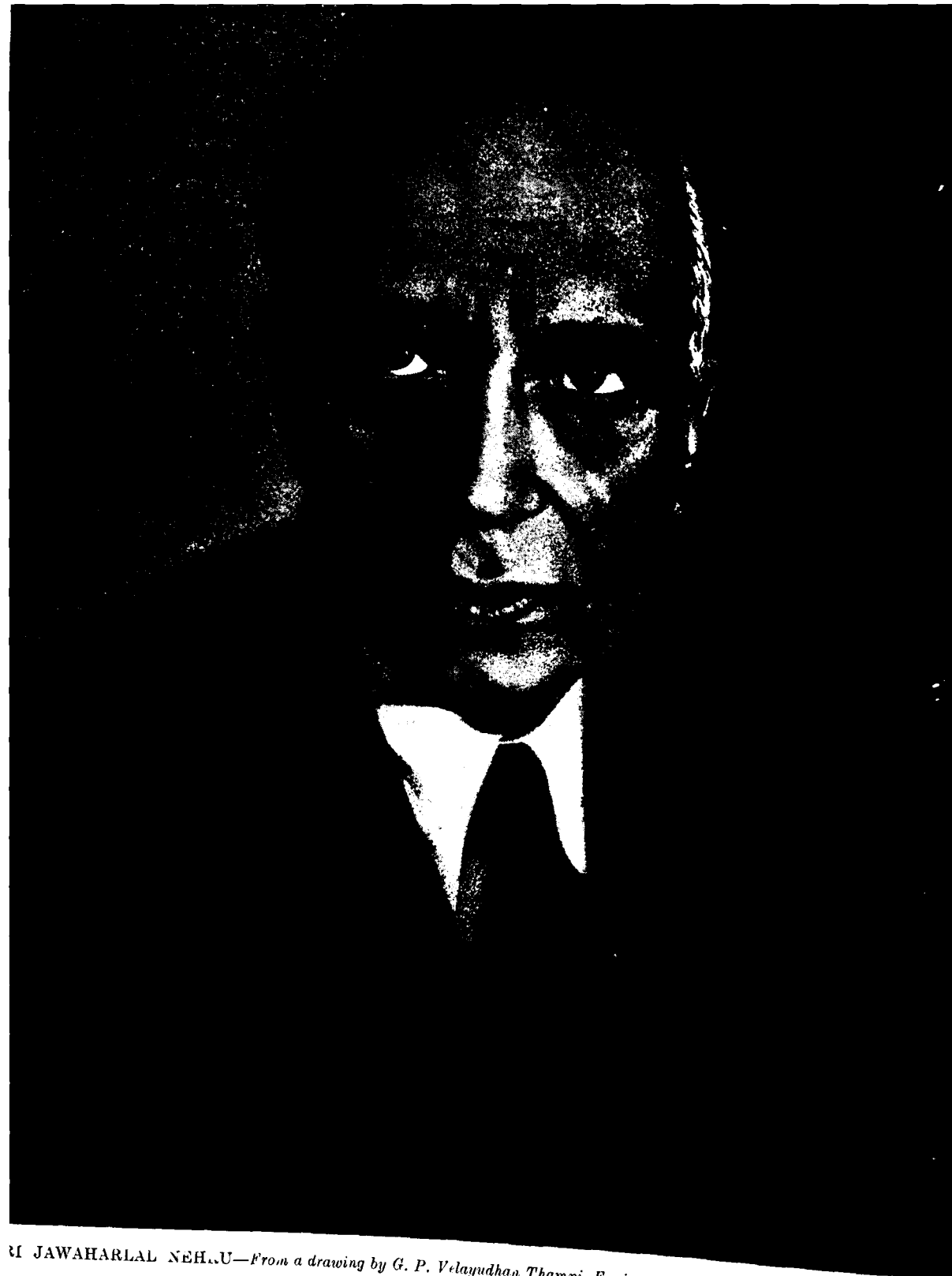
In the early forties, Sri Nehru was imprisoned for offering individual satyagraha and again during the Quit India Movement. The latter was the longest and also the last imprisonment he suffered under British Rule. After his release in June 1945, he organized legal defence for officers and men of the Indian National Army during their trial by the British.

Sri Nehru was elected President of the Congress for the fourth time in 1946 and again for three more terms from 1951 to 1954. In 1946, he played a prominent part in the negotiations leading to the transfer of power, and, as a preliminary, formed the Interim Government as Vice-President of the Viceroy's Executive Council in September that year.

On the transfer of power on August 15, 1947, he became the first Prime Minister of Independent India and continues to hold that office. The last ten years of his career have been packed with a large number of notable events. The more important of these have been his sponsorship of the Asian Conference on Indonesia (1949) and the Asian-African Conference at Bandung (1955); his addresses to the General Assembly of the United Nations (1948 and 1956); and his visits to the U.S.A. (1948 and 1956), the U.S.S.R. (1955) and China (1956). For his life-long service to the nation and his "heroic endeavour in the cause of peace for mankind," the President of India awarded 'Bharat Ratna', the highest award of honour, to Sri Nehru on July 15, 1955.

His books, *Glimpses of World History*, *Autobiography* and *Discovery of India* have been acclaimed as works of considerable literary merit and have attracted world-wide attention.

Sri Nehru was elected to Lok Sabha in the 1957 general elections from the Phulpur Constituency of U.P.



11 JAWAHARLAL NEHRU—From a drawing by G. P. Velayudhan Thampi, Engineering Department, S. Rly., P. rambur, Mad



SRI JAGJIVAN RAM

Born on April 5, 1908, at Arrah in Bihar. Sri Jagjivan Ram was educated at Banaras and Calcutta. Early in the life, he took an active interest in the social welfare of Harijans and was elected Secretary of the Harijan Sewak Sang in Bihar. In 1936, he presided over the Lucknow Session of the All-India Depressed Classes League, which was inaugurated by Mahatma Gandhi. Later, he also presided over a number of Conferences of the Scheduled Classes in Bengal, Uttar Pradesh, Bombay and Punjab.

In 1937, he was elected as a member of the Bihar Legislative Assembly and was appointed as Parliamentary Secretary to the Development Minister. He, however, resigned the post in November, 1939, in accordance with the decision of the Congress to quit office. He was elected Secretary of the Bihar P.C.C. the same year. He was imprisoned in 1940 for taking part in the individual Civil Disobedience Movement and again during the "Quit India" Movement of 1942.

After his release in October, 1943, Sri Jagjivan Ram toured various provinces for strengthening Depressed Classes Organisations. In 1944, he presided over the Conference of all All-India Depressed Classes League at Kanpur. In 1946, he was elected to the Bihar Legislative Assembly and was invited by the Cabinet Mission to present the views of the Depressed Classes. In September the same year, he joined the Interim Government as Member for Labour. On August 15, 1947, he became Minister for Labour. He was elected Chairman of the Preparatory Asian Regional Conference of I.L.O. held in New Delhi in 1947.

He also led the Indian Delegation to the I.L.O. Conferences at Geneva in 1947 and 1950 and was unanimously elected President of the latter Conference.

After the general elections in 1952, Sri Jagjivan Ram became Union Minister for Communications. It was during his tenure that India's air transport was nationalised. He relinquished charge of Communications and took over Railways and Transport in December 1956, following the resignation of Sri Lal Bahadur Shastri.

He was returned unopposed to Lok Sabha in the 1957 general elections from the Shahabad South (Reserved) Constituency in Bihar.

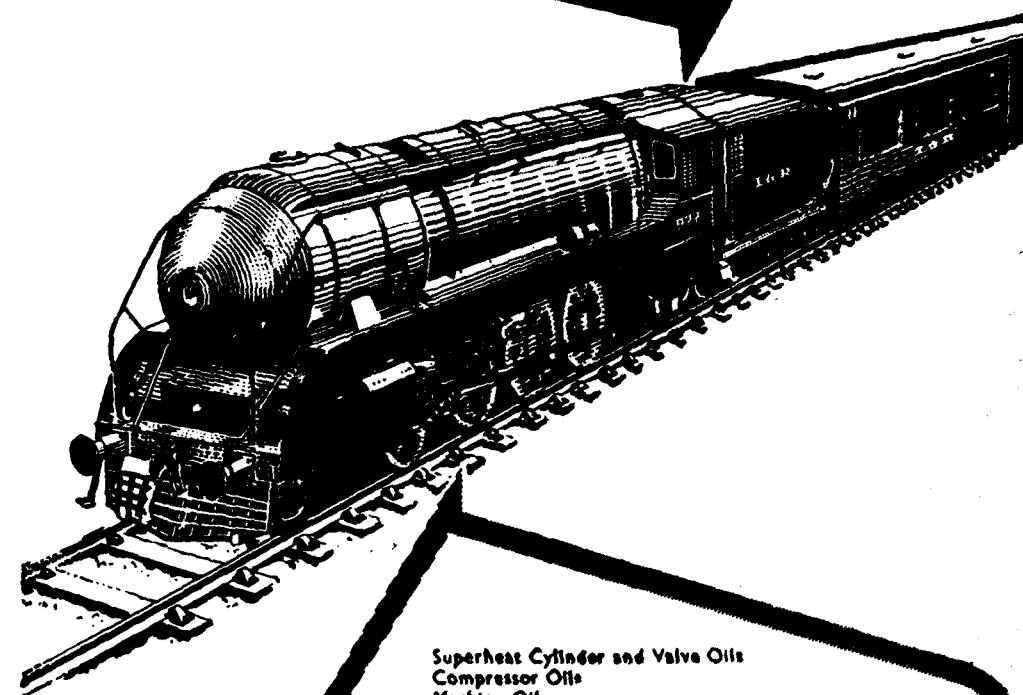


SRI SHAH NAWAZ KHAN

Born at Rawalpindi in January 1914, Sri Shah Nawaz Khan was educated at the then Prince of Wales Royal Indian Military College and Indian Military Academy, Dhera Dun. He was commissioned in 1935 and served in N.W.F.P. in 1937-38. During the war, he was sent on active service to Malaya where he joined Netaji Subhash Chandra Bose's Indian National Army in 1943. He was taken prisoner and was tried at the Red Fort along with other I.N.A. Officers in 1945. He was sentenced to transportation for life, but the sentence was commuted.

He was appointed Parliamentary Secretary to the Minister of Railways and Transport in August 1952, and later he was made Deputy Minister for Railways and Transport. He was elected to Lok Sabha in the 1957 general elections from the Meerut Constituency in U.P.

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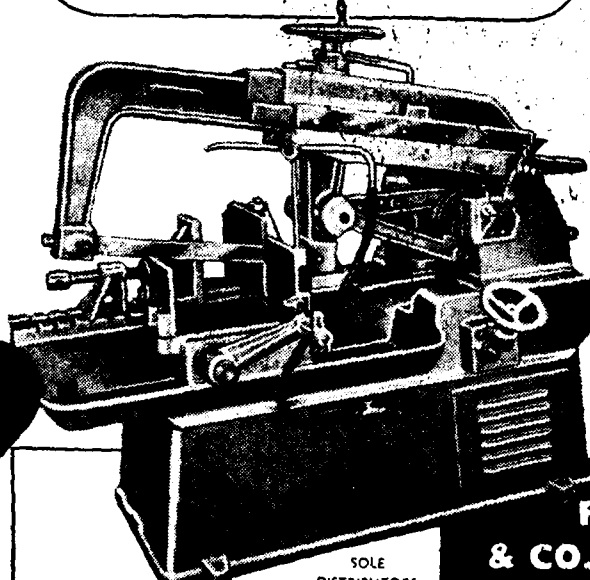


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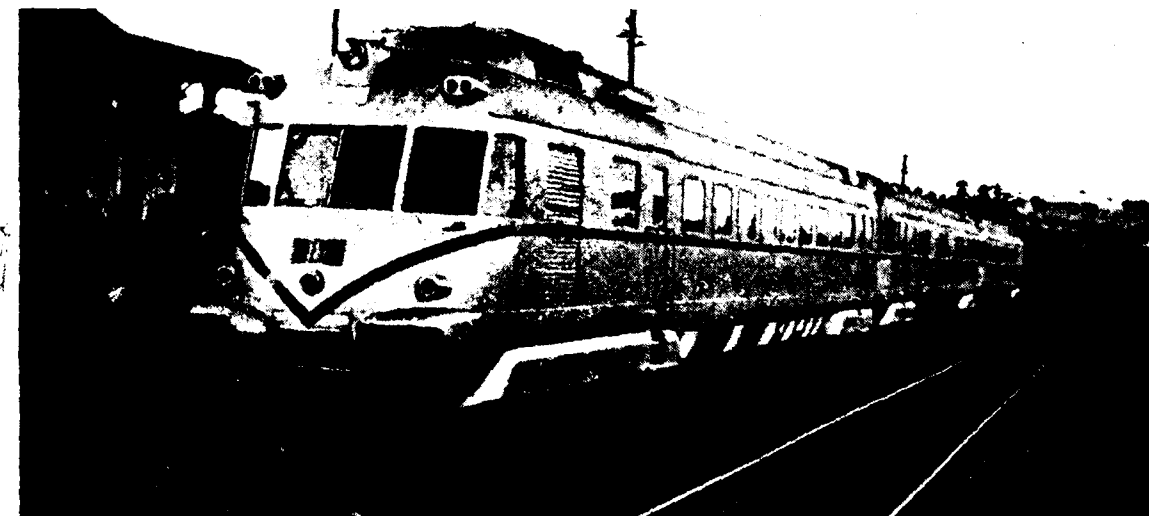
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WORLD OF RAILWAYS

ARTHUR L. STEAD

Our London Correspondent

ELECTRIFICATION forms an important plank in the modernisation programmes of railways in all parts of the world, including, of course, India and Britain. In Europe, a great many railway systems are changing over from steam to electric traction, and one of the very latest conversion schemes to be put in hand is that of the progressive Portuguese Railways.

Portugal has always held immense attraction for the foreign tourist, and since the war great efforts have been made to bring the country's rail network up-to-date. Sleek streamlined all-metal passenger cars and powerful diesel-electric locomotives recently have provided evidence of post-war rehabilitation in Portugal, and soon both passenger and goods transport in this corner of Europe will be revolutionised as electric traction largely replaces steam.

The foundations of the Portuguese Railways were laid in 1845, when the *Companhia das Obras Publicas de Portugal* (Public Works Company of Portugal) was authorised to construct, within a period of ten years, the main-line from the capital City of Lisbon to the Spanish frontier. Actually, the first section of this route (22 miles) was opened for public use on October 28, 1856, having been constructed by the Peninsular Railway Company of Portugal, and by 1858 the mileage had grown to 68.

In 1860, the Royal Portuguese Railway Company was constituted, and this company continued construction of the east-going route to the Spanish frontier, *via* Santarem-Entroncamento. Northwards out of Lisbon, there was built a main-line connecting the capital with Oporto, this work being completed in 1864. In 1865, the principal passenger terminus in Lisbon—the Santa Apollonia—was opened, and five years later regular through running between Lisbon and Madrid (Spain) was introduced.

Following the linking up of Lisbon with Oporto and the Spanish frontier, there were built other main-lines serving all corners of the country. These included the north-going route from Lisbon, *via* Torres Vedras and Leiria, to Coimbra (on the original Lisbon-Oporto trunk route); a south-going main-line to the Spanish frontier at Vila Real St., Antonio; and north and east-going routes from Oporto to the Spanish frontier stations of Valenca and Almedra respectively.

Gradually, after completing the various main-lines, branches were opened up to feed the trunk routes, and the stations improved according to experience and demands of services. In Lisbon, a new Central Passenger Station was opened in 1891, known as the Rossio Station, and over the Lisbon-Oporto and Lisbon-Madrid main-lines through dining and sleeping cars were introduced.

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S. INDIA

The Portuguese Railways of today have a total length of 2,230 route-miles. Of this, 1,755 route-miles are of 5 ft. 5½ in. track gauge and 475 route-miles of metre (approximately 3 ft. 3 in.) gauge. The narrow-gauge routes mostly comprise detached lines operating in the mountainous region in the north.

Modernised track and roadbed of the Portuguese Railways compares favourably with that of any European system, and signalling is on up-to-date lines particularly on the main traffic routes. Steam locomotives were for long exclusively employed for train haulage, and the replacement of these by electric and diesel power is a conspicuous feature of present-day activities.

Portuguese Railway modernisation commenced in earnest in 1948, when the Portuguese Railways began to acquire diverse equipment—direct or with Government aid—by means of what was known as the "Special Fund For Overland Transport". Most of this material consisted of diesel locomotives, self-propelled railcars and trailers, and all-metal passenger coaches, but there was also included much equipment for the betterment of tracks and signalling.

Portugal's stock of 460 steam locomotives now is supplemented by over 40 diesel-electric units and a number of diesel-mechanical machines. By degrees, steam locomotives will disappear from the Portuguese rails, but in the meantime good service is being performed by German-built four-cylinder compound 4-6-2 express passenger machines and two-cylinder 2-6-4 tank engines.

Diesel-electric locomotives today employed in Portugal include powerful new machines by ALCO and Whitcomb of the U.S.A., while another noteworthy American contribution is a batch of all-metal passenger coaches by Budd. "Fiat" (Italian) railcars and British-engined diesel-railcars also are helping to maintain modern service. The last-named units were built in Holland, ten railcars having been supplied for use on the metre-gauge northern lines, and 25 for the 5 ft. 5½ in. main-lines. Each unit comprises a power car with 74 seats and a control trailer with 106 seats. Two British-built 11.3 litre turbo-charged underfloor engines constitute the power plant of each twin-set. The trains run at up to the Railway's maximum permitted speed of 62 m.p.h., and have proved most popular with the travelling public.

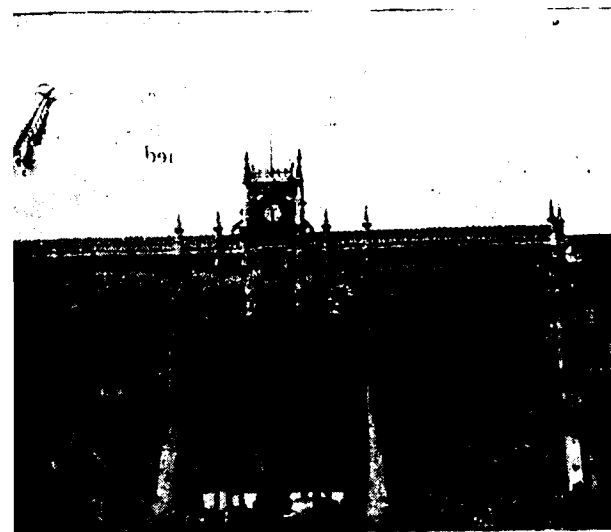
Ultimately, it is hoped to electrify most of the Portuguese Railway routes, and work at present in hand will result in about half the country's rail network being electrified. Movement by electric train over a small section of the Lisbon-Sintra route formed a feature of Portugal's 1956 Railway Centenary Celebrations, and conversion of routes in the Lisbon area rapidly is being effected.

Portugal—after much study of other European electrified railways—decided two years ago to adopt as standard the 25,000 volt 50 cycle system of operation. The first stages of electrification cover the suburban routes around the busy Cities of Lisbon and Oporto, and the Lisbon-Entroncamento 66-mile main-line stretch of the north-going trunk route. Subsequently, electrification will be carried forward from Entroncamento to Oporto, to link the latter seaport by electric service with Lisbon. After many hold-ups caused by the peculiar post-war conditions, construction also has begun of what should prove a most useful electric underground railway to serve the Portuguese Capital.

For the new Portuguese electrifications, there are being acquired 15 Bo-Bo electric locomotives, each weighing 68 tons. These eight-wheeled machines have a maximum speed of 74 m.p.h., and they will be first employed in trunk service on passenger runs between Lisbon and Oporto, where train loads average 400 tons. For use on the busy Lisbon suburban routes, there are being acquired 25 three-car multiple-unit electric trains having a maximum speed of 56 m.p.h.

The new Portuguese electric locomotives and multiple-unit trains will be fed by mono-phase alternating current, at the nominal tension of 25,000 volts and a frequency of 50 cycles, by means of polygonal-shaped light catenary lines supplying current through simple pantographs. It is expected that the tension may be varied for practical purposes between 19,000 and 27,500 volts, and the frequency between 48 and 51 cycles.

Two transformer sub-stations are being built on the new Lisbon-Entroncamento route (at Sacavem and Entroncamento respectively), and at the time of writing excellent progress is being made on the erection of the overhead transmission lines. Hand-in-hand with electrification, there is proceeding the installation



Rossio Passenger Station, Lisbon

of modern signalling and an elaborate telecommunications system. At an early date, it is hoped to commence main-line electric services between Lisbon and Carregado (22 miles). Inauguration of these electric services will be a red-letter event because the route in question is virtually that over which, in 1856, there was operated the very first public train service in Portugal. In 1957, too, Portugal expects to complete the electrification of the Lisbon-Sintra line—one of the most important tourist routes in the vicinity of the capital.

Travelling through Portugal today, one secures striking evidence on every hand of the betterments that are being derived through the modernisation plan. New passenger and goods vehicles are much in evidence on all routes; track renewals are in progress at many points; passenger and goods stations and yards are being enlarged and given up-to-date equipment and handling apparatus, such as fork-lift trucks, conveyors, and the like; workshops and stores are being put on a modern footing; and many level-crossings eliminated in the interests of safety and efficient operation.

To attract passenger and goods business, the Portuguese Railways since 1950 have been pursuing a policy for the reduction of fares and tariffs, these concessions including the quotation of special fares for party travel and "circular tour" tourist movement, and the granting of discounts for goods traffic dispatched in quantity. Container movement also is being introduced for smalls traffic of various kinds, and concessions granted for the storage of traffic at the principal stations either free or at greatly reduced rates.

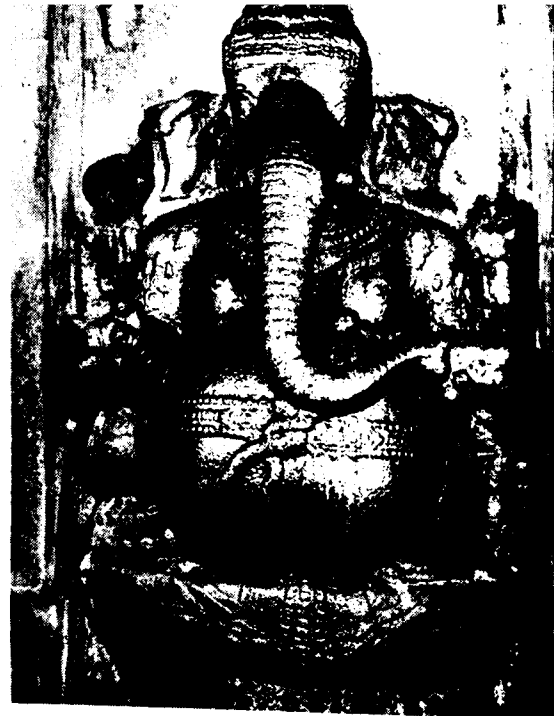
Thanks to its ambitious modernisation scheme and the new selling campaign, the Portuguese Railways gradually are showing improved results. The new electric and diesel services, although costly to install, are effecting valuable savings in operation, and enabling the railways to recapture much business temporarily lost to competitors. All-in-all, this latest European railway improvement plan is bringing in rich results.

"Whitcomb" diesel-electric locomotive for goods working on the Portuguese Railways





General view of the temple at Tirusulam



"Mahaganapathi", one of the lifelike sculptures in the temple



"Brahma" —the creator



"Kaliyamardhanam"—Krishna trampling the Kalia, serpent

A HIDDEN TREASURE

(Temple at Tirusulam)

V. KESAVA SARMA

ABOUT a mile from the Pallavaram Railway station on the Madras Egmore-Tambaram section of the Southern Railway, the ancient temple of Tirusulam is situated amidst the calm surroundings of the four picturesque hillocks. This is an ideal spot for picnic with its rich sculptural beauty and is an attraction to any artist, be he an artist of the pen, brush or lens. This temple of the tenth century is rich in sculptural beauty of the Chola and Pallava origin. As a result of its situation in a very secluded locality, it is known to very few people, though it is within about 12 miles from Madras.

The minute artistic work on the sculptures is so well and proportionately executed by the deft hands of the immortal artist of the period that the sculptures look very life-like. Fortunately many of these figures are saved from the devastation of the middle age, due to which in many parts of the country many immortal works of art were mutilated. The legend is that Lord Brahma himself worshipped Lord Siva here and hence the presiding deity is known as Brahmapuriswarar.

This temple is built on a style known as "Gajaprushtam" and the back portion of the sanctum-sanctorum is like the hunch-pose of a lying elephant. The vimana too has an indication of the back of a lying elephant. This style of temple structure is largely prevalent in Thondamandalam area only. Carvings on some of the pillars are very nicely done. Sarabha for instance is worth a special mention, as this is a rare carving of its kind.

Within a couple of furlongs of the temple, there is a huge figure of Madurai-veeran called Periasamy and towards the east of this on a small hill, the Pandava cave, where there is a mosque. This is an ideal beauty spot with abundance of natural beauty and splendour. These places are also worth a visit.

There are only a very few houses in the village of Tirusulam and most of the people are employed in the quarry works nearby.



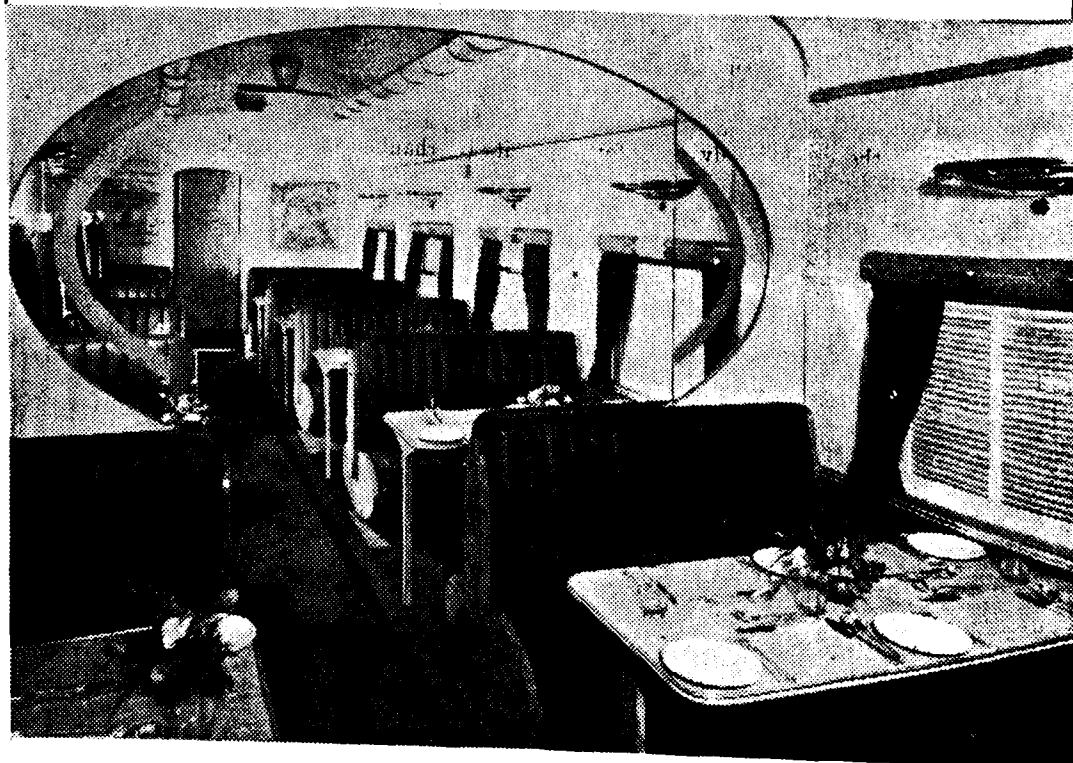
Front view of the temple



"Narayana"



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Departmental Functions in Brief THE MECHANICAL DEPARTMENT

(III)
OPRAIL

*The author is continuing the series on Departmental Functions.
The last article in this series appeared in our March 1957 issue—Ed.*

THE main functions of a railway is to transport human beings, livestock and merchandise from place to place in trains consisting of passenger and goods vehicles.

Passenger vehicles are commonly known as coaching stock, and goods vehicles as goods stock, in railway phraseology. Obviously, no train can move even a few feet without some form of motive power. The motive power used for this purpose is known as locomotive stock (steam, electric or diesel): steam at present being the most widely used form of motive power in India.

It is the main function of the Mechanical Department to supply this motive power, and also to keep all such units of locomotive stock in an efficient running condition, so as to be able to haul all types of trains with the speeds and loads as required or prescribed. In addition to this, the Mechanical Department is also responsible for efficient maintenance of all other types of rolling-stock, i.e., passenger, coaching and goods vehicles.

The administrative executive in charge of this Department is the Chief Mechanical Engineer. He is assisted by perhaps one or more Deputies at headquarters, and also Deputy Chief Mechanical Engineers who are in direct charge of the various extensive workshops (both locomotive and carriage and wagon), wherever situated on each railway system. In addition to these executives there are Divisional or District Mechanical Engineers (both locomotive and carriage and wagon) posted at headquarters, and at Divisional or District head-quarter stations. These senior officers are responsible for the day-to-day functioning and maintenance of all power and rolling-stock units within the Divisional or District jurisdictions.

An idea of the magnitude of the responsibilities of the Mechanical Department may be gauged by the fact that a railway system in India will have anything from one to two thousand locomotives of all types, approximately two thousand coaching vehicles and as much as fifty thousand goods vehicles. All these have to be maintained at a high standard for efficient running.

A locomotive, passenger coach or goods wagon, once it is put on the track to run, like all machines, is subject to normal wear and tear. After each unit of rolling stock has been doing good service for some time, it needs attention: this it receives by being sent into the workshops for what is known as a periodical overhaul. When a locomotive has completed approximately 150,000 miles of running, it is sent in to Shops for its periodical check-up.

As each locomotive comes into Shops for its overhaul, engine, boiler and tender are examined thoroughly by experts, all defects noted, and then the loco goes through the various subsidiary shops and processes, until by the time the complete overhaul is finished, the loco is as good as new, and in good fettle to haul trains for another few hundred thousand miles. All passenger and goods vehicles go through a similar procedure at prescribed intervals. By this means, all the rolling-stock available on a railway system is kept in efficient running condition, for periods up to even fifty years.

Apart from these scheduled periodical overhauls, locomotives and other units of rolling-stock are sent in to Shops for what is known as intermediate repairs, or at any time when major defect may develop suddenly, and which cannot be repaired in locomotive running sheds or at train examining depots or sick lines.

The main function of a large mechanical workshop on a railway is to maintain its scheduled output of repairs to locomotives and other rolling-stock that are sent in from time to time. The details of how this is done cannot be described in this article, which is mainly a broad outline of the functions of the entire Mechanical Department. However, it may be mentioned, that each workshop has to work out what it is capable of turning out month by month, and every man from the Deputy Chief Mechanical Engineer, Works and Assistant Works Managers, Foremen, Chargemen, Fitters, Machinists and so on down to the unskilled labourer, must do his maximum share of the day's work to keep up to the schedule laid down. Labour trouble of any sort, such

as strikes, lock-outs, etc., even of short duration, or 'go slow' tactics on the part of the vast army of workshop personnel—which may be as many as 30,000 employees—seriously upsets the output schedule.

Let us now take a short glimpse to see how locomotives and rolling-stock are kept in what is commonly known as a 'fit-to-run' condition in day-to-day operation.

The locomotive is attached to the train it is to haul with its boiler well charged with steam. A flick of the regulator by the driver starts the huge driving wheels moving, and soon the train has gathered speed and is on its way. But hours of preparation in the running shed have been necessary to get that loco ready for its journey. It has been cleaned, oiled, fuelled and every component of its intricate machinery has been thoroughly checked in shed. If the loco has developed some defect on its previous trip, the driver has booked this in his 'repair' book and fitters have swarmed over the engine checking up and rectifying all defects. Ceaselessly, throughout day and night the running shed fitters and staff are working on the locos as they come in, and only after they are declared thoroughly fit to take out a train, are they allowed to move out of the shed, when the Operating Department have called for a loco to haul a passenger or goods train.

The Loco Foreman and his staff must therefore work in close co-operation with the Operating men at that station, who may be clamouring for an engine for the trains waiting in the yard, all ready and marshalled to pull out on the next stage of their journeys. On the run, too, the driver and his crew are constantly nursing the powerful loco to ensure that the train runs 'on time.' The driver cannot afford to have the

guard to book times losses to 'loco,' as this would be a reflection on his inefficiency.

Similar care and attention is given to passenger and goods rolling-stock. When a mail, express or passenger train pulls into a big station, where train examining staff are posted, these men promptly start on their examination of every coach, working from both ends of the train. Particular attention is paid to the axle boxes, wheels, brake and coupling gear. If any minor defects are noticed, petty repairs are done on the spot. If there is a major defect, then it may mean that the coach will have to be detached from the train and eventually sent to the 'sick' line or repair depot for attention. Train examining staff also examine every goods train as soon as it has rolled into the yard. Here too, a detailed examination is given of the vital components of each vehicle, and similar action taken as in the case of passenger coaches.

The Operating Department will tell the Mechanical Department that they have to provide a certain number of passenger and goods trains per day to move the traffic, and have also framed the time table to show how these trains must move. But it is the Mechanical Department who must provide the locomotives and other units of rolling-stock in tip-top running condition to get those trains rolling from one end of the country to another. So, throughout each railway system from the Chiefs of these departments, to the unskilled labour in Shops, Shed or Depot, and the Operating men in the stations and yards, will realise that unity and co-operation is their strength, which will provide the swift fluidity of movement, and which is and must be the main objective of every railwayman.

GLOBE TROTTERS

A. V. SUGAVANESWARAN, B.E.

ARM-chair travel is my hobby. All that the arm-chair traveller, like the arm-chair politician, requires is an arm-chair. And, of course, a fertile imagination. As an arm-chair traveller you can not only travel anywhere in the world of the present-day but also go back in point of time and be a fellow-traveller with the famous globe trotters of the past.

Going right back into the 4th century A.C. we find Fa-Hien trekking his lonely way across the continent of Asia. As a staunch Bhuddist, this Chinese pioneer started on his historic travel to the land of Bhuddha. After many difficulties *en route* he reached India when it was flourishing under the Gupta Dynasty. Fa-Hien came in search of Bhuddist Sanskrit books and collected quite a number. He returned to China by sea after visiting Ceylon.

His worthy successor Hiuen Tsang, also a Chinese, came to India in 629 A.C. when he was just 26 years old. What strength of mind and singleness of purpose should this young man have possessed to undertake such an arduous journey at such a young age! What makes Hiuen Tsang the most outstanding among a large number of globe trotters in the first millenium after Christ is not only his profound scholarship but perhaps also the considerable volume of material he has left behind as his travel accounts. Crossing the Gobi desert and traversing Central Asia, Kabul and Kashmir, he came to India. During his long stay in India, he visited all important centres of learning and culture including Nalanda, Nepal, Kanauj, Prayag, Banaras, Buddh Gaya, Kanchi and Vatapi. From his accounts we understand that he defeated a Samkhya scholar in debate. How much of Hinduism he must have mastered to have accomplished this! He saw the strange sight of Yogis with one foot on a pole held with one hand and the body hanging in air. After a long stay in India during which time he studied Hindu and Bhuddist philosophy, he left for his home country carrying a big library with him.

Hiuen Tsang visited India at a time when three great monarchs were ruling the country. Harshavardhana was dominating North

India from Kanauj while the Pallavas were the overlords of the South with their capital at Kancheepuram and the Chalukyas were ruling at Vatapi; Hiuen Tsang noted art and culture and literary forms flourishing everywhere; he has recorded of good Government, happy peoples, prosperity and regard for scholarship. Imagine, dear reader, what amount of difficulties and troubles these brave men should have faced during their long journey. More than all the difficulties they had to contend with, the uncertainty of the route and the unknown dangers that lay ahead should have driven all but the bravest away from such a venture. Globe trotting in those days was certainly no pleasant trip with all information available, conveyances, boarding and lodging, and proper routes. The spirit of adventure, the quest for scholarship and the urge for discovery have been deep in the human heart through the ages.

Travelling a few centuries further in the comfortable arm-chair the reader meets Alberuni the great scholar who accompanied the Mohamed of Gazini to India. This Muslim scholar was so keen to understand India and Hinduism thoroughly that he mastered Sanskrit, the 700 verses of Bhagavad Geeta, the song-celestial, enchanted him while the great irrigation works in the Chola Kingdom impressed him considerably. He was amazed at the progress India had made in all spheres and had given a glowing account of all that he saw in his writings.

Skipping another two centuries or more we find the great traveller from Venice, Marco Polo trudging his weary way with his father and uncle in the year 1271. For 3 years and 6 months this party traversed the entire width of two Continents and at last reached Peking, where Kublai Khan, the Mongol monarch was holding Court and ruling China. Like Hiuen Tsang and Alberuni who learnt Sanskrit to understand India better, Marco Polo learnt the mangolian language and became a great favourite of the Khan. He remained in Kublai Khan's court for 17 years. When the time for his return came, he left China with a considerable collection of precious stones such as diamonds, sapphires and gems and came to India. After travelling widely in India for more than a year, he returned to

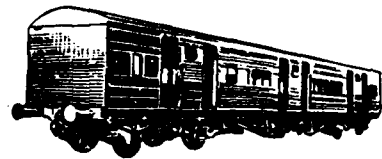
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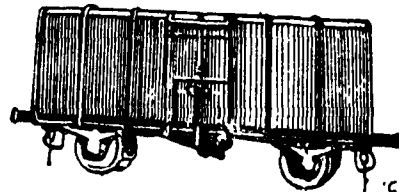
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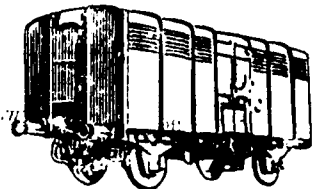
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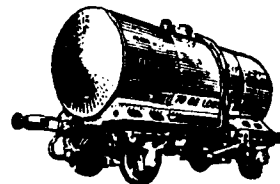
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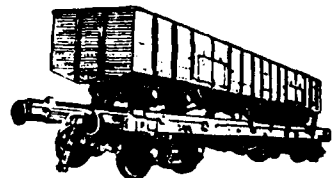
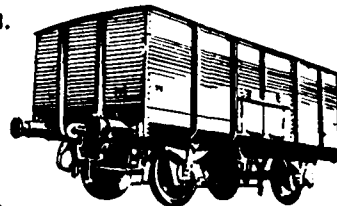
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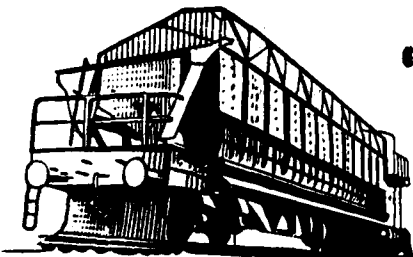
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'HOT COKE' WAGON

MSWC-4

his native place. Unfortunately he had to spend his last days in a prison in Genova when his country was defeated in a battle. This, however, gave him lot of leisure when he wrote a detailed accounts of his travels. Even today this account makes very interesting reading.

The arm-chair traveller now has a busy time. Skipping Nicolo Conti, an Italian who visited Vijayanagaram in 1420, he finds adventurous men of Spain and Portugal dominating the oceans of the world for quite a time. Under the inspiration of Prince Henry the Navigator, these men sailed forth on the waterways of the world in search of discovery.

Christopher Columbus, a poor man from Genova, was fascinated by the sea ever since he was young. He conceived of the idea of going to India and Japan westwards, arguing that the world was round and so it should be possible. He had considerable difficulty in finding support and money for this project. Finally, he found in King Ferdinand and Queen Isabella of Spain the needed finances for the journey. On the 3rd of August 1492, he started on his great voyage with 3 ships and 88 men. After 69 days of drifting in the unknown sea they sighted land; this was one of the group of islands known as the Bahamas at the entrance of Gulf of Mexico. After establishing the supremacy of the Spanish King in the island which he visited, he returned full of glory and with a sense of achievement of boy-hood ambition. He made 3 subsequent voyages to the West and discovered more islands.

The arm-chair traveller now befriends Vasco Da Gama, the great Portugese sailor who leaves Europe on the 7th July 1497. The weather is not good and there is a storm at the outset. With iron determination Da Gama faces the troubles and sails on. Near the Cape of Good Hope there is another storm which, this time, is more severe. The crew loses heart and begs of him to return home. Da Gama replies:-

"If God preserve us we will cross the Cape and make our way to Cathay (as China was then called) in doing which honour shall be given to us and wealth awaits us."

The storm raged yet more fiercely and the men became more and more restless and started conspiring against the life of Da Gama. Coming to know of the conspiracy, Da Gama called the

mutineers one by one to his cabin to talk matters over. As soon as each mutineer stepped into the cabin, he was chained by the few faithful friends of Da Gama; this continued till almost all the mutineers were mopped up. After this ruthless suppression of the mutiny, he crossed the Cape of Good Hope on the 22nd November and proceeded farther. After further adventures, he came in sight of Calicut on 20th May 1498. The Arab traders who were afraid of competition in their trade gave some trouble to Da Gama and his men but eventually Da Gama established friendly relations with the Zamorin of Calicut. He returned to Lisbon in 1499, proud of being the first man to establish a direct sea route between Europe and India.

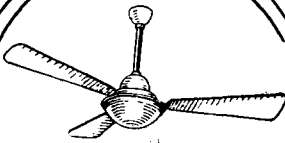
It is a thrilling conception to sail round the world and thus prove that the earth is round. The first circum-navigation of the world was accomplished by a group of men under the leadership of Ferdinand Magellan, a Portugese. Let us accompany the great expedition which set sail on 10th August 1519 with about 250 men. The original conception of Magellan was to find a western passage to India. We find again the story of mutiny repeated when Magellan has just crossed the Atlantic and reached South America. With characteristic vigour and thoroughness, Magellan suppressed the rebellion. Going further south Magellan and his party reached the end of the Continent and crossed the Strait between South America and an island and came out into the open sea on the other side. It was the 27th November 1520 and he was so glad that tears of joy fell from his eyes. As the ocean on the other side was very calm unlike the Atlantic, he named it the Pacific Ocean. The Strait he crossed has been named after him. Of the further voyage of Magellan, a historian says as follows:

"They now sailed for 3 months and 20 days before they saw any land; and having for this time consumed all the biscuit and other victuals they fell into such necessity that they were enforced to eat the powder that remain'd thereof being now full of worms. Their fresh water was also putrified and became yellow. They did eat skin and pieces of leather which were folded about certain great ropes of the ships."

After many other privations Magellan and his party reached Philippines where they were received kindly. However, they got entangled in local politics and Magellan met with his death during a battle along with quite a few of his men. The few men that remained out of

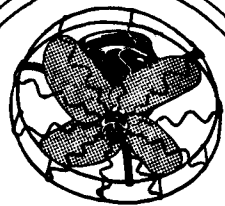


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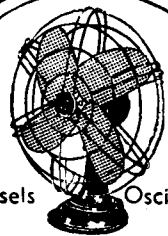
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DOG'S LUCK

Mrs. TRUESTORY

STRANGE as it may sound, Pukidi is the name of a dog and her story is stranger than fiction. Her meteoric rise from adversity to the lap of luxury reads like a fairy tale. History records many shining stories of women triumphing over circumstances to achieve greatness and fame. Take for instance the case of Joan of Arc, an unknown maiden of peasant origin leading the armies of France to victory purely by strength of her faith in her mission in life. We have all heard or studied about Madame Curie, a child of poor parents, rising to be one of the foremost scientists of all time. Coming to contemporary times what greater tribute to the courage of the human spirit can we find than in the story of Helen Keller overcoming the handicap, of, blindness and deafness? But whereas all these notable women owed their pre-eminence to their own courage and innate genius, Pukidi owes her present position solely and entirely to a happy stroke of fate.

Pukidi was born in an ordinary Indian home, one of a litter laid by a pariah dog. She would have suffered the common fate of such puppies, to be thrown out on the streets, either to die or live by its wits on the edge of starvation. She was saved from this fate by my niece, then a small child of four. She was the daughter of my cousin who was also a great friend of mine. On a visit to Pukidi's birth place, she chanced to take a fancy to this dog, and was presented with many blessings and sighs of relief. My niece lovingly selected the name of "Constance" for her puppy. This proved so tongue-twisting a name for the other members of the family. I do not know exactly how she came to be first called Pukidi, but some one called it Pukidi and the name stuck. Though my cousin's house was an affluent home, I have to sadly mention that except for the little niece, the other members of the family were not exactly what you would call dog-lovers. Hence Pukidi's life was by no means easy. She did not receive any of the usual petting lavished upon a beloved puppy. She had to be satisfied with an occasional pat and hug from my little niece when home from school. Poor Pukidi did not receive either milk and brown bread, or soup and bones, or adexolin and vitamin tablets with Bob Martin's condition powders

thrown in. The quality and the quantity of her food depended entirely on the whims and fancies of the cook. Mostly her food consisted of plain rice. On lucky days she might get a little meat gravy or fish gravy from the remains in the kitchen. In the homes of dog-lovers, it is the usual sight to see puppies playing about on beds draped with snow-white sheets or being made free of the immaculate living rooms. This certainly was not the lot of Pukidi. She was never allowed to come indoors for fear she would dirty the carpets. In such a manner did Pukidi spend the tender years of her infancy and the major part of her youth.

When Pukidi was about five years old, my cousin moved into a bigger flat in a better locality. This was to bring about a revolutionary change in Pukidi's life. The upper flat of my cousin's place was occupied by a young newly married European couple. The lady whom I shall refer to as Mrs. E was a passionate gardener. She used to spend all her time in the garden tending each plant and flower as devotedly as one would a tiny infant. At the time I speak of, she was looking after for a friend of hers, a couple of the most perfect dachshunds, I have ever seen. These dogs used to play about among the plants and cause Mrs. E a lot of annoyance. She was forever stoning them, and wishing their owner back. Now it was Pukidi's habit to chew up green leaves probably due to some vitamin deficiency. My cousin who was acquainted with this inconvenient habit had kept her tied on a rope. (A chain or a leash was a luxury which Pukidi could not aspire to.) She was espied by Mrs. E in this unenviable position and lo! the element of the miraculous entered her life. The English lady took the most unexplainable fancy to Pukidi. She commented upon her beauty. Now Pukidi had the most unprepossessing exterior. She was a long, thin, near black dog, her spindly legs ending in white, her ugly face long but wide towards the jaws. My cousin was surprised to hear Mrs. E exclaim, "Oh! what a sweet dog! Look at her white socks! Isn't she perfect? Why do you keep her tied?" Of course, beauty lies in the eye of the beholder. My cousin was only too glad to let Pukidi go, whereupon she made straight

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the original party sailed onwards and after further difficulties finally arrived at Spain on 6th September 1522. This is the great story of the first circum-navigation of the Globe.

Let us now turn our attention to Africa, the Dark Continent. The year is 1871. Who is that bearded man, almost a skeleton, with a much tanned skin, which must have been white some time ago, in the midst of the dark Africans? And who is the other white man, his skin not yet tanned, who is approaching him? Oh yes; dear reader, the bearded man is no other than David Livingstone the great discoverer of Africa. Here is the story of Henry Stanley meeting David Livingstone told in Stanley's own words:-

"So I did that which I thought was most dignified, I pushed back the crowds, and passing from the rear, walked down a living avenue of people, until I came in front of the semi-circle of Arabs in the front of which stood the white man with the grey beard. As I advanced slowly towards him I noticed he was pale, looked wearied, had a grey beard, wore a bluish cap with a faded gold band round it, had on a red-sleeved waist-coat, and a pair of grey tweed trousers. I would have run to him, only I was a coward in the presence of such a mob, would have embraced him, only, he being an Englishman, I did not know how he would receive me. So I did what cowardice and false pride suggested was the best thing—walked deliberately to him, took off my hat, and said: "Dr. Livingstone, I presume?"

"Yes," said he, with a kind smile, lifting his cap slightly.

I replace my hat on my head and he puts on his cap and we both grasp hands and I then say aloud:

"I thank God, Doctor, I have been permitted to see you."

He answered, "I feel thankful that I am here to welcome you."

Livingstone started his discoveries in 1849 unmindful of dangers all around with savages in every nook and corner, tropical diseases rampant and wild beasts, known and unknown, roaming the countryside. Determined to find out all about Africa he set out on his journeys with a mind of steel. With a magic lantern to impress the natives and a few men to assist him, he went from place to place. At one stage he fell sick. Hear his own words about his sickness:

"Fever had induced a state of chronic dysentery so troublesome that I could not remain on the ox more than 16 minutes at a time."

This missionary from Scotland has a fine sense of humour even in the midst of his difficult

occupation. Talking of the tribals of Nyasas he says:

"Fire is their only clothing at night."

Among his various discoveries is the Victoria Falls in Rhodesia which Livingstone discovered in 1855. He was profoundly impressed by the spectacular beauty of these falls which he named after Queen Victoria.

Even a mental journey over the centuries can be tiresome. I hear the arm-chair traveller murmuring that he has had enough. Just one more fascinating Globe Trotter and we will have finished. This time it is the story of a man who braved the arctic winds to reach the South Pole. Captain Robert Falcon Scott of the Royal Navy, accompanied by a band of explorers and scientists sailed in 'Terra Nova' southwards in the year 1910. The full expedition numbered 60; but by the time Scott reached the South Pole, only 5 survived. Scott and his gallant men reached the South Pole on 17th January 1911; but they were greatly disappointed to know that they were not the first to reach the South Pole but Amundsen of Norway had already reached it some time earlier. Scott's return journey is an epic of brave men struggling against terrible odds. The "Last March" was described by Scott himself in his journals which was discovered by search parties by the side of the dead bodies of his comrades and himself. Scott talks of frozen snow waves which made the journey almost impossible. The gales were fearful; the winds were unbearable. Added to this, the food ran short and the temperature was getting lower and lower. All the five men dropped down dead one by one. When there was no news of the men for a long time, search parties from England were sent out. It is thus that we have got a comprehensive account of the travels of Scott in his own words.

I find my reader, that the arm-chair traveller, has fallen asleep! Let us not wake him but during his siesta let us discuss the urge that propels thousands of men of all ages and countries who undertake hazardous expeditions across land and sea. We have travelled with some across land with the most difficult terrain, with some others on uncharted seas, with yet others through dark and dense forests and freezing snows. Is it for wealth and power that men undertake such travels? Or, is it

(Continued on page 33)

IS MONO-RAIL SYSTEM PRACTICAL

M. G. LALL

AN inquisitive member of the Rajya Sabha once asked the Railway Minister whether the Government of India had come to any definite decision in regard to the feasibility of introducing the "Mono-rail system" on the Indian railways.

Members of the House, in reply, got an answer which left the position a little vague. They were left to guess whether or not the Railway Ministry intended seriously to pursue this interesting proposal.

What is this mono-rail system? The Estimates Committee of Parliament recently went into the problem and reported that the mono-rail system (called the "Alwog Bahn") has been experimented for a distance of about 10 miles successfully in Germany. It is claimed that the mono-rail has reduced the initial cost and the working expenses to about 60 per cent of the existing system and that the steel required is also about 80 per cent less.

The Committee was told that technical officers of the Indian railways abroad had been asked to study and submit a report on its working, and also that the Railway Research Centre at Lucknow had been asked to undertake a more comprehensive study.

EXPERIMENT IN NAWANAGAR:

The Committee was also told that some experiment was made in this connection in the former State of Nawanagar on a small scale.

The Committee was of the opinion that the matter deserved careful consideration and if the system could be introduced in the conditions prevalent in our country it might be tried on certain selected routes, e.g., in the proposed ring-railway around Delhi.

It transpires that a railway officer, subsequently visited Germany. He was told by the German authorities that the original intention of super high speed mono-rail system for long-distance travel has been given up. This system is now being perfected purely for urban and suburban traffic. The speed is also proposed to be limited to 50 miles per hour.

WHAT IS MONO-RAIL SYSTEM?

The actual project of installing the Alwog Bahn system in Germany between Cologne and Opladen, this officer was told may take about two years more and the results of its operations would not be available for another three years. In this project, it is intended to provide normally two car streamlined units, but where necessary, even three or four units may be coupled together for operation.

The estimated steel requirement for the mono-rail system is about 300 lbs. per yard. For 90 lb. B.G. track, the steel requirement would be 200 lbs. per yard, and the same for 60 lb. M.G. track may be taken as 130 lbs. per yard.

The mono-rail system could be installed in the middle of the road, but in such cases the width of the road required is about 50 ft., in order to permit the traffic in each direction on either side of the columns supporting the mono-rail system to overtake. Alternatively, if the width of the road is narrower, the Alwog Bahn system could be installed on one side of the road, leaving rest of the space for road vehicles.

By means of a power operated switch, the girders supporting the mono-rail could be bodily slewed, thereby permitting crossings of traffic but it would be rather a slow process. The mono-rail system, therefore, can be suitable only for suburban traffic.

The mono-rail system consists of hollow rectangular reinforced concrete track without rails, adequately elevated to permit on Alwog car to move clear of road transport. The track and its supports are formed from pre-cast interchangeable units.

PROSPECTS IN INDIA:

Against this background, it is apparent that until the results of the actual operation in Germany are available, which may take another two years or more, it would not be possible for the Indian Railways to estimate the operating

(Continued on page 32)

for Mrs. E's precious plants and started nibbling them. Expecting to see an irate lady starting to stone Pukidi, what was my cousin's surprise to find her gathering up the dog in her arms (Pukidi's dirty smelly state was no consideration at all) and remarking "Oh! I think the poor darling is in need of some greens. May I give it some cabbage?" On beholding the speed with which the cabbage disappeared inside Pukidi, the lady diffidently enquired whether she might give it some bones left over from the dachund's lunch. The consent was readily given. Early next morning Mrs. E had a plate of bread and milk ready and started calling from the top of the stairs "Marie, Marie". She had heard my cousin and her children calling Marie many times during the day and had supposed that they were affectionately addressing the dog so. However there was no response to her calls of Marie. The butler then informed his mistress that Marie was the name of the downstairs ayah and not of the dog. On being informed of the undignified name of Pukidi, even Mrs. E, who had received many shocks during her short stay in Indian soil, was a bit taken aback. However she supposed that Pukidi must be an Indian name denoting beauty and nobility and as far as I know, she thinks so till today.

As Mrs. E's fondness for Pukidi grew, she was gradually promoted from a diet of cabbage and left over bones to bread and milk in the mornings and rice with one pound of meat every afternoon. The delight of these delectable meals proved too much for Pukidi's sense of loyalty to her owners and she transferred her allegiance entirely to Mrs. E and her husband. She began to spend more and more of her time upstairs. A small warm rug was bought from Spencers for Pukidi, and she took to sleeping on it every night. To all intents and purposes she became Mrs. E's dog.

Mrs. E used to occasionally spray her plants with insecticide. In the early days of Pukidi's adoption by the lady, when her diet had not yet settled down to a regular routine of two plentiful repasts, she happened to eat the sprayed leaves and was seized by a mild fit of vomiting. This threw Mrs. E into a paroxysm of distress. She charged down the stairs with Pukidi in her arms in search of my cousin, and finding only her husband announced to him, "Oh! a great tragedy is going to happen. Poor Pukidi has been



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IS MONO-RAIL SYSTEM PRACTICAL

(Continued from page 29)

costs and the comparative merits of this system over other existing systems of transport.

There is another, more important consideration. The provision of funds in the Railways Second Five-Year Plan, as modified by the Planning Commission, hardly permits of experimentation with novelties like the mono-rail system.

While, therefore, India can continue to watch the German experiment with interest, there appears to be no practical possibility that in the foreseeable future, India can go in for this novel system of rail transportation.

poisoned. However tell Mrs. K not to worry! I am taking her at once to the Veterinary Hospital". Far from worrying, my cousin's comment on hearing this was "I hope that dog dies on the way to the Hospital". She was a bit nettled by the readiness with which Pukidi had forsaken them all, and taken to Mrs. E, however justifiable it might have been from Pukidi's point of view. This happened at six in the morning. The long suffering Mr. E who had to be in his office by 8-30 A.M. waited in vain for his wife to return the car and at last had to telephone for a friend's car. Meanwhile at the Veterinary Hospital Pukidi was not receiving the attention which her condition of extremity deserved. The hard worked doctors took one look at Pukidi, saw nothing seriously wrong with her, and went on attending to the serious illness of probably very highly pedigreed dogs. However the distraught Mrs. E's importunate pleas made one doctor give his attention to Pukidi. He made Pukidi open her mouth. The stink which assailed him from this quarter was too much for him. He called for forceps and started pulling out black teeth like structures from between Pukidi's teeth. On completing this operation he called for a tooth brush and powder and started brushing the dog's teeth vigorously. This was like Nero fiddling while Rome was burning. Here was Pukidi on the verge of death, and the callous doctor was brushing her teeth!! But to all her violent expostulations the unfeeling doctor said calmly "Madam, nothing is wrong with this dog, except that it has a very dirty mouth. Here is the prescription for her tooth powder". It was 1 P.M. when Mrs. E returned from the hospital.

One of Mrs. E's greatest joys was to show Pukidi off to her friends. It is to be doubted whether her husband shared her enthusiasm for Pukidi. However he pretended to like it, probably to please his wife. But all her friends agreed with her that Pukidi was quite

the sweetest little dog, and admired her beauty spots satisfactorily. Meanwhile the dachshund had been returned to their owner and Pukidi's friend could devote more of her time to this paragon of all dogs. Bathing Pukidi was an elaborate process. It took place on the lawn. The mali, cook, and butler had to direct the hoses of water on to Pukidi, then came vigorous soaping and rubbing with Rexona soap. (I am only able to afford Lifebuoy soap.) Mrs. E would stand by with two of the softest of Turkish bath towels. The minute the bathing was over, Pukidi would be rubbed dry by one towel, then wrapped in the other, and taken up in Mrs. E's arms upstairs and deposited on the rug, to recover from the exertions of the bath, as well as to insure against catching cold. After a safe interval she would be fed, and in the evening taken for a long walk on a new leather leash by a uniformed butler. After dinner when Mr. and Mrs. E read in bed, Pukidi would be playing on the bed. In justice to Pukidi, I must say, she has a due sense of gratitude. On the infrequent occasions when she happens to be downstairs, she turns a deaf ear to the calls of my niece. As for my cousin and her husband, Pukidi might never have seen them in all her life. But the horn of Mr. E's car acts like a clarion call on Pukidi. She bounds down the stairs, and welcomes the bread-winner of the family boisterously. On the last occasion I visited my cousin, I was seated on the verandah with her. Mrs. E happened to come back just then after a day of shopping. She stopped to speak to us for a minute. Immediately there was a quick flurry of footsteps and there was Pukidi, looking cleaner but otherwise much the same circling round her patroness, tail wagging, joyous welcome written all over her. Mrs. E deposited a kiss on her face and took her up. And did Pukidi recognize me or my cousin? As far as she was concerned, we might have been stone statues.

GLOBE TROTTERS—(Continued from page 28)

to please somebody! While these may have been minor considerations in some cases, obviously this is not adequate to make men brave the tallest mountains, deepest seas, the most unkind climate and a hundred other troubles. It is the indomitable spirit of man, searching enquiring, challenging, hoping—and discovering. Let us, of the twentieth century,

then, who are apt to be depressed at the slightest obstruction or difficulty, think of these great globe trotters and draw inspiration from their valiant travels. The faith, that enabled these and other globe trotters to reach their goal, shall stand us in good stead in our journey through life.

RAILWAY AXLE JOURNAL MAINTENANCE MACHINE TOOLS

Craven Brothers (Manchester) Ltd., Stockport, England

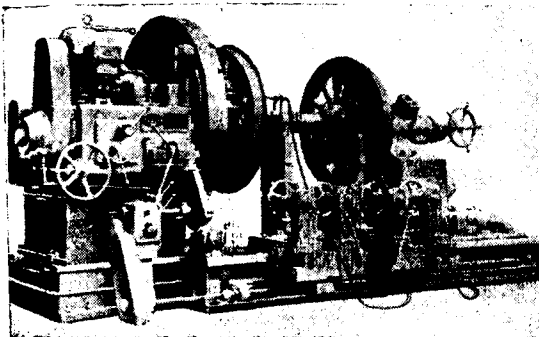
A vast amount of axle journal reconditioning work has to be dealt within the maintenance of railway locomotive, tender, carriage and wagon wheel sets, and a number of special 'Craven' machine tools are suitable for this purpose, all being capable of accommodating and driving a complete wheel set consisting of a pair of wheels mounted in position on their axle.

These machines vary in size and design according to the type and diameter of the wheel sets to be handled and the operations to be performed. The latter generally consist of re-turning the cylindrical portions, and the shoulders and radii, of the journals, and completing their final finish either by the use of burnishing rollers or by an auxiliary grinding operation. In most cases the wheel set is supported between 'live' centres, and several alternative methods of driving are available, as described later.

AXLE JOURNAL RE-TURNING AND BURNISHING LATHES :

Many of the recent 'Craven' lathes in this category for dealing with carriage and wagon wheel sets are built generally on the lines of the machine illustrated in Fig. 4, which is arranged for re-turning and burnishing the journals of 3 ft. 6 in. gauge carriage and wagon wheel sets ranging from 2 ft. 6 in. to 3 ft. 6 in. diameter on the tread. The wheel sets are supported between 'live' centres carried in two

A standard 'Craven' Locomotive Axle Journal Re-turning and Burnishing Lathe suitable for the accommodation of wheel sets up to 7 ft. diameter with either straight or cranked axles (Fig. 1)



adjustable sliding barrels, one in the fast headstock and the other in the tailstock. The bed is of double-gap construction, to accommodate the swing of the wheels, and carries three separate saddles, one on each end section for dealing simultaneously with the two outside journals of the axles, and a single central saddle for use where inside journals or driving wheel seatings have to be machined. The latter saddle is an optional feature included only to order. It will turn one journal only at a time, but is able also to deal conveniently with the outside journal of 2 ft. gauge wheel sets, in cases where the machine has to recondition sets for both gauges.

Each outersaddle is fitted with a four-position rotating-type turret, to carry the various sliding and radiusing tools, and an adjustable three-roller type burnishing attachment is secured to the rear portion of the saddle transverse slide. A range of sliding and surfacing feeds is available for application to each saddle independently, and automatic feed trips are fitted.

The drive is by a 7-1/2 h.p. constant-speed motor, through a friction clutch and twelve gear changes in the headstock. It is transmitted thence to an overhead flanged driving pulley and jockey pulley arrangement from which a flat belt is passed around the tread of the nearest wheel. The speeds thus obtained vary inversely as the diameter of the wheel tread, but on the machine illustrated, are based on a range of 4 to 80 r.p.m. when driving on to a 3 feet diameter wheel.

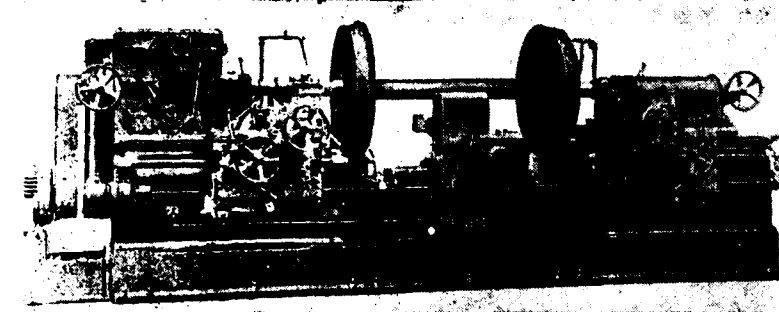
Arrangements are made for rolling the wheel sets directly into the machine on extensions of the workshop rails, and an electrically-driven lift is fitted in the bed to raise the sets up into line with the machine centres.

The above method of driving has been used on many recent 'Craven' lathes of this type with very satisfactory results. In fig. 6 it is seen applied to a larger lathe suitable for dealing with the outside and inside axle journals of locomotive wheel sets from 2 ft. 3 in. to 5 ft. 3 in. diameter on the tread. In general, the method of driving and supporting the wheel sets is exactly the same as for the smaller machine, except that the belt and pulley

June 1957

RAILWAY AXLE JOURNAL

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An alternative type of 'Craven' Carriage and Wagon Axle Journal Re-turning and Burnishing Lathe, in which the drive is by rubber-tyred friction rollers on to the treads of both wheels (Fig. 2)

arrangement is suitable for the larger diameter wheels. The bed is of the wide straight type and the height of the machine centres above the bed is 33 in. The two saddles have self-acting sliding and surfacing feeds and have pillar-type tool rests fitted with two-position tool turrets suitable for carrying journal turning, radiusing and wheel boss facing tools, also two-roller-type burnishing tools. All the saddle controls are elevated for convenient operation from platforms arranged on the saddles. Power motion is included for the simultaneous adjustment of both the headstock and the tailstock along the bed to facilitate loading, and an electrically-operated wheel lift is also provided so that the wheels can be run into position on extension rails and lifted up to centre height.

Machines of this type are particularly useful where wide ranges of wheel diameters have to be accommodated, such as locomotive bogie and tender wheel sets in addition to the driving sets. They have been made also with an auxiliary rotating faceplate to carry

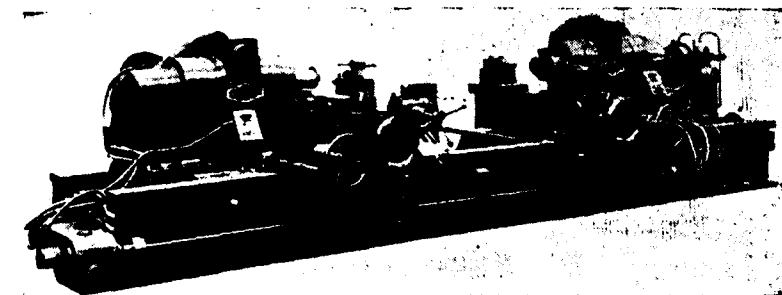
spoke drivers, on the lines of our normal large locomotive machines mentioned later in addition to the belt drive from overhead. Thus the advantages of the two methods are combined in a single machine, giving the user a machine readily adaptable to all circumstances.

FRICTION ROLLER DRIVE FOR THE WHEEL SETS :

An alternative type of axle journal re-turning and burnishing lathe for carriage and wagon wheel sets is shown in fig. 2. It is really a completely re-designed version of a very well established form of lathe for reconditioning outside journals. Both ends of the axle are dealt with simultaneously, and provision is made for facing the outside wheel bosses where necessary.

The bed and saddles are generally of the same construction as the lathe seen in fig. 4, and the wheel sets are supported between 'live' centres carried in the sliding barrels of a fast and loose headstock. The drive

An entirely new type of 'Craven' Axle Journal Lathe, suitable for turning, or re-turning, and burnishing the journals of either new or used axles. The dual drive is from synchronised motors and is transmitted to both end faces of the axle by hydraulic power and annular driving plates with serrated inserts (Fig. 3)



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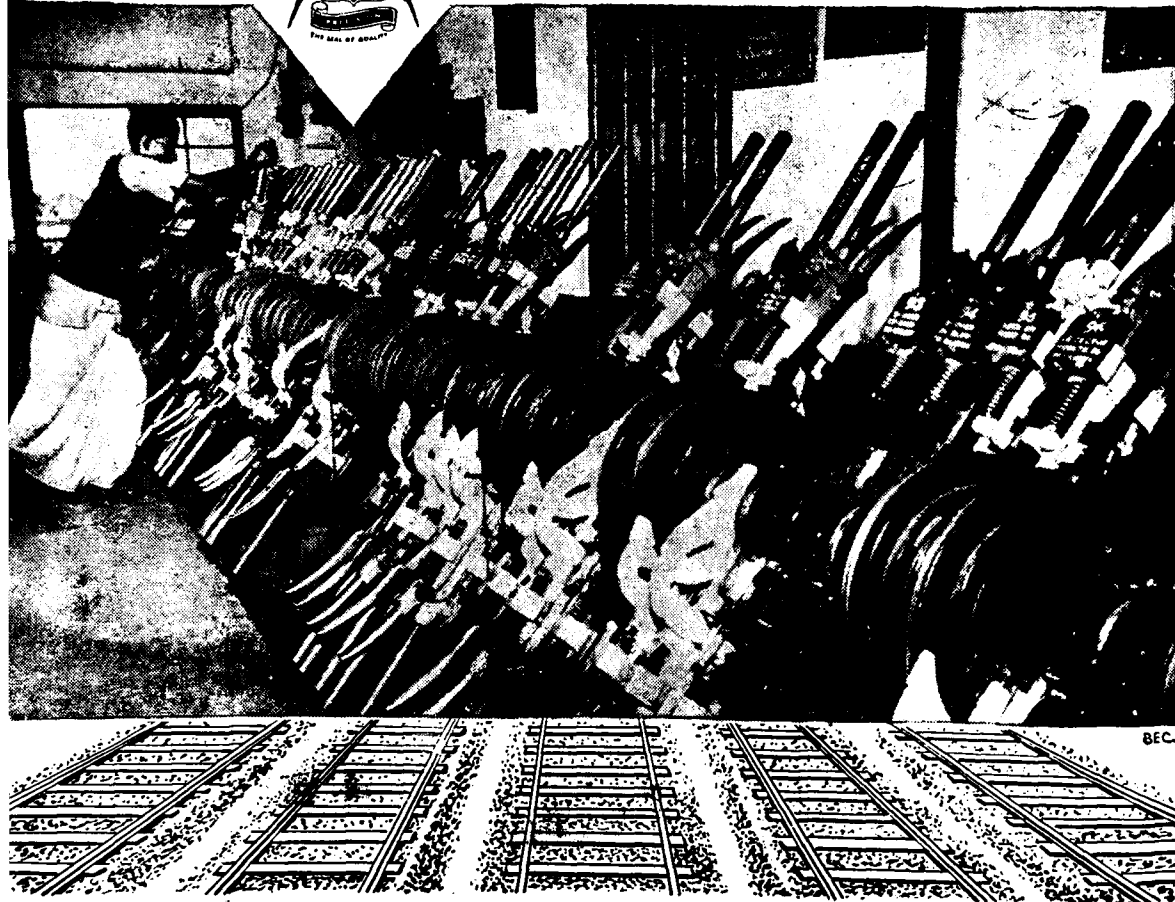
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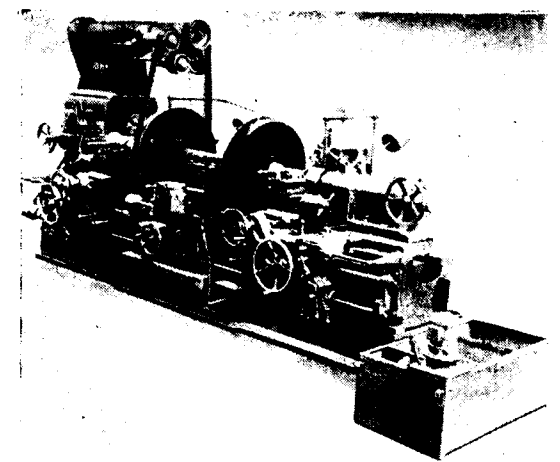


means of two rubber-tyred friction rollers in engagement with the underside of the wheel treads, the necessary contact pressure between the friction rollers and the treads being obtained by adjustable dead weights and levers. The arrangement allows the rollers to be readily lowered by hand or power clear of the wheels when loading.

The two saddles are each fitted with a compound-type front rest carrying a four-position revolving-type tool turret. One position of the turret is arranged to carry the journal turning and radiusing tool, while another position is formed with bearing bosses to carry permanently a front burnishing roller, see fig. 5. A tee-slotted rear rest on the saddle carries a bearing bracket in which a rear burnishing roller is carried.

The two burnishing rollers are of hardened steel and are mounted on anti-friction bearings while the necessary burnishing pressure is applied by hand adjustment of the two rests through a right and left hand threaded screw. Sufficient float is provided in the screw bearings to allow the rollers to accommodate themselves to the journals, and a locking device retains the correct pressure after initial application. A further lock eliminates the screw float when turning operations are required. This is a new type of burnishing equipment which it is felt has many advantages to offer.

The arrangement of the two burnishing rollers on the alternative type of 'Craven' Carriage and Wagon Axle Journal Re-turning and Burnishing Lathe shown in (Fig. 2) (Fig. 5)

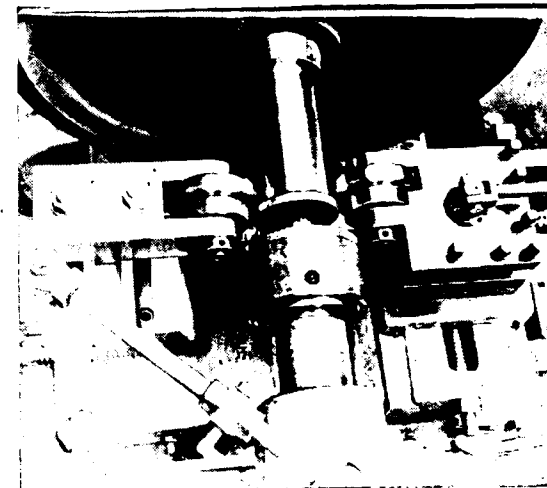


'Craven' Carriage and Wagon Axle Journal Re-turning and Burnishing Lathe with drive by belt on to the tread of one of the wheels (Fig. 4)

The main drive is by a 7-1/2 h.p. constant-speed motor, through vee-belts and a friction clutch to change speed gearing in the headstock. Further belts and a shaft at the rear of the bed convey the drive to the friction roller housings, while the latter are able to swivel bodily, under the influence of their weights, to bring the driving rollers into contact with the wheel treads. When driving on to wheels of 3 ft. diameter a work speed range of 19 to 125 r.p.m. is obtained, but these speeds vary inversely in relation to the diameter of the wheels. The spindle barrels of the headstock and tailstock have longitudinal adjustment to facilitate loading, and the saddles can be moved along their upper bed sections to allow a clear passage for the wheel sets to be rolled into the machine on rails. A central section of bed houses a power-operated wheel lift.

SYNCHRONISED DUAL END DRIVE MACHINES :

We would like to make reference also to a 'Craven' Axle Journal Turning Lathe of entirely new design, which can be used either in the manufacture of new axles or for reconditioning worn axles with their wheels in position, see fig. 3. In this case the wheel sets are driven from both ends simultaneously by two separate headstocks, the driving motors of which are synchronised to rotate in unison. The driving torque is transmitted to the two end faces of the axle by annular driving plates, with serrated inserts, positioned around spring-loaded cone-type centres, the necessary axial to the sets in this instance, however, is by



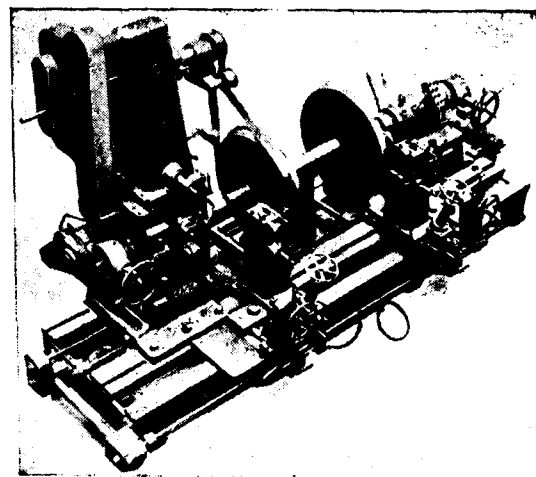
driving pressure being applied and maintained by a hydraulic cylinder acting through one of the headstock spindles.

This arrangement gives an ideal drive, free from axle distortion or belt slip, and is ideally suited to present-day high-speed cutting conditions involving the use of tungsten carbide cutting tools. The spindle speeds range from 150 to 300 r.p.m.

AXLE JOURNAL RE-TURNING AND GRINDING MACHINE :

In certain circumstances, usually dependent upon the practice prevailing in a particular railway workshop, it is necessary to follow the journal re-turning operation with a grinding operation (instead of the more usual burnishing procedure) and the 'Craven' machine shown in fig. 7 is arranged to combine the two operations at a single setting for re-conditioning simultaneously the two outside journals of carriage and wagon wheel sets.

The machine is of double ended construction in which the wheel sets are supported between 'dead' centres from two normal lathe-type tailstocks mounted upon either end of the bed. The wheel set is rotated from a central driving head by two rubber-tyred friction rollers in contact, from overhead, with one of the wheel treads. The self-contained driving



'Craven' Locomotive, Tender, Carriage and Wagon Axle Journal Re-turning and Burnishing Lathe with drive by flat belt on to the tread of one of the wheels (Fig. 6)

head is complete with its own motor drive and speed change gearing, and carries the friction rollers and their final driving transmission in a swivelling arm bracket, which allows the rollers to accommodate themselves on the curve of the wheel tread. Motor-driven vertical adjustment of the grinding head upon a box section upright enables the friction

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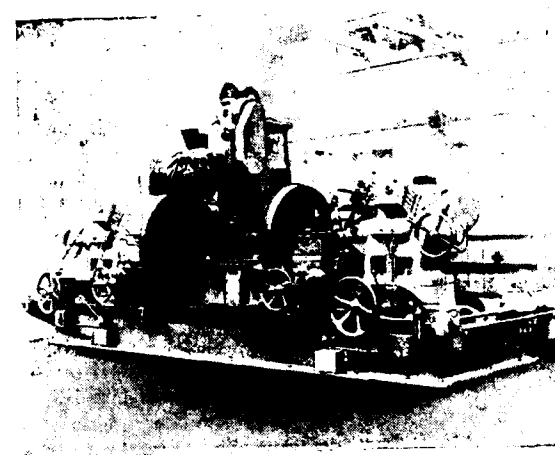
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This 'Craven' Axle Journal Machine is arranged for both re-turning and grinding, at a single setting, the two journals of carriage and wagon axles (Fig. 1)

rollers to be raised to allow clearance for loading purposes, or lowered into contact with the wheel tread and the required driving pressure exerted. A spring balance in the elevating mechanism clearly registers upon a dial, the exact driving pressure being exerted on the tread.

A separate saddle completely spans the bed at each end of the machine, the rear portion of its transverse slide carrying a self-contained motor-driven grinding head, while the front portion carries a compound-type turning rest with a four-position turret-type tool post. Thus, transverse hand adjustment of the saddle slide applies either the turning tools or the grinding wheel to the workpiece as required, and additional slide adjustments on the turning rest facilitate tool setting and cut application. An additional fine adjustment is provided also for the application of the grinding wheel cut.

Automatic traverse of the saddle is by a separate motor-driven screw motion, and a gear change gives suitable ranges of feed for turning or grinding. In the latter case the feed is automatically reversed at the end of each traverse by trip dogs.

Short rail extensions on the bed are able to swing forward to receive the wheel sets and to guide them into position over an electrically-driven wheel lift for elevation into line with the machine centres. The equipment of the machine is complete with coolant supply, observation mirrors and pushbutton control for all motors.

LOCOMOTIVE-TYPE AXLE JOURNAL RE-TURNING MACHINES :

The standard machine for locomotive work, see fig. 1, will accommodate wheel sets up to 7 ft. diameter on the tread and, being fitted with two lighthouse-type tool rests will deal with the two inside journals of straight or cranked axles simultaneously. Alternatively, a single outside journal can be turned at one setting, using the right hand rest only, the set being reversed in the machine to turn the other journal.

The wheel sets are supported between live centres carried by an adjustable barrel in the tailstock and an inner sliding spindle barrel in the head stock. The faceplate is fitted with adjustable balance weights and carries a pair of special drivers to engage the spokes of the nearest wheel. It is driven by a 10 h.p. motor through a friction clutch and gear changes in the headstock to give a range of speeds in the region of 10 to 70 r.p.m. An electrically-driven rim brake quickly brings the faceplate to rest when the motor stop button is pressed.

Sliding and surfacing feed changes are embodied in a gear box below the headstock and the saddle hand controls are conveniently arranged for operation either from the ground level outside the bed or by an operator standing on top of the saddle near the tool rest. The turning tools are easily interchangeable with two-roller type burnishing tools. On certain occasions, this type of machine is supplied complete with an independently-driven auxiliary grinding head carried on a separate saddle on the rear bedways. The traverse of the grinding saddle is effected by a hydraulic cylinder and is controlled by reversing valve gear mounted on the tailstock. It is usual to provide one front turning rest only in this case, the main operations generally being concerned with the grinding head.

Although not perhaps a complete treatise on axle journal re-conditioning procedure in general, we trust that this article will at least indicate some of the main types of machines specially built for this work by Messrs. Craven Brothers (Manchester) Ltd., who are among the world's leading manufacturers of all types of machine tools for the manufacture and maintenance of railway wheels, tyres and axles, and for efficiently carrying out many other railway workshop machining operations.

HOW AMERICAN AID HAS ASSISTED THE DEVELOPMENT OF INDIAN RAILWAYS

K. SRINIVASAN

INDIAN Railways have received from America 63,062,200 dollars, equivalent to about 3 crores of rupees, for Rehabilitation and Expansion.

The movement of additional agricultural produce, of increased industrial output, as well as the movement of necessary supplies and equipment for development projects, is placing an added strain on India's present railway system. The Indo-American programme made its first big contribution to the rehabilitation and expansion of railways in 1954 in support of India's objectives in this sector under the First Five-Year Plan. During those five years, India placed orders for over 2,000 locomotives to be paid for from Indian resources. The railway rehabilitation project under the 1954 Indo-American programme supplemented this effort by providing 100 new locomotives, 2,500 broad gauge wagons and 2,500 meter gauge wagons. An additional \$7,975,000 was made available by the United States Government to offset the excess cost of railway equipment procured in the U.S. under 1954 funds, but not formally covered by a project agreement. Altogether the Indo-American programme will have added 8,730 wagons and 100 locomotives to the Indian railway system.

In addition to supplying locomotives and wagons, United States assistance in 1956 provides from outside sources 255,000 tons of steel and 4,000 tons of rails for the expansion and rehabilitation of Indian railways.

The T.C.M.'s first Railway wagons, representing the larger amount of rolling-stock to be delivered later were formally handed over by the American Consul-in-Charge, American Consulate-General in Madras, Mr. Robert M. Winfree, on behalf of the Government of the United States to Mr. T. A. Joseph, General Manager of the Southern Railway at an informal ceremony held in the Binny's workshop premises in Meenambakkam, Madras on 23rd May, 1956 in the presence of a distinguished gathering.

Mr. Robert M. Winfree said these wagons had been made available to India by the Government of the United States through

International Co-operation Administration in Washington and its subsidiary organisation in New Delhi, the Technical Co-operation Mission. In this particular case the Binny's, one of the most progressive organisations in South India were assembling nearly 3,000 wagons from component parts which came from the U.K. and Japan. Regardless of what some might say, there were no ulterior motives to American-aid—there were no strings attached to it. "Our one desire is that Indian should develop as a strong, independent, industrial nation as quickly as possible and we are more than willing to help in her endeavours."

Sri T. A. Joseph said that the timely aid of U.S. was going to mean a lot to the Indian people and they should feel highly grateful for this generous help. He said that this American help had been exceedingly timely in more than one respect. The Southern Railway was a rather far-flung organisation with Broad Gauge and Metre Gauge mixed in a rather unsatisfactory proportion. The bulk of the total length in Southern Railway was in metre gauge—nearly two-thirds, and the rest broad gauge track, through the latter generally hit the eye. The traffic position here in broad gauge was as bad as in any other railway sometime back but in the last couple of years, they had been able to make considerable improvement.

ASSISTANCE TO METRE GAUGE IN SOUTHERN RAILWAY

On broad gauge they had been able to borrow freely whenever they were short of stock but this was not possible in regard to metre gauge stock because metre gauge section in Southern Railway was not connected with the rest of the metre gauge systems of India. They were a sort of secluded pocket with nearly 4,500 miles in this part of the country. Hence, when it came to a question of looking for additional stock in busy season, there was no means to get it from outside. They had been pressing for additional stock in the past and more than once they had been promised and allotted a fairly liberal supply from the



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RAILWAYS AND THE PUBLIC

S. SUNDARAM

EVERY Railway servant must realise that as a public servant he should not only serve the Government, but in the discharge of his duties also endeavour to serve the public for whose welfare the Government exists. The need for an all round improvement in the relations between the Railways and the public has been engaging the attention of the Government for some time. Towards this end, a Code of Conduct for officials must be enunciated with a view to removing any impression that might exist in the public mind that the psychological approach of these officials towards the public is generally one of unhelpfulness. This apart, the Railway officials must cultivate the right outlook in their relations with the public and observe the utmost courtesy towards all classes of persons; due consideration for their convenience should be the watchword in their everyday relations with the public.

In reference to the Code of Conduct, it is to provide 'transport' that the vast organisation, the Indian Railways, toils day and night, year in and year out, planning, co-ordinating, designing, buying, distributing, manufacturing, repairing, constructing, maintaining, receiving, moving, delivering, accounting and checking. It is to provide this 'transport' that it employs several thousands of railwaymen, each with some set task to do. 'Transport' bridges distances over plains and mountains, across rivers and deserts and forms a net work of communication over the country. Just as a bridge to be safe requires abutments, so does 'transport'; 'transport's' abutments are 'safety' and 'comfort'. Each Railwayman, never mind whatever his duties are, must at all times, keep before himself these two issues. No rule or obligation laid down for consideration of 'safety' can be afforded to be broken or left undone. No task necessary for the provision of 'comfort', be it ever so small or ever so onerous, can be afforded to be omitted or neglected. These two rules should not be given merely lip service but strict attention.

A Railway is more or less a manufacturing concern. Like any other business, our organisation consists of four main branches, each with its own particular function. The Engi-

neering, and Mechanical Departments constitute our 'Maintenance' branch, as it is they who look after and maintain in good order the tracks, locomotives and rolling-stock, which are the plant and equipment, which we use to provide 'transport'. The Operating Department consists of people who work this equipment and provide the 'transport' and so correspond to the 'Production' Branch of a business. The 'Sales' side of the organisation is represented by the Commercial Department, as it is they who sell and advertise the 'goods' to the public. Last, we have the 'Directorate' which on a railway consists of the General Manager, assisted by his Principal Officers. It is their job to direct policy and to ensure that the maximum transport is provided at minimum cost and that the whole concern is run on sound basis. The main mediums of 'sale' are the Station Masters, Booking Clerks, Parcel Clerks and Goods Clerks and it is essential that these men should cultivate the qualities of salesmanship. What makes a good salesman? The qualities are—courtesy, appearance, personality and service. Courtesy is nothing more or less than consideration for the other man. If in all dealings, consideration is given to the other man, his view point and his feelings, then there could and would be no discourtesy. Secondly, about appearance, the uniform is not a badge of servitude; it is the insignia of an office. It is not something to be ashamed of; it is something to be proud of. So it should be worn correctly and proudly. The neatly dressed man conveys an impression of efficiency on all who see him. Thirdly, personality is the gift of impressing others. As in salesmanship, the aim is to impress favourably with a certain amount of self confidence. Lastly, service is giving the customer what he wants and in the way he wants it. The really satisfied customer is the man who feels that he has been given something more in the way of service than he was actually due. Again, there are varied types of humanity, each with their particular foibles, whims and fancies and distinct methods of dealing with each type should be adopted. Acts of proved incivility must be dealt with in an exemplary manner. The officials should also make themselves easily accessible to the members of the public and any mistaken impression that

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RAILWAYS AND THE PUBLIC

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might exist in the minds of some officials that inaccessibility is the hall mark of dignity should be removed.

Though the Station Masters, Booking Clerks, Parcel Clerks and Goods Clerks are the main salesmen, the others in their own particular spheres can help to keep the public satisfied. For example, the Guard can satisfy by keeping his train to time, by making up time when his train is late; by anticipating his passengers' wishes, etc. The driver can do his share towards making travel safe and comfortable by keeping his train to time, by stopping and starting smoothly without jerks, by stopping at the correct spot at each station and thus avoid the necessity for backing or drawing ahead after stopping, by avoiding over speeding over a bad track, and above all by strictly observing all signals. The Train Examiner and electrician can do their bit by seeing that the carriages are watered, well cleaned and the stock well maintained, boxes well oiled and the lights and fans kept in perfect working order. Likewise, the carriage cleaners at junction stations can see to the cleaning of the lavatories, particularly in long distance Express and Mail trains and fill up the overhead tanks with water, without necessitating the passengers to go and complain to the Station Master on duty, about the non-availability of the water in the tank and so on. The Yard Shunter can in his humble way contribute to punctual and comfortable travel by seeing that shunting is done promptly and without jerks, jolts and or bumps and by seeing that stock on trains is correctly marshalled to avoid delay in shunting. The Assistant Station Master can make for safer and more convenient travel by seeing that trains keep time and are not detained at his station, by seeing that correct connections are maintained and by ensuring that all safety rules regarding the working of trains are strictly complied with, etc.

An efficient administrative system should have the means of finding out quickly where the shoe pinches in the particular section of the public it serves, and PUBLIC RELATIONS is the means. The general public live in grooves, are shut in among their own affairs, meet few people not of their own sort and read little. The Public Relations Branch of the Railway project the work done by the Departments on to the mind of the public.

This is achieved by releases to the Press, by pictorial and statistical posters, by films, by explanation on the wireless, etc. This branch should be so made to function that people see things in their correct perspective and not as any propaganda.

It is also imperative for the Railways to improve the transport system to the modern needs and in this direction the public should also be invited to give suggestions regarding different phases of competition, revision of time-tables, revision of fares and freights, frequency of service; suburban train services, goods services, opening of train halts and suitability of sites therefor, etc.

Since Independence, there has been too quick promotions in the services following the large extension of the functions of the Railways, causing a slight decline in the calibre of the services. An all out drive should be launched to liquidate all arrears of work. Railway servants, who invariably prefer for the accumulation of work to the extent as may justify a greater number of posts for the absorption of more staff, should be sternly put down. Departmental prejudices should be discountenanced. No one should ever allow himself to lose sight of this elementary thing—the purpose of each individual, no matter what department he belongs to, must always be to produce maximum 'transport' and to sell it to the public. Departmental interest must always be subordinated to this common purpose and all energies directed to that end. A radical change of outlook should also be cultivated so that the public will feel that the Railways are as ready to refund to the public their legal dues as they are eager to realise from them.

We, each and all of us, administrators, supervisors and workers, have our moral obligations. Each of us have homework or other to do and in doing our work each of us exert a far-reaching influence. All of us come into contact, immediate or remote, direct or indirect, varying from extent to extent, with the public. It is by our actions that we exert and wield this influence. Have we ever paused to consider the vastness of this influence? Have we ever paused to consider whether this influence is good or bad? Railwaymen have to see the necessity for this

(Continued on page 50)

new stock expected, or arriving, or manufactured in this country. But they actually never got any of these wagons owing to the difficulty in moving them over the larger length.

Mr. Joseph said that it was one of the peculiar factors of India that practically all the larger-scale steel industrial works had been concentrated round about Calcutta with the result that the wagon-building industry as it existed now was also concentrated in that area. It was in this background that he learnt about the Binny's interest, in wagon assembly, and eventually in wagon-building in this part of the country.

All the 2,950 wagons, which were to be assembled here have been allotted to the Southern Railway.

MODERN SYSTEM OF SIGNALLING

Moreover the installation of a more modern system of signalling on Indian Railways has been recommended by an American firm of surveyors, whose services were obtained by the Government of India under the Indo-American Technical Aid Agreements.

The service of Messrs. Sanderson and Porter were obtained by the Government to undertake a study of certain aspects of the railway system. The firm has submitted its report to the Railway Board. The report suggested that two pilot sections should be selected and equipped with centralised traffic control to determine the benefits likely to accrue from this type of signalling under Indian conditions.

The Railway Ministry have shown that the operating statistics of the Indian Railways have been heartening and also indicated clearly that they have taken measures for further improvement of operating efficiency. The Railway Board have already had the benefit of the advice from another American Technical Team during 1956. The main task now is of assessing the extent to which India should now receive a general assurance of Bank's aid to cover foreign exchange, of which the Railway requires 425 crores and the actual

manner in which that assistance should be phased.

Out of the Rs. 1,125 crores of total investment for the Railways about Rs. 425 crores have to be in the form of foreign exchange, for a portion of the steel required for the projects and also much of the equipment have to be imported. The estimate of foreign exchange needs, again, is a strictly disciplined figure.

The World Bank Mission has expressed their opinion that every effort should be made for improving the operating efficiency of the Railways for which there is apparently still considerable scope. This need not stand in the way of acceptances by the experts of either the proposed scale of new investment or the percentage of its foreign exchange component, which is irreducible. These two aspects are quite different. Even when efficiency is stretched to its utmost practical limits, the investment in rolling-stock and track would still remain inadequate to meet all the demands that will be made on the Railways during the Plan Period. The experts now in this country are studying the Indian Railway development plan on behalf of the World Bank for a practical and well-defined problem. Last year, the World Bank surveyed all its general aspects and felt convinced about the vital role that transport has to play in making the Second Plan a success.

The report of this team to the World Bank will provide the basis for the Bank's loan assistance to the Indian Railways. The programme for the increase of transport capacity which the Planning Commission has approved of calls for a total expenditure of Rs. 1,125 crores. This is not a generous figure; it is an austere one.

The Government of India and this country expect that as much as possible of the Railways' need of foreign exchange will be met by the World Bank. It is not necessary here to mention any definite figure for the size of the Railway loans which are being negotiated. To some extent, the amount will be determined by the technical appraisal of the schemes and projects by the World Bank's Consultants.

[Reproduced from the Hindu Weekly Magazine, dated 28th April, 1957.]

TRAIN TRAVEL IS FRIENDLY

JOHN JOHNSON

A VISITOR from New Zealand. I have for five months travelled India from one end to the other, and there are many things of which I could write in commendation. But I feel that first and foremost come your lovely big trains. I know that the dust comes in at times through the windows, that sometimes trains are late—though often they make up this time. But, by and large, I feel that the nation has in its train service a wonderful machine for transporting its people, and visitors, from one end to the other, in a state of social proximity, at a very low cost indeed compared with other countries I know.

One of my main objects in India was to meet people and talk to them, and I have found the train just the place to do this while we swing along to our destination. Of course if you want to meet more people you must travel third; and the presence of my wife has often made that impracticable. But I have vivid memories of a journey from Nagpur to Itarsi with a wedding party, or rather the bridegroom (a young doctor) and his friends who, in a crowded compartment, as has so often happened to me in India, made room for me to have a comfortable seat and even shared their food with me. Then between Nagpur and Wardha, one morning, I had a long lecture from an 'untouchable' or Harijan, who, though he had himself risen to responsibility and sent his son to College, was able to tell me at length all the sins of Mr. Nehru, and what a wonderful religion Buddhism now was. I've even found a professor of History in the third class; and I can only regret my neglected opportunities.

But I think it is in the second class you get the best chances of friendship. It was in the north near Bareilly. I had travelled all day in bus from the mountains, and had waited over midnight for the Delhi train. Alas, on arrival, it was full or locked up. Finally in despair I forced my way into a crowded second, and curled up in a corner on the floor. But within an hour, at another station, more people crowded in till we had five stretched on bunks and six sitting round me still on the floor. The last straw was a woman with a servant

and some big bedding, though I didn't know where she expected to use it.

Sleep was impossible. Presently the Indian in the top bunk looked down at me, smiled, and said, 'and whatever part of the world do you come from?' I told him, and he explained he had been really occupying a professorship of law in the U.S.A., but so many wonderful things were happening in India he could not keep away! This led another to explain he was an advocate going to Delhi for a case, and for practice he started on a cross-examination of me about my country and its laws and practices. By this time we had quite an audience despite the hour of 3 a.m. Another man admitted he was the sub-head of an engineering works, and told me how much India was progressing here.

The nice woman, who had been given a seat, had said nothing; so finally I turned to her and asked: "And where do YOU come in this picture?" As I suspected she was not an ordinary woman, if there is such a thing in India! Then it came out she was the head of the Dept. of Political Science at a women's college, had a husband who was a civil servant, also four children, and was a keen Gandhian who did spinning in her spare time as witness the lovely coat and dress of khadi she was wearing. "You must be a busy woman," I said; "but I have two servants," she replied which didn't seem to me to be in excess.

You may be sure by now any resentment I had had at 1 a.m., had quite disappeared through the agency of the lively friendly conversation. And then, blessing of blessings, at 4-30 there appeared at the door the man with the tray of tea! What a wonderful place India is, especially on its stations, for tea to be available in every event, or coffee here in the south. It has never failed me.

The first class carriage tends to be a more lonely place but one night at Hoshangabad we found in our compartment a man reading Bertrand Russell's "Problems of Philosophy." I asked, was he a professor? "Oh no, only a jet plane pilot!" Another soldier I met in Orissa

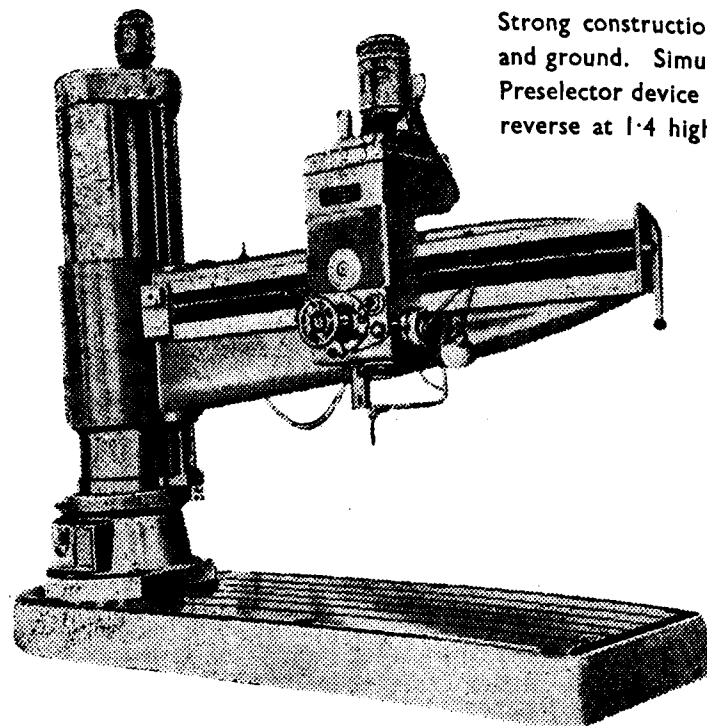
turned out to be an 'aborigine' or its equivalent, and gave us a lesson on history. Hyderabad gave us a delightful Professor of Botany who told us all about the trees we passed. He was just off to U.S.A. to teach, in payment for wheat. Later, we had a Communist M.P. and a Christian woman, both equally friendly. A crowded carriage down south the other night revealed the General Secretary of the Y.M.C.A., a representative of the Mar Thoma Church, an insurance agent who knew just everything and talked like a book, and a nice family off to Singapore.

Of course some English people, perhaps most, tend to be reserved, and so miss the charm of their neighbours; but I come from a country

where equality is our motto, and where each talks to each, in train or bus, without a formal introduction.

I feel I should close this article by a description of that most marvellous scene in all the world: an Indian railway station; but I am afraid that is too broad a scene for my compass to-day. There, one's friendship can extend to the children, the railway men, the most courteous and helpful station-masters. Nor must I forget to mention that most comfortable of your institutions, the railway retiring-room, which so often awaits a tired traveller coming from the train. India is full of kindly, friendly people; not least are they to be found in or near her trains.

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AUNTS AND GRANNIES

V. S. SHANTHALAKSHMI

"THIS Ramu is really becoming more and more incorrigible. His grandma gives him too much of an indulgence and he is a completely spoilt child now, beyond reclamation. Whatever I try to tell her is grossly misunderstood and she does not realise what an amount of permanent damage she is doing to the child's individuality, morale and character." I heard a mother complain plaintively to one of her neighbours, the other day.

Yes, this is not an unique problem of its kind confronting only this particular lady. If you can manage a peep into every Indian household, in most of the homes, you will find the same history repeating itself. In almost all homes where there are grandmas or maiden aunts, very often the grand-children or the nephews and neices have very special emotional relationship to them. They too adore the children and treat them as if they were their own flesh and blood and would even willingly sacrifice anything for their happiness. And not infrequently do they have a feeling that they understand these children better than their own parents understand them.

This is a delicate problem indeed. Is it possible that they have taken these 'ready-made' children, and without assuming the responsibility for their life, their health, their education, their character, are merely enjoying the fruits of their companionship and love, without really being aware of what they are doing? But, what really happens is this. A grand-mother feels that her usefulness in the world has been minimized by time. Her children are grown up and their attention is turned to their own children. The grand-mothers, especially those who are born in an age in which women were not educated to use their leisure fully, often find in their grand-children an opportunity to make themselves useful again. In a sense, they want to show their children that they are not superannuated. They lay an unconscious campaign to win the grand-children over to themselves. This is not very difficult to manage, as the parents always had the unpleasant task of punishing the children for their little misdeeds, while the grand-parents can condone everything.

In a family I know, the mother-in-law under the guise of grand-parental privilege spoiled the children to within an inch of their lives and their sanity. Let not this lead one to the belief that this grand-mother was a malicious psychopath. She was a good lady of course, and but for her neurotic-hostility to her daughter-in-law she lived a fairly normal life. But ever since her only son married she felt neglected and deserted and in order to save her self-respect, was literally compelled to attempt to win her grand-children to her. The problem was finally solved by directing the grand-mother's emotional interests into more acceptable social service activities.

This unconscious and inconsiderate interference of elders often leads to a lot of tensions in the family, the resentment of the parents which essentially gives rise to misunderstanding, ill-feelings and unhappiness in the family. Thousands of untoward psychological complications may also ensue. Sometimes the children are spoiled so badly that when they grow to the age where they have to make independent decisions for themselves, they feel deserted and turn not only upon their parents but upon the 'good' grand-mother or their 'favourite' maiden aunt as well. And then the 'good little grand-mother' has not only the reproaches of the parents to deal with but her own bad conscience as well.

An example which shows how this situation can be handled in a psychological mature fashion is that of a friend of mine who lived with her married sister. Whenever she went out with her neices she always brought along other children of her friends and acquaintances. The purpose of this was to provide for a wider distribution not only of her own, but of her neices emotional interests. The presence of the other children in their company served the double purpose of the development of the neices' social feeling and the frustration of any tendency towards the emotional fixation. The result is that a beautiful co-operative relation totally devoid of pathological, emotional strains, exists between her sisters children and herself.

(Continued on page 50)

LIGHTING THE WAY

For nearly 50 years Exide have been making train-lighting batteries for Indian Railways. And now the manufacture of the famous Exide-Ironclad Battery is firmly established at the Exide factory near Calcutta. With their outstanding record of reliability, efficiency and long life, Exide-Ironclad Batteries are ready to meet the stringent requirements of progressive Indian Railway Engineers...for Fans... Lights...Airconditioning.



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CHILDREN'S CORNER

"The Fire Brigade"

LET us suppose it is a cold winter's night in a large city. The durwan (or watchman) of a large block of flats is keeping a night watch in his little shelter. Squatting on his haunches, he has his hands playing over the red warm glow of a little fire he has built out of odd scraps of wood and cinders. The time is long past midnight, and the cold is biting deep into the bones of the durwan, but the warm fire, and the thick woollen blanket he has draped around his shoulders, keeps him snug. Suddenly, he finds himself getting sleepy, so he props himself up against the wall, pulls the blanket around him tighter and falls into a deep sleep.

While he sleeps, a playful breeze blows into his shelter, fans the tiny fire, and scatters the glowing sparks of wood and cinders to and fro. Some of these hot sparks come to rest on a pile of rubbish near the building, and is soon a roaring blaze.

The durwan feeling terribly hot now wakes up, with clouds of smoke choking him and when he looks around, he finds that the tiny fire is now burning its way into the building.

What happens now? Within a short time the Fire Brigade station gets news of the fire and within a few minutes the fire-engines fully manned come tearing down the city streets, with their loud bells clanging to have the right-of-way. These fire engines reach the scene of the fire and before long the burning building is squirted with powerful jets of water to put out the fire, with the firemen at their jobs of rescuing people and other things from the burning building.

Now let us look a little closer and see how a city's fire-fighting services do their essential but dangerous jobs. If you went to a fire-station the first thing you would see was a huge garage housing gleaming red fire-engines. These are powerful cars fitted out with various fire-fighting appliances like ladders, long, long lengths of hose-pipes, pumps for pumping water and several other gadgets.

In every fire-fighting station there is a control room in which there is always someone on duty. This room is connected by telephone to all parts of the city. On the walls of this room there is a huge map which shows a detailed plan of the entire city. In various

localities of the city there is also a glass-fronted gadget marked 'fire'. If someone comes across a serious fire and he is near one of these, he merely breaks the glass. As soon as he does this, a bell rings in the control room, where the men on duty know at once the exact place to find the fire. The control room may also get news of a fire directly over the telephone.

In every fire-station all firemen live on the premises, usually on the floors above the garage and control room. As soon as news of a fire comes through, the control room sets the fire alarm bell ringing throughout the building, and no matter what the fireman may be doing, within about five seconds he must be out of his living quarters, and you will see him sliding down a shiny and slippery steel pole, until he lands on his feet in the garage. From here he goes straight to the fire engine to which he is assigned, and within about thirty seconds of the alarm ringing, the fire engines are roaring out of the fire-station and through the city streets to the fire.

What happens when the fire-engines get to the scene of the fire? The fire-captain, who is the expert in charge of operations, takes in the whole scene within a minute, and issues crisp orders to his fire-team. Some start taking out the long rolls of hose-pipes, which are connected to the nearest city water-hydrant. One must realise that several long hose-pipes have to be used and so wherever water-hydrants are available nearby, these are connected up. Then the firemen on the nozzle-end of the pipes direct the powerful water jets to various parts of the blazing building. Motor pumps are also used to help the flow of water from the hydrants, as that flow may not be so powerful as to throw a jet of water to the top of a building.

Then you will see those long, telescopic ladders creeping up and up to the high windows of the building, with the firemen climbing up these ladders. What are they doing? Their job is perhaps the most dangerous of all. They have to go into a blazing building to find people who may be trapped, as stairways may have collapsed, walls caved in, and even floors crumbled away in the intense heat, leaving large gaping holes. The smoke too is sometimes so thick that breathing is difficult. For this the firemen must wear gas-masks. Some of the firemen also wear special fireproof clothing so that they can actually go through the fire to rescue people who may be trapped, or

cut off. These men fight a grim battle against the burning flames and lung-choking smoke. In saving the lives of others many of these firemen have lost their own lives, or have been badly burnt or injured, so that they become cripples for the rest of their lives.

Sometimes these men are on a fire-fighting job for long hours on end. More often than not fires start at night, so the firemen can rarely hope to have a complete night's rest. At any moment that fire-alarm bell starts its loud clanging, and it may be four, five, twelve, seventeen or even twenty-four hours before they are finished and back in their living quarters, almost dropping with weariness.

We must also remember that firemen are not only for fighting fires and helping people out of burning buildings. Their services are quite often called for on other occasions. Some crazy fellow living on the fifth or sixth floor of a large building suddenly threatens

to commit suicide. He climbs out of a window to jump, but when he sees the hard street far down below, he gets really scared. He tries to get back through the window to safety, but somehow finds he cannot. He is now trapped, perhaps on a narrow ledge, and if someone does not rescue him soon, he will feel dizzy and hurtle down to his death. So the fire brigade gets the news, and along comes a fire-engine with their long, telescopic ladders and up goes a friendly fireman, who eventually coaxes the crazy fellow to come down to earth and safety with him.

Like so many other things we have in life, the little warm and cosy fire can be our friend, but when we are careless with it, the friend becomes an awful, burning enemy. It is then that we must call in our firemen to overcome the enemy we have made through our carelessness.

UNCLE TELLATALE.

RAILWAYS AND THE PUBLIC

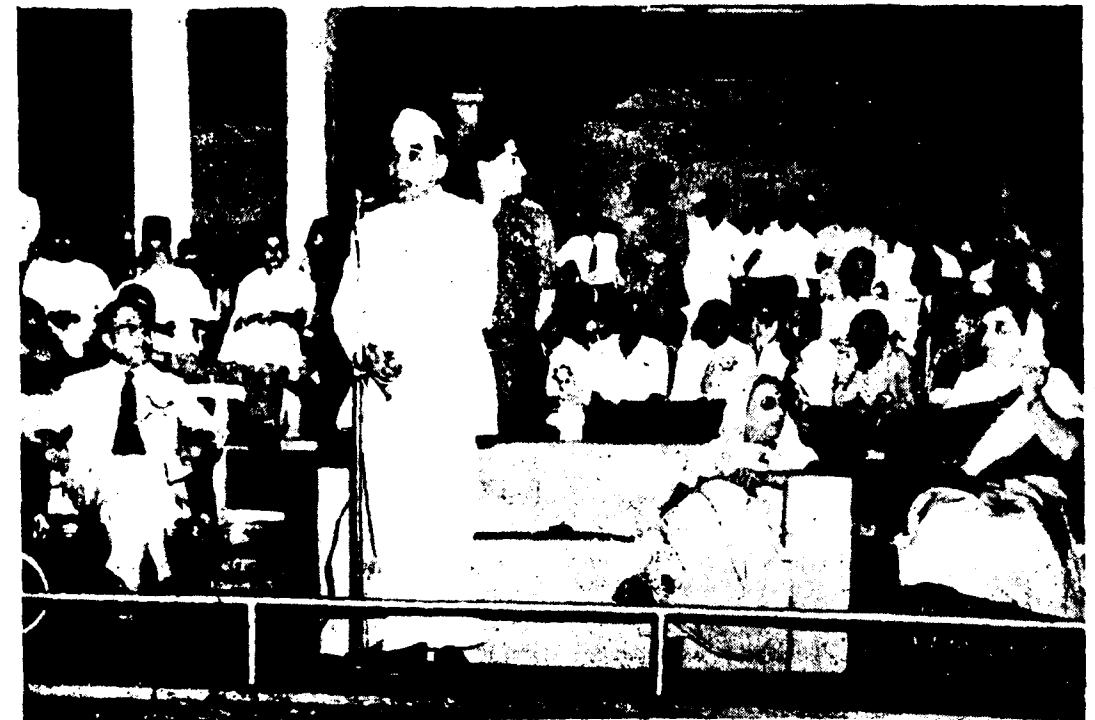
(Continued from page 41)

influence we exert being a good one. Each of us from the lowest to the highest, can by doing our jobs correctly and efficiently help in keeping our customers—the travelling public—satisfied. In this country where Railways are nationalised the public are not only customers, but are shareholders, and no one in business would risk displeasing a shareholder in the concern which employs him. Two sound business precepts can be said to apply to the Railway as well—firstly “The Satisfied Customer Comes Again” and secondly “The Customer Is Always Right”—two sound guiding principles for us who are members of what is the largest concern in the country, the RAILWAYS.

WOMEN'S PAGE

(Continued from page 47)

Hence to love grandchildren, or nieces or nephews not wisely but too well eventually ends in tragedy, not only for the recipients of the love but also for the donors. It is unwise to focus one's entire love-stream upon a child much younger than one's self, especially when that child is not one's own child. Too many chances of disillusion exist. If you must get something, if you must shower your love in unending streams on some living thing, focus it on a dog or a cat, a horse or a gold fish, but not on others children. (But if you have an adopted child, that is a different matter altogether.) And better yet, find a variety of activities from which you can gain your self-esteem. Follow a policy of ‘hands-off!’ with children other than yours and your chances of happiness will be immeasurably improved.



Sri T. M. T. V. Reddy, Governor of Andhra Pradesh, addressing the gathering

RAILWAY TATTOO AT SECUNDERABAD

N. Samuel

(Personnel Inspector)

137188

WHEN at 8-28 p.m. on Tuesday the 16th April 1957 the City Police Band played the National Anthem, the curtain was rung on a most enchanting evening's entertainment brought out as a Railway Tattoo at the Railway Recreation grounds, Secunderabad. It was the fruition of a month of intense planning and practice and courageous perseverance in the face of several handicaps. The Tattoo conceived and executed by Mr. R. K. Natesan, Divisional Personnel Officer of the Secunderabad Division, Central Railway, was designed on the lines of a Military Tattoo. It had to aim at the twin object of bringing into relief the Railways' role in the progress of the nation and kindling the interest of the general public in the day-to-day working of the Railways to promote co-operation between the public and the Railways.

Tableaux on ‘Development of Transport in India’, ‘Punctuality of Trains’, ‘Coach Construction’, and ‘A Railway Worker's Life’

were planned and with these as the main features, the essential ingredients of a Tattoo, viz., Rifle Drill, P. T. Display, Pyramids and Torch Light Tattoo were fitted into the programme judiciously interspersed with interesting and colourful Indian Folk dances. Once the programme was determined, ways and means of staging the function had to be found. It was not long before it was discovered that, except the ground on which this Tattoo could be staged and the spectators accommodated, there was nothing readily available. A small band of officers and senior staff was immediately got together and the machinery to procure all the thousand and odd things necessary was set in motion. ‘Development of Transport in India’ required various animals from a donkey to an elephant, from a palanquin to a horse-drawn-carriage; ‘Punctuality of Trains’ required a train; every other item similarly required men and material, planning and training. Enthusiastically lead, the select

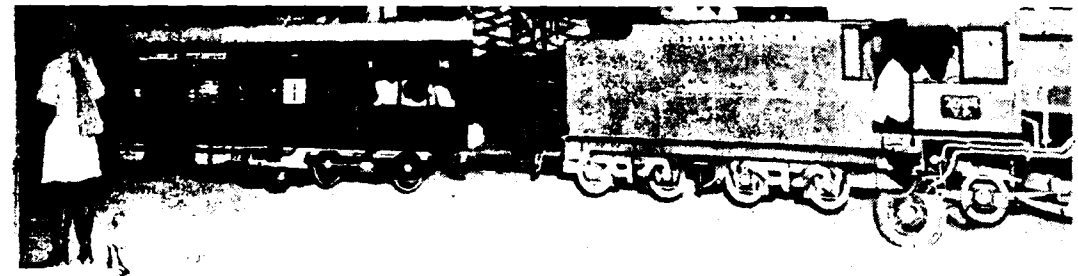
band of officers and staff forged ahead despite handicaps and discouragement at every turn. As the entire show was to be held in the open and in the dark, the non-availability of lighting equipment of a very special nature was the biggest stumbling block until the very day of the Tattoo.

While organisation of the Tattoo was progressing, arrangements on the reception side had to proceed side by side and as this was no less important, volunteers, representatives of differing groups of staff, were formed into a reception committee. This committee started functioning smoothly, arranging printing of invitations, printing of a brochure got up for the occasion, drawing up lists of invitees, etc. The happy result achieved on this side of the arrangements is a significant pointer to the advantages that would accrue if staff belonging to differing shades of opinion team up for constructive work.

Though the Arts & Crafts exhibition—another feature of the Railway Week celebrations—held at the Railway Recreation Club prevented a rehearsal of the Tattoo, the whole programme was mentally rehearsed in the quiet of the night on the eve of the Tattoo, each organiser being briefed in the most detailed fashion. The appointed day arrived—Tuesday the 16th of April 1957. Excitement ran high among the small band of men assisting the organiser and director, Sri R. K. Natesan, who kept up an air of non-chalance and spoke words of encouragement calculated to keep the morale of his assistants high. The show simply had to succeed. Besides the Governor of the State and his wife, Ministers of the State Government, the highest officers of the Defence Services and of every branch of the State Government and other high dignitaries were expected to attend. The Railway represented by the Secunderabad Divisional Administration, having embarked on this extremely ambitious experiment in public relations, could not afford to fail. The Military and Police with their vast resources in men and material, have always available, the facilities necessary for holding displays like Tattoo, Ceremonial Parade, etc. and due to the very nature of their respective services, can bring to bear the organisational skill and experience to make such a function a success. But, for the Railway it was a new experience made more difficult by the need for making the function not only a source of entertainment

but also a vehicle to mould public opinion to appreciate and understand the role of the Railways.

As the zero hour neared, the different pieces began automatically to fall into their places, and the air began to get surcharged with a state of expectancy. Spectators began arriving as early as 4-30 p.m. and filled up the stands on either side of the pavilion. This stream which began as a trickle gathered in size and groups of hundred or two hundred and later thousands, filled up all the available space by 6-30 p.m. and commenced overflowing thereafter, dislocating all arrangements to contain this vast mass of people. The invitees, the ladies dressed in colourful sarees in the latest fashion, began arriving by 6 p.m. and as desired in the invitation card, all were seated by 6-45 p.m. Dusk gathered fast but before it became completely dark it was quite plain that some ten thousand men, women and children, including the invitees in the pavilion had assembled and more were pouring in every minute. The Governor accompanied by Srimathi Trivedi, arrived on the stroke of 7 p.m. and simultaneously with his assuming his seat on the dais in the front of the pavilion with the Divisional Superintendent to his right and Srimathi Trivedi to his left, a beautiful rocket went off high into the sky with a loud explosion. It was the signal for the start of the Pageant depicting the means adopted from time to time for transport: soon the portion immediately in front of the pavilion was floodlit and a man, dressed in dhoti and turban, walked across, followed by a character depicting the postal runner, showing the first means of travel from one place to another. Then followed a palanquin borne by eight men, a donkey with a rider, a camel. An interesting commentary explaining the significance of the development of each mode of transport was heard through loud speakers. Then a magnificent horse followed, introduced by the commentator as a mode of transport adopted by man when he began to value his time. Following the horse came a mighty caprisoned elephant which, when it was exactly opposite the Governor, paused, turned and saluted with its trunk which saw the Governor accepting the salute. Then followed the vehicular transport bullockcarts, horse drawn-carriages of various periods drawn by magnificent animals complete with bells. A model of the Railway engine which hauled the first Railway



Section of the Train used in the tableaux on "punctuality of trains." Inside view of Station Master's Office is seen in the background

train in India was wheeled across to the strains of a march played by the City Police Band. The items of the programme followed with clock-like precision each commencing almost simultaneously with the ending of the one previous, leaving practically no time to the spectators even to applaud. The scenes were changed from one place on the ground to another by illuminating each item at a different place as the previous item ended. The second item, namely the Rifle Drill put up by the Railway Protection Force, turned out to be the star item in the first half of the programme. The absolute precision with which the various movements were carried out without a word of command to synchronize with beautiful music, kept the spectators completely thrilled. The gypsy dance that followed performed by the Railway Girls' School, was a treat of colour and movement, set to melodious orchestral music played by Williams and party of the Commercial Department. This and other dances performed in the arena, about 40 ft. in diameter in the centre of the cricket field at a distance of 200 ft. from the spectators, illuminated by a powerful arc lamp gave the illusion of a technicolour film show. India's champion

pole vaulter, George, Guard of the Secunderabad Division and Champion Weight Lifter, Benny Francis, Apprentice of Loco Workshops, were introduced under the item 'Talents in Railwaymen.'

The P. T. Display that followed put on by the members of the R. P. F. clad in blue and white was another example of graceful physical movements carried out to the rhythm of the band. The 'V' shaped formation of P. T. display brilliantly illuminated by a 'V' shaped spot light from the arc lamp enhanced the beauty of the item. The tableaux on 'Punctuality of Trains' was a surprise item. The spectators sat in wonder gazing at the apparently life-sized train which in fact, was only cut out wooden boards painted like engine and carriages. The children of the Railway Schools who played Station Master, Guard, Brakesmen, Travelling Police Constable, Pointsman, Passengers, etc., gave an impressive performance which helped to drive home the moral of the item.

Pyramids by the Railway Boys' School which followed was another item which drew continuous applause from the spectators.

Folk dance depicting marriage by students of the Keyes High School



The guest artistes of the evening were the troupe of dancers from the Keyes Girls' High School, whose folk dance in the central circle depicting a marriage was most colourfully executed. For this function the Keyes High School had broken a tradition for the first time to give a performance outside their school and under the auspices of an authority other than their own. A demonstration of Coach Construction then followed. The public were shown the rudiment of coach construction introduced by a Hindi announcement and the different stages explained by a commentary in English. The beautiful miniature coach complete in every detail, was finished in 7 minutes and when the arc lamp was switched off, the interior lights of the coach itself went on, presenting a beautiful appearance. Another folk dance, this time by the Railway Boys' School held the spectators' interest to be followed by the story of a Railway Worker when the different stages of advancement in the career and life of a young man starting as an Engine Cleaner and ending up as the Loco Foreman of a Running Shed was shown. At this stage the Divisional Superintendent, Sri Rafi Hydari, addressing

the gathering, explained the objects of the Railway Week and thanked the Governor and his wife, the Ministers, the ladies and gentlemen for responding to the invitation and all the public and private bodies who had helped the organisers of this Tattoo and requested the Governor to speak. The Governor graciously responded, giving expression to the beautiful performance staged and congratulated the Railways in general for the great part they have played in the progress of the nation to date and exhorted the Railways to make still greater efforts in the coming years. After the Governor's speech, the men of the R.P.F. staged the last item of the evening to the accompaniment of melodious music played by the Police Band, when the guests and spectators were kept enthralled with the beautiful lighted patterns of the torchlight Tattoo which drew applause after applause and which turned out to be a fitting climax to an evening of most interesting and enjoyable experiences. When the torchlights formed into the Central Railway's emblem—'C.R.', the emblem 'C.R.' and the words 'RAILWAY WEEK' and 'JAI HIND' were also lighted up



"Koya" dance—Railway School Lalaguda

in large letters on the ground on a big board. Simultaneously, there was an explosion of fireworks and the Police Band played the 'Jana Gana Mana'; the whole arena being lit up, disclosing row after row of artistes, animals and carts and carriages of the pageant, and the whole concourse of people in the field and around it and the guests in the pavilion, standing to attention. At 8-30 p.m. sharp the Governor left. The press people and cars trying to leave the RRC grounds created a first class traffic jam which took a full half hour to clear and people were still leaving at 9-15 p.m. three-quarters of an hour after the close.

The following day, the press hailed the event in glowing terms, one of the English dailies front paging the function under the headlines 'RAILWAY WEEK CLOSES WITH AN IMPRESSIVE TATTOO'. Another English daily gave interesting descriptions of the various features of the Tattoo especially mentioning the instructive Tableaux on 'Punctuality of Trains' and 'Railway Worker's Life.'

Thus ended the Railway Tattoo, the first of its kind to be staged by the Railways, setting a new pattern in the drive for better public relations.

Photo taken on the concluding day of Railway Week celebrations 16-4-1957 at Recreation Club, Central Railway, Secunderabad. Standing—second from the left Sri P. S. Naidu, Organiser



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NEYVELI

K. S.

INDUSTRIAL development in the Madras State has been retarded, mainly on account of the shortage of firm power and indigenous fuel. Power is needed also for working agricultural pumpsets, the limits of use of surface water having been reached. But, additional supplies of coal, besides being expensive and difficult to obtain, impose a further burden on rail transport, already strained to the limit of its capacity. The large reserves of lignite in the South Arcot district furnish a solution to the problem and constitute the basis for the Integrated Lignite Project. Indirectly and ultimately, the Project will also help to conserve coal resources available elsewhere in the country. The project has naturally been welcomed, with great enthusiasm and eagerness, and has received wide publicity.

The Government of India, who are anxious to have the Project pushed through without delay, have sanctioned the Mining Scheme, as the first step, and entrusted the management of the Project to the Neyveli Lignite Corporation, a Government Company, which functions on modern business lines, under the over-all control of Government and Parliament. The Project is an integrated one, the closely dovetailed constituent schemes being designed to supply essential requirements to each other. All the schemes must therefore be taken up and executed according to schedule, if the Project as a whole is to be an economic success, as undoubtedly it promises to be.

With the Government's approval, the Corporation has undertaken their rehabilitation on about 11,000 acres of land, suitable for cultivation and human habitation, given free of cost by the Madras Government for the purpose. House sites, and sites for schools, community centres, etc., and amenities such as drinking water wells, street lamps, etc., will also be provided free of cost. The people affected and their personal effects will be transported to the new, model colonies, free of charge.

The Neyveli lignite reserves are being harnessed under Rs. 68.9 crore multipurpose project to produce much-needed electricity for industrial development in the south to manufacture fertilisers for agricultural develop-

ment and to produce briquettes for use as domestic and industrial fuel.

The project has been accorded a high degree of priority in view of the acute shortage of fuel in South India, which has retarded the development of industry and agriculture in that area.

The total estimated reserve of lignite in the area is 2,000 million tons. Only an area of 200 million tons has been selected for the exploitation of the project. It would suffice a mine life of about 57 years at an average mine output of 3.5 million tons per annum.

IMPORTANT CONSTITUENT SCHEME :

As the most economic utilisation of lignite is to use it as fuel in boilers close to the mine itself, generation of electric power is the most important constituent scheme in the integrated project.

T.C.M. AID :

Under the aid from T.C.M. a pilot plant for the briquetting and carbonising equipment is expected to be received and erected by the end of October 1957. After completion of the tests with the plant, preparation of the specifications for the briquetting and carbonising equipment will be taken up.

Water resources for the generation of hydro-electric power are very limited and, even after the completion of the Kundah and Periyar Hydro-electric Projects and some other possible smaller projects in the State, the demand for power for industrial and agricultural development, and rural electrification generally, will be much in excess of the supplies available. The hydel power supplies available could no doubt be firmed up by the generation of power at thermal stations, but thermal power is costly and is not easy to produce in Madras as coal, besides being very expensive, is not easy to obtain, on account of the difficulties inherent in its transport over long distances.

The total quantity of coal needed at present for various industries and other purposes in the State is of the order of three million tons per annum, but imports of coal into the State from Indian collieries amount only to about two million tons per annum.

That falling apple...

...may have started Isaac Newton thinking—but it took years of patient, intelligent work to establish *The Law of Gravitation*. 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.

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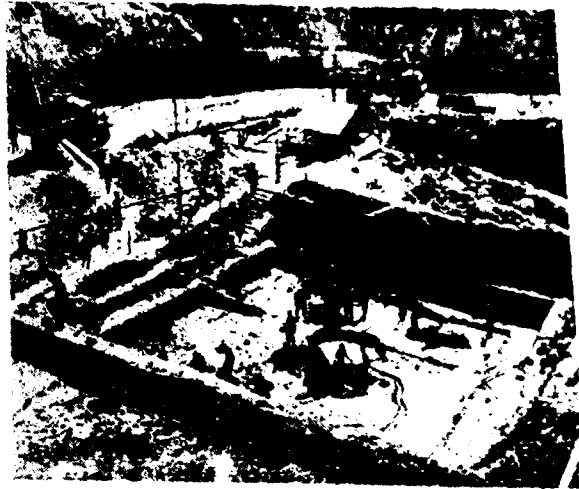
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Welder at work—lowering casing in pumpwell



Excavation work in progress—for bulk sample of Lignite

SOUTHERN RAILWAY

TENDER NOTICE

Tender No. S/236/I/HD/HB/Cables

Sealed Tenders are invited for the supply of Cable Single Core VIR Taped braided and Flame-proof Compounded 250 volts and 660 volts grade of sizes and will be received by Controller of Stores, Southern Railway, Ayanavaram P.O., Madras-23 before 3 P.M. on 20-6-1957 and will be opened by him at 3 P.M. on 21-6-1957.

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 19-6-1957.

Tender forms will not be issued after 3 P.M. on 17-6-1957.

P. N. TALATI,
Controller of Stores.

The transport of lower grade coals over long distances, whether by rail or by sea, would be wasteful and thoroughly indefensible.

Its main significance lies in its multifarious potentialities direct and indirect. As a direct benefit it will provide electric power and fuels for a host of industries, old and new, besides catering to domestic needs on a fairly high scale. Its by-products could also be utilised to start a number of new industries in this State and outside.

The crying need of the hour in India is fuel and more fuel for the generation of electricity and for use in industries and homes. The lignite deposits of Neyveli provide the most effective answer known so far. But it also possess a baffling problem because a whimsical nature has so ordained the deposits that the mineral is protected from the easy reach of man. The existence of a number of very high pressure artesian aquifers below the lignite makes ordinary mining methods useless because the miners will be caught in a deluge.

Although the existence of lignite was vaguely known before, it caught the public eye since 1946 when the Geological Survey of India revealed its existence over an area of 23 square miles in South Arcot district. This stimulated interest and further investigations proved the existence of reserves of lignite, roughly estimated at 2,000 million tons spread over an area of 100 square miles.

The most favourable overburden-lignite ratio and the more easily workable deposits amounting to 200 million tons, occur in the area now selected for the first open mining cut.

The main problem in mining the lignite here is the risk of the artesian water heaving upwards, bursting through the lignite seam and flooding the mine, unless its pressure is kept continuously under control from the appropriate stage of the mining operations. The risk arises out of the fact that there is no impermeable barrier of sufficient thickness below the lignite bed to withstand the pressure that would be exerted on the base of the lignite following the removal of the overburden.

Logically the next step to be taken was the excavation of a pilot quarry which was sponsored by the Madras Government with the aid from the T.C.M.

As the magnitude of the problem unfolded was beyond the financial and technical capacity of the Madras Government, the Central Government took over the financial responsibility for the project from January 1, 1955. The result is the integrated project for mining 3½ million tons of lignite per annum and its processing for the generation of 200 M.W. of electric energy, the production of nitrogenous fertilizers with a nitrogen content of 70,000 tons per annum, and briquetting of 714,000 tons of the lignite and its carbonization to produce 380,000 tons of carbonized briquettes, furnishing smokeless domestic fuel, and a number of valuable by products. With the further investigation of this specific project, the Government of India took over the administrative responsibility as well for the project from September 15, 1955.

Caltex (India) Ltd., anxious to be of service in this important undertaking, had been in close touch with the Neyveli authorities in bringing this scheme to fruition. In a few short weeks the Caltex site near the Neyveli railway station was transformed. Eight gleaming tanks accommodating 120,000 gallons of furnace oil lined the railway siding and the oil company was ready to start pumping fuel to the power house.

With the work in the project to be carried on round the clock in three shifts and a large number of machines spread all over the mining area to be fuelled, Burmah-Shell entered into an agreement with the Lignite Corporation to undertake to make special arrangements for uninterrupted supplies of diesel fuel together with necessary precautions to ensure its delivery in a high state of purity.

Burmah-Shell have erected a modern storage depot with a reserve fuel capacity of over one lakh gallons—a significant contribution to building up a prosperous India and to be in India's Life and Part of it.

PERSONNEL TRAINING SCHOOL

A Training Class for the Establishment Clerks in Class III service of the Southern Railway was declared open by Sri R. Gopalakrishnan, Deputy General Manager (Personnel) of the Southern Railway. The School is situated in the first floor of the western wing of the Central Station Buildings. The school and premises were gaily decorated on the occasion and the meeting was attended by the officers and staff of the Railway Offices.

The meeting opened with a prayer song by Sri Sridaran. The gathering was then welcomed by Sri R. Nagarajan, Personnel Officer/Labour. In his speech Sri Nagarajan traced how a separate Branch for dealing with establishment and welfare work on the Railways came to be established and touched briefly on the different aspects of the work carried on in the Branch. He also emphasised the need for a human approach on the part of the officials dealing with this work.

Sri R. Gopalakrishnan, Deputy General Manager (Personnel), Southern Railway, in inaugurating the class called on the officials dealing with personnel work to deal with cases



SRI M. SAMBASIVA RAO NAIDU

Born on 15-5-1902 at Dharwar in the Bombay State. Sri M. Sambasiva Rao Naidu, son of late Sri Vijayaraghavalu Naidu, got himself employed as a clerk in the M. & S. M. Railway on Rs. 26 in the year 1920 after passing his School Final Class. In 1933, he was promoted as the Senior Clerk on Rs. 80 and again as Head Clerk in the year 1936 on Rs. 147-8-0. After working as the Head Clerk of the M. Section of the G.M.'s Office of the ex-M. & S.M. Railway. Sri Sambasiva Rao Naidu was promoted as O.S. of the G.M.'s Office on 8-1-1951, on Rs. 300 which post he held till the date of his retirement, i.e., for over six years.

In his capacity as Head Clerk and Office Superintendent, he had much important work to carry on with not only the General Manager's Office, but with the entire Railway Administration. During his career. Sri Sambasiva Rao Naidu has impressed his superiors as well as subordinates as a straightforward and honest gentleman.

Sri Sambasiva Rao Naidu retired on 14-5-1957 from the same table on which his beloved father worked.

How happy would the father have been to see his worthy son retire as the Office Superintendent of the G.M.'s Office which post he himself held!

Sri R. Gopalakrishnan inaugurating the class. On his left is Sri R. Nagarajan



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BOOK REVIEW

"INDIAN RAILWAYS"—ANNUAL 1957

This interesting magazine published by the Railway Board, which made its debut in April last year, has completed a year of its career and the First Annual Number, under review, is luxuriously got up, printed on Art paper containing a score of important features pertaining to the Railways well written on varied topics by the Chairman and Members of the Railway Board and other distinguished writers of different nations, with a profusion of illustrations and an attractive colour cover page specially illuminating the same.

Sri P. C. Mukerjee, Chairman, Railway Board, in his article "Railways fully geared to Second Plan tasks" says that our objective is to go firmly ahead, with the unflinching determination that we shall execute the tasks we have before us. "Everyone on the railways should be aware of the great responsibility that we are carrying and we are proud that we have been called upon to shoulder such a heavy task for our country" says the country's top railway executive. Sri K. P. Mushran, Member, Staff, Railway Board, in his article "Welfare of India's 1,000,000 Railwaymen" deals with some aspects of the Railway Administrations' efforts to achieve the greater well-being of their million workers. Sri K. B. Mathur's article on "Enormous Increase in Pressure on Indian Railways" is very interesting. Sri N. K. Roy, in his article "Indian Railways to go in for Thomas Steel" explains how Thomas steel is being used in various countries. Sri T. S. Puri's "Financial Control on Indian Railways" is another interesting article. Sri S. R. Kalyanaraman, Additional Member, Railway Board, in his article "How much relief can Coastal Shipping provide to the Railways?" explains the general objectives of co-ordination between the various methods of transport and the special problems pertaining to Rail-Sea Co-ordination in India. The author, a member of the Rail-Sea Co-ordination Committee, examines in this article the practical scope of the relief which coastal shipping can provide to the railways. Mr. L. Armand, President, French National Railways, makes a complete case for the superiority of electric traction over steam and diesel. "For the Indian Railways, faced with the necessity of increasing both the tonnage and the speed of the trains, the only answer is electrification" says Mr. M.F. Nouvion, a world renowned expert on railway electric traction, in his article "Electrifica-

tion—only answer to Indian Railways' needs." Mr. P. N. Murti's article on "Electrification of 1,300 miles by 1961" is also very interesting. "Impact of Technology on Rail Transport" is another interesting article written by Sri L. A. Natesan, Economic Adviser, Railway Board. Sir Carl G. Holmquist in his article "U.S. Team's Study of Indian Rail Problems" observes that the ten years since independence, is too short a period for the railways to accomplish all that has to be done, but he feels that progress so far made is very encouraging. Sir Holmquist is the Project Manager of the American team of surveying engineers sent to India last year by Messrs. Sanderson & Porter under the T.C.M. aid programme to undertake certain basic studies on the Indian Railways. Mr. K. Ramchandran, General Manager, Chittaranjan Locomotive Works, in his article "India's Loco-Town Reflects Welfare State Ideal" explains the various Welfare amenities extended to the Staff of Chittaranjan. "The Brotherhood of the Iron Road" by Dr. H. Goschwind, President, Swiss Federal Railways, is another interesting article. Sri K. S. Sethi, General Manager & Chief Engineer of the Ganga Project, gives an account of the problems involved in the construction of this bridge, which is expected to help greatly in the economic development of North Bihar. Sri H. D. Singh, Director, Railway Equipment, Railway Board, in his article "Railway Purchases worth Rs. 1,000 crores in Second Plan" deals with the various form of purchase being made by the Indian Railways, with authoritative statistics.

Sri K. Sadagopan, Chief Administrative Officer, Integral Coach Factory, gives a brief account of the new coaches in his article "New Madras Factory to furnish Rail Coaches." Sri S. R. Guha, General Secretary, I.R.C.A., in his article "Role of I.R.C.A. in India's Rail Development" gives an interesting lucid account of the important part played by I.R.C.A. in India's rail development and evolution of uniform rail practices. Mr. Anderson, in his article "A War-Time Wagon Story Retold" relates how cutting through red-tape and war-time priorities he saved the then U.P. from an impending famine by moving in fleets of wagons of Canadian wheat from Karachi. Those were truly exciting days—at least in retrospect; and if one may draw a moral from the story it is: "If you have the courage

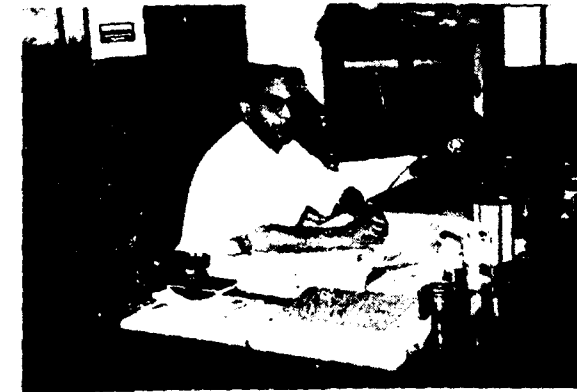
(Continued on page 72)



A section of the gathering



Sri M. V. Sreenivasan, Chief Instructor of the Training School



Sri D. R. Kohli, our new Chief Engineer

without fear or favour and thus divest themselves of the stigma of partiality and corruption sometimes levelled against the staff of the Personnel Branch. He suggested that the

candidates undergoing training in the school should study the rules and regulations thoroughly and equip themselves well for the tasks ahead.

KORATTUR STATION ELECTRIFIED



Smt. Lourdammal, Minister for Local Administration, switched on the new electric lights at Korattur Station last month. Photo above (right) shows a section of the gathering and (below) the Minister with Sri P. Krishnaraju, Dy. GM (General), S. Rly. seated, Sri K. R. Sukkal, Committee Member, Trivellore-Madras Suburban Railway Passengers' Assn., and baby Shanty Sukkal, the young artiste

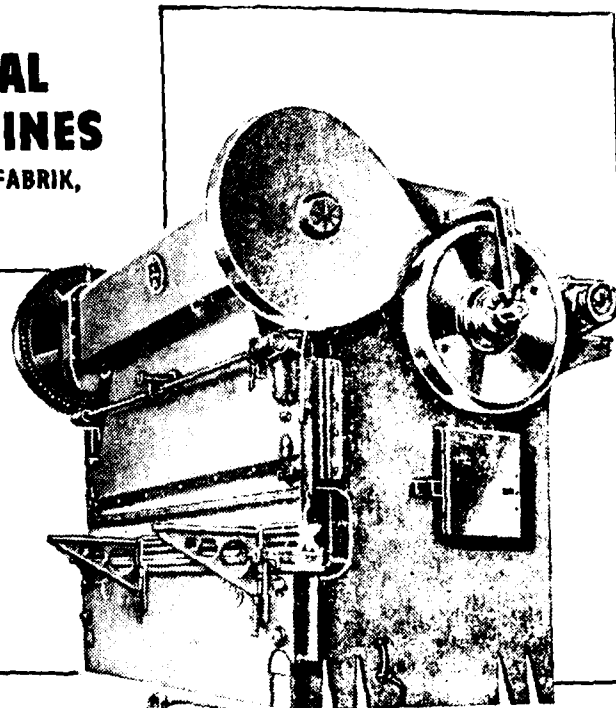


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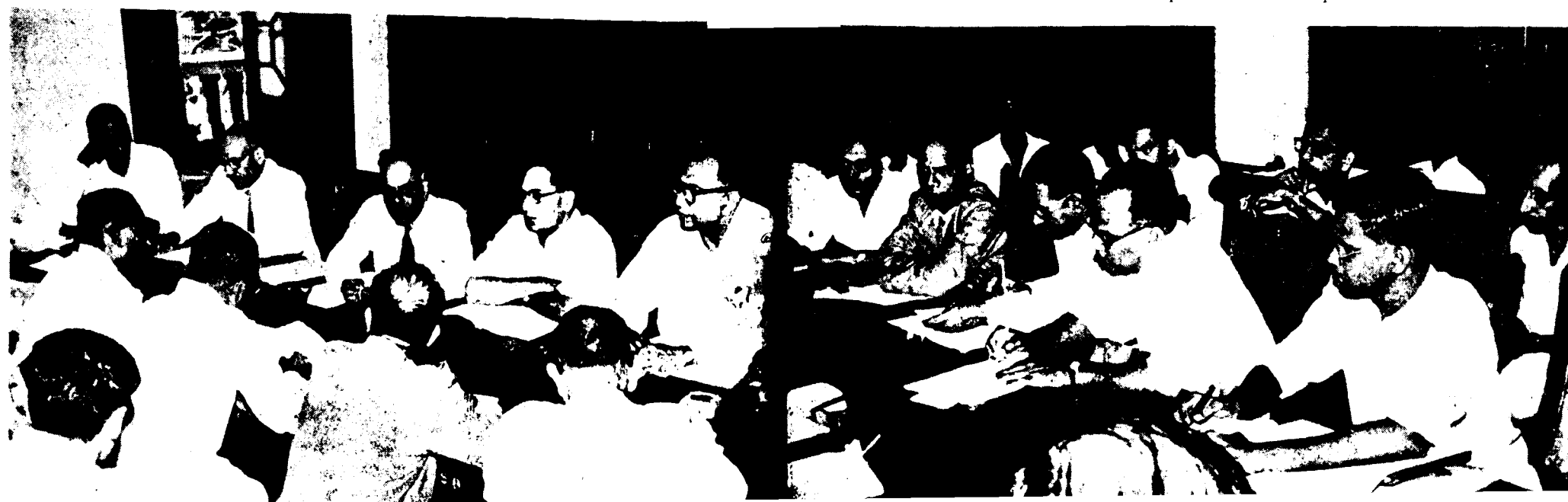


THE GM'S PRESS CONFERENCE was held in the GM's meeting room at Headquarters. Photo above shows Sri V. T. Naidu, C.M.O., at the head of the table and on his left Sri R. M. Mahadevan, CSO, Sri D. B. Patel, SDGM, Sri T. A. Joseph, CM and D. R. Kohli, CE and the Photo below another view of the Conference in progress. Sri S. K. Mukerji, CCS, is seen on extreme right



A view of the press gallery

Another view of the representatives of the press





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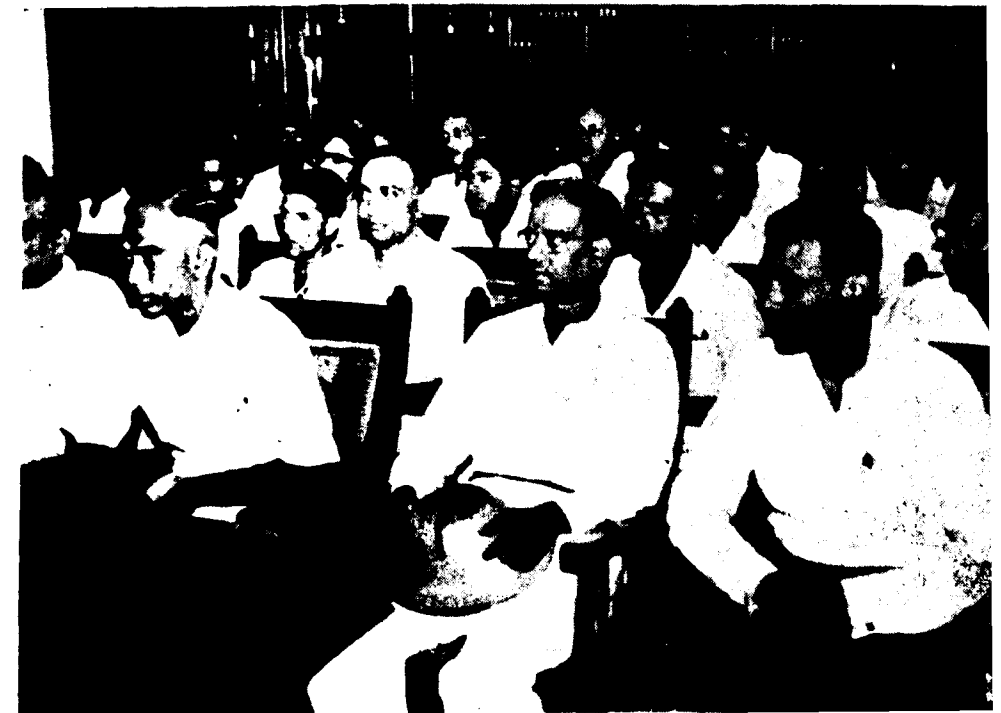
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Sri R. Renganathan, Co-operative Inspector (Rly. Board) talks on "Co-operation and Allied Matters" when the Consumer Co-operative Movement was inaugurated on 22-5-57. On his left are Sri R. Nagarajan, PO (Labour) and Sri T. P. Ramkrishnan, APO (Labour)

Welfare Inspectors who attended the function



BOOK REVIEW*(Continued from page 61)*

of your convictions, don't hesitate—go ahead." Mr. H. M. Chatterjee, in his article "Strides towards Railway Self-Sufficiency" explains that self-sufficiency must be backed by adequate research and development of technical know-how if progress is to be sustained and quality of manufacture steadily raised. "The Case for Diesel Hydraulic Locomotives" is another interesting article written by Mr. L. G. Copestake, Glasgow.

The magazine under review is outstanding in many ways. Its design and get up are very good and for the mind it contains inviting food and there is no doubt this will serve as an 'apex journal' reflecting the national role of the railways 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.

NEW MOTOR CYCLE BATTERY

A new Motor Cycle Battery has recently been introduced to the Indian Market by Chloride & Exide Batteries (Eastern) Private Ltd., Silver Exide type 3ERA7. This new unit incorporates corrosion resistant CB95 alloy pasted with improved active materials, and hard rubber containers which are tough, leak-proof and shock resistant.

Other new features include larger anti-splash vent plugs to facilitate easy topping up and specially designed elements for elimination of short circuits. Also to obviate short circuits, insulated terminal nuts are provided and these are coloured and boldly fluted for finger tightening.

This new Motor Cycle Battery is already being fitted as initial equipment by Enfield India Ltd. who, since their inception, have used Exide exclusively on the Royal Enfield Motor Cycle.



Sri A. B. Krishnaswamy, Senior Labour Welfare Inspector (Sports) and Sri H. A. Vigie, Driver, Southern Railway were awarded Certificates of Outstanding Merit by the Union Minister for Railways, during the Railway Week at New Delhi



Sri R. Natarajan, B. Com., A. C. A., son of Sri V. S. Ramnathan, Power Controller, Podanur, passed IAS Examination, held in Sept.-October, 1956, and Selection (Feb. 1957)

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Sri T. V. Madhav, DPC, UBL inaugurated the Employees' Consumer Co-operative Society Ltd., at Miraj





The Coonoor Rly. Institute bid farewell to the President of the Managing Committee of the Institute, Sri M. A. Sheriff, who retired recently.

PRIZE WINNERS IN ESSAY COMPETITION RAILWAY WEEK

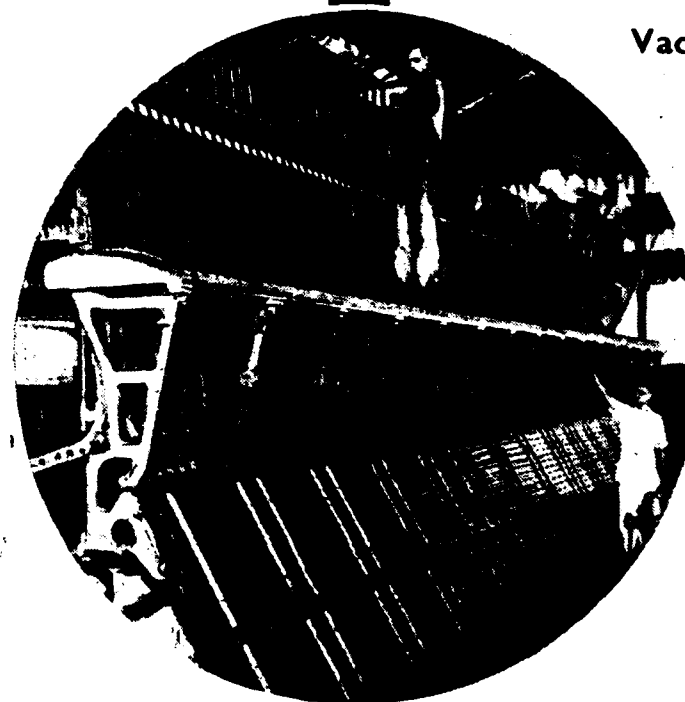
Essays on "How to Improve the Relationship between the Railways and their Customers" were invited from staff during Railway Week. The following three competitors have won the First, Second and Third prizes of Rs. 100, Rs. 50 and Rs. 30 respectively:

1. Sri T. A. Krishnamurthy,
Senior Clerk, Mobile Squad,
Personnel Branch, GM's Office, Madras-3.
2. Sri S. L. Sharma, Chemist 'A',
CMT's Laboratory, Loco Works,
Perambur.
3. Sri V. R. Ramanujam,
Head Clerk, Rates Section, CCS's Office,
Madras-3.

The Essays of Sri T. A. Krishnamurthy and Sri S. L. Sharma will be published in the next issue of "Southrailnews".

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SOUTHERN RAILWAY

TENDER NOTICE

The Engineer-in-chief, Southern Railway, Egmore, Madras-8, invites SEALED PERCENTAGE SCHEDULE TENDERS for the following work :-

Name of work	Approximate value of the work	Earnest money	Cost of tender form
	Rs.	Rs.	Rs.
<i>Proposed Signal & Tele-Communication Workshops at Podanur</i>			
Proposed Compound Wall 8 ft. high with barbed wire fencing 2 ft. high	54,600	2,730	10

The above tender is to be sent to the Engineer-in-chief, Southern Railway, Egmore, Madras-8, so as to reach him not later than 13-00 hours on Friday, the 21st June 1957.

Tenders should be submitted in the prescribed form obtainable from the Office of the Engineer-in-chief, Southern Railway, Egmore, Madras-8, on production of a receipt for the sum of Rs. 10 (Rupees Ten only) paid to the Chief Cashier, Southern Railway, Park Town, Madras-3, or any station master on the Southern Railway, towards the cost of each set of tender forms. In no circumstances, will the cost of tender forms be refunded. The tender forms are not transferable.

Tender forms will be issued upto 12-00 hours on Tuesday, the 18th June 1957.

Earnest money as detailed above should be paid in advance to the Chief Cashier, Southern Railway, Park Town, Madras-3, not later than 12-00 hours on Tuesday, the 18th June 1957 and the receipt submitted along with the tender. No cheque or demand draft should be attached to the tender.

Tenderers are required to submit Income-tax Clearance Certificate in original along with the tender. If previously sent and is current, reference to the particular tender with which it was sent should be furnished.

Earnest money is fixed at 5% of the value of the contract and the successful tenderer will be required to furnish 10% of the value as per his accepted tender towards the Security Deposit.

Tenders will be opened at 15-00 hours on Friday, the 21st June 1957, at the Office of the Engineer-in-chief, Southern Railway, Egmore, Madras-8.

The Engineer-in-chief 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.

INTER - RAILWAY

TABLE TENNIS



The Inter-Railway Table Tennis Tournaments were held at Madras in April. Sri T. A. Joseph, G.M., presenting the trophy to S. Raotogi (W.Rly.), winner, Men's Singles



Sri M. S. Sabharwal (Rly. Board) receives a special cup for good all-round performance



Thiruvengadam receiving the Team Championship Cup

Miss Doreen Augusta of Central Rly. won the mixed doubles item in the Family Events



SOUTHERN RAILWAY

TENDER NOTICE

Tender for "Execution of Work, Supply of Materials in the Zones A to H Madras Division"

The Divisional Superintendent, Madras Division, Southern Railway, Rayapuram, Madras-13, invites sealed percentage tenders for the above to reach him not later than 12 hours on 20th June 1957.

The tenders should be submitted in the prescribed form obtainable from the Office of the Divisional Superintendent (Works Branch) Southern Railway, Rayapuram, Madras-13, on production of a receipt for the sum of Rs. 5 (Rupees five only) paid to the Chief Cashier, Southern Railway, Madras-3, or any Station Master on the Southern Railway towards the cost of tender form. In no circumstances will the cost of tender forms be refunded. The tender form is not transferable.

The tenders should be clearly addressed to "The Divisional Superintendent (Works Branch), Madras Division, Southern Railway, Madras-13."

The requisition for tender forms should reach this office before 12 hours on 17th June 1957, and the tender forms will be issued upto 15 hours only on 17th June 1957.

The earnest money of Rs. 1,000 (Rupees One thousand only) should be paid in advance to the Chief Cashier, Southern Railway, Madras-3, not later than 12 hours on 18th June 1957, and the receipt submitted along with the tender. No Cheque or Demand Draft, etc., should be attached to the tender.

The tenderers should submit along with the tender the Income-tax Clearance Certificate in original or an authorised copy thereof or if he has no taxable income, a sworn affidavit duly countersigned by the Income-tax Officer to that effect.

The tenders received will be opened at 14 hours on 20th June 1957 at the Office of the Divisional Superintendent (Works Branch) Madras Division, Southern Railway, Rayapuram, Madras-13.

The Divisional Superintendent 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.

SOUTHERN RAILWAY

TENDER NOTICE

The Divisional Superintendent, Southern Railway, Hubli invites Sealed percentage Tenders upto 12-00 hours on Monday, the 17th June 1957, for execution of work, supply of materials and labour for various Zones A to I on Hubli Division for periods of:—

(a) One year. (b) Two years. (c) Three years.

2. A Tenderer may quote for one or more Zones.

3. Tenders should be submitted in the prescribed forms obtainable from the Office of the Divisional Superintendent (Works Branch) Southern Railway, Hubli, on production of a receipt for the amount of Rs. 5 (Rupees five only) paid to the Chief Cashier, Southern Railway, Madras, or Divisional Accounts Officer, Mysore, or any Station Master on the Southern Railway towards the cost of the Tender form for the above. Under no circumstances will the amount paid for the tender form be refunded.

4. The Tender form is not transferable.

5. The Tenderer should submit along with the tender the Income-tax clearance Certificate in original or an authorised copy thereof or if he has no taxable income, a sworn affidavit duly countersigned by the Income-tax Officer to that effect.

6. The tender forms will not be issued after 15 hrs. on Monday the 10th June 1957.

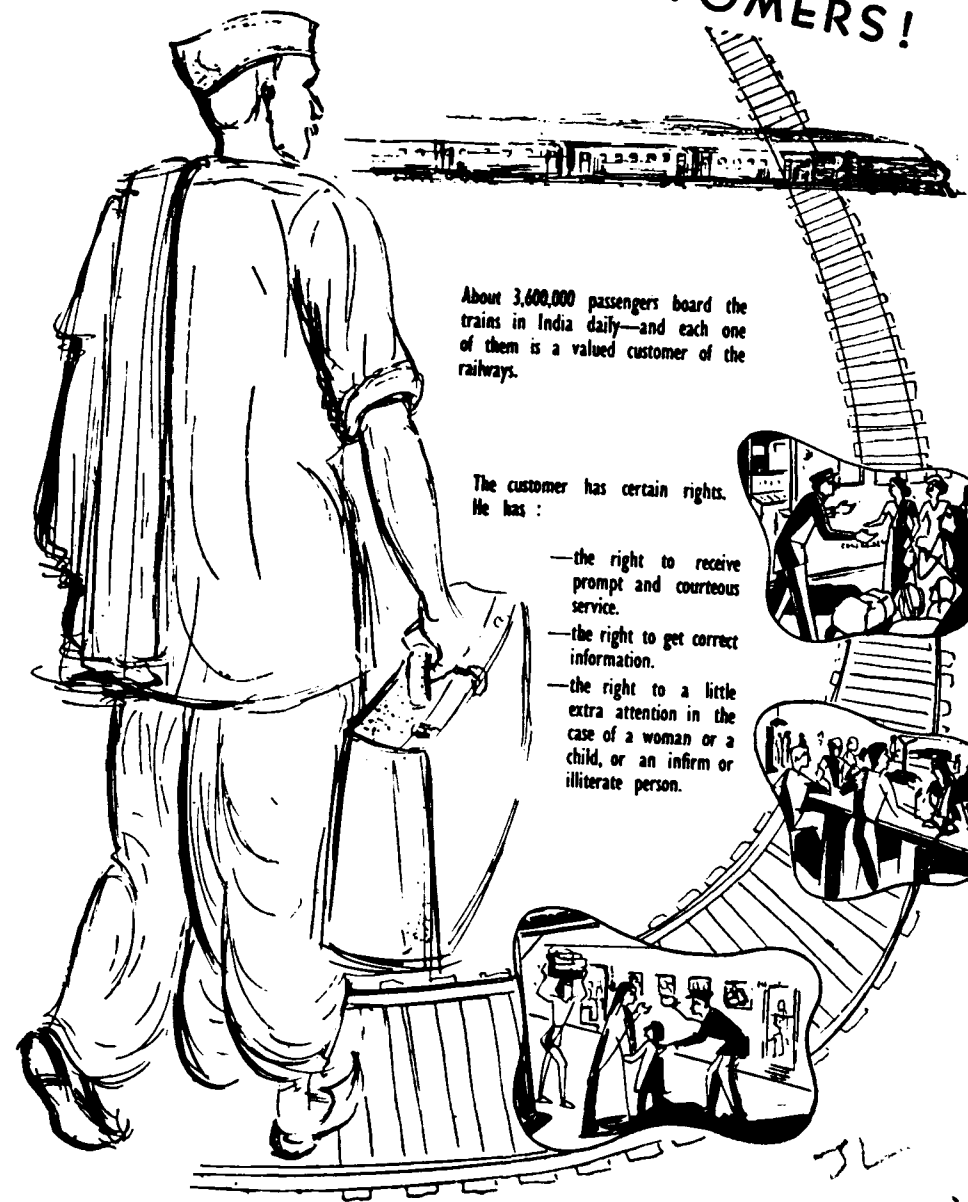
7. Earnest Money of Rs. 1,000 (Rupees one thousand only) should be paid in advance to the Chief Cashier, Madras, or Divisional Accounts Officer, Mysore, and the receipt submitted along with the Tender. No Demand Draft, or Cheque should be attached to the tender.

8. The earnest money will not be accepted after 15 hours on Thursday the 13th June 1957.

9. The tenders received will be opened in the Office of the Divisional Superintendent (Works Branch) Hubli, at 15-00 hours on Thursday, the 20th June 1957.

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

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Standard Circular Tours

The Northern Railway is issuing at a concessional fare of
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for a number of standard tours. These tours cover a
number of specific itineraries, details of which are available
from station masters on this Railway. In addition, if any
itineraries are proposed by the public to the Chief Commer-
cial Superintendent (Rates) of this Railway, they will be examined and
concessional fares granted provided certain conditions are fulfilled.

Special Trains

Requests for special pilgrim or excursion trains on the broad
gauge will be considered and the following concessions will
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- (i) Kitchen arrangement— One bogie vehicle will be
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- (iii) For tours exceeding 1,500 miles and over, a con-
cessional fare equivalent to 3/4th of tariff fare
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For detailed information, please apply to the
Chief Commercial Superintendent (Rates),
Northern Railway Kashmir Gate, Delhi.

THE PUBLIC RELATIONS OFFICER, NORTHERN RAILWAY



SOUTHERN RAILWAY

TENDER NOTICE

The Divisional Superintendent, Southern Railway, Olavakkot, invites sealed percentage tenders upto 12 hours on Friday the 28th June 1957 for :—

Execution of works and supply of materials as per Chapters I to XVIII of the B.S.R. (current).

(a) for one year, (b) for 2 years and (c) for 3 years. A tenderer may quote for one or more zones.

Tenders should be submitted in the prescribed form obtainable from the Office of the Divisional Superintendent, Olavakkot, on production of the receipt for the amount of Rs. 5 (Rupees Five only), paid to the Chief Engineer, Southern Railway, Madras-3, or the Divisional Accounts Officer, Trichinopoly, or to any Station Master on the Southern Railway, towards the cost of the tender form for the above. In no circumstances will the amount paid for the tender form be refunded.

The Tender form is not transferable.

The Tenderer should submit along with the tender Income-tax Clearance Certificate in original or an authorised copy thereof if he has no taxable income, a sworn affidavit duly countersigned by the Income-tax Officer to that effect. If previously sent and is current, reference to the Particular tender with which it was sent should be furnished.

The tender forms will not be issued after 15 hours on Monday the 24th June 1957.

Earnest money of Rs. 1,000 (Rupees Thousand only) should be paid in advance to the Chief Cashier, Madras-3 or the Divisional Accounts Officer, Trichinopoly, and the receipt submitted along with the tender. No Demand Draft or Cheque should be attached to the Tender.

The earnest money will not be accepted after 15 hours on Tuesday the 25th June 1957.

Tenders received will be opened at 15 hours on Friday the 28th June 1957 at the Office of the Divisional Superintendent (Works), Olavakkot.

The Divisional Superintendent 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.

SOUTHERN RAILWAY

TENDER NOTICE

Tender No. S./235/I/GB. 4/F 1927.

Sealed Tenders are invited for the supply of 434 $\frac{1}{2}$ tons of Steel Class II items (Flats and Rounds) and will be received by Controller of Stores, Southern Railway, Ayanavaram P.O., Madras 23 before 3 P.M. on 20th June 1957 and will be opened by him at 3 P.M. on 21st June 1957.

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 19th June 1957.

Tender Forms will not be issued after 3 P.M. on 17th June 1957.

P. N. TALATI,
Controller of Stores.

SOUTHERN RAILWAY

TENDER NOTICE

Supply of 3' 8" to 3' 4" graded clean hard granite metal from Pallavaram (suitable for Reinforced cement concrete work) and supply of river sand, moulding sand, red clay, etc. to be delivered at Engineering Workshops, Arkonam for the period ending 30-6-1958.

The Chief Engineer, Southern Railway, Madras-3, invites Sealed Tenders for the above upto 12-00 hours on Thursday the 27th June 1957.

The Tender should be in the prescribed form obtainable from the Office of the Chief Engineer, Southern Railway, Madras on production of a receipt for an amount of Rs. 5 (Rupees five only) towards the cost of the tender form paid to the Chief Cashier, Southern Railway, Madras-3 or Divisional Accounts Officer, Trichinopoly or to any Station Master on the Southern Railway. In no circumstances will the amount paid for the Tender form be refunded.

The Tender form is not transferable.

The tenderer should submit along with the tender form Income-tax Clearance Certificate in original or an authorised copy thereof if he has no taxable income a sworn affidavit duly countersigned by the Income-tax Officer to that effect.

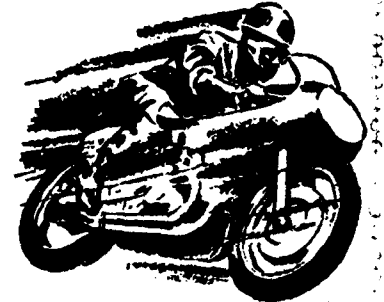
Tender forms will not be issued after 15-00 hours on Friday the 21st June 1957.

Earnest Money of Rs. 1,000 is to be paid in advance to the Chief Cashier, Southern Railway, Madras or Divisional Accounts Officer, Trichinopoly not later than 12-00 hours on Saturday the 22nd June 1957 and the receipt obtained therefor should be attached to the tender. No Demand Draft or Cheque should be attached to the tender.

Tenders will be opened at 12-00 hours on Friday the 28th June 1957 in the Chief Engineer's Office at Madras.

The Chief Engineer reserves to himself the right to reject without assigning reason any or every tender or part thereof and does not bind himself to accept the lowest or any tender or part thereof.

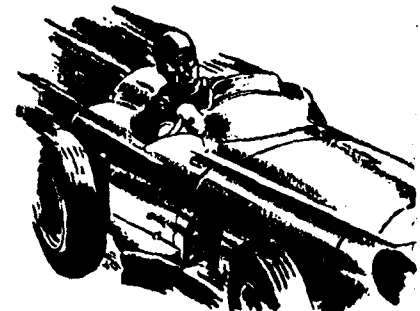
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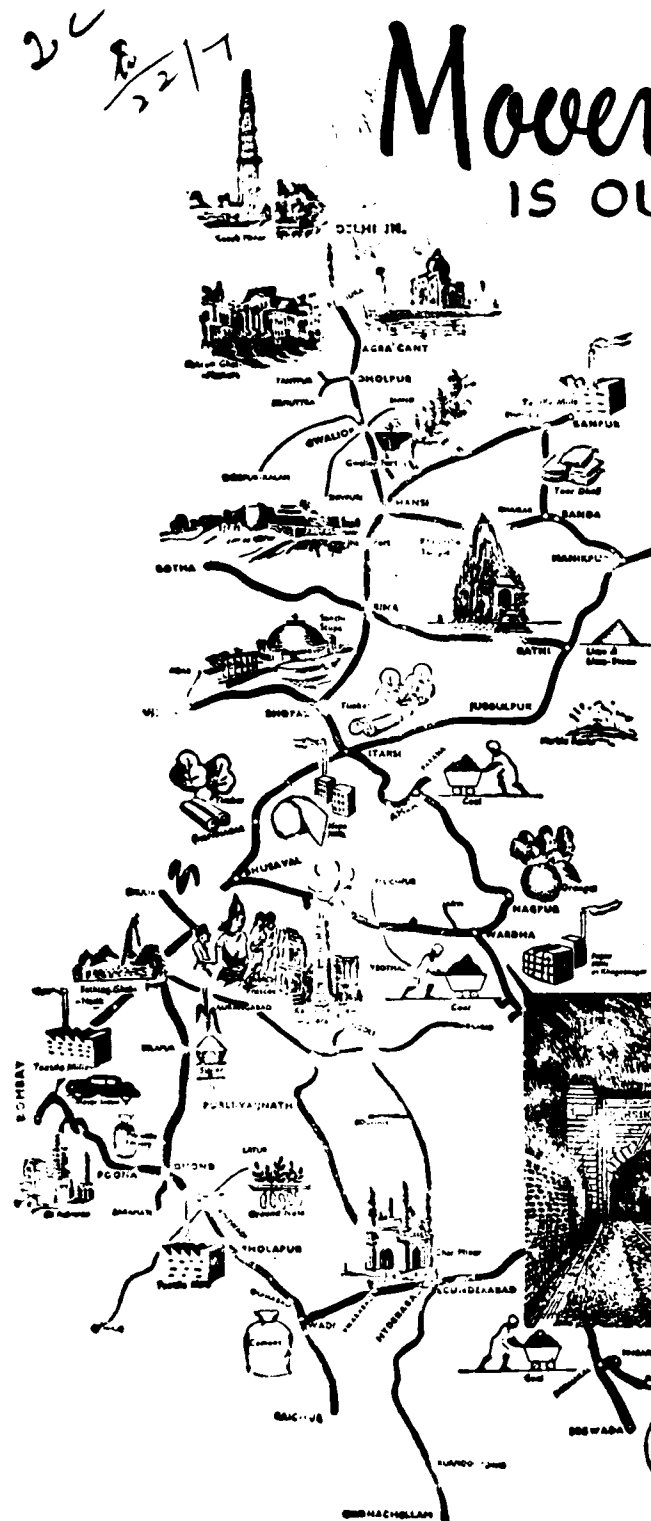
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Movement

IS OUR BUSINESS



Railways are the backbone of the nation's transport. The Central Railway forming part of this vast organization employs over 1½ lakhs of persons on its far-flung system. By their co-ordinated efforts it has been possible, during the year 1955-56, to run 343 passenger mainline trains conveying 2,80,000 passengers per day and 576 suburban electric trains in the Bombay area, carrying 4,32,000 passengers per day. In the same year 15.3 million tons of goods were carried over this railway.

By the end of the first five-year plan the Central Railway has been able to increase its passenger train miles by 9.66% and its freight ton miles by more than 43% over the levels prevailing at the commencement of the plan.

During the course of the second five-year plan the Central Railway proposes to spend 125 crores of rupees on development exclusive of money spent on purchase of rolling stock. It will be possible by the end of the second plan to run 30 additional mainline passenger trains and many more suburban trains representing an addition of 15% to the carrying capacity and to increase the loading capacity from about 2,832 broad gauge wagons to almost 4,000 broad gauge goods wagons per day.

The Central Railway is stepping up its capacity to meet the ever increasing demand. In this business of 'movement'.



CENTRAL RAILWAY