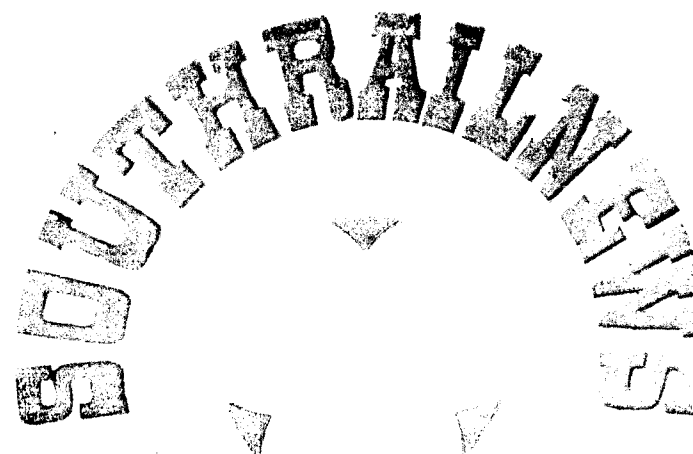


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AUGUST 1955

NO. 5

INDEPENDENCE DAY NUMBER

Annas Six



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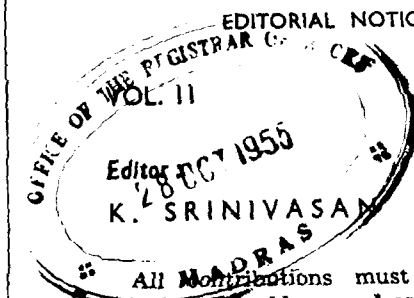
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(Official Organ of the Southern Railway)

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No. 5

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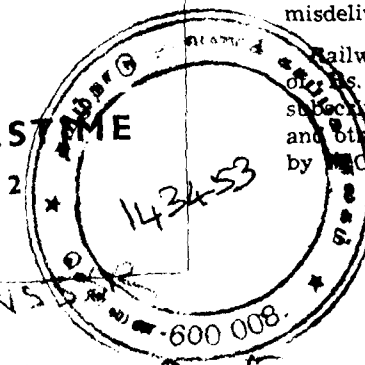
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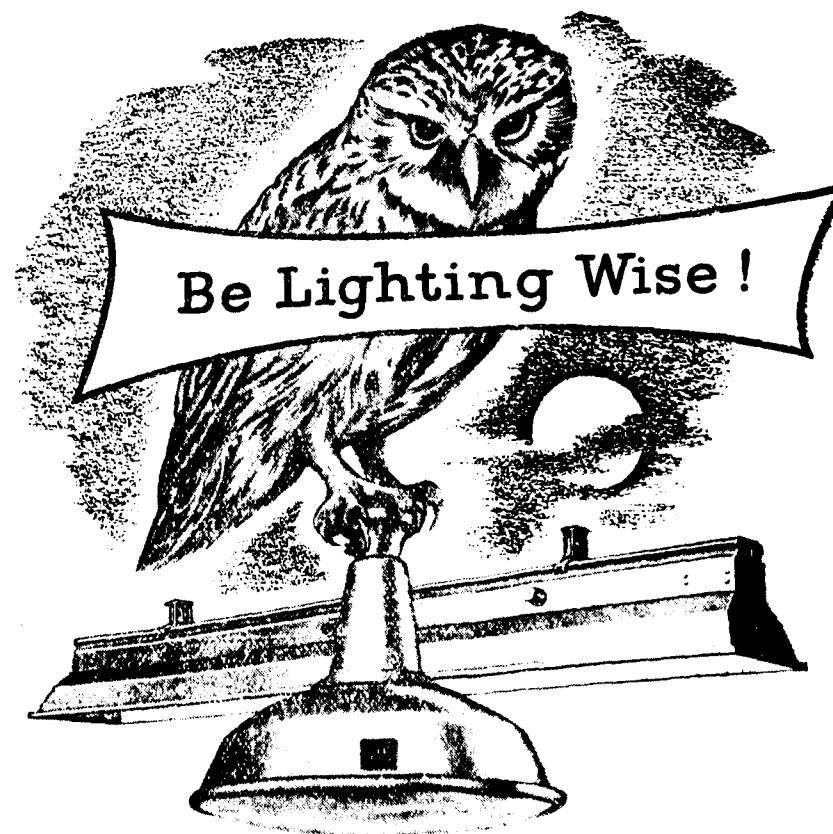
15th August, 1955

FRIENDS,

On the 15th of this month, we celebrate the 8th Anniversary of the attainment of Independence by India. This is a day of great national rejoicing when all the people of India greet each other with shouts of joy and Jai Hind. Let us pray for the prosperity of India and also resolve to do our best in our respective spheres. What the country needs is increase of production. If production increases, the prosperity of the country will increase. Increased production requires increased transport.

"During the Second Five-Year Plan, the targets have to be pitched on a higher key and we have to prepare the ground for the next jump and not step" remarked the Prime Minister of India. The target round which all developments are planned is a higher standard of living brought about by increased production, which means greater demands on transport and especially on Railway transport. The Railways therefore have a vital role to play in the fulfilment of the Second Five-Year Plan. I am sure this is fully realised by all Railway staff and I am confident that by our co-ordinated and concerted effort, we will be able to fulfil this national assignment and "deliver the goods".

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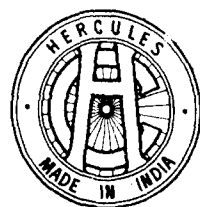
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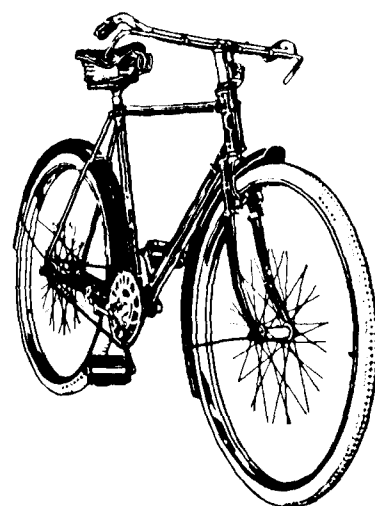


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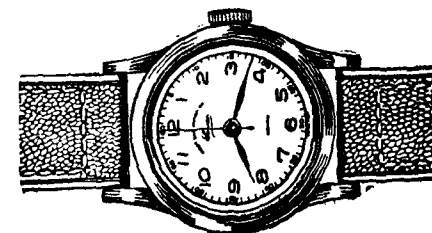
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SOUTHERN RAIL NEWS

Vol. II

AUGUST 1955

No. 5

Importance of Railway Sector in the Second Five-Year Plan

WE are on the eve of the Second Five-Year Plan. The activities have now to be pitched on a higher key and we have to prepare the ground for the next jump and not step, remarked the Prime Minister.

We are passing on to a higher stage of planning when we have to think of all the consequences in regard to production, consumption, employment, unemployment and of each step that we take.

The target round which all developments are planned is a raised standard of living (and herein transport plays a direct part itself), better standards

mean greater demands on existing means of transport. Developments, social or technical, agricultural or industrial, or other economic activities, require new or improved means of transport. Materials and plant must be taken to the development area from the beginning. Ultimately the regular flow of commodities to and from the established region must be assured. It is on these grounds that transport usually figures as one of the most important sectors in a development programme. During the First Five-Year Plan, expenditure was allocated under seven heads as under :

(Rs. crores)

	OUTLAY DURING 1951—1956		PERCENTAGE OF TOTAL OUTLAY	
	Five-Year Plan	Draft Outline	Five-Year Plan	Draft Outline
Agriculture and Community Development	360.43	191.69	17.4	12.8
Irrigation and Power	561.41	450.36	27.2	30.0
Transport and Communications	497.10	388.12	24.0	26.1
Industry	173.04	100.99	8.4	6.7
Social Services	339.81	254.22	16.64	17.0
Rehabilitation	85.00	79.00	4.1	5.3
Miscellaneous	51.99	28.54	2.5	1.9
Total	2,068.78	1,492.92	100.0	100.0

In the Second Five-Year Plan, it may be possible to spend nearly three times the amount that was spent during the First Five-Year Plan. On this basis, it was expected that Railways may be able to spend more than 1,200 crores (i.e. about 1,400 crores) but it looks 1/6th of the whole outlay during the Second Five-Year Plan (the whole outlay being about 6,000 crores). 1,000 crores may be allocated to transport and communications; out of which it can be expected that a little over 800 crores will be allotted to the Railways.

In the First Five-Year Plan, 360.43 crores was allocated to Agriculture and Community Development and Irrigation and Power got 561.41 crores. Next comes Transport and Communications with 497.10 crores. Out of which, 400 to 418 crores was for the Railways. The amount allocated to Railways was next to Irrigation and Power, for which item the highest amount was allocated in the First Five-Year Plan. The Railways will thus get the second largest amount from the outlay in the Second Five-Year Plan.

In a balanced economy a first essential is a properly co-ordinated growth of activities in all its sectors. Within the transport field itself, the balance must be struck also between the different means of transport by land, water and air. It is a dual problem of co-ordination, between the sectors, and within each sector.

It is desirable that the plan is completely flexible and not rigid. Now we have a much more favourable atmosphere for planning in India than there was four or five years ago. Four or five years ago, the very idea of planning was not fully understood or appreciated by many people.

Broadly, the objectives of the Second Five-Year Plan are five per cent annual increase in the national income and the provision of new employment for 10 to 12 million persons. In the First Five-Year Plan, they had succeeded in achieving a three per cent annual increase in the national income. In the Second Five-Year Plan, they must have a higher target. Hence the 5 per cent increase in National Income target is feasible. Every year, we add 1.8 million people to the working population of India. In the Second Five-Year Plan, we shall add over 9 millions to the working population.

In practice the available resources, in finance and technical skill impose restrictions. Secondly, an important problem is the establishment of a schedule for a period of years ahead for the developments to be carried out. Normally, five years is as long as can be foreseen. This means that certain projects will have to be spread over a longer time than other projects according to priority. In order to make the Second Five-Year Plan a success it is necessary that all grades of Railway-men work with confidence, vigour, imagination and initiative.

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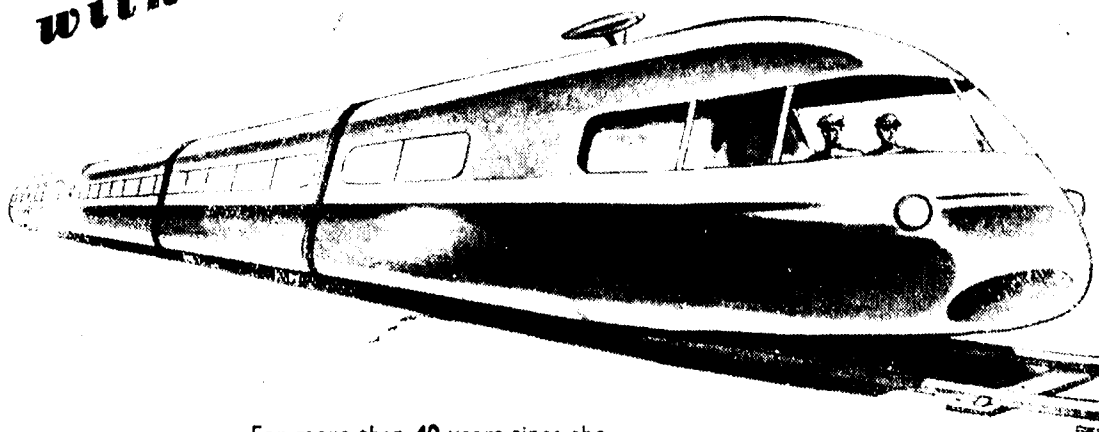
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Railway Corruption Enquiry Committee's Report "Problem Common to all Government Departments"

IN a 300-page report the Railway Corruption Enquiry Committee has made a strong plea to public men and higher officials to lead a reform movement to eradicate corruption which "is not only tarnishing the fair name of our administration but also tempts people to have a fling at our national character."

The Committee observes with regret that a "correct approach" to the problem of corruption on the railways is generally lacking, and expresses the view that if the correct ideals and standards of conduct are kept before the subordinate staff "Our railwaymen will make the proper response and put forth a determined effort to eradicate corruption from among their ranks."

The report was submitted to the Railway Minister on July 11. The Committee was set up on October 3, 1953 under the chairmanship of Sri H. N. Kunzru, who was later succeeded by Acharya J. B. Kripalani.

The Committee issued six questionnaires to different interests, including a general questionnaire to which it received nearly 500 replies. In all it undertook five tours, visited 47 places, examined 1,150 witnesses and held 178 sittings. Its report covers some 75,000 words, divided into 14 chapters and appendixes. It has made over 150 recommendations.

Background to Corruption

Examining the problem in its setting, the report says that corruption on the

railways was nothing new. During the early periods, under company management, the wages of the station staff were very low and what they collected as **bakshish** from the public was connived at. This form of corruption was almost universal.

The system of priorities introduced during wartime and the extreme shortage of transport resulted in new forms of corruption which continued even after the termination of the war as the transport position remained unsatisfactory.

"Railwaymen are not a separate community," the Committee remarks. Being drawn from the same social group as employees in other Government departments and subject to the same temptations, "it would be futile to expect them to be absolutely honest in a general atmosphere of corruption, dishonesty and sharp business practices." While taking steps to eradicate corruption amongst railwaymen, says the Committee, it is essential that the general aspects of the problem are not lost sight of.

Need for Honest Police

It should not also be forgotten, says the Committee, that the first essential condition for eliminating corruption in any Government department is an efficient and honest police force trained in the latest and most scientific methods of detecting and apprehending crime.

"It is difficult for a department to discharge its special functions and also

effectively tackle the anti-social elements working in its ranks. It has not the necessary machinery to do this," the Committee remarks.

Role of Trade Unions

The Committee is sorry to note that the development of railway unions has given the railway employee no idea of the important part he has now to play as a free citizen of a free country. "The majority of the local unions often adopt bullying tactics towards higher officers and their office-bearers are sometimes interested in getting personal advantage for themselves and their friends through their influence," the Committee remarks, adding: "It also came to our notice that some local union officials charged fee for representing individual cases of employees to the Administration. This is the worst thing that a Railway Union could do."

The Committee recommends that the Central Executive of the National Federation of Indian Railwaymen and other unions should issue clear directives to all the unions affiliated to them laying down the new role that the unions have to play in free India. "Their rights must flow from duties faithfully and conscientiously performed," the Committee remarks.

The Committee asks the unions to co-operate with the railway administrations and assist in ensuring that the various privileges that have been conferred on the employees are really made available to them. Machinery for this has also been suggested.

Need for Psychological Approach

Urging a psychological approach, the Committee says that the problem of corruption is not confined to the railways. "It is common to all Government departments and is deep-rooted." Change of outlook on the part of all concerned is, therefore, essential for grappling with this evil. Since the attainment of freedom, the role of the railways has completely changed, and "there should be a corresponding change in the attitude of those who run

this huge machinery as also of the using public." While there has been a growing consciousness of this problem, the Committee says, the steps taken so far have not borne satisfactory results.

The Committee advocates greater publicity being given through various media to facilities that are available to the public, the procedure to be adopted for making full use of them and the machinery that exists to bring to the notice of the administration any complaint regarding the same.

Suitable publicity should also be given to the various facilities available to the employees, particularly those in the lower categories. There should be constant propaganda bringing home the evils of corruption. Such propaganda should also be addressed to the public.

Shortage of Officers

While there has been a substantial increase in the number of railway employees, there has not been in the Committee's opinion a corresponding increase in the number of gazetted officers, with the result that supervision has become more attenuated. The volume of traffic has also increased. Paper work has increased at the cost of outdoor work.

The Committee, therefore, recommends that the Railway Board's Efficiency Bureau should be asked to analyse the quantum of work performed by gazetted officers and suggest measures for the reduction of desk work and increase in supervisory work. The Bureau may also suggest if any increase in the strength of Class I and II staff is necessary.

Committee to Review Zonal System

The Committee expresses the view that the geographical size of the new zones created after regrouping "is too big for effective and efficient supervision." It adds: "Like most large organisations, the re-arranged zones suffer from the defects of over centralisation, indecision, red-tape and inertia."

"A sizable unit," it goes on, "will make possible the delegation of responsibility at different levels, since delegation is brought about as a result of confidence reposed in a subordinate officer adequately supervised by superiors and having personal touch with them."

The Committee recommends that the question of the existing size of zones be revised by a small high-power technical committee, which should also thoroughly examine the question of divisional and district systems. "We are fully conscious of the fact that this may cause certain difficulties, but it is better that these be faced now rather than at a stage after considerable amounts have been spent to consolidate re-grouping."

Reward for good work

Exceptional and outstanding work should receive special recognition by grant of honoraria, letters of appreciation and medals. The honoraria should be confined to non-gazetted employees only. Successful efforts of an officer to root out corruption should be a qualification for accelerated promotion.

Disparity in this emoluments of the lowest paid and highest paid Government employees should be narrowed down. Greater attention should be paid to the problem of staff welfare. The scheme for the provision of subsidised hostels should be finalised without delay. Provision should be made in the second Plan for systematic expansion of medical facilities. The scheme for opening rest houses for staff should materialize without undue delay. The tempo of building staff quarters should be substantially increased.

Departmental Catering favoured

Expressing general agreement with the conclusions and recommendations made the Catering Committee under the chairmanship of the Deputy Railway Minister (which have been largely accepted by Government), the Committee favours departmental catering on a "no profit and no loss" basis and suggests that any loss in the initial

stages should be considered as having been spent on advertisement, and some of it may even be debited to the passenger amenities fund.

The Committee recommends the abolition of the system of giving catering contracts to big contractors, strict enforcement of the rule prohibiting sub-letting, greater vigilance, the awarding of contracts to co-operatives and social bodies, etc.

The Committee has asked that public men and high officials should refrain from giving certificates to catering contractors.

Miscellaneous Recommendations

In the concluding chapter dealing with miscellaneous matters, the Committee has made a number of recommendations, the more important of which are the following:

Railway grain shops should be abolished as early as possible.

The Committee appointed by the Government of India to examine recruitment to Government services should go into the question of procedure adopted for recruitment on the railways.

The Railway Board should bring out a small brochure describing the different types of jobs offered by the railways and other relevant information.

The Committee also makes a number of recommendations in regard to stores purchases and connected matters.

"BOX-MEALS" TO BE SERVED ON TRAINS—EASTERN RAILWAY'S INNOVATION

A new advance in railway catering in India has been made with the introduction of a Hamper Box service in the compartments of trains on sections of the Eastern Railway where catering has been a departmental responsibility for the past 40 years. For a nominal extra charge passengers can now order a meal containing items of their own choices in a box, and eat the food at any time they choose.

In keeping with the Railway Ministry's policy of providing cheap, clean food to passengers, the Eastern Railway has also with immediate effect slashed charges for foodstuffs over a wide range of items, the reductions in some cases working out to 50 per cent of the present charges. At the same time the *à la carte* menu covering only 29 items has been enlarged to cover 41 items.

Passengers on diet or those who desire a dish outside the menu will be accommodated as far as possible. For passengers of modest means cheap food packets have been introduced at certain stations, including Howrah. There will be no extra charge for service in compartments.

Eastern Railway's departmentally-run catering service manages 25 restaurants, seven refreshment rooms, six tea-rooms and eight dining cars on important mail trains. Recently a model refreshment room, called Coffee Corner, was opened at the Howrah station.

SHRI LAL BAHADUR SHASTRI INAUGURATES KALINARAYANPUR JN. STATION

Speaking at the inaugural ceremony of the Kalinarayanpur Junction Station, 48 miles from Calcutta, on the Calcutta-Krishnagar Section of the Eastern Railway, on July 8, the Union Minister for Railways and Transport, Shri Lal Bahadur Shastri, gave an outline of the work that would be undertaken by the Railways under the Second Five-Year Plan. The Union Minister announced that during the Second Plan Period it was proposed to lay 3,000-mile additional track mileage to open up new areas and another 2,500 miles to double the existing track. The doubling of the track would not merely mean laying lines parallel to those already in existence but lines making a detour and thus opening up newer areas.

The new station which was opened to traffic on April 1 last serves the colony

of the displaced persons at the place and several other large settlements in its neighbourhood. Situated, as it is, at the junction of the Santipur and the

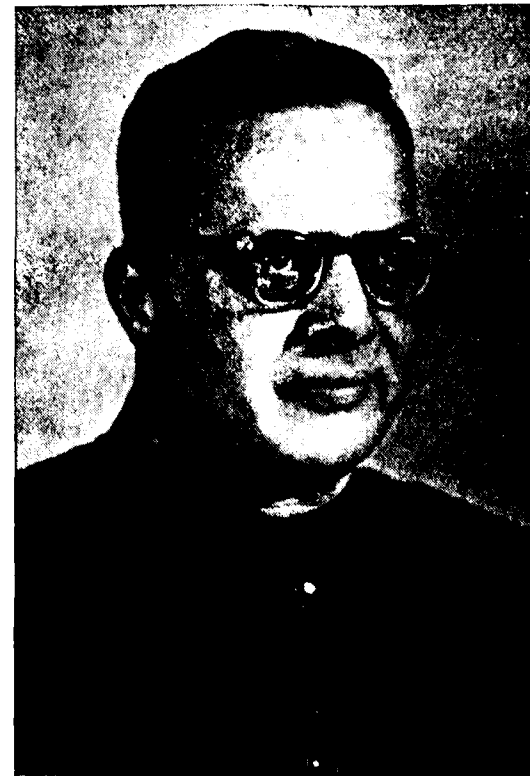


Shri Lal Bahadur Shastri inaugurating
Kalinarayanpur Junction Station

Krishnagar Branches, the station is expected to help the rapid development of the adjacent areas by providing easy access to important places like Krishnagar, Santipur, Ranaghat and Calcutta.

SHRI N. C. KAPOOR

Shri Nanak Chand Kapoor, who has been appointed the General Manager of the newly formed South-Eastern Railway, was born in Uttar Pradesh on March 12, 1902. He was educated at the St. John's College, Agra, and after graduating as Bachelor of Science, took up an appointment on the college staff. Simultaneously, he studied law and for M.Sc. at Agra College, but before completing these courses, took an examination for the Railway Service. He joined the former Eastern Bengal Railway in January 1926, as a Probationary Officer. He was appointed as Assistant Traffic Superintendent and within a few months was selected to officiate in the Senior Scale. In 1937



Shri N. C. Kapoor,
G.M., South-Eastern Railway

he was transferred to the East Indian Railway, where he served as a Senior Scale Officer in various Divisions, including the Head Office, and was promoted as Deputy Chief Operating Superintendent (Emergency) in July 1942. Between 1942 and 1948 he occupied the posts of Deputy Chief Operating Superintendent (Goods), Deputy Chief Commercial Manager, Divisional Superintendent, Allahabad, Divisional Superintendent, Moradabad, Divisional Transportation Superintendent, Dhanbad and Divisional Superintendent, Asansol. In June 1948, he became Traffic Manager, Oudh and Tirhut Railway, and at the end of that year was promoted Chief Commercial Manager. Shri Kapoor later was transferred to Bombay, where shortly afterwards he was promoted Chief Transportation Superintendent, Great Indian Peninsula Railway. While with

the G.I.P. Railway Shri Kapoor was sent on deputation to the Bombay Port Trust as Officer on Special Duty for a period of about three months in 1951. Shri Kapoor then returned to the East Indian Railway as its Chief Operating Superintendent and in December 1951 became that Railway's Chief Commercial Manager to return, after 28 days, to the Operating Department of that Railway as its Chief.

On the formation of the Eastern Railway on April 14, 1952, Shri Kapoor became that Railway's first Chief Operating Superintendent.

SHRI S. SARANGAPANI

Shri Srinivasa Sarangapani, who has been appointed as the General Manager of the newly formed Eastern Railway, was born on August 4, 1903, in the State of Madras. Shri Sarangapani

Shri S. Sarangapani, G.M., Eastern Railway



became on June 19, 1929, a probationer on the Indian Railway Service of Engineers and was drafted to the then East Indian Railway. Three years later, he was confirmed as an Assistant Executive Engineer. November 16, 1935, saw Shri Sarangapani as the Manager of the Block Signal Workshops at Howrah. He was promoted to officiate as an Executive Engineer on August 2, 1941.

During the last world War, Shri Sarangapani was granted Emergency Commission on February 27, 1943, in the Indian Engineering Corps and, in recognition of his services, he received special distinction from the Government of India on January 1, 1945.

On January 1, 1948 he was appointed as the Deputy General Manager (Planning) and five months afterwards he became the Deputy Chief Engineer (Lower). The next June saw him as a Divisional Superintendent.

In aid of the North Madras Social League, dance recitals by Uma, Sundar (a railwayman) and Party were held at St. Mary's Hall, Armenian Street, on 23-7-55



Throughout his service, Shri Sarangapani had worked on the East Indian Railway and when in 1952 portions of that Railway became amalgamated with the then Bengal-Nagpur Railway to form the Eastern Railway, he continued as a Superintendent of one of its Divisions.

On August 1, 1953, Shri Sarangapani was seconded to the Calcutta Electrification Survey as its Project Officer and carried out an exhaustive Survey for the proposed electrification on Eastern Railway. On May 1st, 1954, he became the Engineer-in-Chief of the Calcutta Electrification Project. In this capacity he visited the United Kingdom and a number of countries in Europe during November and December 1954 to study the post-war developments in Railway electrification. He was placed on deputation to Japan during March 1955 to assess the capacity of the Electrical rolling stock industry in that country.



World of Railways

Arthur L. Stead

Our London Correspondent

"Hullo, Paris? Hullo, Copenhagen? Hullo, Vienna? Here is Bureau EUROP at Berne calling"

Throughout the twenty-four hours, the European telephone lines buzz with messages exchanged in the French, German and Italian languages, between the new railway goods wagon control at Berne, Switzerland, and the wagon distribution offices of ten national rail systems covering Western and Central Europe.

The EUROP international goods wagon pool is a major post-war railway development in which my SOUTH-RAILNEWS friends will certainly be interested. The pool represents a unique co-operative effort to improve freight movement right across the continent, and to secure more economical use of goods wagons of all types engaged in international rail business.

The ten national rail networks parties to Bureau EUROP are Austria, Belgium, Denmark, France, Germany, Italy, Luxemburg, Holland, the Saar and Switzerland. By degrees, it is hoped every system on the European mainland will share in the pool.

The new EUROP set-up supplements, but does not supersede, exchange regulations drawn up by the International Car Union some years ago, and which are still operative throughout the rail undertakings of the continent.

These provide for a fully loaded wagon continuing its journey over the

national frontier to destination, the receiving railway paying a daily rent to the owning system. Wagons have to be returned to owning system after each trip, but to save empty haulage they may, after unloading, be diverted to pick up a return load, either for an internal destination or for an international journey.

The new goods wagon co-operative—"Bureau EUROP"—operates a much more flexible international wagon exchange. Wagons in the pool no longer have to be returned to the owning country immediately after each journey, the balance between the number of wagons received from each system and the number sent to that particular system being made good daily by delivery of an appropriate number of EUROP wagons at the frontier. If the balance cannot be so redressed, the receiving country has to pay to the creditor country (per day and per missing wagon) a rent based on the cost price of the wagon or—where heavy traffic is passing—on the loss of revenue.

When first established, the EUROP goods wagon pool embraced 59,884 box and 92,905 other type vehicles. Largest contributors to the pool were the French and German railways, with 50,000 wagons each, the contributions of the other countries grading down to the 474 box and 755 other type wagons provided by the Luxemburg Railways, and the 200 box and 400 other type vehicles furnished by Denmark. At the

present time, the EUROP pool consists of 61,624 box and 98,105 other type wagons, giving a total common-user stock of 159,729 vehicles.



French and Swiss experts discuss international goods wagon movement in the "Bureau EUROP", Berne

Since EUROP wagons are employed by every member railway in the same manner as their own, the system using them is responsible for their current maintenance (periodical overhauls excluded) and must carry out all necessary repairs. In addition to the owner's markings, wagons in the pool carry on their sides the inscription 'EUROP' made distinctive by a black border. This at once distinguishes the vehicles in marshalling yards, sidings and goods stations.

Periodical overhaul of EUROP wagons—taking place every three years—is a responsibility of the owning administration, at its own expense. When the overhauling date approaches, the wagons are forwarded—preferably under load—to the owning country. In exceptional cases, a seriously damaged vehicle may be returned to the owner system, which carries out the repairs at the expense of the system responsible for the damage.

The Swiss Railways—which still ably manage the original International Car Union plan—are the presiding administration of the new EUROP goods wagon co-operative. Each member country is represented on a special EUROP committee supervising the work of the central office located at Berne, Switzerland. Decisions are taken by a majority vote, and the chairmanship

(which carries with it a casting vote) is changed every month.

Every day, the railway systems in the EUROP pool advise their representatives in Berne the number of EUROP wagons entering and leaving their country during the previous twenty-four hours, differentiating between the types, and whether empty or loaded. The communications also include the number of EUROP wagons required by the various systems, the number of wagons ready for restitution and details as to the desired direction of wagon movements.

Having tabulated the information received from the different countries, the EUROP pool headquarters decides for each day as to whether the number of EUROP wagons debited to the respective systems happens to be lower or higher than the actual number contributed to the pool by the undertakings concerned. After examining and considering the situation, as well as the desires and requirements of every member, the EUROP central office determines the movements of empty EUROP wagons which are necessary to maintain, on the network of each member country, a number of EUROP vehicles of each category as

A common-user wagon from the Saar Railways operating in the "EUROP" pool



near as possibly equal to their contribution to the pool. The representative in Berne of each country advises his own system of the prevailing EUROP wagon situation daily.

After receiving the daily report from Berne, the member systems arrange for the required movements of empty EUROP wagons to be carried out. When these movements have a certain continuity—as often happens—to save time the railways concerned may arrange for them to be made before the actual receipt of definite information from Berne. These movements of empty EUROP wagons are also, as far as possible, adjusted to prevailing operating conditions and to the flow of loaded traffic.

A country having a number of EUROP wagons to its debit in excess of its attributable contribution to the pool has to pay rental fees for the surplus. Although, at first sight, the arrangements for operating the EUROP wagon pool appear somewhat complicated, in practice the plan works remarkably smoothly.

The big aim of the EUROP wagon pool, namely, the reduction in the number of empty journeys, has been fully realised, a saving of about 200,000 empty wagon miles a day now being usual. To illustrate the advantages of the arrangement, there is a heavy traffic north-south from Germany, Belgium, Luzemburg and the Saar, towards Italy, in transit via France, Switzerland and Austria, whereas traffic is relatively light in the reverse direction.

Italy has to compensate the more northern railways with a large number of empty wagons, via France, Switzerland and Austria. On the other hand, Italy has periodically to convey important traffic from Trieste to Austria. For this traffic, Italy may use any EUROP wagon available, instead of her own vehicles, or those of Germany and Austria, which entered loaded on her system.

The normal traffic between Austria and Italy, and vice versa, being almost

balanced, the required compensation from Italy to Austria are insignificant and the Trieste-Austrian traffic can therefore, balance the surplus of transit traffic from France and Switzerland to Italy. The main north-south and south-north traffic being thus relatively balanced, Austria may forward to Germany a number of wagons equivalent to those received from Italy. Thus the Austrian unloading centres being close to the German frontier, Austria saves a considerable number of empty journeys on her network.



The busy telephone exchange of the European central wagon control at Berne, Switzerland

The whole business of EUROP wagon distribution is like the solving of a huge jigsaw puzzle, yet with practice it comes to perfection. Ultimately, the aim of the idealists is to combine the whole rail network of the European mainland—at present formed of a large number of separate national systems—into one big undertaking. Whether or not, the plan will ever reach fruition remains to be seen. In the ambitious EURC goods wagon pooling scheme, however, there lies one of the most practical contributions so far made to sensible co-operative operation between the various European railways for the common good and for the benefit of railway users as a whole.

Planning and the Railways

BERNARD SHAW used to say that the two essential requirements of every man are money enough for a decent life and power enough to be his own master: in other words, every citizen wants to have economic salvation. In order to ensure that every citizen has got economic salvation, it is necessary to have plenty of food, clothing and adequate housing accommodation.

Initially, planning consists in ministering to the food requirements, clothing and housing of the millions. Other necessities and luxuries get less priority. The target round which all the developments are planned is a raised standard of living. Better standards mean greater demands on existing means of transport. Developments, social or technical, agricultural or industrial require new or improved means of transport. Materials and plants must be taken to the development area at comparatively small cost. **On these grounds, transport figures as one of the most important sectors in a development programme.** In terms of money, it may mean 1/6th or 1/5th of the total outlay. In the programme for Transport and Communications, a large part of the total outlay was on railways. For instance, in the First Five-Year Plan, out of the 497 crores outlay on Transport and Communications, a little over 400 crores was for railways. The most serious problem facing the Indian Railways till recently was the task of rehabilitation and provision of adequate equipment. When the railways were just emerging in 1937 from the effects of economic depression of the thirties and were attempting to overtake the arrears of maintenance and development, the Second World War intervened and interrupted this process. Considerable arrears of renewals and replacements accumulated and internal facilities for rehabilitation appreciably curtailed. After the war, new problems came up in the wake of partition. The condition

of the track also deteriorated during the past two decades and rehabilitation measures loomed large in the first Five-Year Plan.

With a view to reducing dependence on the external sources of supply, the Central Government have set up a workshop for the construction of locomotives at Chittaranjan at an estimated cost of about Rs. 15 crores.

The broad objectives of the First Five-Year Plan for Railways was rehabilitation and the modernisation of the rolling-stock and the fixed assets. The Planning Commission have agreed to the acceleration of the procurement programme of the rolling-stock and the orders actually placed for the rehabilitation of locomotives and goods wagons exceeded the number provided in the plan by 50 per cent. The likely position of the over-aged stock at the end of the Second Plan period may be approximately 17 per cent of the locomotives, 37 per cent of coaches, and 12 per cent of wagons will be due for replacement after making allowance for the retention of 10 per cent of over-aged stock in service.

As for immobile equipment, the subject has caused no less concern. The track renewals which have been in arrears had to be speeded up. As a result of the extensive track renewals, the mileage under speed restrictions of 3,000 miles has been reduced to 2,000 miles in 1953.

More than 13 out of the 26 dismantled lines have been restored. 9 new lines have been opened and work is in progress on 5 new lines. The Railways had embarked on the programme for the removal of bottlenecks on the existing lines and the provision of additional facilities to meet the present demands from the increase in traffic arising out of the implementation of the First Five-Year Plan.

The Policy under the Plan of improving the housing and the welfare of the

August 1955

PLANNING AND THE RAILWAYS

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staff and giving increased amenities to the travelling public is being progressively implemented.

The Railways' Second Five-Year Plan will have to be co-ordinated with the more and more important branches of the National economy, such as agriculture, coal, manure, steel, cement, etc., in order to evolve a coherent and integrated plan. The Chittaranjan Locomotive Works has to increase its production capacity to 200 locomotives. The Telco have to increase their production from 50 to 75 M.G. locomotives and they should be prepared to raise the production to 100 locomotives. The Perambur Integral Coach Factory will go into production during October, 1955 and the output will be gradually increased to 350 locomotives in 1959-60. New construction is being planned on a large scale. About 5,500 miles of Railway line inclusive of double line is being mentioned.

The Ministry of Railways are planning to develop 50 per cent increased capacity for the Second Five-Year Plan over the estimated demand at the conclusion of the First Five-Year Plan period. If the First Five-Year Plan is going to have 20 per cent increase in carrying capacity over pre-plan period, the Second Five-Year Plan is going to have 50 per cent increase in capacity over and above the 20 per cent increase in the First Five-Year Plan it means there is going to be 80 per cent increase in the carrying capacity over the pre-First Five-Year Plan period.

In view of the demands for Road Transport, which are on the increase, emphasis will have to be laid on the use of improved signalling and Telecommunications to ensure safety and increase the rate of traffic flow in suitable areas. It will be necessary to undertake extensive works for increasing capacities at transshipment points, for the expansion and remodelling of marshalling and terminal yards, for the construction of new crossing stations and for the lengthening of loops, etc. On the Southern Railway,

Bezawada station and yard improvement forms one of the major works. Rajahmundry station remodelling is a major work.

With the increasing availability of electric power from hydro-electric schemes or other projects and on sections of line with heavy density traffic areas, where line capacities have reached saturation, the electrification schemes would require special consideration. In this connection, the first sub-phase of electrification of the section between Howrah and Burdwan via Main Line and Tarkeshwar branch of the Howrah Division has been sanctioned at an estimated cost of 11.84 crores. This scheme is expected to be completed by the middle of 1957. It is gratifying to note that on the Southern Railway, the scheme of extending electrification from Tambaram to Villupuram costing Rs. 3.3 crores has also been approved in the planning schemes.

The question of adequate technical personnel will be of very great importance and suitable and adequate training facilities will have to be created to meet these requirements. Rehabilitation, expansion and development of railway facilities will generate demand for increased employment on the railways during the second plan period. It is necessary for the fulfilment of the assignments that adequate organisation should be set up. The planning cell in the Railway Board and the planning organisation on railways have been set up. The procurement programme for rolling-stock, equipment, stores and materials will have to be fully thought over, so that progressive implementation of the plan is not impeded by the supplies not being received in time. Supplies of steel, cement and coal will require planning in advance. The railways require about a million ton of steel a year which cannot all be supplied from indigenous sources.

The Railway Freight Structure Committee, which has been appointed by the Government of India recently,

NORTH-EASTERN RAILWAY

WHILE MAKING THE NEXT PILGRIMAGE WHY NOT VISIT

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2. VRINDABAN ~ The Holy City famous for Temples
3. BANARAS ~ The Holy Centre of the Hindus
4. KAMAKHYA ~ The Centre of Tantric Worship in India
5. KASIA ~ The Scene of Buddha's Mahaparinirvana
6. SARNATH ~ Where Lord Buddha Preached his First Sermon
7. AYODHYA ~ The Birth-place of Shri Ram Chandra

♦

PUBLIC RELATIONS OFFICER
NORTH-EASTERN RAILWAY GORAKHPUR

under the Chairmanship of Sri A. Ramaswamy Mudaliar, M.P., has been asked to review urgently the freight rates structure in order to keep pace with the far-reaching developments expected on the economic side under the Second Five-Year Plan.

The present freight rates on Indian Railways were introduced with effect from October 1, 1948. On that occasion, the revision aimed at simplification and rationalisation of rate structure by standardisation of charges over the then nationalised Indian Railways. Telescopic rates on a continuous mileage basis irrespective of Railway boundaries were introduced for the first time, the unit charge declining with increase in distance.

The present Railway Freight Structure Committee has been asked to examine whether the liability of Indian Railways as goods carriers requires revision. At present, the responsibility of Indian Railways for loss, destruction or deterioration of goods tendered for conveyance by railway is that of a bailee only. The Freight Rates Structure Committee will have to go to the fundamental question of examining whether the Indian Railways as carriers of goods can exercise the greater responsibility of a common carrier as in the United Kingdom and some other foreign countries.

The Committee may also examine revision of the provisions of Section 77 of Railways Act pertaining to time limit for claim for compensation for loss, destruction or deterioration of goods. Another term of reference of the Committee relates to the Railway Rates Tribunal, in a matter pertaining to simplification of the procedure for conduct of cases by the Rates Tribunal and the jurisdiction of the Tribunal to quote wagon load scale rates for a commodity for which none exists at present and also the date from which the decisions of the Tribunal should take effect, whether

they should take effect with retrospective effect or not.

Co-ordination of Transport

In a balanced economy, a first essential is a properly co-ordinated growth of activities in all its sections. Within the transport field itself, the balance must be struck also between the different means of transport, by rail, road and water. It is a dual problem of co-ordination, between the sectors, and within each sector.

Integrated development of transport means that railway, roadway, and water-way are performing the functions for which they are most fitted to perform in the interest of the country's economy. The Planning Commission had already formulated a basic policy for the development of road transport and had suggested the formation of tripartite corporations in which Railways would be partners, for the development of nationalised road transport by the State Governments. Such corporations should lead to the co-ordination of rail transport with road transport with a view to having 'integrated operations' in the best interest of the country.

"Under the Second Five-Year Plan, the road development will be on a much bigger scale than under the current Plan. Expenditure provisions of Rs. 60 crores and Rs. 33 crores for National Highways and the Roads of Inter-State or economic importance respectively are under consideration. I have no doubt that both the Centre and the States will rise to the occasion and play the part well so that the country can have a well-knit system of road communications," declared Sri O. V. Alagesan, Deputy Minister for Transport and Railways, Government of India, on the occasion of the foundation-stone laying ceremony of the Palar Bridge at Ranipet (near Madras) on June 10, 1955.

There is the problem of co-ordination with inland water transport, coastal shipping and rail transport.

Co-ordination of Rail and Sea Transport

While presenting the Railway Budget in the Lok Sabha on February 22, 1955, the Minister for Transport and Railways had announced that a committee would be set up to go into the question of co-ordination of Railways and coastal shipping with a view to promoting the development of the latter on sound lines. The Government of India have now issued a resolution, setting up this Committee.

Sri N. S. Lokur, Chairman, Railway Rates Tribunal, will be the Chairman of this Committee.

The Committee will undertake a comprehensive examination of the reasonableness of freight charged by coastal shipping with reference to its costs of operation and of the existing pattern of trade movements within the country. The Committee will examine in particular the need for development of coastal shipping on sound lines and suggest measures to ensure effective co-ordination between Railways and coastal shipping and also advise the Government whether any standing machinery should be set up for allocation of traffic between the two forms of transport.

The Committee is expected to submit its report within six months.

News items appeared in the Press, that the railways are likely to get

Rs. 1,480 crores for the Second Five-Year Plan. Judged, on the basis of the First Five-Year Plan, when the total outlay on the First Five-Year Plan was 2,069 crores, transport and communications were given 497.10 crores, out of which Railways got about 400 crores, we can expect in the Second Five-Year Plan, when the total outlay is likely to be 6,000 crores, transport and communications to get about 1,000 crores; of which 800 crores or 820 crores may be allotted to the Railways. **Prima facie**, this 800 crores may seem insufficient.

It has to be borne in mind that the targets have to be pitched on a higher key and we have to prepare the ground for the next jump and not step, remarked the Prime Minister, referring to the Second Five-Year Plan.

Coming round to the argument with which the article was begun, the target round which all developments are planned is a raised standard of living, better conditions of food, housing and clothing, which means greater demands on means of transport necessitated by the need, to take materials and plant to the development area from the place where these things are easily obtainable and ensuring the regular flow of commodities to and from the established regions. On these grounds, transport in general and railways in particular form an important sector in a development programme. A schedule for a

period of years ahead has to be established. Normally, 5 years is as long as can be foreseen. This means certain projects would be spread over a longer time than other projects, according to priority. On the Southern Railway, conversion of Gudur-Renigunta into broad gauge from metre gauge has been given high priority and the work is in progress. Among surveys Mangalore-Hassan line has been given high priority. Construction and rehabilitation are some of the major items of the Second Five-Year Plan.

RAILWAY EQUIPMENT COMMITTEE AND THE SECOND FIVE-YEAR PLAN

It was the intention of the Government of India to attain self-sufficiency in Railway equipment. They appointed a Committee under the chairmanship of Sri G. P. Kotak, M.P.

The Railways purchase 70 crores worth of Railway equipment in India and import goods worth of 25 crores from abroad. The equipment need would increase by 30 to 35 per cent during the second plan period.

The Government of India intended to construct 1,50,000 wagons, 12,000 coaches and 6,000 locomotives during the next plan period.

Four Railway showrooms have been opened at Calcutta, Bombay, Madras and Delhi. The showroom is intended to give an opportunity to manufacturers to examine the various exhibits and obtain full details regarding their consumption with a view to considering the feasibility of extending their existing plant or setting up new industries in India for producing items which are at present being imported.

LATEST TRENDS

The Planning Commission's Steering Committee on Industrial Planning held on 21st July at New Delhi when Shri K. C. Neogi, Member, Planning Commission, presided, discussed about the measures for stepping up production at the Chittaranjan Locomotive Factory and the I.C.F. at Perambur. The Committee stated that the production in both these factories should be organised, if possible, on a triple shift basis; otherwise at least on double shift basis in order to get the best out-turn from the capital investment. The scope for expanding the production of locomotives at the Tata Locomotive and Engineering Works on the basis proposed by them, namely, 50 locomotives with 75 per cent of indigenous components and 50 locomotives with 40 per cent of indigenous components should be considered by the Ministry of Railways. It was noted that bulk orders of fewer varieties of locomotives in place of the existing practice would assist in enabling larger production being achieved. It is a question of having the largest necessary number of the smallest feasible variety of the heaviest possible locomotives.

As for operating the installed capacity of the Industry on three shift basis, the need to ascertain the point of view of the Labour Organisation in this connection was emphasised. Bearing this and other difficulties in mind every endeavour will have to be made to operate the production equipment in different industries at least on a double shift basis.

Taking into consideration the various aspects, it will be clear that the Second Five-Year Plan for Railways is gigantic and ambitious. In order to make the ambitious Second Five-Year Plan for Railways a success, it is necessary for all grades of railwaymen to work with confidence, vigour, imagination and initiative.

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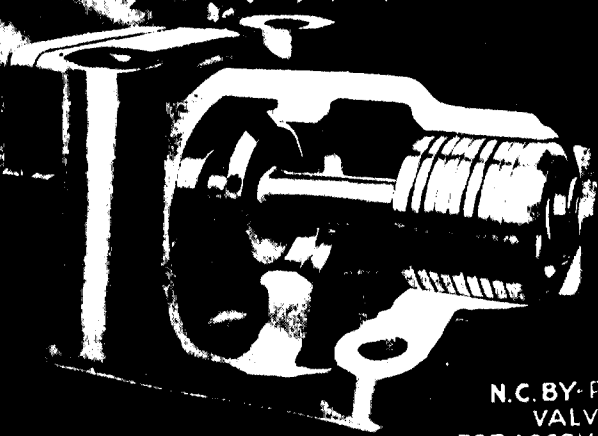
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Technical Ramblings of a Trackcomber

Mr. J. V. Stuart-Edwards, M. B. E.

IN this article I am endeavouring to record some of my past experiences and views which I feel would be of interest to many of our new recruits in the engineering branches of our railways. It does not contain any higher mathematics to make it almost unintelligible to the lower grades of P.W.I.'s, A.P.W.I.'s, and foremen, etc., who, if they see a whole mass of figures, almost avoid reading it. I find that there is no established system or principle according to which day to day practical difficulties, which are solved by one railway in a particular way, is broadcast for the advantage of other railways. You will see from the gist of this article that sometimes a problem is solved one way by one railway and another by another. Invariably only one of such solutions is the best, and therefore, it is very sad that we have no system whereby this information can be circulated for everybody's advantage. We certainly have the quarterly technical bulletins published by the Railway Board but I think I am correct in saying that this publication is of such a high technical nature that it invariably does not filter down to such individuals as A.P.W.I.'s, and even if it does, the higher mathematics and abstruse calculations in it have little interest for them.

While on the subject of new recruits, particularly as Assistant Officers in the Civil and Mechanical Engineering, I think it is well to record that these youngsters should in the very early stages of their career endeavour to take upon themselves the most onerous duties and difficult jobs, for it is only this experience that will pay big dividends in the long run. The tendency of youngsters to try and obtain jobs where they can sit in an office chair, with one eye on the classified list, is deprecated. Once a young lad has made a profession of one particular branch of engineering he should definitely adhere to it and make a success of his career. This success is not only

to his benefit, but will benefit our mighty railway organization and our young nation. Instead, many try their utmost to be transferred to such jobs as dealing with personnel, statistics, planning, etc., where they are assured of an armchair and little hard work.

Rails

I was extremely gratified and proud to hear that the Civil Engineering side of the Central Standards Office has at last produced from first principles, revised rail sections which embody a more scientific distribution of metal. This is a very definite step in the right direction and the sooner that we can implement this achievement by adopting the section as an approved standard all over, the better. I personally do not see why there should be any practical scientific tests of this rail section other than the test of how it will stand up in the track. I may be wrong in this view but to a great extent it is the result of logical argument. We have used, in our country, bull or double-headed rails of varying poundages from 85 to 100. All of these have stood the test of over half a century. The 90 R. Flat Footed rail adopted as standard although a lighter section, is very definitely stronger than either of these bull or doubleheaded types. This section also has stood up for the past 25 years. Therefore, as the revised section now designed is again stronger both vertically and laterally than either of these, I cannot see why their adoption should be delayed by scientific testing. I do not mean to imply that this scientific test is of no value, but what I mean to convey is that we require in India quick and "jet propelled" progress in order to catch up to the other countries and if we just go on now investigating and researching, we will reach no finality. As we progress, other countries are progressing, and therefore, it is up to us to progress at a quicker rate otherwise we will always be behind.

While on this question of rails, if I remember correctly, there is no clear-cut directive based on scientific knowledge as to when exactly a rail already in the track is to be renewed. According to the Standard Dimensions, which was current till I left the railway, the rule enunciated that a rail is to be renewed when it had lost 5 per cent of its weight, by wear or through other causes. This is entirely wrong. In the first place, as mentioned above, the 90 R. Flat Footed rail is stronger than say 100 R. bull or doubleheaded rail. How then does this 5 per cent serve as a guide? Here is an item of rail renewals which vitally affects our expenditure, which I think should be brought on to a more scientific footing.

Fish Plates

Obviously as the proposed new rail section has been increased in height, the new fish plates are automatically strengthened and this is a very great advantage in that we are now strengthening the rail joint which has been the cause of so much controversy and trouble in the past. The rail joint is the weakest link in the track and all means were experimented with in the past for trying to strengthen not only the rail joint but its support. On the old North-Western Railway, the practice was to have a very close sleeper spacing at the joint. Some other railways followed this, but we were presented with the problem of effective packing. Another step taken was to have a sleeper directly under the joint, on which the rail was free to move without being anchored or keyed to the bearing plate or sleeper. All these attempts have their advantages and disadvantages, but in my opinion the greatest damage that is occurring at rail joints is due to the defective manufacture of fish plates. Unfortunately manufacturers in our country punch the hole in the fish plates when they are hot. Unless this is done with meticulous accuracy, there is a tendency for the metal to distort under this punch blow, with the result that infinite small bulges occur above and below each fish bolt

hole on the fishing planes. This has a very damaging effect on the rail end. One has only to visualise that when fitting such fish plates there is no continuous fishing contact but only four-point contact on the top and bottom fishing planes (there are only four fish bolt holes in the present fish plate). Here I have the authority of my past experience. I have put set squares across the fishing planes of new fish plates and have found this marked distortion. I have also fitted new fish plates with new rails and found that they did not fit snugly, as designed, on account of these bulges, with the result that as the fish bolt length was designed for a snug fit, there were one or two threads in the nut which could not engage the end of the bolt. After the passage of time when the fish plates were removed for periodical oiling I have seen four bright spots at the top and bottom of the fishing planes of almost every fish plate, and corresponding bright spots on the fishing planes of the rails. This clearly indicated that the contacts were only at these points. The resulting damage can well be imagined by any practical engineer or P.W.I. The end of the rail which is unsupported—a cantilever—results in being permanently hogged, and you have endless trouble with low joints. As apparently this controversy about punching and drilling of holes is still going on it is up to every individual on the railway, in charge of permanent way, to look for these defects and not hesitate to report about it because it is only with concerted and firm action that we can reach somewhere in our technical advancement.

One of the obvious solutions is to go in for welded joints which is the modern trend all over. This is certainly a step in the right direction, but one must not forget the aspect that we in India have established the practice and programme of removing rails from the main lines and using them in less important lines, and then again removing them probably for the second time to be put into sidings. If, therefore,

we are to deal with long lengths of welded rails, this secondary and tertiary relaying will present some problems.

Sleepers

Briefly the types of sleepers used in our country can be divided into three categories:—

- (1) Cast Iron,
- (2) Steel Trough, and
- (3) Wood.

I am very proud of our present CST 9, Cast Iron Plate Sleeper, as I had put in a tremendous lot of design and research work at the time I was in the Standards Office when this design was prepared by me under the able guidance of Sir Harold Colam. We in India have had the most satisfactory results from Cast Iron Sleepers of which there were several types in the shape of pots and bowls, etc. The CST 9 is a compromise design of what proved successful in the past and adapted to take the flat footed rail. When I was last in the United States of America, many of the Chief Engineers of some of the leading railroads were surprised that we used Cast Iron Sleepers. It was only after I had explained by means of rough sketches how exactly these sleepers are designed that they were convinced of the scientific applicability. Indeed, many of them had asked me to send them our Indian drawings only for the sake of their personal information and elaborate notes which they maintained. I wonder how many Chief Engineers on our railways have still got valuable notes, or care to keep these notes up to date with new ideas or recordings of their experiences.

Readers will probably be surprised and no doubt proud to know that ours is the only country in the world using Cast Iron Sleepers, and also that the designs we have produced are, in a life basis, the most economical that can be obtained from any part of the globe.

In my opinion there is still scope for improving this design. We have been tutored from early years in railway maintenance that what we require is

an assembly having the least number of replaceable or removable parts. At present the CST 9 sleeper has four cotters and two keys. It is now up to the ingenuity of the new generation of railway engineers to devise some improved fittings whereby the numbers can either be reduced or altogether eliminated. The present cotters used are not very satisfactory. It is impracticable to split them accurately in order not to have them loose. Some type of spring cotter is, therefore, likely to be more satisfactory. At the same time, if young engineers are working on new designs, they must always have before them that it is one thing to get a brilliant idea, and it is a totally different matter to convert that idea into a commercial or economical proposition. I once knew a brilliant electrical engineer who could design any type of electrical gadget. He could sit in an armchair and by pressing a series of buttons he could open ventilators, close doors, etc. Indeed he went to the extent of designing a most ingenious device for the automatic opening of his garage door. At the entrance of the door was stretched a very fine piano wire, so adjusted that it vibrated to the sound of his motor-car horn. When he approached the garage he pressed his horn. The wire vibrated, made an electrical contact, and the door opened. All this is very well for a hobbyist, but none of his ideas had any commercial value because they could not be produced on a commercial level.

One item in the sleeper which can very definitely be improved immediately is the two-way key. Actually when I originally designed this key, it was copied from an original patent design by Mr. Morgan (of Roorkee Engineering College) when he was on the old O. & T. Railway and subsequently Chief Engineer on the North-Western Railway. When we copied it the patent had expired, and it was a great pity that this very competent engineer did not, in the first 20 years of the validity of his patent, reap any

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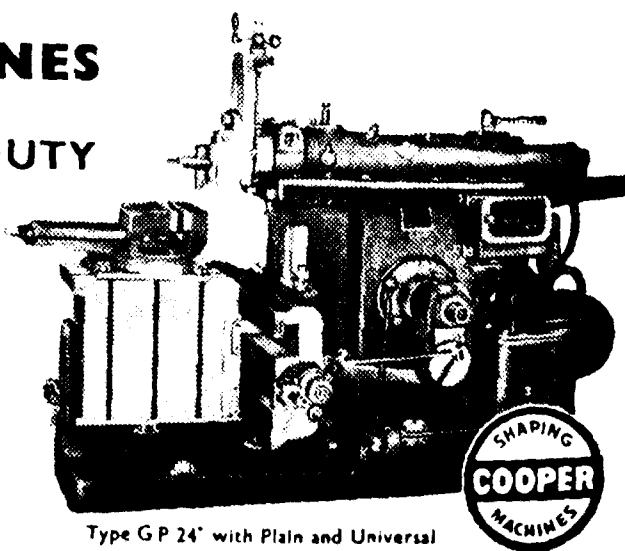
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TECHNICAL RAMBLINGS OF A TRACKCOMBER

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benefit or even obtain the Government's acknowledgment of his design. In any case, he had the satisfaction in the latter years of his service to know that it was his idea that is behind today's universal rail fastening adopted by us. If the older generation from our illustrious Thomson Civil Engineering College at Roorkee could have produced such ideas, I feel that a larger number of our young and new engineers should be able to improve and flood the technical wing of the Railway Board with many new ideas and suggestions. This key is now proving very rigid. It is used in the Cast Iron Bearing Plate or Sleeper and it is found that due to this rigidity, no matter to what extent it is hammered, it will eventually work loose. What we want now is some type of similar key but with a spring or resilience where the grip is certainly better.

Steel Trough Sleepers

The present Steel Trough Sleeper has been gradually evolved from a type that was used by us many years ago with pressed up lugs. The first departure in the type of rail fastening was a drop forged loose jaw, patented by Mr. Walker of the Nizam's State Railway, which was then known as the 'Ougree Jaw'. The latest improvement is our standard Silico Manganese Spring Steel loose jaw. As rail fastenings go for steel trough Sleepers, I think there is little that can be done to improve upon this jaw. The same rigid key is used for fastening the rail but due to the spring in the jaw the rigid key is not such a disadvantage here.

The main problem in Steel Trough Sleepers is maintenance. If this one item is given the fullest attention, then a steel sleeper track once laid can practically look after itself. It does not require the same amount of maintenance as other types. This secret is "Centre Binding". With our method of packing, most wood sleepers, and particularly the Steel Trough has a tendency to get 'centre bound'. In the steel trough, all the ballast accum-

ulates in the form of a cake, right in the centre. It is obvious therefore, that theoretically the steel trough is unstable as it is pivoting about a centre point. Depending on the formation, the conditions at site, the various slope of the cess, etc., these sleepers then have a tendency to slip off the centre towards one or the other side. This slipping may not be uniform. You may have three or four rail lengths slipping to the right, and thereafter a few more slipping to the left and so on. This is very marked, because you will find a wavy bright thread on the rail heads instead of a continuous straight line. Some inexperienced P.W.I. then sets about trying to force the gauge one way or the other. The secret in altering this lies in removing the centre binding. The North-Western Railway had a very good system of having a central drain down the middle of the ballast section. This was not only intended for drainage purposes but very definitely ensured that there was no 'centre binding'. In effect, there was a blank space under the sleepers, whether of wood or steel trough, in the middle. Most railways do not follow this practice and when on the G.I.P. Railway, where it is not the practice to have a central drain, I effected another experimental compromise. I had some steel trough sleepers specially manufactured by pressing down two baffles of about 3" x 2-1/2" at a distance 1'-6" from the gauge line on each side. These acted as stops or baffles in the sleeper preventing the ballast moving up to the centre during packing. In other words, the total length of about 3 feet under each rail 1'-6" on either side of the gauge was that portion which was being packed. These experimental sleepers were laid between Lonavla and Poona, and as far as I know, up to the time I left, they proved an unqualified success. It is information of this nature which if circulated to every railway, will be of maximum value in broadcasting ideas and experience with the intention of obtaining uniform success.

(To be continued)

Works and Maintenance

----- "Oprail" -----

A heavy rain-squall passes over a Railway Colony. During the brief, but powerful storm, a door or window in a railwayman's quarters has been wrenched off its hinges by the force of the wind. The railwayman swears when the wind and rain rips through one of his rooms. "Damn, I always knew that window would come apart some day. I should have asked the I.O.W. (Inspector of Works) to fix it long ago." By way of introducing the Inspector of Works, it must be mentioned that the 'fixing' of such fittings in railway quarters is one part of his job. But if this was all, the impression given would be, that it was rather insignificant. But this is a patent understatement. So, one morning let us get up early, accompany the I.O.W. to his office and get a quick glimpse of the multitude of his duties.

At 7 a.m. the Inspector is at his office desk, rapidly looking over the 'work orders' for the day. Some wire fencing around the colony has been damaged or stolen. This has to be repaired. Some furniture in one of the station offices require repair or overhaul. A railwayman's quarters needs white-washing. A water pipe-line somewhere in the colony has sprung a leak, wasting good drinking water, or pipes may have become choked, interrupting the water supply at some point. Odds and ends of masonry jobs on culverts, buildings, walls or floors, need prompt attention. These are only some of the many miscellaneous jobs to be done during the day.

To get these jobs done, the Inspector will then arrange the distribution of the skilled and unskilled labour. Masons, with their help, draw on the local stores for their materials and are sent out for the masonry assignments. Carpenters are detailed for the wood-working jobs, blacksmiths for metal

work jobs, and fitters for defects in water-supply piping.

The I.O.W. does not do all his work from his desk, merely giving directional orders. Actually, a considerable part of his work is outside his office. He must be constantly on the move inspecting the various jobs in hand to ensure that they are being done thoroughly. If any structural alterations are to be made in buildings he, along with his superior officers, the Engineers, has to inspect the jobs to be done.

Where there is a very large railway colony, with a number of office buildings and other structures, the Inspector of Works' jurisdiction lies only within the confines of the colony, but where these Inspectors are posted at smaller stations, their jurisdiction also extends to other stations on the line within certain limits. Within this section of his, the Inspector is responsible for the upkeep and repairs of all structures, roadways in the station colonies, smaller bridges, culverts, station buildings and offices. In order to keep himself posted on the condition of all these, he is required to make frequent and regular inspections, noting defects, and anything which needs attention.

The water supply systems within station colonies and yards is an important aspect of the work entrusted to the Inspector of Works. The railway staff living in station colonies, and the passengers who travel on trains passing these stations, need water for drinking and other purposes. The locomotives which haul the trains also must have water that provides the steam which is the motive power of the engines. So, from the source of the water supply, be it a tube-well, a river, ground tanks, and throughout pipe-lines carrying the water, the Inspector of Works must ensure that this supply is adequate and clean.

August 1955

WORKS AND MAINTENANCE

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On some railways, part of the sanitation at stations and in railway colonies, is also the responsibility of the Inspector of Works. Wherever railwaymen, or the people who use the railways, are gathered together in large numbers, refuse, garbage and sewage is bound to accumulate. To get rid of this menace to health, adequate drainage systems, and means of refuse disposal have to be provided. The Inspector of Works must therefore, constantly inspect the arrangements provided for this sanitation. Drains must be kept cleaned and flushed, so that matter liable to putrefaction is not allowed to choke up the drainage system.

Where special bridge engineering staff are not provided separately for the maintenance and repair of all bridge structures on railways, this job also devolves on the Inspector of Works and his men. A railway track that is laid across country of uneven physical formation, has to cross not only rivers, but also innumerable little streams and nullahs. The track over these gaps goes over on what are known as culverts, or small bridges, usually of strong masonry work. The heavy trains constantly passing over these structures set up strains and stresses. The Inspector must therefore constantly keep a probing eye on all these structures to detect cracks, or any signs of weakness which may develop. As soon as such defects are apparent, prompt action is taken by the Inspector and his staff to make these bridging structures absolutely safe for the passage of all trains.

The Permanent-Way Inspector is the man responsible for the laying down of the railway tracks and their maintenance, but before this can be done, a substantial road bed on which this

track is laid, must be prepared. This involves considerable earthworks, piling up of embankments and so on. All this earthwork is the job of the Inspector of Works and his men.

As with most railwaymen, whose jobs keep them in the great outdoors, when the monsoon months come along, it is a period of trial and anxiety for the Inspector of Works and his staff also. Prolonged heavy rain often causes havoc to various structures and the roadbeds on which railway tracks are laid. Little streams become swollen, biting deep into embankments or the earthworks on which bridges are supported. Along with other Engineering men, the Inspector of Works and his staff are out there, cold, and wet to the skin, day and night, constantly on the alert to repair the damage done by these adverse climatic conditions. Wherever a length of track, or a structure is in danger, there is no let-up until the job is done so thoroughly, that safety, both first and always, is ensured for the thousands of passengers travelling on the trains that have to pass over the dangerous spots. When the dry whether comes around again, the Inspector of Works, feels relieved.

The tap in the quarters of a railwayman goes out of order, the plumbing system in a large railway office building needs attention, the waiting room furniture of a station is looking shabby and needs smartening up, the drainage somewhere in a colony gets choked, the water supply to the locomotive shed is giving trouble and the engines are panting for water that is not coming fast enough, the masonry work on a culvert way out in the blue on the line is crumbling; well, reach for the telephone and ring up the Inspector of Works. He is the railwayman to do these and the other thousand and one jobs of a similar nature.



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MADRAS 2

London's Famous Zoo

Paul Lewis

THE desire to tame animals and keep them as pets goes back to the earliest days of the world's history. The ability to train the wilder animals was not so advanced then as it is now and history records that our early ancestors had to defend themselves against attacks from these creatures.

With the development of civilization has come the desire to collect birds, animals and reptiles and keep them together in a zoo. The first zoo in England was founded in the 12th century by King Henry I and it

contained leopards and lions. During the reign of Henry III it was transferred to the Tower of London in the early 13th century. This zoo was presided over by an officer of the Crown who received an allowance for himself and so much for each animal in his care. The amount allotted for each animal was the same as that allowed for each human prisoner lodged in the Tower dungeons! The collection grew with the reign of each succeeding monarch and an elephant house was built with instructions that it should be designed so as to be

"Dopey" and "Maud". Giraffes in London Zoo

(Courtesy: Zoological Society of London)



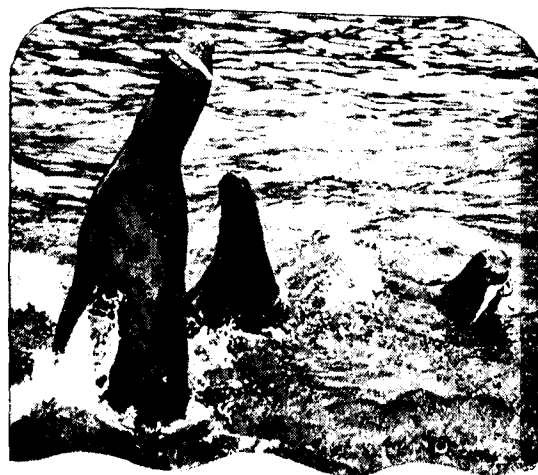
capable of use for other purposes if necessary.

James I started a small private menagerie in St. James Park for by that time the Tower zoo was causing great public interest, for wild animals were unknown to the ignorant people who had never seen them before. Pipcock started a menagerie in the Strand which was later acquired by a man named Cross who founded a zoo in Surrey. In 1731 a litter of lion cubs was born in the Tower Zoo and this caused a sensation.

The Zoological Society of Great Britain was founded in 1826. Sir Stamford Raffles was the chief organiser and in this work he was ably assisted by Sir Humphrey Davy, the inventor of the miner's safety lamp. The former was the first president of the society which had its headquarters in Bruton Street with a meeting room, museum, dissecting room and offices. In 1836 the society moved to larger premises in Leicester Square and in 1843 to Hanover Square. It received a Royal Charter in 1829.

Almost immediately after the formation of the society, plans were prepared for the institution of a zoological garden in Regent's Park. It was opened to the public on 27th April 1828 and in 1830 the collection of animals housed in the Tower of London and Windsor Castle were taken there. From that time London's zoo gradually grew into what today may be considered to be the finest collection of mammals, birds and reptiles in the world.

In 1848-50 the first reptile house was built and in 1864 a monkey house. The sea lions pond, which holds 100,000 gallons of water, was opened in 1905 and in 1913 the insect house which was completed with the assistance of a gift of £15,000 from Sir J. K. Caird, Bart. The society's offices were shifted to the Zoological Gardens in 1910. The famous Mappin terraces were completed in 1914 through the generosity of J. Newson Mappin of Messrs.



Californian Sea-lions at feeding time
(Courtesy: Zoological Society of London)

Mappin and Webb Ltd. In 1924-25 the chimpanzee house was built and in 1924 and at a cost of £55,000, a new aquarium. This was followed by Monkey Hill, a new monkey house and a new reptile house.

It can be appreciated that the annual cost of maintaining this fine collection is considerable for funds must be found to pay the wages of the staff, feed the animals and for maintenance and development. The society receives no grant from public funds and is entirely self-supporting on revenue derived from gate money and fellow's subscriptions.

During the Society's first ten years the number of visitors who went to the gardens each year was not more than 200,000. The average now is about 2,000,000; the year 1950 proved a record being 3,013,571. This was probably due to the attraction provided by Brumas, a baby polar bear, born on 27th November, 1949. It was the only one out of twenty-two born at the Zoo which survived, the others dying after a few days. The keeper Bruce-Smith, who gave it its name, received the Zoo's Bronze medal. This medal has only been awarded thirteen times in a hundred years and the previous award was in 1940.

The membership of the society is between 4,000 and 5,000 and in addition to the menagerie there is an extensive library, an infirmary, operating room and anatomical and pathological laboratories. Regular meetings are held and papers read by members. The staff of the Zoo comprises Helpers, Keepers, Head Keepers, Overseers, Curators and a Superintendent who is responsible to the Scientific Director and Dy. Secretary. The gardens are

cottage, streets and village square with a police station and cinema. There is also a fair ground with a wheel for the mice to play on and a pond from which they can quench their thirst. This section is staffed entirely by girls who are recruited at the age of 17, from the secondary schools. This is not essentially the prerequisite and only qualification for good health, keenness and a genuine love for animals are indispensable factors.

During the war the Zoological gardens suffered heavy damage through air raids but there were no casualties among the livestock. The elephants had been sent to the Society's park at Whipsnade and all dangerous snakes were destroyed at the outbreak of war. Nearly every pane of glass in the place was broken and a few buildings were destroyed but considering that H E bombs, an oil bomb, a flying bomb and hundreds of incendiaries fell in the gardens, the damage was comparatively light.

Every year a census is taken of the Zoo inmates and it is quite a job. The one for 1953 revealed that, excluding the 3,000 exhibits in the aquarium, which are valued at £2,080, the total was found to be 3,203 specimens which have been valued at £76,000. The inhabitants of the insect house could not be included in the census. Among 900 mammals of 267 different types, there are 67 varieties of apes, monkeys, lemurs and their allies. This group includes a gorilla valued at £1,500 received from the Paris Zoo in 1947. The most valuable bird in the collection is the Mantell's kiwi presented by the Government of New Zealand in 1953 and is priced at £500. There are 1,700 birds in all valued at £18,700.

Some of the mammals are very valuable. An African rhinoceros costs £2,000 while gorillas and elephants are about £1,500 each. Tigers cost £600 while lions are only £100. At the other end of the scale, white mice are 1s. 6d. each.



Mischka and Ivy—Polar Bears
(Courtesy: Zoological Society of London)

situated in the north-west corner of Regent's Park and covers an area of 34 acres.

The Zoological gardens has a section set aside for children where they can fondle ponies, woolly lambs, a llama and other soft creatures. A feature of this corner is mouse town which has its own

In 1931 the Zoological Society opened an animal park at Whipsnade which enabled the larger mammals to live more naturally and also to be seen under those conditions.

King Penguin and Baby
(Courtesy: Zoological Society of London)



Sri B. Venkataraman, I.A.S., District Magistrate, Phulbani, Orissa and Kumari Leela, daughter of Sri R. Krishnaswamy, lately Dy. CME (Works), Western Railway, Ajmer, who were married on July 8



The London Zoo is to be rebuilt at a cost of one million pounds sterling. When completed it will be the most wonderful zoo in the world. Plans and scale models have already been approved by the Society but the starting date will depend on the availability of funds. The most striking feature will be the replacement of many buildings with two-storey structures which will need no stairs. Varying levels of the site will be used to provide ground level entrances to both the upper and lower storeys. Covered ways between the various houses will enable visitors to tour the Zoo without getting wet.

By the use of moats and deep cuttings, animals will be kept at a safe distance without having bars to interrupt the visitors' view. Dr. Harrison Mathews, scientific director of the zoo said, "What we are contemplating is not just the rebuilding of the zoo. It is replanning. It is an ambitious scheme."

There were 1,972,222 visitors in 1953 an increase of 2,172 on the previous year. The Children's Zoo with 245,677 visitors had 23,062 more than in 1952. The number of Fellows of Society at the end of 1953 was 7,729, an increase of 257.

Transport of Smalls Traffic

T. S. Parthasarathy

[This is the first of a series of articles which the writer, who recently attended the Third Operating Course held at the United Nations Railway Training Centre, Lahore, will be contributing to the SOUTHERN RAIL NEWS. Later articles in this series will cover important subjects pertaining to railway operation such as despatching systems, improved methods of flat and hump shunting, design and working of marshalling yards, advanced systems of block working and signalling, etc. the adoption of which will increase single line capacity without much capital investment.—Ed.]

"Smalls Traffic" known in some countries as "miscellaneous goods" "sundries traffic", "L.C.L. traffic" and by similar names, is a term applied to goods which do not move in wagon loads but are offered for transit in odd lots of small consignments.

In countries where most of the traffic moves in wagon loads and there is no severe road competition, the handling of smalls is often found extremely inconvenient by railways. The "Road Goods Train", which performs the collection and delivery services of smalls at roadside stations, is the operating man's 'nightmare' as it gets the lowest preference from the Train Controller for crossing purposes, occupies block sections for long periods and reduces capacity especially on single lines. Although railways in such countries do not actively discourage the movement of smalls, they encourage wagon load traffic by adopting various methods which include the quotation of cheaper rates for traffic in wagon loads, permitting consignors to club together small consignments and offer them in wagon loads and the imposition of a small surcharge on smalls booked over short distances.

In India, Pakistan and other countries of the East, which had in the past an economy based chiefly on agriculture and the export of raw materials through ports, most of the traffic by rail moved in wagon loads. With rapid industrialization, this pattern of traffic is fast changing and the movement of goods in small lots has assumed an important place in the national economy. As the

road competition in these countries has not yet assumed serious proportions, it is now the time for railways to put the movement of their smalls traffic on a sound footing and be prepared for a stage when road services may seriously attempt to 'steal' the traffic.

In other countries, however, the railways, after a period in which their sole pre-occupation was the difficulty of dealing with all the traffic, once more find themselves affected by ever-increasing road competition with ample resources available. This competition acts in a way that makes it quite clear that cost alone does not decide the choice of transport. Other factors, especially speed, saving in handling and packing and commercial convenience, often play a preponderant part in the case of smalls consignments. It is more necessary than ever to make a thorough analysis of all the transport factors, other than cost, which the client will take into consideration, in making his choice between the railway and road transport.

By means of terminal lorry services the railway can reach clients who are not connected to the railway. There are other ways of reaching such clients, such as taking the wagons to the consignee by using special trailers or road-rail vehicles or by containers. Speed, regularity of service, use of special wagons and more organized collection and delivery services are some of the other factors that ensure a better service to the public in the matter of smalls.

IMPORTANCE OF SMALLS TRAFFIC

There is such divergence in the pattern of traffic in the various countries that while in some, most of the traffic moves in wagon loads, in others, the bulk of it is in the shape of smalls. India is one of the countries in which traffic moves mostly in wagon loads while in Belgium, it forms only 1.2 per cent of the total traffic carried.

In view of its small proportion to the total traffic handled, railways in the ECAFE Region are likely to underrate the importance of smalls traffic. In this respect they should take the cue from the railways in the European Continent. Menaced by ever-increasing road competition and with ample resources available many of the European Railways had to go all out to retain their smalls traffic by reorganizing it and providing accelerated service and other facilities. Some of the railway systems reorganized their movement of smalls traffic every few years. In Belgium, although the smalls traffic forms only 1.2 per cent of the total traffic, the earnings from smalls are as much as 11.3 per cent. After the war, Belgian Railways decided to introduce the Dutch system. They cut down loading and unloading to 39 stations as against 1,200 stations before. The concentration of traffic enabled through wagons to be made, thereby cutting out transfer sheds. Brussels functions as a central transfer shed almost on the lines of Tolbiac in Paris (which will be dealt with later in this article) and is able to make up a through wagon to practically every important point.

It was the reorganization of their smalls traffic that enabled the Continental Railways to retain that traffic and in certain cases recover traffic which they had lost. The daily average tonnage of smalls traffic on the Netherlands Railways is 3,300 tons and the Tolbiac shed alone in France handles daily about 1,00,000 loads weighing about 2,400 tons. These are by no means insignificant figures for a railway system and are invariably the

result of careful planning by the operating men concerned and frequent reviews of the working of the plans.

TRAFFIC PLANNING

To deal with traffic, whether smalls or in wagon loads, in an efficient and organized manner, very careful planning of all its aspects at every stage will be necessary. Traffic planning calls for a complete analysis of the existing average loadings according to a master chart of wagon loadings or smalls loadings. This is the method adopted by continental railways when they plan or reorganize traffic and although it involves a considerable amount of work in the initial stages, it pays ample dividends in the long run. In fact, it is the only yard stick by which traffic moving between marshalling yards, junctions, large and small centres can be measured and used as a basis for traffic planning. The following is a specimen master chart:

	A	B	C	D	E	F	G	
A	X	12	17	—	151	—	7	860
B	13	X	100	10	15	20	—	251
C	53	70	X	—	187	—	—	564
D	4	10	—	X	70	—	40	121
E	65	—	—	70	X	12	80	521
F						X	—	—
G							X	—
H								X

In the above case, station A has sent 12 wagons to station B, 17 wagons to C, none to D, 151 to E, none to F, 7 to G and 860 to H.

A master chart can be made out for smalls traffic in the same method and instead of wagons, the number of consignments and the weight should be shown. This will enable a tentative number of centres to be decided upon as also what full wagon loads can be made up and what transshipment would be necessary.

After thus analysing the quantity of traffic there is to be carried, railways use their own formulas to determine the optimum or the minimum number of centre stations that will be required for the reorganization. Although based on average figures of traffic, this investigation gives some valuable information, making it possible to base the reorganization upon formal mathematical elements and not on mere opinion which must be judged with caution. As an example, the Belgian method is summarized below:

DETERMINATION OF THE OPTIMUM NUMBER OF CENTRE STATIONS

This determination is based on the following statistical formulae and elements:

(a) Relation between the number of centre stations and the average tonnage between two centre stations.

(b) Relation between the number of centre stations and the mileage run by the lorries.

MINIMUM NUMBER OF CENTRE STATIONS

The minimum number of centre stations is attained when all the transport can be carried out by means of through wagons between the centre stations without any goods having to be transhipped.

Before smalls traffic on any railway is reorganized, a master chart should be prepared and other statistical data collected which will enable the most favourable system being introduced.

FORMALITIES AND DOCUMENTS

On railways where the capacity to handle smalls traffic is limited and the

traffic offering exceeds the capacity, the acceptance of smalls for booking is controlled by a priority register in which intending consignors are required to enter their demands. In addition to fixing priority of acceptance, this register also helps the railways to estimate the amount of traffic and to plan its movement in the most expeditious manner possible.

On certain railways, however, no priority registers are maintained for smalls and traffic is accepted freely.

The latter practice will be found extremely convenient by the trade as it guarantees acceptance of all traffic brought to the rail-head and it is advisable that priority registers for smalls, wherever in force, are abolished.

Intending despatchers are required to fill up a consignment note which acts as a contract between them and the carriers and is therefore filed away carefully. The responsibility of the carriers in respect of the goods entrusted to them for transport is also fixed in terms of the entries made in this note by the consignor and accepted by the railway. This form, which was of a complicated nature in some countries before the war, has since been simplified and a number of risk notes which consignors were required to execute have also been done away with.

Practices in this respect differ and in several countries no forms are filled at all and smalls are accepted in the same manner as parcels. In the interests of the public, all formalities in connection with the booking of smalls should be simplified and the filling up of forms kept down to the minimum.

The system adopted in France for collecting and despatching small consignments known as "colli" deserves to be mentioned here as it reduces booking operations to a minimum.

All smalls weighing 50 kg. (110 lbs.) and less come under this scheme. When such packages are presented for booking, the sender is given a form which

he has to fill in triplicate, the necessary carbon and writing materials being supplied by the railway. This form shows the following:

- (1) Sender's name and address
- (2) Consignee's name and address
- (3) Description of the goods
- (4) Weight as declared by him

The package is then accepted for booking and for freight collected stamps are issued and pasted on the form. (The system is therefore called "Postal Colli"). The railway staff then fill in certain particulars on the form such as the code number of the station, etc. The three foils are disposed of as under:

- (1) One copy is kept as station foil
- (2) One copy is given to the party as receipt
- (3) The third is pasted on the packet and no other way-bill accompanies it.

The receiving station makes out its delivery book from the labels on the packages and delivers them on presentation of the receipt.

All the leading shippers in the country have heartily co-operated with this scheme and in fact do a part of the work which should be done by the railways. They get a supply of labels, fill them up and paste them on the packets and also present a complete list of colli brought for booking. This naturally reduces the railway's work considerably and enables it to clear a large number of such packages within working hours.

ORGANIZATION OF COLLECTION AND DELIVERY SERVICES

The most comprehensive service for collection and delivery of smalls is provided by the railway administrations in Great Britain and South Africa. The former was, in fact, the first European railway which created railway-owned road collecting and delivery services and owns at present

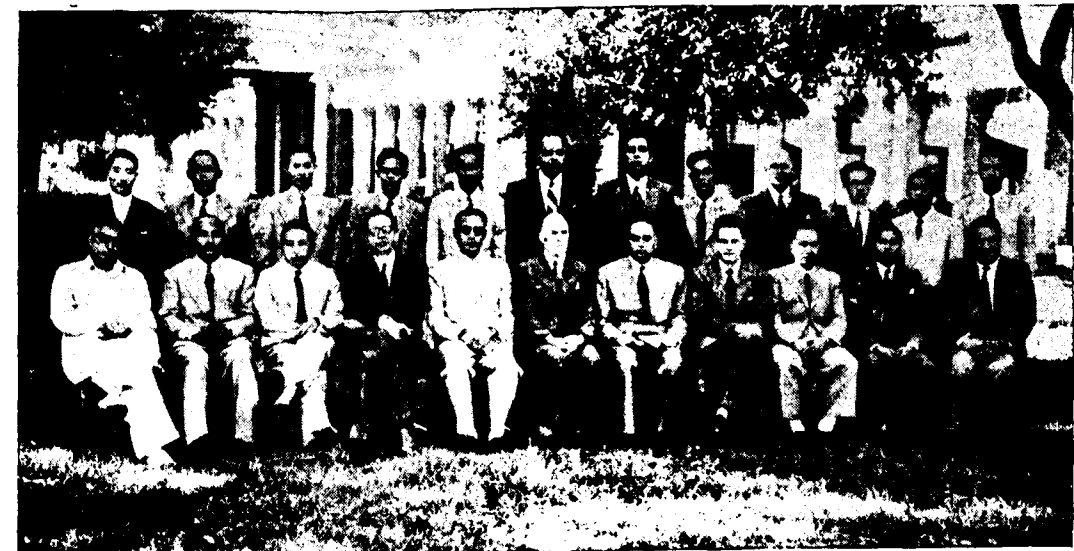
the most extensive system of road services. This practice is adopted with modifications in many countries and in others, the parties are in the main, required to make their own arrangements for carting the traffic to and removing it from the railway stations.

In Netherlands, a sister company of the railway provides the pick up and delivery services in a radius of 25 miles from centre sheds. In Belgium, under the new organization that has been set up, all collection and distribution are done by road services which cover the entire country. There is also a system of collecting and delivering postal colli, which are less than 11 lbs., by the railway and the postal authorities in places where no rail delivery is done.

In India, collection and delivery services are done by private hauliers only in certain important cities under conditions approved by the railway administrations. Unlike some other countries, there is no compulsion that clients should make use of this 'door-to-door' service and only a small part of the total smalls traffic, is therefore, carried by such services.

The French National Railways only deliver full wagon loads on behalf of certain public administrations, for example, in the case of transport of tobacco. Before the war, they were considering collecting and delivering services through their ancillary companies and actually prepared various haulage rates based on the kind of goods transported. But in spite of their diversity, these rates were not sufficiently flexible for adaptation to all the traffic variations and to all the forms in which traffic of the same kind can be transported. For these reasons the project was not followed up.

In Switzerland, the transport is carried by the so called 'official hauliers' under contract with the Swiss Federal Railways. They are paid according to the weight carried and the distance and in cases where the rates do not cover the cost, the railway subsidizes the official haulier.



Photograph showing Officer Trainees and Lecturers of the Third Operating Course held from March to June 1955 at the United Nations Railway Training Centre Walton, Lahore

There is much to be said in favour of railways organizing their own collection and delivery services for smalls. They save the client the bother of finding a haulier at two ends for the sake of a few packages and the trouble of going through the formalities at two railheads. Delivery services bring the goods to his very door and these facilities are in fact the secret behind road hauliers taking away the cream of the traffic on certain railways.

A comparison of the various practices obtaining on different railways shows that collection and delivery services can be arranged by railways in three ways:

- (1) By means of their own cartage organization operated departmentally as in the case of Britain, South Africa and other countries. (The British Railways claim that the operation of road services by railway-owned staff and equipment has been found more satisfactory than service by private hauliers and that there is an insistent and growing demand for the expansion of such services).

- (2) In co-ordination with private hauliers.

- (3) Through sister concerns formed on a partnership basis with road hauliers.

(In other countries, the above two arrangements are reported to be working extremely well. The Netherlands Railways, for example, are only concerned with the rail transport part of the arrangements. Local and zonal collection and delivery by road vehicles and the handling and administration of smalls have been put out to contract and most of this work is done by Van Gend en Loos, an undertaking which also operates a network of road services complementary to rail services. This firm is an affiliate of the Netherlands Railways and has mechanized the transshipment of goods by means of fork lift trucks, pallets and box-pallets).

In the Indian sub-continent, many clients have their own lorries and think

it more profitable to carry out their own terminal transport. Some make use of public hauliers who give them certain additional services which the railway cannot foresee in advance and include in its rates. Then there are the cheaper local modes of transport like bullock carts, hand carts etc. which are taken advantage of by smaller merchants. Collection and delivery services in a country like India should aim at giving the public the following benefits:

(1) A door-to-door service should be provided at important mercantile centres and this service should completely eliminate the need for clients finding their own transport at either terminal. There should be no compulsion in this respect, as in the case of certain countries, and clients should be free to elect or reject the service.

(2) Public hauliers, if employed, should be made to side with the railways for mutual benefit than against them.

(3) Delivery should be effected on the same day consignments arrive destination.

(4) Advance information, wherever possible, should be given to consignees regarding the arrival of their consignments and the time by which they will be delivered in their premises.

TOWN BOOKING OFFICES

In India, Pakistan and other countries, collecting centres for smalls and parcels have been established in various parts of big towns and these are called "Town Booking Offices". These centres have been found extremely convenient by the mercantile community whose premises are situated in the vicinity. These Booking Offices, which are run either departmentally or through a contractor, accept smalls for booking and issue railway receipts on the spot. At the end of the day, consignments are cleared by lorries, either departmental or private, to railheads where they are loaded directly into wagons. These offices are, in

fact, collection and delivery centres and in addition to serving the trade by providing service near their premises, avoid pressure at the central railhead by distributing the work to several local centres.

OUT-AGENCIES

In several countries in the Region, there are collection and delivery centres in interior towns not connected by rail and these are known as Out-Agencies.

Many of these are run by the railways themselves and the others by private hauliers under contract with railway administrations. Goods are transported between the railheads and the Out-Agencies by trucks which are invariably owned by private hauliers. Through railway receipts are issued to and from these agencies including in them the road proportion of the freight also. Sometimes, these agencies are as far as hundred miles away from their railheads and are mainly intended for smalls traffic.

In India, a large number of requests are received by the railways for opening Out-Agencies for the convenience of the trade and a recent press note issued by the Ministry of Railways stated that as many as 90 requests were being investigated.

TERMINAL HANDLING

Terminal, as well as intermediate, handling of smalls involves a considerable amount of transshipment from lorry to wagon and vice versa and from wagon to wagon of the same gauge or different gauges. This transshipment, which often has to be done by primitive means, consumes a considerable amount of labour but the output is so poor that the handling becomes costly. Manual handling of goods frequently results in damage to fragile and badly packed articles which in turn increases the claims bill in addition to causing dissatisfaction amongst the railways' clientele.

Railways were, therefore, obliged to develop various techniques for improved

handling of goods and introduced mechanized modes of loading and unloading goods. These include the use of containers and pallets, fork lift trucks, wagon-conveying trailers, rail-road trailers, winches, capstans, wagon traversers etc. A brief examination of some of these methods of handling will be made in the following paragraphs.

CONTAINERS

Containers were first used experimentally in 1926 but they are today a regular feature on European railways with the prospect of being adopted in an ever increasing measure in future. Railways using them have found that for a large range of smalls traffic, the expense of double handling can be avoided by the containers being craned on and off railway wagons and cartage vehicles.

Containers are usually owned and supplied by the railways but they may also be privately owned. The British Railways have found the extensive use of privately owned containers undesirable in view of their restricted availability and empty mileage. Concessional rates are offered for traffic moving in private containers and on some railways, empties are returned free of charge.

Most railway administrations favour the use and development of containers for transporting goods. In Holland, this method of transport is continually increasing in importance. In Holland, Switzerland and France, traffic has been recovered from the road, thanks to containers.

Belgium and Switzerland encourage privately owned containers while Holland discourages them.

A railway should think carefully before deciding on the type of container they intend providing on the system. The French Railways have for instance gone in for the Coder type which requires mechanical appliances at stations to handle it. In Holland from the very beginning they devised containers which could be transferred

from a wagon to a lorry and vice versa by one man.

Containers are most useful in countries like India where there is more than one gauge and frequent transshipments have to take place at junctions where the gauges meet. Goods like crockery can be very safely transported in containers than by any other means. Most containers are fitted with springs and do not transmit shocks to the goods loaded in them. By careful planning, it should be possible to get return traffic in the same containers thereby avoiding empty haulage. Other goods for the transport of which containers can be used with advantage are cooking oils, fruit juice, liquid chemicals, books, china and cloth.

SPECIAL GEAR FOR HANDLING CONTAINERS

At stations where containers are used, it will be necessary to provide fork lift trucks, mobile cranes and similar plant. It is noteworthy that on several European Railways, no charge is made for the use of such plant which is often allowed to be handled freely by the parties themselves.

A reliable method of transfer between rail and road vehicles without the use of cranes would allow containers to be dealt with at almost any stations where there are suitable road vehicles. Such a method devised by Van Doorne's Aanhangwagenfabriek of Eindhoven and known as the D.A.F. system has been adopted by the Netherlands and Belgian Railways. Small steel wheels on the containers fit into grooves both on the rail chassis and on the special road transporter unit. The road unit is merely backed up against the rail chassis and the container pulled off and pushed on by the hydraulic ram with which the road unit is equipped: the equipment on the road unit enables the container to be transported to and from ground level.

In Holland, everything is done for the customer. Handling at the station and at his premises and transport

between the station and his premises are carried out entirely by the Railway which uses for this purpose the D.A.F. unloader described above.

PALLETS

The term "palletization" is applied to the storage and/or movement of traffic in unit loads on pallets. Pallets are made of timber, steel, aluminium or other material and may be of the permanent or expendable type.

The rising cost of handling freight traffic led many European Railways to consider palletization as an alternative to the methods generally employed for smalls traffic. Pallets, which are incidentally cheaper than containers, are of two types, the flat and the covered and for movements on the platform, fork lift trucks and foot-operated lift trucks are used.

The Swiss Railways believe that there is still a large potential demand for further development in the use of pallets as traders are getting increasingly pallet-conscious. Small goods received for despatch, destined for stations having pallet facilities are sorted to destinations and distributed among pallets which have been laid out previously in station order on the floor of the goods shed. As the pallets become full they are moved into the appropriate wagons by means of trucks. At the destination, pallets are unloaded by fork lift trucks or hand pallet trucks.

RAIL ROAD TRAILERS

These trailers are used in France and the name shows their value. They can be used at each end of the journey just like a lorry. Consequently they can be used by firms whose activities are specially directed to road transport. The entire trailer is driven to a station with goods, loaded into a wagon, unloaded at the destination and driven away to the customer's premises. The use of this type of trailer has not however extended to other European countries.



WAGON CARRYING TRAILERS

Due to their high cost, these are used only in France, Italy and one or two other countries. These trailers convey entire wagons from railway stations to the parties' premises and vice versa. Special platforms at railway stations and arrangements at parties' premises will be necessary to deal with wagons in this way. Some firms provide short rail sections near their premises in order to take up wagons.

A firm without a private siding may receive wagons right up to the door of its premises. The road rollers consist of a tractor and a low level carrier wagon.

EXAMPLE OF A MECHANIZED GOODS SHED

As an example of a mechanized goods shed, a description of the Zurich goods shed in Switzerland may be given here. This shed, which deals with 2,200 tons of smalls per day, has the following features:

(a) Mechanization by tractors, elevator trucks and pallets.

(b) Palletization of smalls: 8,000 pallets of standard sizes 8 x 120 c.m. or 100 x 203 c.m. are used. Specially marked spaces are reserved for goods suitable for palletization and 80 per cent of the entire smalls traffic is palletized.

(c) Containers: Three containers can be loaded on a suitable railway wagon. Special road vehicles are used for conveyance of containers from railway to customer and vice versa.

MECHANIZATION IN ECAFE REGION

In spite of the obvious advantages of mechanization, great care will have to be exercised in countries in the ECAFE Region in the matter of railways deciding to mechanize their goods sheds. Mechanization is bound to throw a certain number of men out of employment and in countries where the unemployment problem is acute, it may be the policy of the Government to

engage as much manual labour as possible on national projects. Mechanization will also require large quantities of steel for the manufacture of containers, etc. and it may be difficult to find it as steel is still in short supply and is required for more essential purposes.

Although manual labour may be available at cheap rates, it is no reason why railways should tire their men out by primitive methods of handling instead of keeping them fresh, especially in hot climates, by saving human effort. Simple carts, fitted with roller bearings, for instance can save a lot of human labour as the resistance will be so little that a man will be able to convey goods weighing more than a ton. Carts which can go directly into wagons will be an added advantage. If a small self-propelled tractor is provided, several carts can be coupled up and pulled together from one end of the shed to the other. Before going in for these, however, sheds should first be provided with a good flooring.

It may be possible to persuade leading firms dealing in costly goods to go in for pallets or containers and a slight concession may be shown for traffic offered in containers or pallets. The saving in the cost of handling and the reduced risk of damages and claims will amply compensate the railways for the reduced charges quoted.

In cities where labour is costly and is already fully engaged in mills, factories, etc. railways can handle goods more expeditiously by mechanization. At any rate, central handling and transshipment stations for smalls, if established at places like Calcutta, Madras, Bombay or Delhi, cannot be operated without a certain amount of mechanization.

ORGANIZATION OF COLLECTING CENTRES

By its very nature, smalls traffic involves a considerable amount of work all round for booking, collecting, sorting, transit, tranship and delivery

operations. The amount of paper work involved and the number of invoices that have to accompany the goods are also very great. In addition to all this work, the cost of these operations, as compared to those necessary for transporting wagon load traffic, is high.

Besides, the Road Goods and Shunting Trains, which pick up and deliver smalls at roadside stations, are, as already mentioned, the operating man's nightmare. The average speed of these trains in many parts of the Region is about 8 M.P.H. and with terminal delays, smalls consignments do not travel even at the rate of 100 miles for every 24 hours.

The problem was so acute in the European Continent that many railways gave considerable thought to the question of concentrating miscellaneous traffic to centre stations, closing intermediate stations on main lines and completely or partially closing branch lines. They found it was advantageous to carry out transport by rail only between a small number of stations correctly choosing the points from which smalls traffic could be distributed or to where they would be concentrated by road services. This would give expeditious service, improved wagon loading, economic and efficient use of rolling stock, minimise handling operations, reduce chances of damage to consignments and serve effectively a greater area. The selection of these concentration stations was made giving due consideration to the following factors:

Geographical, junctions, contours, volume of traffic, position on main railway system, terminal accommodation, both existing and potential.

The average cartage limit allotted to a centre station for the purpose of road conveyance varied according to the conditions prevailing in the different areas.

With the reduction in the number of forwarding and receiving stations consequent on the organization of centre stations, the number of through

wagons capable of running without re-handling definitely increases. It has been estimated that it will be possible to despatch 80 per cent of the traffic on the British Railways, 50 per cent on the Pennsylvanian Railroad and Long Island Railroad and 70 per cent on the Egyptian Railways in direct wagons without re-handling.

In order to introduce the scheme, only a limited number of modern tranship sheds equipped with mechanical appliances need be provided to reduce manual handling and high labour cost.

Suitable train services will have to be provided. It would be preferable to have overnight service within a radius of 250 miles. The scheme is to minimize forwarding delays, provided collection schedules and train departures are closely related. Concentration will result in greater wagon load and improved turn round. It will be possible to run more express goods trains resulting in better usage of stock.

The arrangements on the European Railways will be reviewed briefly below:

(a) **British Railways.**—The country has been divided into approximately 280 areas. The size of these areas varies according to traffic density.

The smalls traffic may be loaded at one or two types of stations only, which in broad terms are:

(1) a selected station adjacent to the centre of the area, called a sub-railhead and

(2) the centre of the area, called a railhead.

A railhead covers the collection and delivery of traffic within a prescribed portion of the whole area. It may also deal with traffic to and from sub-railheads within its area, such traffic being forwarded to or received from sub-railheads by rail or trunk road motor. A railhead receives traffic by wagon direct from sub-railheads, railheads or zonal centres throughout the

country. The railhead is linked to one or more zonal centres by rail and/or trunk motor according to the directional flow of traffic.

Zonal centres are places selected as giving the best service alternative to the railhead when direct wagons cannot be made up. In effect, zonal centres are the only places at which transshipment from wagon to wagon still occurs. The aim is ultimately to abolish transshipment entirely.

(b) **Netherlands.**—Zonal system for the conveyance of less-than-wagon-load traffic was introduced in 1934 with a view to fighting competition. The country was divided into a number of zones and in each zone, there was a zone centre station; the organization of traffic was such that traffic moved between the zonal centres during the night. In principle, each of the 36 zone centre stations sent one wagon a day to each of the other zone centre station: a theoretical number of 36×35 wagons ran between the zone central stations to transport about 3,300 tons per day. (Through certain combined uses, the practical number is 1,000). The trains started from the zone centre stations between 18-00 and 20-00 and arrived at their respective destinations between 23-00 and 5-00. Traffic is carried in accordance with a fixed scheme leaving no choice of itinerary. Transport of goods within each zone from the centre station to a secondary station and vice versa was by rail or by road according to economic considerations. Railway wagons arriving during the night at the zonal central station were transhipped into road vehicles for local delivery or into either a lorry or a wagon for delivery farther afield within the zone. At the zone centre stations, goods destined for other zones were loaded into railway wagons in the afternoon or early evening and despatched during the night.

(c) **Belgium.**—The first reorganisation of smalls traffic was done in 1934 when 14 transfer sheds were provided. In the transfer shed of the zone, wagons which had arrived during the night

from stations in the zone were unloaded between 8-00 and 14-00 into "junction wagons" which arrived around 20-00 at the second transfer shed. Between 20-00 and 5-00 all transfer sheds reloaded the smalls from the junction stations and those from stations in their own zone into distribution wagons destined for stations in their own zone. Between the larger originating and destination stations direct wagons with only one or no transfer were possible.

A new organization has since been set up limiting the loading and unloading to 39 stations instead of 1,200 (400 of which used to have their trucking delivery service). Only a small percentage of the traffic will be reloaded and transshipment will be done only at Brussels, which is the main shed. Wagons will be loaded through for a destination if 3 tons of traffic was forthcoming. All collection and distribution will be done by road services and will cover the whole country.

ADVANTAGES

The advantages of zonal collection and delivery services of smalls can be summarized as follows:

- (a) the most effective use of rail and road according to circumstances
- (b) elimination or curtailment of transshipments
- (c) less damage and pilferage due to reduction in the number of transshipment
- (d) economy in handling staff at transshipment stations
- (e) better wagon uses by concentration of loading and by more direct through wagons.

CONCENTRATION OF TRANSHIPMENT OF SMALLS

Although a certain amount of transshipment is also done at the centre stations described above a unique example of concentration of smalls transshipment is the Paris-Tolbiac goods shed of the French National Railways. By careful planning and mechanization, the French Railways are able to handle, between 5-00 and 21-00, about 2,400 tons

of goods made up of about 1,00,000 loads ranging from machine tools of one and a half tons weight to postal colli weighing 3 kgs. (6 lbs.).

The main function of this shed is to handle smalls traffic coming from the northern part of France, including Paris and destined for the southern part of the country. The loads arrive by rail, by road vehicles or by direct delivery from consignors. The goods are unloaded at reception platforms on conveyor belts which run at 0.25 m. per second. The goods are sorted into ten stillages (special vehicles), each stillage receiving goods only for one set of wagons, standing on 10 despatch lines meant for 10 different directions out of Paris. The packages of each stillage are then distributed to the wagons of the corresponding set (averaging 16 in number) the stillage being taken to each wagon in succession. The stillages are worked backwards and forwards by motor tractors. The total number of wagons handled in one day may be some 450, depending on the number of trains despatched and the number of wagons duplicated. The following are the other interesting details about this shed :

(1) It has replaced a large number of goods depots serving Paris area and which were destroyed during the war. It is the most important link in the "accelerated system" introduced in France for the quick transit of smalls.

(2) Handles goods originating from 138 places in Northern France (including Paris) and destined for about 150 towns and zones in the southern part of the country.

(3) Tonnage received : by rail 47 per cent, by road 45 per cent, and by direct delivery 8 per cent.

(4) There are 10 tracks, each 220 metres long arranged on either side of 5 ground level islands of 8½ metres average width.

(5) There are 4 conveyor belts, 280 stillages and 88 petrol tractors for towing them : 3 travelling cranes and 2 overhead transporters.

ANALOGY APPLIED TO SOUTHERN RAILWAY

If zonal collection and delivery services for smalls are to be organized at Madras, arrangements on the following lines will be necessary :

(1) A central goods shed will have to be opened at a suitable place in Madras served by both the Broad and Metre Gauges.

(2) Smalls traffic booked at the various stations, town booking offices, etc. within a radius of 10 miles should reach this shed before 19-00 by road or rail. The shed itself will be open for booking smalls.

(3) Sufficient mechanized equipment should be provided to complete loading, transshipment, etc. before 22-00 when trains for the different directions should leave the shed.

(4) Running at an average speed of 10 M.P.H. the trains should be able to deliver the goods up 100 miles by 8-00 next morning and up to 300 miles on the third day.

(5) The shed can also undertake gauge-to-gauge transshipment of all smalls routed via Madras while wagon load traffic can continue to be routed as at present.

(6) Similar central depots can be established at other large goods booking centres like Bezwada, Hubli, Bangalore, Trichinopoly and Madura.

(7) Collection and delivery services within a radius of 25 miles from the centre stations should be done by road transport either departmentally or through an affiliated concern.

SPEEDING UP OF TRANSIT—GENERAL METHODS

The demand for speed, increasingly evident before the war, has been intensified and many factors have contributed to this development. The holding of smaller stocks by traders has been encouraged by shortage of consumer goods, the advantage to the trader being that less capital is tied up, less storage room is required, stocks

be kept in fresh condition. An important effect of transport arising from this policy is the smaller size of individual consignments.

The object should therefore be to provide services which will ensure delivery of a maximum proportion of traffic the morning after acceptance. Before the war, the Green Arrow arrangement in Britain ensured this by following up the transit of a consignment by wire from point to point.

SPECIAL VAN TRAINS ON GERMAN RAILWAYS

One of the first steps to improve speed was the introduction by the German Railways of specially equipped collecting trains consisting of a powerful locomotive and two or three exceedingly large interconnected vans which ran at very high average speed and collected and delivered smalls at stations. Later, the special vans trains were replaced by Diesel motor trains and the system has also been followed in other countries.

R.A. AND R.O. TRAFFIC IN FRANCE

In France they have two types of goods services, the R.O. (Regime Ordinaire) and the R.A. (Regime Accelere) for which different tariffs are charged for wagon load traffic. All smalls traffic, however, is sent by the accelerated service without extra charge to overcome road competition. The wagons are hauled by accelerated goods trains which are, in some cases, dealt with at separate marshalling yards, earmarked for accelerated traffic. In other marshalling yards, a few lines may be earmarked for such wagons.

In other countries, wagons generally travel between the centre stations by fast goods trains. Pick up and distributing wagons travel by stopping passenger trains. In Italy, on important routes, there is an express service by speeded up goods trains but a surcharge of 25 to 50 per cent is imposed.

On railways on which an accelerated service for smalls is in existence, the timings of these trains are worked out in great detail and published in a special time table. The time table shows the time of departure and arrival of pick up trains, the connecting trains, the code numbers of vans to be transferred from one train to another and the day and time of arrival of the van at the destination. To enable this to be done, codification of smalls will be necessary and this is explained below.

CODIFICATION OF SMALLS

Codification of smalls is done by substituting the station name by a letter, number or combined letter and number code. All smalls consignments are clearly marked with that number. The objects are :

(1) to avoid misrouting due to badly written station names or insufficient geographical knowledge of staff ;

(2) to rectify misrouting, if any, at the earliest opportunity and

(3) to facilitate the work of loading and unloading.

All sorting in France is done according to the code system. To take an example : "4 PERPIGNAN 20" (Perpignan is in Southern France).

In the North East and West Region, all smalls beginning with 4 are sent in one wagon to Paris-Tolbiac which then reloads it in a wagon marked "4 Perpignan". In Perpignan, it is again reloaded into a wagon marked "4 Perpignan 20" and reaches its destination which is 20.

In Belgium, all packages are labelled with a destination number of three digits. The destination number is either a station or a line with a number of smaller stations, the distributing wagon thus has the same number as the label. Next to each door is a special label holder for labels of 210 x 293 m.m. (8" x 11½") and the labels are inserted in these holders.

EXPRESS GOODS TRAINS

In countries of the ECAFE Region, like India, the running of express goods trains for smalls traffic will be greatly appreciated by the public. A beginning has been made in India from October 1954 to run such trains between Madras, Bombay, Delhi and Calcutta at accelerated speed. Goods are accepted on nominated days for specified destinations by prior arrangement with consignors and the goods are scheduled to reach the destination on specified days.

GUARANTEED DELIVERY

In Germany, railways are in a position to inform a shipper when and by what train his traffic booked from a port, say Hamburg, will reach a station in the interior like Munich for example. Connecting trains at junctions wait for a specified time to maintain connection. This system has been considerably improved upon after the war, although it was in existence even before the war.

USE OF LOCO TRACTORS

Another method of running an accelerated service for smalls will be to stop Road Goods Trains only at watering stations, unload all the smalls for the section and deliver them by Loco Tractor trains. These tractors can be operated by traffic staff and can be run whenever a path is available. They can be started by pressing a button and can also be used for local shunting at stations. Loco Tractor trains can be short and can be accommodated in small sidings or behind trains if crossings have to be made.

To take a concrete example on the Southern Railway, these tractors will be extremely useful on the Bezwada-Madras section which is an extremely congested one. Road Goods trains on this section seldom get a chance of reaching their destination on the same day. If Loco Tractor trains are introduced on this section for Shunting and Road Goods, steam trains need

only be stopped at watering stations, the service between watering stations being performed by the Loco Tractors. These short trains can connect the steam trains at watering stations and also perform the necessary shunting for attaching and detaching the loads.

SHED LAYOUTS—GOODS SHEDS

During recent years, considerable research into the methods of goods shed working has been undertaken. The L.M.S. Railway of Britain was the pioneer and applied the "Time Study" methods which mean, in fact, the breaking down of the throughout operations into component parts, thus revealing where bottle-necks and waste occur. (Trainees who attended the U.N. Railway Training Centre got quite familiar with this method as a number of such studies were made by them during the study trips).

The designing of goods sheds is the favourite subject of many a leading railwayman and an eminent authority on railway operation, M. Marchand of the French National Railways has dealt with the question in great detail in his article "La Halle Unique" published in the "Revue Generale des Chemins de Fer".

In continental Europe and America, goods sheds are seldom used for wagon load traffic, smalls being always kept separated from such traffic. Incoming and outgoing traffic is also kept isolated and good floors are invariably provided. It is essential to have sufficient track length to load directly to many destinations. Most railways have high platforms except the French, who have platforms at rail level which does not allow through loading but brings cart floors at wagon floor level.

Switzerland.—The goods shed at Zurich has a horse-shoe layout. The outward and inward goods sheds are situated on either side and the goods office in the centre. There are six lines for shunting between the inward and outward platforms which are of the Echelon type, each holding

4 wagons. The inward holding capacity is 44 wagons and outward 28 wagons, to deal with a total of about 220 wagons per day.

America.—The Atcheson, Topeka and Santa Fe Railroad has built a new freight station in Chicago which is equipped with modern communication and towing system. The new facility is served by six tracks which will accommodate a total of 160 wagons

This is known as the "toweyor" and consists of a roller type continuous chain conveyor installed in the floor of the platform.

Britain.—The Derby goods shed on the L.M.S. is 145×137 yards and has 18 tracks of 100 yards length. This shed handles a daily tonnage of 1950. All tracks are connected outside the shed by a wagon transfer. An overhead crane runs round the shed and capstans are used to empty tracks and fill them with new loads.

The Birmingham goods shed on the L.M.S. is 220×120 yards with 8 loading tracks of 165 yards average length. The long conveyor belt used in British goods sheds enables as many as 10 wagons to be unloaded in half an hour.

TRANSHIP SHEDS

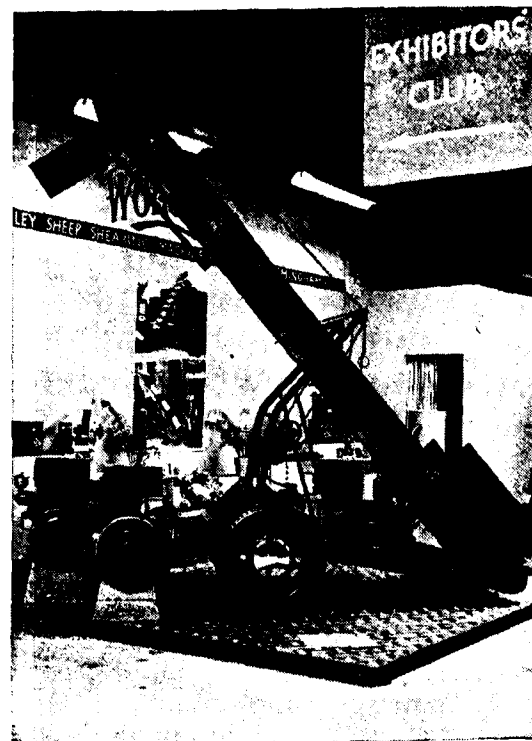
Transshipment depots have always been covered sheds with raised platforms, the number, width and length of which depending on the tonnage to be handled. For preliminary calculations, the formula that 10 sq. ft. will be required for every 110 to 176 lbs. handled is used on some railways.

At Brussels transshipment station, the platforms are interconnected by lifting bridges worked electrically at the ends of the platforms and halfway along them.

The maximum length of platform allowed in Switzerland is 460 feet with a certain number of parallel transshipment sidings alongside intermediate platforms.

In France, after re-examination of the problem, it was decided to retain the classical type of depot with wide transshipment platforms and a very big platform at the side for local traffic when the tonnage to be transhipped does not exceed 1,000 tons a day.

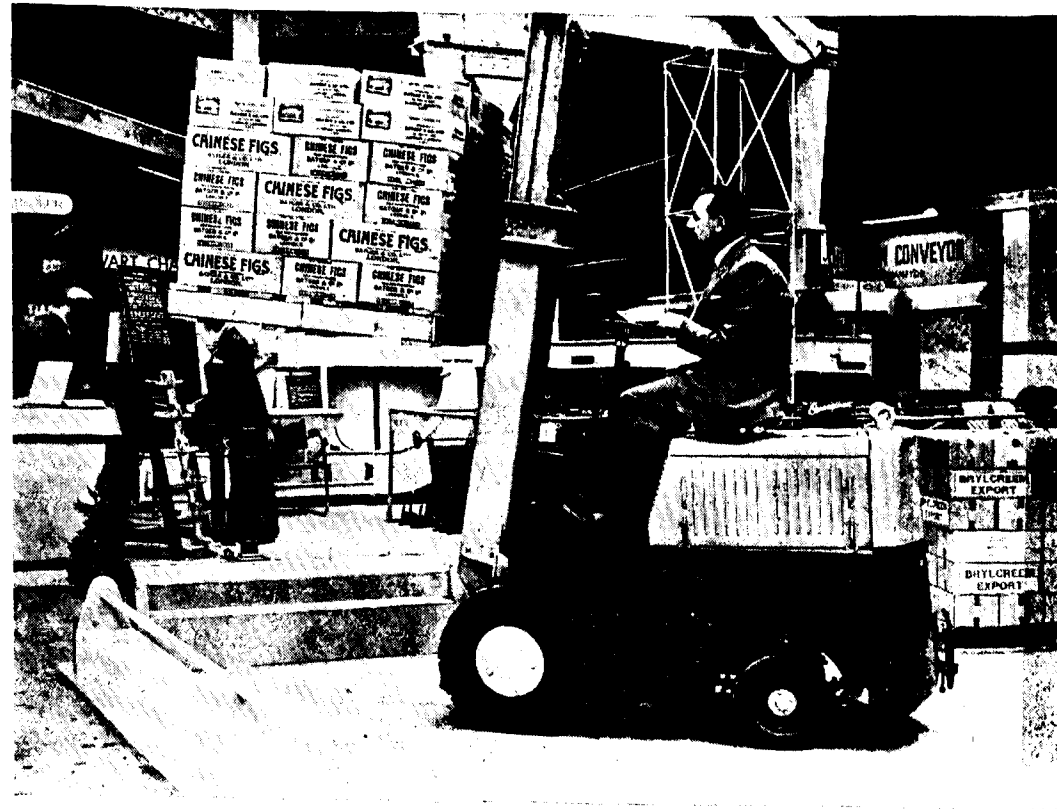
The British have a solution for larger depots. The wagons to be transhipped are put into position on the



Portable elevator used for loading and unloading open wagons
(Courtesy: British Information Services)

under one roof permitting uninterrupted freight handling operations regardless of weather conditions. During construction, special care was taken to avoid obstructing the platform with columns. An outstanding feature of the new freight station is the under-floor towing system installed for hauling merchandise on platform trucks between unloading and storing points.

unloading sidings, the parcels are unloaded onto conveyor belts which take them to the trucks on which they are grouped according to destination. As soon as the trucks are full, they are taken by tractor to the loading yard and the goods are transferred into the wagons corresponding to their destinations. The platforms of the trucks are naturally on the same level as the floor of the wagon to facilitate handling.



"Conveyancer" Fork Lift Truck, petrol-driven, capacity 13 cwt.

(Courtesy: British Information Services)

COMBINED GOODS AND TRANSHIP SHEDS

In countries like India and Pakistan in the Region, goods sheds and tranship sheds are usually separated and constructed in different part of a station. At junctions where the Broad and the Metre Gauges meet, it is not uncommon to have a B.G. goods shed,

an M.G. goods shed and a tranship shed for gauge-to-gauge transshipment. Quite often, actually in everyday practice, loads are sealed from the goods shed to the tranship shed and vice versa resulting in delay not only to the wagons but also to the consignments load in them.

Such countries should, therefore, take the cue from those who have designed

combined goods-cum-tranship sheds and are successfully operating them with great efficiency. The Paris-Tolbiac shed may be called the greatest achievement in this respect. Even if it is not possible to mechanize the sheds as is done in the West, railways in the Region can follow the general layout of such sheds and have their own



Frozen meat being stored in a railway frozen meat container

(Courtesy: British Information Services)

methods of handling traffic. It is however pointed out that a minimum amount of mechanization will be necessary if sheds are to be operated on modern lines and traffic in bulk dealt with expeditiously within the working hours of the sheds.

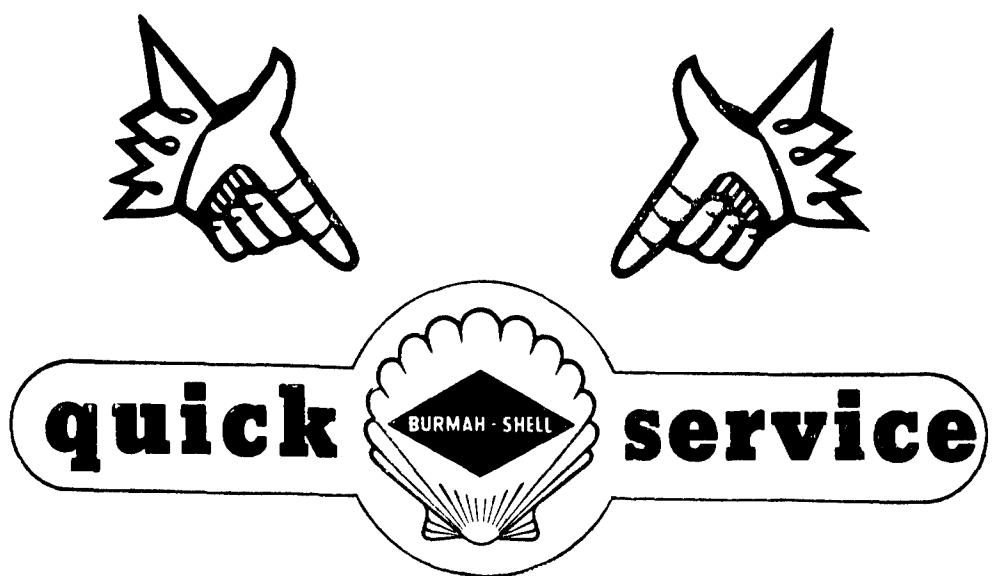
CONCLUSION

It will be clear from the facts presented so far in this article that the transport of smalls traffic is one of the most important obligations which railways have to discharge in the rendering of their service to the public and most administrations have therefore given the matter their earnest attention and consideration. The traffic has also great significance from the standpoint of national economy and the growing industrialization in many countries in the Region. As most of the commodities booked as smalls are consumer goods, organized transport of

sundries is a matter of great importance to the public at large.

Railways, who have not so far organized their smalls traffic and placed it on a sound footing, should initiate investigations into the matter and take steps to give a co-ordinated smalls service to the public, keeping the following objects in view:

- (1) Free, unrestricted booking of smalls with the minimum formalities
- (2) Collection and delivery services to be arranged from and to clients' premises wherever possible
- (3) Concentration of smalls in centre stations with a view to handling the traffic expeditiously and making up better wagon loads
- (4) Accelerated train service for smalls traffic
- (5) Guaranteed delivery and notice of arrival to consignees.



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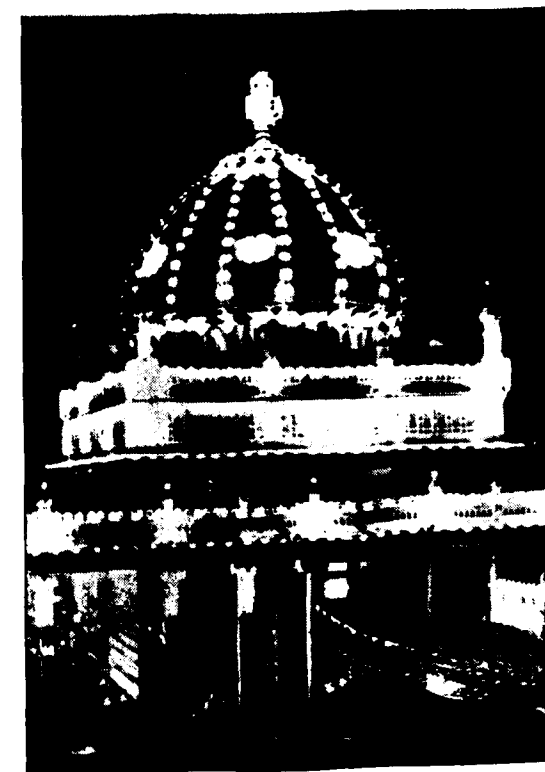
SHELL X-100 MOTOR OIL

Dargah of Hazareth, Natherewalli

The shrine (Dargah) of Hazareth Natherewalli (Tabalay-Alam-Badshah situated in the midst of the Town of Tiruchirapalli near Trichinopoly Fort Station of Southern Railway), dates back to the 11th Century A.D. The Saint according to historical facts was one of the very first of Muslim Missionaries to have come to South India from Arabia, during the time of Raja Raja Chola, when the Chola Empire was at its zenith. The Dargah,

the Saint was placed by the Hindu ruler.

The Saint is venerated both by Hindus as well as Moslems and every year during the month of Ramzan, according to the Muslim calendar an annual celebration known as the **Sandankoodu** is celebrated. Thousands of people from all parts of India flock to participate in this festival and pay



as one may see, is a masterpiece of craftsmanship blending the Moslem type of architecture with Hindu type. Its dome, probably one of the biggest in South, gives one an insight of the skill of workmanship prevailing in those days. The present site on which the Dargah was built is part of the vast landed property, which with other villages was given away as inam lands by the Maharani Mangammal, in recognition of the high esteem in which

homage to the Saint who is interned here. This Dargah has equally figured in modern history, for it is here that the then Nawabs of Carnatic **Mohamad Ali** and **Chanda Sahib** are interned.

History records that the dome was built by the Nawab of Carnatic, **Mohamad Ali** and was planned and erected with the help of French engineers.

Badami Cave Temples

P. S. Vedhachalam
Publicity Inspector



A general view of Badami Caves

SEVENTY-THREE miles south of Bijapur, 42 miles north of Gadag and 78 miles from Hubli, is Badami, well-known for its cave temples and Jain excavations, which are ascribed to the 6th and 7th centuries A.D. The town of Badami is 3 miles from the railway station Gadag-Sholapur section (Southern Railway).

Badami (Vatapipura) was the first capital of the Chalukyan Kings of whom the greatest monarch was Pulakesin II (608-42). Pulakesin II was the grandson of Pulakesin I (550-66 A.D.) who established himself as lord of Vatapi, the modern Badami, now in the Bijapur district of the Bombay State. Pulakesin II was the contemporary of Emperor Harsha (606-47) of Northern India. Harsha sought to bring the Deccan under his domination, but Pulakesin II repulsed his attack. Pulakesin was so famous that the distant king of Persia exchanged embassies with him. A year after the

visit of Hiuen Tsang, the celebrated Chinese Pilgrim, Narasimhavarman, the Pallava King of Kanchi, who became the paramount power in the Peninsula, defeated the Chalukyan king and took Badami in 642. The Rashtrakutas occupied it in 753. Even then the country was known as Maharashtra as it is now. Colonel Thomas Munro took Badami from the Mahrattas in the year A.D. 1818.

The Fort of Badami is to the North-East of the town : its caves and temples bear testimony to the former eminence of Badami. Three of the Cave Temples are Brahminical in origin and date from A.D. 550 to A.D. 580 ; the fourth is Jain and is said to date from A.D. 650.

The first Cave excavated about 50 feet up in the face of the rock is dedicated to Siva. Here, some of the sculptures which disclose a high degree of excellence are the Pillars, Dwara-palagars, Nandi, Vishnu, Harihara,

August 1955

BADAMI CAVE TEMPLES

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One of the Caves at Badami

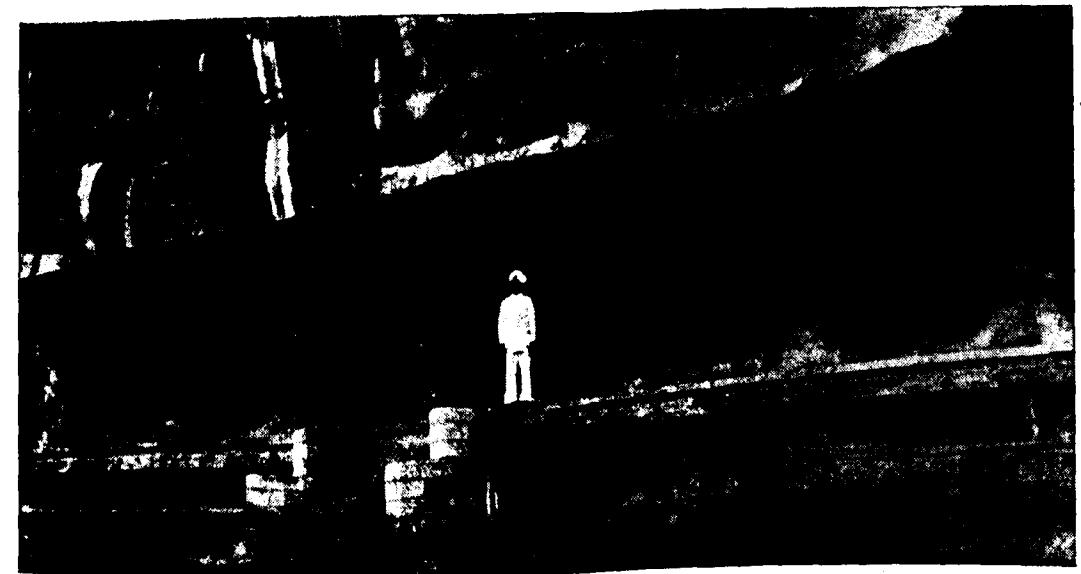
Ardhanariswarar, Durga, Ganapathi, Skanda, etc.

The second Cave Temple is higher up. The carvings relate to Varaha Avatar or Vishnu in the form of a Boar, Vamana or Dwarf Avatar of Vishnu, Vishnu with four arms riding

on Garuda and the ceiling containing a lotus with fishes round it. The figure of Krishna may be seen on the top of the wall in a frieze.

The third cave is a perpendicular rock. It contains "one of the most interesting Brahmanical works in

Another Cave at Badami



India" according to Dr. Burgess. Eleven steps lead up to the cave. The representations worthy of note here relate to Ardhanariswarar, Siva and Parvati, the male and female figures in one; there are also traces of paintings visible on the lower side of the caves and the roof of the verandah. The other figures carved in this cave temple refer to Narasimha, Hari-hara, Vamana Avatar, Vishnu reclining on Adishesha and the Varaha or Boar incarnation of Vishnu.

The fourth or Jain Cave overlooks a pretty lake and commands a fine view. This is a broad overhanging cave, but cut out of the rock. The Jain divinity Parasnath and the image of Gautama Buddha as well as the statute of Mahavira can be seen here, beautifully sculptured.

About 6 miles from Badami is the village Paresbgad with its famous temple of Sri Banasankari.



Temple of Sri Banasankari



The Care of Teeth

Dr. L. R. Parthasarathy, M.B.B.S., D.M.R.
Assistant Surgeon, S. Rly., Perambur

I saw an advertisement of a tooth paste with an illustration of a man who is afraid of smiling. He closes his mouth and blinks with a horrified look. The advertiser obviously wants to bring home his point that people having bad teeth must feel ashamed of showing their dentures.

While it is a fact that such an advertisement is not of good taste it cannot be denied that there is truth in it.

The state of the teeth of the people in our country is highly deplorable and it is high time that we should plan and work out a national scheme for education and propaganda for the health of teeth.

Oral sepsis is often mentioned as an important cause of a variety of diseases from anaemia to arthritis and from myalgia to myocarditis. A deficient diet means bad teeth—bad teeth means bad health. Nutritional treatment of some oral diseases like tooth decay (dental caries) and Pyorrhoea is increasingly being recognised. Malnutrition and particularly vitamin and mineral deficiency (rickets, etc.) occurring during the formation of teeth may result in their improper development and predispose them to caries. Dental caries is common among children. To help them develop healthy teeth and to prevent caries, a well-balanced diet is essential. It should

contain milk, eggs, leafy and root vegetables, some fruit (an orange or a tomato), cereals, potatoes and fats in sufficient amounts to meet the full caloric requirements.

I had a case of chest pain of a most incapacitating character. All the examinations were negative except the presence of a dental sepsis. He was, therefore, referred to a dentist. To my great surprise, attacks of chest pain completely disappeared as soon as necessary extractions were done. It should be realised that it is not a complaint which requires treatment but it is the patient who needs it in respect of a complaint. The patient should be considered as a whole and not as one placed in water-tight compartments of different systems. The discovery of the patient "as a man" in America today is hailed as the greatest discovery!

Great care of the teeth is required during the eruptive stage and periodical examination of the teeth by specialist during this period should be arranged. The importance of ante-natal care of the mother should be stressed.

Dental caries may even be described as loss of Dental structure itself. The presence of acidity preformed in food or developed by bacterial activity on the food-residues around the crevices of the teeth appears to be an important factor in the erosion of the dentine and enamel. The contact of acid with the

tooth surface is necessary to produce caries. Soft drinks containing considerable concentration of organic acids have been observed to produce caries. Fermentable sugar is an important dietary factor in the promotion of caries. The use of flouride in the prophylaxis of caries is an important advancement in the control of caries. The places where flourides occur naturally in the water supply, the incidence of caries is significantly low. Of course, pyorrhoea, gingivitis, sore gums, gum boil, etc. are common diseases with teeth which only a doctor would be able to advise and guide the patient.

A tooth brush should be used properly according to the technique prescribed by a competent authority and should be well cleaned and stored for future use. Many tooth brushes are likely to be unsatisfactory because of caked dentifrices and food debris sticking to the root of the bristles. The brush should be so shaped that it fits the teeth for easy and thorough cleaning. Gentle massage of the gums promotes firmness for teeth. Equal, if not more attention should be paid to massaging

of the gums also. There ought to be a routine inspection and cleaning of the tooth brushes. An unclean tooth brush used in the wrong way will do more harm than good. There is a tendency nowadays of adding medicaments to the tooth pastes. Even anti-biotics like Penicillin are added. I think these should be discouraged. The teeth should look pearlwhite and cleanliness of teeth is a prerequisite for a healthy body. It is needless to add that clean teeth is also a factor for social success.

We have, of course a dental clinic for Railway employees at the Headquarters (Madras) but this is not enough. We must have full time doctors who should work as qualified dentists in at least each district headquarters. Training in dentistry could be given to a few chosen doctors with refresher courses, wall charts and cine films to keep them conscious of dental hygiene. This will go a long way to improve the general health of the Railwaymen. It is my earnest plea that attention should be directed in this field and we must have a group of well trained dentists in our Railway to meet the demands.

OBITUARY

We deeply regret to announce the death, on 25-6-1955, of Sri V. Harihara Iyer, District Commercial Superintendent, in charge of Bangalore-Salem Traffic Survey, at Salem as a result of injuries sustained by him in a jeep accident.

The late Sri Harihara Iyer was born on 1-11-1920. After a brilliant academic career, he entered the Ex. M. & S. M. Railway as a Probationer in the Transportation (Traffic) and Commercial Departments on 17-10-1944 and was posted to a working post as an A. T. S. on 6-1-1947. He was promoted to the Senior Scale on 27-9-1954.

In his death, the Railway has lost a promising and conscientious officer.



Flowers

V. S. Shanthalakshmi

FLOWERS—about the use of flowers in our homes, we can write at length. We cannot but adore their beauty, their sweet fragrance, captivating colours, velvety smoothness—exquisite qualities that are always associated with quite an amount of sentiment. How often have we not seen even insignificant insects like bees and butterflies humming and hovering over flowers in our garden with joy. Many a poet has drawn his inspiration from a red rose in its full bloom or the glory of a meadow in spring. The mild scent of jasmine or rose wafting in the gentle breeze of a moonlight night has been the background for quite an amount of romances both ancient and modern.

The English have a fascination for roses red and white. In fact it was their ensign during the 'wars of the roses'. "Black Beauty"—a variety of deep red rose is quite often used by the Persians in their crests. Nehru had this, his favourite, button-hole even during his recent tour in U.S.S.R. The Czechs have lilies. And Lotus in which dwell our goddess of wealth and goddess of learning is held dear to our hearts.

We worship our gods with flowers and that gives it a touch of religious aura. In all our South Indian festivals flowers are a 'must'. And does

it not form one of our chief head decorations too! No South Indian girl need be told about the numerous ways of stringing the flowers into a 'veni' and the colour combinations for a 'kadambam', to decorate her hair with. But using flowers as a decorative accessory for enhancing the beauty of one's home is altogether a different affair. It is a magnificent work of art by itself. One can't really imagine what a difference a vase of flowers makes in an otherwise drab looking drawing room—the amount of warmth and colour it imparts is simply wonderful.

And a few leaves too at times, with flowers are excellent for decorating houses—the various crotons, ferns, creepers with tendrils are quite suitable for this purpose. They are quite inexpensive once you know how to preserve them properly.

Cut flowers are prone to wither because they cannot obtain sufficient water through the stems to overcome evaporation. There is then the problem of bacteria. The microbes multiply in water, clog and destroy the stem tubes. Charcoal, salt, camphor or ammonia added to the water in the vase in small quantities retards bacterial growth.

Flowers should be cut early in the morning or after sun down. Cut stem

at an angle to increase water intake,—use a sharp knife in preference to shears. Soak thoroughly before arranging. And daily the water in the vase should be changed and the stem cut. Single ends by wrapping flowers in a bath towel with stems extended.

Hyacinth, narcissus, etc., should have their jelly-like sap squeezed from ends of stem to facilitate suction of water. Camellias, gardenias, etc., take water only through petals. So wrap these in wet tissue to preserve them and spray while on display. Hydrangeas and other flowers with woody stems should have 2 inches of the bottom of the stem pounded. Ferns may be stored in wet newspapers, in a cool, dark place. Water lillies may be forced to remain open by pouring a few drops of warm paraffin in the centre while the flower is open. And to open a partly blossomed bud to full bloom, don't handle it with your fingers but blow hard inside it.

If the flowers are from your own garden they should be cut at the proper stage of development—Dahlias when fully open; gladioli when the first floret is open; peonies when the petals are unfolding and roses before buds open. In general they should be cut before they are quite fully open.

The flowers, if they are not to be used as soon as they are received, should be placed in a bucket of cold water and set in a cool place for an hour or so. A fresh supply of cold water should be ensured. If flowers are received by express or other shipment in a seemingly hopeless condition, they can be revived by placing them in a container of water hot enough to steam for a few minutes. Then remove them, container and all to a cool, dark place. They will revive in about an hour. When flowers begin to wilt they can be made to last longer, by laying them in a basin or tub so that the water covers the entire stem.

One danger is choking the stems by crowding them within the narrow neck

of the container. Remember flowers must absorb certain elements from the air and through water. It is much better to distribute the flowers in two containers than crowd them into one where they are sure to wither soon. Never allow the ends of the stems to touch the bottom of the container. While fresh air is always beneficial to flowers, avoid draughts passing directly over the blossoms. Do not place them in direct sunshine.

The arranging of flowers in a vase needs quite a bit of aesthetic sense. For tall containers, flowers like tube rose, etc., give elegance. Cut stem of choice flower for highest point in the vase. Have a design or pattern to arrange the flowers; start with triangle in three dimensions, place a flower at one corner, the second one to the right and forward, the third to the left opposite the second flower. Add more flowers of different lengths to fill. But buds and tendrils fall naturally regardless of height or position.

Select a focal point to which the eye should be drawn. Place the best flowers at this point. Open roses, gardenias, and camellias make good focal points. To avoid confusion in design leave some empty space towards edges. Always avoid a square or zig-zag line. The design should be similar to, or contrasting with, the design on the container. Table centre pieces should be low. Planned arrangements should be made so that placed together they would appear as on harmonious display. The design should be in balance, preferably in a symmetrical balance. A figure in the container may balance colour in a flower, etc., but always avoid mathematical precision.

Flowers fall into two groups—round shapes (roses, carnations, tulips, daisies, zinnias, etc.) and elongated or spear shapes (gladioli, snap-dragon, hollyhocks, desphirium, etc.). A good arrangement combines both. If one shape is not available leaves and ferns may be of help.

Sort colours first. Colours should be arranged light on top and dark at the bottom. If you have various shapes of one colour, graduate them. But if only a few blooms are dark, use them as an accent at the top or focal point desired. Flowers should harmonize in texture with each other and with the container and table cloth; also if possible with the furnishings and the style of the room itself. Delicate fine textured flowers do not mix well with heavy coarse ones. Stones, shells, driftwood.

seed pots, gourds, fruits, miniature gardens, weeds, etc., add to the beauty of the display if arranged dextrously. And your flower vase may be almost anything—tea cups, tea pots, mixing bowl, jar, pie plates, silver or copper ware, a soup tureen, a shell, an old jewel box, etc. And don't be surprised if I tell you that I once saw a wooden shoe serving as a novel flower vase! With all the gay coloured flowers arranged skilfully and with taste, it did strike one as a lovely piece.

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THE LEADING PUBLICATION SOUTH OF THE VINDHYAS



(Left to Right) HAIR STYLES IN INDIA

1-(a) Double-legged twist tuft
(b) Ajanta tuft
(c) Single-legged twist tuft

2-(a) Mat tuft
(b) Folding tuft
(c) Samsaram tuft (family)

3-(a) Rajakumari tuft
(b) Bend tuft
(c) Burma tuft

4-(a) Pinnal Kondai
(b) Kondai of dry hair fashion
(c) Double Pinnal Kondai

5-(a) Double Vadai Kondai
(b) Money Purse Pinnal
(c) Gujarati Kondai

6-(a) Circular Kondai
(b) Punjab Kondai
(c) Sungu Ring Kondai

7-Bent Money Purse Kondai

8-(a) Double round Kondai
(b) Malabar Kondai (In Tamil Nad it is called
Kodall Muduchi)

(c) Double Paniaram Kondai (Indian Cake)

9-(a) Josiar Kondai
(b) Ring Kondai
(c) Cooly Kondai

10-(a) College Kondai
(b) Crop Kondai
(c) Naradar Kondai

11-(a) Nurse Kondai
(b) Bengali Kondai
(c) Ball Kondai

12-Konjee Kote Kondai. (This is a form of
hair dressing done by the Kothas residing
in the Nilgiri Hills)

13-(a) Basket Kondai
(b) L.T. Kondai
(c) Snake Kondai

14-Butter Roll Kondai. (A kind of hair dressing
of Todas)

15-Ringlets

16-Curls in the hair net.



Children's CORNER



SAFETY FIRST AND ALWAYS

ONE bright morning two boys were waiting for a tram to take them to school. Now instead of waiting just at the spot where the tram had to stop, they were waiting a little ahead. The tram came speeding along towards them, when suddenly one of the boys shouted excitedly, "Let's see who can jump on first before the tram stops". Both rushed for the first place. The boy in front came level with the tram, still moving rather fast, reached out for a door handle, got a grip.

But because the tram was moving fast, his hand slipped, and the boy was thrown off with force on to the road. Rumbling up behind was a big motor truck, which hit the boy. There was a screech of brakes as the truck driver pulled his lorry to a sudden stop. There, to one side lay the poor boy, very still, and with blood oozing from a wound in his head.

Now you will want to know what happened to the poor boy. Well, anything could have happened. He may have been killed, or badly smashed up so that perhaps for the rest of his life he may have been without both or even one eye, or may have become an idiot. But, I am sure you can guess what I would like to talk about this month. Supposing we call it the story of 'Safety First'.

If you live in a big city like Calcutta you must have seen a number of notices on the city streets near busy crossings, and with traffic policemen controlling the movement of cars, buses, pedes-

trians and so on. If you have ever walked or travelled over a railway level-crossing, you may have noticed a signboard with these words "Beware Railway Crossing". If you go into a large factory, or perhaps into an electric power station, you will notice a number of these 'safety first' warnings all over the place.

These warnings are there to tell people to be careful of machines, electricity and so on, which can swiftly cause the loss of life; but in our everyday lives there are many little things which also need this warning of 'safety first', and for which no signboards can be put up. As youngsters you may perhaps not know the dangers, or your curiosity may lead you into trouble. So let us see where some of these dangers can lurk.

Supposing your father happens to own a motor car some day you would like to drive it yourself. Well, you have watched how Dad turns the switch key and pushes a button on the dashboard, and lo, the car starts purring like a gigantic cat! So one day when nobody is looking, you find Dad has left the key in the switch, and you put an inquisitive finger on the starting button, and your foot on what looks like a little piece of metal under the steering wheel.

There is a roar as the engine starts, and you twiddle something on the steering wheel column when the car leaps forward like a mad horse. Now what happens to you? Well, fright has gripped you, and you lose your head. Within a few minutes perhaps both you

and the car will be badly smashed up. So don't play with machinery of any kind.

Just a little box of matches, a nice pile of wastepaper and oh what a nice bright, bonfire you can make! So out comes a match, then a scratch on the box, a flame leaps to the tip of the match and the wastepaper is soon merrily blazing. But perhaps this little bonfire may be too close to some other things in the house which can burn easily. Now this may happen when mother and father are out of the house. So, what happens. The little wastepaper bonfire becomes such a huge bonfire that the clanging fire-engines are soon on the spot squirting powerful jets of water to save the house. So, don't play with matches.

Now isn't that a grand radio set on the table. One day when you are alone in the house you try and switch it on, just like mother and father do. But when you twiddle the knobs nothing happens. So you look behind the set and touch one of those wires. Before you know what has happened you feel as if a mule has kicked you across the room. That was only an electric shock, and you're lucky you are still alive, because shocks are tricky things.

Sometimes you just feel that mule-kick, sometimes it knocks you flat on the ground and senseless, and quite often there is such a surge of electricity in the shock that once you reach the floor you never get up again, because the shock has killed you. So, whenever anything goes wrong with electrical things in the house—don't touch wires or do any fiddling yourself.

You may be living not far from some kind of a railway bridge, which spans a river. Well one can do some tricky things crossing bridges. Two boys may want to defy one another that they can walk across the bridge on the railhead. It is quite a balancing trick. So off you go doing a sort of tight-rope walk. Way down below is the muddy waters of the river. You look down, get scared, topple and in

a few seconds, the river is all over you. If you can swim, you are lucky. If you cannot, your only hope is that someone who can swim is nearby to haul you out of the river. If there is no such person, well, you may never come out of the river alive. So remember, don't try balancing tricks on any kind of bridge, or on railway tracks.

Boys like to fly kites, and if they have a nice large field or playground,

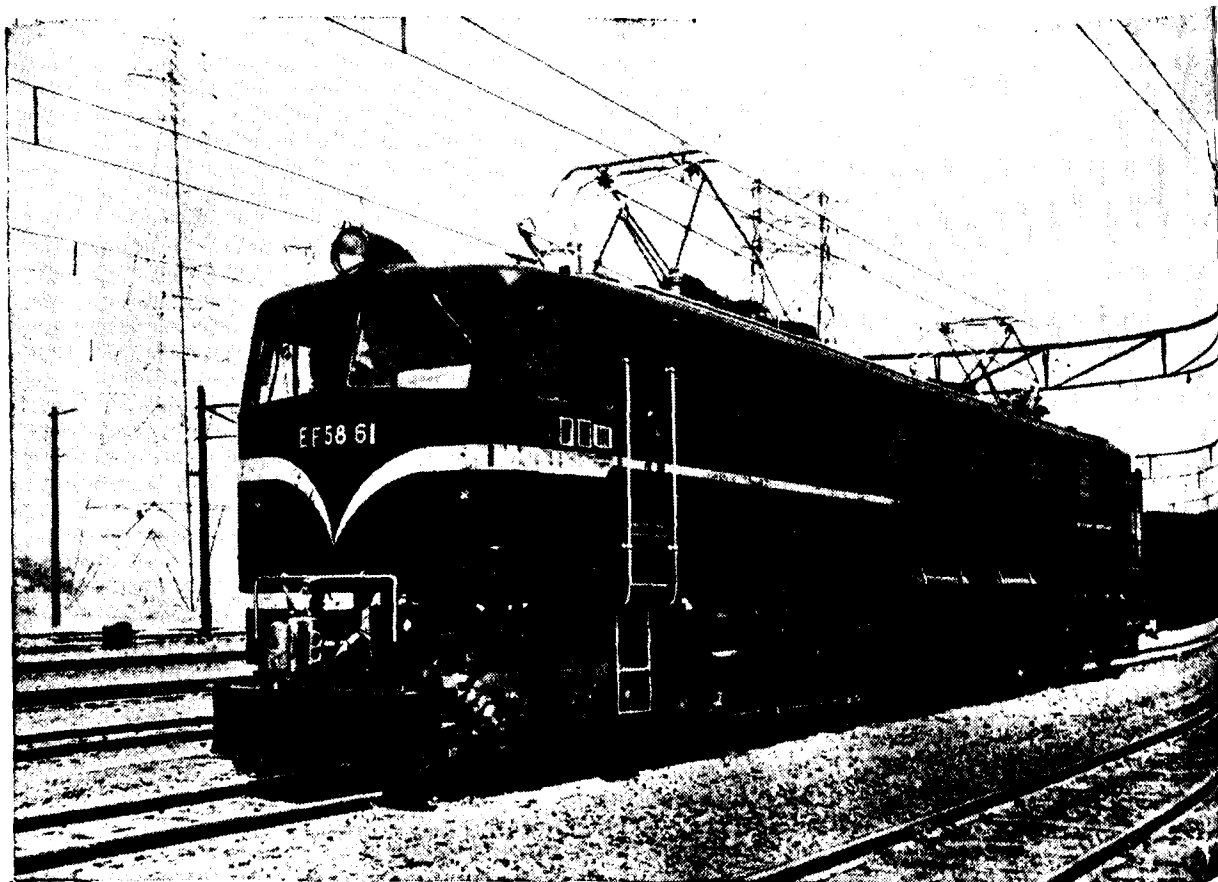


Playmates

far from any fast traffic, well they can do their kite-flying from morning to evening. But in big cities a lot of kite-flying is done on the roof-tops of tall buildings. If you do fly kites on any such roof-tops see that there is a chest-high wall right round the terrace, otherwise, while your gaze is up in the blue sky watching your kite sailing in the breeze, your feet are slowly backing, and backing, until—well the hard paved street about one hundred feet below is no soft cushion, and you will be lucky if every bone in your body, including your skull isn't smashed. So, be careful when flying kites on roof-tops, or better still, don't fly kites at all in such dangerous places.

Now, you know what it means to think and act 'safety first' if you don't think like this and do reckless and foolish things you have only yourself to blame if you lose your life.

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Chief Commercial Supdt's Office, Southern Railway

SITUATED 168 miles by trunk road and 196 miles by rail from Madras on the Madras-Dhanushkodi main line of the Southern Railway, Kumbakonam alias Thirukudandai is geographically well set for its future economic development.

Bounded on the north by the river Cauveri and on the south by its tributary the Arasalar in the District of Tanjore which is famous for its shrines, this "Temple Town" is set in a fertile delta area, studded with eighteen shrines and several mutts.

The ruins of an ancient structure in a suburban village called Solamaligai indicate that Kumbakonam was the capital of Chola Kings. Kumbakonam

was formerly called as Kudamucku. It is also called as Thirukudandai by some people.

Though primarily this is a pilgrim centre, yet, it has been known from ages as a centre for Arts, Letters and Music. This is a centre for all religions. The three leading Hindu sects have locally their representatives, mutts and temples. The Head of the Kanchi Kamakoti Peeta Sankaracharya Mutt is here. Also, the Brindavanams of Sri Vijayendraswami, Sri Jaganatha Tirtha and others with the branches of the Uttaradi and Vyasraya Mutts exist to venerate the Madhva sect. The Protestants have a Church built in 1855 and both Tranquebar Mission and Roman Catholics have their churches here.

Pilgrims bathing in the Mahamagham tank at Kumbakonam



Sri Kumbeswaraswami Temple built by the Chola Kings of old has a Gopuram rising to a height of 126 feet and has attractive carvings on it. The central 'Linga' of Kumbheswara is said to be composed of fragments of a pot installed in a box.

The temple of Shri Nageswaraswami has its Gopuram so built that every year on three days the rays of the sun fall on the Lord which is taken to mean that the Sun God offers his prayers and respects to the great Lord. There is a sculptural representation of 'Uchishta Ganapathy' (the Polluted Elephant God) in the temple of Nageswara. Other venerated and worthy of Saivite temples are Sri Someswaraswami Temple, Sri Abhimukeswaraswami Temple and Sri Kasiviswanathaswami Temple with the "Navakannikas", viz., Ganges, Jamuna, Saraswathy, Narmada, Godavari, Cauveri, Mahanadhi, Payoshni (Palar) and Sarayu.

Near the Kasiviswanathaswami Temple is the famous Mahamakam Tank where once in every 12 years, when Jupiter passes the constellation of Simha or Leo, it is believed that the holy Ganges comes flowing, inter-mingling with the sacred waters of other eight holy rivers in the land, to exercise certain powers over the waters of the Tank and saturate it with mineral properties. On this auspicious occasion, lakhs of people gather here for a sacred bath. (On the same occasion there is a lake in Kotihar [Kashmir State] which as the result of Jupiter passing over Leo gets a full supply of water though it continues dry for the remaining 11 years !) It is said that there are 20 sacred wells within the tank. The tank covers 200 acres. There are 16 mantapas along the banks and they are dedicated to various deities. In the mantapa on the northern bank one sees a sculptural representation of "Tulapurushadana" (weighing oneself against gold) which is otherwise called "Gangathirtham".

Sri Sarangapaniswami Temple is the most beautiful amongst the other temples, with its lovely Gopuram of

12 stories rising to a height of 147 feet which is said to have been built by Nayak kings of Tanjore. The Central shrine of the temple is in the form of a Chariot drawn by horses and elephants with openings on either side showing the descent of God Sarangapani from heaven in his Chariot. It is said, that Lord Vishnu thus appeared to a sage who performed penance. The hermitage of the Sage is said to have been on the bank of the temple tank Pottamarai.

In the Chakrapani temple Lord Vishnu appears in the form of a Discus or 'Chakra' to put down the pride of Surya (Sun) who subsequently became his devotee in the temple of Nageswara.

The sculptures in Ramaswami Temple are worth seeing. The fresco painting of Sri Ramapattabhishekham on the interior wall of this temple is of high artistic importance and delicate workmanship. It is believed that this temple has been constructed in the 16th century by Raghunatha Nayak, king of Tanjore. The deity Sri Rama appears in his Coronation robes in this temple which is a rare scene. The Mahamantapa in front of the temple has several fine sculptures—Vamana-Tiruvikrama, Vishnu with his consorts Sridevi and Bhudevi and of the marriage of Parvati. Sri Varahaswami temple, Sri Gopalaswami temple, and the only temple for Lord Brahma form the other famous places of worship for the visiting pilgrim.

Festivals

The Chitrai Car which is the one amongst the three huge temple cars, so very reputed in South India belongs to Sri Sarangapaniswami temple which requires at least 7,000 persons to drag. (The other two temple cars referred to here, are the one at Tiruvadamardur of Sri Mahalingaswami Temple and the other is the one at Tiruvarur of Sri Tyagarajaswami Temple.)

The 100 year old Government College is situated on the banks of the river with a very nice natural background

(Continued on page 74)

"Now You Know It"

Alfredo Borges

Christmas Festival is older than Christianity

THE celebration of Christmas really dates back to Roman times and owes its origin to pagan customs. Instead of the congregational prayers and ceremonies annually held in honour of Saturn, Mithras, Ordin or of Frey, the Romans celebrated the feast of Christmas which took the place of Saturnalia, a week of festivities and riotous fun, during which the whole of Rome held carnival and open house to greet the birthday of the Unconquered Sun. The first Christians to visit Britain found that she was already celebrating a national holiday, the feast of Woden, one among the several personifications of the Sun, in the midst of winter. Many years before their advent, the Vikings had sailed to Britain bringing with them, the adoration of the old Norse gods. During the feast of Woden, as Odin was called by the Britons, the Druids or high priests cut mistletoe branches from the holly oaks to woo the gods of prosperity and fertility for the year to come. A few of these early customs still survive and are part and parcel of Christmas celebrations to-day!

Lord Nelson's famous dictum is wrongly reported

Contrary to popular belief, Nelson, England's greatest admiral did not order the famous signal "England expects that every man will do his duty". Mark you, I said "signal" these were not merely the last dying words of the gallant sailor. The original signal the famous admiral ordered ran "Nelson Confides that Every Man will Do His Duty". According to evidence established in the light of modern historical research, it was Mr. Pasco, the signal lieutenant of the glorious "Victory" who respectfully suggested

that "England" should be substituted for "Nelson" and added that if "Confides" was changed to "Expects" the signal would be sooner completed as "Expects" was included in the vessel's signal vocabulary while the word "Confides" would have to be spelt out letter by letter in signal form. So Lord Nelson's famous dictum has come down to us in a corrupted form. It is generally conceded that Pasco's version is more patriotic.

The Origin of Santa Claus

There can be no real Christmas without the midnight visitation of a benevolent personality known to millions of young folk as Santa Claus. Stealthily climbing down the chimney, he has been known to fill with toys the stockings hung by the bedside by children on the eve of Christmas. Did you know that Father Christmas or Santa Claus is also called Saint Nicholas and is the Patron Saint of Russia? Historians tell us that his main interest in life was to make everybody happy specially young people. He gave away all his wealth to feed the poor and bring happiness and solace into the souls of those who were less fortunate. Saint Nicholas who was Bishop of Myra in Asia Minor in the fourth century was said to have secretly given three bars of gold which was his most cherished and only inheritance as dowries to three poor girls. This was supposed to have started the custom of giving presents on his feast day which fell on December the 6th. Saint Nicholas is also the Patron Saint of children. The Dutch took the idea of present giving to America where the name San Nicolaus was corrupted to Santa Claus. The practice of giving toys to children was later transferred to Christmastide which is essentially a family festival all over the world today.

THIRUKUDANDAI*(Continued from page 72)*

which is a right comparison to the Cambridge on the bank of the river Thames. Possessing as it does the best educated population in South India, this place stands second in Literacy in Tanjore District. The 300 year old Govinda Dikshitar Dharmasala conducts Sanskrit and Vedic classes.

Celebrities of the place

Professor Ramanujam, the mathematical prodigy, Sir T. Madhavarao, R. Raghunatha Rao, Sir C. P. Ramaswami Iyer, Sri Sadhu Seshayya, Rt. Hon'ble Srinivasa Sastri are a few among the illustrious persons coming from this place. Famous musicians like Maharajapuram Viswanatha Iyer, Semmangudi Srinivasa Iyer, Violin Rajamanikyam Pillai and Flute Sanjeevarao also hail from this place.

This ancient town has managed to preserve a great deal of its old world charm even now. Its very life is the river Cauvery which flows across the town.

Kumbakonam is a business centre. The betel from Kumbakonam is the

best choice of connoisseurs all over South India. Also, Kumbakonam is famous for the manufacture of bell metal, brassware and handwoven textiles, apart from its unique pride for gold and silver jewellery.

The Porter Hall built in 1855 is a place of public meeting and club life of the upper gentry. There is a Theosophical Society Library which gives vast opportunities for any research student interested in matters of religion and literature.

Many religious places, temples and other tourist centres are there in and around the town amongst which Uppiliappankoil which is situated 3 miles to the east of Kumbakonam, and Thirunageswaram are never missed by the pilgrims.

Kumbakonam today lives as an example of present living in harmony with the past even though there are no excavations to prove the glory of the past. The great heritage of the past is well preserved and safeguarded here by the growing development of modern knowledge.

To a tourist Kumbakonam is not a riddle to analyse but a feast to his eyes and satisfaction to his historical sense.

WARNING

Anti-social elements are committing thefts of Railway properties including Electric Bulbs and Dynamo Belts, etc. and selling them to the public. Please note that possession of these articles is an offence under the Railway Stores (Unlawful Possession) Ordinance, 1944 and punishable with imprisonment.

Do not buy these materials or allow them to be used in functions in your houses, theatres, business premises, etc.

Pass this information on to your friends and help the Indian Railways to serve you better.

GENERAL MANAGER
SOUTHERN RAILWAY

**FAREWELL PARTY**

Sri S. K. Gopinath, District Scout Commissioner, Central District and new Hony. State Secretary, got up at short notice an "At Home" to bid farewell to Shri G. S. A. Saldanha on the eve of his departure to Calcutta as Secretary of the Railway Freight Structure Committee, Railway Board, on 12-7-55 in General Manager's Meeting Room, Madras.

After tea, Sri A. R. Rao, Senior Deputy General Manager and State Chief Commissioner said that one of our promising Officers is leaving to take up the post of Secretary, Railway Freight Structure Committee which is a proud recognition of this Railway. The guest was known to him, apart from his official career, by his extra curricula activities and he is able to know him intimately through sporting. He is one who came into contact with one and all, by his special aptitude, and he wished him always to keep up the Southern Railway flag flying wherever he goes.

Sri R. Jagannathan, DTS, Rayapuram and Headquarters Commissioner (Scouts) then "with mixed feeling of joy for his elevation, on promotion, and sorrow for losing his company" praised his work as Chairman and District Scout Commissioner of the Ex-M. S. M. Railway Boy Scouts Association. "He always showed himself as a good Scout by his pleasing manners and as a true scout he always placed service above his personal interest. It is very difficult to fill his

vacancy." However he wished him all success in his new field of work.

Sri G. B. Ambrose, Hony. State Organising Commissioner and Senior Labour Welfare Inspector, then traced his first contact with Sri Saldanha in 1941-42 when he took his training in the cabin as a Probationer and came to know he was also a Scout and was still interested resulting in an article being to the "Scout Clarion" of the M.S.M. Railway Boy Scouts entitled "A Scout on a Railway". Mr. Saldanha, he said, became a subscribing member in 1943, the Chairman of the Executive Committee in 1947, District Scout Commissioner in 1949 and State Secretary in 1955. He was a Scout in spirit and in deed, but unfortunately for us he has to leave us on transfer when there is much to be done. He also personally expressed his desire of becoming a Life Member very soon. He wished Sri Saldanha all success in his new career.

Sri P. K. Krishnamurthy, Assistant State Secretary, then proposed a vote of thanks.

Among those present were Sri S. K. Mukerji, State Commissioner (Scouts), Mrs. and Mr. N. G. Hoskote, State Commissioner (Guides) and Asst. State Commissioner (Scouts) respectively, Sri J. J. Batliwala, Vice-President, Sri S. Krishna Rao, Secretary, Central District, Sri N. Seshachalam, Secretary to G. M., Sri P. Nagarajan, P.O. (Labour) and Sri R. T. Iyengar, P.O. on special duty.

TAMIL SANGAM GUNTAKAL

The Fifth Anniversary of the Tamil Sangam, Guntakal, was celebrated on Sunday the 10th July at the Indian Railway Institute Hall, Guntakal. Sri R. K. Thyagarajan, Dt. Mechanical Engineer, Southern Railway presided.

Mr. K. Sundara Raman, Secretary, presented the annual report and requested one and all to co-operate in improving the Sangam which is doing a great service in the field of Art and Literature.

Mr. R. Mahadevan, B.A., ('Devan'), Executive Editor, 'Ananda Vikatan', delivered a lecture on 'Humour in Tamil Literature'.

There was a music performance by Smt. Thunga Bai and party and Dance recitals by Baby Pramilla Mathews, Vijaya Lakshmi and Priya Darsini. A Tamil drama 'Kannal Thirandhana' was also enacted by the members of the Sangam.

OFFICERS' FORUM AT MYSORE

The Monthly Meeting of the Officers' Forum on the first Friday of every month is a regular feature at Mysore. All Officers at Mysore and Mysore South are Members of the Forum. At these meetings matters of common

A general view of the officers who were present at the meeting held on July 1, 1955



interest pertaining to various branches of Railway working are discussed and there is a spirit of cordiality and free communication of views.



Sri D. Venkataswamy, W.M. MYSS, reading the paper on "Mysore Railway Workshops—Development and Outturn" on 1-7-55

PRAISE FOR STAFF

Copy of letter dated 12th June, 1955 from Miss. Florence Pulsford, Leadbeater Chambers, the Theosophical Society, Adyar, Madras, addressed to the Chief Commercial Superintendent, Madras.

I have recently completed a railway tour of over 1,700 miles throughout South India and Malabar, and write to express my appreciation of the Southern Railway generally.

Throughout the journey I met with the utmost courtesy and helpfulness from Railway officials, whatever their rank and status. If I asked for information they took the trouble to give it carefully and fully, and in a most obliging manner. This is something I have not always found in my own country!

I was fortunate enough to be able to travel first class, and found the compartments most comfortable everywhere. The catering arrangements also were perfectly satisfactory at all stations.

But most of all I praise your staff!

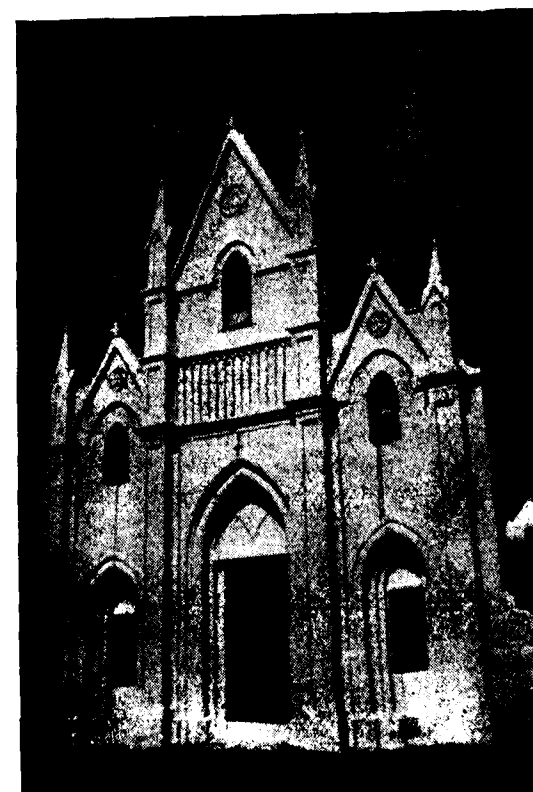
With cordial greetings.

P.S.—I had to travel by bus where there was no rail service available and always found it a great relief to get back into the train.

* * * *

Copy of letter No. 58 35 dated 2-7-1955, from the Collector, District Raichur, addressed to the General Manager, S. Railway, Madras.

I am to thank you and your officers including the Chief Operating Superintendent, the DTS/GTL, the Divisional Engineer and his Assistants for the kind co-operation extended by all the Railway Officers and staff during the visit of the President of India to Munirabad from the 21st to 23rd June 1955. I am to request you kindly to convey my thanks to all the Officers concerned.

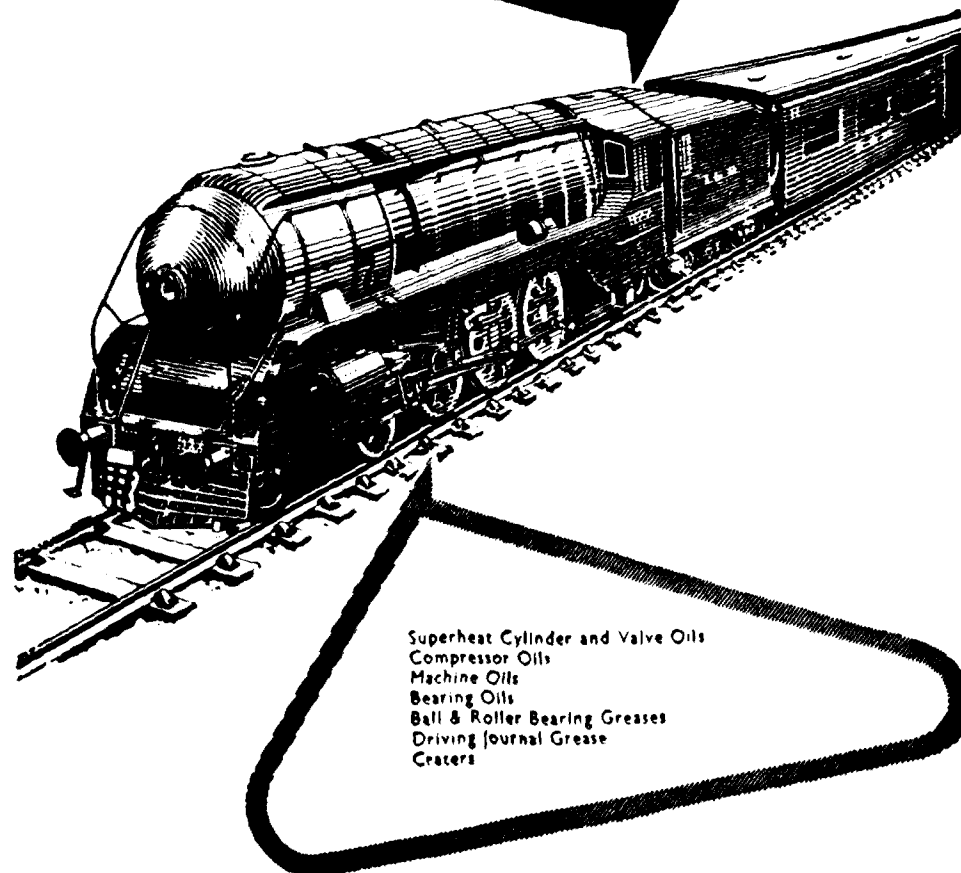
FAMOUS SHRINE OF DORNALLI

This Shrine of St. Antony is situated at Dornahalli, 19 miles from Mysore, on the Mysore-Arsikere line. The legend goes that while ploughing his field, a Hindu farmer came across a stone resembling the image of St. Antony. The Saint appeared to him in dream and requested him to build a shrine where the image was found. The farmer, with the help of the Church Priest stationed at Pondicherry, built a small shrine.

In 1920 Shri D. Dharma Raju Chettiar, son of Shri D. Thambu Chettiar, ex-Dewan of Mysore built a beautiful new church near the shrine.

There are two festivals, in May and June every year, celebrated here and people from all parts of India and afar attend them in large numbers.

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Chief Minister Sri Kamaraj's Advice to Railwaymen

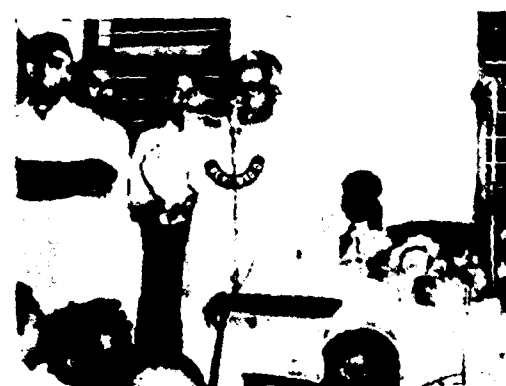
----- Inauguration of New Building -----

DECLARING open the "UNION HOUSE", the New Building of the Southern Railway Employees Union, OPEN LINE BRANCH at No. 72, Cochrane Basin Road, Basin Bridge, Madras on 23-6-1955 evening Hon'ble Sri K. KAMARAJ NADAR, Chief Minister of Madras said that the main object with which Freedom had been won and the ideal of the Socialistic pattern of Society for which the CONGRESS stood—all meant only that Community Labour should result in the good of the community as a whole and not in the welfare of a few.

Sri KAMARAJ said that he felt greater pleasure in participating in a function such as the opening of a Building in the raising of which every worker has had a share. He knew that every one of the members had put in his share in which they derived the utmost pleasure.

The Chief Minister said that the Southern Railway Employees' Union had been in the vanguard of the movement for the country's freedom and was pursuing the path of NON-VIOLENCE, UNITY, and SOLID CONSTRUCTIVE WORK set by "MAHATMA GANDHI."

Sri M. Bhakthavatsalam, Minister for Industries and Labour, is seen addressing the gathering



(Photo: P. S. Vedachalam)

The Unity of the people of India under GANDHIJI'S leadership induced the Britisher to part with power in peace and leave this country in an ordered state, so Unity and Strength on the part of the Workers would enable them to progress. He

Sri Kamaraja Nadar, Chief Minister, is seen speaking to Railwaymen



(Photo: P. S. Vedachalam)

knew that the members of the Union realised this in full measure and would not give quarter to any movement of a disturbing character. Though everyone might have some grievance or other, there was always the process of legislation to come to their rescue. There was a new awakening among the workers and if they pursued the right path, there would be no difficulty in realising a socialistic pattern of society.

He lastly said that workers would realise that the prosperity of the country and themselves lay not in the liquidation of the people but in their putting in honest labour which alone would ultimately reward them.

Earlier Hon'ble Sri M. Bhakthavatsalam, Minister for Industries and Labour, unveiled a Statue of Gandhiji

Handwritten notes and stamps: JL, X415 m, 15143453, NSS, 601008

Sri T. V. Anandam (General Secretary) unfurled the Labour Flag, Sri M. Audhikesavulu opened the "Sambandam Hall" named after one of the early Founders of the Union and Sri S. A. Mahalingam opened the "Thiru-vi-ka" Library.

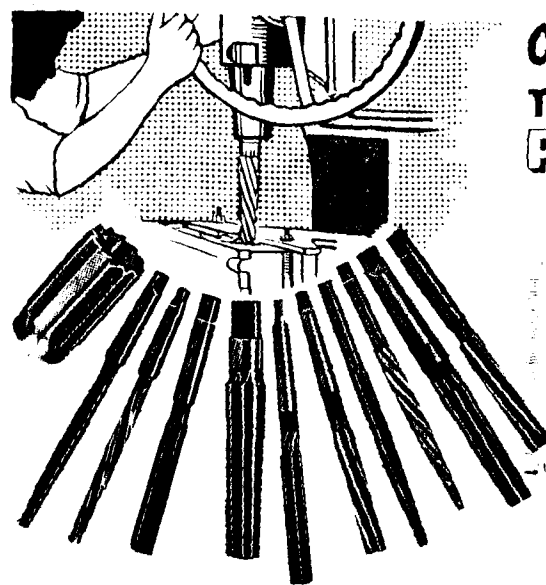
Hon'ble Sri O. V. Alagesan, Dy. Railway Minister in his message wishing the function every success said "Unity among Railwaymen" was never more essential than it is today.

Sri V. V. Giri former Union Labour Minister in his message called upon the Railwaymen to imbibe their best tradi-

tions, strengthen their present organisation with 100 per cent membership and build sanctions behind their reasonable demands.

Amongst others who had sent messages and articles were Messrs. C. Rajagopalachari; S. Guruswami; T. A. Joseph, General Manager; J. J. Battiwala, Dy. C.A.O.; M. Varadarajanar; K. Srinivasan, P.R.O. and H. F. Kapadia.

To commemorate the occasion, the Open Line Branch has brought out an attractive Souvenir, priced annas four which is available for sale in the Union Office.



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BOOK REVIEW

THE PROJECTS OF INDIA
THE INDUSTRIES OF INDIA
THE STATES OF INDIA
THE PETROLEUM STORY
THE STORY OF OIL

The Burmah-Shell which has thus far been considered as a top-ranking industrial concern is now blazing across the literary horizon by issuing a series of remarkably good booklets dealing with the topics captioned above. It might be observed, *en passant*, that the subjects chosen are of vital importance to the growth of the Greater India and the successful working of the Second Five-Year Plan, and the implementing of the First Five-Year Plan.

It must be admitted on all hands that Petroleum's Contribution to the building of India's river valley projects is of no small importance and that it served a number of essential requirements. The booklet on the Projects of India deals exhaustively with the implementation of the Damodar Valley Development Scheme which has been envisaged in two stages, (i.e.) the first stage including the construction of four dams at Tilaiya, Konar, Maithon and Panchet Hill; three Hydro-electric stations at Tilaiya, Maithon and Panchet Hill, the steam power plant at Bokard and the transmission system; and the Durgapur barrage and the associated canals and distributaries. Details are given pertaining to the cost and the benefits thereof. This fifty-page booklet (got up in attractive pocket size) has a fund of information that is not only interesting but also provides thought-provoking details to make the effort *fait accompli*. The central note is struck when it is stated (page 48) that the D.V.C. cannot merely rest content with the fulfilment of the passive function of supplying water but that it will have to promote its use actively in every possible way for the double reason that, as a business undertaking, it must look after its own profit and loss account, and as a public corporation, it has a specific statutory responsibility for promoting social and

economic welfare. What better could one think of for stabilising the prosperity of a country?

The three booklets on 'the Industries of India' deal with coal, cement, iron and steel, bringing out the undeniable fact that Burmah-Shell have devoted some of their finest technologists to solve the various lubrication problems and in their successful solution added yet another link to the chain which joins the great industries of India with the universality of Burmah-Shell service. The booklet on coal throws a flood of light on the actual history of the coal in India beginning almost with the beginning of the British Rule in India. It may be stated without the least fear of contradiction and without smacking of exaggeration that coal provides the motive force of the Industrial world today. And, that is not all: coal justifies the name 'Black Diamond' and, in fact, it is far more precious than diamond itself since it contains treasures still uncounted among the great assets of the future!

Though cement is a comparatively new material, yet this unique thing was known (perhaps) in a different form during the days of the ancient Romans and Hindus—the famous Roman Roads being constructed with a special kind of mortar (cement) which was strong enough to withstand the ravages of wind and weather; whilst Harappa and Mohenjo Daro in the Indus Valley Corporation had evolved a material similar to the present day Portland Cement. Meticulous—but not unwarranted—details are furnished in this priceless little booklet as to what cement is and how it is made; providing as it does a mine of information.

The origin of iron is shrouded in the mist of antiquity. To the early man, it was the heavenly metal, a celestial gift to the world. In these 18 pages an effort is made to weave a delightful story of how Burmah-Shell by unstinted research and experience has succeeded in supplying the Iron and Steel

Industry with the appropriate information for every individual party, in making the most of the oil resources of India. These publications, with great care, have been put into the hands of the public for their information and enabling them to come into closer touch with the world.

The series of India pamphlets deal with the oil resources of India, history, Barbery and oil, oil products and minerals, and Saurashtra with its oil resources and the oil water. The pamphlets deal with the development of Coorg, the Southern part of South India, for development of oil resources and the oil water. The pamphlets deal with the oil resources of India, history, Barbery and oil, oil products and minerals, and Saurashtra with its oil resources and the oil water. The pamphlets deal with the oil resources of India, history, Barbery and oil, oil products and minerals, and Saurashtra with its oil resources and the oil water.

In the two pamphlets on the "Petroleum Store" to "The Oil Store" left, intended to keep the reader with the process of prospecting and production. The story of "Cracking" is a delight to any chemist's heart but expressed simply it involves a chemical change, and that is what exactly the pamphlet so wonderfully does. These pamphlets explain how the oil companies, such as Burmah-Shell, with the co-operation of the Railways, do their best to meet the demands for petroleum products whenever and wherever it arises. To understand exactly what a Herculean task such an enterprise means, it may be stressed rather casually that though the production of oil sounds a comparatively simple operation, yet it is a herculean task to realise that one oil company spent twelve crore of rupees in Venezuela in ten years before producing oil in marketable quantities.

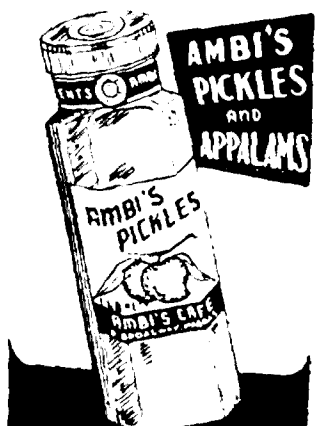
And, last not least, "The story of oil" is one that enters in a thousand and one ways in our lives. Finding oil-bearing rock layers today is no picnic as a lot of toil and sweat goes into the job and imagine, for a moment what would be the calamities and catastrophe position if oil supply was cut off? Horror upon horror! Everything would come to a standstill but Burmah-Shell says "No" writ large in capitals.

V. T. NEELAKANTAN.

'CALTEX CIRCLE' 1st Quarterly Magazine

Caltex in India has brought out its first quarterly magazine called 'Caltex Circle' to provide better understanding and good fellowship among the staff and the 1st issue appeared in June 1955. Mr. J. R. Price, the General Manager hopes all the contributions to future issues of this magazine will be made by the staff of the Caltex Organisation, numbering more than 3,000, employed throughout the length and breadth of India and he rightly calls it as "this is your magazine...". It is profusely illustrated with fine photographs of the Caltex Offices and historic monuments in India a few among which are the 'Taj Mahal', 'the Gateway of India', 'the Kuthub Minar', 'the typical South Indian Temple Tower, etc. The colour scheme introduced into this Magazine is **par excellence** and the Caltex Organisation deserves to be congratulated on this venture.

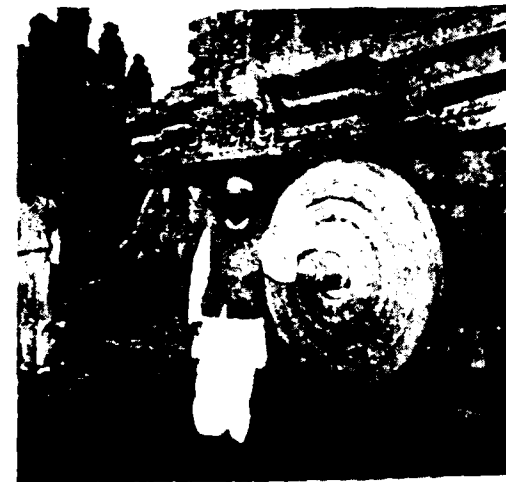
AMBI'S CAFE
6 BROADWAY
MADRAS 1



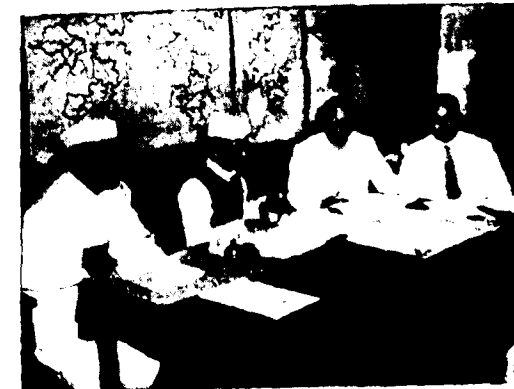
AMBI'S PICKLES AND APPALAMS

AMBI'S CAFE, MADRAS 1.

Railway Minister Visits Hampi Bijapur, Dharwar and Jog Falls



Shri Lal Bahadur Shastri, Union Minister for Railways, admiring the stone wheels of the chariot at Hampi. (He visited Hampi on 24th June)



Shri Shastri holding a press conference at Dharwar (28th June) seated (extreme right) is Sri B. C. Desikachari, C.O.P.S.



Union Minister for Railways inspected Bijapur Station on June 22. Shri B. C. Desikachari is seen to his right.



Shri Lal Bahadur Shastri, while on a visit to the Jog Falls (25th June)

SOUTHERN RAILWAY

TENDER NOTICE

QUILON-ERNAKULAM RAILWAY—SECTION I—QUILON TO MAVELIKARA

The **Chief Engineer, Southern Railway, Park Town, Madras-3**, invites **separate** sealed tenders for the following works upto 13 hrs. on 7-9-1955 :

Item	DESCRIPTION OF WORK	Station	Earnest money
			Rs.
1	Construction of station building, staff quarters and passenger latrines	Perunad	1,950
2	"	Sasthankotta	1,750
3	"	Karunagapalli	1,950
4	"	Ochira	1,750
5	"	Kayankulam	2,750
6	PWT's office and stores	and Mavelikara	4,750

Tenders should be in the prescribed form obtainable from the **Chief Engineer's Office**, or from the **Executive Engineer's Office, Quilon-Ernakulam Railway Construction, Ernakulam South**, or from the **Assistant Engineer's Office, Quilon-Ernakulam Railway Construction, Quilon**, upto 12 hrs. on 5-9-1955 on production of a receipt from the Chief Cashier, Southern Railway, Park Town, Madras-3, or from the Station Masters, Ernakulam South or Quilon, for payment made towards the cost of tender forms at the rate of Rs. 10 per set of tender forms **for each station** and Rs. 2 per spare schedule, only if available, which amount will not be refunded.

Tender forms are not transferable.

Earnest money, as noted against each station, is to be paid to the **Chief Cashier, Southern Railway, Park Town, Madras-3, before 12 hrs. on 5-9-1955**. The Security Deposit for the accepted tender will be 10 per cent of the value of the contract.

Particulars of remittance of money should always be clearly furnished to avoid unnecessary correspondence and delay.

Income-tax Clearance Certificate, in original, should be attached to the Tender ; if previously sent and **is current**, reference to the particular tender with which it was sent should be furnished. Otherwise, fresh Income-tax Clearance Certificate should be sent.

Tenders will be opened at 11 hrs. on 8-9-1955.

The Chief Engineer does not bind himself to accept the lowest or any tender.

"Build Better Relations"

Dr. E. K. Swamy, M. Com., Ph. D.,
D. Econ., F.C.I. (Birm.), A.B.I., A.I.R.A. (Lond.)

AS Railway Employees you have to contact the public often. You would find them differ markedly in their traits, temperaments, needs, desires, likes and dislikes. In order to establish correct attitude towards them, it is necessary that you should keep these things in mind, if you want to build better relations with them and thus bring credit to yourself and the Railway.

Building Better Relations means more amicable and friendly dealings with others. In order to get along well with the other people, you must constantly cultivate a correct attitude towards them.

All persons are born with certain inherited tendencies or instincts but no one is born with a definite attitude of understanding, tolerance, consideration for others, tact, etc. These attitudes are gradually acquired as one grows through training, environment and association. A person may not be wholly responsible for all his attitudes but is fully responsible for his good relations with others and his ability to get along with them.

Emotionally immature people seem to blame others for every bad break

they experience. Such traits do not build good relations.

Doubtless we have all had experiences with employees who gave the impression that they were not the least bit concerned about establishing correct attitude to the public and thus fail to build better relations. Their attitude placed a reflection upon them as well as the Railway they represented.

A few years ago, I met at London, a Managing Director of a leading industrial corporation. In the course of a conversation he said, "whether a corporation or a government employs one person or ten thousand people, your opinion of that organization is formed mainly by the contact and dealings you had with the one person you dealt with."

As loyal Railway employees, it is your responsibility to constantly build better relations. When some one does something to fret you, instead of letting it ruffle your feelings, you should think of how many times you too have made mistakes. You should keep concentrating on more pleasant things—to spread happiness, amity and to establish correct attitude to "Build Better Relations".

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Magazine Make-up

V. T. Neelakantan

THE idea of a get up whether it be for a Newspaper or for a magazine is one that requires the greatest skill of a trained News Editor. It is oft-times contended that sensationalism goes a great way to make the paper or the magazine, as the case may be, best seller. This may be true in Park Road of America: but if Fleet Street of England be taken into consideration, then, sober get up is more scintillating than this flash of ghastly sensationalism.

In thinking of a get up for a responsible and respectable magazine like the "Southrailnews", one must know exactly where to draw a thick line of deviation and demarcation taking into consideration that responsible magazines do not cater for mere mass demonstration. To clarify further the get up, one must take into consideration the position of the article, the layout of the pictures that go to support the articles concerned as also other blocks of interest that might have to be cramped in. But in doing so, one must not lose sight of the fact that a clumsy get up is enough to ruin the

prestige of the magazine whilst a carefully studied layout goes a great way not only to ensure public support but also serves to afford ample food for reflection.

Today we are excelling in the art of display and features that go to make a display of good work well done, and to get at this result, 'make up' goes a long way: for, after all is said and done, a careless caption or a non-symmetrical footnote or unbalanced photographic details will mar the beauty of what would otherwise have been a glorious production. Said Keats, the famous English Poet, 'A thing of beauty is a joy for ever, and a good make up would not only be a joy for ever but it will scintillate wherever the particular magazine is seen. It is not possible in the short space at our disposal to deal *in extenso* about the various features of make up, but suffice it to say that the planning of the headlines, the arrangement of the photographs and the calculated captions will be a novelty in the make up of modern journalism.

Two New Railways Started Functioning on August 1, 1955

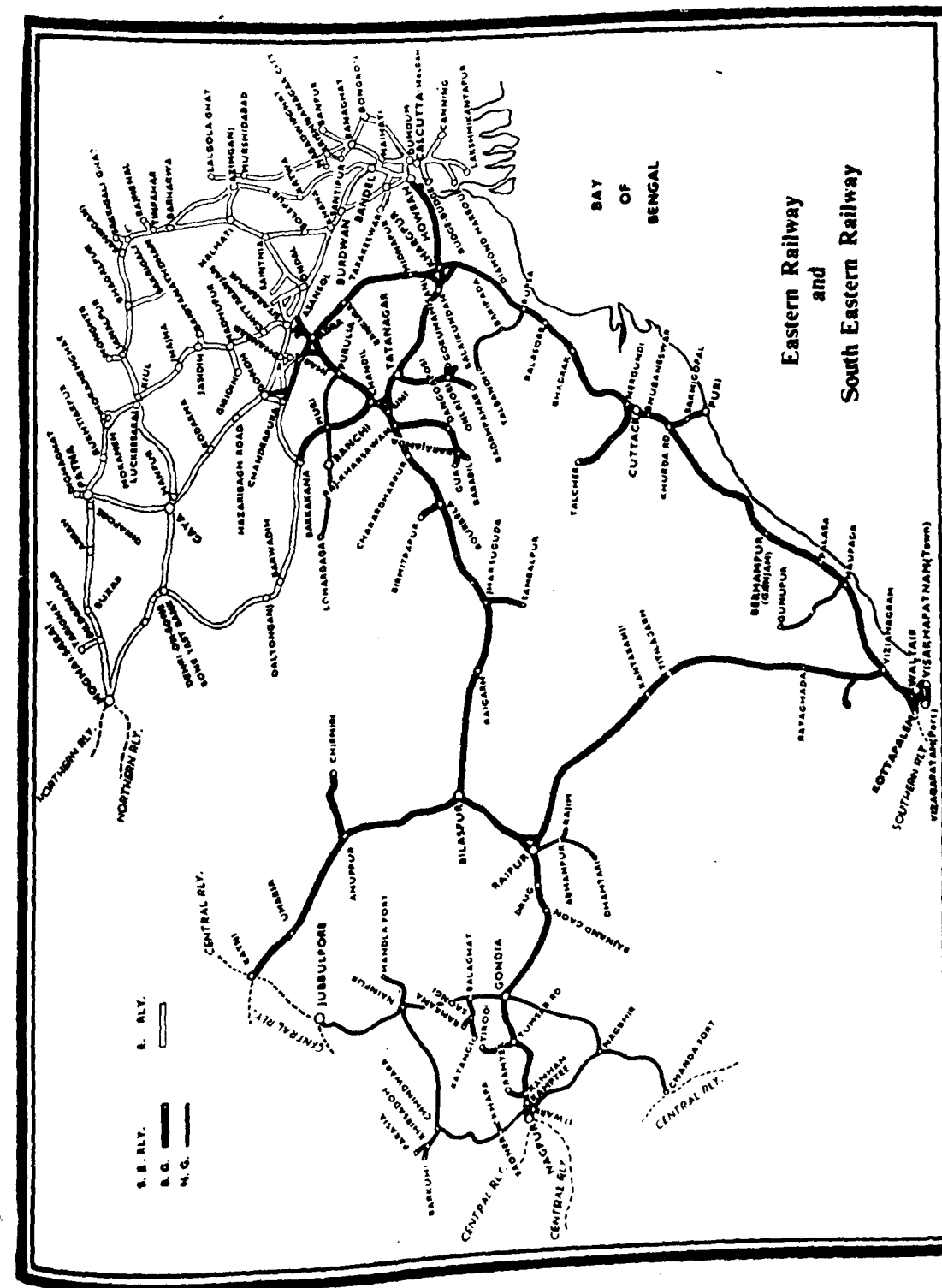
THE two new railway zones formed by dividing the old Eastern Railway formally came into being on Monday, August 1, 1955.

Although reduced in route mileage, the new Eastern and South Eastern Railways will each carry a heavier load of traffic than some of the bigger railway systems in the country.

Out of every 100 tons of goods loaded on the Indian railway system, the

undivided Eastern Railway accounts for 48 tons. The total traffic is likely to increase by about 50 per cent as a result of industrial expansion envisaged under the second Five-Year Plan. The burden of a major portion of this additional traffic will fall on the newly-constituted Eastern and South Eastern Railway. Between these two, the burden of new traffic is likely to be greater for the South Eastern Railway.

TWO NEW RAILWAYS



OUR COMMERCIAL News Letter

EARNINGS

The approximate earnings on originating traffic for June 1955 compare as under with those for the corresponding period of the previous year :—

	(Figures in thousands of Rupees)	
	June	
	1954	1955
	Rs.	Rs.
Passengers	1,67.03	1,75.93
Other coaching	27.00	32.77
Goods	1,57.31	1,78.50
Sundries	7.52	8.43
Total	3,58.86	3,95.63

Increase in passenger earnings is due largely to increased movement of marriage parties.

COMPENSATION CLAIMS

The following is an analysis of the position regarding compensation claims for the month of June 1955 :—

1. Number of compensation claims received during the month of June 55 ... 4,496
2. Number of claims disposed of and the amount paid during the month of June 55 ... 4,384
Rs. 1,88,463-7-0
3. Number of claims outstanding at the end of the month ... 4,031
at the end of June 1955
4. Number of days taken to settle a claim ... 37

TICKET CHECKING

76,102 persons were detected travelling without tickets during the month of May, 1955 and an amount of Rs. 1,38,132-10-0 was recovered from them in the shape of excess fare. 96,534 beggars and mendicants were turned off Railway premises.

Mahakumbabhishekam at Chidambaram

P. S. V.

It was an unprecedented scene of a vast concourse of nearly two lakhs of devotees who witnessed the Mahakumbabhishekam of Sri Nataraja temple at Chidambaram on Thursday the 7th July, 1955. Water specially



Pilgrims waiting in the temple at Chidambaram to have Dharshan of the Kumbabhishekam

necessary to carry out urgent repairs and renovation. Even according to the sastras, purification of the Sacred Edifice and spiritual revitalisation of the Deity are considered necessary for every sixty years. So, the Kumbabhishekam Committee headed by Messrs. Rathnasabapathi Pillai and Rathnaswami Chettiar made elaborate arrangements for the successful completion of the Kumbabhishekam at a cost of over two lakhs of rupees. In recognition of their valuable services and conduct of the Kumbabhishekam, the head of the Dharmapura Adheenam presented golden shawls to them. July 7, 1955 was indeed a memorable day in the annals of the history of South Indian temples. The temple precincts, ramparts, terraces, tree tops and other vantage points were full with people, who watched the proceedings of the

brought from the Ganges was poured on the nine **kalasams** on the gold-plated roof of the Chit Sabha, the sanctum sanctorum at 10 a.m. Kumbabhishekam was performed also on the four main gopurams simultaneously.

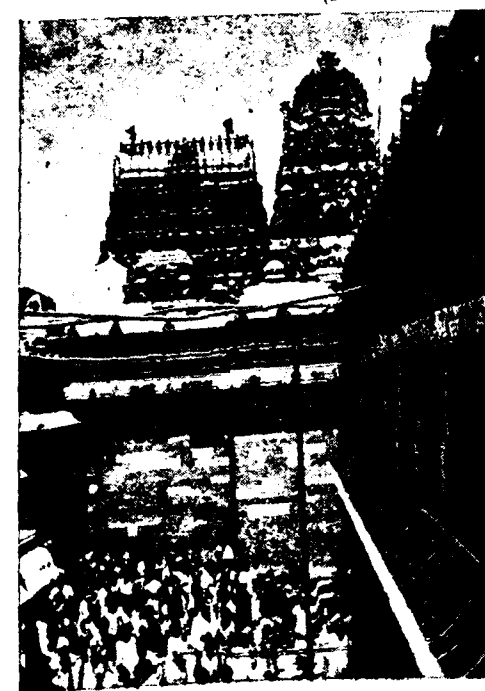
The last Kumbabhishekam was performed in 1891, when extensive repairs were made to this ancient temple by the members of the Nagarathar community headed by the forefathers of Raja Sir Annamalai Chettiar.

My father who was devoted to Sri Nataraja and who visited the shrine at Chidambaram twice every year for several decades, used to relate to the members of his family with considerable religious fervour that the Mahakumbabhishekam performed in the year 1891 was undertaken on a very grand scale.

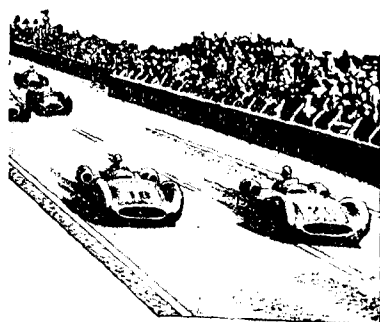
During the six decades that have since elapsed, very little repairs were done. It was considered absolutely

Pilgrims in the Prakaram around the Sanctum Sanctorum

(Photos by Author)



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with a mild detergent to clean the engine
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to announce lighter oils for easy starting, quick getaway and petrol economy
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with improved inhibitors to protect the oil itself
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with hypoid axle oils containing an anti-scuffing additive and rust and corrosion inhibitors
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festival celebrated after an interval of 64 years.

New silver steps and doors were provided to Chitsabha. The five steps leading to the Chit Sabha signify the five sacred letters of "Panchakshara Mantra"—**Na ma si va ya**. The roof of the Chit Sabha is plated with gold and the sanctum sanctorum where God Siva is worshipped in His aspect as the Cosmic Dancer—Sri Nataraja—is in the Chit Sabha. The Kanaka Sabha is in front of the Chit Sabha and its roof-top made of gold glitters in the bright sun. Sri Nataraja was stationed later in the Kanaka Sabha for the convenience of public worship on the Mahakumbabhishekam day.

Sri O. V. Alagesan, Union Deputy Minister for Transport and Railways, Sri B. Parameswaran, Minister for Religious Endowments, Madras and the Minister for Local Administration of the Madras State, the Collector of South Arcot and many other officers and prominent people from different parts of the State and elsewhere were present during the Mahakumbabhishekam day at Chidambaram.

I shall not cover the same ground again in this write-up regarding the religious importance of the place which has been referred to in my article on "Chidambaram—Holy of Holies" published in the January issue of the 'Southrailnews', but I will merely content myself by a brief reference to the hierarchy of the rulers of South India, who have contributed to the construction of the magnificent gopurams, the numerous mantapas including the hall of 1,000 pillars, the huge parapet walls, etc.

The Pallava Kings built a major portion of the main temple. Among them may be mentioned the name of Hiranyavarma Chakravarthi. The sacred work left by the Pallavas was continued by the great Cholas. In this connection, the name of the Chola King Rajaraja the Great is worth mentioning. He ruled for a period of 29 years from the year A.D. 985. He was

responsible for constructing the gopurams, parapet walls, the Thousand Pillar Mantapam and also covering the dome of the 'Chit Sabha' with gold. The subsequent rulers of the land, the Pandyas, the Nayaks and the monarchs of the Vijayanagar Empire contributed in no small measure to the fine temple architecture at Chidambaram. The Gopuram or tower at the Northern entrance was the liberal gift of the celebrated Vijayanagara King, Krishnadevaraya.

Reverting to the Mahakumbabhishekam festival, it may be stated that very efficient arrangements were made by the Railway to handle the festival traffic. The important days of the festival were from the 7th to 10th July, 1955. To avoid congestion at the Booking Office at Chidambaram, Return Tickets for III Class were issued to Chidambaram from stations within a distance of 75 miles from Chidambaram from 6th July to 9th July, 1955, available for completion of Return Journey by midnight of the 10th July, 1955. An attractive pamphlet in English-Tamil was issued by the Railway in this connection. The pamphlet contained a short write-up relating to the religious importance of Chidambaram, particulars of the festival on important days, the stations on the sections wherefrom the return tickets were issued, abstract timings of Passenger specials and the dates on which the specials were proposed to be run and the facilities provided for passengers. 30,000 copies of this pamphlet were printed and distributed widely to the public to the best advantage.

Thanks to the Southern Railway Administration, the arrangements made to carry the festival traffic were deemed to be very satisfactory by the public. The public were heard to say that similar arrangements should be made to handle the traffic in other festival centres. The festival and pilgrim traffic is peculiar to this part

of the country, as South India is a land of temples and festivals. If properly handled, this source of traffic will prove to be a gold-mine to the Southern Railway Administration. The authorities of the Railway were fully alive to the importance of the event at Chidambaram. Sri B. C. Desikachari, COPS, Mr. K. Basheer Ahmed, RTS/Trichinopoly, Mr. J. S. D. David, DTS/Trichinopoly, and Sri Viswanathan, AOG/TPJ were in camp at Chidambaram to supervise the arrangements made for carrying the festival traffic.

Sri K. Srinivasan, Public Relations Officer, was also present at Chidambaram to ensure that the Public were satisfied with the arrangements made. It was noticed that the public reactions were favourable.

It is worth mentioning that nearly two lakhs of people attended the festival on this historic occasion, during the period from 29-6-55 to 12-7-55 the total figures of which are as under:—

No. of passengers alighted (Inwards)	No. of passengers booked from Chidambaram (outwards)	Total traffic dealt with
1,03,606	95,604	1,99,210

Apart from strengthening of all trains on various sections, 71 passenger special trains were run, of which 58 were between Villupuram and Mayavaram.

The other special features were:— Supply of good drinking water, temporary festival sheds and booking offices, a separate enquiry office, information given through the specially provided Mike in regard to the arrival and departure of trains and other arrangements made about entraining, detraining, booking, etc., suitable catering arrangements, a temporary Hospital for necessary medical aid and adequate lighting arrangements.

HCX-31

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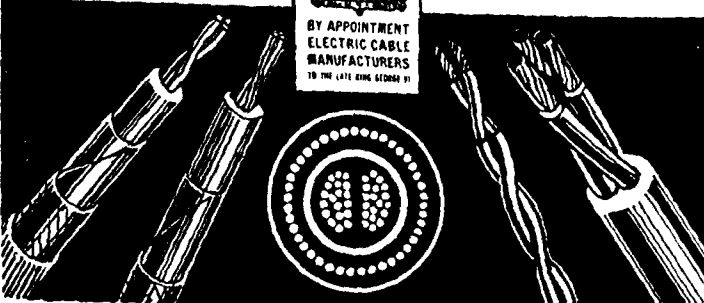
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Inter-Regional Foot-Ball Tournament

The fact that, among the out-door games, foot-ball is becoming more and more popular with Railwaymen was well established during the recent Inter-Regional Foot-ball Tournament held in Madras. All the matches were played in the Railway Indian Institute grounds at Perambur. Each Region sent in two teams 'A' and 'B' and there were thus six teams taking part in the Tournament. The Tournament commenced on the 23rd July, 1955.

On the first day, viz., 23rd July, 1955, two matches were played. The first match was between Madras Region 'B' and the Trichy Region 'B'. Both the teams were evenly placed and till the end, it was difficult to say as to who would come out victorious. The Madras 'B' who had better of the exchanges scored one goal through their right out, Kamalasekharan and thus won the match. The second match on the same day was that between the Madras Region 'A' and the Trichy Region 'A'. This was quite an interesting match. Both the teams consisted of players of repute and experience. Right from the beginning, the ball was moving from one end to the other. The game was fast and there were equal exchanges. During the second half, Om Prakash, the Right Inner for the Madras Team scored the opening goal. It was again followed up by another goal by Rajendran, the Left Inner. Thereafter, the Trichy Region were all out to equalise, but despite their best efforts, they were able only to reduce the margin by scoring a goal through Das Martin, their Right Extreme. The game reached a very high standard and was witnessed by a large gathering.

On the next day, the 24th July, 1955, two more matches were played. The first match was between the Madras Region 'A' and the Mysore 'B'. Here it has to be mentioned that both the Mysore teams were lucky to

get into the bye in the draw. The game was mostly one sided with only a few raids on the Madras goal. The Madras 'A' team came out as winners by three goals to one. Padmanabhan, the Centre Forward scored two goals while Om Prakash, the Right Inner got the third goal. Mysore 'B' reduced the margin through their Centre Forward, Natarajan. The second match, which was between the Madras 'B' and Mysore 'A', ended in a draw. Mysore had several chances to score, but Velayudhan the Custodian for the Madras Team did very well at the goal and gave no chance for the Mysorians to score. It was more a match between the Goalie and the Mysore Team. The drawn match was replayed the next morning at 7 o'clock. Mysore 'A' fought with redoubled vigour and won the game by two goals to nil, the scorers being Muni Ramiah, Centre Forward and Moshin Ali Khan, the Left Extreme.

The Finals between the Madras Region 'A' and the Mysore Region 'A' was played on the same day, Sunday the 24th July, 1955, at 5 p.m. Shri B. C. Desikachari, Chief Operating Superintendent and Chairman, S.R.A.A. who presided for the Finals, hoisted the flag and after presentation of the Teams to him, the game was commenced. The exchanges were equal and the Score Board was blank till the end. Therefore, the match had to be replayed the following day. On the following day, there was a very huge gathering of people from 4 p.m. itself and when the match was started at 5-15 p.m., it looked as though there were walls of people all round the ground. The game was quite exciting, each team trying to get the better of the other. The Madras Forwards were very nippy while the Mysorians played rather a slow game aiming more at combined moves. Though the game was not very fast, it did produce some exciting moments as both the goals were being attacked in turn,

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Life Assurance in force	Rs. 30,56,26,000
Total Assets	" 9,73,00,000
Total Income	" 1,68,00,000
Life Assurance Fund	" 8,77,00,000
Total Claims paid in 1954	" 52,85,000

NEW BUSINESS SECURED : Rs. 5,30,00,000

OUR BIENNIAL VALUATION ON 31st DECEMBER 1954 BONUS DECLARED :

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especially during the second half of the game. The cleverness of the Madras Team secured them two goals early in the first half through Rajendran and Padmanabhan. Both the goals were spectacular ones resulting out of very good moves. Gurusathan at the Centre Half played a marvellous game for Madras while Swamy, as a deep defender, saved Mysore on many an occasion. Efforts made by Mysore especially towards the end of the game enabled them to reduce the margin only by one goal. Thus the Madras Region 'A' came out as winners of the Inter-Regional Foot-ball Tournament.

After the game was over, Shri N. Seshachalam, Hony. Secretary, S.R.A.A. requested Shri B. C. Desikachari, to take the chair and distribute the prizes. Shri C. V. Gopaul, Member-in-Charge, Foot-ball, S.R.A.A., then gave a brief review of the performance of the foot-ball branch of the S.R.A.A. While doing so, he brought out the fact of Foot-ball becoming more and more popular with Railwaymen all over India as evidenced by the entry of some Railway Team or other in all the Foot-ball Tournaments taking place in our Country. Coming to the S.R.A.A. Team, he spoke about their excellent performance in the First Division League Championship of the Madras Foot-ball Association, where they have won nine out of the ten matches so far played. In addition, he was pleased to state that the



(Photo: G.S.R.)

Sri B. C. Desikachari shaking hands with the players

S.R.A.A. have won the Tournaments conducted by the American College, Madurai, Railway Institute, Hubli and the United Foot-ball Club, Coimbatore. He expressed the fond hope that the S.R.A.A. may become the league champions this year and also do well in the Social Service Tournament that is in progress now.

EXPRESS NEWSPAPERS MARCH ON

THE INDIAN EXPRESS (English Daily) Simultaneously published from Madras, Bombay & Delhi
The largest circulated English Daily in India

DINAMANI- The largest circulated Tamil Daily published simultaneously from Madras & Madurai

ANDHRA PRABHA- The largest circulated Telugu Daily of Madras

THE SUNDAY STANDARD (English)-The people's Week-end Newspaper published simultaneously from Madras, Bombay & Delhi

DINAMANI KADIR-Illustrated Tamil Weekly-Madras

ANDHRA PRABHA WEEKLY-Illustrated Telugu Weekly-Madras

SCREEN (English)-SCREEN (Hindi)-The widely circulated Film Journals Bombay

LOKASATTA-The largest circulated Marathi Daily-Bombay

SUNDAY LOKASATTA-The popular Week-end Marathi Newspaper-Bombay

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Shri B. C. Desikachari, in his speech as the President, referred to the excellent performance of the Southern Railway Foot-ball Team, paying tributes to the efforts made and able guidance given by the Manager of the S.R.A.A. Foot-ball Team, Shri Sriramamurthy, a veteran foot-baller of the Madras

State. With a vote of thanks by Shri N. Seshachalam, the function ended successfully. There was a huge gathering till the end which included several officers of the Railway, such as Shri D. B. Patel, Shri S. K. Gopinath, Shri R. Jagannathan, Shri K. Srinivasan, Shri M. A. Uthappa and others.



(Photo: G.S.R.)

Sri B. C. Desikachari giving the trophy to the Captain of the Madras Team

SOUTHERN RAILWAY ATHLETIC ASSOCIATION (Mysore Region) Mysore Regional Tournaments, 1955-56

The Mysore Regional Tournaments for the year 1955-56 will be conducted as per programme. The tournaments are open to all Institutes in the Mysore Region. Staff of the Railway belonging to the Mysore Region and also those working in Mysore area, who are not members of any Institute may also participate in these tournaments and they will be grouped as "UNATTACHED TEAMS".

2. An Institute may enter not more than three teams for a tournament. Two or more small Institutes may join together and enter a team with the previous permission of the Regional Committee. Only a bona fide Railway employee who has been a member of the Institute for at least two months prior to the dates notified for the receipt of entries for the tournament, shall be eligible to represent an Institute in the

tournaments. An employee who is a member of more than one Institute must play for the Institute at his home station only. No player can play for more than one team in one event. In the case of an employee who is a member of more than one Institute the concerned Institute sending his entry should obtain and forward a declaration from him.

3. The entrance fees for the various tournaments and closing dates of entries are furnished in the programme.

(a) Entries will be rejected if the prescribed fees are not received before the closing date.

(b) Particulars of competitors or players with their Names, Staff Numbers, Designations and the Departmental Heads under whom they are working, should be furnished clearly in the entry forms, failing which, the entries will be rejected. The Institutes should arrange leave and passes for the competitors. In the case of staff not belonging to any Institute, the Regional Committee will do the needful.

Note.—Entries may be sent in manuscript or typewritten furnishing the required particulars.

4. The tournaments will be held at Mysore or at any Station decided by the Regional Committee and a Tournament Committee will be in charge of each tournament. The Committee's decision shall be final in all matters of disputes.

5. As far as games are concerned, the decisions of the Referee shall be final and no protests will be entertained.

6. The draw for the tournaments, specifying place, time and date will be notified in due course. Matches shall be played

strictly in accordance with the 'DRAW'. No postponement will be granted under any circumstances. It, however, lies within the powers of the Referee controlling the games, to decide whether postponement is necessary for reasons of bad weather.

7. No batta will be paid by the Athletic Association and the Institutes concerned should make their own arrangements to pay their players batta, if necessary.

8. Special casual leave and passes on sports account are permissible as per rules in force.

9. Trophies will be awarded to the Winners and Runners-up.

10. Referee's decision on a point of dispute in the course of the game, should not be questioned and any player guilty of misbehaviour will be liable to be debarred from further participation in the tournament.

11. It is hereby notified also that before the receipt of draw for each tournament, no players should be relieved for participation. Intimations will be sent well in advance in each case.

12. For any other instructions or if any doubt arising in regard to these tournaments, the matter may please be referred to this office.

M. CHELUVU URS.

Chairman,

S.R.A.A. & RME MYS.

Mysore,
7-7-1955.

M. M. NATHANIEL,

Hony. Secretary,

Mysore Regional Committee
and RPO MYS.

NEW EXCAVATION OF ASWAMEDHA YAGA SITE NEAR DEHRA DUN

(Continued from page 99)

kinsmen whom I love, bear goodwill towards me.

(b) "Amanamasi amanasyadevaha ya striyaha samanasaha tha ahani kamaye hruda tha mam kamayantham hruda thama amanasa kruthi." Oh God, may there be mental unity between me and my subjects. May the noble women who are dear to me bear affection towards me.

Political unity is absolutely necessary for the peaceful progress of society.

If two powers are constantly on the border of warfare, there cannot be lasting peace. Hence the necessity of an organisation like the United Nations. This advanced theory of modern politics was contemplated thousands of years ago by our forefathers, as shown by the word "Samrat" and "Samrajyam".

To modern Hindus, Jagatgram has become a place of holy pilgrimage.

SOUTHERN RAILWAY ATHLETIC ASSOCIATION Programme for Mysore Regional Tournaments and Sports 1955-56

EVENT	Entry fee.	Last date for receipt of entry fees.	Proposed date.
	Rs.		
1. Hockey Elevens	10 per team ..	2-9-55	26 to 30-9-55
2. Volley Ball Sixes	3	9-9-55	3 to 8-10-55
3. Badminton Doubles	2	20-9-55	10 to 13-10-55
4. " Fives	5	20-9-55	13 to 16-10-55
5. Football Elevens	10	10-10-55	1 to 6-11-55
6. Table Tennis - Singles	1 per Competitor ..	31-10-55	20 to 25-11-55
7. " Doubles	2 per Team ..	31-10-55	20 to 25-11-55
8. Tennis Men's Singles	1	31-10-55	15 to 20-11-55
9. " " Doubles	1	31-10-55	15 to 20-11-55
10. Tennis Mixed Doubles	4	31-10-55	15 to 20-11-55
11. Cricket	10	16-11-55	10 to 18-12-55
12. Athletics :			
100 Metres Bat race .. .. .	.. .. .		
200 " " .. .. .	.. .. .		
400 " " .. .. .	.. .. .		
800 " " .. .. .	.. .. .		
1,500 " " .. .. .	.. .. .		
3,000 " " .. .. .	.. .. .		
5,000 " " .. .. .	.. .. .		
10,000 " " .. .. .	.. .. .		
High Jump .. .. .	.. .. .		
Long Jump .. .. .	.. .. .		
Hop Step and Jump .. .. .	.. .. .		
110 Metres Hurdles .. .. .	.. .. .		
400 " " .. .. .	.. .. .		
Discus Throw .. .. .	.. .. .		
Javelin Throw .. .. .	.. .. .		
Shot Put .. .. .	.. .. .		
Pole Vault .. .. .	.. .. .		
Hammer Throw .. .. .	.. .. .		
Fancy Dress .. .. .	.. .. .		
4 x 400 Metres Relay Race	Re. 1	10-11-55	Will be notified later.
4 x 100 Metres Relay Race	Re. 1		

New Excavation of Aswamedha Yaga Site Near Dehra Dun

Vedantha Ratnakara Agnihotram Ramanuja Thathachariar

It is a matter of great delight to all of us that the Archaeological Department of the Government of India have recently excavated the site of the Aswamedha Yaga performed by King Silavarman at Jagat Gram in the Dehra Dun District of the Uttar Pradesh. Jagat Gram, a very beautiful spot, on the banks of the river Jamna is forty miles distant from Dehra Dun. On the opposite bank of the river is Khalsi where there is an Edict of Asoka.

Making of altars in the shape of Garuda and other forms (Garuda Chayana) is part of the Aswamedha sacrifice. The bricks used in this Chayana are inscribed as follows: "Nripathehe Varshaganasya Pona-shashtasya dhimathaha chathurtasya aswamedhasya chaityoyam Silavarmanaha." "This is the altar of the fourth Aswamedha performed by King Silavarman, who belonged to the Vrishagana gotra and is the 6th descendant of Pona."

Though Aswamedha Yagas are mentioned often in our puranas and

Panaromic view of site III from South



(Courtesy: Archaeological Dept., Govt. of India)

literature, there is scant historical evidence as to the time or place where this yaga was actually performed. We have only the coins of Satavahana, who is said to have performed the Aswamedha Yaga twice.

Excavation in progress from South-West



(Courtesy: Archaeological Dept., Govt. of India)

This excavation is unique as a series of Aswamedha Yagas have been performed here.

In the pre-historic period, we have vague evidence of the existence of Aswamedha Yagas in Europe as well as Asia. Of all rituals of Vedic religion, Aswamedha Yaga occupies a position of supreme importance. Sri Ramachandra was born after the performance of the Aswamedha sacrifice. Yudhishtira performed this sacrifice for washing away the sins committed during the war. It is interesting to note that a list of kings who performed Aswamedha Yaga is given in Satapatha Brahmana of Sukla Yajur Veda and Aitreya Brahmana of Rig Veda.

Though we come across a number of hymns connected with Aswamedha Yaga in the Rig Veda, full descriptions

August 1955

NEW EXCAVATION OF ASWAMEDHA YAGA

of Aswamedha Yaga is only given in the Brahmanas of the Yajur Veda—especially the mantras of the 7th Kanda and 8th and 9th Prasnas of the 3rd Brahmana of the Krishna Yajur Veda.

The construction of altars described in the Brahmanas and in the Sulba Sutras show the engineering skill and mathematical genius of our forefathers.

Von Schnader says that Pythagoras learnt not only his theory of transmigration but his mathematics also from India—(R. C. Dutt, 'History of the Civilization of Ancient India'). The rituals of Vedic religion are unique in this that they aim not only at promoting welfare in the other world but also at promoting welfare in this world. There are numerous rituals in the Vedas dealing with the social, economic, political, national and international spheres of life. Sacrifices (Yagas) are prescribed for political aims. Aswamedha Yaga aiming at uniting political power is one of them. Modern scholars, maintaining that the advanced political conditions which form a necessary background for the Aswamedha Yaga could not have existed in our country at that time, said the sacrifice could not have been actually performed—in short that Aswamedha Yaga was a myth. Now the discovery of this site establishes the historicity of Aswamedha Yaga.

The pattern of Vedic culture in the secular field is decentralized economy, interdependent social order and centralised political power.

Modern historians following the Western approach, say there was no political unity in the early days of Indian history.

This is contrary to the plan of society as described in the Vedas. When prescribing the Aswamedha Yaga the Kalpa Sutra explicitly says "Raja Sarvabhaumao Aswamedhana Yajatha." There is a story in the Sathapatha Brahmana of Vashishta who helped a king to conquer the whole world. This was the ideal of the monarchs. When

the sacrificial horse is let loose by the king to wander around for a year it is a call to all neighbouring kings to accept his supremacy. If any one catches the horse, the king has to go to battle with him and cannot proceed with the yagyam unless victorious.

Aswamedha being a sacrifice with a political background, there are many political ideas in the mantras connected with Aswamedha. In the beginning there is an "ishte" or "yaga" called "Samgrahini" which is intended to catch the minds of subjects. The king, being engaged in Aswamedha sacrifices

Agnihotra R. Tatachariar at the site of the 4th Horse-Sacrifice of Silavarman Jagat Gram near Khalsi. He is walking first in the row



(Courtesy: Archaeological Dept., Govt. of India)

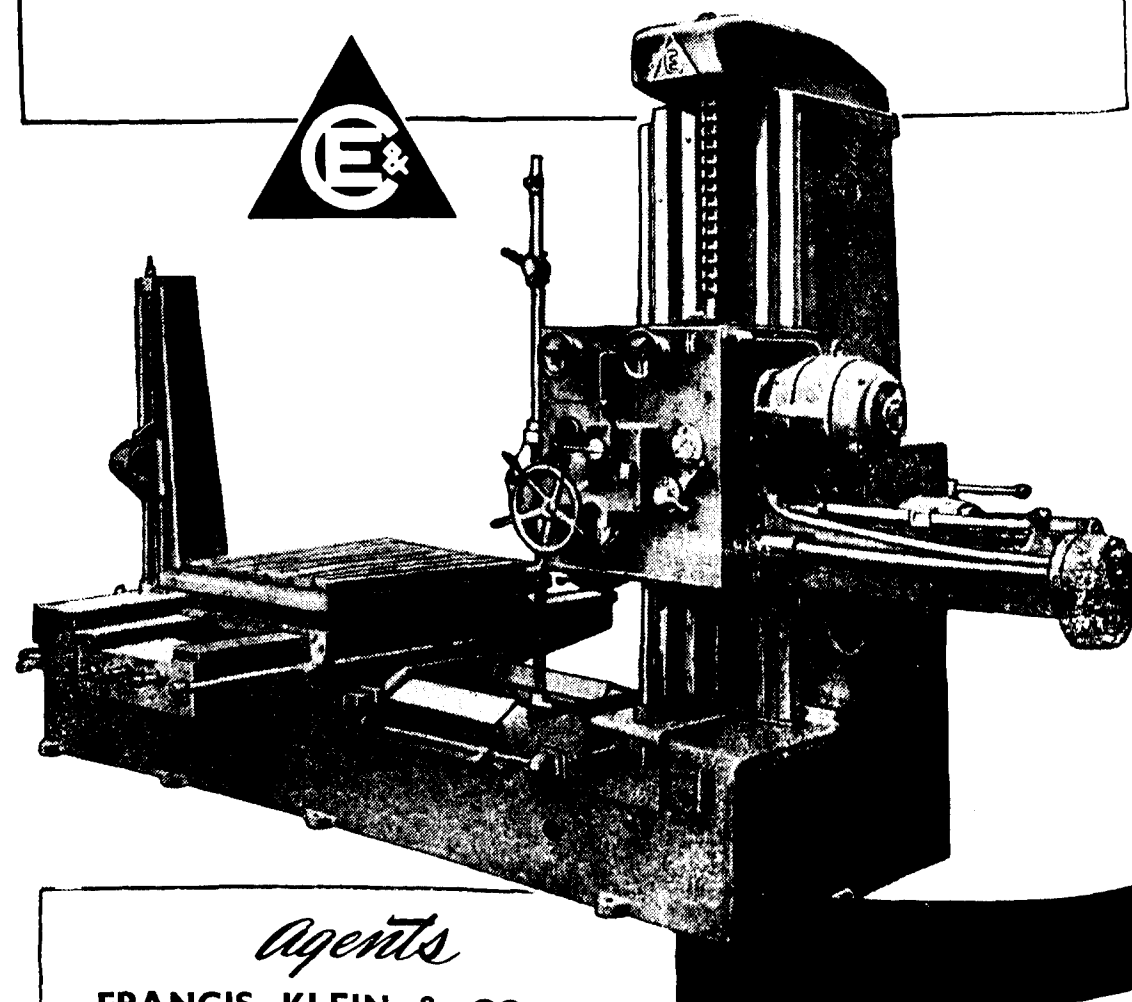
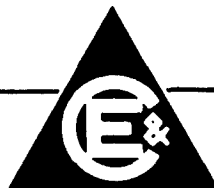
for one year, loses contact with his subjects. If a revolution arises meanwhile, the power of the king will collapse. To retain the loyalty of the people, he does mantras during the yaga. In the Upahoma, there are two prayers:—

(a) "Amanamasi amanasyadevas ye sajathaha kumarahas samanasa thanaham kamaye hruda tha mam kamayantham hruda." Oh God, may there be mental unity between myself and my subjects! May the young

(Continued on page 96)

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Gandhiji's Sayings on Ticketless Travel Etc.



The following is the authorised version of Mahatma Gandhi's post-prayer speech at New Delhi, on 28th October, 1947 :

If the railway earnings ran into crores, it was equally true that the expenses of running trains were no less heavy.

Gandhiji impressed on the audience the necessity of observing laws of sanitation in railway compartments. Spitting within compartments was an instance in point. He also deprecated disregard of railway rules like pulling the alarm signals without sufficient cause.

If he were at the head of the railway administration, Gandhiji said, he would advise the railway management to tell the public that unless they purchased tickets, trains would be stopped and they would resume journey only if the passengers willingly paid the fares due.

MAHATMA GANDHI'S SAYINGS

I have in my life never been guilty of saying things I did not mean—my nature is to go straight to the heart and if often I fail in doing so for the time being, I know that Truth will ultimately make itself heard and felt, as it has often done in my experience.

Indeed, what may appear to be an obvious error to one may appear to another as pure wisdom. He cannot help himself even if he is under a hallucination.

There is an indefinable mysterious Power that pervades everything I feel it, though I do not see it. It is this unseen Power which makes itself felt and yet defies all proof, because it is so unlike all that I perceive through my senses. It transcends the senses. But it is possible to reason out the existence of God to a limited extent.

Faith transcends reason. All I can advise is not to attempt the impossible. I cannot account for the existence of evil by any rational method. To want to do so is to be co-equal with God.

The divine music is incessantly going on within ourselves, but the loud senses drown the delicate music, which is unlike and infinitely superior to anything we can perceive or hear with our senses.

I believe that we can all become messengers of God, if we cease to fear man and seek only God's Truth. I do believe I am seeking only God's Truth and have lost all fear of man.

God is the searcher of hearts. He transcends speech and reason. He knows us and our hearts better than we do ourselves. He does not take us at our word, for He knows that we often do not mean it, some knowingly and others unknowingly.

God is the hardest taskmaster I have known on this earth, and He tries you through and through.

God comes to your assistance somehow or other and proves to you that you must not lose your faith and that He is always at your beck and call, but on His terms, not on your terms. So I have found. I cannot really recall a single instance when, at the eleventh hour, He has forsaken me.

Let us pray that God may cleanse our hearts of pettiness, meanness and deceit and He will surely answer our prayers. Many have always turned to that unfailing source of strength.

Though God is in every atom about us, around us and within us, He has reserved to Himself the right of becoming manifest to whomsoever He chooses.

On all occasions of trial, God has saved me. I know that the phrase 'God saved me' has a deeper meaning for me today, and still I feel that I have not yet grasped its entire meaning. Only richer experience can help me to a fuller understanding.

Worship or prayer is no flight of eloquence; it is no lip-homage. It springs from the heart. If, therefore, we achieve that purity of the heart when it is 'emptied of all but love', if we keep all the chords in proper tune, they 'trembling pass in music out of sight'. Prayer needs no speech.

As I believe that silent prayer is often a mightier force than any overt act, in my helplessness I continuously pray in the faith that the prayer of a pure heart never goes unanswered.

God demands nothing less than complete self-surrender as the price for the only real freedom that is worth having. And when a man thus loses himself he immediately finds himself in the service of all that lives.

There is no danger whatsoever if many people could truthfully represent the inner voice. But, unfortunately, there is no remedy against hypocrisy.

Some think that God Himself is a creation of our own imagination. If that view holds good, then nothing is real.

God has never forsaken me even in my darkest hour. He has saved me often against myself and left me not a vestige of independence. The greater the surrender to Him, the greater has been my joy.

You have to believe no one but yourselves. You must try to listen to the inner voice, but if you won't have the expression 'inner voice' you may use the expression 'dictates of reason', which you should obey, and if you will not parade God, I have no doubt you will parade something else which in the end will prove to be God, for, fortunately, there is no one and nothing else but God in this universe.

A humble seeker that I claim to be has need to be most cautious and, to preserve the balance of mind, he has to reduce himself to zero before God will guide him.

There are two aspects of things—the outward and the inward. The outward has no meaning except in so far as it helps the inward. All true Art is thus an expression of the soul. The outward forms have value only in so far as they are the expression of the inward spirit of man.

The productions of man's Art have their value only in so far as they help the soul onward towards self-realization.

People generally fail to see Beauty in Truth, the ordinary man runs away from and becomes blind to the beauty in it. Whenever men begin to see Beauty in Truth, then true Art will arise.

When I admire the wonder of a sunset or the beauty of the moon, my soul expands in worship of the Creator. I try to see Him and His mercies in all these creations. But even the sunsets and sunrises would be mere hindrances if they did not help me to think of Him. Anything, which is a hindrance to the flight of the soul, is a delusion and a snare; even like the body, which often does actually hinder you in the path of salvation.

Truth is the first thing to be sought for, and Beauty and Goodness will then be added unto you. That is what Christ really taught in the Sermon on the Mount. That is the Truth and Beauty I crave for, live for, and would die for.

Life is greater than all art. I would go even further and declare that the man whose life comes nearest to perfection is the greatest artist; for what is art without the sure foundation and framework of a noble life?

True Beauty after all consists in purity of heart. Art to be art must soothe. I want art and literature that can speak to the millions.

I must admit my many inconsistencies. But since I am called 'Mahatma', I might well endorse Emerson's saying that 'foolish consistency is the hobgoblin of little minds'. There is, I fancy, a method in my inconsistencies. In my opinion there is a consistency running through my seeming inconsistencies, as in Nature there is unity running through seeming diversity.

I want India to recognise that she has a soul that cannot perish and that can rise triumphant above every physical weakness and defy the physical combination of a whole world.

Like opium production, the world manufacture of swords needs to be restricted. The sword is probably responsible for more misery in the world than opium.

Immediately the spirit of exploitation is gone, armaments will be felt as a positive unbearable burden. Real disarmament cannot come unless the nations of the world cease to exploit one another.

Let our first act every morning be to make the following resolve for the day: 'I shall not fear anyone on earth. I shall fear God only; I shall not bear ill-will towards anyone. I shall not submit to injustice from anyone. I shall conquer untruth by truth and in resisting untruth I shall put up with all suffering'.

Suffering is the law of human beings; war is the law of the jungle. But suffering is infinitely more powerful than the law of the jungle for converting the opponent and opening his ears, which are otherwise shut, to the voice of reason.

By a long course of prayerful discipline I have ceased for over forty years to hate anybody. I know that this is a big claim. Nevertheless, I make it in all humility. But I can and I do hate evil wherever it exists.

I could not live for a single second without religion. Many of my political friends despair of me because they say that even my politics are derived from religion. And they are right. My politics and all other activities of mine are derived from my religion. I go further and say that every activity of a man of religion must be derived from his religion, because religion means being bound to God, that is to say God rules your every breath.

The politician in me has never dominated a single decision of mine, and if I seem to take part in politics, it is only because politics encircle us today like the coil of a snake from which one cannot get out, no matter how much one tries.

I claim to be a humble servant of India and humanity, and would like to die in the discharge of such service. I have no desire to found a sect.

Dark though the path appears, God will light it and guide my steps, if I have faith in His guidance and humility enough to acknowledge my helplessness without that infallible guidance.

I do believe that in the other world there are neither Hindus, nor Christians nor Mussalmans. There all are judged not according to their labels, or professions, but according to their actions, irrespective of their professions.

I believe absolutely that India has a mission for the world. She is not to copy Europe blindly. India's acceptance of the doctrine of the sword will be the hour of my trial.

My scheme of life, if it draws no distinction between different religionists in India, also draws none between different races. For me 'man is a man for a' that'.

While I prate about Universal Nonviolence, my experiment is confined to India. If it succeeds, the world will accept it without effort. There is, however, a big BUT.

I do not say 'eschew violence in your dealing with robbers or thieves or with nations that may invade India'. But in order that we are better able to do so, we must learn to restrain ourselves. It is a sign not of strength but of weakness to take up the pistol on the slightest pretext.

My non-violence does not admit of running away from danger and leaving dear ones unprotected. Between violence and cowardly flight, I can only prefer violence to cowardice. I can no more preach non-violence to a coward than I can tempt a blind man to enjoy healthy scenes.

I cannot impose my personal faith on others, never on a national organisation. I can but try to convince the nation of its beauty and usefulness. It would be a calamity if by my obstinacy I stand in the way of the country's progress by other means, so long as they are not positively mischievous and harmful.

I have said more than once that if we do not know how to defend ourselves, our women and our places of worship by the force of suffering, i.e., non-violence, we must, if we are men, be at least able to defend all these by fighting.

It is a first-class human tragedy that peoples of the earth who claim to believe in the message of Jesus whom they describe as the Prince of Peace show little of that belief in actual practice. It is painful to see sincere Christian divines limiting the scope of Jesus' message to select individuals.

Peace will never come until the Great Powers courageously decide to disarm themselves. It seems to me that recent events must force that belief on the Great Powers. I have an implicit faith, a faith that today burns brighter than ever, after half a century's experience of unbroken practice of non-violence—that mankind can only be saved through non-violence.

Freedom of India will demonstrate to all the exploited races of the earth that their freedom is very near and that in no case will they henceforth be exploited.

I refuse to abuse a man for his fanatical deeds, because I try to see them from his point of view. It is that broad faith that sustains me. It is a somewhat embarrassing position I know—but to others, not to me!

I ask people to examine every religion from the point of the religionists themselves. I do not expect the India of my dream to develop one religion, i.e. to be wholly Hindu, or wholly Christian, or wholly Mussalman, but I want it to be wholly tolerant, with its religions working side by side with one another.

The New Testament gave me comfort and boundless joy, as it came after the repulsion that parts of the Old had given me. Today supposing I was deprived of the Gita and forgot all its contents but had a copy of the Sermon, I should derive the same joy from it as I do from Gita.

There is one thing in me, and that is that I love to see the bright side of things and not the seamy side, and so I can derive comfort and inspiration from any great book of any great religion.

I came to the conclusion long ago, after prayerful search and study and discussion with as many people as I could meet, that all religions were true and also that all had some error in them, and that whilst I hold by my own, I should hold others as dear as Hinduism, from which it logically follows that we should hold all as dear as our nearest kith and kin and that we should make no distinction between them.

I have a deep conviction that no religion can be sustained by brute force. On the contrary those who take the sword always perish by the sword.

In reality there are as many religions as there are individuals. Religions are different roads converging upon the same point. What does it matter that we take different roads, so long as we reach the same goal?

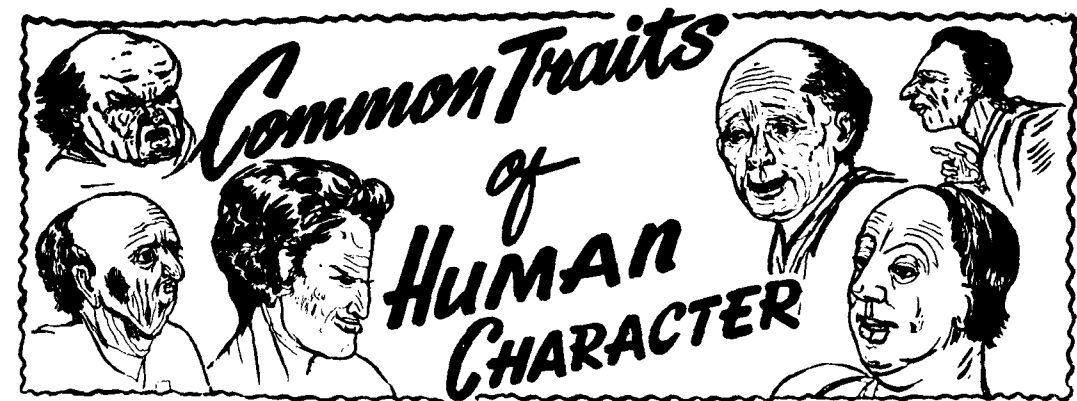
There must be a higher law than that of destruction. And if that is the law of life, we have to work it out in daily life. Wherever there are jars, wherever you are confronted with an opponent, conquer him with love. In this crude manner, I have worked it out in my life.

Brute force has been the ruling factor in the world for thousands of years, and mankind has been reaping its bitter harvest all along, as he who runs may read. There is little hope of anything good coming out of it in the future.

Jesus never uttered a loftier or a grander truth than when He said that wisdom cometh out of the mouths of babes. I believe it. I have noticed it in my own experience that if we would approach babes in humility and in innocence, we would learn wisdom from them.

(Courtesy: The Navajivan Trust, Ahmedabad)

(Compiled by P. S. Vedhachalam)



6. Stupidity

S. R. Srinivasa Raghavan

Integral Coach Factory

STUPIDITY has been defined as unconscious ignorance. A stupid man lacks knowledge about elementary things. The natural conclusions one can draw from observation are not plain to him; he needs a lot of explanation to understand the plainest facts and it need not be surprising if, even then, he is not able to catch the point. Compared to other traits, stupidity is more common. In fact the sum-total of knowledge that we acquire in the whole course of our life is very small. During the short span of "three score years and ten" we are not able to observe the deeper and shadier parts of life. Naturally every third man is stupid from one point of view or another.

Suffering fools gladly is not the virtue of a highly intelligent man. Ignorance may be bliss to the stupid; but the wise feel that fools rush in where angels fear to tread.

Stupidity has been celebrated by Alexander Pope in his "Dunciad". "The bookfull blockhead, ignorantly read with loads of learned lumber in his head" is not only dull himself but he is also the cause of dullness in others. The stupid man with a spurious pretension of knowledge has been called "learned without sense and venerably dull, with various readings stored in his empty skull".

Oliver Wendell Holmes has felt a sort of soothing comfort in a dull man. According to him a ground-glass shade over a gas lamp does not bring more solace to our dazzled eyes than such a one to our minds. Intellectual brilliance is not really a very popular quality amidst dullards. An intelligent man is surely out of place in dull company. The stories of Socrates and Galileo and Christ plainly prove to us that a new truth is not easily swallowed by humanity. That means, it does not like its fortress being razed to the ground by a sudden onslaught from an intelligent quarter. Our superstitions spring from stupidity. Readers might be aware of the French Emperor who was in the habit of constantly consulting his barber on matters of state.

A dull man has been condemned as being so near a dead man that he is hardly to be ranked in the list of the living. "As he is not to be buried whilst he is half alive, so he is as little to be employed whilst he is half dead."

Tamil literature contains many fine pieces of poetry in which dull patrons of art have been approached by poets who were poor. In one instance a rich individual seeks the aid of his wife to hide himself from the sight of approaching doom in the shape of a poet!

SOUTHERN RAILWAY TENDER NOTICE

**Tender No. S HSM 55 3—Sale of
Old Wagon underframes, etc.**

Sealed tenders are invited for the purchase and removal of condemned and scrap materials such as Machines, Lathes, Oil Tank, Scrap signal fittings and Old wagon underframes etc. from the General Stores Depots, Perambur and Hubli and will be received in the Controller of Stores Office, Southern Railway (Perambur) Ayanavaram P.O., Madras-23, before 3-00 p.m. on the 24th August, 1955 and opened at 11-00 a.m. on the 25th August, 1955.

Tenders should be submitted only in the prescribed forms obtainable from the Office of the undersigned (from 10-30 a.m. to 3-00 p.m. on week days and from 10-30 a.m. to 12-00 noon on Saturdays) on payment of Rs. 5 per copy in cash or by M.O. (which is not refundable) with full name and address of the remitter.

Remittance by any other means will not be accepted. Tender forms are not transferable.

The materials can be inspected on application to the District Controller of Stores, Perambur Hubli on production of the tender form. Delivery is Ex-site.

Applications for tender forms will not be entertained after 3-00 p.m. on the 22nd August, 1955.

P. N. TALATI,
Controller of Stores.

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SOUTHERN RAILWAY TENDER NOTICE

The **Regional Engineer, Southern Railway, Rayapuram, Madras-13**, invites **Separate Sealed Percentage Schedule Tenders** for each of the following works to reach him **not later than 12 noon on Wednesday the 17th August 1955** :

Serial No.	NAME OF WORK	Total approximate value of the contract	Earnest money to be paid
		Rs.	Rs.
1	Proposed 'C' Class Station between Tada and Sullurupeta ..	14,000	700
2	Proposed 'C' Class Station between Doravarihattam and Nayudupeta	14,000	700
3	Proposed 'C' Class Station between Nayudupeta and Pedapariya	14,000	700

Tenders should be submitted in the prescribed forms, obtainable from the **Office of the Regional Engineer, Southern Railway, Rayapuram, Madras-13**, on production of a receipt for the sum of **Rs. 10 (Rupees Ten only)** paid to the **Chief Cashier, Southern Railway, Madras-3**, or **Regional Accounts Officer, Trichinopoly** or **Mysore**, or to any Station Master on the Southern Railway towards the cost of each form. Extra copies can be had if available on payment of **Rs. 2 (Rupees Two only)** each. In no circumstances will the cost of the tender forms be refunded. The tender forms are not transferable.

Tender forms will be issued **upto 15-00 hours on Thursday the 11th August 1955**.

Earnest money as above should be paid in advance to the **Chief Cashier, Madras-3**, or the **Regional Accounts Officer, Trichinopoly** or **Mysore**, **not later than 15-00 hours on Friday the 12th August 1955**, and the receipt submitted along with the tender. No cheque or demand draft, etc., should be attached to the tender.

Tenderers are required to submit **Income-tax Clearance Certificate** along with the tenders.

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

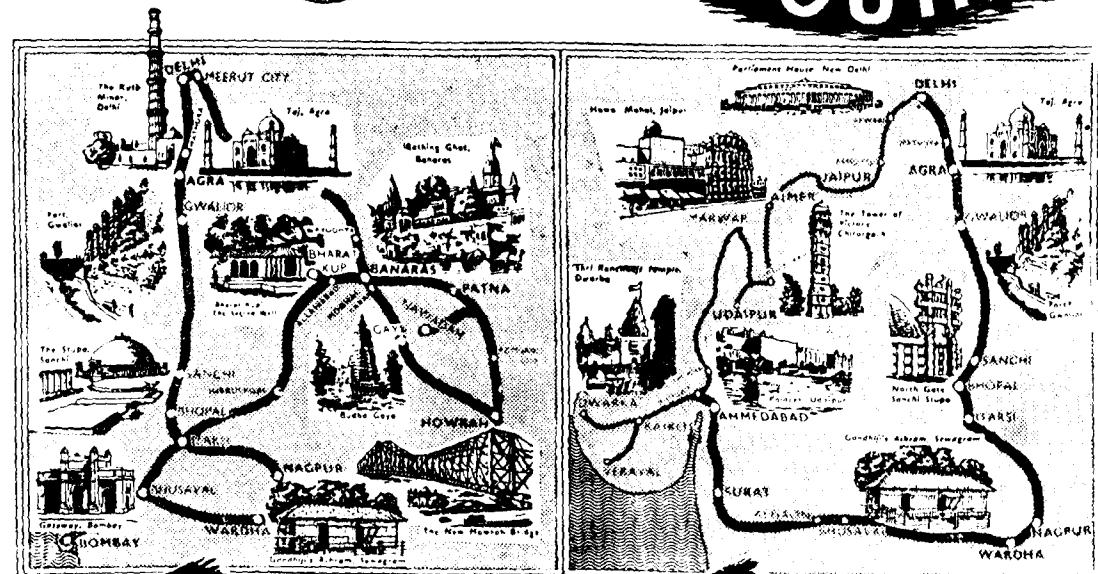
The tenders will be opened at **12 hours on Thursday the 18th August 1955** at the **Office of the Regional Engineer, Southern Railway, Rayapuram, Madras-13**.

The **Regional Engineer** 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.

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Adult I Class II Class III Class
 Fares — Rs. 170-14-0 Rs. 108-1-0 Rs. 57-4-0

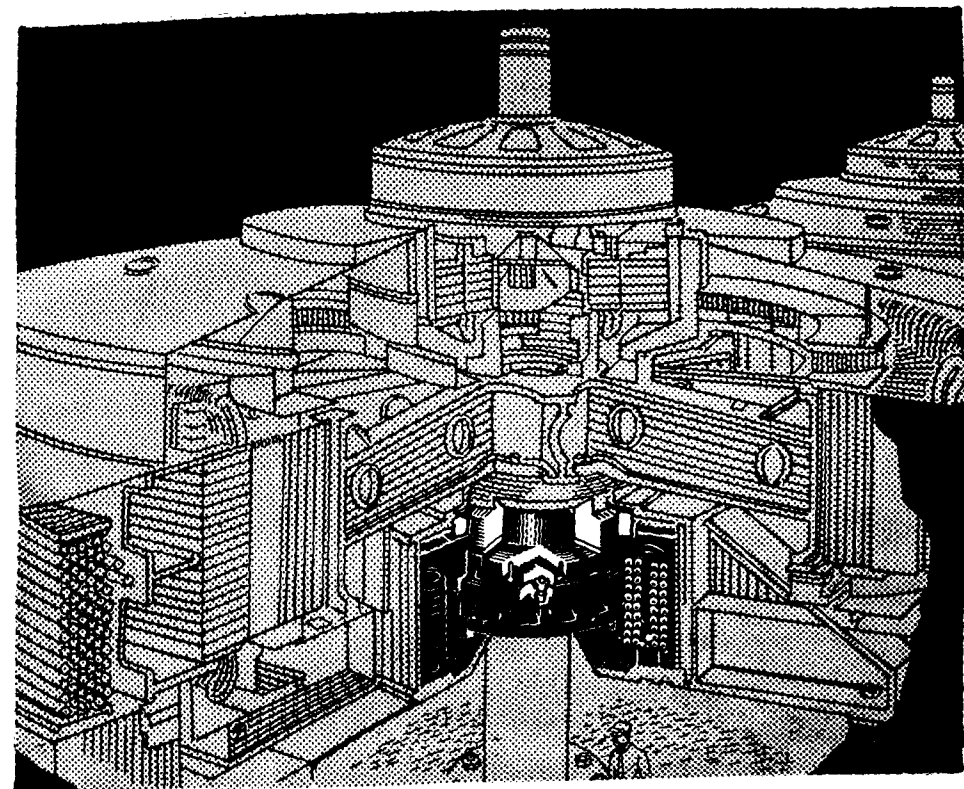
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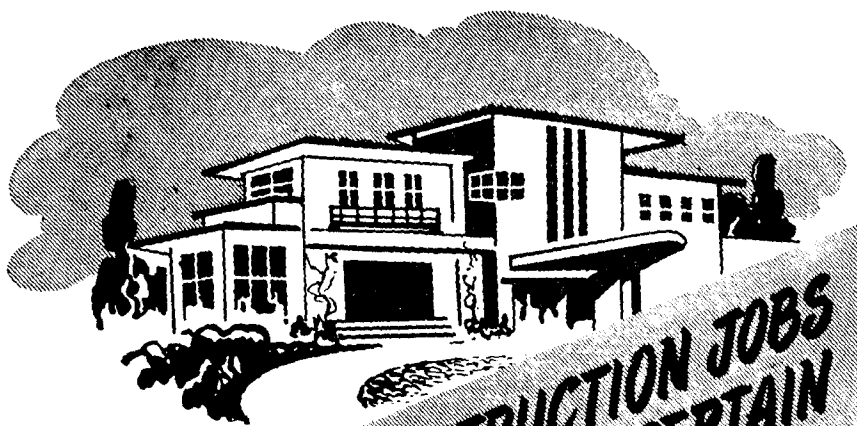
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Railway in the Nation's Economy

L. A. Natesan
Economic Adviser, Railway Board

THE slower pace of development of other forms of transport has rendered Indian Railways by far the most important means of inland transportation in the country. In the United States, for example, Railways account for only 52 per cent of the goods and 5.5 per cent of the passenger intercity traffic of all carriers. The rest of the traffic is handled by road, river and private automobiles. One would expect that with the greater dependence on the Railways, rail traffic in India would have progressed to a greater extent. But transportation is dependent on the general economic development of the country and our comparative backwardness is reflected here. The average number of miles of rail journey per inhabitant in India is only 101 in a year as against 409 in the United Kingdom, 198 in the United States and 193 in Canada. The disparity in the case of goods traffic is even greater. Indian Railways handle **per capita** only 66 ton miles as against 4,339 in Canada, 3,795 in the United States and 448 in the United Kingdom.

With expanding production in agriculture and industry, and the consequent increase in national wealth to be anticipated in the immediate future, it is to be expected that these averages per head of the population would indeed go up. Such increases will make progressively increasing demands on our railways. A general idea as regards the extent of the increase that may be expected may be found by

reference to a few comparative figures. Table I presents the **per capita** goods traffic originating daily in certain select countries :

TABLE I

Per capita goods traffic originating	
Country	Goods traffic originating per capita in pounds
India	... 1.26
South Africa	... 25.6
U.K.	... 34.9
U.S.A.	... 47.5
Canada	... 60.5

Our railways carry daily **per capita** only 1.26 lbs. as against about 35 lbs. in the United Kingdom, 48 lbs. in the United States and 61 lbs. in Canada. What should be observed about these figures particularly is that even if the present averages were to be increased fourfold, the results would still leave our figures exceedingly low as compared with the other countries. But the effect of even such a relatively modest increase on our rail traffic would be prodigious.

The needs of the immediate future are emphasized by the importance we attach to the objectives of a welfare State and of the socialistic pattern of the society. Speaking in economic terms, they imply an improvement in production of material wealth, so that the welfare of the people as a whole might be improved substantially as rapidly as possible and their standards

of life raised to levels deemed adequate according to the modern standards. The measure of the success in these efforts towards increased production in the farm and mine and later in the factory depends essentially on transportation.

So far as our railways are concerned, the record of the recent past has indeed been encouraging. During the past six years, 1948 to 1954, despite the disabilities of the war-worn equipment of the railways, the rehabilitation effort, and other measures, it has been possible to operate 19.6 per cent more train miles. Detailed figures by services may be seen in Table II:

TABLE II

Train mileage during 1948-49 and 1953-54

	1948-49	1953-54	Increase or Decrease in percentage
1. Route miles	33,861	34,406	1.6
2. Train miles Pass. and Prop. (000s).	94,491	113,378	20.0
3. Train miles Goods and Prop. (000s).	62,256	74,000	19.0
4. Total train miles (000s).	156,747	187,468	19.6

It is significant that recent figures of railway working have exceeded substantially the peaks of the pre-war figures of train operation which related to the much larger system of the undivided India. Although substantial improvement has been effected, assurance of adequate rail transportation for the future depends on the present plans of railway development and expansion.

What should be the rate of increase in rail transportation? A direct answer is difficult because of the multiplicity of factors which need to be taken into account before arriving at a conclusion. But it must be stated that judging from the experience of other countries, the rate of increase in transportation is generally greater than the rate of increase in production or

population. The demand for transportation is thus progressive. According to the American rate of development since 1890, a 50 per cent **per capita** increase in freight traffic for each decade seems to be a fair average. The rate depends on the tempo and the extent of the economic growth. It may well be greater in India because of the organised national effort directed under Central Planning.

From this point of view, therefore, the success of our national policy to improve our economic conditions depends to a very large extent on our ability to provide adequate rail transportation. This is the reason why special importance has to be attached to the present planning of the railways, their sound administration and commercial principles of working.

In formulating railway policy of the future, certain aspects of railway development, I think, need to be specially considered at present.

Firstly, I would refer to the comparatively low proportion of the railway mileage in India. Whether considered from the point of view of area or of population, the progress of our railway development has been limited in the past. We have, for instance, in India only 9 route miles per 100,000 inhabitants as against 311 in Australia, 278 in Canada and 141 in U.S.A. Rated against area, our railway mileage is only 27 per 1,000 sq. miles as compared with 204 in the United Kingdom, 120 in France and 75 in the United States. The scope for further development, even if allowance is made for the expansion of alternative means of transport, should be clear from these comparative figures.

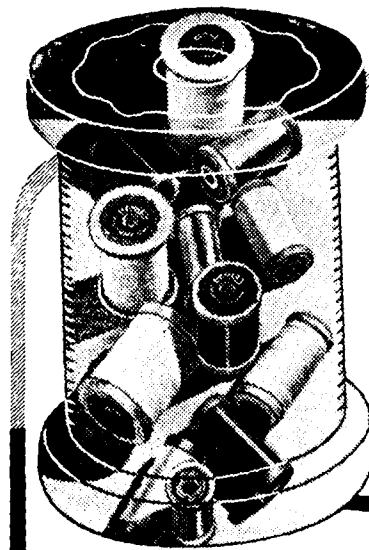
Secondly, the extent of the provision for increased transport capacity is one which will have to be determined mainly by the character of development anticipated in the agricultural and industrial sectors. From the long-term point of view, it is necessary to examine to what extent additional

transport capacity would be provided by alternative means of transport, such as, inland river, canal, coast-wise shipping and the road. Railway development will require to be assessed carefully and properly integrated with the development of other forms of transport.

Thirdly, it is necessary to ensure strict adherence to commercial principles of working in the administration of railways. The failure to observe this has seriously endangered the financial status of nationalized railways in other countries and brought about deficits which had to be covered by State subsidies and taxation. We have during the last 30 years reaffirmed

more than once commercial principles of working and maintenance of this policy should be the basis on which future planning of railway finance should be based.

Fourthly, the purity and efficiency of the administration of the largest nationalized undertaking in the country should be maintained. In the past Indian Railways have had, on the whole, a fair record of probity of management, and it cannot function satisfactorily unless this is ensured in the future. The wisdom of our Parliament reflected in the revised convention adopted last year has ensured that these principles would be observed in the future.



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SOUTHERN RAILWAY TENDER NOTICE

1. The Chief Engineer, Southern Railway, Park Town, Madras-3, invites Separate Sealed Percentage Tenders for the following works up to 12-00 hours on Friday the 2nd September 1955 :—

S. No.	NAME OF WORK	Total approximate value of the contract	Earnest money
		Rs.	Rs.
1	Stone ballasting in place of existing sand ballast for a length of 14 miles from mile 42/12 to 52/11 and from mile 59/11 to 64—Arkonam sub-division—Gooty district ..	2,91,200	14,560
2	Stone ballasting in place of existing sand ballast for a length of 16 miles from mile 275/5-6 to 291/6—Gooty sub-division—Gooty district ..	3,25,200	16,260

2. Tenders should be submitted in the prescribed forms obtainable from the Office of the Chief Engineer, Southern Railway, Madras-3, on production of a cash receipt for the amount of Rs. 10 (Rupees Ten only) paid to the Chief Cashier, Southern Railway, Madras-3 or Regional Accounts Officer, Southern Railway, Mysore or Trichinopoly or to any Station Master on the Southern Railway towards the cost of each tender form. In no circumstances, will the cost of the tender forms be refunded. The tender forms are not transferable.

3. Tender forms will be issued up to 12-00 hours only on Saturday the 27th August 1955.

4. Earnest money mentioned above should be paid to the Chief Cashier, Madras-3 or the Regional Accounts Officer, Mysore or Trichinopoly, not later than 12-00 hours on Tuesday the 30th August 1955 and the receipt submitted along with the tender.

5. The items given in the schedules attached to the tender forms are covered by Printed Schedule of Rates, 1955, which can be had on production of a receipt for the amount of Rs. 5 paid to the Chief Cashier, Southern Railway, Madras-3 or the Regional Accounts Officer, Mysore or Trichinopoly or on payment of Rs. 5 to any District Engineer of this Railway.

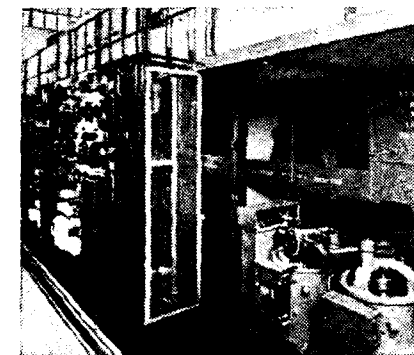
6. Earnest money is fixed at 5 per cent of the estimated cost and the successful tenderer will be required to remit a further sum which, together with the earnest money, will represent 10 per cent of the value as per his accepted tender as Security Deposit.

7. Tenderers are required to submit Income-tax Clearance Certificate along with their tender.

8. The tenders will be opened at 12-00 hours on Saturday the 3rd September 1955 at the Office of the Chief Engineer, Southern Railway, Madras-3.

9. The Chief Engineer 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.

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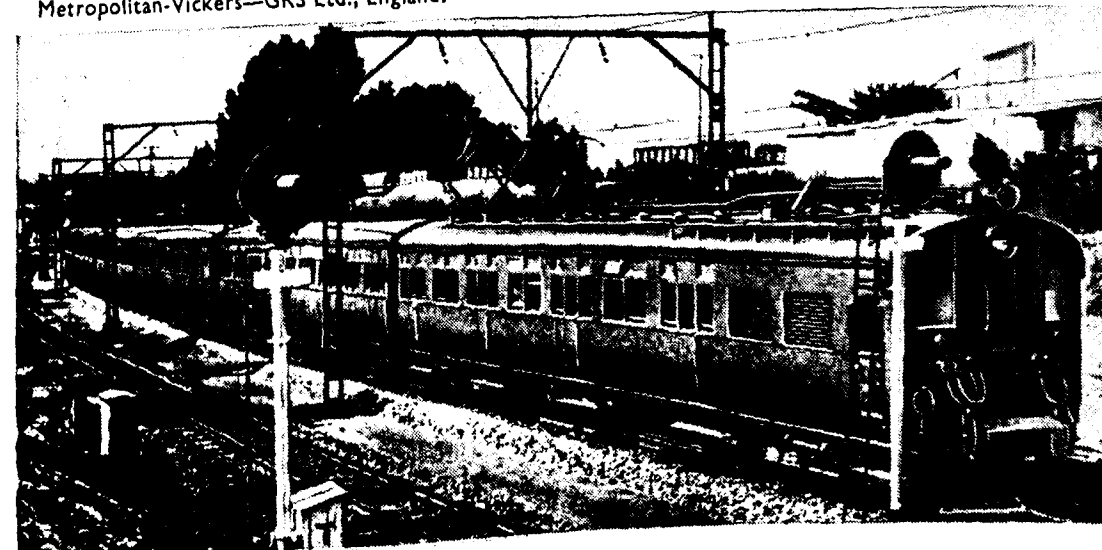
This contribution to the electrification of India's railways follows a worldwide contribution to railway electrification by the A.E.I. Group of Companies for over half a century.

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A.E.I. (India) Ltd. will supply indoor equipment for all the six main line Traction Substations and all the four Track Sectioning Cabins on the Howrah-Burdwan main line. This includes twelve Pumpless Steel Tank Rectifiers totalling 32,000 kW and seventy-six High Speed Circuit Breakers all manufactured by the British Thomson-Houston Co. Ltd., England.

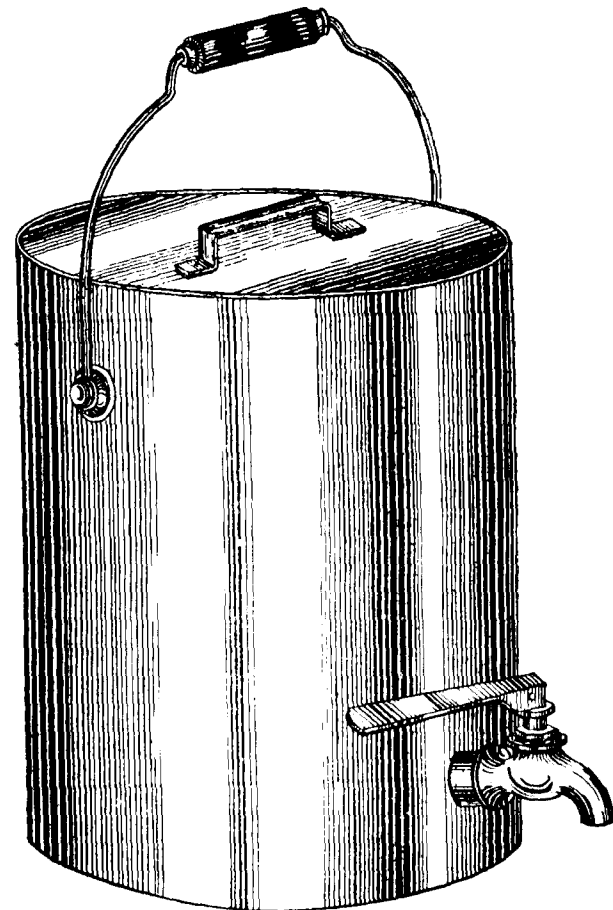
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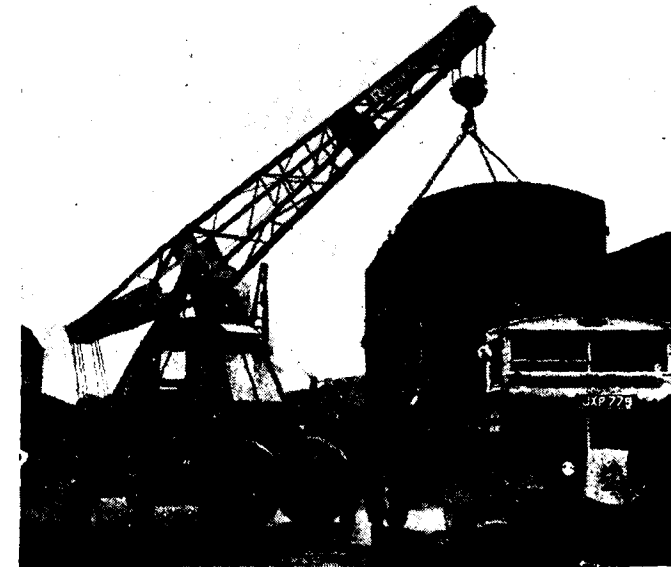
The inner stainless vessel has a rounded bottom to facilitate easy cleaning. The tap is of special quick-flow type. Solid wire handle with plastic hand grip is very convenient for carrying.

This Urn is at present made in one size only to hold 2 gallons (5 Madras Measures). Other sizes and styles can be specially made to order.

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RAPIER



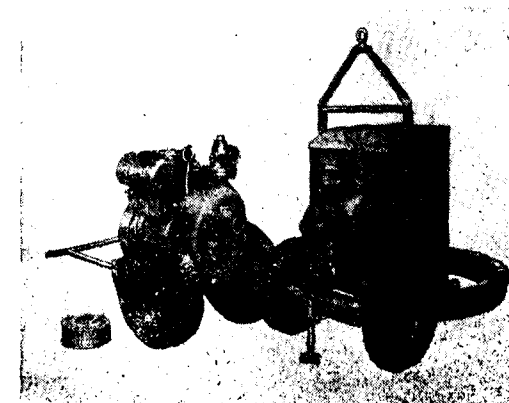
RAPIER 7 Standard Mobile Crane handling container traffic in a railway goods yard.

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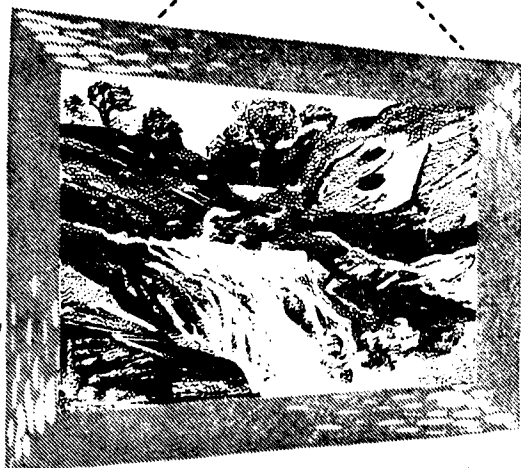


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The illustration shows a RAPIER Loco Hoist in a repair depot of the Southern Railway.

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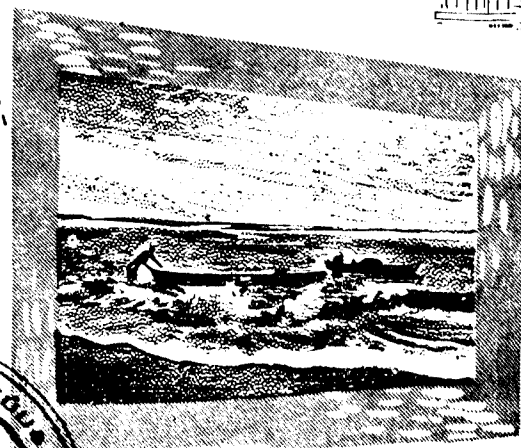


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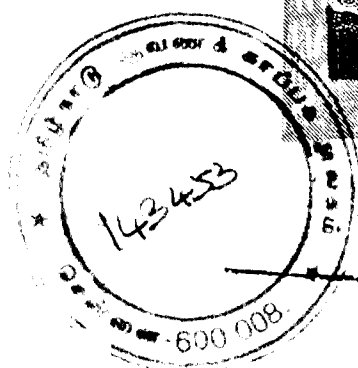
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AND

If you are planning to undertake a "See India" tour, remember to avail of the

STANDARD TOUR TICKETS

for first, second and third class which are issued at 3/4th of the ordinary fares for distances of 1500 miles and over.

There are many places of interest situated on the Northern Railway, such as Lucknow, Penaras, Ajodhya, Amritsar, Kanpur, Allahabad, Jodhpur, Delhi and Bhakra Nangal besides the enchanting hill stations of Simla, Mussoorie and Kashmir.

People going to Jammu and Kashmir State should get permits from the District Magistrate or the authority concerned for entry into that state.

For more details on the places of interest, please refer to our booklet on "Places of Interest" available at railway bookstalls and for particulars on Concessional Tickets and Standard Tour Tickets, contact the nearest Station Master.



SOUTHERN RAILWAY & INTEGRAL COACH FACTORY

SHOW ROOM OF IMPORTED RAILWAY EQUIPMENT (Integral Coach Factory Canteen Hall, Perambur)

The public are notified that as from 1-7-55 the Show Room will remain open from 10 a.m. to 1 p.m. and 2 p.m. to 5 p.m.

Several leading industrialists have visited the Show Room and some of the remarks offered by them are reproduced below :

1. "A good eye-opener for small industries as to how to enter the Railways."
2. "Let Indian traders learn from this and develop Indian industries."
3. "I am very much pleased to see this for the encouragement of the industries."
4. "Very well organised display."
5. "Small Scale Industries can manufacture some of the interesting items exhibited in the Show Room."
6. "A very representative selection well arranged."
7. "Your exhibition is a real eye-opener for all prospective Manufacturers, including ourselves. Thank you."

If you have not visited the Show Room, we request you to do so at the earliest opportunity to inspect the 1,400 exhibits, and decide for yourself if it will be worth your while to manufacture and supply the same to the Railways.

We shall give you all the information you desire. Further enquiries may be addressed to the Officer-in-Charge of the Show Room. Telephone No. 55653.

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