

Southrail news

1957 - July

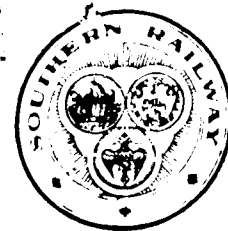
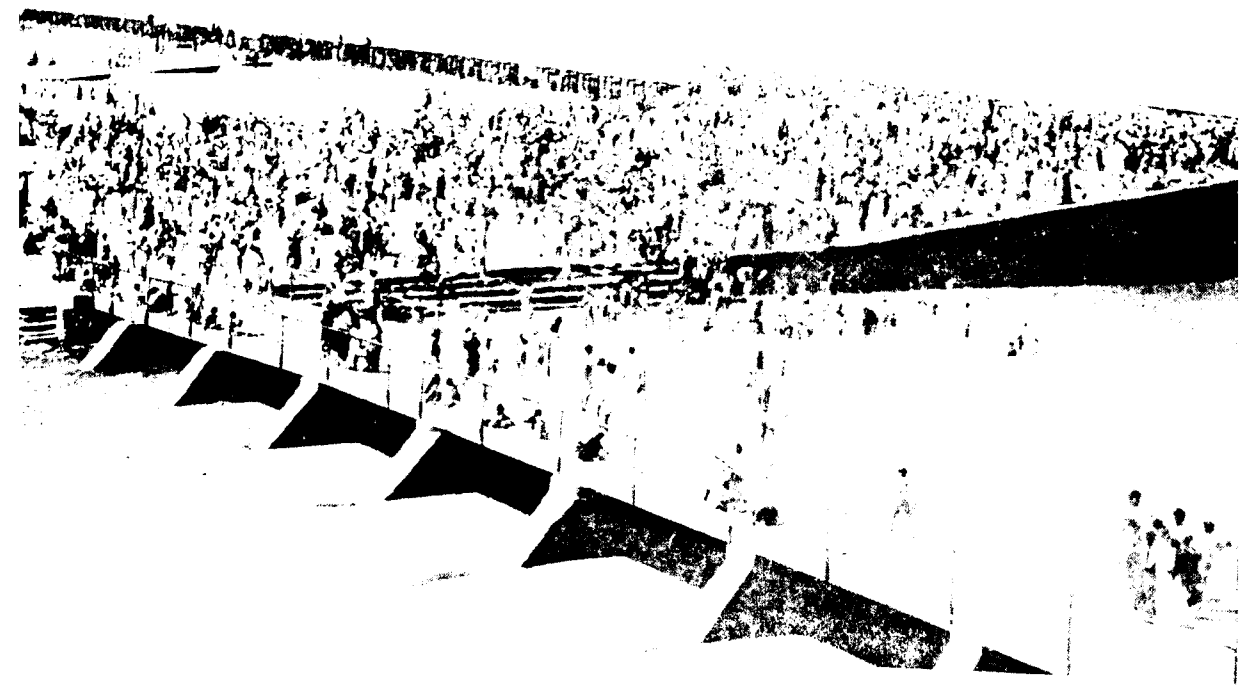
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VOL. IV

JULY 1957

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Madras

SOUTHRAILNEWS

(Official Organ of the Southern Railway)

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VOL. IV

No. 4

Editor :

K. SRINIVASAN

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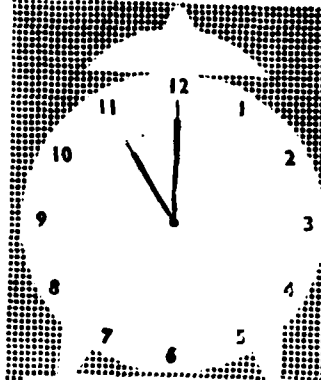
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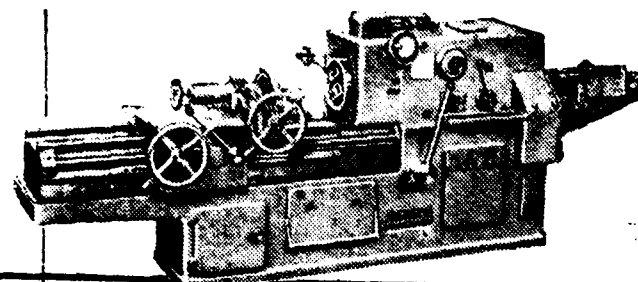
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GUSTAV

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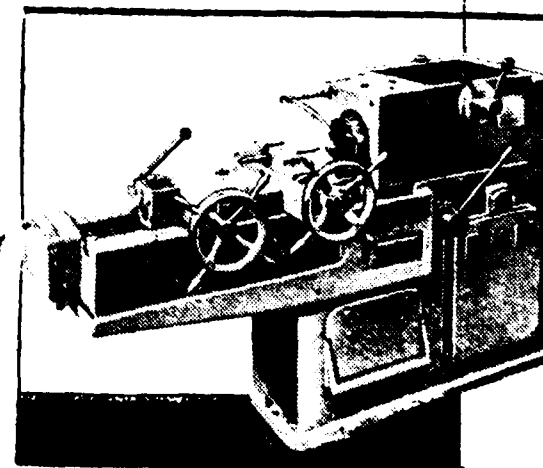
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SOUTHERN RAIL NEWS

VOL. IV

JULY 1957

No. 4

RAILWAYS, STEEL PROCUREMENT AND STEEL PLANTS

INDIAN Railways require large quantities of steel supplies which at present are in heavy arrears. With effect from 1st April 1957, the Ministry of Railways have taken over from the Ministry of Commerce and Industry the work relating to the procurement of the more important categories of steel requirements for the Indian Railways. The supply with which the Ministry of Railways are concerned, are rails, steel sleepers, fish-plates and bearing plates. A small unit for procurement has been formed in the Railway Board Office at New Delhi.

The Government of India decided to send a small Steel Purchase Mission to Europe to negotiate supply of steel and conclude contracts on the spot. The mission is led by Sri K. P. Mushran, Member, Railway Board. Sri N. C. Deb, Additional Member (Finance), Sri H. D. Singh, Director of Railway Equipment and Sri M. N. Berry, Joint Director (Works), Railway Board, have been included as members of the Mission. The Mission has gone to United Kingdom and will visit other countries of Europe which produce steel. The Mission is expected to visit Canada also. Besides, it is proposed to depute one officer to Japan to make investigations into the possibility of procuring steel from that country.

Sri K. P. Mushran and the other three members of the Steel Purchasing Mission left on the 28th of May 1957 for London by air. They are going to purchase 776,000 tons of steel track material for the Indian Railways. They would try to purchase the required material at the cheapest possible rate on reasonable terms. The Mission will be in the United Kingdom and the Continent for two months and, if necessary, visit U.S.A. and Canada.

During the Second Plan Period, three Steel Plants of one million tons of ingots capacity each are proposed to be established in the Public Sector at Rourkela in Orissa with the help of Germans, Bhilai in the Madhya Pradesh with the help of Russians and Durgapur in West Bengal with the help of Britishers. The Rourkela Plant is expected to produce 720,000 tons of products of steel, hot and cold rolled. The Bhilai plant will manufacture 750,000 tons of saleable steel mainly heavy and medium products, including 140,000 tons of billets for the re-rolling industry. The Durgapur plant will produce 750,000 tons of light and medium sections of steel and billets.

The capital investment on the three plants is expected to be in the neighbourhood of Rs. 360 crores.

The plant at Rourkela, a small village 257 miles from Calcutta on the main railway line between Calcutta and Bombay, has had the benefit of the technical and financial association of the two well-known German firms of Krupp and Demag. Estimated to cost Rs. 128 crores, it is expected to start production towards the end of 1958 and achieve full production by 1960.

The Bhilai plant.—Bhilai, 156 miles from Nagpur on the main Bombay-Calcutta line, is being set up with the technical and financial assistance of the Government of the Soviet Union. The Soviet organisations will supply most of the plant, machinery and equipment and train Indian personnel in the Soviet Union. They will be paid Rs. 2.5 crores for their services and approximately Rs. 63 crores for the plant and equipment. The equipment will initially be on credit at 2½ per cent per annum repayable in 12 equal instalments.

The Durgapur plant.—Durgapur, 110 miles from Calcutta on the Calcutta-Delhi main railway line, is to be built with British association. An agreement has been reached with a British Consortium of manufacturers known as the Indian Steel Works Construction Company.

Work at the site of India's three steel plants was well set to run as scheduled, according to the review of the activities of the department dealing with India's steel plants. A railway line is under construction from Rourkela to Dumaro (Taldih). Construction of a railway line linking Bhilai to Dalli Rajhara is expected to be ready by the middle of 1957. Good sources of limestone

have been located in Deorjhal, about 12 miles away from Bhilai and a railway line to that place is under construction.

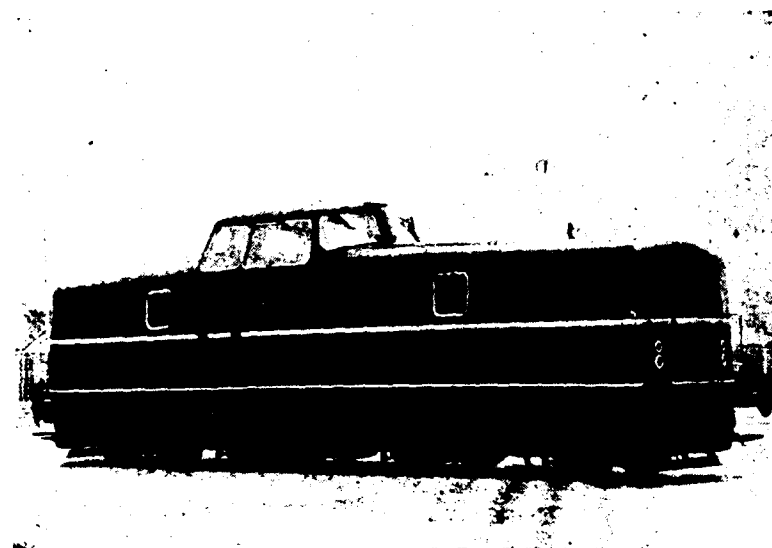
Arrangements have been made with the Damodar Valley Corporation for a common system of water-supply for the steel plant at Durgapur and for a big thermal station which will supply power to the plant.

A broad allocation of coals for use in the three steel plants and in the existing two steelworks has been settled with the Coal Controller. Three washeries will be set up in the Jharia coalfields to wash Jharia coals for all these five steelworks.

PERSONNEL

It is estimated that for the operation of the three Steel Plants, India will require 120 experienced engineers who would be entrusted with higher technical direction. Besides, she will require 1,200 qualified engineers, 10,000 skilled workers of different categories and 7,000 semi-skilled workers. Besides 269 engineers were recruited for the construction of the works. 541 engineers have been selected to be trained to take over ultimately the operation of the three plants. A batch of 90 engineers are under training in the steelworks of the USSR. A batch of 68 engineers is under training in West Germany. The Ford Foundation of the United States has made arrangements with the steelworks in that country to train about 900 engineers and skilled workmen. Another 300 engineers and skilled supervisory staff are expected to be trained under the Colombo Plan in the steelworks of the United Kingdom.

Large savings and profits.—It is estimated that the direct cost of production of materials, fuel, water and power, labour, staff and maintenance would be below Rs. 200 per ton. While the price which is earned by the existing Steel Works is Rs. 391 per ton of steel sold, it is said of each of the steelworks, the excess of revenue over the current expenditure would be Rs. 15 to 20 crores per annum.



A diesel locomotive manufactured Daimler-Benz Aktiengesellschaft Stuttgart-Untertürkheim Frankfurt, Germany. M/s. Tata Locomotive and Engineering Co., Ltd., Bombay, are the representatives of this firm in India

The Kandla (Gandhidham)-Deesa Rail Link of 170 miles was opened to traffic on October 2, 1952. Kandla on the west coast has thus been linked with the hinterland.

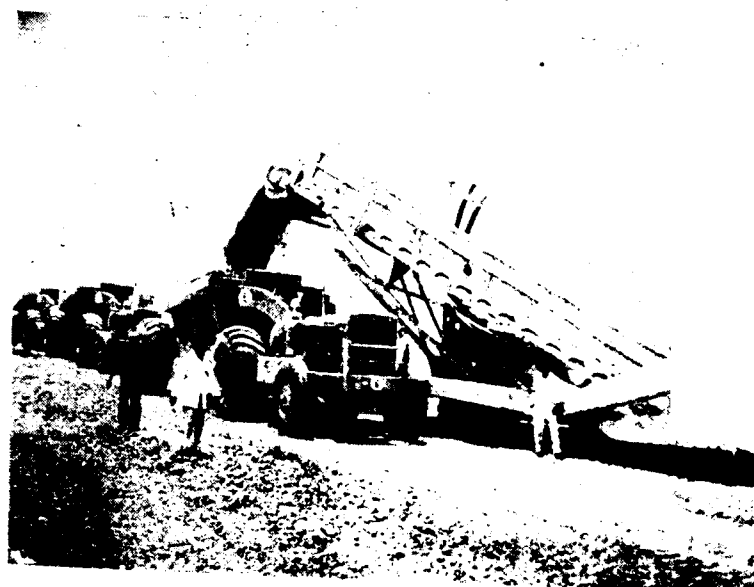
The main features of the programme of development under the Second Plan are: doubling of 1,607 miles of track; conversion of 265 miles of metre gauge lines into broad gauge; electrification of certain sections totalling 825 miles; dieselisation of 1,293 miles; construction of 842 miles of new lines, and renewal of 8,000 miles of obsolete track.

July 1957



Sri Jawaharlal Nehru delivering the inaugural speech at the Neiveli Lignite Mines

20 c.yds. dumpers queue up behind a giant 900 c.yds. earth scraping-cum-loading machine at Neiveli



NOTES ON CURRENT RY. TOPICS

RAILWAY MINISTER'S MEETING WITH CHIEF MINISTERS

Suggestions for the construction of new railway lines and proposals for achieving the maximum co-ordination between the Railways and State Governments to ensure greater safety in railway travel were among the subjects discussed at a meeting between the Railway Minister and the Chief Ministers and representatives of States, held in New Delhi on 5-6-1957.

The Railway Minister, Sri Jagjivan Ram, in his opening remarks stressed the importance of safety measures in view of the approaching monsoons. He said that the railways were themselves taking precautionary steps including posting of additional men, but it was desirable that the maximum co-operation should be forthcoming in this important task from the State Governments.

The meeting accepted a Village Vigilance Scheme prepared by the Railway Board, under which the railways could enlist the co-operation of villagers wherever railway lines pass, for reporting unusual occurrences like heavy local rainfall, breaches or threatened breaches of tanks, heavy floods, etc.

The meeting recommended the appointment of a standing committee in each State consisting of engineers from the Railways and the States. The committee would meet periodically and keep under review the safety of railway track in so far as this may be affected by the maintenance or new constructions of dams and irrigation works or by deforestation, and at the same time to see that the railway embankment or other works do not endanger safety of villages in the vicinity at times of floods.

The Chief Ministers and representatives of States dealt at some length with the requirements of their respective States for new lines or for the conversion of narrow gauge and metre gauge lines into broad gauge lines. The Railway Minister indicated that he had already approached the Planning Commission for additional funds to enable the Railway Ministry to undertake the construction of some new lines in areas which needed to be opened up in the interests of the country's economy. The Minister pointed out that even assuming that additional funds were available, two serious handicaps would remain: non-availability of foreign exchange and



shortage of construction materials, particularly steel.

SLEEPER SHORTAGE

The Railway Minister asked for the co-operation of the State Governments in increasing the availability of wooden sleepers from within the country. He said that at present the Railways were able to get barely one-third of their requirements of sleepers in the form of wooden sleepers from within the country. The balance had to be made good by import of wooden sleepers from abroad and by resort to iron and steel sleepers which also had to be imported and involved a drain on foreign exchange. A suggestion considered by the meeting was that the Railway Ministry should fix quotas of sleepers to be supplied by various States and the States should try and work to these quotas.

The meeting also considered the question of speedy acquisition of land for urgent railway projects and the expeditious payment of compensation for land acquired. Suggestions were considered for minimising delays in the payment of compensation to tenants after land had been acquired. The Railway Minister requested the State Governments to ensure that the quantum of compensation payable by the Railways bore some relation to the compensation paid by State Governments themselves for similar land acquired for their own purposes.

The Railway Minister also called for the co-operation of the State Governments in the field of education for railwaymen's children. He said that education was a State subject, but the railways nevertheless supplemented the efforts of the State Governments in providing additional educa-

tional facilities for their employees' children. He said that the co-operation of the States was needed in matters like recognition of schools set up by the railways. The railways, on their part, were willing to contribute towards the maintenance of schools set up by the State Governments in or near railway colonies to which railwaymen's children were admitted.

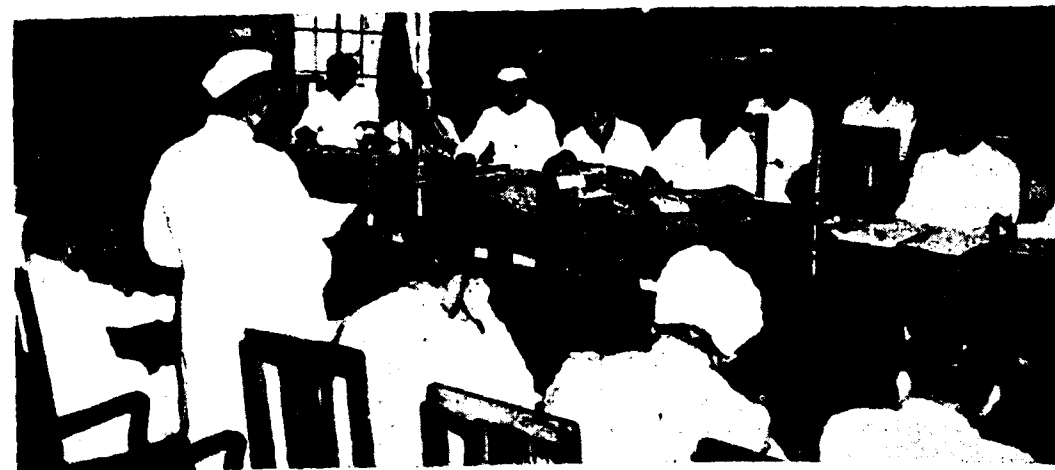
MORE FREQUENT CONTACTS

The meeting also considered suggestions for combating anti-social practices like ticketless travelling, alarm chain pulling and beggar and hawker nuisance in trains. A suggestion was made that the co-operation of village panchayats should be sought and the publicity campaign to eradicate these evils should be stepped up.

Some Chief Ministers urged that there should be more frequent contacts between the railway authorities and State Governments. In this connection the Railway Minister said that he would ask the General Managers of Railways to periodically meet the State Chief Ministers and other concerned Ministers so that a mutual exchange of views may take place on common problems affecting rail transport.

CLASS IV RAILWAY STAFF PROMOTIONS

Representatives of railway labour on 3-6-1957 welcomed the appointment of a committee to explore avenues of promotion for class IV staff on the Indian railways. They were speaking at the opening session of the class IV Railway Staff Promotions Committee, inaugurated in New Delhi by the Railway Minister, Sri Jagjivan Ram.



The Committee's Chairman, Sri G. D. Tapase, was absent because of ill-health. Others present at the meeting included the Deputy Railway Minister, Sri Shah Nawaz Khan, Miss Maniben Kara, President of the Western Railway Employees' Union, Sri A. P. Sharma, Vice-President of the National Federation of Indian Railwaymen, other members of the Committee, and Chairman and Members of the Railway Board.

EARLY REPORT DESIRED

The Railway Minister said that he was anxious that a pattern of promotions should be evolved under which a Class IV employee could go up to a Class I post. He was anxious that the Committee should submit its report early so that its recommendations could be implemented before the current year was out.

Speaking after the Minister's inaugural speech, Miss Maniben Kara said that she would like to express on behalf of railway labour her great satisfaction at the appointment of the Class IV Railway Staff Promotions Committee. While congratulating the Railway Minister for the keen interest

he had shown to better the working conditions of railway labour and for the impartial manner in which he approached the related problems, she said that at present the pace of progress of the lowest class of railway employees was too slow and this state of affairs needed to be put right.

Sri A. P. Sharma, Vice-President of the National Federation of the Indian Railwaymen, congratulating the Minister for the "bold" step he had taken in appointing this committee, said that the committee's terms of reference proved that the Railway Minister was eager to improve the lot of railwaymen. He, however, drew attention to the main demand of railwaymen relating to revision of pay scales. While he recognised that this was a general issue affecting other Central Government employees, he urged that positive steps to meet the demand should be taken.

The appointment of the Class IV Railway Staff Promotions Committee was announced on May 4, 1957, with the following personnel: Sri G. D. Tapase, Chairman; Sarvashri B. B. Mathur, Senior Deputy General Manager, Northern Railway; C. V. Cunningham,

Deputy Director-General, Posts & 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. Jogota, Deputy Chief Mechanical Engineer, Chittaranjan Locomotive Works and J. N. Roy, Deputy General Manager, Eastern Railway, Members. Sri P. M. Narasimhan, Deputy Director, Establishment, Railway Board, is the Secretary of the Committee.

WORLD BANK'S ASSISTANCE

The Government of India had not specified any particular figure for the assistance sought from the World Bank. They had only indicated the need for assistance to finance the foreign exchange costs of the development programmes in the Second Five-Year Plan. Of these, the World Bank had so far selected for early consideration 4 projects. These were the second expansion programme of the Indian Iron & Steel Co., initial loan in support of the railway investment programmes, such additional projects in the field of transportation notably ports and shipping, as may, upon further investigation, prove suitable for the Bank's consideration and fourthly the Koyana and Rihand Hydro-electric projects, the two new projects of the Damodar Valley Corporation and the expansion of the Trombay Steam Plant.

It is understood that, agreements relating to two loans, one of 20 million dollars for the expansion programme of I.I.S.C.O. and the other of 5.6 million dollars for buying Boeing Jet aircraft for the Air India International Corporation had since been signed.

MANUFACTURE OF DE LUXE AIR-CONDITIONED COACHES IN INDIA

The de luxe air-conditioned coaches are entirely manufactured in India, except for the air-conditioning equipment and underframes which are imported.

The first class air-conditioned coaches are built at the Matunga workshop, at an approximate cost of Rs. 2,69,000 per coach. Third class air-conditioned coaches are built at the Kharagpur workshop, at an approximate cost of Rs. 2,70,000 per coach. The Parel workshop builds air-conditioned dining cars, at an approximate cost of Rs. 2,25,000 per coach. The luggage, brake and power vans are manufactured at Kancharapara, the cost per coach being Rs. 3,00,000.

SLEEPING COACHES FOR CLASS III PASSENGERS

The Indian railways have decided to introduce shortly a new two-tier sleeping-cum-sitting coach service for III class passengers.

In these coaches, sitting accommodation will be provided on the lower berths, while sleeping accommodation will be provided on upper berths only.

At present third class sleeping accommodation is available on a number of routes in three-tier coaches.

The object of the new experiment is to see which type of coach is more popular with the public so that the future plans may be made accordingly.

As in the case of the existing III class sleeping service, a charge of Rs. 3 per night per berth will be levied in the new coaches.

The new service will operate on the following eight pairs of trains: Madras-Bangalore Mail; Delhi-Lucknow Express; Howrah-Puri Express,

Mehsana-Bhavnagar Express; Lucknow-Kathgodam Express; Delhi-Bikaner Mail and Madras-Trivandrum Express.

In each of these new coaches there will be sleeping accommodation for 24 passengers on the broad gauge and for 16 on the metre gauge.

A novel feature in the broad gauge coaches will be a separate luggage room where heavy luggage can be stored.

RAILWAY ELECTRIFICATION IN INDIA

FURTHER STUDY OF A.C. SYSTEM BEING UNDERTAKEN

The Railway Board has decided to undertake further technical studies abroad to determine the suitability, in Indian conditions, of the 50 cycle single phase A.C. system of electric traction.

The final adoption of the A.C. or D.C. system for railway electrification in this country being a decision of fundamental and far-reaching importance, a thorough examination of the problems involved is considered essential.

Originally, it was intended that, in electrifying the new sections, the D.C. system which is already in vogue in this country should be adopted. The matter is, however, being re-examined in view of the fact that in recent years several advanced countries have adopted the A.C. system for which certain advantages are claimed. The team of French electric traction experts who visited India a few months ago at the invitation of the Government of India, also reported in favour of the adoption of the A.C. system in India.

OFFICERS LEAVE FOR EUROPE

The Chief Electrical Engineers of the Central and Western Railways,

Sri L. N. Mathur and Sri S. C. B. Mazumdar respectively, have left New Delhi for Europe where they will study the working of the A.C. system in France, the United Kingdom, West Germany, Belgium, the Netherlands and Turkey. They will be joined later by Sri Karnail Singh, Member (Engineering), Railway Board.

While abroad, the team will also try to locate suitable technical associates who can assist in the execution of electrification projects.

SELF-HELP AND SELF-IMPROVEMENT

A novel experiment in self-help and self-improvement by 8,000 workers of the Central Railway's Parel workshop in Bombay is reported to have yielded striking dividends in improving working conditions.

The Parel workshop is one of the largest single industrial units in Western India.

The workers have a three-man committee which controls welfare activities.

The experiment started with a small group of apprentices led by an officer who started voluntary work in the workers' colony. Soon the contagion spread and, for several months now, Sunday working has become a ritual during which houses are painted, drains are constructed, roadways are repaired - all for the love of it, and no demand for payment is made. Equipment is loaned by the workshop authorities.

The self-help movement has also embraced many other aspects of the workers' life. These include the distribution of milk to children, classes in embroidery, tailoring and handicrafts for the wives of the low paid staff, rover, scout and cub movements.

July 1957



Dr. Kailas Nath Katju, Chief Minister, Madhya Pradesh, is seen here at Khandwa pulling the lever which lowered the signal to start the inaugural train over the new Khandwa-Thakal Metre Gauge line which was formally opened on 18th June 1957. With the Chief Minister may be seen Sri M. N. Chakravarti, General Manager of the Central Railway

The inaugural train about to pass through the welcome arch when it steamed out for Thakal, 18½ miles away from Khandwa



July 1957

NOTES ON CURRENT RAILWAY TOPICS

15

Recently a striking thing happened. The workers started a systematic drive to paint their machines and work-benches in pleasing colours, keeping the environments very clean. Except for the cost of paint and brushes, no other expenditure has been incurred by the administration, the staff contributing labour in their spare time. The latest "target" is the workshop garden which is being improved.

The workshop craftsmen themselves have manufactured an attractive shield to be awarded to the tidiest section in the workshop.

MANUFACTURE OF WAGONS

Four firms of railway wagon manufacturers in India have received large orders for supplying wagons to the Indian railways against their 1957-58 rolling-stock programme.

In all, orders have been placed for over 2,600 wagons of different gauges and types.

A Calcutta firm has received an order for 1,124 broad gauge wagons, while another firm in the same city has been awarded a contract for 148 metre gauge motor and parcel vans.

A firm in Bombay has received an order for 500 broad gauge wagons, and another in Mozaffarpur has received orders aggregating to 787 wagons of different types.

RAILWAY PERFORMANCE IN APRIL

The Indian railways loaded an average of 25,807 wagons daily during April 1957, as compared to 23,429 wagons daily during the corresponding month last year.

On the metre gauge system, the April 1957 loadings of 9,009 wagons

daily represented an increase of 12.3 per cent over the figure for April last year. The increase on the Northern Railway alone was 19.3 per cent and on the Western Railway 18.6 per cent.

On the broad gauge, the over-all increase on the Indian railways was of the order of 8.82 per cent. The Central and South-Eastern Railways showed increases of 13.4 and 13 per cent respectively, while the Western Railway showed an increase of 11.3 per cent.

DO YOU KNOW?

RAILWAY LINES IN INDIA:

During the First Plan period 430 miles of railway lines dismantled during the war were restored, 380 miles of new lines constructed and 46 miles of narrow gauge line converted into metre gauge.

By the end of the Plan, ten new lines totalling 453 miles were under construction, 52 miles of lines were under conversion into broad gauge and surveys for 2,000 miles of new lines were in progress.

Of the nineteen new lines totalling 758.92 miles opened to traffic since independence, twelve were executed during the First Plan period.

The most important of these new lines was the Assam Rail Link measuring 142 miles. In spite of adverse conditions, the project was completed well ahead of schedule.

Work on the Mukerian-Pathankot line was started in November 1949 and the line was formally opened for traffic on April 7, 1952. This 27 mile-long line has cut short the distance between Delhi and Pathankot by 44 miles.



The Prime Minister, Sri Jawaharlal Nehru with Mr. Urho Kekkonen, President of Finland, at a reception given in honour of the Prime Minister by the Indian Ambassador, Sri L. S. Chopra, at Helsinki

Below : The Prime Minister replying to a speech of the Mayor of Damascus at a civic reception held in his honour. Sri Jawaharlal Nehru arrived in Damascus on June 14, on his way to a tour of the Scandinavian countries before attending the Commonwealth Prime Ministers' Conference in London



London-Perth Night Express leaving King's Cross for Scotland

WORLD OF RAILWAYS

ARTHUR L. STEAD

Our London Correspondent

IN the whole world of railways, there are few busier traffic centres than the British capital city of London. At the many passenger terminals of Britain's Thames-side metropolis, travellers from every land constantly are arriving and departing, and one of the most famous and important of all London terminals is the King's Cross Station of the Eastern Region of British Railways.

London's main-line passenger stations are situated in a ring encircling the city. On the northern side lie King's Cross Station, and the Euston and St. Pancras termini of the Midland Region; in the east is the Liverpool Street Terminus of the Eastern Region;

to the south lie the Waterloo and Victoria Stations of the Southern Region; and in the west is the Paddington Terminus of the Western Region. All these bustling main-line stations are linked with each other by underground electric railway and surface bus services, and there is a constant interchange of passengers between the different termini.

Home depot of the London-Edinburgh "Flying Scotsman" and other outstanding long-distance daily trains, to people in lands far and near, the name King's Cross conjures up nostalgic memories of heather-clad Scottish moorlands, singing salmon streams and kilted Highlanders. After

more than a century of public service, King's Cross is really much more than a railway terminus—it is a veritable institution in the world of travel.

If you delve into history, you will discover that King's Cross derived its picturesque title from a house nearby which was surmounted by a statue of King George IV. The station was opened for traffic in 1852 by the London and York Railway Company. Ten acres of land were given over to the passenger station, with 49 acres adjoining for the handling of goods traffic, and from contemporary accounts the opening ceremony was a very gay affair indeed.

The first King's Cross passenger terminus was 800 feet long and 210 feet wide, covered by a pair of semi-circular arched roofs, supported on the outer walls, and a central dividing wall of piers and arches. Seventy-one feet was the maximum height of the structure, and at time of building the station roof was the largest of its type in the world. The interior was planned on simple lines, two long covered platforms being provided, for inward and outward business respectively, with sixteen tracks in between for the stabling of trains.

On the opening of King's Cross, passenger business consisted of three fast and ten slow outward trains daily, and about the same number inwards. The very first train to proudly steam out of the terminus on October 14, 1852, was the 7-00 A.M. "Parliamentary" train for York. These early "Parliamentary" trains reached York in the early evening, after a somewhat roundabout journey via Lincoln. Passengers stayed the

night at York, and proceeded on to Scotland the following morning. Stops were made at the principal stations *en route*, and the railway authorities of the day were very proud of the fact that they made the nearly 400-mile London-Edinburgh run in two days, as compared with the three days taken by the horse-drawn coaches of the period.

Ten years after the opening of King's Cross, the now world-famous "Flying Scotsman" daily service was introduced. Leaving King's Cross at 10-00 A.M., Edinburgh was reached at 8-30 P.M. The 10-00 A.M. departure has been maintained from King's Cross to this day, except for a brief period during World War II, when a suburban station outside the city had to be utilised because of German bomb damage at King's Cross itself. Today, the "Flying Scotsman", greatly accelerated, is still "going strong", and is perhaps the best-known of all world passenger trains.

At the time of the introduction of the "Flying Scotsman", three railway companies were concerned in the London-Edinburgh run. From London to York, the train was handled by the Great Northern Railway (successor to the London & York Company); from York to Berwick, on the Anglo-Scottish border, the "Flying Scotsman" and other long-distance trains were handled by the North-Eastern Railway; while from Berwick to Edinburgh responsibility for train working fell to the North British Railway. In 1923, these three individual companies disappeared to form the London & North-Eastern Railway, and on January 1, 1948, the London & North-Eastern Railway's identity

became submerged in the Eastern, North-Eastern and Scottish Regions of British Railways.

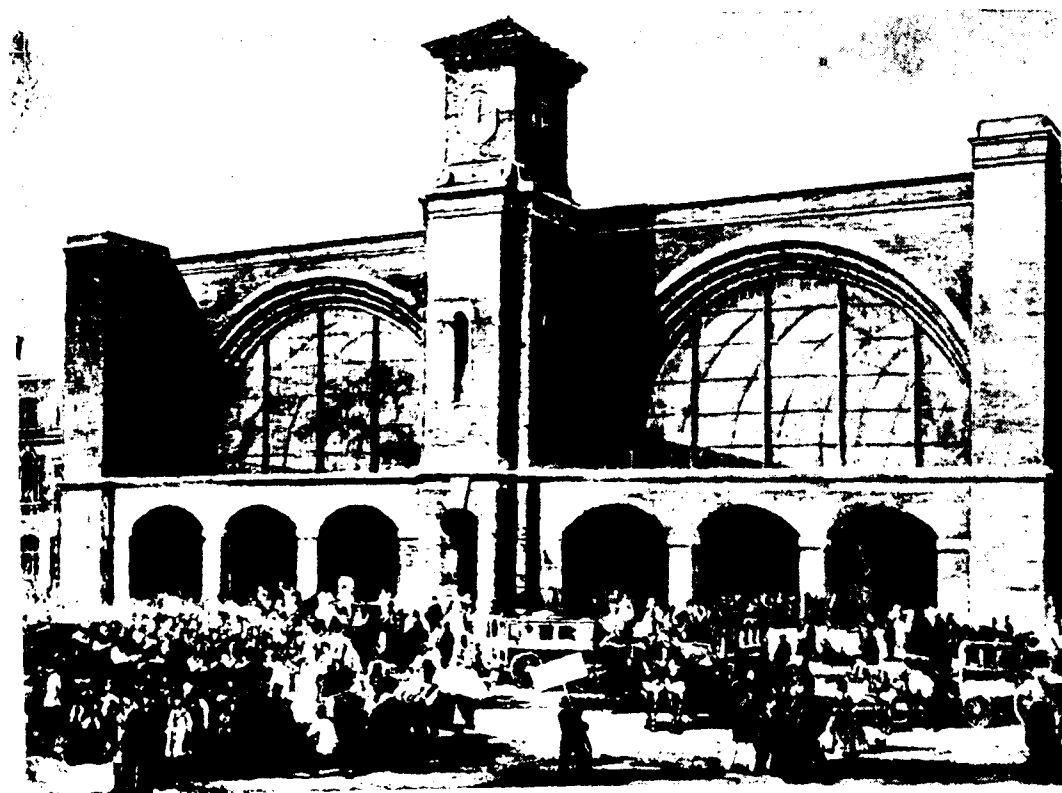
Apart from the "Flying Scotsman", a great number of regular fast trains have, through the years, been operated out of King's Cross. Among these are the "Coronation" London-Edinburgh pre-war express, and the more recent "Elizabethan" daily non-stop service between the same points. On top of the ordinary business handled, there is the seasonal traffic. This includes the annual late summer rush of sportsmen to the Scottish grouse moors, and the special motor-car trains for summer tourists to the Highlands.

All the long-distance trains based on King's Cross are formed of modern

passenger vehicles. Train catering on this particular route (London—Peterborough—Doncaster—York—Darlington—Newcastle—Berwick—Edinburgh) has always been of a high standard. It was the Great Northern Railway which, in 1879, operated the very first British dining-car, working between King's Cross and the Yorkshire industrial centre of Leeds. To the same enterprising company went credit for introducing the world's first all-electric kitchen-car (in 1921).

About 60,000 passengers are handled at King's Cross Station daily, including both long-distance and suburban patrons. For the convenience of passengers, a first-class hotel is operated adjoining the terminus. Refreshment

King's Cross Station, London, on the opening day, 105 years ago



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July 1957

WORLD OF RAILWAYS

21



Buffet lounge car on the "Flying Scotsman", Edinburgh, operating daily out of King's Cross Terminus

rooms are conveniently located on the station platforms, and all the other usual amenities are provided in good measure.

True giants of the "Iron Way" are the enormous "Pacific" steam locomotives employed to haul main-line trains in and out of King's Cross. A fine new locomotive depot just outside the station accommodates 200 engines. Included in the equipment is a 70,000-gallon water tank, and an electrically operated coaling plant with a capacity of 500 tons. At the coaling plant a "Pacific" engine can be fuelled in three minutes.

The "Pacifics" which are so much in evidence at King's Cross mostly have been built at the railway shops

at Doncaster. They include many engines with tenders equipped with a side corridor. This fitting enables engine crews to be exchanged while travelling at speed on the nearly 400-mile long non-stop run between London and Edinburgh—a plan which is unique in British railway practice and very rare indeed elsewhere.

Outstanding new works brought into use at King's Cross recently include a modern power signalling installation. This has enabled considerable economies to be effected, and has also been the means of securing more efficient working and speedier turnover of trains. The equipment covers a central power-operated signal box, replacing two former manually-operated

cabins, and having an all-electric power interlocking frame with 232 levers; a long-range of colour-light signals; short-range shunting lights; and route indicators for the guidance of engine-men.

The new signalling at King's Cross cares for suburban as well as main-line train working, and also the through movement of traffic between the north and south London lines, *via*, the electrified Metropolitan Railway. It must be mentioned that the first practical track circuit system in Britain was brought into use just outside King's Cross more than sixty years ago. Unlike some of the big London stations—for example, Waterloo and Victoria—King's Cross is steam-operated. For many years plans have been pigeon-holed for the electrification of the terminus and the suburban routes

outside, as well as the main-tracks to the north. Recently, a decision has been come to under which there will shortly be put in hand big electrification works between King's Cross and northern points like Peterborough, Doncaster and York.

Before so very many years have passed, we shall see an electrically-hauled "Flying Scotsman" heading north from King's Cross for "Bonnie Scotland", to the great delight alike of railwaymen and the travelling public. For the present, however, this great London terminus quietly carries on under steam working, handling expeditiously and economically its heavy traffic, and presenting for railways everywhere a fine example of efficient city station operation and administration.

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"FAT BOY"

Mrs. TRUESTORY

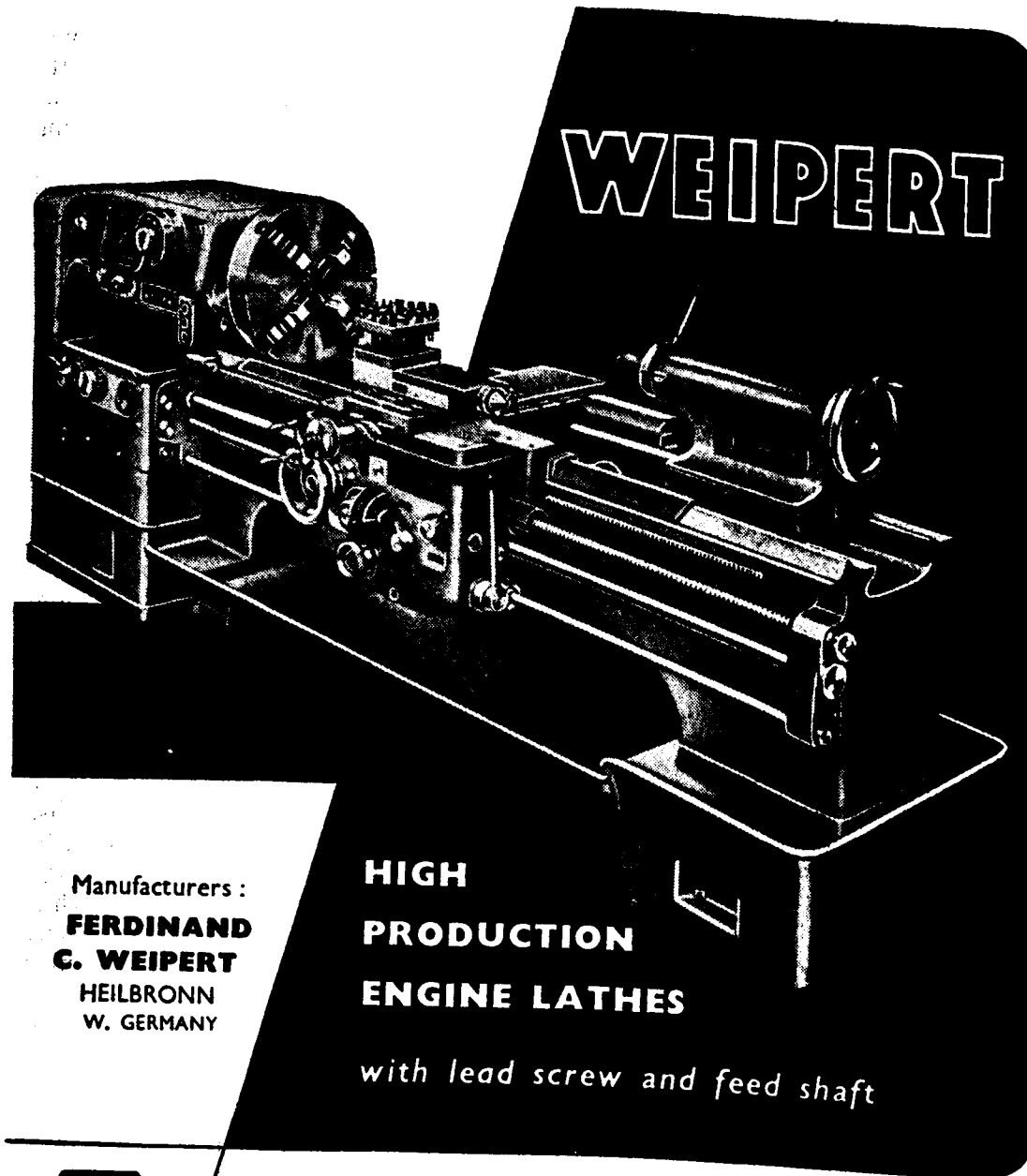
HE was the perfect bachelor's servant, in a class with Jeeves, that immortal creation of P. G. Wodehouse. In spite of rolls of fat, and a childish round chubby face, his more than medium height and straight bearing lent him an air of dignity so that people were wont to comment that he could easily pass off as a dignified Judge or a Sub-Collector. He looked a permanent fifty but his exact age was unknown. It is to his credit that at no time in his long service was he found attired in anything except immaculate white long coat and spotless, white stiff turban.

Subbiah had worked as butler only to Englishmen, a fact of which he was very proud, till he came to work for my husband. His master was going "home" for a long spell and had recommended him to my husband. He was doubtful about working with an Indian, but condescendingly agreed to try it out for a while. His requirements were modest, in his own words. He wanted only a pay of Rs. 45 along with an army of servants consisting of a cook, cook's mate, mali and sweeper working under him. Fresh from College, with hardly two years of Railway service behind him, my husband was quite inexperienced in the ways of wily veterans of the servants force and readily agreed to all his demands though the question why four servants were necessary to minister to the needs of a single individual did occasionally occur to him. My husband had a passion for nicknames, and nothing could have been more apt than the term "Fat Boy" which he chose for him. Fat

Boy became an institution and a byword with all his friends.

It didn't take long for Fat Boy to find out how gullible my husband was regarding money. Thereupon he steadily augmented his fat pay from the bazaar money, balancing this, by a staunch devotion to his master and the detailed care he devoted to all his possessions. The house and all the articles in it could not have been kept more spick and span, if they were his own. Every piece of furniture was kept polished, every piece of linen was clean and freshly laundered, silver and brass kept polished to a shine. Like any frugal housewife he used to do the mending himself, and would never throw away any piece of clothing till it was beyond repair. Paradoxical as it may sound, any cash which my husband might leave lying about, was sacrosanct to him. In one instance, my husband had kept a hundred rupee note in the inside pocket of his coat and had forgotten about it. It was discovered there by Fat Boy and handed back religiously.

When I think back on Fat Boy, the most outstanding quality about him, seems to me, to be his efficiency. There was no occasion, however unorthodox and taxing it may be, that he could not cope with. He caioled and bullied the other servants till he got the best out of them. Though a mediocre cook himself, he saw to it that his master's cook was an excellent one, and would deal with him unmercifully if he showed the slightest tendency to slacken. He kept the



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for training. Fat Boy accompanied him. This was the only unhappy period of his service. Fat Boy did not know Hindi, only Telugu and the kind of English which I have recorded. Thrown into the midst of tough Pathan bearers with fierce beards, who looked down upon anything South Indian, poor Fat Boy was like a lamb thrown to the wolves. He could not understand their language, neither could he order them about as he used to, in the South. He stuck it out for three months, purely for love of his master. By then, he had reached the end of his tether, and mournfully told my husband "Master, these people all very jungly peoples, they are making very difficult for me. So I'm thinking to, excuse me, master, I'll be going home, but when master coming back from Army, I come back and working with master." True to his word, when my husband came back from overseas in 1944, Fat Boy appeared smiling and happy and took up the reins of the household.

Being a human being, Fat Boy was not perfect. There were occasions when it was apparent even to my husband that the bazaar account totalled up to a grandiose figure quite unrelated to the fare placed before him. My husband would censure him strictly, and immediately there would be a downward curve in the account column. No one whether it be a servant, or a tradesman, or a humble petitioner for a job, had access to my husband except *via* Fat Boy. It is quite possible that he turned this to his financial advantage. Once on returning unexpectedly to the house from a trip to town, my husband found the upholstered sofa and chairs of the drawing room, out on the lawn,

with Fat Boy holding forth to his eronies, all seated on the above-mentioned pieces of furniture. My husband's arrival was as unexpected as it was alarming. He said nothing but when dinner was served, he seated himself at the dining table, called for Fat Boy, and ordered him to sit at the table with him and dine. Fat Boy was in a state of collapse. He bowed himself to the ground, weeping and begging pardon for his misdemeanour. I cannot now remember any other occasion except this when Fat Boy failed himself.

It was a matter of personal pride to Fat Boy that his master was one of the best dressed officers of his day. The credit for this was due largely to Fat Boy. It was his job and pleasure to keep his master's clothes ship shape, and he did this so well that I am hard put to it to reach that standard these days. He had very definite ideas as to the kind of attire to be worn for day and for night, his models being the English masters he had served previously. So when on leave in his village, Fat Boy kept white trousers, white shirt, brown tie and brown shoes for my husband after his morning bath, he definitely was disappointed to be told that no one wore this there, and that his master would feel quite comfortable in a dhotie, shirt and slippers. He privately felt rather sad to think that his master hailed from such a jungly land. He felt even more let down when his master refused to wear anything except a mere white dhotie and shirt for even his marriage.

And now I come to the crowning episode in Fat Boy's service. It is

a marriage custom among us that the bridegroom is presented with a gold ring in exchange for about 20 yards of white cloth which his mother presents to the bride's mother. My husband had left his ring in his leather box, the sole custodian of which was Fat Boy. Months later, when I be-thought myself of this ring, it was found missing. Just about this time we received an invitation for Fat Boy's son's marriage (Fat Boy had left us by then) and we presume to this day that this ring served as the wedding ring for his son. Moreover, we were surprised to find that the wedding invitation was issued with the best compliments of my husband.

It was a year after my eldest child was born that Fat Boy left us pleading the ills of old age. It is possible that a subordinate position in the house hold over which he had once reigned supreme was not to his liking. But whatever be the reason, certain it is that he had his own kind of loyalty and devotion to duty. It might be mentioned here that his loyal service did not go unrewarded. To conclude, Fat Boy is an excellent example of a type of servant that has passed away.

Departmental Functions in Brief

THE ENGINEERING DEPARTMENT

(IV)

OPRAIL

IF you have ever ridden on the cab of an engine and taken a driver's eye view of what lies ahead, with the train moving at a speed of about fifty odd miles an hour, you will see among other things in the approaching landscape, two lines of shiny blue steel glinting in the sunlight. These seem to be rushing towards you and disappearing swiftly under the wheels of the engine. Keep your gaze steady and look as far ahead as you can, and you will see these two blue lines converge to a point and merge with the haze of the distant blue horizon.

Now these two steel lines are the railway track, without which no engine or train could run even for a few feet. It is the primary and main function of the Engineering department to lay those two steel tracks for thousands of miles of permanent-way, and keep them at a high standard of safety and maintenance year in and year out, and in all types of weather. It is these two steel tracks that take the strains and stresses of the considerable number of mail, express and heavy freight trains, that must pass over, while carrying passengers and goods to all parts of the land.

The executive who controls the entire Engineering department is the Chief Engineer, who after qualifying for a civil engineering degree in college, usually starts his railway career as a probationary assistant engineer, and then after long years of service and

the acquisition of practical and valuable experience in the hardest and best way of doing the job himself, eventually achieves that eminent and important position.

At headquarters the Chief Engineer has under his control several Deputy Chiefs, and a number of Executive and Assistant Executive Engineers, together with a sufficient strength of subordinate technical and clerical staff. Throughout the entire railway system in the Divisions and Districts, there are also senior divisional and district engineers, assistant engineers, and the necessary number of subordinate staff of inspectors, supervisors, skilled and unskilled labour.

To the ordinary man standing by the railway track, the two steel lines, either on a bed of wooden or steel sleepers, which again rests on what looks like a mass of stone rubble and rock, this permanent-way seems to look far from complex. But this is not so. To lay down just one pair of 36 foot rails is a complicated process, requiring the services of a number of men. First there is the earth-bed or road on which the rails, sleepers, etc., will have to be laid. This has to be specially prepared to take not only the rails, but the enormous weight of the trains that will speed over them. Then there is the ballasting (the rubble or rock already referred to); the wooden, or steel sleepers, laid at right angles to the rails, and spaced evenly apart. Then

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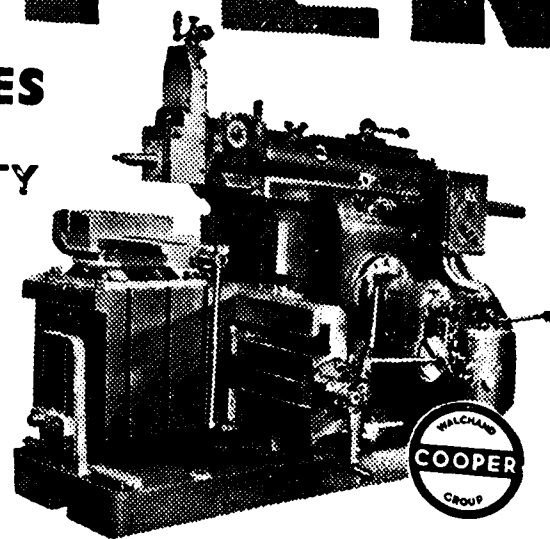
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on to these sleepers are fitted other components, like chairs, jaws, rail-screws, etc. Then the rail itself is slipped into position and secured to the sleepers by means of rail-screws, cotters, etc. Finally the whole rail-length of track is again securely packed by ballast. By the time the job is completed, it is firm and strong enough to take not only one train weighing as much as 1,500 to 2,000 tons, but as many as 30 to 40 per day. Each section of the track is laid like this, the rails being joined together by means of what is known as a fish-plate.

This is in brief what happens when the track is first put down. But the job does not end there. Every train that passes over the track sets up strains, stresses and vibrations, and if the permanent-way and all the components that go to make it up, were left uncared for, it would not be long before it would be dangerous for any train to move over the rails. These stresses and strains and continual exposure to the vagaries of the weather, can cause the gauge to spread, the various components of the track to get loose, alignment to go askew, and so on. All of these factors are a source of danger to the trains passing over. Therefore, it is vitally important and essential, that every foot of permanent-way receives constant inspection and attention, day in and day out.

The men who are responsible for keeping the track in a state of efficiency are the permanent-way gangs. Each gang consists of a number of skilled men under the supervision of a mate. A certain number of these gangs are then placed under the control and direct supervision of a Permanent-way

Inspector and perhaps one or two Assistant Inspectors. Each gang is responsible for the efficient maintenance of about 4 to 5 miles of track. Every day the gang is at work on its particular beat, checking levels, gauge, rail fittings, ballasting, packing, etc. When and where defects are noticed, these are remedied immediately, unless the defect is beyond the capacity of the gang tools and equipment. The Inspectors and his assistants are required to move over their respective sections by trolley, checking up and supervising the work done by each gang. These Engineering Inspectors can take no chances, or sit back comfortably in their offices and merely bark out orders, as even a slight track defect not discovered and repaired in time, may send a fast train carrying hundreds of passengers to destruction and death.

The Engineering department is also responsible for the construction and maintenance of all structures and buildings essential to the working of a railway. These comprise such as complete station buildings, yards, bridges, foot overbridges, culverts, waterways, cabins, goods and parcel sheds, sinking of wells, water supply, and a host of other minor items.

Among these structures, one of the most important is that of bridges. A railway track does not merely run over nice, flat country, but has to go up gradients, down inclines, bore through hillsides and span waterways, from the thin trickle of a tiny stream to a broad river. To span these waterways, whether small or large, requires the construction of some type of bridge. On large railways, both officers and men are employed, whose

speciality is bridgework, both for constructional and maintenance purposes. It is these men who, functioning within the Engineering department, are responsible for the building and maintenance of all bridge structures of a railway system. Like the permanent-way, all bridge structures too, have to be constantly inspected and checked to ensure that they are always firm and strong enough to take the enormous loads that must pass over day by day. But it is during monsoon conditions, when due to heavy and incessant rain all streams and rivers are strong and turbulent, and perhaps threatening to overflow their banks, that the bridge staff have to be extremely vigilant. Flood levels have to be watched almost hour by hour, and if the water rises above the bridge decking and rail tracks, then special precautions must be taken to arrange for the safe passage of trains while these dangerous conditions prevail. When the dry weather comes round again, the bridge men feel relieved, but this does not mean that they sit back and get careless. Over every bridge there are rail tracks, and the rail track is safe only so long as the bridge is safe. So, it is always a question of being alert and watchful to keep all bridge structures safe.

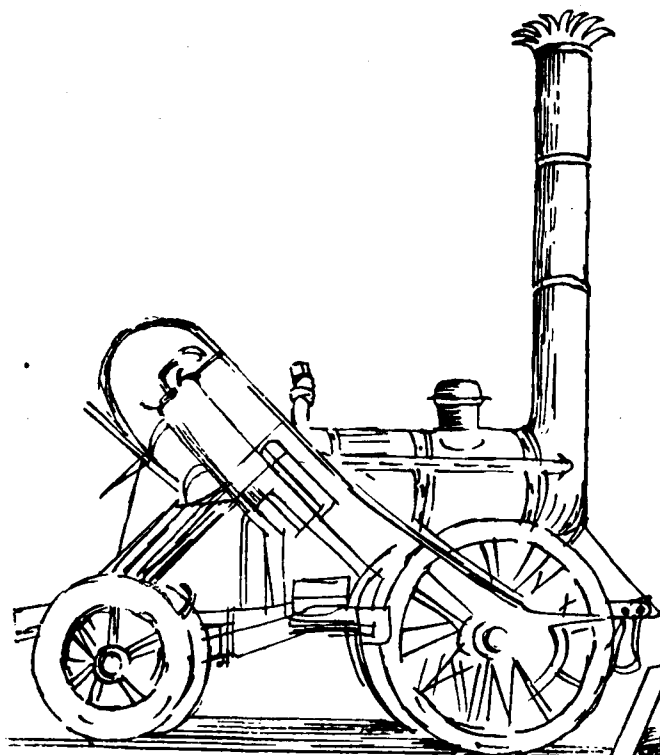
Another important aspect of the Engineering department is what is known as the 'construction' jobs. By this is usually meant bringing in a new section of railway, or doubling or quadrupling of existing tracks, and other essential and large projects to increase the capacity of the railway to handle more traffic. Before a new

section of railway can be constructed a considerable amount of preliminary work has to be done, in the nature of a survey of the entire physical features of the land over which the track will be laid. This may take a few months, as those portions over which the track will run, must offer the least obstruction in the way of gradients, cuttings, waterways, tunnels, etc. When this is complete and the route has been mapped out, then the railroad bed has to be prepared, requiring extensive excavation work and levelling up of earth formations, etc. Then only can the track be put down, station layouts and buildings constructed, and the new section of railway opened for traffic.

The Engineering department also plays a major role when a serious accident occurs. When this happens some portion of the permanent-way is invariably damaged. Once the train wreckage has been cleared from the track, the engineering men immediately tackle the job of restoring the damaged track to as near as normal as possible within a few hours, so that a smooth flow of rail traffic can be resumed.

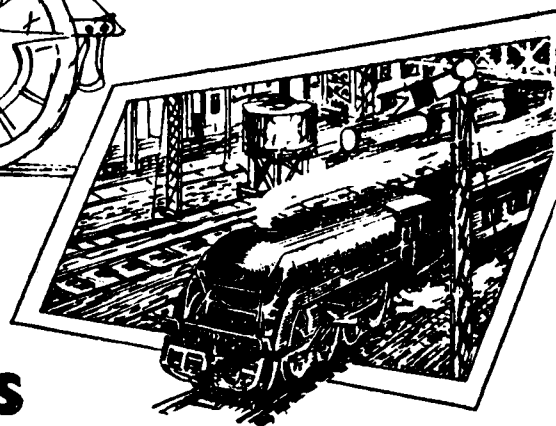
This is only a brief review of the main features of the Engineering Department of a railway system. It is the objective of every railwayman to 'Keep those wheels moving,' but no wheel can turn unless the Engineering men from the Chief and down to the gangman on the open line, keep those parallel steel tracks that run over hill and plain, river and stream, through tunnels and cuttings, for thousands of miles, firm and strong enough to pass the trains that thunder over them.

The Rocket



The principal features of the 'Rocket', the locomotive steam engine built by George Stevenson, were an improved steam blast for urging the combustion of coal and a boiler in which a large heating surface was given by the use of many small tubes through which the hot gases passed.

In all essentials and particularly in the use of steel tubes the locomotives of today follow the same principles.



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Annavaram Hill Temple—main entrance

KRISHNA PUSHKARAM AND KANAKA DURGA

K. SRINIVASAN

THE BIRTH OF THE RIVER KRISHNA :

ACCORDING to Hindu mythology Lord Brahma wanted to perform Yagna on the Sahyadri or western ghats. As his first wife Saraswathi could not turn up in time for "Muhurtham," Brahma was advised by Lord Shiva, Vishnu and others present on the occasion, to perform the 'Yagna' with his second wife Gayathri. He did accordingly. Saraswathi who came to the spot later learnt what had happened and got enraged. Out of anger she cursed that all those including the Trinity who were present should become rivers. The curse had its

effect and Vishnu became the river Krishna, Shiva the river Veni and Brahma the river Kakudmathi and the Trinity flowed together from the western ghats. The other Devas and Rishis also became rivers and all these rivers joined the river Krishna.

THE LEGEND OF THE RIVER KRISHNA :

After the last Pralaya, Lord Vishnu asked Brahma to start creation again. Brahma wanted to know from Vishnu how best "Dharma" could be established in Kaliyuga. Vishnu created Krishna with His 'amsha' and Brahma was surprised at the beauty of Krishna and treated Krishna as His daughter. In order to purify the world which

was full of sins, Vishnu deputed Krishna one of His four aspects ('amsha') to take the river Krishna from the possession of Brahma and leave her on earth. Krishna set out with the river, but was unable to find a suitable place. In His search for a proper place, He came across the sage Sahya who was doing penance assuming the shape of a mountain. The sage requested Krishna to live on him with the river Krishna. His request was conceded and Krishna stayed on the Sahyadri (western ghats) in the shape of a tree and the river Krishna took birth from within that tree. The river has many sacred places on both sides of her banks at several spots.

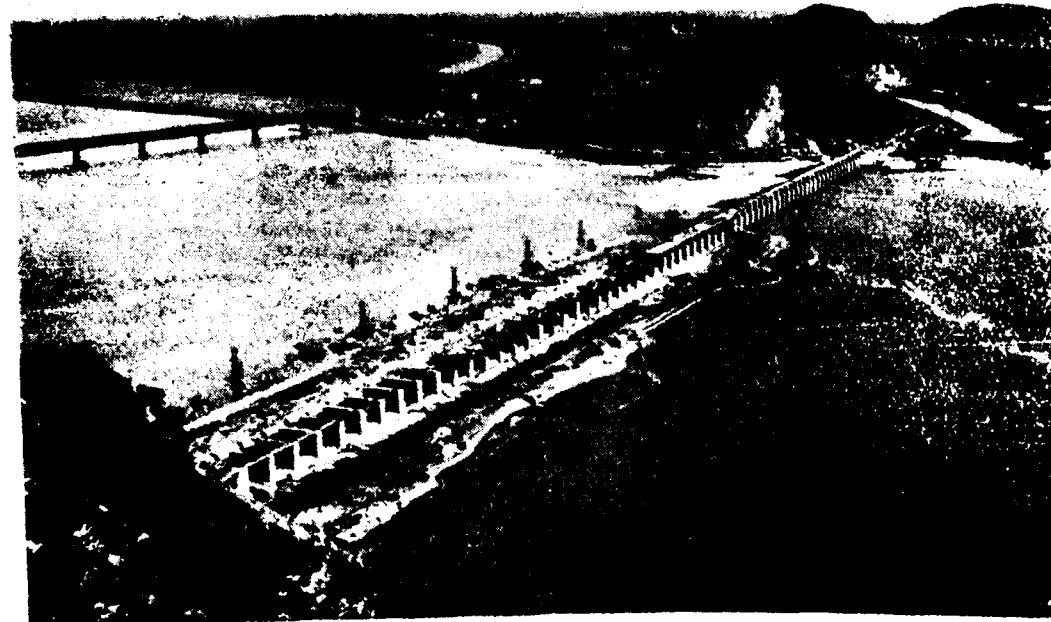
THE LEGEND OF PUSHKARAM:

A Brahman by name Tundila did penance for a very long time and at last Lord Shiva appeared before him

and offered a boon. The Brahman's joy knew no bounds. He prayed to Lord Shiva to grant him the form of Pushkara Theertharaja. Lord Shiva awarded the boon.

After some time, Lord Brahma got a boon from Lord Shiva according to which Pushkara had to live in the waters of Brahma's 'kamandal'. Later, Brihaspathi, having satisfied Brahma with his great penance, obtained Pushkara grahadipathyam and great reverence among gods as boons. Pushkara having been given away to Brihaspathi as boon, refused to follow him leaving Brahma. At last, it ended in a compromise that Pushkara should be with Brihaspathi for 12 days in the beginning and 12 days in the end of his (Jupiter's) year and one hour at noon during the rest of the days. Devaguru or Jupiter's stay in the twelve Rasis

The Krishna Barrage at Vijayawada under completion



"Rasa Krida" on the Durga Hill

(Zodiac signs, viz., Mesha, Vrishabha, etc.) represents Pushkara festival to the twelve sacred rivers of India as shown below:

Name of Rasi (occupied by Jupiter)	Name of River (having Pushkaram)
1. Mesha ..	Ganga.
2. Vrishabha ..	Narmada.
3. Mithuna ..	Saraswathi.
4. Karkataka ..	Yamuna.
5. Simha ..	Godavari.
6. Kanya ..	Krishna.
7. Tula ..	Cauvery.
8. Vrischika ..	Tamraparni.
9. Dhanus ..	Sindh.
10. Makara ..	Tungabhadra.
11. Kumbha ..	Brimaradhi.
12. Meena ..	Praneeta.

In the course of his traverse through heavens Jupiter or Brihaspathi enters 'Kanya' rasi during June 19 to 30.

GREATNESS OF KANAKA DURGA KSHETRA:

The greatness of Sri Kanaka Durga Kshetra was described in Skanda Purana. This Kshetra has, as its eastern boundary, the western Keela mountain (Keeladri) which was formerly forming a part of the mountain Indra Keela (Indra Keeladri) but was subsequently driven apart by the river Krishna and is now known as "Pata-mata." This kshetra has, Mangalagiri the seat of Lord Narasimha on the southern side. Undavalli caves known as "Ananta Theertha" on the western side, and the rivulet "Pridhivi" which is popularly known as Budameru

Malleswara Swamy Temple



on the northern side. In the midst of these sacred places lies Durga kshetra which is considered to be very sacred, where all rivers, Rishis, etc., are said to be residing invisibly. The Indra Keela mountain on which goddess Kanaka Durga and Lord Mallikarjuna are worshipped in the temple on the top spreads in semi-circular shape from the north-western direction to the southern direction of the Kanaka Durga kshetra.

The river Krishnaveni flows just by the side of this mountain. The river which originated from the western ghats or "Sahyadri" while running towards the sea in the east could not move ahead since the way was obstructed by the Indra Keela mountain. The Devas prayed to the mountain to give way to the river through two of its many caves. The mountain conceded to their request and allowed the river to flow through two of its caves. The river Krishnaveni flowed through the caves and a portion of the mountain in between these two caves was carried away by the current. The river was thus able to reach the sea.

In days of yore, there was a town called "Kanakapuri" (Town of Gold) on the eastern side of the Indra Keela mountain. At the request of Devas, the goddess—Parameswari killed the demons and shined like gold. That was why the town was called 'Kanakapuri'. The goddess was therefore praised by Devas as Kanaka Durga and she stayed on the mountain at the request of Devas. Lord Shiva joined her later in the shape of 'Jyotirlinga'.

Here we are reminded of the origin of Durga, the Supreme Goddess, born of the womb of Yasoda and fond of the boons bestowed on her by Nara-

yana. She was sprung from the race of the cowherd Nanda. She is the giver of prosperity, the enhancer (of the glory) of (a worshipper's) family, the sister of the terrifier of Kamsa and the destroyer of Asuras.

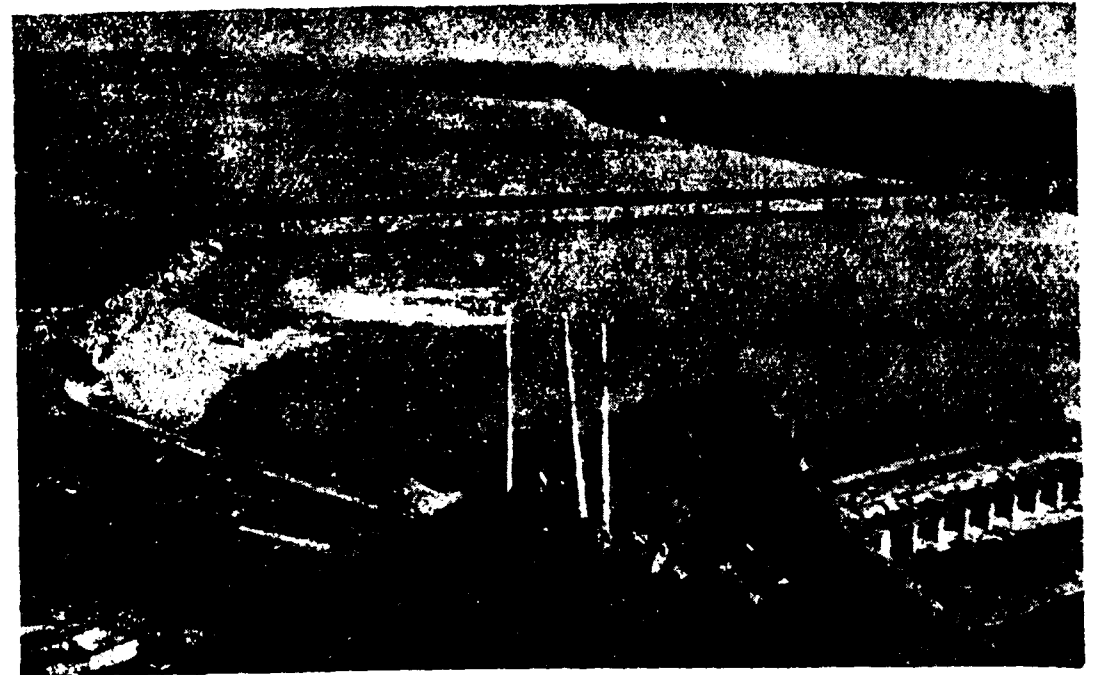
Durga is represented in art as a woman of gentle countenance with ten arms in each of which she holds a weapon. With one foot she presses on the body of Mahisha and the other rests on her Vahana, the lion, which is depicted as lacerating the body of Mahisha. She wears a crown on her head and her clothes are magnificently jewelled.

She is the foremost of all deities, extending grace and mercy to her worshippers; she is the source of earthly blessings of fame, prosperity, steadiness, offspring, art, knowledge, intellect, both Solar and Lunar beauty, forgiveness, mercy and every other thing.

THE CITY :

Bezwada, now known as Vijayawada, lies at the head of the fertile estuary of the Krishna River. With the advent of the Railway, it has become a big trading centre. The magnificent bridge over the Krishna River was commenced in December 1890, and completed by March 1893 at a cost of over 35 lakhs of rupees. Many industries including cement, textiles, machine tools, etc., have grown in and around Bezwada which is steadily growing in importance.

The place was a religious centre of great importance in the Buddhist period and the famous Chinese traveller Huen Tsang is stated to have visited it about 639 A.D. Early in the 7th century, the Chalukyas, who reigned at Kalyani in the ex-Nizam's Dominions, invaded the place, then ruled by the Pallava dynasty, and



The Railway Bridge over Krishna as seen from the peak of Durga Hill

established a separate province there. The Chalukya dynasty flourished there till in turn it was conquered by the Gajapati dynasty of Warrangal in the 12th century. After 1228 A.D. it fell into the hands of the Muhammadans who established their capital at Kondapalli, a hill fortress near Bezwada. The hill fortress was seized in 1515 by Krishna Deva Raya of Vijayanagar and given over to the Orissa Raja. Finally it passed into the hands of the British, in 1766. At the foot of the hill is the village which is noted for the manufacture of toys, carved out of soft wood, or moulded in clay.

IMPORTANT THEERTHAS :

The following are the important Theerthas that lie within the Durga kshetra—Bezwada.

1. Phalguna Theertha
2. Durga Theertha

3. Shiva Trisula Theertha
4. Shankha Theertha
5. Brahma Theertha
6. Mukti Theertha
7. Indra Theertha
8. Rishi Theertha.

On one occasion, Lord Brahma performed a hundred Ashwamedhas. When Lord Shiva appeared, he worshipped Him with 'Mallika' flowers. Having been worshipped by Mallika flowers Lord Shiva attained the name of Mallikarjuna and stayed with Durga on the hill. As Kanaka Durga remained on the hill, it is also called Kanakachala—Mountain of Gold. On another occasion, Kanaka Durga killed the Demons Shumbha and Nishumbha and attained the name of Vijaya. Kanakapuri was therefore called "Vijaya Pattanam" or Vijayawada. The town is called Vijaya Pattanam also because Arjuna of the Five

Pandavas who was also called Vijaya did penance on this mountain and obtained Pashupatham from Lord Shiva.

The following are some of the important sacred places around Bezwada:

AMARESWARA THEERTHAM (AMARAVATHI): Situated 20 miles away from Bezwada is Amaravathi, famous for its architectural ruins of Buddhist origin.

The Hindu temple at this place is dedicated to Amareswara. The gigantic 'linga' in the temple is worth seeing.

NARASIMHA KSHETRA AT MANGALAGIRI: The temple on the hill is dedicated to Narasimha who is popularly known as 'Panakalaraya'—the Lord of 'Panakam'. Panakam

Caves of Akkanna and Madanna with Sila Sasanam



Main entrance to Sri Kanaka Durga Temple

means jaggery water. Panakam is poured in a hole in the temple on the hill and when half of the vessel from which the jaggery water is poured, is emptied, small quantity of the water will trickle through the hole as though it is an indication that Lord Narasimha is satisfied with what has already been poured.

A visit should be paid to the famous rock-cut temples of Undavalli, 2 miles south-west of Bezwada. Bezwada is said to have been the mythological 'Vijavawada' where the sage Agastya worshipped Shiva known here as Mallikarjuna.

Pilgrims bathe in the holy river Krishna and worship at the Shiva shrine as well as at the other temple dedicated to the Goddess, Kanaka Durga.

ERRATA

In June 1957 issue of the 'South-railnews', at folio 43 in the article entitled "How American Aid has assisted the development of Indian Railways" in the first sentence it is mentioned that "Indian Railways have

received from America 63,062,200 dollars, equivalent to about 3 crores of rupees, for Rehabilitation and Expansion." This 63,062,200 dollars amounts to about 30 crores and not 3 crores. The error is regretted.

ATOMIC LOCOMOTIVES

C. V. B. MENON

Divisional Commercial Superintendent, S. Railway

COULD a nuclear-powered locomotive be built? Judging from the results of the studies undertaken by various nuclear physicists in this direction so far, such a locomotive would appear to be technically feasible. According to published reports, an atomic-powered submarine has been running, and quite successfully, since January 1955. The interest in the possibility of using the same source of energy on a locomotive is not therefore merely academic. The thermal reactor used to provide power for the submarine proves that it is possible to build an atomic reactor for the production of power that will run for reasonably long times, continuously and efficiently.

At least four different designs for atomic-powered locomotives are understood to have been developed so far, two in the U.S.A., one in Germany and one in the U.S.S.R.

One of the American ideas is the locomotive design worked out by Dr. Lyle Borst, Director of Research of the University of Utah, in conjunction with representatives of certain manufacturers and railways. This design envisages a unit of about 7,000 h.p. weighing about 325 tons and having an over-all length of about 160 ft. According to the designer, this locomotive would have the power of at least four diesel units and the pick up of an electric locomotive. It could be built to operate a year or more without refuelling.

Power is derived from an atomic reactor of the water boiler design, two feet wide, three feet high and three feet long, placed in the centre of

a massive protective shield and weighing altogether about 180 tons. This reactor, which is capable of an output of 30,000 k.w. of heat, would consist of a hexagonal stainless steel vessel containing the liquid fuel or "soup" which is Uranium, 235, in the form of Uranyl Sulphate, dissolved in water to give a homogeneous solution. Uranium, 235 is the fissionable material. It loses some of its mass in breaking up into two other atoms and releases considerable energy in the process in the form of heat.

Adjacent to each the two hexagonal faces of the reactor is a water reflector. The two water reflectors are connected by about 10,000 heat transfer tubes which perforate the reactor vessel and present a surface of about 806 sq. feet. Each of these tubes consists of two concentric stainless steel tubes of 0.015 inch wall thickness. The tremendous heat generated by the fission chain reaction of Uranium heats up the water circulating through the tubes and reflectors and produces as much steam as the largest steam locomotive. The steam is used to operate a conventional condensing steam turbine, the heat being rejected through heavy duty finned radiators to the atmosphere. Electricity generated by the turbine turns the wheels of the locomotive. Water requirements for such a locomotive should be negligible, since the turbine and reactor system must be hermetically sealed to avoid release of radio-active materials.

The reactor vessel is provided with a soup circulation equipment and what are known as "control rods." The fission chain reaction inside the atomic

YOU SHOULD KNOW

HOW THE RECENT INCREASES IN EXCISE DUTIES AFFECT YOU

When you buy SUGAR, remember that the increase in duty is 5 nP. per lb. or 10 nP. per seer.

VEGETABLE OILS produced by ghanis or by small producers are exempt from duty and should not, therefore, cost more. Even for vegetable oils from large mills the increase in duty is only 2 nP. per lb. This small increase may very well be absorbed by the trade in view of the 10 to 20 nP. per lb. rise in price during the last year.

If you smoke, please note that you need not pay more on any brand of cigarettes other than those manufactured exclusively from Indian TOBACCO such as "Char Minar" or "Shah-I-Deccan". On these the effect of rise is between $\frac{1}{2}$ to 1 nP. per packet of 10. 100 biris will cost only 1 nP. more. The price of hukka tobacco should not in any case increase by more than 13 nP. per lb.

For your MATCHES, do not pay more than 4 nP. per box of 40 sticks and 6 nP. per box of 60 sticks. This includes reasonable profit for trade as well as increase in duty.

A quire of Ordinary Writing PAPER (8 lbs.) should, if at all, cost only $1\frac{1}{2}$ nP. more.

**PAY ONLY WHAT IS FAIR
IT BENEFITS YOU AND THE COUNTRY**

reactor is controlled by these control rods which consist of sheets of material of a very high neutron absorption cross-section, with perforations to permit circulation of the soup. Starting up the reactor is accomplished by removing the control rods and establishing a chain reaction. The latter operation requires considerable skill and experience, in addition to high precision instruments and control systems. When the desired power level is attained, the rods are so positioned as to make the reactor "critical," or, in other words, to ensure that the chain reaction is just maintained. Reactor shut down is comparatively simple and easy. The control rods are inserted and that is all there is to it. They absorb neutrons and the chain reaction then dies out.

The Baldwin-Lima-Hamilton Corporation of U.S.A., in association with the Denver, Rio Grande and Western Railroad has had an atomic-powered locomotive study under way, with the backing of the U.S. Atomic Energy Commission. The design they have in view envisages the use of Uranium Hexafluoride gas (UF_6) to drive a piston directly in a single-cylinder engine by energy produced by fission. The plan is to make a "free piston" engine, at one end of which would be a "moderator," which is a means of slowing down the neutrons and controlling their reaction. The UF_6 placed at the end of the moderator becomes fissionable and the heat generated by radioactivity pushes the piston. One modification thought of by the designers is to have two reactors, one at each end of the cylinder, to push the piston back and forth. The specific advantage of this

design is that it dispenses with the elaborate condensing system, as also the necessity for intermediate heat transfer.

The German design visualizes a much simpler and smaller machine by using a reactor cooled by Helium or some similar gas and by using gas turbines to drive reduction gears or a hydro-mechanical transmission without any use of electric transmission components. The Soviet proposal is understood to be to build a 300 ton locomotive of 8,000 h.p., driving through a gas turbine, electric generators and traction motors.

The economic incentive for the use of atomic power for locomotives should arise from a possible reduction in fuel costs. But the price of Uranium is at present a secret and in the absence of this information, a comparison of the economic possibilities of the proposed atomic locomotive with existing diesel and steam practice is not possible. The initial cost of an atomic locomotive, as at present designed, will be about 2-1/2 times that of a diesel locomotive.

Because of the nature of the source of energy, all the designs planned by the scientists are still in the area of mathematical and physical theory. They are only studies at this juncture. But, in these days of rapid scientific and technological development, anything as nearly feasible as this can certainly be accomplished. It is only a question of when the atomic locomotive will become a reality. Recently one of the builders in the U.S.A. suggested that they might have an atomic locomotive to offer by 1970.

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TO GIVEN SPECIFICATION AND STANDARDS

Traditions of the Service

THE PASSING OF SRIRAMULU

ONE OF THE SPECIES

THIS is the story of an ordinary clerk of the Statistical Branch. who until his sudden end by Typhoid in March last, illustrated a great truth : the truth that however humble relatively a man's work or status may be, he can make it great in the performance of it : as it should be, well and to perfection and in a manner that would mark him out as a man among men.

But then one might ask what is there to make so much fuss about, if a clerk just did his duty, when that is just what is expected of everyone and as a matter of course and what did the late Sriramulu do, anyway, to write all this lyric about him ?

Well - to come straight to the point, the late Sriramulu demonstrated in his life work what an astounding gap there is between the average performance of the ordinary man in service and the best man who has the right aptitude for the job and who exerts himself to his capacity : and that the best performer even in India could turn out records which would compare favourably with the world's best.

Add to this, another great truth in today's world context. And this is, that today, it is only the countries where the vast generality of ordinary men and women who consciously put forth their best effort, may be in a competitive spirit, who are getting to be the pace setters and leaders of the world : with other countries in which the vast majority of the population take things easy, rapidly losing ground, even when some of these

latter countries were amongst the world's leaders until yesterday. And you get the significance of Sriramulu's work in its correct proportion. You see that it is a message !

The late Pasupaleti Radhakrishna Sriramulu who was born in 1916 of very humble parents - his father was just a member of the class IV staff of the ex-M. & S. M. Railway Company - passed the School Final examination and joined his father's Company in 1937. As a clerk on the Commercial side of Statistical work he was initially tried, part time, as a Hollerith Key Puncher. His remarkable speed with equally remarkable accuracy in his punching resulted in his being posted permanently on to the Hollerith machines. He was also subsequently posted as a Hollerith Sorting machine and Tabulating machine operator. The work of a large body of clerical establishment is handled by a very limited number of men on these machines. This means that a high degree of efficiency and resilience of men in this section could, up to a point, make up for deficiencies elsewhere, whatever may be the cause of such deficiencies. In this context, the out-turn figures, in numbers of cards punched per hour or per day, of the late Sriramulu were something which could be considered as near world records. Add to this the unbelievable fact that these cards were punched a hundred per cent correct, and one could see what a tower of strength the late Sriramulu was to this Branch.

(Continued on page 58)

HOW TO IMPROVE THE RELATIONSHIP BETWEEN THE RAILWAYS AND THEIR CUSTOMERS

[The following are the essays which were awarded first and second prizes in the essay competition held during the Second Railway Week, 10th to 16th April 1957. The essays were invited from Railway staff.—Ed.]

First Prize: Rs. 100

T. A. KRISHNAMURTHY

Sr. Clerk, Mobile Squad, G.M.P. Office, Southern Railway, Madras

IN fostering Public Relations between Commercial concerns and their clientele, the old adage "The Customer is always right", holds the field. This wise motto can be ignored only at the risk of being thrown out of business.

Would it be right to let this dictum govern the Railway's relations with its customers? The term 'customer' is a new find for the Railways. Till recently he was known as "user", "passenger", "merchant" or just the "public". Should he be treated with greater deference and solicitude as a 'customer'? These are current topics which call for a new approach in the welfare state that is being forged.

The most common form of transport in this country is by rail and in the network of Railways, we have a great national asset, which has a vital role to play in the economic development of the country. The nation relies on the Railways not only to transport goods and passengers but to move goods speedily and passengers with reasonable comfort, security and courtesy. The Railways have, therefore, rightly recognised the necessity for cultivating close and friendly relations with the general public, of whom hardly anyone can be excluded as not being a customer. Thus improvement of relations with its customers

amounts to winning public confidence and exhibiting due regard for popular opinion and needs.

The relationship between the Railways and their customers had for long been that between a monopolist of an essential service and a helpless clientele driven to it for inevitable necessities. Only after the advent of freedom, attempts have been made in a large measure to take the passengers and other users of the Railway into confidence in deciding the customer's requirements. Though there has been a programme for providing more and more amenities to passengers, and remarkable progress, has, indeed, been achieved in this field, the policies and principles followed have been hitherto moulded by the Railways to a great extent and only recently enlightened public opinion has been given due opportunities to associate itself in the formulation of policies and advising Railways of the customer's needs and requirements. Customer opinion is now elicited largely through the Railway Users' Consultative Committees set up at different levels and for specific purposes. It is to be admitted that, however representative the consultative Committees may be, they cannot represent all shades of public opinion, although it should be their bounden endeavour

July 1957

RAILWAYS AND THEIR CUSTOMERS

45



Sri T. A. Krishnamurthy

to do so. The Public Relations Organisation and the direct source in the shape of complaints and suggestions box do play their part but the growth of direct relationship between the Railways and the customers in a much larger measure is a necessity.

The customers judge the efficiency and courtesy of the Railways by the behaviour and performance of the members of the staff with whom they come into contact. The problem in a nutshell is, therefore, to instil into the staff an awareness of the important role they are playing and make them appreciate that by and large their individual acts of omission and commission mould public opinion for or against the Railway. A positive change in the outlook of the staff who should live contented and whose welfare the administration should assiduously promote, can be brought about only by well-planned training, which has to inculcate a sense of responsibility and discipline and deve-

lop a fine tradition, never to be forgotten for ever to be followed by generations of Railwaymen. The Railway Administration and the organised unions of Railwaymen are, no doubt, alive to the importance of this basic issue and are examining ways and means of implementing this surest method of winning public confidence.

The necessity, however, for devising other ways and means of associating responsive public opinion with the day-to-day working of Railways and of winning public confidence cannot be over-emphasised. A few aspects that need consideration and some of the steps that can be taken for making the public feel that their views are given the consideration they deserve may be outlined.

One aspect in which a new orientation can be given is to improve the organisation of the enquiry offices at bigger stations. These constitute one of the important fronts where the railways face their customers actual and potential. These offices may, with great advantage, be exploited for cultivating good relations with the customers, and not be run just as a wing of the traffic or the commercial departments. The enquiry offices may be set up as branches of the public relations department and manned by trained personnel of that department, with a flair for successfully dealing with the trying public. The approach that 'the customer is always right' can be best put into practice here. The dissemination of information at these centres need not be narrowly confined to timings and fares only. The offices should be adequately equipped to provide the traveller with spontaneous help or guidance to continue his journey into the city or town

SOUTHERN RAILWAY

TENDER NOTICE

The Engineer-in-Chief, Southern Railway, Egmore, Madras-8, invites *separate sealed percentage schedule tenders* for the following works:—

NAME OF WORK	Total approximate value of the work	Earnest Money	Cost of Tender Form
	Rs.	Rs.	Rs.
BEZWADA-WALTAIR SECTION			
(1) Earthwork for laying a Diversionary line from mile 417 to 421 to eliminate the steep gradient in Hamsavaram Bank	3,88,600	11,700	10
(2) Earthwork for regrading to 1 in 250 between Gullipadu and Narasapatnam Road	3,49,100	10,500	10

The above tenders are 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 Thursday, the 25th July 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 form. 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 Monday, the 22nd July 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 Monday, the 22nd July 1957 and the receipt submitted along with the tender. No cheque or demand draft should be attached to the tender. Such of the Contractors who have deposited the lump sum of Rs. 25,000 as earnest money with this Railway, need not again deposit the earnest money mentioned above but mention should be made of this in the tender. From this amount no adjustment will be made towards Security Deposit.

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 3% 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 11-00 hours on Friday, the 26th July 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.

or to let him know the facilities he may expect, by way of connecting trains or road services, boarding and lodging arrangements, places of interest for sight-seeing, etc. Complaints should be looked into on the spot with the object of having satisfied customers. The aim should be to develop the railway enquiry offices as model institutions, which should not only disseminate accurate information on diverse subjects, but should also serve as the practical training ground for the Railwaymen in general. Traditions of spontaneous, courtesy and an eagerness to anticipate and satisfy the needs of the travelling public should be developed in these institutions, which will, by example, enable other staff at the less important stations adopt a similar satisfying approach.

The mass participation of the customers in some annual event of the Railway may provide an occasion for maintaining closer relations with the customers. The popularity of the Centenary Exhibition Special Trains has given an indication of the tremendous enthusiasm which can be generated in the common man in shows organised by the Railways. The popularity of the various Exhibitions organised seasonally or in association with festivals such as the Christmas season at Madras, Dasserah at Mysore give a pointer in this direction. The Railways should organise similar Exhibitions preferably on wheels, during the Railway Week Celebrations. These can not only depict the achievements and aspirations of the Railways but provide opportunities for social education, the need for which is rightly recognised. The education of the general public to use the amenities provided

by the Railway in the right manner is no doubt an integral part of our public relations activities. The travelling exhibitions may be organised each year in one of the Divisions so that the ordinary traveller even from wayside stations gets an opportunity to see and assist.

Besides, annual conferences of the management and representatives of the travelling and trading public delegated by institutions such as Chambers of Commerce, Passenger Associations, Local bodies, etc., may be conducted either at the Headquarters of the Railway or in each Division. To provide a sense of direct participation in the celebrations, cultural and sports festivals by railwaymen and others may be arranged simultaneously. This suggestion is worth consideration, as it would provide a means of fostering better relationship between the Railways and the public.

To illustrate how a good deal of public enthusiasm is roused by these colourful events, the Annual Governor's Cup Football Tournament conducted by the Railwaymen at Salem may be mentioned. Every year about 45 teams enter the field. They come from the various parts of Madras and neighbouring States. The players are from different walks of life. The Railway Institute, which takes all the trouble to organise this big tournament, does not enter its own team. Almost all the teams are from non-railway institutions. The coveted Rolling Cup was instituted by his Excellency Shri Sri Prakasa, former Governor of Madras. The event lasts for a fortnight or more. About 80,000 people witness the games. The tremendous enthusiasm and jubilation shown by the public confirms the view that the

public can be well-impressed with the fact that Railwaymen, apart from their onerous duties of public transport, can also contribute a good deal for the promotion of common good and social relationship.

One direction in which the railway customer may be made to feel that he is given due regard is in the matter of disposal of complaints. It is true that much headway has been made in setting up regular complaints organisations in the Railways and that proper action is being taken on public complaints generally. But there appears to be scope for improving the extent to which the customer is kept informed of the action taken on his complaints or suggestions. It is not uncommon to come across cases where a complaint is acknowledged in the normal routine manner and necessary action, say, against the staff at fault is finalised after usual departmental proceedings, at a much later date. The customer, unless specially informed, is still left with the feeling that apart from an acknowledgment or a general state-

ment that things have been looked into, nothing tangible has been done by the Railway. Improving the follow-up of customer's correspondence and couching the language of the correspondence in more personal terms would bear further study.

It is not always possible to comply with the requests of customers or implement their suggestions. Customers come from diverse walks of life with varying temperaments, some sympathetic, some considerate, some helpful, some irate, some cynical and some mischievous. While it is no doubt impossible to follow the dictum "The Customer is always right" to the very letter, it is nevertheless desirable and necessary that the approach should leave such a feeling in the minds of the customers. The Railways should make the customers feel that they are eager to keep them in the picture always as one of their trusted and valued consultants for only a very thin line of distinction exists indeed between the owners and the customers of the Railways.

Second Prize : Rs. 50

S. L. SHARMA

CHEMIST 'A', CMT's Laboratory, Loco Works, Madras

THE Mail left the starting point on schedule. It was tearing through the dark chill night gathering momentum every minute as it sped. Suddenly it came to a halt, we had hardly covered twenty miles. It was a small station where the mails usually do not stop. Everybody peered out. Half an hour, and there was no sign of the train moving out. Many got down and gathered round the engine. Something had obviously gone wrong with it. People started fidgeting,

cursing and showing their impatience in several other ways. One of them called out to the Guard who was busily pacing the platform with his lamp, and demanded an explanation in the most explosive way. Everybody's tempers were frayed. But the Guard's tone was cool; he met the situation squarely: "Well Sir, one of the engine axles is running hot and it is too dangerous to proceed with this engine any further; the nearest shed has been contacted for relief and

we will be moving out in another quarter of an hour. I know how you all feel: but a little more patience, Sir, and all will be well." This explanation appeared to satisfy most. I immediately put in "Suppose you just announce this in every compartment, will it not help to allay the anxiety of other passengers." He readily agreed and promptly did it. Another Engine did arrive in a few minutes and pulled our train out to the relief of all.

This is one instance in which a whole train-load of customers were satisfied by mere soothing talk of one of the officials on the train. It cost him nothing. He had tact, patience and above all a cheerful and amiable disposition. Just this and nothing more helped the Railway to be thought of well by its customers.

Several other such problems, perhaps much more delicate, crop up every day. The ultimate end is no doubt pleasing the customer. But it is a big problem, very complex in nature governed by several factors. It is not just as easy as the job of other commercial establishments like a haberdashery shop, a hardware or a druggist's store, a tailor's firm or a catering establishment wherein a customer obtains his choicest needs and walks out satisfied.

Here, the customer pays in advance, entrusts himself and his belongings to the care of the Railways, who agree to transport him safe and in all possible comfort to his destination. This is no easy task as it involves an ideal degree of efficiency of the entire organisation.

The first requisite is the safety of the passenger. This involves a very careful checking of the various fittings

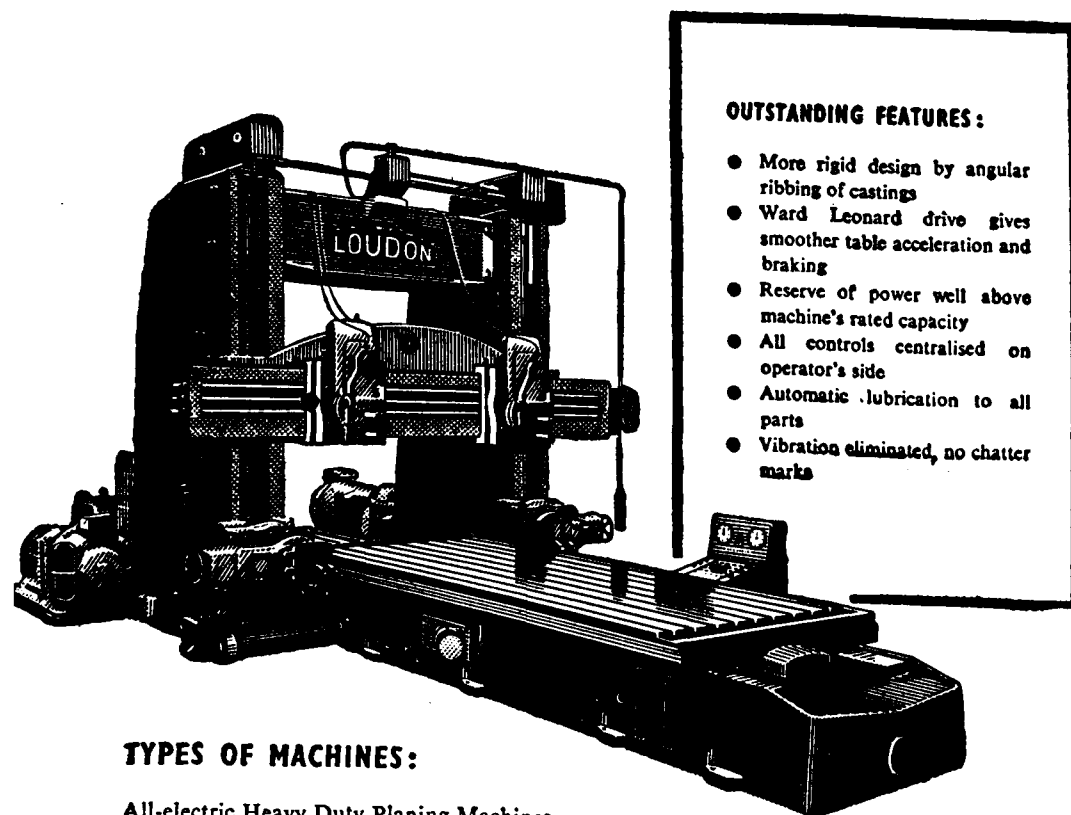
of the rolling stock. A loose fitting, a badly manufactured part or any other form of negligence in workmanship may cause an accident which may involve life and property. This aspect chiefly concerns the Mechanical Department and its efficiency not only ensures a safe travel, but its increased output could go a long way in relieving congestion and overcrowding by an increased availability of the rolling stock for more frequent service.

No less in importance is the responsibility of the Engineering Department. The safety of the track is of utmost importance. A corroded rail or a loose fish plate, or an insecure bridge will spell disaster and tragedy. The recent ghastly accidents are still green in the public mind. The fair name of the Railway is shadowed. May be, it is due to the nature's 'unkindest cut', but the average man does not pause to think. All he knows is that the bridge collapsed, people died and the Railways are responsible for this. Nor can we completely disregard his opinion as he is our potent customer. Therefore it is that no degree of efficiency is deemed as adequate in the maintenance of track and bridges. It is the very life-line of the Railways.

It is obvious that the Operating Department has a very vital role to play in satisfying a customer. The vigilance of the guard—indeed the guardian of the train—the efficiency of the engine crew—regardless of the onerous nature of the task and their inexorable devotion to duty alone can carry the day. Theirs are the main roles in this mighty play. It is they that carry the customer and his property. The correct running of trains



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July 1957

RAILWAYS AND THEIR CUSTOMERS

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to schedule is their job. How relieved a passenger feels as he steps out of the train which has arrived correct to schedule! What joy and relief are written on his face! and to this, if only a little more comfort is added by way of enough space to sit in comfort, cleanliness of the compartment, adequate water supply and such other common vital needs to be attended to by the train examining staff, what a grand success this tale of journey would be! On the other hand, even the slightest slackening of effort on the part of any of these may spell ruin and disaster. Thus a conscientious duty performed by them may earn kudos to the entire railway and the converse of it may ruin its name.

The Commercial Department is to be rated no less. They have a very important dual role to play. Perhaps they come in contact with the customers directly more than any others of the organisation. They have to satisfy the customers and at the same time render accounts of the earnings of the organisation. The job of the Ticket Examiners for example is indeed an unpleasant one, which calls for tact, strictness and a jovial disposition. A jarring note, or an over-zealous official attitude, may annoy a customer. His mission is indeed delicate. So are the duties of the Station staff, the Claims Inspectors, the catering staff and a host of others. Only when it is realised by all these that the customer is our paying guest and he has to be conscientiously treated so, can there be a remedy for the existing complaints, if any. The Railway looks more to this type of staff for its fair name than to others.

Not very much in lime light from the view point of the customer but

still very vital are the Electrical, Stores, Medical, and the Financial Departments.

An efficient functioning of all these above are very necessary for satisfying the customer. A fan that does not work, a light that does not burn, may cause far greater annoyance than any other form of physical discomfort.

The stores form the very backbone of the entire organisation. It is they that purchase, distribute and keep the supplies running, which in turn keep the wheels moving. Just as the limbs of the body cease to function, if the vital food is stopped, the efficient functioning of other departments to a very great extent is vitally dependent on the stores and purchase organisation.

The Finance and Accounts Department deals with the Railways earnings and expenditure. It deals with the Public money or the 'rate payers money' as is popularly called. A strict control, maintenance and rendering of accounts of several crores of Railway finances is an ordeal but a very necessary task. They are the custodians of the national wealth, and any slacking of vigilance on their part may reflect on the entire efficiency of the undertaking. A *Cerberus*-like vigilance alone can prevent wasteful draining of the resources, and conserving the money for providing greater amenities to the customer.

The importance of Medical Department can never be underrated. A healthy staff is a prerequisite to healthy and efficient service to keep the wheels moving and the customer satisfied. Every employee of the organisation has a vital role to play and a healthy employee with a family

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free from sickness has much less care and much more time to concentrate on his work and thus become a great asset. The Sanitary Department has something more important to give to the customer. Cleanliness of trains, platforms, etc., check the disease, adds to the appearance and to the fair name of the Railway.

And above all, the Railway protection Force:—They are the custodians of Public property during transit. Theirs indeed is an arduous task. Scrupulous honesty, cool temperament and unflinching loyalty and courage are very exactly required of them. Any disruption in this organisation may involve colossal loss to Public property.

Thus it is, that every employee plays directly or indirectly a very vital role in satisfying the millions of customers day in and day out. A contented and efficient staff is a very great asset to the organisation.

Within the last two decades, the outlook of the Railways and the customer has considerably changed for the better. The former management under companies had an eye on profit, which they could get by doling out the absolute minimum to the customer.

Now with the advent of Independence, the Railways have become a National concern. They belong to the customer. He has a voice in their administration. The management has also become more democratic. Regional Advisory Committees are set up; suggestions and criticisms invited and every effort made to improve the standard of service.

Perhaps the most common complaints are:—

- (1) Over crowding,
- (2) Late running of trains,
- (3) Lack of adequate provision of necessities,
- (4) Unclean compartments,
- (5) Bad catering,
- (6) Stray cases of incivility on the part of the staff.

It is very heartening to note that these are being remedied steadily. Perhaps in course of time, we will be able to get over these complaints with a little more effort, tact and vigilance on the part of all departments concerned.

It has been widely recognised both at home and abroad, that our railways are heading towards complete self-sufficiency and great advancement in every way. The World Bank authorities who visited our country recently, were very much pleased by the effort the railways were putting in. The Second Five-Year Plan envisages great building programme for the Railways and with these improvements we should be able to satisfy our customers better.

Perhaps a few suggestions at this stage may not be out of the way.

(1) It is felt that we lack publicity. The public must be informed by means of all available potential means of propaganda like the Cinema, Radio, the great work we are doing, the handicaps we face and thus enlist public appreciation of our problems and their sympathy and co-operation.

(2) The public by the same means should also be educated how best to use the amenities provided.

(3) The possibility of provision of some amenities like a film show or a wireless set as a form of recreation for the customer who embarks on a long journey should be investigated.

(4) If the train happens to run late, at important stations, provision shall be made to inform the passengers in the train as to how much late the train is running so that they may know when they would reach their destination.

(5) Solicitous enquiries shall be made of passengers by train conductors or other staff as to their needs if any, periodically.

(6) A strict watch over the licensed porters to prevent their exacting more portage than the schedule from the passengers must be kept.

(7) Wide publicity among the Railway staff should be given to the appreciative testimonials given by the Public for good service rendered just as a bad act is widely publicised. This will perhaps serve as an incentive to others.

(8) If such individual acts are rewarded in some way, it may produce better results.

The responsibility of keeping the customers satisfied is no slight task.

Some years back an incident that happened in Great Britain was reported in the Press: It appears a factory worker arrived as usual at the way-side station at which he used to catch his train to his place of work. But that particular day the train had left half a minute earlier than schedule. The Railway provided him immediately a cab to reach his work-spot as an alternate means of conveyance. Such should be the super-consciousness towards the obligation we owe to the travelling public and the degree of efficiency which would definitely please even the most fastidious of our customers.

In fine, the entire organisation could be compared to a mighty orchestra, which gives out scintillating, thrilling music to a paying audience. No performer even if he be the last fiddler has a mean role to play. When every instrument is properly string tuned and correctly played, it can never fail to achieve the desired result. One jarring note, may spoil the entire show. So let us march from one thrill to another hand in hand as one grand team of performers with tireless, unceasing effort at attaining the highest level of efficiency in our sacred job.

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For detailed information, please apply to the
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THE PUBLIC RELATIONS OFFICER, NORTHERN RAILWAY

THIRUVALLUVAR

A BORN POET AND THE
UNIVERSAL TEACHER

G. S. RAJU

INDEED, the unique feature of Valluvar is his universality in the approach to every subject. That is the reason why he ranks foremost among the poets of Tamilnad, ancient and modern. He was praised justly by his contemporaries and there is no doubt that the succeeding generations also will never fail to appreciate. Art is permanent and more important than the artist himself. This is the case with Valluvar, for his work of art has far outshone the man. The time in which he tread this earth is still doubtful. Opinions are controversial but according to most of the critics it is somewhere near the Second century A.D. This was the time of the last of three Tamil Sanghas in Madurai. The fact that the Kural is counted amidst the 18th tamil classical works of that time is a reliable evidence. Avvaiyar and Kabilar the two famous poets lived in that period, and according to legends Valluvar is the brother of those poets.



Sculptural representations of Thiruvalluvar—sitting
and walking at Thiruvalluvar Temple,
Mylapore, Madras

We know only scraps about the life of Valluvar. Lacking firm historical evidence all we know about him is based on hearsay and legends. As the story goes, he was born of a Brahmin Bagavan and Adhi, a non-Brahmin woman. He was brought up by Valluvar community and he owes his name probably to that community. He is supposed to have been born at Madurai but his life was spent in Mylapore, Madras where he attained Mahasamadhi. He followed the profession of a weaver like Kabirdas of Northern India. His domestic life was an ideal one since he had a chaste and a lovable wife, Vasuki. His one great work of art is the Kural, the very essence of morality.

But in Kural we see the multifaceted personality of Valluvar breathing fragrance in every couplet. After a thorough study we realise that his work is not a code of morals for a particular parochial sect, but a

Entrance to Thiruvalluvar Temple



catalogue of principles and moral codes for every citizen of the world. Even in the very first chapter of prayer we find the broadmindedness of Valluvar. He believes in one true God who is the master of the Universe. The very first Kural says,

"God is the first of all things
like 'A' the first of letters."

"அகர முதல் எழுத்தெல்லாம்
ஆதி பகவன் முதற்றே உலகு"

This is the essence of all the religious teachings. Again, we find in another Kural which speaks of Valluvar's religion.

"Those who reach feet of the
lord of the flower,
will live in prosperity for ever."

"மலர் மிசை ஏகிஞன் மான் அடி சேர்ந்தார்
நிலம் மிசை நீடு வாழ்வார்"

The Vaishnavites say that the Lord of the flower is Lord Vishnu, who according to puranas, resides on the lotus flowers. The Buddhists point out that it is Buddha who is also pictured as sitting in Padmasana on the lotus flower. We see it in many frescoes and sculptures. According to Jains, Mahavira is the Lord of the flower since he also is represented as sitting on the lotus flower. But the correct interpretation will be the Lord of flower is God—the master of the universe who resides on the flower which is in the hearts of devotees. With such wide-heartedness, Valluvar sums up his conception of God in the ten Kurals of the first chapter.

Valluvar's view on domestic life is an ideal one and resembles more the picture of Indian household. He visualises the everlasting bond of love between the husband and wife. He devotes one third of his book in picturing the properties of true love. He eulogises the chastity of the wife

and states that there is no pride for a husband without a chaste wife.

"புகழ் புரிந்திலவோர்க்கிலை
இகழ்வார் முன் ஏறுபோல் பீடு நடை"

The whole of domestic life is its greatness as well as its baseness depends on the wife. Says Valluvar

"If there is a good wife in the household, it lacks nothing; if there is a bad wife in the household it lacks everything".

"இல்ல தென் இல்லவன் மாண்பானால்
உள்ள தென் இல்லவன் மாணக்கடை"

For the wife the husband is God. She who worships her husband, God can make the clouds rain at her will.

"தெய்வம் தொழான் கொழுநற் தொழுதெழுவான்
பெய்யெனப் பெய்யும் மழை"

But the fruit of a good household is a child. Valluvar defines the duties of the parents towards child and *vice versa*. The duty of the father is to make a son a great scholar and the duty of the son towards his father is to make people wonder and think 'by performing what penances has this man begotten such a son?' Valluvar touchingly depicts the mother's heart overflowing with joy when she hears the people talk of the glory of her son

"சுன்ற பொழுதின பெரிதுவக்கும் தன்மகனைச்
சான்றோன் எனக்கேட்ட தாய்"

Hospitality is one of the main duties of the household says Valluvar; the very purpose of domestic life is to exercise hospitality.

"இருத் தோம்பி இல் வாழ்வதெல்லாம்
விருத்தோம்பி வேளாண்மை செய்தற் பொருட்டு"

Hospitality is treasured so highly that even if one is drinking the divine nectar one has to share with the guest.

"விருந்து புத்த தாத் தான் உண்டல், சாவா
மருந்தெனினும் வேண்டற் பாற்றன்று"

Coming to politics, we find Valluvar's appeal is still more striking and more universal. He lived in a time of Monarchy and he has elucidated all

the aspects of administration. It is in many ways similar and in some ways greater than 'Artha Shastra'. Valluvar believes that the King is the people's soul. People depend on the King just as the plants depend on rain.

"வானோக்கி வாழும் உலகெல்லாம் மன்னவன்
கோல் நோக்கி வாழும் குடி"

The King should rule the country with the advice of elders and wise men. (Now Governors and Ministers.) He devotes a separate chapter in laying down how the King should seek the advice of the wise. (பெரியாரைத் துணை கோடல்).

The minister is the right hand man of the King and Valluvar in a chapter devoted to elucidating the duties and requisites of the minister, crystallises the various qualities required for a successful diplomat and politician. In one of his couplets he says that in any negotiation the minister should study the matter deeply first, find out solutions and give his unequivocal expression for it.

"தெரிதலும் தேர்ந்து செயலும் ஒரு தலையாச்
சொல்லலும் வல்லது அமைச்சு"

Again we see Valluvar setting up yardsticks for an ideal country. He visualises a country with surplus production, a country of noble minds and rich hands, a country that can be united in front of an aggressor, a country of devoted tax-paying citizens, a country devoid of internal struggle and strife and last but not least a country that can stand on its own legs. In Valluvar's opinion a country which does not depend on others is in the real sense a country. A nation that looks for the help of others does not deserve the name at all.

"நாடுன்ப நாடா வளத்தன் நாடல்ல
நாடு வளத்தரு நாடு"

With his eyes cast on the vast picture of the country, he does not forget the

tillers the backbone of the country. The life of the agriculturists in Valluvar's opinion is a true life; all others are slaves and sycophants. This idea is expressed in the familiar couplet.

"உழுதுண்டு வாழ்வரே வாழ்வார் மற்றெல்லாம்
தொழுதுண்டு சிஞ்செல்பவர்"

According to Valluvar, the whole world depends on the profession of the farmer. He says

"கழன்றும் ஏர் சின்னது உலகம் அதனால்
உழன்றும் உழவே தலை"

From the above discussions we find the universality in the approach of Valluvar.

Before concluding, it will be fitting and proper to have a glimpse of Valluvar's view on education. In the specified chapter he has set down unshakable facts gathered from his rich experience. Laying down the process of learning the universal teacher says that the right way is to learn without an iota of doubt and confusion and putting it to practice. Numbers and letters are the two eyes of all living beings "எண்ணும் எழுத்தும் கண் எனத்தகும்". All therefore should learn and become scholars. On meeting a scholar one feels delighted but his parting is heart-rending. Knowledge becomes stagnant when there is no more study and one has to dive deep into the sea of books to keep his knowledge overflowing. Knowledge sprouts like water when one digs deep into sand. This idea is expressed subtly in these two lines.

"தொட்டனைத் தூறும் மணற்கேணி மாந்தர்க்குக்
கற்றனைத் தூறும் அறிவு"

Great men and scholars are not parochial and limited in their outlook. They belong to the whole world and world belongs to them. They are respected everywhere. Valluvar

says this fact as follows: "To the learned man every city and country is his own; why should then one die without learning?"

"யாதானும் நாடாமால் ஊராமால் என் ஒருவன்
சாந்நுணையும் கல்லாதவாறு"

In the 1330 metrical couplets of Kural we find this honest, large-hearted, shrewd minded, sympathetic and unselfish personality of Valluvar breathing in every line in the limited manner we have seen here how Valluvar's religion is: the ideal of good family: his concept of ideal administration: his views on learning and how the learned bear the stamp of universal appeal. Every couplet is sugared with a touch of artistry. Valluvar's Kural is an intellectual casket of moral treasure for he condensed great moral ideas in a few words. A contemporary says that he has probed the Atom and has filled it with seven seas. The Kural is highly impersonal. In 1330 Kurals he has given us a yardstick to measure various aspects of human life. For this reason alone he remains a shining star in the firmament of Universal literature.

TRADITIONS OF THE SERVICE

(Continued from page 43)

The Statistical Branch of the Southern Railway has been fortunate to attract lately, for purposes of study of its methods, many distinguished Indian and Foreign Statisticians, Railway and general. The late Sriramulu was one of the most valued show pieces of the Statistical Branch, always to be shown and admired by such visitors. It was not financial reward that made him what he was. The best things in life can never be rated against money—so was his work. All that he valued and got was the approbation

His Kural has been translated into many European languages. Now the Russians have got the staunch avidity to translate Kural into Russian language.

Many poets paid glorious tributes to Valluvar and let us see a sample of what the great poet Nakkiranar (நக்கிரனார்) said: "What this world can do in return to the great Valluvar who has given to the World the four purushartas i.e., Dharma அறம், Artha பொருள், Kama இன்பம், and Sorga வீடு in a simple and easily understandable manner and to the cloud that feeds this world with water? Nothing"

The famous poet of our times Bharati says: "Tamilnad acclaimed skyhigh fame by giving a Valluvar to this world." 11th June, 1957 was the Tiruvalluvar's day. Everywhere in the South it was celebrated and a cheap edition of Kural was sold.

In what way we are going to pay homage to the great poet? The answer is in possessing a book of Tirukkural in each house, reading his teachings and acting according to it.

and affection of his colleagues and his official seniors.

A spontaneous subscription in cash by all these equals and seniors immediately following the shocking news of the death of Sriramulu, though few had come prepared to meet this expense, to ensure that the family of Sriramulu may not have the sorrow of penury added to that of his personal loss on the day of his death—would at once show the firm affection in which the late Sriramulu was held by his colleagues.

In the passing of Sriramulu the Branch has lost one of its pace-setters, and India's great citizen.

GUIDED MISSILE

K. SRINIVASAN

Many a wonder walks the earth
Wondrous none is as a man
Man the cunning souled indignant forming
Yokes the tireless mountain ball with his
devices masterful
Subtle inventions past believing
Now unto evil bring him now unto good

Sophocles.

Through various stages, man improved transport from that of bullock-cart, stage-coach, etc., and devised steam engine, steamer, aeroplane and other means of communication. Now he wants to use the Guided Missiles for communication as well as an instrument of war for bombing enemy countries.

What is a guided missile? It is a robot device that can be directed to a target by commands originating from outside the weapon or by instruments built into it. To be truly guided the craft must be capable of changing its course to take account of unpredictable factors or evasive movement of the target.

By common usage the term guided missile means a robot craft that flies through the air or space. Actually, no limit should be placed upon the element through which a guided missile moves. It may move in the atmosphere, into space beyond the atmosphere, on land, on or under the surface of the sea, or, theoretically, through the earth. Concerning sub-earth travel, it is an understatement to say that there are some technical difficulties to be overcome before the "terra-jet" becomes practicable, although it has been mentioned by more than one propulsion engineer.

However, in speaking of guided missiles, one usually means the aerial version.

VARIOUS KINDS OF GUIDED MISSILES:

A guided missile is classified by type according to the location of the target and the location of the launcher. For example, a controllable bomb launched from an aircraft and destined for a ground or naval target is known as an air-to-surface missile. Similarly, other missiles are designated as surface-to-air, surface-to-surface and air-to-air missiles. These names are abbreviated ASM, SAM, SSM and AAM respectively.

Control devices and propulsion systems used in guided missiles are found in two other types of robot craft as well. The first is an early cousin of the guided missile—the present missile that can only maintain a predetermined direction, position, or attitude with respect to a fixed reference. The conventional naval torpedo and the German V-1 and V-2 missiles are examples. The second is the remote-controlled pilotless vehicle which is not built for the purpose of attacking a target. Drone aircraft used for reconnaissance and in anti-aircraft target practice and space ships of the future, are examples of this type.

This does not mean that guns will immediately become obsolete. Targets within effective range probably will be best attacked by guns for some time to come. Against low-level, close-in attacks, an accurate, rapid-firing, radar-tracking gun is highly effective. It is true, however, that the engagement range of fixed-trajectory weapons (guns and rockets)

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will decrease. The problem is best discussed in terms of time of flight to the target. Any unguided projectile with a time of flight greater than a few seconds is not effective because the target can manoeuvre away from the predicted point of interception. In a strategic air defence surface-to-air missiles will take over the gun portion of air defence entirely. With adequate early warning the necessity for sudden close engagement should be obviated, even if the plane is flying at low altitude.

It may well be argued that we need guided missiles, but what are the problems involved in using them? For one thing, guided-missile units will require considerable logistic support. A rocket-type surface-to-surface missile ready to fire may weigh up to ten times as much as its own warhead. This means that for every ton of high explosive delivered to the enemy as much as 10 tons of material must be transported to the launching site. In the 100-mile-range category the firing of many guided missiles, in terms of tonnage, will be like firing large volumes of medium artillery, the gun itself being launched with each round. Yet battlefield supply may be simplified, because the missile can be brought up in light, separate loads, assembled, and fired from rear areas. But because of the fragility of missile components, the difficulty and hazards involved in storage and transportation of fuels, and the complexity of much equipment, guided-missiles logistics will never be easy.

Ballistic missiles fly either by celestial guidance, using the stars, or inertial guidance, following a pre-set

course with the missile correcting its own deviations. On nearing its target, terminal guidance may help it to home on, for example, the heat emitted by a city or a factory.

Fuels: Ramjets use kerosene. Solid fuelled rockets burn cordite.

Surface-to-Air missiles are designed to bring down enemy aircraft, are gracefully tapered objects, 10 to 15 ft. long and 1 ft. or less in diameter. They are launched from a kind of gunmount. Air-to-air missiles (fired by aircraft against other aircraft) need not be as big as other missiles. They need carry less fuel because they do less climbing. Surface-to-air and air-to-air missiles may well spell the doom of conventional bombing tactics. Even when they rise all the way from the ground, they will reach the bombers' altitude in something like one minute. Air-to-ground missiles when fired, will shoot ahead and vanish with blinding speed. Their accuracy need not be "pinpoint" for they can be made big enough to strike with atom bombs. Surface-to-surface missiles are the biggest. They will range from modest "artillery" rockets to vast intercontinental monsters (still in development).

IMPLICATIONS:

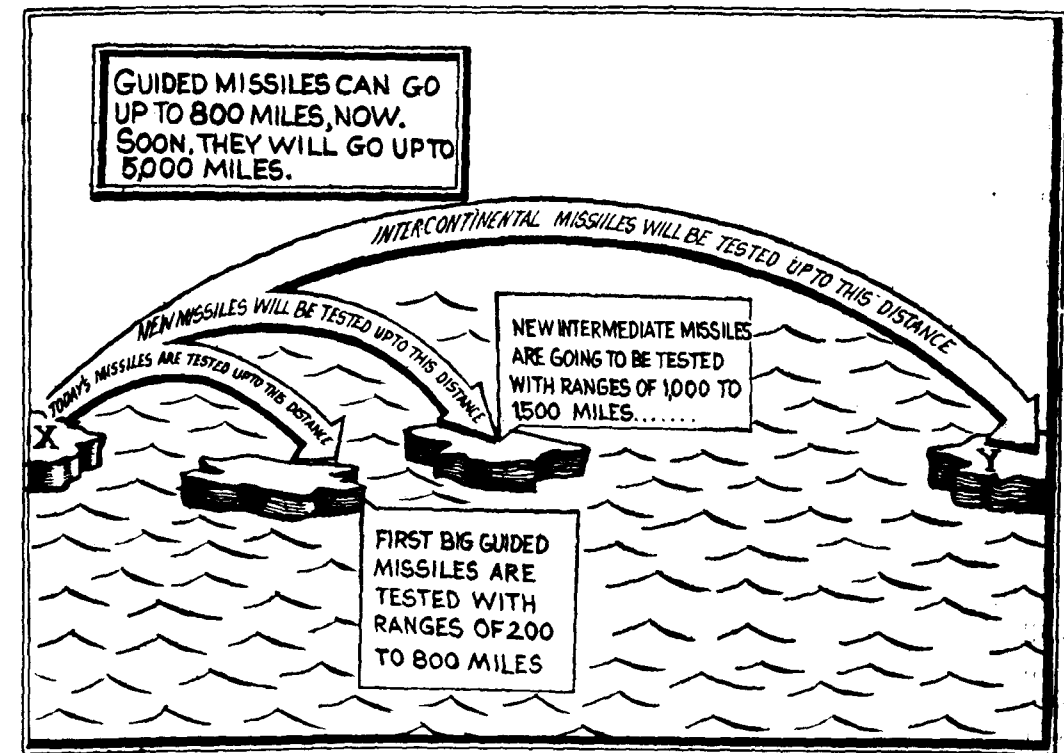
The implications of the combat employment of guided missiles are profound and must be studied by all military leaders. Commanders of small units will find that, because of guided missiles, leadership and personal skill are more important than ever.

It is argued in order to protect oneself against consequences of attack

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GUIDED MISSILE

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by guided missile, it is necessary to know how to use the guided missile.

"Deceit not to practice but to avoid deceit thou shall surely learn"

Shakespeare

No matter where the soldier, sailor, or airman is working, or what he is doing, his introduction to guided missiles is inevitable. He may serve in a unit or on a ship that has guided missiles as its primary weapon, or that uses them in addition to other armament. Even if his particular unit never has direct contact with these robot devices, its activities will be affected by them. The combat employment of these new weapons will force new tactics, techniques, logistic plans, and personnel problems on all services.

MANHOURS TO BUILD MISSILES:

Production cost must also be taken into consideration. It required about 900 man-hours of German labour to produce a V-1 missile and 4,000 man-hours to build a V-2 rocket. This is an impressive figure for a single round of ammunition, but not an impossible one. Moreover, while the cost per round may be high, the total expense of destroying a particular target may be less with guided missiles than with any other weapon because of the increased accuracy and lethality of guided missiles.

RESEARCH AND DEVELOPMENT

PROBLEMS:

The practical problems of research and development, field testing, production, transportation and storage training, and reliability of operation all

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add to the cost. A guided missile may have from dozens to hundreds of components in series. The failure of any one means a lost missile. Therefore extremely high standards of reliability for each component are essential, and high standards mean high costs.

Guided missiles are born of utter necessity. Therefore, in spite of all problems, they will be developed. They are adaptable to all types of combat and to all forms of military operations. Their uses are limited only by the knowledge and skill of the technician and by the imagination of the tactician. They will be employed widely in the deadly game of war.

The newest guided missile, the Falcon, described as the "only air-to-air missile with a 'brain' of its own" has been released in U.S.A. This six-foot-long, 100-pound missile was designed to knock down enemy bombers carrying nuclear bombs before they reached the target. Falcons could be launched from jet fighters and once the target has been chosen the missile's electronic brain could control the course.

The supersonic device has a range of three to five miles and is launched automatically from the fighter. If the enemy bomber tries to manoeuvre out of the way, the missile will change its course and follow it.

PRESS-BUTTON WARFARE :

When this futuristic weapon appears on the scene of combat, "push-button" warfare may have arrived. With the advent of the supersonic intercontinental missile, what choice is there but to devise a

way to stop it? The target will be a high-altitude supersonic missile, flying either in level flight or in a high-angle V-2 rocket type of trajectory. Probably it will not be capable of evasive action to avoid interception, but its speed and altitude will make it extremely difficult to locate and destroy.

Tremendous sums of money are being poured into a single phase of national defence in U.S.A. First, because the development of guided missiles is absolutely necessary. Secondly, because of their inherent complexity and radical departure from existing military equipment, their development costs come high. The development time for the U.S. Navy 'Bat' missile, for example, was estimated to be 100 man-years.

U.S., seriously concerned, is stepping up pressure advancing its deadline for a 5,000 mile weapon. Russia, well along in medium missiles, is dropping hints about "intercontinentals." It is said Soviets now give this weapon top priority.

The goal: a 100-foot missile, able to cross the Atlantic, at three times the speed of a rifle bullet, too fast to be intercepted. Flash across the Atlantic in 30 minutes, fly from continental U.S. to targets far in Russia in 40 to 60 minutes. Deliver a full-size H-Bomb from one continent to another at a "ground speed" three times that of a rifle bullet. Soar 600 miles into the stratosphere, then descend on a target thousands of miles away too fast for any known means of interception to stop it.

To try out the U.S. supermissile, when completed, a testing range

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GUIDED MISSILE

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stretching, 5,500 miles over water from Florida to the Ascension Island area, is being got ready for use by late 1957.

U. S. as a result of growing concern, is stepping up its programme for big missiles to something very near a "crash" basis. Top emphasis is being placed on the Atlas, a gigantic version of the German V-2 weapon.

Cost to tax-payers of the stepped-up missiles race promises to increase with the complexity of the nation's basic weapons. Right now, the U.S. is spending on missiles, directly and indirectly, at the rate of a billion dollars a year. Much of this still is for research. Most of the rest is for development and for training missiles. The big production costs still lie ahead.

While this supermissile is to get the big emphasis, it will be backstopped by two other long-range missiles the Snark and the Navaho. Both are propelled and are in the 'Pilotless bomber' category. They are relatively slow—each will take three or four hours to cross the Atlantic. But they promise greater accuracy. One, the Snark, already is in 'limited production.' The big drawback. They can, in theory, be intercepted by fast anti-aircraft missiles.

The whole programme of intercontinental and other missiles must be gone into by non-partisan Governments. Height does not extinguish the rights of nations, nor alter, except

for the worse, the physical consequences of a few hundred tons of heavy metal with poisons to explode coming down upon them now and then according to the mathematical law of chances.

With reference to the information given in the Washington statement about the Missile Atlas, Sri C. Rajagopalachari commented: "The rest of the world over which these missiles will move ballistically may also be reasonably alarmed by the prospect."

When a peaceful citizen reflects on the destructive effects of inventions such as Guided Missiles, he would rather prefer the ideal as embodied in the lines of Tennyson "though the giant ages heave the hill, break the shore and ever more what know we greater than the soul." It is necessary to use all inventions for peaceful purposes lest perverted uses of modern weapons bring about another world war. If all destructive inventions are put to peaceful uses, humanity will benefit and peace on earth and goodwill towards man can be ensured.

ACKNOWLEDGMENT :

March 1955 'Science News Letter', U. S. News and 'World Report', January 20, 1956, contain instructive technical description and data used in this article. The journals were taken from the United States Information Service Library, Mount Road, Madras.



TICKETLESS TRAVEL AND BEGGAR NUISANCE

P. R. MUTHUKRISHNAN

Production Dept. Southern Railway, Perambur

INDIA is a big and vast country connected by a network of Railways extending over thirty-four thousand miles. The Railways were managed by the various companies with British Investors for over a century and almost all the Railways had been taken over by the State prior to the transference of Power from Britain to Free India on the 15th August, 1947. The Railways are the biggest state-managed service in the whole of India and the efficient running of the Railways inspires confidence in the policy of the present Congress Government to reorganise the present Society on Socialistic Pattern without violence and bloodshed. The Railways have made remarkable strides in progress in all directions in the last one decade and particularly, III Class has been made very comfortable. Steps are being taken to eradicate the rampant evil of corruption in the Railways in particular and ere-long, we are sure to have an ideal Railway Administration with efficient Railway services as the greatest boon of this era. New lines are sure to be opened in the Second Five-Year Plan and suburban Electric Railways will connect mofussil centres within a radius of 100 miles with the various metropolitan towns in the States. New tracts are sure to be opened and with the opening of various factories and projects at the various centres, an organised and efficient Goods Service of the Railways is bound to loom large in the public eye in the immediate future. Railways are having

their own presses all over and the Railway Workshops will hum with work all over the country providing employment for millions of our countrymen. The income from the Railways is bound to swell into several hundreds of crores provided the Railway audit is very vigilant with the administration. Indeed the Railway Minister at the Centre is an important figure in the Central Cabinet. There are two dangers however, to the income side of the Railways which should be guarded against. One is on the side of the Administration and the other is on the part of the general travelling public and unless both co-operate, the leakage of revenue by Ticketless Travel will eat into the very vital of the revenue side. What are the main reasons for the ticketless travel by the Travelling Public has to be gone into and remedial measures have to be devised to check the leakage of revenue under this item. Let us examine the problem dispassionately.

TICKETLESS TRAVEL ON THE RAILWAYS.

India is a very poor country with masses steeped in poverty owing to foreign rule for over a century. The economic situation of the country is still very bad and it may take a quarter of a century for the people at large to become very sound on the economic front provided there is continuity of Government with settled policies. India is a land of distances and with masses of people on the move to eke

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TICKETLESS TRAVEL

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out their livelihood, the ticketless travel becomes a very common feature. Beggars in India are so numerous in number that the tackling of the beggar problem by the State becomes a very difficult one, indeed. Beggars in the guise of pilgrims constitute a large proportion of ticketless travellers. Begging with some persons has become a noble profession and with saffron clothes, that profession has become both respectable and coveted too. The State will have to tackle this problem and should end this disgrace to society quickly and effectively. If this is done, one aspect of ticketless travel will perforce be solved.

Poor people who have no crust of bread to eat cannot be expected to pay for their railway travel. Self-respect in this country, even for poor villagers is a National trait and unless a man or woman is very poor, he or she will not travel without tickets on the railways. Travel without tickets, as an adventure on the part of students and unemployed youths should also be tackled tactfully and carefully. In respect of the poorer section of society who have to travel by rail for *bona fide* purposes, some measures will have to be devised to cater to their needs until the standard of living of the masses is raised. This happy day may have to be looked forward to very many years hence. The travelling public should not show false sympathies to ticketless travellers but should co-operate with the Railway Authorities in enforcing the law on such erring passengers. Some such wholesome measure devised to minimise ticketless travel will go a long way to check leakage of revenues under 'Ticketless Travel'.

The Railway Staff should be encouraged to express freely their suggestions to counter the ticketless travel on railways, which is having a disastrous effect on the Railway Revenue at present. The various Committees such as the III Class Passengers' Association, the Goods Traffic Association, the Chambers of Commerce which attend to the needs of the business public and the Railway Trade Unions should all co-operate in ending the social evil of ticketless travel on railways.

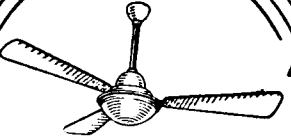


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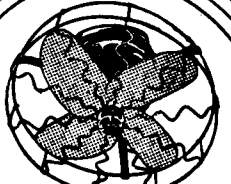


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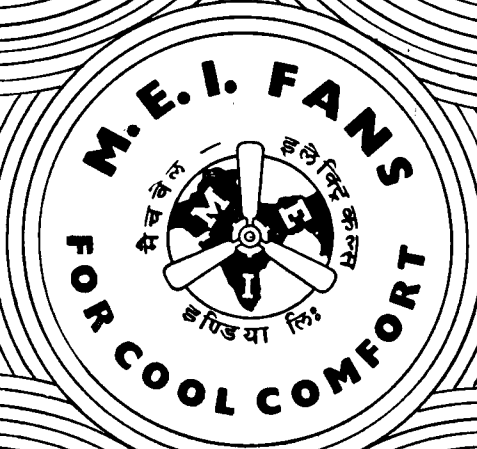
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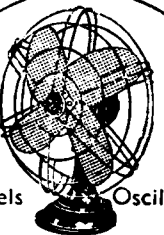
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EXHIBITION

(Contributed)

AN exhibition is an organised display of works of Industry, Science and Art usually international in range of section and appeal. Market, Fair, Mart, Exhibition are terms used almost interchangeably. A Fair is often a special Market. A Mart has been defined as a greater species of Fair. An Exhibition is any general and public display and in particular public show of goods for the promotion of trade. Generally an exhibition or exposition is assumed to reflect human progress to be open to every branch of human effort and to have an educative importance. A Fair is to assemble raw and manufactured articles for brief display and to be of commercial importance.

SHORT PERIOD TRADE SHOW:

Trade Fair is long period show accompanied by bands, amusement parks, etc. Unquestionably it is of immediate gain to the city in which it is held. Vast numbers of people attend from all over the world to see them. But the cost of participation by industrialists of the countries is considerable; employment of staff, immobilisation of stock, etc., entail expense. Industries depending for prosperity on fulfilling the daily domestic needs of the bulk of the population, are generally popular. Food, Clothes, Sport trades and Musical instruments fall in this category.

THE LEIPZIG FAIR:

The Leipzig Fair, for almost 800 years a great centre of European commerce, today continues twice yearly to make a unique contribution to the development of world trade. The international Spring Fair, with

its large technical section, and the Autumn Sample Fair, act as links between the major markets of the world; at them, new contacts are made, whilst the business turnover is now of unprecedented dimensions. Leipzig has, in fact, been described as a barometer of economic relations; it certainly provides a demonstration of the possibilities of trade and commercial development under conditions of peaceful co-existence. To exhibit your goods at Leipzig Fair means to show them to the world; to visit Leipzig Fair is to visit the markets and showrooms of many countries, assembled in one city.

Leipzig, gaily decorated at Fair time, is a historic and cultural centre with traditions reaching far back into the dawn of European history. It links the past and present. There are ancient buildings to tell something of her past, and modern ones to illustrate her present and give a glimpse of her future, and to fill in the details and clothe the story, there are fine museums and famous monuments.

RAILWAY CENTENARY EXHIBITION, 1953:

The site of the Exhibition was itself of some interest. It was an open area approached by road and rail and had as a fitting background the passing of the main line trains on the Delhi-Mathura route. History hovers in the surroundings, in the many monuments that are visible from the site. The age of these relics, recalling the far and the near past, emphasized the modernity and vitality of the Exhibition, the strength and freshness of a free people.

The general lay-out and architecture of the Exhibition followed a certain pattern and had been worked out to portray the central theme. The exhibition was not a mere museum, nor was it a trade show or fair. The dominant note in the Railway as well as in the private stands was that of the progressive improvement on Indian Railways and in allied fields and a glimpse of what could be achieved with the advent of freedom and popular initiative.

The first and largest pavilion was that occupied by the Ministry of Railways, the six Regrouped Railways, and the Locomotive factory at Chittaranjan. Next in sequence came two pavilions housing overseas manufacturers of railway rolling-stock and equipment who had contributed to the growth of Indian Railways in the past and who exhibited some of the latest developments on foreign railway systems.

Different kinds of locomotives illustrative of the types of traction in use on Indian Railways were on view on another line.

The exhibits of many private exhibitors were no less interesting, some of them of great educative value. What the private sector could contribute to the Railways was symbolised by the Telco metre gauge engine and the specialised wagons of Burn's and Jessop's.

About a lakh of people visited it every week on an average since its opening and the public interest did not at any time show signs of flagging.

INDUSTRIAL EXHIBITIONS—THE SHOW-WINDOW OF THE NATION :

Industrial Fairs provide nations and institutions with opportunities not only

to show their goods to potential buyers, but also to inform the large masses of people who come to see the show. An industrial exhibition demands the use of many types of talent. Co-ordinating the efforts of the artist, the architect, the public relations man, the builder and the technician, calls for both experience and initiative.

For nearly two months, the vast grounds of the Indian Industries Fair were covered by a mass of seating, jostling humanity. Gaily-dressed peasants, bright-eyed as children, content to be pushed about; restless students from all over the country, eagerly collecting every bit of literature distributed at the pavilions; businessmen from all parts of India and from abroad—they were all there. For the first time, a large cross-section of the Indian people was able to see for themselves the progress achieved by their country.

INDIAN INDUSTRIES FAIR :

With 21 foreign nations participating, the Indian Industries Fair was indisputably the biggest international fair ever held in Asia. The importance of a fair of such magnitude in the field of advertising could not be ignored. But to exploit this comparatively new medium called for an entirely new technique and the resources available in most agencies were inadequate. Lack of free-lance architectural designers and model makers also added to our problems.

The exhibits displayed in the Federation of British Iron and Steel Stand in this pavilion were rather attractive and drew a large number of visitors.

Despite lack of trained artisans and building material and inadequate

transport facilities, the success of Indian pavilions deserves special mention. It will be unkind to compare them with national pavilions of foreign countries who had not only the experience behind them but also an almost unlimited budget. Architectural design and interior arrangements of exhibits definitely reflected improved standards of workmanship. It was encouraging to see that many pavilions in Small Industries Section had collected a number of craftsmen from all over the country and exhibited their handicrafts. Exhibitions of bangle making, carpet weaving, clay modelling and ivory carving were highly admired by visitors. Such demonstrations to some extent fulfilled the want of working exhibits in this Section.

The Indian Industries Fair was a Fair equal in size and scope to the largest International expositions.

ORGANISATION :

The water, electric and telephone lines should be laid as soon as the plots had been demarcated, followed by the laying of good roads. The merit of this plan, is that construction work and the unloading of exhibits would have been stepped up, and the sorry spectacle of giant cranes and hoists immobilised by elemental mud would have been avoided.

First and foremost, a decision to participate in the Fair should be taken as early as possible.

The average visitor rushes from exhibit to exhibit and nothing will obviously register with him unless the story you tell him is simple, concise and of course well presented.

A precise list of exhibits with dimensions, weight colour, etc., is

most helpful because the designer can adequately design an exhibit only when he knows what is to go inside it. As in the case of a press advertisement, a lay-out cannot be drawn unless the visualiser is given the headline, the logotype, the number of works of copy, and in some cases the specific illustration required.

Transport of goods to the Fair site on schedule is a very important matter, and the appointment of full-time liaison Officers would be of great assistance.

Another necessary provision is the fixing of separate hours for business visitors and the general public. This was done at the I.I.F. only in the last weeks. In this context it may be useful to bear in mind that the vast majority who visit fairs and exhibitions in our country are of the "tamasha-deknawalla" type and for some reason or other they have a tremendous fascination for printed material.

For such distribute cheap giveaway material. Experience has shown that a humorous treat or a simple story on the organisation are very acceptable items.

The Indian Industries Fair has materially helped to raise standards of display and exhibition work, and it has indeed been an unique experience to all of us—participants and public alike.

UNIVERSITY CENTENARY EXHIBITION AT GUINDY :

University Centenary Exhibition from 27th January 1957 to 17th February 1957 at Guindy Engineering College Grounds was, undoubtedly, one of the largest exhibitions ever seen in Madras. It had all the usual ingredients of an exhibition—innumerable stalls proffering an amazing

variety of goods, vivid depictions of the activities of the Government, entertainments, amusements and side-shows; but it was something more. It was an attempt perhaps for the first time, to combine the academic and the actual, the theoretical and the practical, the class room and the workshop, to present a kaleidoscopic view of the progress of knowledge and how knowledge and experience act and react.

The all-round excellence of the Exhibition was so compelling that it is almost impossible to name the highlights. It will be an invidious task to single out any section or exhibit for special mention. The exhibits of Government Departments and of private firms and industries brought into bold relief the progress achieved by the country in the economic and industrial sphere after independence.

An idea of the new vestibuled air-conditioned de-luxe train on the Indian Railways could be had by visiting the Railway stall. Brightly illuminated and painted in olive green, the Railway stall was applauded as one of the most pleasing sights at the Exhibition.

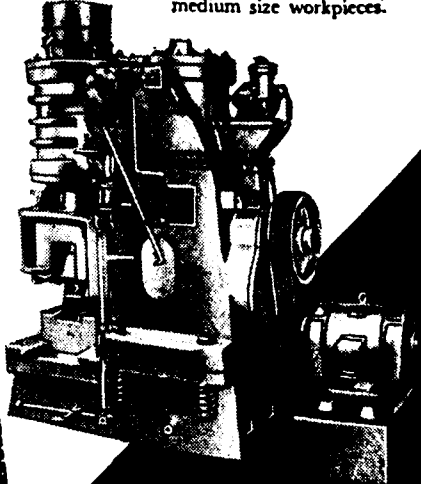
The irresistible attraction at the Exhibition was the television programme between 4 p.m. and 8 p.m. every day. Professional and amateur artists gave performances every day over the television. Three auditoriums in the A.C. College of Technology were equipped with T. V. receiver-sets.

Another interesting item was the radio-controlled motor car designed by Mr. Murugamanickam, a Reader in the A. C. College. It is a sight to watch the 'Driverless Car' obeying the dictates of the 'invisible hand' and spinning and zig-zagging to the thrill of the joy-riders.

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RAILWAY SIGNALLING PRACTICES (VI)

T. S. PARTHASARATHY

Deputy Chief Operating Supdt. (Coaching)

IN the light of the general principles for railway signalling and interlocking so far enumerated in this series of articles, I shall now describe the existing signalling arrangements in other countries, both in the East as well as in the West, including the United States of America.

In the eastern countries in which the early railways were built by the British, fundamentally the same train-working methods and the same signalling and interlocking systems are used, e.g., India, Burma, Ceylon, Pakistan and Malaya. Large junctions and engine-changing stations have cabin interlocking. Three aspect upper-quadrant signalling, power colour-light signalling, electrical interlocking and illuminated diagrams indicating the track circuits and automatic signalling are some of the advanced methods adopted in these countries

wherever they are justified by traffic conditions.

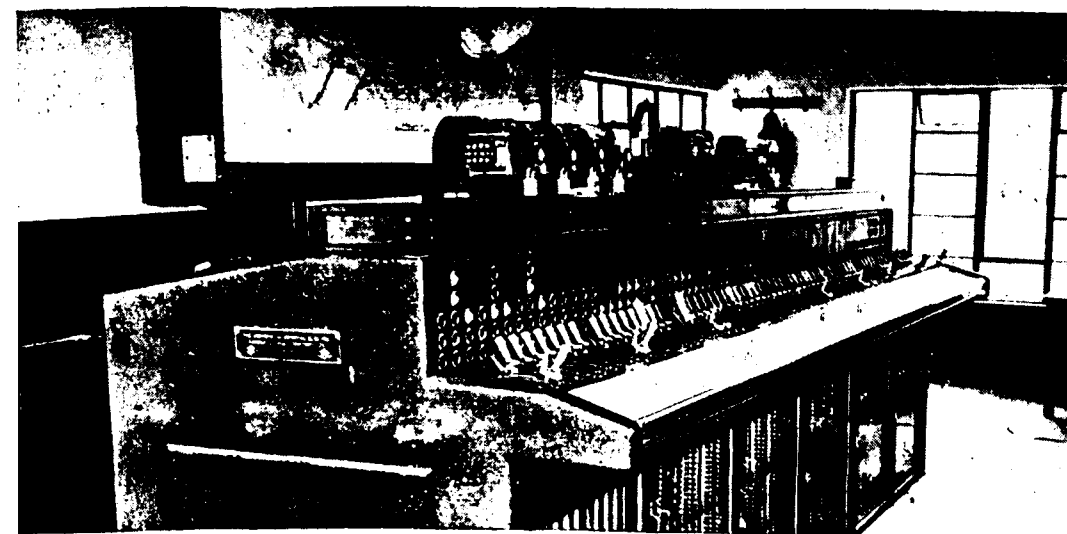
CHINA:

On lines with high speeds and dense traffic, the Automatic Block System is used. The types of signals are three-position colour-light type for high signals and position-light or colour-light for dwarf signals. Two kinds of electric interlocking plants have been installed, first class for more important stations or junctions and second class for smaller stations.

Home signals are invariably interlocked with points. Automatic signals are installed at the boundary of block sections and the first automatic signal next to the Home Signal is controlled in its indication by the Home Signal.

On one of the double line sections in North China, the Lock and Block system is used and electrically-connected

All electric blocking frame



instruments are used. Approach or Distant (Warner) signals have been provided on the double line and these are fully interlocked with the Home Signals to display the same indication while the Home Signals are interlocked with the points.

Larger stations are equipped with first class electric interlocking and electro-mechanical interlocking plants. In major small stations, second class electric types are used with two-position colour-light type for high signals and position-light type for dwarf signals. Track circuits are installed within the station to form a semi-electric type. On the single line, where traffic is medium, about 70 per cent of stations are equipped with Warner, Home and Starter Signals ("A" class working), mostly of the two-position mechanical type with only a few two-position colour-light signals. The interlocking is of the detector type with the exception of one section where modern electro-pneumatic relay interlocking has been provided and another section which uses first class mechanical interlocking plants of the Saxby and Farmer type.

In Taiwan (formerly known as Formosa), where the gauge is 3'—6" and the total length of railways is 590 miles, signal installations are satisfactory but the safety factor is not as high as on the main land. The types of interlocking include a few electro-mechanical plants, Saxby and Farmer type and a majority of the Japanese detector type. Home and Warner signals are interlocked to display the same indication. Safety installations are not adequate on the busy sections and the Taiwan Railways are planning to install automatic block signals on these sections.

INDONESIA :

It is well-known that the countries which now form this modern nation were under Dutch influence for a long time and the signalling arrangements described below may be found peculiar by quite a few. All signals are of the semaphore type and there are three kinds of signals :

(1) Home signals consisting of two disc-ended arms at one pole. Both arms horizontal means "stop." Upper arm horizontal and lower arm upward means "proceed at limited speed." Lower arm horizontal and upper arm upward means "proceed at full speed."

(2) Starting and entering signals consisting of one disc-ended arm indicating the route.

(3) Warner signals consisting of a square-ended arm. The arm in the upper quadrant position means "proceed at full speed," indicating that the following signal will also show "proceed." The arm in the lower quadrant position means "proceed at limited speed" indicating that the next signal will show "stop."

PAKISTAN :

The writer, who had once visited the areas now called "Pakistan" even before the partition, had an opportunity of revisiting them a couple of years ago and found that fundamentally the same signalling systems provided on the Indian railways were still being followed, the only new development being the introduction of colour-light signalling on single line sections. In this system, the Warner and Home Signals have three positions and the Starters, two. For reception of trains on the Loop, the Warner and Home both show yellow light and for reception on the Main, the Warner

shows green and the Home shows yellow. For through running, all lights on the Main line will be green. All lights are normally extinguished but light up when the train closes a track circuit about 2,000 feet in advance of the Warner, thus ensuring great savings in battery power.

PHILIPPINES :

Two principal railway companies operate in the Philippines, viz., the Manila Railroad Company on the island of Luzon and the Philippine Railway Company on two islands of the Visayan group, namely, Panay and Cebu. The railway lines are mostly single line track and the gauge is broader than our Metre Gauge, the width being 1.067 metres. The more important sections at and near Manila have double lines and one or more signal cabins from which signals and interlocked points are operated by mechanical lever frames of the old Saxby and Farmer type. The Home Signals (there are no Warners) which control the movement of trains are of the lower quadrant, square-ended, two-aspect, semaphore type. Red and green lights are used for night indications.

The rest of the lines are single line sections and trains are run from station to station without the use of semaphore signals. In their stead, route indication at every main line point is given by means of a "point target" attached to the top of the vertical pointstand spindle (this corresponds to our point indicator). The points are hand-operated and the point target displays a round white disc to indicate that the points have been set for the Main and a red arrow if they are set for the Loop. At night, a two colour oil-lamp, also attached to the spindle, displays

a green light for the Main and a red for the Loop.

THAILAND AND VIET NAM :

In Thailand, formerly known as Siam, a small percentage of stations have full mechanical interlocking and semaphore signals. The rest have hand-operated points and use "station limit" boards. Trains must stop at station limit boards when a "stop" signal is shown by flag or lamp at the station.

On the Viet Nam State Railways, the manual signals in use are the following :

(1) Main Signals : Home Signal (red and white square) Warners (Yellow semaphore) Stop signal or sidings (Violet square).

(2) Temporary and moveable signals and speed indicators. The colours used are :

Red	=Absolute Stop.
Green	=Proceed.
Yellow Orange	=Caution.
Violet	=Stop (for sidings).

IN THE WESTERN COUNTRIES :

The signalling appliances described above may appear to be somewhat elementary or even primitive when compared to the equipment in European countries, in the States or even in Japan but consideration has to be given to the conditions prevailing in the above countries. Generally speaking the speeds of goods trains in the eastern countries (excepting Japan) are not high. The existing permanent way standards militate against any appreciable increase in the speeds of trains. The length of crossing loops does not permit the running of long trains as is being done in the United States. Use of heavier engines would not solve the



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problem either unless the loops are lengthened. As heavy density traffic did not exist in many countries of the East till recently, there was little justification for increased mechanization of operation. Even now, with heavy density conditions obtaining on several sections of the Indian Railways, there would not be many cases where the latest types of installations—such as all-relay control panels, Automatic Block and Centralized Traffic Control—can be justified. Furthermore, the electric power is not sufficiently developed to permit the extensive use of power-operated signalling appliances.

I shall now proceed to describe the advanced signalling appliances provided in a few western countries.

SWITZERLAND :

Automatic Block signalling is in use on the double line track between Goeschenen and Airolo stations, with an intermediate station midway between them in the Gotthard Tunnel. The total length of the line between Goeschenen and Airolo is 10 miles. Normally all signals of the intermediate block station at Gotthard operate automatically. This station is provided with two cross-overs and four points as well as signals and interlocking apparatus and is remote-controlled from Goeschenen station. The tracks are insulated and track circuited. Single line working with automatic block by means of axle counters has also been provided for on this line. These and other arrangements provided enable the section to be worked either as double line or single line on either side of the intermediate station.

Generally at all stations on the double line and at some single line

stations, power control panels are provided. The important features of these electrical installations are :

(a) All points and signals are remote-controlled from the power frame located at the Station Master's Office and operated.

(b) All signals are of the multiple colour-light and position-light automatic type.

(c) All the lines at the station are fully track-circuited.

(d) A luminous diagram of track system with small lamps to indicate signals, points and track circuits is fixed to the power frame. Indication is provided to the despatching staff as to whether a block section is occupied or not.

(e) The points are track circuited to prevent their being thrown over under the vehicle.

Mechanical signalling on the Swiss Railways includes the provision of Distant, Home and Starting signals. Signals are either of the mechanical Upper quadrant semaphore or rotating disc type or colour-light type. Normal position of the signals is "ON". The Distant signal is not a stop signal but only a warning signal, indicating the position of the main signal ahead. The signal aspects are provided for "Speed" and not for "route", green for "proceed", green and yellow for "caution" and red for "stop". Section blocking is provided by interlocking each starting signal on the single line with the next block station, so that opposing movements may not be possible. Furthermore, on single as well as double track, the starting signals are provided with reversers which put back the signal to "ON" automatically after the train has entered the block section ahead and the

signal cannot be taken "OFF" again until the train has cleared the block section and has operated the track circuit inside the Home signal of the block section ahead putting it back to "ON" position. The distant signal is placed at the braking distance, varying from 2,000 to 2,500 feet from the Home signal which is generally placed at about 500 feet from the facing point.

Stations on the single line are equipped with mechanical signalling and interlocking of the double wire type, operated from one signal box from the centre of the station. Electro mechanical signalling is not in use on the Swiss Railways. Within station limits, level crossing gates, when closed, close the electric circuit to the signals for operating them but gates are not locked in any position.

ITALY:

The Bologna Central Passenger station is provided with power signalling and route relay interlocking worked by two cabins at each end of the station yard. There are 17 main tracks and a group of spur tracks for terminal services. This system comprises 149 trains routes, 995 shunt routes, 300 point mechanisms, 57 signal units, 165 dwarf signals and about 220 track circuits! An illuminated diagram is provided in each cabin. The route set up is indicated by white contiguous lines of light over the entire route and as soon as a train has passed the signal, the white sections referring to the various track circuits engaged by the train disappear gradually and in their place appear numbers lit up in red, referring to the track circuits still occupied; but these disappear as soon as the track circuits clear.

The signals used are of the colour-light (search-light) type and the aspects displayed are:

Red = Stop.

Yellow = Proceed with caution.

Green = Proceed at speed.

A steady "Yellow over Green" indication is given at the first stop signal and means low speed (20 m.p.h.) beyond next signal; while the same indication flashing means medium speed (40 m.p.h.) Calling-on signals, with two white lamps flashing side by side, provided below the Home signal on the same post, are employed for the purpose of admitting a train when Home signal is showing danger.

Mechanical signalling is of the two-aspect lower quadrant type based on route principles. Points are generally rod-worked and signals operated by single wire. On certain sections of the single line where traffic is light and speed is low, the stations are protected by one signal only in each direction placed at braking distance (1,000 feet) from the outermost points.

On electrified sections of the single line, interlocking plants are of the electro-mechanical type. Multiple aspect signalling with search-light signals and manual block instruments are provided. The Home signal is placed 125 feet from the outermost facing points and the distance between the Home and the Warner is generally 1,500 feet. Operation of signals governing entry to and exit from a block section is recorded by means of a clock register. This arrangement is unique inasmuch as it dispenses with the necessity of maintaining train registers for movement of trains in the block section.

(To be continued.)

TETE-A-TETE

V. S. SHANTHALAKSHMI

I was present at the 'At Home' given to Mrs. Departing and had the honour of meeting Mrs. Knowall there. Well, she was a very erudite lady as her name suggests, and her wide travelling had added considerably to her treasure of knowledge. The range of her remarks was extraordinary, and might include anything in the course of a single dinner-party from, say, the way they make earth-worm soup in China to the defects of the linguistic division of India. Her talk on the whole was very overwhelming,—I must confess I was carried off my feet. Of course she discoursed, she lectured, she harangued. But for conversation strictly so called she had no turn. Well, that was her only shortcoming: if any topic was introduced by someone else which did not appeal to her, she did not attempt to conceal her indifference; it fell flat and she made no effort to return the ball. Of give and take, of meeting you half way, of paying you back in your own conversational coin, she had little notion.

Yes, conversation is not just prattling away for the sake of saying something or just to while away one's time. It is an art and not an easy one at that. You must have free and liberal exchange of ideas and opinions and of course mutual understanding and also try to respect the other's point of view. It is really shocking to note people, even in refined and cultured societies, indulging in conversational bad manners. Quite true, no one needs warning against such elementary misdemeanours as actual rudeness, undue assertiveness, coarse-

ness of language and so on. But errors like bad listening, monopolising, egotism, etc., though less glaring are even more prevalent.

Bad listening and monopolising go hand in hand, the bad listener being generally one who listens badly because he wants to talk himself. They are intolerable afflictions and so are egotists. Amazing indeed is the obliviousness which can be displayed in this way by even the most intelligent people. Whatever the topic started, the conversation always comes back to herself, and the 'I's, stick out of her discourse as someone once put it, 'like the telegraph poles on a country road.'

This leads us on to the kingdom of bores. The bore, the enthusiast she is, simply cannot believe that anyone can be indifferent to a subject which is so fascinating to herself, and so with the best of intentions in the world—with genuine desire to bring others to her way of thinking and to induce them to share her joys—she lets herself go, in Malvolio's words 'without mitigation or remorse'. All the same, it is most annoying and should be guarded against more strenuously.

But some people are just the contrast to bores. They adopt the habit of silence during conversation from the foolish notion that an impassive demeanour is a sign of strength of character and therefore a thing to be cultivated. They do not pull their weight by contributing to the discussion, but keep their own counsel and 'hearing all contents herself with naught.' About those who keep their lips tightly compressed as if bolted from within simply because

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SOUTHERN RAILWAY

TENDER NOTICE

Tender No. S/235/1/GB4/F/1196

Sealed tenders are invited for the supply of 348.151 tons of Steel Class II Plates of sizes and will be received by Controller of Stores, Southern Railway, Ayanavaram P.O., Madras-23, before 3 P.M. on 18-7-1957 and will be opened by him at 3 P.M. on 19-7-1957.

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 17-7-1957.

Tender forms will not be issued after 3 P.M. on 15-7-1957.

P. N. TALATI,
Controller of Stores.

shyness or inarticulateness or sheer lack of ideas, of course there is nothing to be said. But those that remembering the tag 'Vir sapit qui panca loquitar'

'do a wilful stillness entertain, with purpose to be dressed in an opinion of wisdom, gravity, profound conceit'

are not a desirable group to be conversed with.

Another disagreeable habit among others is that of talking manifestly above the heads of the company in general, either for the purpose of display or with the "expressed object of embarrassing the less well-instructed". In any case it is certainly a fault to be avoided, for nothing is more comfortable or humiliating than to be made a party to a conversation of this kind and be placed in an awkward position of either confessing one's ignorance or dissembling painfully, in fear of being found out and exposed any moment. Therefore you should never be too superior. Temper the wind of your learning to the shorn lambs, and have consideration for the weaker brethren.

A conversational offence of quite another kind is that which is sometimes known as 'switching'—otherwise continually flitting from one subject to another with the volatility of a butterfly, which can be more fatiguing than anything. They are talkers with what may be called a jerky mind. They say bright things on all subjects but their zig-zags rack you to death. Really after a jolting half-an-hour with one of these jerky types, talking with even a dull friend affords great relief.

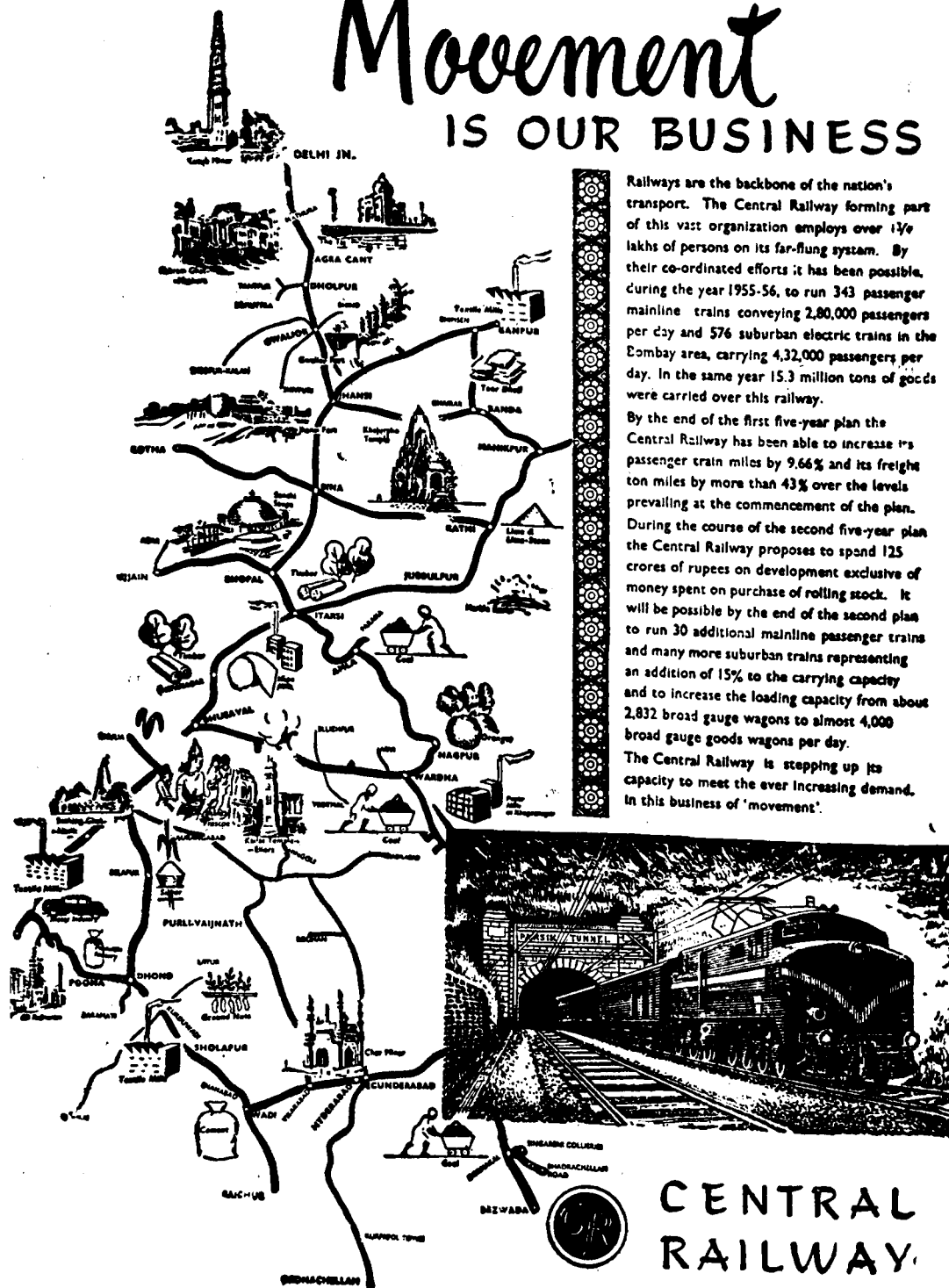
Talking 'shop' is another of those vexing manners. It is all right if all concerned are equally interested in the particular 'shop'. But in a company when only two persons of like occupation or interest try to monopolise the conversation with technical discussions and terminologies, then that is too bad indeed.

Some people have got the habit of constantly repeating the same expression or catch phrase such as 'you know', 'Don't you follow', 'Quite, quite', 'Exactly', 'what I mean is' and worst of all perhaps 'That's right' interjected constantly to signify agreement. A certain amount is unavoidable but when phrases of this kind is absolutely worked to death, as it is by some people it sounds extremely foolish and becomes very wearisome. Constantly repeating the name of the person to whom they are speaking like 'yes, Mrs. Gopal', 'No, Mrs. Gopal', and so on is not only quite unnecessary but unpleasantly humble and deprecating.

Trying to talk to a friend of yours in a language (which of course your friend knows but) which the rest of the company cannot understand is also quite an annoying conversational misdemeanour and at times even insulting.

Hence whenever engaged in a conversation try to avoid all these misdemeanours. Assume an easy manner in conversation which is natural and scorn airs. I am sure all these tips will help you become a good conversationalist. You know a good conversationalist is always a great success in society.

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**

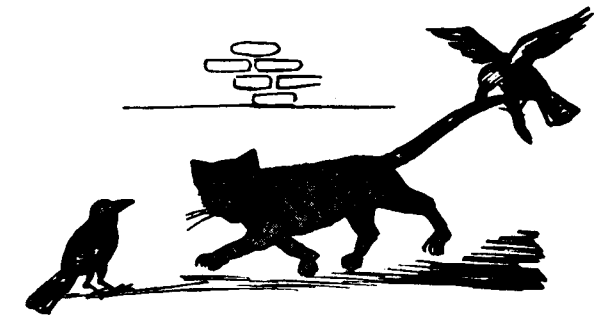
the fish darting about under the surface of the water will get frightened and start swimming towards the shore also, and the nearer they get to the shallow water near the shore, within the closing circle of pelicans, hundreds and hundreds of them get packed closer and closer. When the fish are so thick and keep bumping into each other, the pelicans plunge their big beaks into the water. With each movement of opening and shutting their beaks, a dozen or more little fish will get trapped in each beak, and so give the pelican a nice dinner.

If each pelican did fishing on his own, and far away from the next pelican, he would be lucky if he caught even one little fish each time he pushed his beak into the water, as fish move about in water almost like streaks of lightning. So, among the happy band of pelicans, there is nothing like getting together to do some joint fishing.

Now, let us look at a little scene of how birds help each other in tackling a common enemy. In this little act, we have Rusty, the Ginger Cat, and two black crows, whom we will call Pip and Pop. Rusty is a house-cat who thinks that part of his job is to kill a bird now and then, and especially the big birds like crows, who are expert thieves.

Pip and Pop do their flying around together, so whenever they fly into the compound looking for odd bits of food to steal, Rusty is always on the watch for them. But Pip and Pop know how to keep Rusty guessing, and harmless. Pip flies down to the grass. Rusty spots him, and creeps closer and closer getting ready for the final pounce. But Pop is perched on a wall near by, watching closely.

As soon as Rusty is about to swipe Pip with a paw, Pop swoops down, opens his strong, black beak, and gets a scissors' hold on Rusty's hairy



tail. Rusty lets rip a cat-yell of awful pain. At the same time, he whips round and makes a swipe at Pop. But Pop is too quick for him, and hops away, out of reach. Now, Pip goes into action. Rusty's tail is now within his reach and he too clips on the scissors' hold. Rusty yells blue murder again, and tries to smack Pip. Now, it's Pop's turn to give Rusty another beak-hold, and so the game goes on until Rusty's tail is so sore, that he calls off the battle and slinks into a corner to soothe his tail with his rasping tongue. So we see that Pip and Pop are wise birds, who act together when their common enemy the cat tries to attack any one of them.

Next, we take a look at Mr. and Mrs. Swallow, who had built themselves a snug little nest under a roof in a house. One day, while they were out flying, they returned to find another bird squatting in their lovely little nest home. This was Mrs. Sparrow who was too fat and lazy to build her own nest, so she just took over the ready-made swallow nest for her own home. When the Swallows flew in close to Mrs. Sparrow, she

would attack them with her sharp beak. But this was not the end of the story. The Swallows flew around to the other swallow families who had their nests close by, and soon they got together and had a 'swallow' meeting to decide on a plan to get Mrs. Sparrow out.

They soon hit on a good idea. Within a short time each swallow flew away and returned, each carrying a piece of wet mud in their beaks. They now flew straight to the nest occupied by Mrs. Sparrow, and put each piece of wet mud on the opening of the nest. Mrs. Sparrow soon found herself plugged and in darkness, for the swallows had sealed off the nest. Mrs. Sparrow found that her nest had turned into a tomb. And that was the end of Mrs. Sparrow.

Do animals sometimes share food with each other? Well, once an ape and a chimpanzee (of the monkey family), were kept in two cages side by side. When feeding time came, only the ape was given food, but poor little chimp got nothing. The big ape soon saw he was getting all the food, and little chimp was only licking his lips with longing. Ape felt sorry for chimp, so he kept some food aside and passed it through the bars of his cage to little chimp, as if to say, 'I can't bear to see you go hungry pal, so share my dinner.' Big ape was not going to see his brother monkey starve while he had some food.

So, even in the bird and animal world, there is quite a lot of kindness.

UNCLE TELLATALE.



THE SECOND FIVE-YEAR PLAN AND THE SOUTH-EASTERN RAILWAYS

The Keynote of the economic endeavour in the country since Independence has been the deliberate fostering of as rapid a development as possible. This objective has necessitated the formulation of concrete plans for economic and industrial growth in a co-ordinated and balanced manner and along lines which are intended to secure the quickest advance and which, at the same time, will pave the way for more speedy development in the future. The plans express, in physical terms, the earnest desire of the people to canalise the economic activity in the country in the direction which will be the most fruitful from the point of view of the maximum good to the maximum number. Unswervingly the goal followed has been the 'Socialistic pattern of Society'. The criterion has been ultimate social gain and not private profit. And this has been the guiding principle for evolving our plans. The benefits form an increase in the national income and employment must quickly reach the under-privileged classes of society and the concentration of income, wealth and economic power must be deliberately combated and reduced. In pursuit of this clearcut objective, both the First and Second Five-Year Plans came to be formulated by the Planning Commission in a truly democratic fashion in consultation with a large body of renowned economists and

scientists, experienced administrators and industrialists and the leading political and economic thinkers in the country. A balanced advance towards the economic freedom visualised can be secured in the shortest possible time only through a carefully prepared programme of co-ordinated development so that the resources available are utilised to the very best advantage.

The target round which all developments are planned is a higher standard of living brought about by increased production, which means demands on transport. The transport, therefore, has a vital role to play in the fulfilment of the Second Five-Year Plan. Transportation, being vital to the economic life of the community, the provision of adequate transport is imperative and urgent. The needs of the country are such that there should be an urgent expansion of transport capacity. In the pilgrimage to progress and plenty, Railways will have a very significant role to play.

The brochure under review sets out the Second Plan and its impact on the South-Eastern Railway, which is very interesting and informative. The various important works to be undertaken during the Second Five-Year Plan such as doubling of lines, construction of lines, improvements in signals, introduction of crossing stations, electrifications, construction of workshops and staff amenities, etc., have been explained with nice illustrations. Printed in art paper, the get-up of the brochure is also very nice.

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BACKGROUND TO BURMAH-SHELL

Publisher: *The Burmah-Shell Oil
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India Ltd.*

This is an interesting publication of the Burmah-Shell whose products touch the life of the people at all points; lighting their homes, moving their goods, carrying them on pleasure or business, driving and lubricating the machinery of industrial production, surfacing their roads, providing chemicals for crop protection and control of pests, and many other industrial and agricultural applications.

Any advance in the living standards of a people has always demanded increased consumption of raw materials, and in particular, energy in suitable forms. The bold and imagina-

tive Second Plan, and the promises embodied in long range planning emphasise this highly important point and it is certain that many of the targets would be unattainable without ready access to additional and rapidly rising supplies of suitable energy.

Oil is not the only source of energy in any country and certainly not necessarily the major one; many countries in fact extract the major proportion of their power requirements from the use of coal and hydro-electric power; but over the world the rate of growth of oil demand is markedly greater than that of any other source of energy.

The present demand for oil in India is modest in the aggregate and very thinly spread. The consumption per head of all products is only a little

over 3 gallons per year, and this is very far down a scale where the highly industrialised nations are over 500, and the world averages 70 gallons per head. For India the figure of 3 gallons includes all petroleum products. The consumption of the four most widely used products—Kerosene, Petrol, High Speed Diesel and Light Diesel Oils—worked out at about 2.25 gallons per head in 1955. Over the whole area of the country this approximates to only 1.8 gallons per square mile per day. In itself such a thinly dispersed demand is inevitably complex and expensive to supply and demands widespread storage and distributing facilities. The logical consequence of this fact is that the Oil Industry as a whole must be largely self-financing. This means that after provision has been made for replacement of outdated existing plant the money required to meet expanding demand can only be found by retaining in the business the major proportion of net earnings, and also that the size of these net earnings must be adequate to sustain the required growth. It is seen that for Burmah-Shell the cost of expanding facilities to meet rising demand has exceeded the total net earnings, requiring a large inflow of capital from the central pool of finance to meet the shortfall. This is at once a measure of the cost of providing and maintaining countrywide service and of our confidence in the future of this great country.

solutions to the country's problem embodied in the proposed perspective planning, make it prudent to expect that a strong rate of growth will be maintained. Close attention has therefore to be given to the long term problems of supply and distribution of oil. Burmah-Shell handles a full range of petroleum products from the lightest to the heaviest. Amongst the more important are the familiar Petrol for vehicles, Aviation Fuel for both piston-engined and jet aircraft, Kerosene for illumination, domestic heat and power uses, Diesel Fuels for stationary engines and automotive use, and Fuel Oil for under-boiler burning. These major products are supported by a comprehensive range of specialised products including various grades of Bitumen for road-making, automotive, industrial and marine lubricants; oil for jute batching; petroleum solvents, insecticides and chemicals for a great variety of agricultural and industrial purposes. The latest addition to the range is Liquid Gas for domestic and industrial uses.

The book under review, printed on excellent art paper is got up nicely containing a brief outline of the activities of the Burmah-Shell and some of the problems facing this major industry today, with facts and figures. The get-up of the cover page is peculiar and nice. The colourful graphs and photographs inside the brochure are well produced.

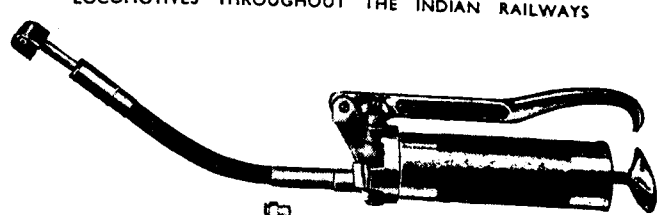
The targets and objectives of the Second Plan and the longer term

S. VEDANTAM.



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Senior Labour Welfare Inspector

THE Nilgiris known as the "Queen of the Hill Stations" in India was selected as the venue for the Fourth Children's Holiday Camp which was arranged between the 15th to 20th May 1957. As many as 66 boys and 10 girls from the various stations on Southern Railway participated in the Camp.

The main group of children together with guides, etc., left Madras Central on 15th May 1957 by the Cochin Express in a specially reserved carriage. Sri R. NAGARAJAN, Personnel Officer (Labour) and Sri T. P. RAMAKRISHNAN, Assistant Personnel Officer (Labour) were at the Central Station to see the children off. Other groups of children joined the party en-route at Arkonam, Jalarpet and Erode.

On 16th May 1957, the party left Mettupalaiyam by train No. 553 for Coonoor in a reserved carriage. The

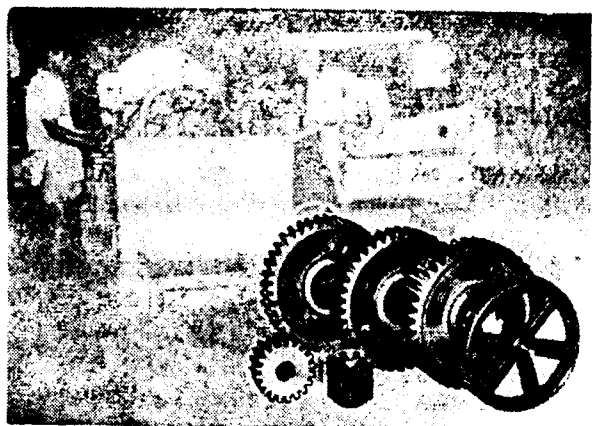
Send off at Central Station



The children with guides, etc., at Central Station

journey from Mettupalaiyam to Coonoor was a source of immense joy to the children. The Rack Rails and the engine pushing the train from the rear instead of pulling it from the front were all novelties which evoked the children's admiration. The changing scenery, as the train wended its way up the hills crossing over from one valley to another, the deep gorges with the winding streams, the high hills crested with Tea plantations and the coffee estates on either side of the Railway line were a wonderful and enjoyable experience to the children.

On arrival at Coonoor, the children were taken to the Municipal High School where they were accommodated with all the necessary facilities. Children were allowed to take some rest on that day and in the evening they were taken round for sight-seeing and marketing.



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SOUTHERN RAILWAY

TENDER NOTICE

Tender No. S/236/1/GB5/23/GOC/2.

Sealed Tenders are invited for the supply of 2330 gallons of Enamel gulf red ISC 473, Spraying Exterior Type I, synthetic finishing to specification IS 521.2 and 695 gallons of Enamel venetian red ISC 445, Spraying Exterior Type I, synthetic undercoating to specification IS 521/1 and will be received by Controller of Stores, Southern Railway, Ayavaram P.O., Madras-23 up to 3 P.M. on 17th July 1957 and will be opened by him at 3 P.M. on 18th July 1957.

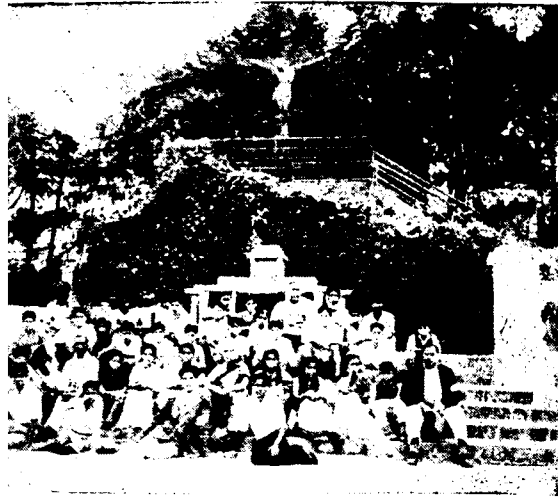
The prescribed form of Tender is obtainable on payment of Rs. 5 per copy in cash or by M.O. Remittance by any other means will not be accepted.

The last date for the receipt of Earnest Money, viz., Rs. 500 by the Chief Cashier, Southern Railway, Madras-3 is by 3 P.M. on 16th July 1957.

Tender forms will not be issued after 3 P.M. on 15th July 1957.

P. N. TALATI,
Controller of Stores.

July 1957



The children at candel cross three miles from Ooty

On the 17th the party visited the Sims Park, Government Fruit Farm, Nutrition and Malaria Institutes, Silk Farm and Gut Section. The children had an enjoyable time in the Sims Park with its beautiful collection of flowering plants and the varieties of trees, indigenous as well as foreign, and in the Government Fruit Farm where fashion fruits, plums, peaches and varieties of apples are grown. The visit to the Nutrition and Malaria Sections was very instructive. Doctors specially detailed for the purpose explained to the children with instruction charts, photos and pictures the evils of malnutrition and how diseases spread due to lack of vitamins. The causes of Malaria and ways and means of its prevention and cure were also explained at length to the children. The Silk Farm was another place of interest that attracted the Children, where imported worms along with indigenous worms are allowed to breed and lay eggs, which are hatched after exposure to sun light for about 10 days. The young worms, as they grow up are sent to

the Mysore Silk Farm before building the cocoon for production of silk.

In the afternoon the children were taken to the Dairy Farm at Wellington. Here they witnessed the methods of cleaning milk and churning butter. Then they were taken to Staff College, where they saw theatres, swimming pools, play grounds, schools, etc. In the garden maintained by the College, the children were able to see rare collections of plant life, flowers and desert plantations from foreign countries. The success of the Japanese method of Table-top garden was also explained to the children by the Garden Maintainer. Then the party visited Stanley Park and later on the Training Centre and Children's Camp-grounds for Southern Region of the Bharat Scouts and Guides.

On the 18th children were taken by Rail to Ooty where they were treated to pony ride, boating in the lake, etc. After lunch, they visited the Flower Show at the Government Botanical Gardens. The varieties of flowers and vegetables

Breakfast at Coonoor Railway Station



July 1957



Boating at Ooty

on show made the children very happy and they were always beaming with smiles. The party returned to Coonoor in the evening where the children had games and Camp Fire.

On 19th May 1957, the children were again taken to Ooty by rail and on to Pykara in special buses. A drive in the bus through the hilly country was very pleasant and exciting to the children. The children were

At boat club, Ooty



told of the purpose of the dam. The party then motored to Glen Morgan to see the Lake. They drove south around the lake to the diversion canal, along a narrow road bounded on one side with steep, high hills and on the other by a deep gorge. As it was late, the party was not able to visit Singara (Power Station), but returned to Ooty. Sri Madappa, Assistant Personnel Officer, Mysore, who was at Ooty on that day was very

Pykara Dam



helpful to the boys and girls. After a brief halt at Ooty, where children made purchases of vegetables, fruits, etc., the party returned to Coonoor for the night.

On the 20th the party returned by train No. 556 to Coimbatore where they visited Sri G. D. Naidu's Workshop, where children were shown the latest advances in Electricity and Radiography, etc. Sri S. Chaudhry, the Divisional Superintendent, Olavakkot, met the children at Coimbatore and made kind enquiries about their experience during their tour. At Mettupalaiyam, Sri Chakravarti, Chief Mechanical Engineer and

Sri Raman, Divisional Superintendent (Mechanical), Podanur, met the party and made kind enquiries about the Camp. The party returned to Madras on 21st May 1957.

The party is very grateful to the Municipal Commissioner, Coonoor who kindly made all arrangements to make the children's stay at Coonoor very comfortable.

The Camp was in charge of Geo B. Ambrose, Senior Labour Welfare Inspector (Scouts) ably assisted by Messrs. R. M. Swami, M. J. Veeraghavalu, C. M. Stanley, V. John, A. M. Chandrasekariah, B. Rozario, Mrs. B. E. Julian and Miss I. Regina.

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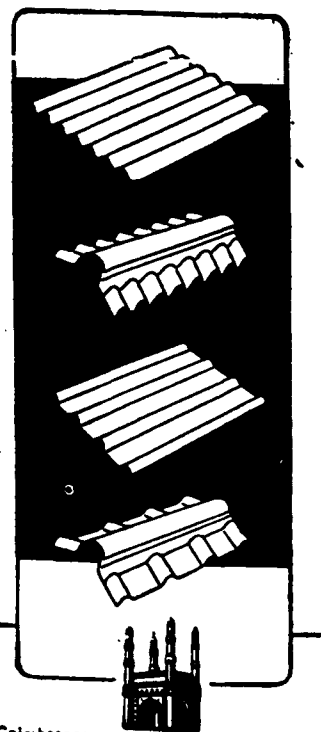
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OPENING OF THE NEW RAILWAY DISPENSARY AT SHENCOTTAH



The new Railway Dispensary at Shencottah was opened by the Chief Medical Officer, Dr. V. T. Naidu, on the 10th June 1957.

The District Medical Officer said that Shencottah being situated at the entrance to the Ghat section is an important station with a large concentration of the Railway staff. Though there has been a dispensary ever since the opening of the Railway line in this area, with the new programme of giving better medical amenities to the staff the need for a dispensary of the standard plan was felt and this was taken up during the year 1956-57 and just completed. He added that the state-owned Railways in India as the biggest, single employer of labour,

have undertaken to provide a number of amenities to the staff of which medical amenities form a part. Under the Second Plan the Ministry of Railways have proposed to build new Hospitals and Dispensaries. Proceeding, he enumerated the various facilities afforded by the new Dispensary built on the new standard plan, approved by the Railway Board. It has a Doctors' Consulting Room, a Dispensary, a Dressing Room, Stores, Sanitary Inspector's office and stores and also two emergency beds.

Concluding his welcome speech, he requested Dr. Naidu, Chief Medical Officer, to open the new Dispensary.

The Chief Medical Officer replied thanking the organisers of the function for having afforded him an opportunity to participate in the opening ceremony and emphasised the need for a well-equipped dispensary at Shencottah because of the unhealthy nature of the ghat section which was considered malarial. The existing dispensary though it had to cater to the needs of nearly 900 Railwaymen could not be

The DMO, Madurai, delivering his welcome speech at Hospital, Shencottah





A section of the gathering

located in a proper building with adequate accommodation due to want of funds and policy of economy during the company-managed time. With the advent of the Welfare State, the need for a well-equipped dispensary was felt and proposal for the same was included in the First Five-Year Plan with the result that the new Dispensary was constructed.

Continuing, he said, that a good number of similar dispensaries are going to be opened in many other places so that there may be one for every 50 miles. He further added that all the Headquarters are to be provided with all modern methods of diagnosis and therapeutics such as X-rays, etc.

He remarked that these amenities are not only for the Railwaymen but also for their families. Midwives are appointed at all important stations while Lady Doctors are placed in charge of Health Centres and Maternity Wards at all Divisional Headquarters.

The Chief Medical Officer concluded his speech by thanking the Divisional Superintendent, Madura, for having given him an opportunity to perform the opening ceremony and all those who had contributed to the success of the function.

The Chief Medical Officer then declared the Dispensary open.

The Chief Medical Officer with DS/MDU and other guests at tea on the occasion



GOVERNMENT REWARD A.S.M. FOR TIMELY TIP



A silver cup, awarded by the Government of Andhra Pradesh as a reward to Sri P. Venkateswaralu, Assistant Station Master, Southern Railway, for his keen observation and sense of duty which resulted in the apprehension and conviction of the culprits in the famous 'Miss Cox Murder Case', was presented to him on 3rd June 1957 by Sri M. S. Murty, Divisional Superintendent, Southern Railway, Bezwada. There was a large gathering of railway employees present.

It will be recalled that Miss E. E. Cox, a British National and a Nurse working in a Hospital in East Pakistan, was found murdered in a Second Class Coupe of the Calcutta Mail bound for Madras on 21st August, 1954. Sri Venkateswaralu, who was then working as Assistant Station Master, Yellamanchili, noticed two persons getting down from the offside of the Calcutta Mail and proceeding towards the village. He rightly suspected their movements and gave this useful information to the Police who traced the two persons, who were later identi-

fied by him. They were arrested and charged. The Sessions Court sentenced them to transportation for life.

Sri Murty congratulated Sri Venkateswaralu on his keen sense of duty which had been duly recognised and appreciated by the Government, and which had earned for him the reward that was presented to him at the function.

SOUTHERN RAILWAY INSTITUTE

TONDIARPET MARSHALLING YARD :

The Southern Railway Institute, Tondiarpet Marshalling Yard, celebrated its Eleventh Anniversary on 1st June, 1957.

The General Body Meeting was presided by Sri K. K. Padmanabhan, Vice-Chairman.

Several members spoke appealing to the Administration to develop the Institute.

The new Office-Bearers were elected unanimously for the ensuing year and the meeting terminated.

Sri M. Ponnuswamy, Fitter, Loco Shed, Trichinopoly, has invented recently a gadget for arresting the speed of train in the event of derailment of engine



July 1957

USE OF HINDI FOR OFFICIAL PURPOSES

In order to intensify the use of Hindi for official purposes, the Ministry of Education of the Government of India have initiated a scheme of Examination of three Grades, viz., Prabodh, Praveen and Pragya. The syllabus for the highest of the three Examinations, viz., Pragya has been framed with a view to test the capacity of the candidates for noting and drafting in Hindi. The Examination consists of four papers carrying 100 marks each; one of these papers being office noting and drafting in Hindi. The first Pragya Examination ever to be conducted was held in January 1957, at New Delhi. 48 Candidates from the various Railways represented the Railway Ministry at the Examination out of which 9 have come out successful. Three employees of the Southern Railway appeared at the Examination and all of them have



passed. Sri S. Subramanian of the Time Table Section of the COPS Office of the Southern Railway topped the list of the 9 successful Railway candidates by scoring the highest marks, i.e., 242 out of 400 in the Examination.



Sri Srinivasan of the Central Rly. and Smt. Padmasundari, daughter of Sri V. Dharanipathy, C.S.'s Office, Madras, were married on 2nd June

July 1957

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CO-OPERATIVE WORK ON RAILWAYS

In compliance with Railway Board's orders a meeting of the Welfare Inspectors attached to the Headquarters and Divisions was convened on 22nd May 1957, and presided over by the Personnel Officer (Labour), Sri R. Nagarajan.

The speech delivered by the Officer on Special Duty (Co-operative Societies), Railway Board, to the Welfare Inspectors of the Central and Western Railways in Bombay on 9th and 11th February 1957 respectively was read out by the Assistant Personnel Officer (Labour) for the information of the Labour Welfare Inspectors. A copy of the speech was given to each of the Welfare Inspectors.

The Co-operative Inspector (Railway Board) attached to the Southern Railway, addressed the gathering and laid stress on the following points :-

- (a) Duties of the Welfare Inspectors with regard to formation of Societies.
- (b) Supervision of Societies.
- (c) Inspection.
- (d) Propaganda.

The Welfare Inspectors were requested by the Co-operative Inspector to assist the *Ad hoc* Committee Members in collecting Share Capital preferably on the pay-day, and keep the Inspector advised of the progress made from time to time. The Co-operative Inspector enumerated the various items of work to be gone through by the Labour Welfare Inspectors.

In order to have a thorough idea about inspections, the Co-operative Inspector wanted the Welfare Inspectors to get themselves acquainted with

the accounts of the Society which would enable them to take up inspection work at a later date. They were also requested to accompany him (the Co-operative Inspector) in his inspection tours of the Societies so that they can acquire sufficient knowledge in the Co-operative accounts.

Regarding propaganda, the Labour Welfare Inspectors were requested to arrange for issuing pamphlets, circulars and also arrange for periodical meetings in Railway Colonies. The Co-operative Inspector also wanted the Inspectors to celebrate Co-operative Day and Co-operative Week, etc.

Finally the Co-operative Inspector requested the Labour Welfare Inspectors to lend their active support in the formation of Societies in the remaining 20 centres over Southern Railway.

The Personnel Officer (Labour) in his speech laid emphasis on the importance, from the point of view of the employees as well as the employers, of forming Consumer Co-operative Societies. The stage has been reached when the Railway Administration has to assume direct responsibility for the development and supervision of Co-operative Societies, which hitherto formed one of the functions of the Officer on Special Duty (Co-op. Societies), Railway Board. This called for a detailed knowledge of the working of Co-operative Societies, which could be gained only by close association with the Co-operative Inspector. The Welfare Inspectors should, therefore, avail themselves of every opportunity to learn all the details of the working of Co-operative Societies under the guidance of the Co-operative Inspector. They should at the same time concentrate their attention not only on the

formation of Societies in new Centres but also on developing the Societies that have already been formed. These duties called for certain special qualities on the part of the Welfare Inspectors, such as capacity to learn, doing propaganda, organisational abilities, etc., which the present set of Welfare Inspectors possessed in an abundant measure. It should not, therefore, be difficult for them to take over the responsibility for the organisation, development and supervision of Co-operative Societies.

The Personnel Officer/Labour referred in this connection to one important aspect of Co-operative working which should receive the special attention of the Welfare Inspectors. Many employees become members of Co-operative Societies but seldom make their

purchases from the Stores Society. Once an employee becomes a member of a Stores Society, it is his duty to purchase all his requirements to the extent they are available from the Stores Society even if he has to pay a little more for certain articles than he has to pay in the market. Anything more he pays will come back to him, atleast in part, by way of rebate on purchases or as dividend. This would ensure the success of all Co-operative Stores Societies.

The Personnel Officer, Labour, in conclusion called upon the Welfare Inspectors to devote some time daily for work connected with Co-operative Societies on the Railway which, he said, would in due course enable them to take over the responsibility for the Co-operative movement on the Railway.

SOUTHERN RAILWAY

TENDER NOTICE

Tender No. S/236/V/GB 10/E/26.

Sealed tenders are invited for the supply of 1,200 Plastic Panelling Sheets 8'-0" x 4'-0" x 1/8" thick as per specification available in the prescribed tender forms and will be received by the Controller of Stores, Southern Railway, Ayanavaram P. O., Madras-23, upto 3 P.M. on 25-7-1957 and will be opened by him at 3 P.M. on 26-7-1957.

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.

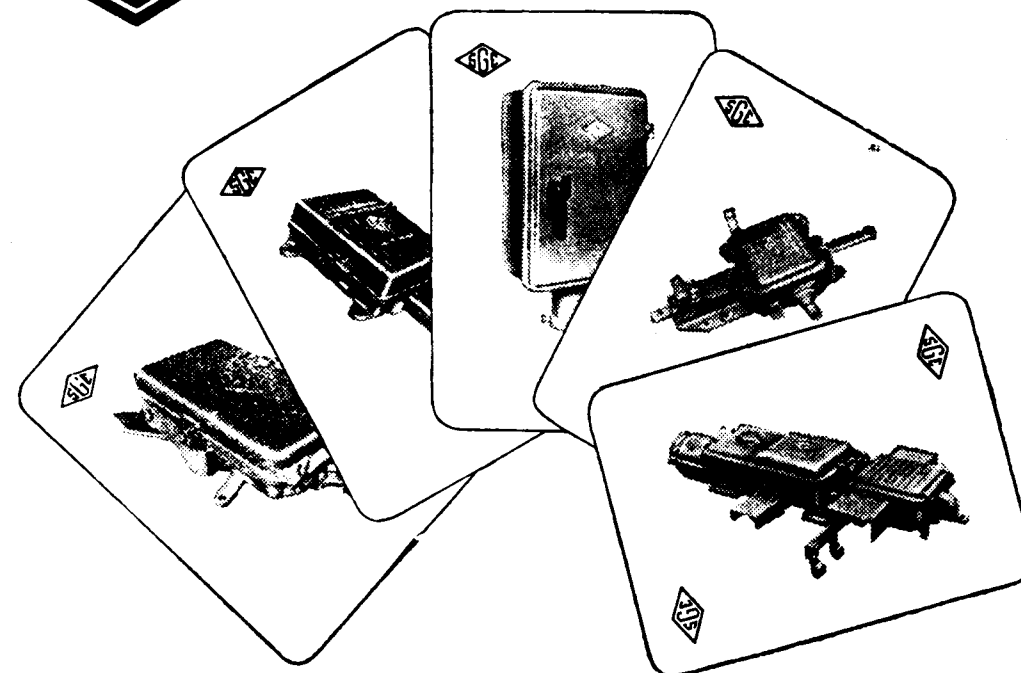
The last date for the receipt of earnest money, viz., Rs. 500 by the Chief Cashier, Southern Railway, Madras-3, is by 3 P.M. on 24-7-1957.

Tender forms will not be issued after 3 P.M. on 22-7-1957.

P. N. TALATI,
Controller of Stores.



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SRI V. T. NAIDU, CMO, RETIRES



Sri T. A. Joseph, GM, Sri V. T. Naidu, CMO and Sri K. Sadagopan at the Farewell Function at Dasapraakash



A view of the ladies who attended the function

Views of the dinner



Sri V. T. Naidu, Sri T. A. Joseph and Sri P. N. Talati, COS, with other officers



The CMO with Smt. V. T. Naidu

SOUTHERN RAILWAY

TENDER NOTICE

Sealed tenders on prescribed forms will be received up to 13 hours on 22-7-1957 for completing (within FOUR months) "The Collection and Supply of Hard Stone Ballast 1" and 2" at Gudur in connection with Junction Arrangements"; the approximate value of work and the earnest money to be deposited being Rs. 36,500 and Rs. 1,095 respectively.

FURTHER PARTICULARS and the tender forms costing Rs. 10 each can be had from the ENGINEER-IN-CHIEF, EGMORE, MADRAS-8.

FAREWELL PARTY TO SRI V. K. STHANUNATHAN



Sri K. Sambamurti, Dy. CCS, Rates, speaking at the party given to Sri V. K. Sthanunathan, on the eve of his departure to the Railway Staff Training College at Baroda. To his left are Sri S. K. Mukerji, C.C.S. and Sri V. K. Sthanunathan

A view of the party



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The guest of the evening is seen seated with Sri S. K. Mukerji (left) and Sri Mir Inayath Hussain (right)

SOUTHERN RAILWAY

TENDER NOTICE

Sealed tenders on prescribed form will be received upto 13.00 hours on 19-7-1957 for the SUPPLY OF MATERIALS AND FORMING APPROACHES FOR ROAD UNDERBRIDGE No. 323-A on the Quilon-Ernakulam Railway Construction—Section II, to be completed within six months.

Approximate cost of the work is Rs. 17,500. Earnest money to be deposited is Rs. 525.

Further particulars and tender forms costing Rs. 10 from: The Engineer-in-Chief Egmore, Madras-8 or the Executive Engineer, Quilon-Ernakulam Railway Construction, Ernakulam South.



G. Kanniah Naidu retired Station Superintendent, Madras Central, celebrated the marriage of his daughter Sow. G. Padmavati with Chi. B. V. N. Devaraj, son of Dr. B. V. Narayanaswamy Naidu, at Abbotshurty, Madras, on 19-5-1957

Sri T. A. Joseph, G.M., congratulating the newly wedded couple



The bride and bridegroom



A view of the guests at the wedding

SOUTHERN RAILWAY

TENDER NOTICE

Tender No. S/235/1/GB4/F/845.

Sealed tenders are invited for the supply of 76½ tons of Steel Class II angles of sizes and will be received by the Controller of Stores, Southern Railway, Ayanavaram P.O., Madras-23, before 3 p.m. on 25-7-1957 and will be opened by him at 3 p.m. on 26-7-1957.

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 24-7-1957.

Tender forms will not be issued after 3 p.m. on 22-7-1957.

P. N. TALATI,
Controller of Stores.

RAILWAY STALL IN THE BANGALORE CONGRESS (1957) EXHIBITION



Demonstration of the working of Tele-typewriters



Visitors eagerly gazing at the publicity wheel

General view of the stall



Two platoons attached to the Southern Railway Social Association photographed during the celebration of Railway Week. Sri D. B. Patel, Divisional Superintendent, Madras Division, is seated fourth from left in the photo above



SOUTHERN RAILWAY

TENDER NOTICE

1. The Chief Engineer, Southern Railway, Madras-3, invites separate sealed tenders for the collection and training out of stone ballast on the North-East Line—Bezawada Division as per particulars given below upto 12-00 hours on Monday, the 22nd July 1957.

Serial No.	PARTICULARS	Total approximate value	Earnest money
		Rs.	Rs.
1	Collection of stone ballast at Mustabada Station Yard and training out	2,54,200	7,600
2	Collection of stone ballast at Chebrol Station Yard and training out	1,53,000	4,800
3	Collection of stone ballast at Rajahmundry Station Yard and training out	3,16,800	9,500
4	Collection of stone ballast at Golavari North Siding and training out	4,98,500	14,900
5	Collection of stone ballast at Kadlam Station Yard and training out	4,30,500	13,200
6	Collection of stone ballast at Duraisala Station Yard and training out	3,97,700	11,900
7	Collection of stone ballast at Kasimkota Station Yard and training out	1,92,900	5,800
8	Collection of stone ballast at Anakapalli Station Yard and training out	1,18,100	3,600
9	Collection of stone ballast at Duvvada Station Yard and training out	5,62,300	16,900

2. The tenders should be submitted in the prescribed form obtainable from the Chief Engineer's Office on production of a receipt for the amount of Rs. 10 paid to the Chief Cashier, Southern Railway, Madras-3 or the Divisional Accounts Officer, Mysore or to any Station Master on the Southern Railway towards the cost of each tender form for each work. In no circumstances will the amount paid for the tender form be refunded.

3. The tender form is not transferable.

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

5. Tender forms will not be issued after 15-00 hours on Monday, the 15th July 1957.

6. The earnest money for the tenders mentioned above should be paid in advance to the Chief Cashier, Southern Railway, Madras or to the Divisional Accounts Officer, Mysore, and the receipt issued by him should be attached to the tender. No demand draft or cheque is to be attached to the tender.

7. Contractors who have already made a lump sum deposit earnest money of Rs. 25,000 with the Railway, need not pay the earnest money separately for these works, but reference to the receipt, etc., under which the lump sum deposit of Rs. 25,000 has been made should be quoted in the tender.

8. The earnest money will not be accepted after 15-00 hours on Tuesday, the 16th July 1957.

9. The tenders will be opened at 12-00 hours on Tuesday, the 23rd July 1957 in the Chief Engineer's Office at Madras.

10. 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.

SOUTHERN RAILWAY

TENDER NOTICE

Tender No. S/235/1/GB4/F/901/AJJ/2.

Sealed tenders are invited for the supply of 132 tons 5 cwts. 3 qrs. 16 lbs. of Steel Class II Channels of sizes and will be received by Controller of Stores, Southern Railway, Ayanavaram P. O., Madras-23, before 3 P.M. on 1-8-1957 and will be opened by him at 3 P.M. on 2-8-1957.

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 31-7-1957.

Tender forms will not be issued after 3 P.M. on 29-7-1957.

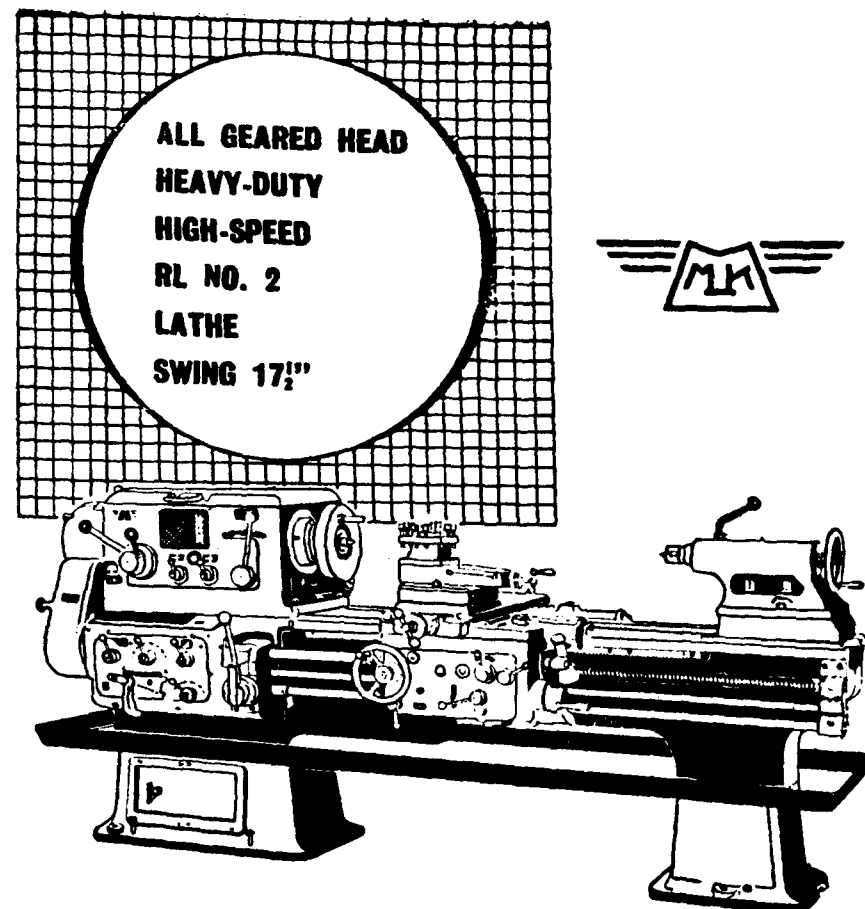
P. N. TALATI,
Controller of Stores.

ON CORRUPTION

Commenting in the journal 'The Harijan' Mahatma Gandhi once observed:—

"Bribery in the name of 'mamool' and the like, to Railway officials and others is not an unusual occurrence in Indian life. I have had to suffer in my time for refusing to pay a paltry anna at the third class ticket window, for getting my ticket in my turn, which would never come because favourites had to be served first. I have had to wait for hours, sometimes, before I could get a chance of buying my ticket."

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