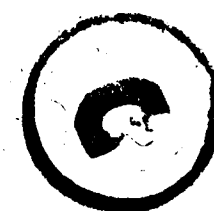


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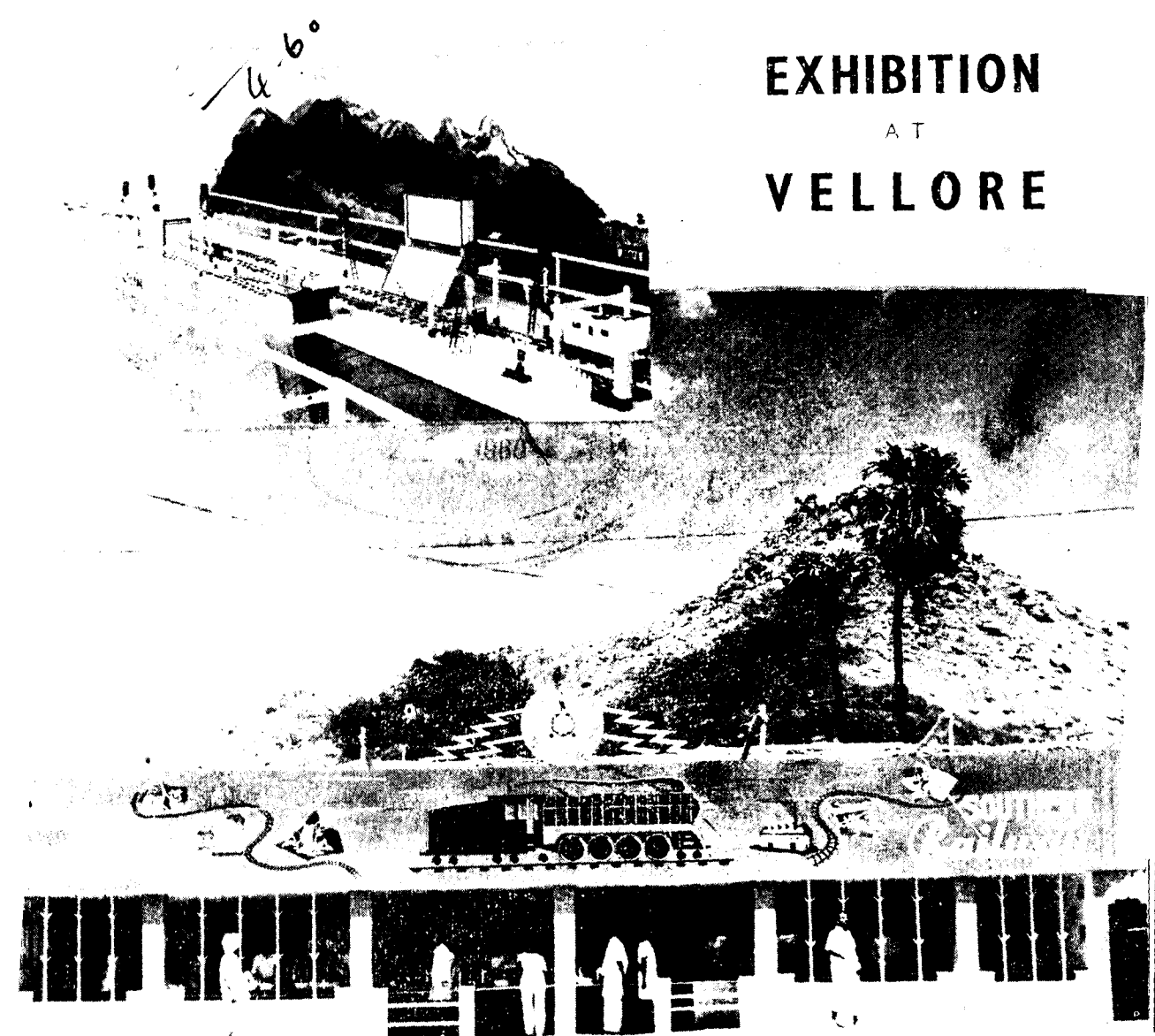
SOUTH RAIL NEWS.

Vol. VII

No. 6

September, 1960

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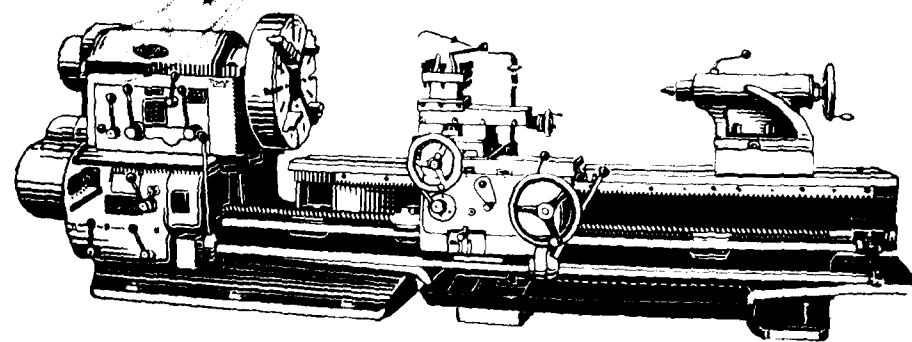
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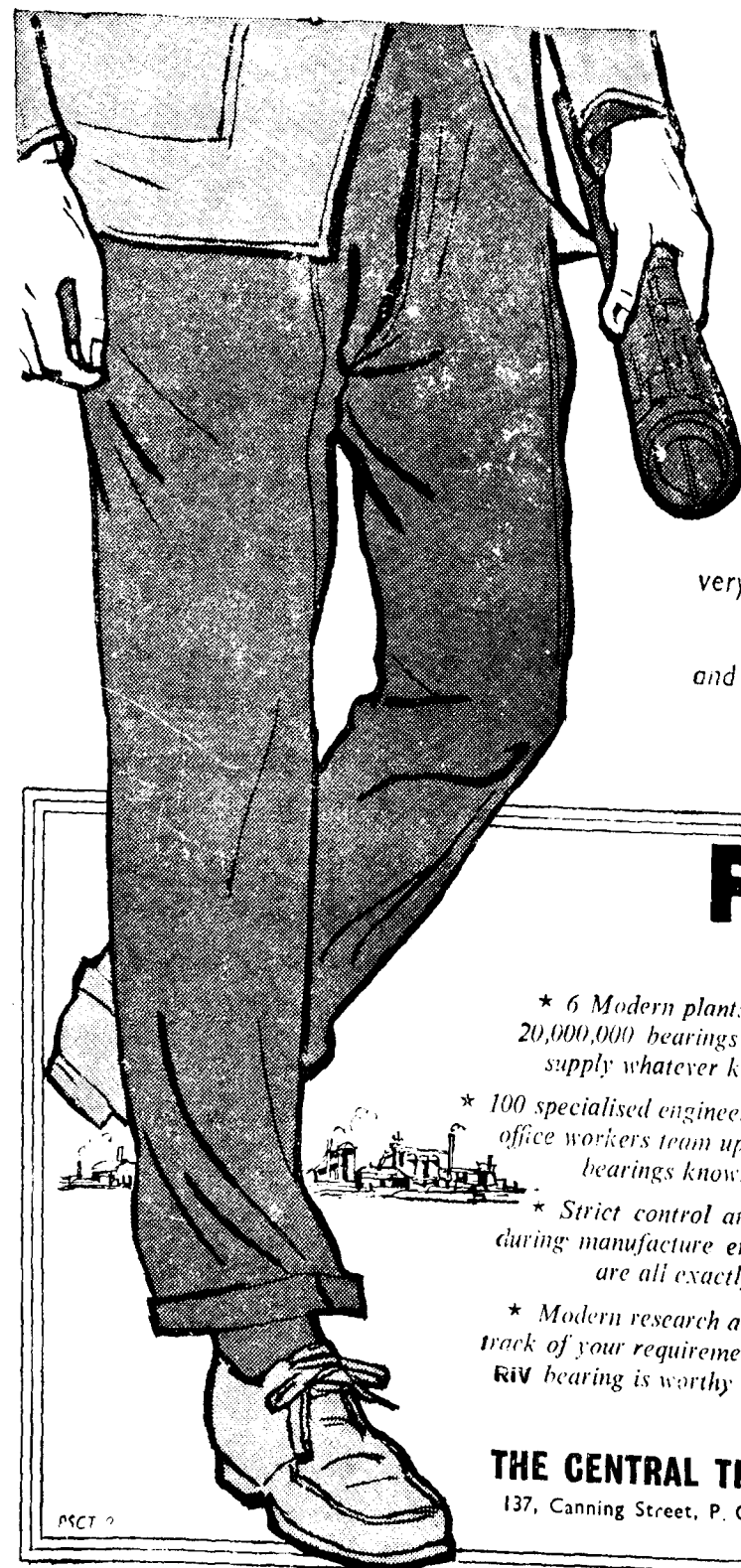
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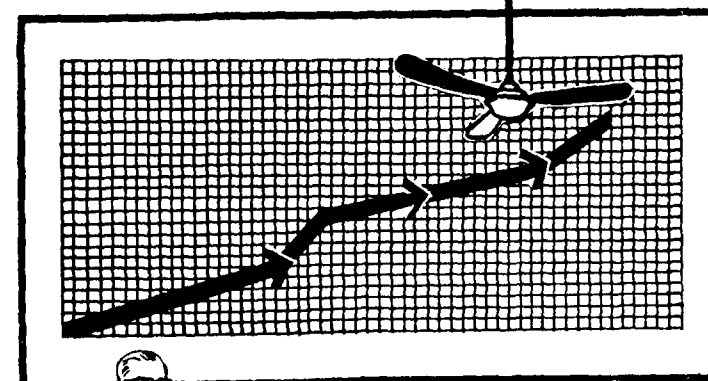
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Cover: Our Railway Stall at Vellore Exhibition

Photo by: Shri C. Yogeeswara Moorthy, Staff Photographer.

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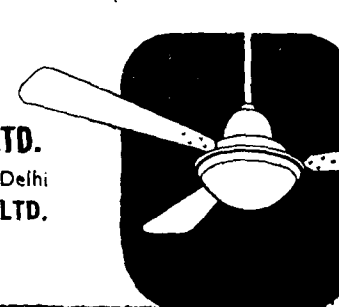
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REFRIGERATED FISH VANS FOR INDIAN RAILWAYS

M. M. LUTHER, *Production Engineer*

AND

G. P. DODEJA, *Divl. Elec. Engineer, Matunga Workshops, Central Rly.*



Shri M. M. Luther



Shri G. P. Dodeja

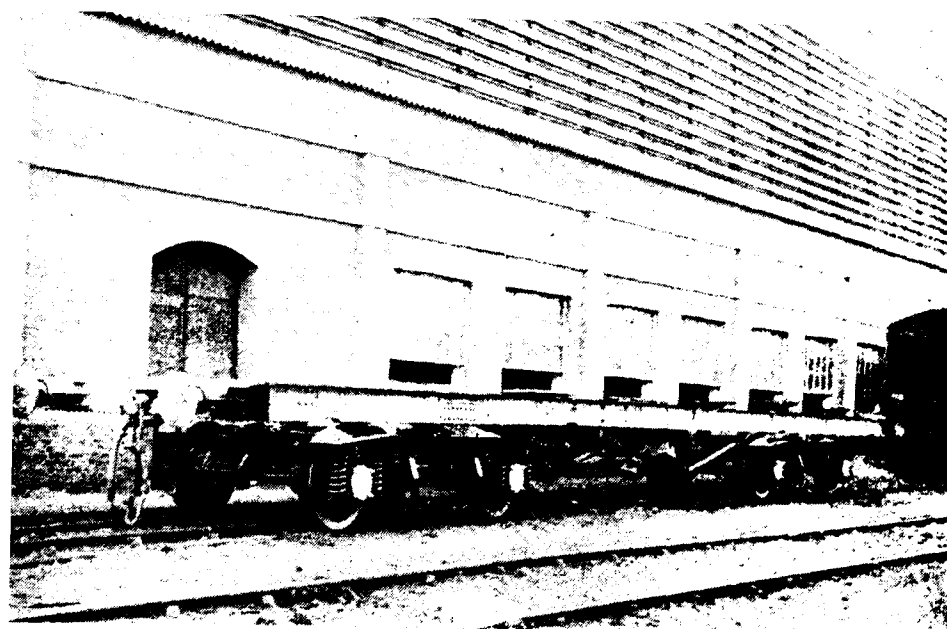
INTRODUCTION :

In 1958 the Ministry of Food and Agriculture decided that the development of a large number of fisheries, sponsored by them, and the employment of modernized fishing methods, could not be put to the best advantage unless fish could be carried over long distances to various inland places without getting perished. With this background they decided to streamline the transportation of fish by rail with the help of six refrigerated vans. In order, however, to provide for their maximum utilization, it was also later decided that the vans will, in addition, be used for other perishable commodities like fruits, meat, poultry, etc., etc.

The Ministry of Railways were asked to undertake the design and construction of these vans and on their behalf, the Central Railway, in consultation with the Research, Design and Standardization Organization of Indian Railways, worked out the detail of their design. A scale model of the proposed vans was first made in the Central Railway Carriage & Wagon Workshops at Matunga, Bombay and this was exhibited in the World Agricultural Fair, 1959, at New Delhi. Their construction was later undertaken in the same Workshops.

DESIGN FEATURES AND EQUIPMENT :

Underframe.—In order to obtain the best possible utilization of place inside



Underframe and Trucks (1)

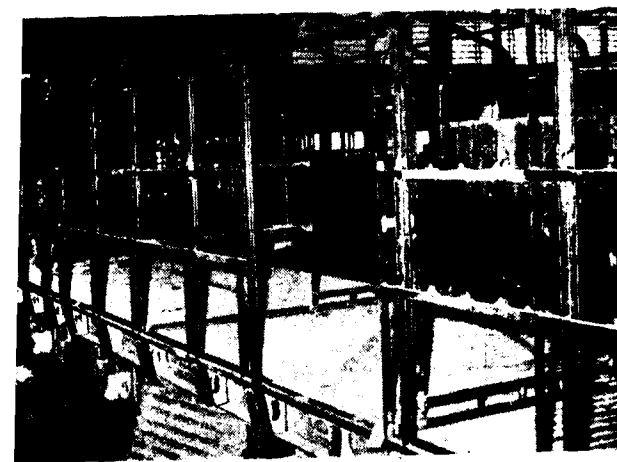
a wagon, the ratio of pay-load to empty weight of a wagon has to be kept as high as possible. With this in view and also to accommodate the refrigeration equipment special 56'-0" long underframes constructed from rolled mild steel were manufactured by Messrs. Braithwaite & Co. for these vans. These underframes were made specially rigid to avoid, during service, any damage to aluminium panels which were to form the walls in the body of the wagon. The initial built-in camber of the underframes was $\frac{1}{2}" + \frac{1}{4}" - 0"$. The underframes were designed to have a deflection of approximately $\frac{1}{4}"$ only after loading and this was checked on their receipt by suspending suitable dead-weights, approximately equal to the various equipment items at the relevant places, spreading equally the estimated weight of the body which was 13 tons, over the entire length of the underframe and distributing, in addition dead-weights equivalent to 50% of the pay-load, i.e., 3.75 tons on the underframe at the location of each refrigerated compartment. Special care was taken in the designing of the underframe to cater for high gross load and speeds.

The special light weight all welded bogies for these vans were manufactured by the Integral Coach Factory, Perambur, Madras.

The axle to generator drive has been modified by dispensing with the use of belts, the drive being taken from a "Hypoid" gear box mounted directly on the axle through a propeller shaft to the generator. The brake gear has been specially adapted to suit this arrangement.

The underframe complete with bogie is shown in Photograph No. 1.

Body.—The body consists of two aluminium shells, the outer shell being separated from the exterior panels by a 2" wide air gap. The outer shell is supported by steel rails and pillars in a manner which makes it possible to carry out periodic inspection for corrosion. Very close tolerances were laid down for the pillars and body brackets and special jigs and fixtures were designed for welding and drilling work on them. With the exception of body brackets which were hot dip galvanized, all other steel members were grit blasted and while



Steel body framing and corrugated aluminium floor (2)

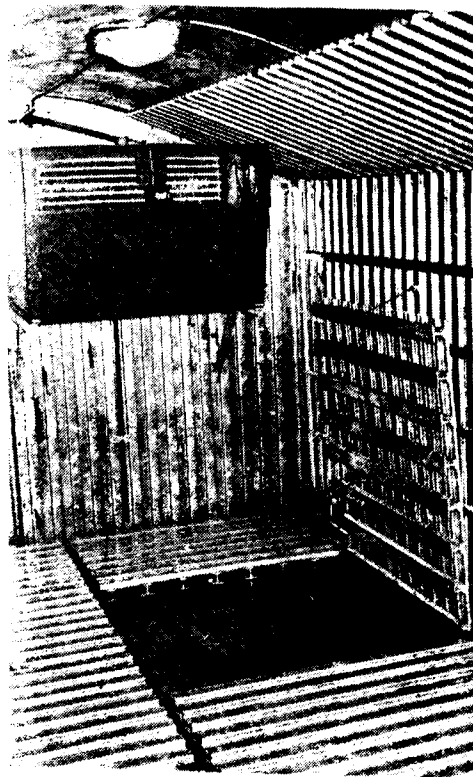
still hot and untouched by hand, were treated with one coat of zinc chromate primer followed by four coats of 'Inertol' bitumastic paint. It was also specified that all timber packings should be coated with bitumastic paint. The steel framing for the shell is shown in Photograph No. 2. The design of the inner shell allows for its expansion and contraction which is inevitable due to the wide range of operating temperatures. It also caters for the removal of condensed water between it and the insulation. The inner shell consists of corrugated hat section aluminium pressings. Continuous limber packings were provided over sole bars and centre longitudinals, and hat section aluminium pressings were provided as the floor of the outer shell. The sides of the outer shell of the refrigerated compartments were made out of $1/16"$ thick aluminium sheets. The portion of the shell which came in contact with the steel members was provided with a protective coat of zinc chromate primer followed by

four coats of "Inertol" bitumastic paint. On the floor of the outer shell, provisions was made for timber stools over which rested the aluminium channel door cross bearers which in turn supported the floor of the inner shell.

In order to minimise the infiltration of heat, a 9" thick insulating material has been used between the two shells. The insulating material used is one of expanded plastic type manufactured locally under the trade name of "Thermocole". The choice of this material was mainly due to its light weight (1.1 lbs. per c.ft.), low specific heat (.32) and high insulating quality (0.2 British Thermal Units per sq. ft. per inch thickness, per hour, per degree F.). A special adhesive with the trade name "Cardokote" was specified for securing the insulation to the metal sides. Photograph No. 3 shows a refrigerated compartment with Thermocole insulation on the floor and walls. Since any metal to metal connection between the two shells

Refrigerated Compartment showing Thermocole Installation on the Floor and Walls (3)





Corner of Refrigerated Compartment showing cooling unit and floor trays (4)

would reduce the efficiency of insulation, the design of the inner shell aims in keeping these connections to the minimum. The design of the shells also ensure that the "Thermocole" has no load and to achieve this, the floor sheets have been suitably supported.

There are two refrigerated compartments, each measuring approximately 20'-6" in length, 8'-6" in width and 7'-0" in height. They are separated by an attendant's compartment which also houses the compressor and the control panel as well as amenities like a bath-room, sleeping berths, etc.

Fish will be stored inside the refrigerated compartments in boxes stacked one above the other and free circulation of air, which is essential in order to maintain an even temperature throughout the compartment, has been provided for even at floor level. Photograph No. 4 shows the arrangement of the sides, the roof, floor trays and the cooler unit in a corner of a refrigerated compartment. The doors leading to refrigerated compartment are provided with three seals to avoid air infiltration and a special locking arrangement has been incorporated to ensure a uniform pressure all round the opening even under service conditions.

The aluminium floor sheets have been butt welded with Argon gas and in addition, thorough sealing of the joints was ensured by riveting aluminium strips below the joints.

The body design also included timber packings bolted to steel car lines and securing of side and end brackets on to the steel pillars by bolts. Aluminium angles were provided over these brackets at the top to support the inner aluminium car lines. 1/8" thick aluminium mouldings on to the brackets were provided to support the aluminium ceiling sheets. The inner ceiling sheets were designed with three joints running longitudinally, the side ones being corrugated and the centre one being plain.

The roof was made of good quality mild steel sheets. The steel roof was painted with white enamel finishing paint and the body sides and ends in two-tones, white and mist blue.

Refrigeration and Electrical equipment. The refrigeration equipment

provided on the van is designed to carry out the following duties :

(1) To pre-cool the empty vehicle down to 32° F. in approximately 7½ hours from an initial ambient temperature of 105° F. inside the compartment when the coach is standing in full sun with shade temperature upto 118° F, the pre-cooling being carried out by taking supply from 400-V AC, 3-phase, 50 cycles system from the station supply,

(2) To maintain the minimum temperature of 32° F plus/minus 2° F in the two refrigerated compartments of the van under the conditions :

(a) that the vehicle is attached to a running train travelling at an average speed of 30/35 MPH,

(b) at halts not exceeding 6 hours maximum with half cargo load,

(c) with an ambient shade temperature up to 118° F and surface temperature in the sun at 170° F.

The equipment works efficiently at higher speeds and also is capable of withstanding occasional speed spurts of 70 MPH.

Brief description of the equipment. The refrigeration equipment is of the axle driven electro-mechanical direct expansion type. The van axle drives the electrical generators through the gear-box, propeller shaft, centrifugal clutch, etc., and the generators supply current to the motors driving, the refrigeration compressor, condenser fan, air circulation fans, lights and fans inside the compartment, etc., etc.

When the van is stationary, the A.C. electric motor can drive the

generators, the drive from the axle being automatically declutched.

The main components of the refrigeration equipment are :

(i) Compressor.

(ii) Condenser unit complete with filter, dehydrator, liquid receiver, etc.

(iii) Heat exchanger.

(iv) The cooler unit complete with expansion valves, etc.

(i) *Compressor.* The compressor is mounted in the attendant's compartment. This is a single acting 5F30 type machine with three cylinders arranged in an arrow head formation of Carrier Corporation design and is basically the same machine as used on B.G. fully air-conditioned coaches. The compressor has speed range of 600 to 2000 RPM. Under normal working conditions the compressor works between 1800 to 2000 RPM, the lowest speed of 600 RPM being the minimum speed at which the oil pump can maintain the correct lubricating oil pressure. The compressor has automatic capacity or out-put control so as to maintain constant suction pressure and in the event of the refrigeration being not required due to thermostatic controls on the cooler units, the capacity control system completely shuts out the compressor whilst it continues to run at the rated speed. The capacity control regulates the opening of the suction valve which opens more with increased suction pressure and conversely close with reduced suction pressure thus causing the cylinder concerned to operate

at normal or light as required. This has the further advantage that the compressor starts up completely when unloaded. The 3-compressor cylinders also do not load and unload simultaneously but do so in sequence. The control is very fine and rapid and therefore maintains the suction pressure within fine limits throughout the full range of the compressor capacity.

(ii) *Condenser unit.* The condenser is of air-cooled type and consists of nests of plate finned copper tubes in a steel frame on which is also mounted the two fans, their driving motor, 'V' belts, the liquid receiver, the dehydrator and the filler. The condenser unit is also exactly identical to the condenser unit in use on B.G. fully air-conditioned coach.

(iii) *Heat exchanger.* The heat exchanger is provided to ensure that the liquid refrigerant from the condenser unit to the expansion valves in the cooler units is cooled down as much as possible and the refrigerant gas from the cooler units to the compressor is heated up to eliminate suspended liquid involved. To achieve this, the warm liquid passes through the coils of the heat exchanger units surrounding which is the shell wherein the cooled suction gas passes in opposite direction on its way to compressor.

(iv) *Cooler units.* Two cooler units are provided in the van, one in each compartment. Photograph No. 4 shows a cooler unit mounted in position. Each cooler unit is a rectangular sheet metal box with an angle frame and comprises the following equipments:

(a) The evaporator coil and expansion valve,

(b) Electric defrost heater elements,

(c) Two electric propeller type blower fans,

(d) Thermostats,

(e) Automatic defrost control switches,

(f) Drip tray.

A fine filter is also provided with each unit to ensure that no stray particles reach the expansion valve. With each cooler unit a separate magnetic stop valve is also provided and it functions in a way as to shut off the supply of liquid refrigerant when the temperature or defrosting control temporarily stops cooling in the particular unit. Cooling inside the refrigerated compartment is carried out by circulation of the cooled air. There is no fresh air intake for fish storage and therefore the same air is in circulation all the time.

Refrigerant. The refrigerant used is Di-chloro-di-fluoromethane, commonly known as Freon-12. It is a colourless, odourless, non-poisonous, non-toxic fluid, which will not corrode any of the commonly used metals. It is not harmful to the compressor lubricant. It has the added advantage that minute leaks can be easily detected. The presence of impurities such as air and moisture can be very troublesome and therefore it is of utmost importance that complete evacuation of the system is carried out before the gas is charged. During erection of the equipment, before charging the gas, the system was evacuated to an absolute pressure of 1.15 mm. of Hg after testing for leaks under pressure.

Operation of the refrigeration system.—As already stated, the refrigeration system is of the electro-mechanical direct expansion type.

The refrigerant in the gaseous state is compressed in the compressor. Due to the compression the temperature of the gas also rises and the hot refrigerant under pressure flows into the condenser where it is cooled and condensed to a liquid state. The warm liquid then flows via a liquid receiver and a dehydrator and a filter to the heat exchanger where some heat from the liquid is transferred to the cooled suction gas on its way to the compressor. The liquid line then divides into two to feed the two cooler units via magnetic stop valves and expansion valves which control and regulate the flow. The expansion takes place in the expansion valves with the resultant sudden drop in temperature and pressure. The heat absorbed from the refrigerated compartments by way of the air circulation boils the liquid as it passes through the evaporator coils. The low pressure suction gas then returns to the compressor via the heat exchanger. The continuous circulation of refrigeration is a closed circuit and the changes of pressure, temperature and state constitute an irreversible thermo-dynamic cycle which operates to transfer heat from the refrigerated compartments to the outside atmosphere.

Electrical equipment. The main function of the electrical equipment is to transmit the power from the van axle and mechanical drive to the refrigeration machinery in an efficient and convenient manner, within the wide speed range from approximately

10 MPH to 60 MPH and to give a maximum output from 25 MPH upto 60 MPH. In the equipment provided, the compressor starts running at about 600 RPM at the train speed of 10 MPH and within the range of 25 to 70 MPH it runs at full output speed.

The electrical equipment consists of the following major components:

(a) Motor generator,

(b) Exciter generator,

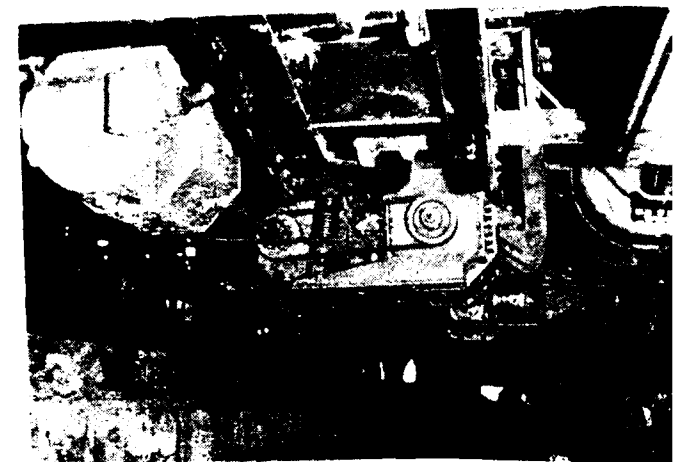
(c) A small auxiliary battery,

(d) Motors driving the refrigeration equipment,

(e) Switch-gear, safety and control devices, etc., in the control panel.

(f) Lighting in the attendant's compartment and refrigerated compartments.

Exciter, Counter Shaft and Motor Generator suspended from the underframe. Hypoid gear-box is seen in the background behind M.G. set (5)



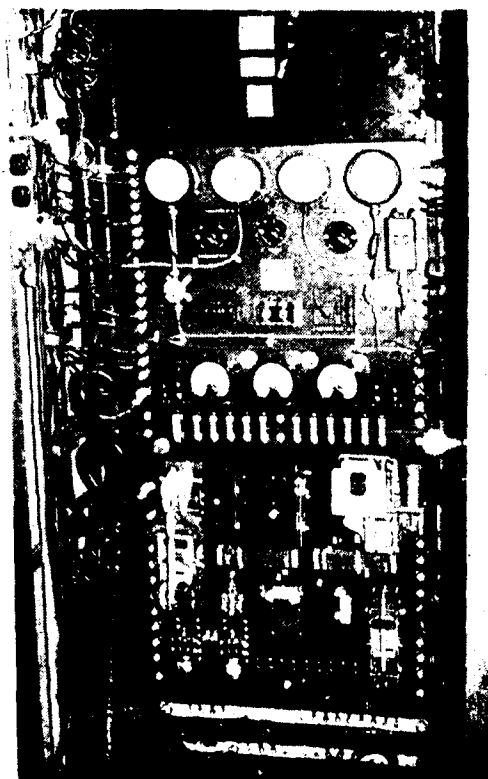
M.G. set.— The AC pre-cooling motor and DC generator together form a single machine with a common shaft. The DC generator generates at 135V and supplies power to the compressor motor, condenser fan motor and defrost heaters, located in the cooler units. This machine is mounted on 6 resilient suspension blocks to cushion the vibration inherent with a direct axle mounted gear drive. Photograph No. 5 shows the M.G. set in position. The drive to the motor generator is from the Hypoid reduction gear mounted on the inner axle to which the propeller shaft is directly connected through universal joint. The propeller shaft drives an automatic centrifugal clutch which is mounted on the motor generator set. The Hypoid gear-box has a ratio of 1: 4538. The gear-box is mounted on 12 rubber pads which transmit the torque and also absorb the running shocks. These rubber pads are individually adjustable for mounting the gear-box correctly concentric with the axle. The gear-box has a wheel centre assembly which has a steel tube borne by the rubber pads and on which is fixed the crown wheel and taper roller bearings. The wheel centre is a solid one piece assembly which is to be threaded for fitting it and one wheel and one axle-box has to be removed to do so. Single piece crown wheel has been adapted for improved reliability though it makes it necessary to remove one wheel and axle-box in case it is to be removed in position without having to remove the gear-box. The casing of the gear-box is further split in half to facilitate opening for inspection.

Exciter generator. This is a 24V generator which supplies power for

field excitation of generator and the compressor motor, power for lights and fans in the attendant's compartment, lights in refrigerated compartment, power for generator control switch-gear, blower fan motor of the cooler units and for charging the auxiliary battery. The drive to the exciter generator is taken off from the other end of the motor generator shaft and is transmitted *via* the "V" belt drive and another smaller propeller shaft.

Auxiliary battery. This is a 100 ampere hour lead acid 24V battery contained in a standard metal battery box of the type used on I.C.F. coaches

Control Panel (6)



with slight modifications. The battery supplies power to the blower fan, lights and fans in the attendant's compartment whenever the van is stationary.

Switch-gear control and safety device. All the control equipment is mounted in the control panel, shown in Photograph No. 6, mounted in a cubicle inside the attendant's compartment. The equipment provided is as under :—

(a) Automatic star-delta starter for the 400-V pre-cooling motor provided with the sequence and timing relay, low voltage protection and overload and single phasing protection.

(b) Generator, motor and defrost heater switch-gear to regulate the operation of the main generator, compressor and condenser motor and defrost heater in response to the various controls. Automatic carbon pile voltage regulators are provided to control the voltages of the main and exciter generators at 135V and 30V respectively. Switches provided in the main and exciter shunt-field circuit control the compressor and condenser fans without starting contactors and relays, etc., in order to simplify the controls. The only contactor provided is for defrosting which is generally off.

(c) **Blower temperature defrost and protective controls.** All the controls are worked off 24V 32V DC and for each cooler unit a separate selector switch is provided so that the compartments can operate independently. A low voltage relay protects the battery in the event of battery getting fully discharged. The temperature of each compartment

is controlled by a separate cooling pilot relay and high and low limit thermostats as follows :

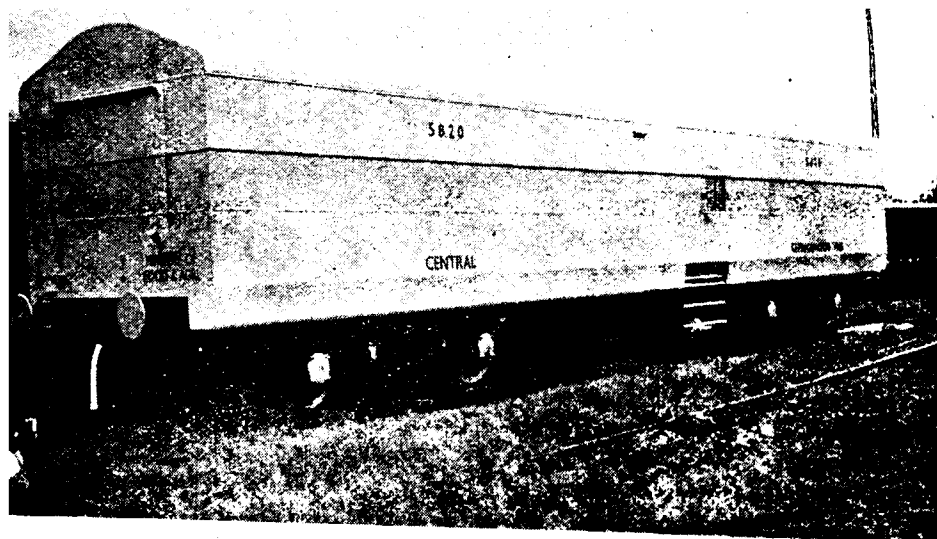
		Setting	Low Limit	High Limit
Low	..	32° F	31° F	33° F
High	..	45° F	44° F	46° F

A high pressure switch is provided to switch off the compressor in case the pressure exceeds 240 PSIG. Instruments are provided to indicate main and exciter generator output current and a Volt meter is provided to indicate the main generator voltage. Two remote dial type thermometers reading the temperature of the return air stream in the compartment are also provided.

Supply from parallel block system of train.— Inter vehicle Kent couplers and 15-way junction boxes are provided at each end of the van with through cable connections so that the vans can run with passenger trains in any marshalling order. The through cables are tapped with a change-over switch so as to provide lights in the van in an emergency from the parallel block main of the train.

Indicating lights and alarm buzzer are provided outside the refrigerated compartments which go into operation by pressing push buttons provided inside the compartment for meeting an emergency when a person gets locked inside the refrigerated compartment and is not in a position to open the doors from inside.

The refrigerated fish van as completed, is shown in Photograph No. 7.



Completed Refrigerator Van (7)

In conclusion, it is hoped that these vans which have been made in the Railway Workshops for the first time, will relieve the long felt necessity of providing refrigerated wagons for perishable commodities in the country and will serve as fore-runners of similar ventures in future.



“BEGGARS CAN BE CHOOSERS”

OPRAIL

THE door bell buzzed suddenly. “Damn” I exclaimed. I was looking forward to a few undisturbed hours to read over a couple of new novels sent to me for reviewing. I had made myself comfortable for a long session with a large pot of hot tea and a generous supply of cigarettes, when the interruption came.

I opened the door. Outside was a tall, middle-aged stranger whom I took to be a door-to-door salesman. To my enquiry as to the purpose of his call, the reply came without a trace of hesitation: “Can you spare me a ten-rupee note?”

To say that I was staggered at this audacious request was putting it mildly. After recovering from the shock, I felt prompted to enquire, “whatever for,” but did not. My amazement then gave way to curiosity. Here was a man obviously seeking charity, and naming the sum with the assured confidence that he would get it. From the begging fraternity one expected a trace of whining supplication, followed by the usual hard-luck story. But this stranger had made his request as if he were casually asking for a cigarette.

He stood waiting for my response. Once again my curiosity was aroused. Here was a character worth cultivating. There might be a good story in him, if I could persuade him to talk. I sprang the bait.

“Won’t you join me in a cup of tea?” The reply came promptly from him, “with pleasure”.

Again this was somewhat of a surprise to me. He did not accept my invitation with the nervous alacrity of the hungry and poor, but with the self-assurance and courtesy of a social equal.

I offered him a chair, poured out two cups of tea, then told him to go ahead with the crisp, hot toast and jam on a tea trolley within reach. While he was eating, I was storing away mental notes of his appearance.

He looked to be a man in his middle forties, clean shaven, with a small bald patch just noticeable on the crown of his head. There was nothing uncommon about his features, but for a slight downward twist to his thin lips, giving the impression that he had something to be bitter about. His well-tailored grey tropical suit, with shirt and tie to match, indicated that he liked good clothes. A few frayed edges here and there revealed that his clothes needed attention. However, although I may have been mistaken, I felt that the shabby attire was a deliberate symbol to fit in with his role of charity-seeking. The more I studied him, I could not help but feel I had met him before, but could not recall the time and place.

Over the tea we exchanged items of small talk, my object being to make him easy and dispel any feeling of charitable condescension he may think I had towards him. Also, I wanted to lead up to the real purpose of my invitation: to find out what

had prompted him to adopt this forthright method of begging.

I was groping for an opening to pose the question, not wanting to offend him by direct interrogation, when he seemed to read my thoughts. He smiled and said amiably, "You'd like to know why I adopted the profession of begging, and why I name the exact amount I want?"

With relief, I nodded assent.

He continued. "For the last fifteen years or so, I seem to be the victim of malevolent ill-fortune as far as steady jobs are concerned. Somehow, I could never hold one for long. A few months here and perhaps a year there, and then something would go wrong, and I'd be out on the hunt again. Not that I was a waster, or incompetent. However, I won't bother you with details. A time came when I got tired of rolling from one job to another, and I was getting on in years....."

He paused, feeling in his pockets for something. I surmised it was a cigarette he was after, which I offered promptly. When he had lit it and taken a deep inhalation, he spoke again.

"This ill-luck kept hounding me, pushing me around, and I couldn't shake it off. One fine day I decided to quit job-hunting altogether, and try my luck some other way. Musing over ways and means, a cynical thought kept tempting me. Why not trade on the so-called milk of human kindness. Go a-begging. I toyed with the idea, distasteful as it was. Eventually I made up my mind. I would at least give it a try. I had nothing to

lose, and the most I could get was a refusal. But I decided on the surprise approach. I would ask for a specific amount....."

Here I interrupted, using a little flattery. "But you appear to be a man of education and taste, accustomed to the good things of life. Surely, it was galling for you to ask for charity. And there must have been something else you could have tried. A business of your own, or writing; both hazardous, but at least leaving your self-respect intact.

His reply was a short laugh, sneering and mirthless. "You forget my jinx. It had squashed all the self-respect I had. I didn't care a damn for any punctured dignity".

To me, his reasons were not convincing, but I did not want to involve him in argument, so let him continue.

"To get on with my story. Like a seasoned salesman, I planned my begging campaigns. I sought charity from those who could afford to part with the amount asked for without missing it."

It was my turn to smile. "You were out to sting the rich".

"Why not?" he replied. "Although the common belief is that the poor feel more for the poor, I don't quite agree. Poverty makes you grasping and mean, and if you do part with anything, it is usually the odd coppers flung to the crippled, maimed or diseased, as a sort of salve to the conscience. If you want charity, big charity, go to the rich. You will get what you want, or nothing at all.

To these observations I added, "But surely you didn't always get your ten-rupee note, and must have been offered smaller amounts at times?"

He retorted. "I was, pretty often. But I never stopped to haggle or climb down. It was ten rupees or nothing. Offered less, I merely walked away."

I had to admit he had nerve to beg in that fashion. I continued with another question. "What kind of reception did you get from your potential benefactors?"

"Mixed, and rather intriguing. Some would raise their eyebrows haughtily and dismiss me with an emphatic 'certainly not'. Others would try and compromise on a smaller amount. Some would try the old, old moral lecture dodge. Other genial souls would register amazement at my audacity and part with the ten-rupee note. A maiden lady in her early forties—not bad looking too—tried to hook me for a husband. Invited me in, offered me refreshments, chatted amiably and hinted at continuing the acquaintance. But in spite of my not rising to the bait, she was generous and eventually gave me thirty rupees, adding that I was always welcome for a repeat visit".

I asked, "What kind of a living did you get out of this? Must have been rather precarious".

He smiled again, a sort of bitter gloating. "On the contrary, I was lucky. I collected enough to keep me in reasonable comfort".

Somehow, I could not believe his statement. My glance strayed to his

elegant, but frayed clothes. "Oh, these", he said, "merely an emblem of the better class beggar. A little seediness must be displayed to arouse some compassion....."

He paused, rose from his chair, saying, "I think I've overstayed your welcome. Thanks for the tea....."

I had almost forgotten what he had come for, so I took out my wallet, extracted five ten-rupee notes and offered them to him. "You asked for ten. May I add another forty for your interesting company?"

"Why not?" he replied quizzically. I passed over the money, which he took and slipped into his pocket and said, "Thanks, old chap. Extremely generous of you".

As we parted at the door I asked him to drop in again any time for a chat. His parting shot was, "perhaps, but if I don't you may hear from me again".

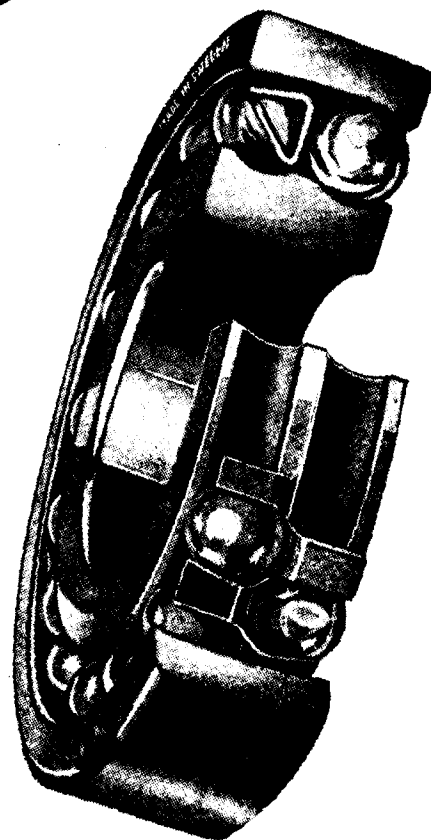
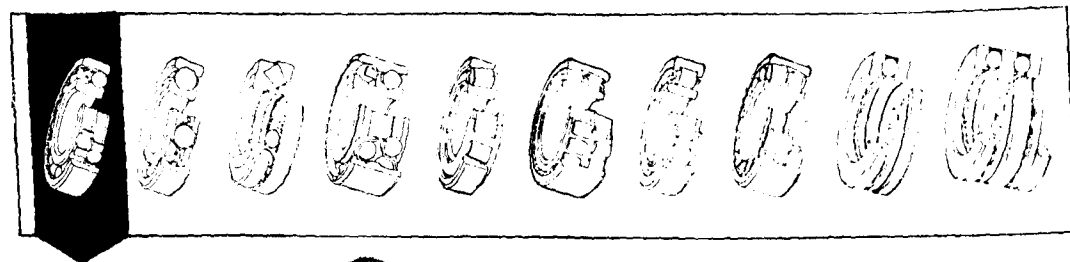
After he had left I thought it would be interesting if he called again, so that I could hear more of his story. There was good material in him for a writer, and if I could have got his whole story, a book could have been written with a title like "Beggars Can be Choosers".

A few months passed. I often thought of the begging stranger and wondered why he had not called. Then one day a letter and a package was delivered to me.

I opened the letter and read. "Dear A, You were right. We had met

(Continued on page 67)

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RAILWAY STAFF COLLEGE—BARODA

V. K. STHANUNATHAN, B.Sc. (Hons.)

"Enter on the path of training whilst the minds of young men are pliant and whilst their age is ductile"—*Virgil*.

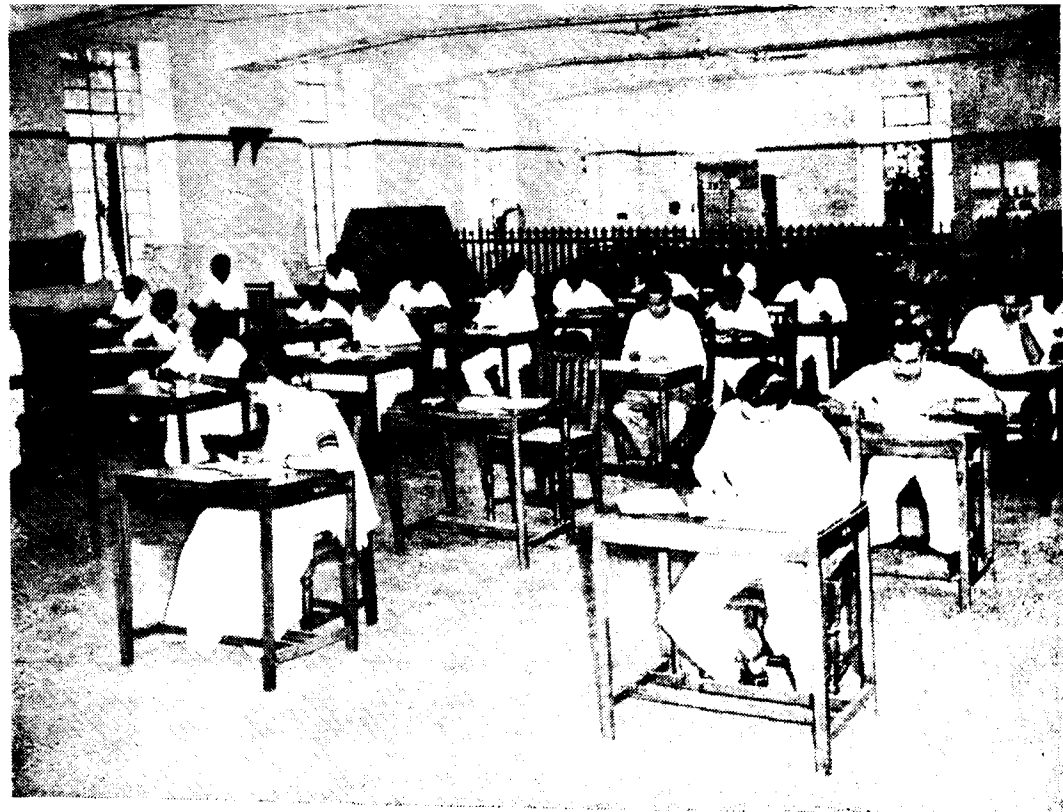
THE Railway Staff College, Baroda, is the central institution in the country for the training of Railway officers. The College was opened on the 31st of January, 1952 by the late Sri N. Gopalaswami Iyengar, the then Minister for Transport and Railways.

The need for a central staff training college for officers was being felt for a long time and even as early as 1927 in a memorandum given to the Standing Finance Committee for Railways in September 1927 it was mentioned "Generally speaking, a railway officer requires and acquires his experience by the practical work which he is engaged on, and his value as an officer depends on the extent to which he is able to accumulate and apply his day-to-day experience throughout the whole of his service. To give him opportunities of acquiring other people's experience and knowledge through the medium of lectures and practical courses, whereby his own possibly limited experience may be supplemented, is the object for which the Railway Board propose to establish an Officers' college. Such a measure is possible more necessary in India than in other countries, because the great distances which separate the different parts of the railway system in India, are a serious bar to free communication and interchange of experience in railway working, between railway officers".

A Staff College was, therefore, started at Dehra Dun in 1930 but this College was closed down soon after on account of the financial depression of the 1930's.

Proposals for reviving the Staff College was mooted again but had to be shelved owing to the Second World War and these proposals were revived soon after World War II. Thanks to the encouragement of the then Railway Minister, the Railway Board were able to push through their proposals for the setting up of a Central Officers Training College and Baroda was chosen as the site for locating the centre, because in addition to other facilities the Pratap Vilas Palace and a big estate of over 62 acres of land was available for accommodating the Staff College. The buildings lent themselves for use as Staff College with suitable additions and alterations and the College was opened on the 31st of January, 1952. From a modest beginning where facilities existed for giving training to 18 officers at a time, the college has been fast developing and extending its usefulness and at present the college has facilities to give training to over a hundred officers at a time.

The Railway Staff College provides several types of courses of instructions. One is the general course which is in the nature of an orientation course where Class I officers on Railways soon after their recruitment are sent to the Staff College for a period of training for about three months. All officers belonging to the various departments are given instructions on Transportation, Commercial, Accounts, Mechanical and Civil Engineering, Signalling, Electrical Engineering and Establishment. To raise the standard



Officers busy with their paper

of general knowledge, lectures are also given on general subjects like General Economics, Banking and Accountancy, World Organisations, Constitution of India, Organisation of the Government machinery, Five-Year Plans, etc. Lectures are also given on Railway Law and in First Aid. This intensive course of training enables officers newly posted to Railways to get a very good background knowledge about the working of the various departments of the Railways apart from their own professional work. A good working knowledge of running of all other departments is very necessary to enable a Railway Officer to acquit himself efficiently in his work. The various departments have many common problems to tackle and the smooth and efficient working of the Railways depends upon the co-ordinated and concerted endeavour of all the depart-

ments and therefore it is very necessary that Railway Officers of every department should have a good appreciation of the work in the various other departments also so that they can understand the view points of the various departments and contribute of their best in a concerted endeavour to get maximum efficiency.

A second type of course that is conducted in the Staff College is what is known as 'a second phase course' which is really in the nature of a professional course. Probationary Officers of departments like Traffic, Civil Engineering, Mechanical Engineering, Signal Engineering, Electrical Engineering etc., are given advance instructions in their own professional subjects and also instructions in subjects like Personnel management, Accounts and connected subjects. For this course,

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RAILWAY STAFF COLLEGE -BARODA

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experienced railway officers from different railways who have made a special study for particular subjects come and deliver lectures. These courses usually last for about two months.

A third type of course is the Refresher course that is conducted for officers who have put in some years of service. For this again Railway Officers and eminent men who have specialised in particular subjects deliver lectures. In the case of Civil Engineers, for example, during the last Refresher Course held at Baroda, Engineers connected with the Cement Concrete Association of India gave lectures on up-to-date developments regarding concrete technology, pre-stressed concrete, etc. These refresher courses are very necessary to enable officers to refresh their academic knowledge and acquaint themselves with the latest developments in railway working and technique. The late Sri N. Gopalswami Iyengar made particular mention of this aspect during his inaugural address: "Unless there is an Institution which will give the Railway Officers an inspiration for better work all the time, they are likely to fall into the rut of routine, and that rut is perhaps one of the most deadening things that man has to experience in life. This rut, specially in an administrative system such as the Railways, is particularly to be prevented; and how can we prevent this except by making the men engaged in Railway service to hark back to the principles, hark back to the duties they owe not only to the services to which they have devoted themselves, but to the public for whom their service is intended? Whatever one might say, a person who enters life's avocation with a

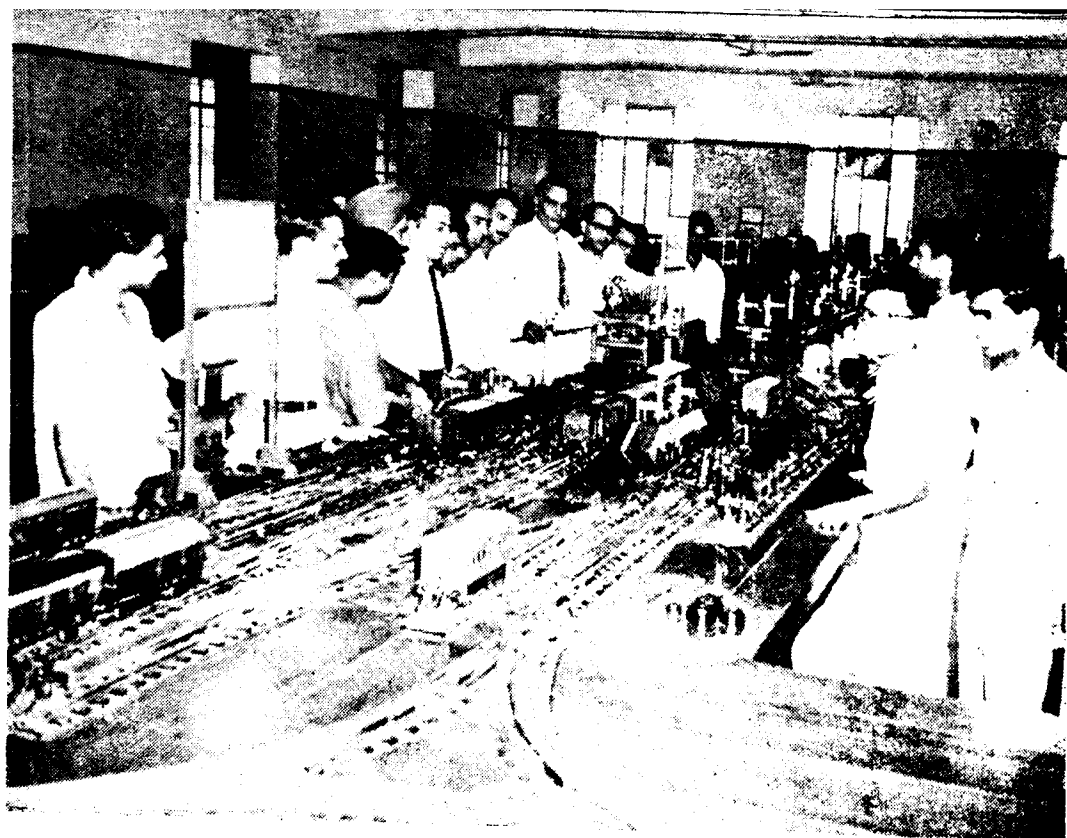
background of academic instruction and training is much better for the task that he undertakes than one who has not had that benefit'.

Special short courses are also held during which lectures are delivered by eminent railway officers who have specialised in particular subjects like Railway Rates, Bridge Engineering, Railway operation, etc. These courses are of short duration and last for about two weeks. These are intended for experienced officers to bring their knowledge up-to-date. Papers are also read by those attending the course.

Another type of course that is envisaged is the conducting of seminars where very senior officers like Departmental Heads could meet and discuss problems of topical interest. This will be mainly in the nature of discussions of particular subjects.

Apart from class room lectures, practical training to officers is given in the Transportation and Mechanical Model Rooms and in the Permanent Way Yard attached to the College. There is a very up-to-date Model Room attached to the College where different types of signalling existing on railways, the various kinds of block instruments, etc., are shown in working condition. There is also a working model of C.T.C. Equipment in the Staff College which is the only one of its kind in the country. The Mechanical Model Room consists of sections of engines, wagons, coaches, etc.

Apart from these, the officers who come for training in the College are taken out on 'Instructional Tours' to



Transportation Model Room

important yards, stations, to signalling cabins, factories and important projects in the country. These tours enable officers to get an idea of the developments that are taking place on railways all over the country. Normally, railway officers do not get a chance to go round and study the improvements and developments that are taking place on other railways in the country and the course in the Staff College particularly Refresher courses give an opportunity to them to study the various developments on Railways.

During these courses of training and particularly during refresher courses, the officers are encouraged to take part in discussions and make out thesis or papers on some important subjects in which they have specialised or in which they are interested.

There is a very well equipped Library attached to the Staff College with a number of technical books. A large number of technical journals are also received in the Library and these enable the officers to get a fund of information on various important aspects of railway working, latest techniques and trends and give them a chance to drink deep of the ever expanding fountain of knowledge.

There are also ample recreational facilities provided. There are Tennis courts, Badminton courts, Table Tennis tables and a swimming pool provided where after a hard day's work, the officers can relax. There is regular physical training in the morning. All these help to build up sound physical health also. If only officers who come to the college continue the same disciplined life even after they go back to

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RAILWAY STAFF COLLEGE BARODA

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the railways, it will be very useful to preserve their health, strength and freshness. "A sound mind in a sound body" is an oft quoted proverb which has become almost a 'cliche' but how many of us remember this!

The Officer trainees of the Staff College are also enabled to cultivate the various other qualities required to make good and efficient officers on railways. They have got opportunities for cultivating the qualities of leadership which is so necessary in an organisation like the Railways. They have the chance to meet great and eminent men who come to the Staff College and benefit by such contacts. The various social functions enable them to know proper social etiquette. The variety entertainment programmes that are occasionally arranged at the college during National days and during visits of very important persons, enable officers to bring out their latent talents for cultural activities like dance, drama, music, etc. There is a lot of cultural talent latent among railway officers. Only opportunities are required to bring them out and the Staff College provides the occasion and the forum to give expression to

these faculties. This only goes to show that railwaymen can not only be good and efficient railwaymen but they can also take part in music, in dance, in drama and in the various other fine-arts which have been handed down to us from time immemorial and which have had such a profound influence in making an integrated personality in man. The Railway Staff College helps officers to cultivate a really integrated personality.

A very important aspect of the training in the Staff College is the rich experience which officers gain by living together with not only officers of their own departments from different railways but also officers of other departments as well. There are officers from all railways, from different departments, from almost every State in the country, speaking different languages living together, working together and playing together. There is as it were a cross-section of the whole country in the College and this enables officers to understand one another and cut across narrow, parochial and linguistic considerations and understand the basic unity underlying the great variety in this great and ancient land of ours.

The Staff College has great potentialities for increasing its scope and usefulness and I am sure that this will be done so that it will be the premier institution for imparting training to Officers of Indian Railways, an Institution of which the country could be proud.

Physical Training in Progress



SOUTHERN RAILWAY

TENDER NOTICE

Separate Sealed Tenders for the supply of the following materials will be received and opened by the Controller of Stores, Southern Railway, Ayanavaram P. O., Madras-23, on the dates and the time shown against each on the prescribed form obtainable from his office at Rs. 5 (Rupees Five only) per set to be paid in cash or by Money Order only.

Earnest Money of Rs. 500 (Rupees Five Hundred only) should also be remitted to the Chief Cashier, Southern Railway, Madras-3, on or before the dates noted against each.

Serial No.	Tender number, brief description and quantity.	LAST DATE FOR			Date and time of opening (15-15 hrs.)
		Sale of Tender Documents (15-00 hrs.)	Receipt of Earnest Money Deposit (15-00 hrs.)	Receipt of Tenders (15-00 hrs.)	
1	S/236/IV/B/J/311 Diesel Oil Engine driven centrifugal pumps 15 BHP at 1200 RPM. Quantity: 2 Sets.	1-10-1960	4-10-1960	5-10-1960	5-10-1960
2	S/236/II/D/1253/M/131 C.I. Distance blocks and chairs for level crossings. Quantity: Items 6.	3-10-1960	5-10-1960	6-10-1960	6-10-1960
3	S/236/I/GB10/1257/PER/4 Cair yarn 2 ply 1/2" dia. to Specn. No. G/TEX/C/13C/C Quality I. Quantity: Cwts. 340.	23-9-1960	26-9-1960	27-9-1960	27-9-1960
4	S/236/I/GB10/2517/PER/3A Wool Worsted Trimming white soft elastic Quality for lubrication of Locomotives to Specn. No. G/TEX/56F quality. Quantity: Cwts. 10.	30-9-1960	3-10-1960	4-10-1960	4-10-1960

INDIAN RAILWAYS' FIRST ESCALATOR

Photograph shows India's first Escalator, which has been designed entirely by Indian Railway engineers. Fabrication work on the Escalator is already in progress at Northern Railway's Workshop at Amritsar



We have heard about Escalators at Railways stations in advanced countries like England, America, etc. Some of us might have used Escalators while abroad. India's first escalator is expected to be installed later this year at the Delhi Main station. Designed entirely by Indian railway engineers, fabrication work on the escalator is already in progress at Northern Railway's workshop at Amritsar. The escalator is proposed to be fitted at the Ghaziabad end approach from the third class waiting hall to connect with the foot-overbridge, in order to facilitate quick dispersal and movement of passengers. Half of the approach will be served by the escalator and the other half by stationary steps.

The escalator will have a carrying capacity of 8,000 persons per hour. The steps will move at a speed of 90 feet per minute and will be 48" wide between the two side railings. This will enable two adults with an armload of luggage to stand comfortably side by side on each step. The escalator can be switched on to move in the upward or downward direction depending on the flow of traffic.

A two-step level at the top and bottom will allow sufficient time for passengers to secure balance while boarding or stepping off the escalator. Safety devices against overload and a push button control which can be operated in case of an emergency to bring the stairway to a smooth stop have been incorporated in the escalator.

SOUTHERN RAILWAY
GUNTAKAL DIVISION

TENDER NOTICE No. 41

The Divisional Superintendent (Works Branch), Southern Railway, Guntakal, invites separate sealed tenders for the following works upto 16 00 hours on 17-9-1960 :—

Serial No.	NAME OF WORK	Approximate value	Earnest money	Cost of Tender Form
1	RENIGUNTA — Construction of Type I Staff quarters — 20 Units with Mangalore Tiled Roofing	Rs. 60,040	Rs. 1,501	Rs. 10
2	GOOTY—Construction of 19 Units Type I Staff quarters with Cuddapah Slab Roofing	38,720	968	10
3	GUNTAKAL — Construction of Type I Staff quarters — 28 Units with Cuddapah Slab Roofing	59,720	1,493	10
4	RAICHUR — Construction of Type I Staff quarters — 17 Units with Cuddapah Slab Roofing	37,110	928	10

Last date for ISSUE of Tender Forms .. 12 hours on 15 9 1960.

Last date for DEPOSIT of Earnest Money with the Divisional Accounts Officer, Southern Railway, Guntakal .. 16 hours on 15 9 1960

Date of OPENING of tenders .. 10-30 hours on 19 9 1960

Further particulars and tender forms can be had from the Office of the Divisional Superintendent (Works Branch), Southern Railway, Guntakal, on production of a receipt towards the cost of tender forms paid to the Divisional Accounts Officer, S. Railway, Guntakal or any Station Master on the Southern Railway. Tender forms are not transferable.

WHY FUNNY OBJECTIONS AGAINST RAILWAYS

K. SRINIVASAN



rate of twenty miles an hour, all their lives being at the mercy of a tin pipe, or a copper boiler, or the accidental dropping of a pebble on the line of way !

Railways will in their efforts to gain ground do incalculable mischief. If they succeed they will give an unnatural impetus to society, destroy all the relations which exist between man and man, overthrow all mercantile regulations, overturn the metropolitan markets, drain the provinces of all their resources, and create at the peril of life, all sorts of confusion and distress. If they fail nothing will be left but the hideous memorials of public folly ”.

The development of railways down the years is indeed an enthralling story of trials and tribulations, and of battles against seemingly impossible odds with ultimate victory for the indefatigable railway engineers.

As instances may be cited : “ Does anybody mean to say ” wrote John Bull of 1835 “ that decent people, passengers who would use their own carriages, and are accustomed to their own comforts, would consent to be hurried along through the air upon a railway, from which, had a lazy school-boy left a marble, or a wicked one a stone, they would be pitched off their perilous track into the valley beneath ; or is it to be imagined that women, who may like the fun of being whirled away on a party of pleasure for an hour to see a sight, would endure the fatigue, and misery and danger, not only to themselves, but their children and families of being dragged through the air at the

Objection for the project was supported by the emphatic declarations that locomotives would not work since “ any gale or wind which would affect the traffic on the Mersey would render it impossible to set off a locomotive, either by poking the fire or keeping the pressure of the steam till the boiler is ready to burst, and that culverts and houses would disintegrate ”.

“THE KINGDOM IS TO BE TATTOOED :

We denounce the mania as destructive of the country in a thousand particulars the whole face of the Kingdom is to be tattooed with these odious deformities—huge mounds are to intersect our beautiful valleys ; the noise and stench of locomotive steam engines are to disturb the quietude of the peasant, the farmer and the gentleman ; and the roaring of bullocks the bleating of sheep and the grunting of pigs to keep up one continual uproar through the night along the lines of

these most dangerous and disfiguring abominations.

Richard Trevethick was the first engineer to apply power to the haulage of loads on the railway, just as Joseph Cugnot had done on the roads of Paris in 1769; and in February 1804, he had completed a "locomotive" engine. But, strangely enough, it is to George Stephenson that the honour of having first made the locomotive engine a success is generally accorded; even though he did not build his first engine until 1814 at Killingworth at a coal mine at which he had been made engine-wright two years earlier.

Edward Pearce one of the largest shareholders in the Stockton and Darlington Railway, was so impressed with Stephenson's locomotives and with the immense advantage to be derived by their use, that he and another shareholder Thomas Richardson advanced Stephenson £1,000 to assist him to commence the business of locomotive construction at Newcastle.

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

The critic of the Railways in countries like America who wanted to

harass the railway put his objection in the form of a bill talked loudly about it, about how it might pass if the sovereign people were to be protected against the monster Railway.

It did not take the Railway Officers long to adverse legislation before it had taken form. So, the free pass was invented and for half a century the free pass was the most effective public relations work that any Railway could master. They went to important and very important persons, High ranking Government Officials, Bankers, Merchants and Industrialists, large shippers, Hotel keepers, etc. But, not all the free passes on earth could dissipate the resentment felt by many of the clergy. No doubt, they objected to Sunday operation of trains on the grounds, it was against God and Sunday operation of trains has a depressing effect on attendance at Holy Services. There is no clear record of how the Railways met with this new and concerted attack, other than to ignore it.

IN INDIA:

In India, on the 16th April 1853, the first railway train ran over a stretch of 21 miles from Bombay to Thana. The formal inauguration ceremony was performed on the 16th April 1853, when 14 railway carriages carrying over 400 guests left Bori Bunder at 3.30 p.m. amidst the loud applause of a vast multitude and to the salute of 21 guns. The day was observed as a public holiday by all Government office and banks. The party reached Thana at about 4.45 p.m. where refreshments were served. The guests returned to Bombay at 7 p.m. on 17th April 1853.

INTERMEDIATE BLOCK SIGNALLING ON DELHI-GHAZIABAD SECTION

SIRISH CHANDRA

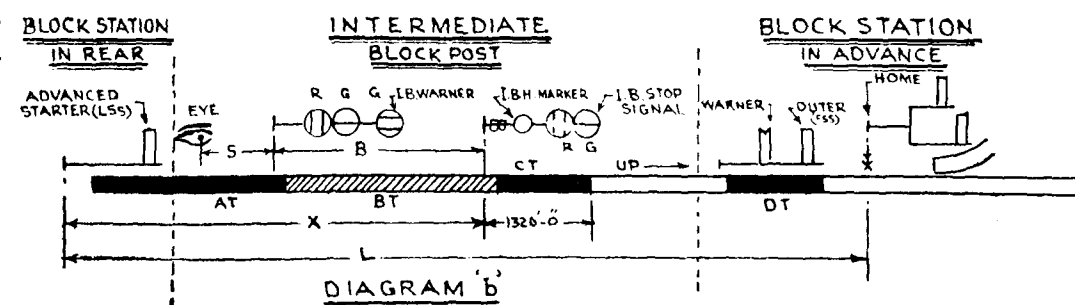
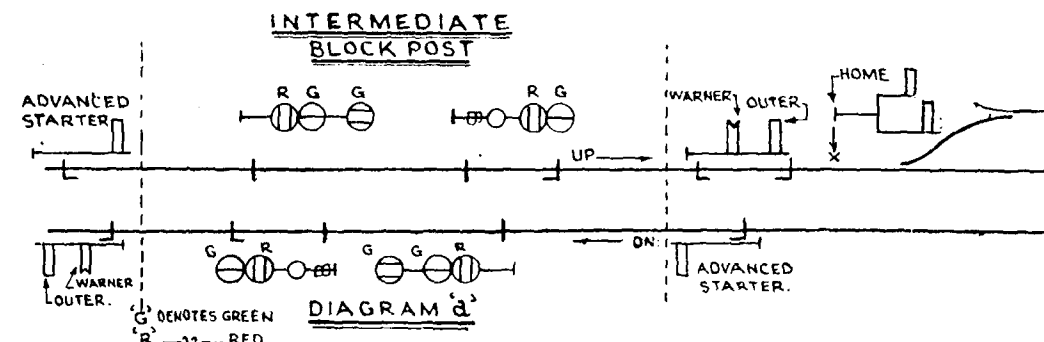
Senior Signal and Telecom. Engineer (P), Northern Railway, Baroda House, New Delhi

INTERMEDIATE BLOCK SIGNALLING, a system of signalling new to Indian Railways, is under way. Formalities concerning the sanction of the Government Inspector of Railways to introducing the new installations are under way. General Rules have been suitably amended to admit this signalling system to the company of those with which most Railwaymen are long familiar.

The Rules, as now amended, define Intermediate Block Signalling as "an arrangement of signalling on double line in which a long Block section is split into two portions, each constituting a separate Block section, by

providing Intermediate Block signals without a block hut, which are operated and controlled by the Block station in rear; under this system, track circuiting is provided from the last Stop signal of the station in rear to an adequate distance beyond the Intermediate Block Stop signal and an Intermediate Block Post on double line as "a Class 'C' station remotely controlled by the Station Master of the Block station in rear".

Intermediate Block Stop signal means the 'Home' of the Intermediate Block Post and has 'IBH' marker which shall be a white circular disc, with letters IBH painted in black on



it, fixed to the signal post just below the signal."

Further, the Intermediate Block Posts may be equipped with either Semaphore or Colourlight signals. It follows that the signalling at an Intermediate Block Post, took after the usual signalling at a Class 'C' station where a 'Warner' Distant and a 'Home' constituted the minimum equipment of signals.

Diagram (a) shows the proposed signalling at Intermediate Block Posts on each of the three Block sections between Delhi and Ghaziabad; Diagram (b), the track-circuited and the untrack-circuited Block sections into which each of the original Block sections is to be split on the Up and Down lines. (For the sake of clarity, only one track is shown.) The Intermediate Block Stop and Warner signals have been located on 'time' basis, in order that when a train arrived complete at the station in advance and cleared the Block section, a following train travelling at the highest booked speed of the section, might sight the Intermediate Block Post Warner signal in the 'off' position, and proceed unchecked. Simple mathematical calculation would show that the optimum distance 'X' between the last Stop signal of the Block station in rear and the Intermediate Block Stop signal should approximately be:

$$X = \frac{L+S+B+T-1320}{2}$$

when 'L' is the length of the original Block section, 'S' the sighting distance for the Warner of the Intermediate Block Post, 'B' the suitable emergency braking distance (440 Yds. min.) and

'T' the time taken, in terms of distance, to signal a 'Line Clear' on the block instruments for the following train and to clear the Intermediate Block Warner signal.

In accordance with the Rules, the entry of a train into the track-circuited Block section is controlled by the station in rear; its entry into the adjacent untrack-circuited Block section, is controlled by the Block station in advance. The Intermediate Block signals are, of course, operated by the station in rear. As at any Class 'C' station, the track CT which represents the minimum permissible adequate distance of 440 yards beyond the Intermediate Block Stop signal is proved clear, as well as tracks AT and BT, before the last Stop signal of the station in rear can be taken 'off' to admit a train on to the track-circuited Block section. As a train would proceed and pass, in succession, the last Stop signal of the station in rear, the Warner and the Stop signals of the Intermediate Block Post, these signals would be restored automatically to their normal position, by the actuation of the track circuits AT, BT and CT respectively, and protect the train from a following one.

In the event of any of the lamps, meant to display the 'on' positions of the Intermediate Block signals, going defective, the last Stop signal of the station in rear cannot be taken 'off' unless 'Line Clear' has been signalled on the block instruments.

The 'off' position of the Intermediate Block Stop signal is controlled by the 'Line Clear' indication on the block instrument. Once taken 'off' and restored to the 'on' position by the

passage of a train past it, it cannot be taken 'off' again until the train has cleared the Block section and 'Line Clear' has been signalled afresh by the station in advance. An Intermediate Block Warner signal automatically assumes the 'off' position when the corresponding Intermediate Block Stop signal is 'off', provided that the track BT is also clear; if the former is defective when in the 'off' position, the latter is also deemed to be defective.

The first Stop signal of the station in advance is similarly restored to the 'on' position automatically by the actuation of the track circuit DT.

It is essential to this type of signalling that the aspects of the Intermediate Block signals, and the occupancy or otherwise of the tracks AT, BT and CT are visually indicated in the controlling cabins, by luminous signal Repeaters, and Track indicators. The condition of the overlap track CT is visually indicated also at the station in advance, because train movements over track CT directly concern that station. So as to remind both, the station in rear and the station in advance, to transmit and acknowledge 'Train Entering Section' signal, when a train passed the Intermediate Block Stop signal, the actuation of the track circuit CT would ring a bell at the station in rear, which would be stopped only when the 'TRAIN ON LINE' had been signalled on the Block instruments. If, on the other hand, a train passed the Intermediate Block Stop signal in the 'on' position without the proper authority to proceed, bells would ring continuously, at both stations, until the Station Masters of the two stations applied their Emergency

keys to switch off the electrical circuit of the two bells. These operations of the key were to be kept on record as important evidence of the breach of Block regulations.

The installations on Delhi-Ghaziabad section, which will cost approximately Rs. 10 lacs, would draw 'power' from the 'Mains' at Delhi, Delhi Shahdara, Sahibabad and Ghaziabad where 5 KVA 400 volts 3 phase AC supply, stepped down to 110 volts single phase 50 cycles AC, has been arranged. 115 volts, 6 KVA Diesel generators, one at each of the four stations, have been installed as 'stand-bys', which automatically come into operation within 15 seconds of a power failure.

A two-core 7/064 rubber-insulated armoured cable has been laid underground between the Intermediate Block Posts and their controlling stations on each side, to carry 'power' to track and signal 'locations' for the 'local' circuits which would energise the signal lamps and the track circuits, as required. Two six-core 1/064 rubber-insulated armoured cables have been laid on the same alignment both for controlling the operation of the Intermediate Block signals and for carrying the visual and audible indications to the concerned controlling stations.

The telephones installed at each Intermediate Block Post are connected to the controlling stations through a pair of wires in these cables so as to ensure efficient communication under all weather conditions.

The signals at the Intermediate Block Posts would operate on 110 volts AC and the track circuits on 2.5 volts D.C. obtained through 110 volts A.C./

2.5 volts D.C. transformer-rectifier sets housed in the locations situated close to the equipment they feed.

Standard Track, Line, and Lamp proving relays, and reliable transformers, rectifiers, double filament lamps and visual indicators should guarantee trouble-free service, under efficient 'maintenance' staff.

In order to ensure the integrity of signals, all vital signal and indication circuits are suitably cross-protected against false feeds from extraneous power sources.

Owing to practical difficulties in the installation of long D.C. track circuits, the track circuit AT comprises three short track circuits which, arranged in cascade, work as one continuous track circuit.

If the Intermediate Block signals, situated miles away from their controlling stations, should fail, or the block track circuits should develop faults, how would the traffic be regulated? How would trains pass these defective signals, if no previous advice had been given to Drivers? Is this new signalling system conducive to smooth, steady and safe operation, even under adverse conditions? These are most pertinent, if important, questions to which all those who interest themselves in the intricacies of railway working would anxiously expect a satisfactory, and convincing, answer. Further, they might also ask, What led to the adoption of Intermediate Block Signalling on Delhi-Ghaziabad section in preference to introduction of manned Class 'C' block huts which had given a good account of themselves elsewhere in the past? Was this new system more economical?

It is not quite fair to suppose, as it might be supposed at the first blush, that the elimination of recurring expenditure on station staff essential to a manned block hut, made the Intermediate Block Signalling more economical. On the contrary, the laying of long lengths of multicore underground cables from Delhi to Ghaziabad, the installation of reliable standby power sources, the provision of long track circuits and the supreme need for highest maintenance standards made it even more expensive. The installations on Delhi-Ghaziabad section would cost about Rs. 16,000 more, annually, than an equivalent number of block huts.

However, the increased safety and the insurance against accidents, which continuous track-circuiting, 'cross protection' circuits and the long-range colourlight signals would provide; the appreciable increase in line capacity that would accrue from the elimination of manual block operation on half of the section; the near-elimination of signal failures that could not, sometimes, be prevented at manned Class 'C' block huts, where mechanical signals and bare over-head electric wires, as usually provided, were helplessly exposed to inimical extraneous influences—all these considerations more than justified the additional expenditure.

Although splitting of long Block sections into smaller ones, by opening new Class 'C' block huts, has been, for long, a favourite specific for line capacity problems on double lines, yet the use of this specific, on sections where 'Line Clear' working was enforced by means of block instruments, had its limitations. When the Block

sections, which it is proposed to split, were already quite short, the time factor involved in the operation of block instruments would so severely militate against smooth flow of fast traffic that the gain in line capacity expected from the new block huts would be almost nullified. Therefore, when such a stage is reached, continuous track-circuiting as an infallible means of proving the condition of a Block section should replace block instruments.

For many years now, the Delhi-Ghaziabad double line section has been carrying traffic nearly equal to its rated capacity of about 40 trains, each way. The need for providing additional capacity was felt as far back as 1951 when, faced with the persistent and clamorous demand for an indefinite increase in the number of suburban trains, the Administration gave serious thought to providing Automatic signalling and continuous track-circuiting on the section. The usual and the cheaper expedient of opening additional block huts did not commend itself as the constituent Block sections were only 3.75, 4.50 and 4.25 miles long. However, in view of the high initial cost of Automatic signalling and the indefiniteness of the immediate requirements, it was decided, in 1955, to install Intermediate Block Signalling as a step towards Automatic Signalling.

If ever, Intermediate Block signals, block track circuits or block instruments should fail, special provisions now made in the Rules would take care of safe movement of trains on the affected section.

"If the block instrument provided at the stations on either side of an

Intermediate Block Post, or the track circuiting provided beyond the last Stop signal fails, the Intermediate Block Stop signal will be treated as defective and the section between the stations on either side of the Intermediate Block Post will be treated as one Block section."

"The Driver of a train shall not pass an Intermediate Block Stop signal, that refers to him, when it is 'on' or defective, unless (a) he is authorised to do so by a written permission from the Station Master controlling the signal or from the Station Master of the last Stopping station; or (b) he is authorised by the Guard of the train by issue of a written authority."

The written authority, referred to in clause (b) shall not be given unless the Guard of the train has obtained the permission of the Station Master of the Station in rear on the telephone specially provided for this purpose, at the Intermediate Block Post. Of course, before such permission is given by the Station Master, he should have obtained the 'permission to approach' from the station in advance. This procedure obviated the inconvenience of sending out a traffic representative to the foot of the defective signal, as prescribed for stations other than Intermediate Block Posts. In case of failure of telephones—which occurrence should be rare as the telephones are connected through underground cables of high insulation the Guard would wait for five minutes before he authorised the Driver of his train to proceed cautiously at a speed not exceeding 10 m.p.h., ready to stop short of any obstruction; when owing to sharp curvature of track or adverse weather conditions a clear view of the track

ahead was not available, this speed would be further restricted to 5 m.p.h. There is no gainsaying that the procedure is a trifle cumbersome and might, occasionally, cause dislocation to traffic. It must, however, be mentioned that by virtue of the signal aspects being continuously repeated at the station in rear, the occasions when a defective Intermediate Block Stop signal would take a Driver by surprise should, in practice, be too few to cause anxiety. In any case only one train, which might have to leave before a failure is detected, would observe the abnormal procedure: the following trains would be pre-warned and duly authorised to pass the defective Intermediate Block Stop signal in the 'on' position.

It is, however, obvious that for a scheme of Intermediate Block Signalling, or for that matter for any other

based on remote control of signalling equipment, to be of service, the installation should be of a standard that would, almost preclude failures. Further, a high standard of maintenance should be ensured, by posting experienced Inspectors and Maintainers on such installations. No pains should be spared to see that any Permanent Way packing or dressing on the track-circuited portion is done with utmost care, so as to prevent the least damage to rail insulations and track bonds.

Intermediate Block Signalling on the Northern Railway is an exciting experiment in the field of remote control of signals. It may be hoped that its success will breach obscurantist psychological barriers and tilt unconverted opinion in favour of 'Centralised Traffic Control'.

RAILWAYMEN

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NONE BUT THE BRAVE

A. V. SUBRAMANIAN

Personnel Officer, I.C.F., Perambur

THE ancient Tamils delighted in bull fights and many a romance takes birth in the dusty arena where the youth of the village fought the angry bulls before the fairest maidens: for none but the brave deserves the fair.

The arena presents a very animated spectacle. Young men bedecked with all the flowers of the woods are already inside, full of valorous talk in tune with their surging ambitions. The fairest maidens of the village have come and have taken their seats on the raised galleries constructed for the purpose. From the stalls the bulls are let out one by one with the blaring announcements, "He who quells this white bull shall win this beautiful maiden as a fair prize of combat. The one that subjugates this dark bull with the sharp horns will get as his mate this fair maiden. The youth who shall control this dust-coloured killer of a bull shall win the hand of this deer-eyed girl." All is dust and confusion inside the arena. It is as if lions and elephants and horses and crocodiles are engaged in deadly combat on the slopes of the mountains. The din is terrific.

The bulls mean business. They search out the young men and by making use of their sharp horns they draw copious blood. Grievous is the wound that is caused by the horns. But what valour, what courage! A young man has caught hold of the horns of a bull and holds fast to them though the bull tries its mighty best to shake itself free.

The girls bend forward in excitement. "My friend, look at this young man who flies at the throat of a bull and catches hold of it and does not let it go though the bull tries all its antics to free itself from the unpleasant embrace: is he not the son of the keeper of buffaloes?" says one in obvious thrill. Another's eyes are clamped upon a young man who has subjugated a mighty bull and jumping on its back, he is seen riding it with great ostentation. He is known to her as the son of the keeper of cows, and this mighty victory sets the seal on a longstanding courtship.

Another youth has bedecked himself in the blue flowers of the mountain slopes and having quelled a bull which attacked him with terrific force, he is lightly holding its horns. The girl who had lost her heart to him remarks: "Does he not look like God Vishnu when he killed the horse-faced demon by tearing up its mouth? His valour truly makes me tremble." Another compares her young man to God Shiva at the time he quelled the God of Death who rides a buffalo. Even the bulls seem to observe the laws of ethics in the arena. The young man who wants to catch hold of the bull when it flies at him misses his hold and falls down. Tragic would have been his fate, but the bull resists the temptation to tread on him: it holds itself back.

The noise of battle assails the ear drums, the grunts and the stertorous breath of the bulls and the valorous

(Continued on page 67)

MASILLAMANISWARAR TEMPLE AT THIRUMULLAVAYAL

N. V. ESWAR



Main Gopuram at the entrance to the Masillamaniswarar Temple

THE small village of three short streets, Thirumullavayal, 2 miles away from Ambattur on the Madras-Arkonam line has quite an ancient temple. It is dedicated to Lord Shiva under the name of Masillamaniswarar.

While the name of the village means "the field of the sacred jasmine", the name of the Deity signifies a Divinity that is without disfigurement. Local legends trace this name from an incident during the reign of the Cholas.

One of the heir-apparents to a Chola King, who ruled from Kancheepuram, Thondaman Chakravarthy, set out on a friendly visit to the three Kurumbar Rulers, Vanan, Onan and Kandan who ruled the Puzhaleri regions close

to Madras. This is the area surrounding the Red Hills whose lakes supply water to the city of Madras.

As Thondaman Chakravarthy neared his destination, he and his companions grew restless for, instead of a warm welcome, they sensed a wave of hostility in the atmosphere.

So Thondaman Chakravarthy beat a retreat, with the idea of going back to Kancheepuram to gather his forces and storm the Puzhaleri Fort of the Kurumbars.

En route, the elephant, on whom he was riding, got one of its feet entangled in a mass of jasmine vines and, no matter how hard the elephant tried, it could not wrest the foot free from the tangled undergrowth.

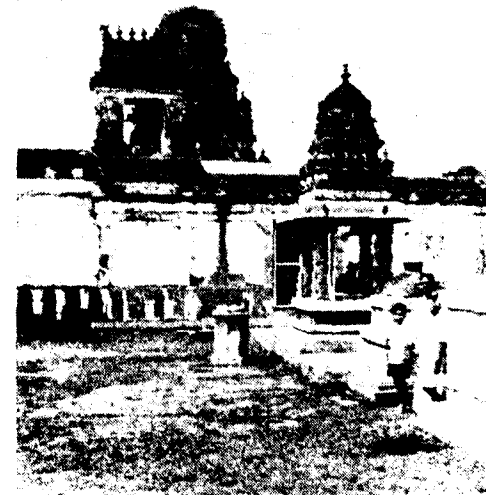
Thondaman got down from his perch on its back and cut away the jasmine bush with his sword. As the elephant took a step forward, Thondaman was surprised to see a gush of blood on the spot.

Afraid he had harmed some hidden living thing, Thondaman ordered the clearance of the bush. As the top soil was removed in the process, Thondaman was horrified to find that there was a Lingam, a portion of which had been cut away by his sword. Thondaman grew remorseful with the thought that he had wronged the Lord.

Lord Shiva appeared before the grieving Thondaman and told him

September 1960

MASILLAMANISWARAR TEMPLE



The canopied shrine housing Nandi which faces East, away from the temple which is peculiar since Nandi always faces the Deity inside the temple

that He had purposely blocked his passage by using the jasmine bush, since the Lord was desirous that Thondaman should build a temple for Him on the spot. The Lord also assured Thondaman that he had not done Him any harm and there was no sword-cut on His body.

The Lord said: "I am the One without disfigurement. I am Masilla-mani". The Lord then showed Thondaman that there was no wound on His body.

Lord Shiva then asked Nandi to go ahead and help Thondaman defeat the Kurumbars. This is the reason why Nandi in this temple has turned his face away from the Lord, whereas in all other Shiva temples, Nandi always faces the Lord into the temple.

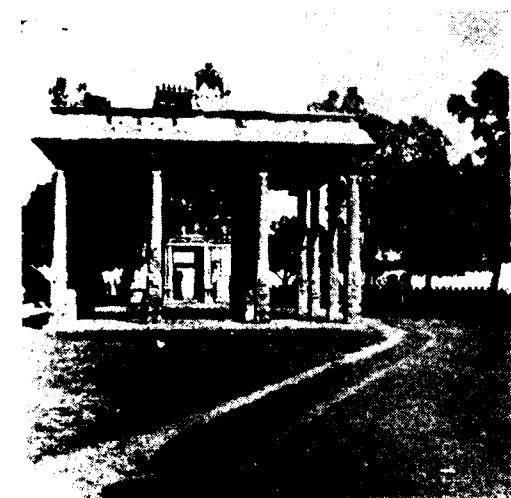
After vanquishing the Kurumbar Rulers with the aid of Nandi and his hordes, Thondaman Chakravarthy built the present temple on the spot

where his elephant was stopped by Divine Will at the jasmine bush.

Thondaman had taken away the two Erukku and bell-metal pillars as also the pearl-studded doors that decorated the Kurumbar Palace. The Erukku pillars of a black shade and measuring 12 feet in height and about a foot and a half in diameter stand in front of the sanctum sanctorum of the Thirumullavayal temple today. The bell-metal pillars and the pearl-studded doors are supposed to have been used in the temple at Thiruvottiyur (north of Madras) since believed to be washed away by the Sea.

The entire temple is built and roofed over with stones and although purely of a Chola type, the flagmast and the Bali Peetam (Stone Pedestal for offerings) in front of the temple would easily make one believe that he is visiting a typical Kerala temple. The fairly tall tower at the main entrance and the large stone Mantapam in

Stone-pillared and stone-roofed mantapam before the main tower of the temple at Thirumullavayal

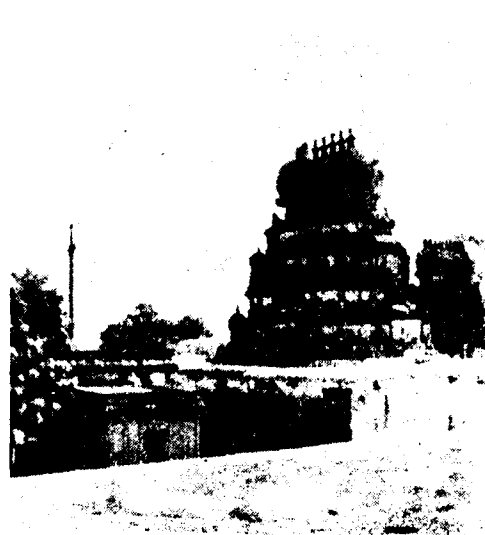


front of it are typical of these structures which one comes across in the South.

The main shrine dedicated to Masillamaniswarar is flanked on the left with a shrine dedicated to Lord Subramanya, His son, and by a contiguous shrine on the right dedicated to Kodi-Idai Amman, a form of Parvathy, His Consort. The name of the Goddess denotes "a Deity among Jasmine bushes".

At the entrance to the village is a small shrine dedicated to Parvathy and Pachai Amman, where a number of devotees come particularly on Sundays, actuated by the Hope and Conviction that all their problems would be solved by prayers and offerings there. This temple courtyard has an imposing array of Muniswarar, Ayyanars and their horses, with Agasthya right in front, facing the Deity. The local population believes that the Maniswarar rises an inch every year.

Canopied tower over the sanctum of Thirumullavayal Temple



Parvathi Pachai Amman Temple

It is believed that the Goddess in Thirumullavayal is Kriya Sakthi, while the Goddesses in Melur (near Minjur about ten miles from Madras on the north-east) and Thiruvottiyur on the northern border of Madras are Icha Sakthi and Gnana Sakthi respectively. Offering prayers at all these three temples on a Friday which also happens to be the Full Moon day is considered a very auspicious coincidence. A number of devotees observe this triple worship, whenever they can, to attain Liberation from continuous births.

On the eastern side of the temple is a good tank paved with stone steps with two young banyan and neem trees standing guard at the top of the flight of steps. Set amongst the green of the surrounding cultivated areas, the City dweller finds a heaven to sit on the steps of the tank and muse, in perfect bliss, on the hum-drum life in the City, only a few miles away.

BRAVE-NEW-MODERNS

K. S.

THE present springs from the past. Past and present are our means. Future alone is our end, said Pascal. It does not mean that the immediacy of the present experience is to be ignored. Future is our concern. A Utopia is not a portrait of the real world or of the actual political or social order. It exists at no moment of time and no point in space. Just as a conception of an idealised state of things has stood the test and proved its strength in the development of the modern world.

The infinite longing for the infinite which poets like Valmiki, Goethe, Shakespeare, Kalidasa and others have visualised for thousands of years was the source of man's greatest achievements, has become so completely a thing of the past, that it is difficult for us to visualize them. At bottom, we only know that such concepts existed. What our forefathers regarded as the most important thing is dwindling in importance to us in the present age. It is questionable whether it is a healthy attitude. So much so, the proposition: all men are mortal, has been superseded by the proposition: Mankind is exterminable.

Whatever changes have taken place in the world after the Second World War, have not affected the validity of the new proposition. The truth as it expresses is confirmed by the general threat hanging over us. Its implications have become more sinister. For what is exterminable today is not merely all men, but mankind as a whole. This change inaugurates a new historical epoch.

Moreover, lack of conscience today is considered no moral defect, but an objective condition. Hence all the more dangerous. Let us assume that the modern hydrogen bomb has been exploded. To call this "an action" is not enough. The chain of events leading up to the explosion is composed of so many links, the process has involved so many different agencies, so many intermediate steps and partial actions, none of which is the crucial one, that in the end no one is regarded as the agent. Everyone has a good conscience and has once and for all been transferred to moral machines because responsibility cannot be fixed on anybody and has been shifted to destructive object, it has become a mere chess move. The correct chess move is what ought to be done. The wrong chess move is what ought not to be done. There is a vastly ramified organisation which resorts to these destructive devices such as Atom Bombs, Hydrogen Bombs, Robots, etc.

Also the action of releasing the bomb is not merely irresponsible in the ordinary sense of the term, this irresponsibility falls within the realm of topics for discussion. The consequences of this 'action' are so great that the agent cannot possibly grasp them before, during, or after his action. Moreover, there is no goal or positive value that can even approximately equal the magnitude of the means used to achieve it. This incommensurability of cause and effect or means and end is not in the least likely to prevent the action.

SOUTHERN RAILWAY

GUNTAKAL DIVISION

Tender Notice No. 42

The Divisional Superintendent (Works Branch), Southern Railway, Guntakal, invites separate sealed tenders for the following works upto 15-00 hours on 4-10-1960:-

Sl. No.	Name of work	Approximate value	Earnest money	Cost of tender form
		Rs.	Rs.	Rs.
1.	Supply of hard stone ballast (2" & 1½" size) from mile 162/0 to 176/0 between Cuddapah and Kamalapuram Stations ..	3,30,682	8,267	10
2.	Supply of hard stone ballast (2" & 1½" size) from mile 176/0 to 186/0 between Kamalapuram and Yerraguntla Stations ..	2,33,025	5,825	10

Last date for issue of tender forms .. 12 hours on 3-10-1960

Last date for deposit of earnest money with the Divisional Accounts Officer, Southern Railway, Guntakal .. 16 hours on 3-10-1960

Date of opening of tenders .. 16 hours on 4-10-1960

Further particulars and tender forms can be had from the Office of the Divisional Superintendent (Works Branch), Southern Railway, Guntakal, on production of a receipt towards the cost of tender forms paid to the Divisional Accounts Officer, Southern Railway, Guntakal, or any Station Master on the Southern Railway. Tender forms are not transferable.

As for responsibility for loss of life or murder, one can repent one murder, not a million murders. In other words, in the case of individual murders, man's emotional, imaginative and moral capacities come into play. This condition in which man is more or less equal to himself, is no doubt the basic prerequisite of humanity. But this is absent from those who want to release the nuclear weapons. Man's failure does not primarily consist in his failure to conform to a specific human image of himself; not even in his failure to meet the requirements of a just society; but rather in his half-guilty and half-innocent failure to conform to himself that is to say, in the fact that his capacity for action has outgrown his emotional, imaginative and moral capacities.

As for our emotions, they have only a limited capacity and elasticity. We may have scruples about murdering one man; we have less scruples about shooting hundred men and probably no scruples at all about bombing a city out of existence.

In our emotional responses, we are at the rudimentary stage; but in the capacity for killing, the so-called advanced countries have entered a proud stage of industrial mass production. Our emotional nature, inhibitions, fears, worries, regrets are in inverse ratio to the dimensions of our diseases. The former grow smaller as the latter increases. The gulf between our emotional nature and our destructive powers is widening. As against this modern cleavage, all our older spiritual conflicts between mind and body, duty and inclination, are relatively harmless. The struggle within us in

our emotional nature was human. The contending principles were attuned to each other. They were in actual contract. Neither of them lost sight of the other. Atleast on the battle-field of the contending principles, man preserved his existence unchallenged.

The incompatibility of man's emotional nature and his capacity for destruction which has reached a stage of industrial mass production can be attributed to the following causes.

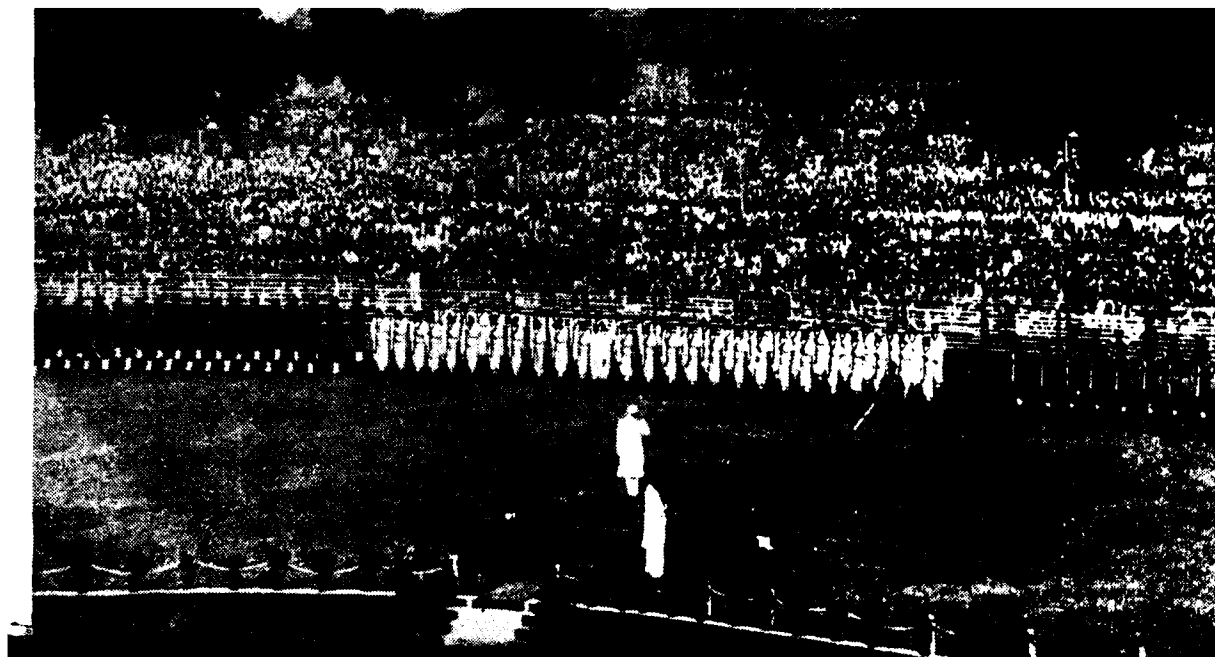
Lack of an emotional integration on the part of World's advanced nations is due to the lopsided development in the individual man. According to Sri Aurovindo, the Western world has developed the man's mental, physical and vital activities while in the East, especially in India, there is lopsided development of supramental and spiritual activities. Countries like India should develop more mentally and physically while Europe and other Western countries should develop the supramental and spiritual sides of life. Man's nature according to the Upanishads consists of five aspects: Annamayakosa, Pranamayakosa, Manomayakosa, Vignanamayakosa and Anandamayakosa.

There is a reference in the Titreya Upanishad to these Kosas. If there is no balanced development in the individual, he is dissatisfied with his lot and tries to quarrel with his neighbour. This is a result of a lopsided development. Just as there are quarrels between individuals, there arises quarrels between communities and between nations. This is all due to a lack of proper development of all the 5 aspects of man's nature referred to above.

The tendency to indulge in Atom Bomb and Hydrogen Bomb for destructive purposes is all born of a Demoniac nature. It is said in the 16th Chapter of the Gita that when Demoniac nature develops, man thinks: this is my empire; I have won this; I have had this achievement; I am going to have new positions; I am going to conquer new territories and such other ambitions. If the Angelic nature is developed, such demoniac tendencies will

not develop. The lack of peace and restlessness in humanity is the lack of peace and the restlessness prevailing in every human being. The healthy man is he who has health, wealth and is strong and who has got good conduct; that is who is free from desires and whose conduct is pure. If this ideal referred to in the Titreya Upanishad is followed, then the world can be saved from the catastrophies discussed in the foregoing paragraphs.

The 13th Anniversary of Indian Independence was celebrated throughout the country on August 15, 1960. In Delhi, Prime Minister Nehru, after inspecting a combined guard of Honour by the Armed Navy, Air Force and the Delhi Armed Police, unfurled the National Flag at the ramparts of the historic Red Fort and addressed the mammoth Independence Day gathering. Photograph shows the Prime Minister taking the salute as the guard of Honour presents arms. The historic Jama Masjid is the background.



MAN'S QUEST OF POWER AND PEACE

K. PARTHASARATHY

FROM immemorial times, the story of man's progress has been one of inquiry and experiment, struggle and frustration, hope and achievement. Ever since the birth of man on this planet, the Earth, a power of contemplation, assimilation and synthesis in successive degrees of progress has characterised all his pursuits of Mind and Nature. Evidently on time's track many civilizations and cultures of contrast and identity arose leaving their thought and character to the discrimination of posterity. Footprints of successive centuries on the sands of time have led the human race to a new era, the momentous Twentieth Century.

The drama of the twentieth century, the heat and passion of it, the romance and tragedy of it all holds us, hypnotizes us. The achievements of the age are varied and wonderful. The conquest of air, "the aeroplane", marked the opening of the twentieth century. The radio, the cinema, the telephone followed in its wake. The television is yet another remarkable gift of the age. Again plastic a synthetic material is a gift of chemistry to man which is put to infinite variety of uses from cups and plates to radio cabinets. In the sphere of medicine the inventions of chloromycin, penicillin and BCG have checked, prevented and cured, the recurrent rough shod ravages of many a dreadful disease hitherto thought incurable. The great advances made in surgery through successful brain and heart operations alleviates the pangs of afflicted humanity. Advanced medical research

offers the gift of sight to the blind by "surgical replacement process" if brother-man, donates by will, his eyes, for such surgical replacement, after his death.

Remarkable experiments in sound and space have yielded astonishing results. The world is no longer a disintegrated phenomena. Poles apart have been pulled together. The World is at finger tips. Space and time have been conquered beyond human imagination. Deepest depths have been fathomed and greatest heights have been reached by quickest and best devices of unsurpassable human ingenuity and endeavour. A transmigration of scientific and social ideas have revolutionised the values of human life and achievement. The World has become a surprisingly compact house. The jet propelled air-craft has broken the sound barrier in speed. The latest D.H. 110 can perform transonic and supersonic flights. Rockets are racing through the atmosphere and stratosphere to reach the worlds above. Sputniks are soaring into the outer-space to explore it. The nature and form of other worlds are earnestly and prospectively viewed through huge telescopes by men with ideas of conquering them. Scientists are of view that the era of the space-ship and interplanetary travel is not far off.

But Alas! the triumph of science is only one degree less than the colossal devastation it has inflicted on humanity. In fact what seemed as the flowering of a millennium has turned into a dead-sea fruit.

SOUTHERN RAILWAY

VIJAYAWADA DIVISION

Sealed tenders are invited by the undersigned for the work of handling fuel at the undermentioned Loco Sheds for the period from 1-11-1960 to 31-3-1962.

Sl. No.	STATION	Amount of tender deposit to be remitted
		Rs.
1	Bitragunta (including Pump site at Sularupeta, Nayudupeta, Nellore, Mile 128/7—Bogole, Ulavapadu, Ongole, Karavadi, Chinnaganjam).	2,000
2	Waltair (including Pump site at Anakapalle)	1,000

Tenders should be submitted only in the prescribed forms available for sale from 1-9-1960 to 24-9-1960 from the Office of the Divisional Superintendent (Mechanical Branch), Vijayawada, on production of a receipt for Rs. 3 per set for each Station (not refundable) issued by the Divisional Pay Master, Vijayawada. No money orders towards the purchase of tender forms and tender deposits will be accepted by the Divisional Superintendent (Mechanical Branch), Vijayawada, but the same will be accepted by the Divisional Pay Master, Vijayawada. The amount of tender deposit should be paid to the Divisional Pay Master, Vijayawada on or before 28-9-1960, before 12-00 hours.

The last date for receipt of tenders by the Divisional Superintendent (Mechanical Branch), Vijayawada, is 30-9-1960 before 12-00 hours.

The Divisional Superintendent, Vijayawada, reserves to himself the right to reject any or all tenders without assigning any reason.

DIVISIONAL SUPERINTENDENT.

Guided missiles are dispensed with human agency for air operations against enemy basis. Bullets have been replaced by deadly and devastating bombs. With infinite devotion, with inestimable cost amounting to sheer cruelty atom and hydrogen bombs and deadly molecular weapons are being produced to wipe out civilization and the human race itself. Prof. Albert Einstein said "Rifle bullets kill men, but atomic bombs kill cities. A tank is a defence against a bullet, but there is no defence in science against the weapon which can destroy civilization. The two world wars of the century gave extraordinary spur to scientific progress. The submarine, the aeroplane, the torpedo, the mine and the poison gas were the outcome of the first decades of the century and were ruthlessly used during the first world war against humanity already submerged in the depths of suffering and frustration. The advent of the second world war introduced rapid improvements in the field of aviation (the radar)—the atom bomb, the air-craft carriers all as spectacular achievements of vengeance and destruction. Particularly the second world war gave unbridled spur to molecular weapons. Atom and hydrogen bombs were used against defenceless women and children. "The beast in man roams about unbridled tearing the fine texture of brother-man."

As "Ouspensky" the great Russian Philosopher and Mathematician remarked, "How desperate a madness is it for men, after taming the fiercest of beasts, to become yet worse than beasts to one another. It passes for greatness to burn cities and to lay whole nations waste". Hiroshima and

Nagasaki" gravely remind us of the colossal destruction brought about overnight by the use of atom bomb in the second world war. Life seemed impossible on earth. Responsible spokesmen of men and matters all over the world were paralysed with the fear of the very extinction of the human race by the use of molecular weapons, the atom and hydrogen bombs. They feverishly sought protection for the human race in the idea of dispersing population centres underground into "Linear or ribbon" cities. In the words of Albert Einstein "Reasonable men, with these new facts to consider refuse to contemplate a future in which our culture would attempt to survive in ribbons or in underground tombs". As he further remarked "with rockets and atom bombs, in man's possession, no centre of population on the earth's surface is secure from surprise destruction in a single attack." The prophetic words of Charles Darwin in the enunciation of the "evolutionary theory" that some animal species have become defunct, extinct totally due to deadly conflicts rings a note of warning in the world of man. What is true of the animal species would be equally true of the human species.

A fear of annihilation hangs over the world. Man seems to have no protection against the application of his own pursuit of knowledge. A dispassionate pursuit of truth reveals that an agonising and inescapable unrest has taken, a monstrous hold of the hemispheres. "This picturesque and glamorous unrest is self-imposed and painfully pleasurable" to use the figure of oxymoron. As Swami Vivekananda said of modern times "the

peel of laughter at the surface only identifies with the agonising wail at the bottom". The face value is laughter. The stark realism is agony. "Although Nazi concentration camps or extermination centres have ceased to exist there are still others in the world and they grow in number each year. As long as human beings are imprisoned, tortured and murdered for their convictions, humanity is a bitter farce," said Ouspensky, the great Russian Mathematician and Philosopher who proved mathematics and philosophy are two sides of the same coin.

Startling inventions have been made by pure sciences. New schools of thought have been established by the liberal arts and humanities. All are deemed to aim at the welfare of man. Yet a seething mass of turbulent life is inevitably obvious on all sides as the only destiny of mankind. Frustration and misery are eating into the very vitals of the common man. He hopes much against hopes.

Caught in a world of conflicting ideas and ideals man wants to invent excuses, arguments for what he wants to believe, for what he wants to execute and make others acknowledge. No-wonder, "a false sense of values" emerge "with a proxy of truth". Consequently opinions are acknowledged as facts, fallacies are accepted as realities, tyranny is regarded as valour, ignorance is perpetuated as wisdom. In other words we seek growth but only degenerate. We long for unity but create only diversity. We pine for peace but only invite war. In fact we self-betray, we stand defeated against ourselves.

The causes for this chaos and frustration, misery and tyranny, on searching analysis are revealed with a mixed note of surprise and pain. The "raison de etra" lies in us, in our comprehension of things, approach to values, treatment of life and behaviour towards fellowmen. As Bernard Baruch, Adviser to Six Presidents of U.S.A., wisely said "Civilization does not lie in skyscrapers or in atom bombs. The problem is not one of science but of ethics." John Ruskin said "One might read an entire library of books and still remain, uneducated" if the quality of thoroughness in learning, is unaccomplished and that searching analytical mind is unformed. Similarly Dr. Radhakrishnan asserts that one may enter into the portals of a college and come out graduated and yet may be reckoned uneducated if the spirit of inquiry and experiment adaptation and harmony is absent or rare in him. Again as the prophets proclaimed "One might have conquered the whole world but yet lay defeated if he had not conquered himself." Likewise a oceanic acquisition of knowledge by varied pursuits cannot contribute to human welfare so long as passion for power controls it. It means we have greater knowledge but not greater wisdom. We seek knowledge for power but not wisdom for peace.

In particular, the invention of the atom bomb is the unquestionable evidence of man's exercise of the highest intellectual faculty, but to what consequence, to wipe out his very race? in philosophic parlance, made in God's own image. "Men have learnt to fly in air like birds and swim in water like fishes but not learned how to live

on earth together as human beings" says Dr. Radhakrishnan. Vested interests and destructive motives exploit knowledge. Such exploitation is a cruel mockery at human suffering. In the context, the very knowledge which we have sought and acquired through our various sciences and arts along the path of time, instead of awakening and building us to progress and peace, seeks to disintegrate and extinguish us, as the application of our knowledge in the main has been towards the achievement of a false sense of values. As Dr. Radhakrishnan says quite poignantly "We are transitional creatures burdened with uncertainties, with chaos in our minds and we cannot redeem ourselves from the burden of inert and petrified illusions". A false sense of values is spreading like a deadly epidemic and is eating into the very vitals of lives like cancer.

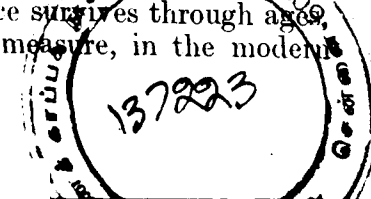
These false sense of values with a proxy of truth gain momentum and velocity in the world of man. As Bernard Shaw remarked "Truth sounds stranger than fiction, and truth is bitter". And these false sense of values in the name of civilization and high standard of living create superficial wants, the disease of the age. Superficial wants to satisfy our greed, our vanity, our lust, our tyranny, all hold us, hypnotizes us. In our tempting, unchecked pursuit of these superficial wants, sense of equity is expelled from the province of rationality and morality. Exploitation of the most conspiring magnitude takes root into human society. "Men become a pack of wolves with a pretence to reason and civilization". Consequently we agonise, we suffer, we kill, we maim

and we extinguish the very fires of humanity. We stand defeated against ourselves, we degenerate. Our life is narrowed into distrust and despair. We wish for peace but create war. Peace pacts are otherwise named armistices. This hypocrisy, diplomacy is like poison administered in the shape of medicine. Poison can only be poison though it may bear the name of medicine.

It is most fittingly evident in the words of Dr. Radhakrishnan that "we have the assertion of *mind over life and matter* and not yet of spirit over mind, life and body. Our inward unity of the spirit is lost. We have lost our inner harmony with the permanent and peaceful. We have controlled the physical nature. We have not mastered the substance within us. We do not know what to do with us" Quite naturally "our achievements are like beautiful eyes—but without sight".

The gross accumulation of ideas and masterly memory of them does not constitute wisdom. Wisdom does not belong to the province of information, intellectual entertainments, intellectual excitements and speculations. Wisdom is not identified with intellectual attainments. Wisdom does not lie singularly in intellectual cultivation. Wisdom is derived by a disintegrated and dispassionate pursuit of ideas towards the establishment of peace in the world. Knowledge is sublimated into wisdom by the higher dictates of conscience.

In the context, the ancient Greek doctrine of education "Mens agit Molem" "Mind moves the body" whose influence survives through ages, in increasing measure, in the modern



institutions of learning needs to be retrospectively studied and analysed. The philosophy behind all modern education is based on this greek doctrine "Mens agitat Molem" "Mind moves the body".

But mankind at large has not questioned as to which moved the mind. In fact this great searching question is the key to all problems. As Swami Vivekananda in his philosophic discourses said "The ancient seers of India realised that, it is the inexhaustible, inexpressible and the unconquerable human spirit that moves the mind". Ancient universities of India like Nalanda, Navadweepa, Dharamikota, Taxila, Varanasi all devoted their pursuits to the spiritual enquiry which guided and controlled the intellect. They realized not merely intellectual cultivation, but spiritual realization worked out a panacea, for all the ills of the world. If in mere intellectual cultivation, lies the salvation of the world, examples are not wanting in history where many individuals of the highest intellectual attainments, have disfigured the face of the world with atrocities and crimes which even the worst of the savages never dared. "Gross pursuit of intellect leads to materialism decked out in full dress and awarded with tempting medals. There are academies and universities dedicated to the service of the intellect alone. It is recognized, it teaches, it tyrannizes over sublimation of thought or spiritualization of ideas" remarked with a cutting irony Ouspensky the great Russian Philosopher. Thus it is evident that mere intellectual cultivation is no answer to the raging problems that eclipse the world today. "The panacea lies inevitably in the

values of spiritual culture, in the pursuit of self realization its part inside the human being and outside the world, he inhabits" as Dr. Radhakrishnan, the greatest of the contemporary philosophers observes. Culture evolved out of spiritual values, is not curiosity. It is not learning. It is not exclusiveness. It is not vanity. It is not class distinction. It is neither material aristocracy nor intellectual aristocracy. It is the simplicity, the sublimity and purity of the heart. Culture is an expression of the irresistible spiritual force of which we are all made and over which the mind, has no control. The inherent spiritual element seeks to manifest itself of its eternity, solidarity, sublimity and sweetness in human thought and action. Examples are not wanting where men most unlettered, men who do not know how to read and write have bequeathed greater wisdom to posterity. Sri Ramakrishna Paramahansa unlettered, unsophisticated, uncultured in the modern sense had the irresistible power of the spirit to stand on the very pedestal of time as the ideal of human destiny to guide generations unborn. This then is the force of the spirit. True culture touches the spirit—not mind.

To the cultured heart, the common man is not common. He is precious. He is the ore without which metal cannot exist. He is inestimable. He is the last great link in humanity—the very jewel of creation. It condemns any one tearing his fine texture and trampling him down in cold blood and filth as an unspeakable crime.

It behoves us to reckon "who knows what precious diamonds emeralds, rubies are hidden beneath the dust

begrimmed face of a beggar in the street, who knows he may sit in contemplation with the greatest saints and artists. In his life of contemplation he may be a Buddha—a Jesus—a Shakespeare—a Ramanujam—a Ravi-varma—a Beethavan—a Kalidasa—A focus of the world is in the individual. Life is manifested in the individual. Truth is revealed to the individual.

Not all can learn to discern real from the false but he who can will not receive this gift of discernment free. This is a thing of great labour, a thing of great work which demands boldness of thought and boldness of feeling arising out of the true cultural values. True culture reaffirms man's belief in the indomitable human spirit. To a world of disillusionment it offers a ringing denial that any tyranny can destroy the creature made by God in his own image. "The spark of life still burning in one soul, can flame up against the forces of evil, can shelter the nightmare and night".

Again we have masses of men and women who are absolutely unlettered and untutored in the modern ways of life—yet who have the power to see the truth and make it prevail, who have the strength to speak the truth and sacrifice, who have the capacity to be gentle and peaceful, whereas a good score of intellectuals and modernized often are less attached to truth and true cultural values. As Ouspensky said "Our society exists to remind us through its various voices that the ultimate truth in man is not in his intellect or his possessions—but it is in his illumination of mind by the ripening of his heart, in his extension by sympathy across all barriers of caste, colour and creed, and prejudices, in his recognition of the world not merely as a storehouse of power but as a habitation of man's spirit with its eternal music of beauty and its inner light of harmony and peace".

True culture achieves a universal perspective which makes all ages and countries its debtors.

A Correction

In the August 1960 issue of SOUTHRAILNEWS page 38, first column, 7th line please read 295 MILLION instead of 295 lakhs.

Quick Transit Service

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Smalls
Quickly



SOUTHERN RAILWAY

By paying a small surcharge, you can send your goods both 'Wagon Loads' and 'Smalls' quickly within a *guaranteed target time*. The surcharge will be refunded if the guarantee is not fulfilled. The scheme of QUICK TRANSIT SERVICE is in operation between important pairs of points, e.g.:

	No. of days
Salt Cotaurs—New Delhi ..	8
Salt Cotaurs—Wadi Bunder ..	12
Salt Cotaurs—Shalimar ..	7
Wadi Bunder—Salt Cotaurs ..	7
Salt Cotaurs—Cochin Hr. Trs. ..	5
Salt Cotaurs—Bangalore City ..	4
Madras Beach—Tuticorin ..	5
Bangalore City—Wadi Bunder (via) Ghorpuri ..	4
Cochin Hr. Trs.—Mangalore ..	4
Bangalore City—Shalimar (via) Madras ..	11
Bodinayakanur—Wadi Bunder (via) Madras Egmore ..	8
Bodinayakanur—Shalimar (via) Madras Egmore ..	9
Bodinayakanur—New Delhi (via) Madras Egmore ..	11

For full particulars of frequency of service and the target time of transit as well as timings of the services, please see the current Time Table of the Southern Railway.



THE SHEPHERD WOULDN'T DO IT

THERE was once a king who thought so much of himself and his importance that every time he sneezed all his people would have to say "Bless you." But how did his people know when he sneezed? Well, he had a special messenger to follow him wherever he went, and whenever the King sneezed a signal would be given and bells would be rung all over the land. When the people heard the bells they would have to say promptly, "Bless you."

Now there was one young man who refused to obey the King's orders. He was a shepherd who looked after his father's sheep and roamed on the hill-sides with his staff and flute. This young man was not only handsome, but strong too, and was afraid of no man or beast.

One day it was reported to the King that the young shepherd would not say "Bless you" when the King sneezed. So he was taken to the palace by the King's soldiers and there appeared before him the King himself. The King waited and then suddenly sneezed. Everyone nearby and in the palace and outside, at once said "Bless you." But the young shepherd said "Bless me."

The King said in a commanding voice, "Have I not ordered that all my people will say 'Bless you' when

I sneeze? So why do you disobey my orders? Now say 'Bless you' at once and I will pardon you; but if you do not, you will be sent to your death in the bear pit."

The shepherd remained silent. The King was now angry and roared, "Obey my command at once and say 'Bless you'."

The shepherd remained silent. The King now shouted to his royal guards, "Take him to the bear pit to die."

The guards caught the young shepherd, took him out of the palace and straight to the bear pit, and pushed him in.

The huge grizzly bear was there in the pit, looking fierce and hungry. As soon as he saw the young shepherd he rushed towards him. But the shepherd knew how to deal with animals. He stood still and stared straight into the little eyes of the bear. The huge animal stopped and seemed to be afraid. He saw something in those eyes he had never seen before, and he could not attack and kill this strange being. The next morning when the King and the guards came to the bear pit, they expected to find the ripped-up dead body of the young man. But instead they saw him there alive and fearless, while the bear was hiding in a corner.

The King went back to his throne room and ordered the guards to bring

SOUTHERN RAILWAY

TENDER NOTICE

The Divisional Superintendent, Southern Railway, Hubli, invites sealed tenders for the work of Fuel handling at the following locomotive depots for the periods shown against each:—

Sheds	Period of contract		Earnest money required	To be remitted to	Tender form can be had from and submitted to
	From	To			
1. Ghorpuri (including pump sites at Jeyuri, Nera and Salpa).	1-11-1960	31-3-1962	Rs. 1,000	Divisional Pay Master, Southern Railway, Hubli.	Divisional Superintendent (Mechanical), Hubli.
2. Belgaum (including pump sites at Gokak Road, Pachapur and Ghatprabha).	1-11-1960	31-3-1962	300	Divisional Pay Master, Southern Railway, Hubli.	Divisional Superintendent (Mechanical), Hubli.
3. Koregaon (including pump site at River side).	1-11-1960	31-3-1962	300	Divisional Pay Master, Southern Railway, Hubli.	Divisional Superintendent (Mechanical), Hubli.

Tenders should be submitted only in the printed forms obtainable on payment of Rs. 3 per set (not refundable under any circumstances) from the Divisional Superintendent (Mechanical), Hubli.

Money Orders for Tender Forms will not be accepted by the Divisional Superintendent (Mechanical), Hubli after 12 hours on 19th September 1960.

Intending tenderers should remit the requisite earnest money deposit for each of the stations as shown above on or before 12-00 hours on 22-9-1960.

Tenders should be submitted to the Divisional Superintendent (Mechanical), Hubli before 15-00 hours on 22-9-1960.

Tenders should be supported by a current Income-tax Clearance Certificate failing which they will not be considered.

The Divisional Superintendent, Hubli, reserves to himself the right to reject any or every tender without assigning reasons.

DIVISIONAL SUPERINTENDENT.

the shepherd before him. Once again the King told the shepherd that he must obey the royal orders and say "Bless you" when he sneezed. But if he again refused to obey, this time he would be thrown into a den of ferocious wild boars to be torn to death.

The shepherd again refused but said, "Your Majesty, I will say those words only if you will give me your daughter, the princess to be my wife."

The King roared out, "What, you impudent, insolent young upstart! You, a shepherd, dare to ask for the princess to be your wife? Get gone, you rascal, to your death by the wild boars."

The guards seized the shepherd and took him off to the den of wild boars. He was pushed inside and the huge iron door locked. Ten ferocious wild boars faced him, snuffing and snorting, ready to make a charge and rip his body into shreds of bleeding flesh. The young shepherd never lost his head, but promptly took out his little flute and began piping a lovely, lilting melody. The wild boars suddenly stopped snorting, cocked up their little ears and before long were hopping and dancing about. The shepherd kept on playing and playing and watched the antics of the dancing boars. They looked so funny that he wanted to laugh and laugh, but he dare not stop until the animals had been made thoroughly weary, as otherwise they would attack and kill him.

So right through the night the shepherd kept piping his flute and the boars danced and danced until they fell down and went to sleep with tiredness. It was only then, towards

daylight, that the shepherd put away his flute and laughed and laughed until tears came from his eyes.

This was how the King and the guards found him in the morning, still laughing and laughing, but alive, and the wild boars fast asleep. Once again the King had him up in the throne room and asked how it was the wild boars had not torn him to death. The shepherd told the King what had happened. Now the King really admired a man who was brave and who would stand up to him, and he found that as the fear of death would not make the shepherd say "Bless you", he would try some other way.

So he said to the shepherd, "Come along, young man, with me and see what I have for you." The shepherd followed the King until they came to a beautiful piece of country with forests and meadows and green lawns. Truly, a lovely bit of land. The King, watching the shepherd admiring the view, said, "Well, all this is yours if you say 'Bless you'." But the shepherd refused and again asked for the princess as his wife.

The King did not give up and next took him to his treasury, where he showed him a big bagful of gold coins. "Here you are, young man, all this is yours if you say those two little words, 'Bless you' to me." Once again the shepherd refused and asked for the princess as his wife.

The King thought to himself; that here was a stubborn young man, but there must be some way of getting him to obey, and yet not agree to the princess being his wife. So, the King took him to another secret vault in the palace, and there he showed him

of glittering jewels, like diamonds, rubies and other costly gems. Truly this was a dazzling sight and the shepherd did feel a little tempted, but he was determined not to give in. Once again he refused and asked for the princess as his wife.

The King now realised that here was a man who could stand up to anybody and seemed worthy to be a king's son-in-law. So at last he agreed to give him the princess as his wife.

"Now, young man, I have agreed to your request and you must say the words 'Bless you' when I sneeze. Just then the King sneezed, but still the shepherd did not say the words and said "Not yet, your Majesty, but after I am married to the princess."

The King knew he was beaten so orders were given for the wedding, which was held within a few days with great feasting and rejoicing. When it was all over and the princess had become the young shepherd's wife, he waited for the next royal sneeze. But strange to say from that day until the King died several years later, he never sneezed, and so the young shepherd did not have to say the words "Bless you."

After the King's death, the young shepherd became King and the first thing he did was to cancel the order that his people should say "Bless you" when he sneezed, as he did not want to force anybody to do anything so silly.

UNCLE TELLATALE.

SOUTHERN RAILWAY

TENDER NOTICE

VIRUDHUNAGAR - Proposed

Marshalling Yard - Madura Division

Scaled tenders for the above in the prescribed form will be received by the Chief Engineer, Southern Railway, Madras-3, upto 10.00 hrs. on Monday, the 26th September 1960.

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

3. The tender form will be issued only upto 15.00 hrs. on Tuesday, the 20th September 1960.

4. Approximate cost of contractor's portion of the work is Rs. 8,89,595. The earnest money of Rs. 17,800 should be paid before 15.00 hrs. on Friday, the 23rd September 1960, to the Divisional Pay Master, Southern Railway, Madura.

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

S. R. News

HANDICRAFT EXHIBITION AND SALE

"I am very happy to associate myself with the First Handicraft Exhibition and Sale, organised by the Handicraft Centre, Railway Colony, Hemambikanagar, and my sisters, under the guidance of the Chairman, Sreemathy Balambal Krishnan, deserve congratulations for the rapid progress made during this short period of its existence": thus observed Mrs. Abdullah (wife of Mr. P. K. Abdullah, District Collector of Palghat), while inaugurating the First Exhibition at 5 P.M. on 14-8-1960 in front of the Railway Primary School, Hemambikanagar, before a large and distinguished gathering. The elite of the place was present, and among those present was Sreemathy P. H. Sarma (wife of Sri P. H. Sarma, General Manager).

There were about two hundred exhibits received from the trainees of the Handicraft Centre and employees of Olavakkot Division. A Committee of Judges consisting of Sreemathees Abdullah, Sarma, Ramachandran and Padmanabhan, selected three best exhibits under fancy hand-made article, embroidery and tailoring and it was decided to award one prize each. After that, the visitors were allowed inside the exhibition hall. The stall was kept open between 5 and 8 P.M. on 14-8-1960 and 12 A.M. and 8 P.M. on 15-8-1960. It deserves mention that,

in all, more than 1,500 persons visited the exhibition stall. Almost all the articles intended for sale were sold out.

Taking all factors into consideration, the maiden attempt proved a success.

INDEPENDENCE DAY CELEBRATIONS—

15TH AUGUST 1960

VIJAYAWADA DIVISION

Independence Day celebrations were held in a befitting manner at the Divisional Headquarters. Sri M. M. Nathaniel, Divisional Personnel Officer, presided over the function at the Divisional Office. At 8-30 A.M. the National Flag was hoisted. All the Divl. Officers and staff were present with their families. The R.P.F. was on parade. After hoisting the flag, Sri Nathaniel spoke on the significance of the celebrations, emphasising that it was a day for re-dedication to service on the part of each and everyone. He further stressed the need for devotion to duty, loyalty, discipline and respect for authority in the case of every citizen and public servant and especially so in Services like the Railways. With the singing of the National Anthem, the function came to a close.

The Staff Canteen at Vijayawada had Flag Hoisting ceremony at 9 A.M. as part of the Independence Day celebrations. Sri V. Rama Iyer, Chairman of the Canteen, requested

Sri T. Madhavarao, D.C.S., to hoist the National Flag. There was distribution of sweets to children of Railway employees.

At Satyanarayanapuram Colony, Independence Day celebrations were arranged by the Colony Welfare Committee at the Single Teacher Primary School. At 9-30 A.M., Sri J. S. D. David, D.O.S., hoisted the National Flag. School children gave a few items of songs. Sweets were distributed to children. Sri K. Sachitanandam, President of the Colony Welfare Committee, read an address explaining the importance of the occasion. With the singing of Jana Gana Mana by the children, the function came to a close.

DINDIGUL

The Independence Day celebrations were conducted in an impressive scale on 15th August 1960 in the premises of Railway Institute at Dindigul under the Presidentship of Sri M. Kannan Menon, AEN/DG.

In the presence of large gathering of Railway employees and their children, the National Flag was hoisted at 8 A.M. by the AEN/DG. After inspecting the Guard of honour provided by the Railway Protection Force, sports were conducted both for Railway employees and their children and the Asst. Surgeon Sri M. R. Venkatesan distributed the prizes to the winners.

The function came to a close with the vote of thanks proposed by the Hon. Secretary of the Railway Institute.

RAILWAY INSTITUTE, TRICHY FORT

The Independence Day was celebrated by the Members of the Railway Institute, Trichy Fort, with great enthusiasm. The Institute premises was gaily decorated with festoons and flags. At 7 A.M. national flag was hoisted in the Institute ground by Sri S. Gopalachari, Secretary of the Institute. In a short speech, he exhorted the members of the Institute to dedicate themselves on the auspicious day to the services of the motherland and contribute their best by hard work for the prosperity of the nation. The St. John Ambulance Brigade was in attendance on the occasion. In the evening, there was a children's treat in which the children of the Railway members participated. Sweets were distributed to them. Besides, there was a music performance. Sri B. P. Shenoy, Divisional Superintendent (Offg.), presided over the function. Medals were presented to the artists in appreciation of their performance by the President. The President appealed to the members to bear in mind three things in life, viz., discipline, knowledge and hard work.

With a vote of thanks proposed by Sri S. Gopalachari, Secretary of the Institute, the function concluded.

OLAVAKKOT DIVISION

Sri K. N. Krishnan, Divisional Superintendent, accompanied by his wife, arrived at the Railway Hostel,

Railway Colony, Hemambikanagar, where he was received by Sri Tippanna Rao, ASOR, Sri Ranganathan, Inspector, RPF, and the Hostel Leader, Balaraman. The Divisional Superintendent came to the Flag Mast. Sreemathy Balambal Krishnan, at the request of the ASOR, unfurled the National Flag. There was an impressive March Past by the Railway Protection Force at which Sri K. N. Krishnan took the Salute. The staff and students of the Railway Primary School came in a procession and lined up in front of the Hostel. Similarly, those of the Hemambika Sanskrit High School also came in a procession which added beauty to the whole area. Action song and Leziums drill of the Railway Primary School, Malayalam recitation, onakkali and single dance of the Hemambika Sanskrit High School, and Malayalam recitation and music of the Railway Hostel marked the highlights of the day's programme. Sri A. M. Achuthan Nair read a report about the Hostel. Sri K. N. Krishnan in his speech congratulated the participants in the various entertainments and the Railway Protection Force for their smart turn out. He then formally declared open the Hostel by planting a mango sapling in front of the Hostel. He also released the First Manuscript Magazine brought out by the inmates of the Hostel. The Hostel Leader proposed a vote of thanks.

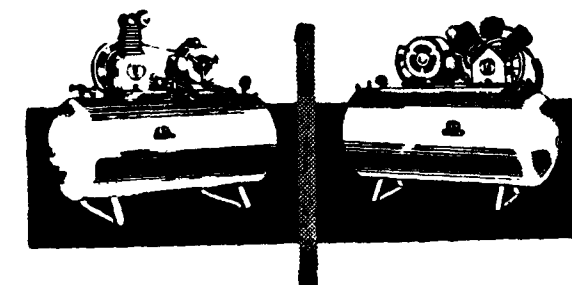
With the singing of Jana Gana Mana, the function came to a close at about 10-30 hours.

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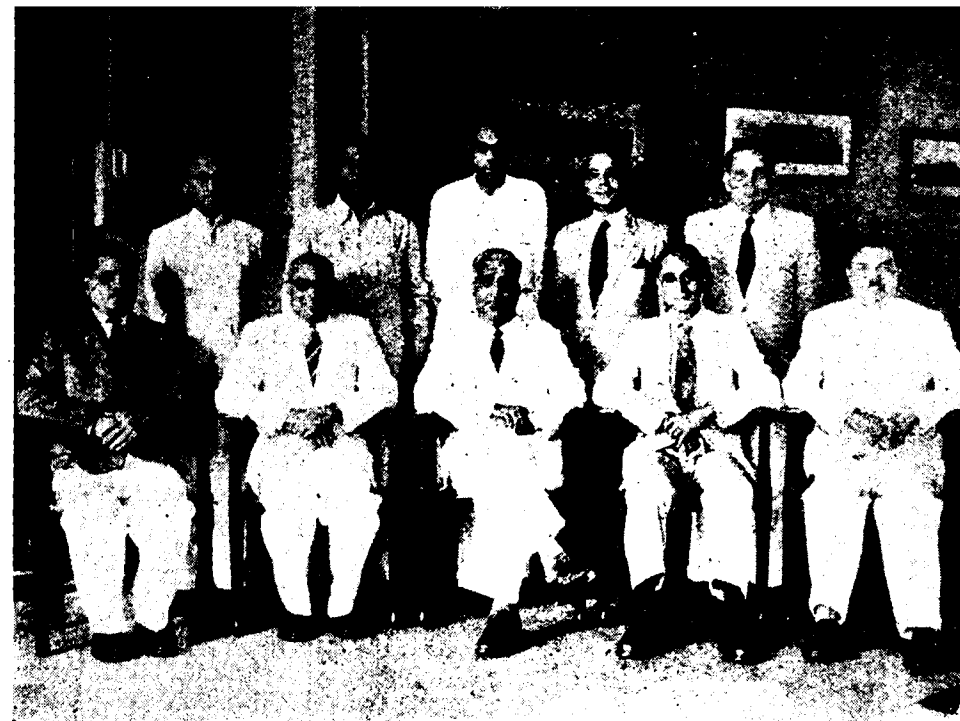
The President being welcomed at Madras Central on the 6th August. The Governor and Chief Minister of Madras are also seen in the photo



The President being seen off at Madras Central on the 16th August



Sarva Sri H. R. Krishnaswamy (left) and J. A. Coilpillai (right), Inspectors of Police on deputation on the Southern Railway, were awarded the President Police Medal on Independence Day, 1960 for meritorious and distinguished service



I.R.C.A.

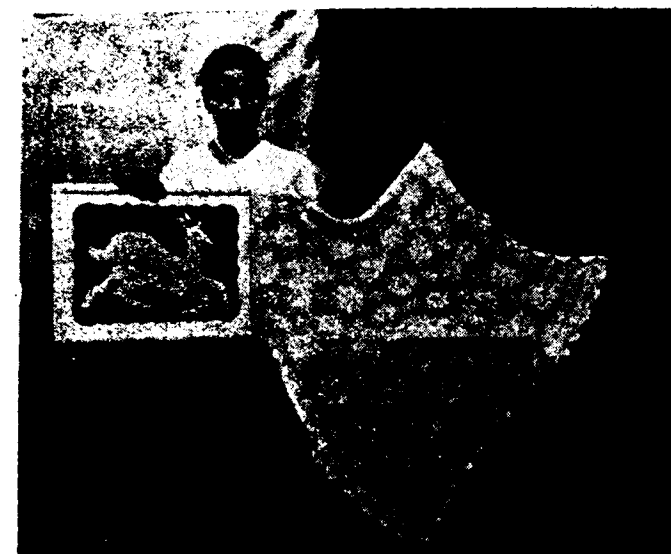
Group photograph of the Commercial Committee with President, I.R.C.A., taken during 100th Meeting of the Commercial Committee held at Bombay in June 1960

SITTING

(From left to right) Shri J. B. Rao, C.C.S., S.Rly, Shri D. B. Patel, C.C.S., C.Rly. (Chairman, Commercial Committee), Shri S. S. Ramasubban, G.M., W.Rly. (President, I.R.C.A.), Shri G. S. Khosla, C.C.S., E.Rly., Shri S. K. Mukerji, C.C.S., N.Rly.

STANDING

(From left to right) Shri V. K. Rangaswami, C.C.S., S.E.Rly., Shri S. R. Guha, G.S., I.R.C.A., Shri S. P. Lal, C.C.S., N.E. Rly., Shri P. C. Mookerjee, T. S., Martin Burn, Rlys., Shri R. Gopalakrishna Iyer, C.C.S. W.Rly.



Shrimati R. Chandra Bai, Clerk, Fuel Accounts, S.Rly/Madras won a 2nd prize for Exhibit "Crochet Table Cover" in "All Railways Exhibition" held at Delhi



Farewell to Rover Scout Leader, Olavakkot : On the eve of transfer of Shri B. Rangabashyam, Rover Scout Leader, in his official capacity to Salem, a farewell party was arranged in the premises of the Divisional office at Olavakkot on 1st July 1960. Shri K. N. Krishnan, DS/OJA, the President, Shri M. Khasim (DPO/OJA), Vice-President and Major M. J. Kuriakose (APO/OJA), Hony. Secretary, were also present on the occasion

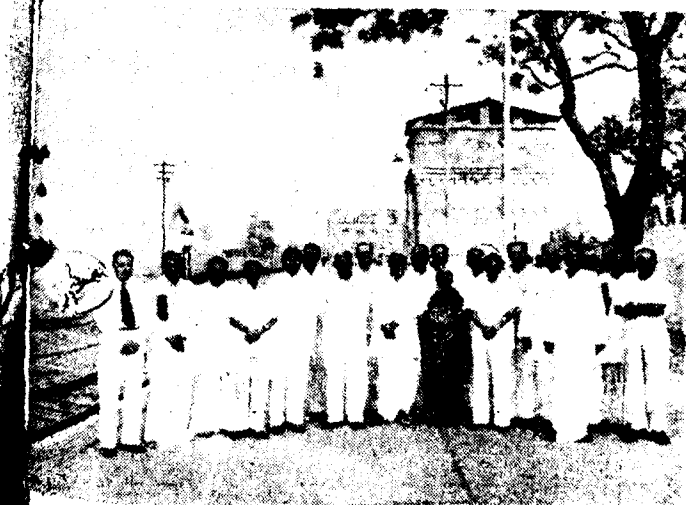


Photo taken on the occasion of "Farewell" party given on 23-7-'60 in the N.G.O. Canteen premises to Shri Subbarao Cowkur, Assistant Superintendent Claims, on the eve of his retirement due to superannuation

St. John Ambulance Brigade (I) No. XX Southern Railway District, Trichinopoly Fort, Ambulance Division, celebrated "Independence Day" at Railway Institute Grounds, Trichinopoly Fort on 15th August 1960 at 7 a.m. Dr. T. Balamukunda Rao, Divisional Medical Officer, Southern Railway, Golden Rock, hoisted the National Flag.

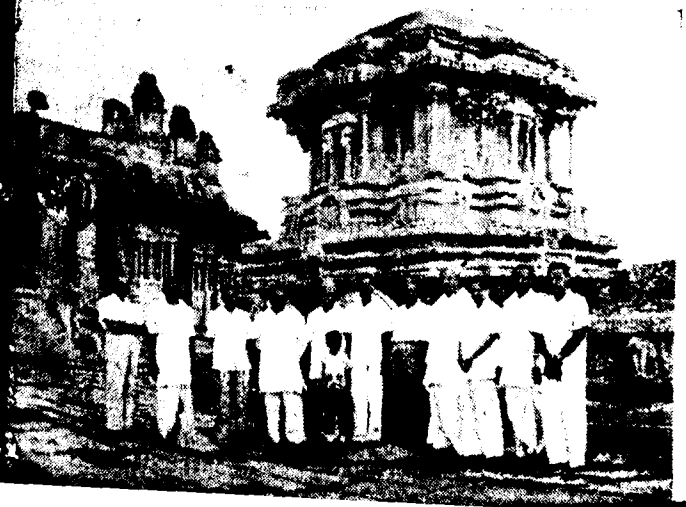


The 14th meeting of the D.R.U.C.C., Guntak 1 Division, was held at Hospet on 20th August 1960



The members at Hospet Station

The members took advantage of their presence at Hospet to visit the ruins of the Vijayanagar capital at Hampi

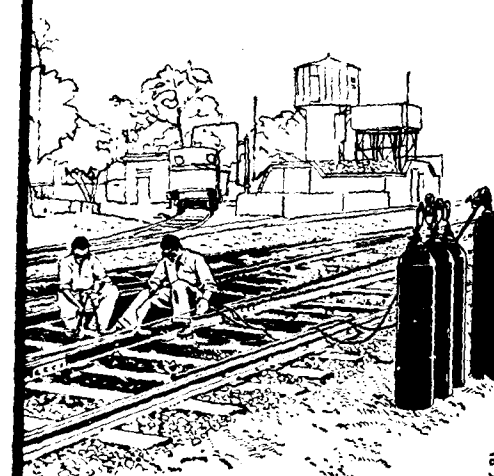


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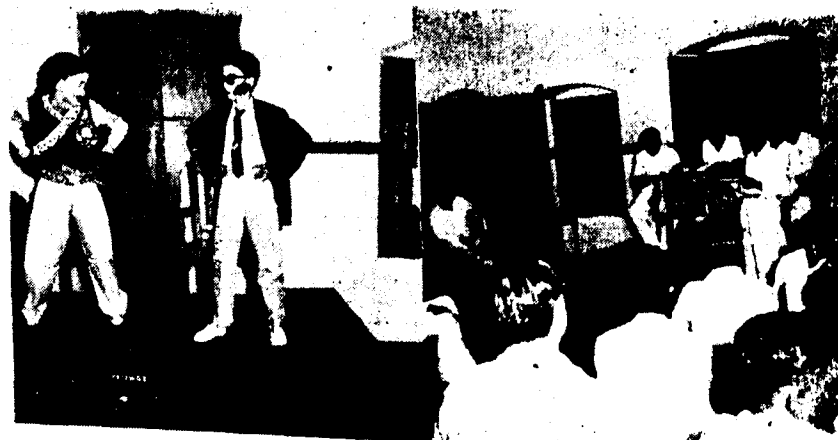
INDIAN OXYGEN LTD

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Sixth Anniversary Celebrations of New Joint Offices Staff Cultural Association

The New Joint Offices Staff Cultural Association, Southern Railway, held its Sixth Anniversary Celebrations at the Railway Colony School/Ayanavaram on 23-8-60. Sri B. H. Sreekantiah, Dy. CME/S. Railway, presided. Sri V. K. Sthanunathan, Public Relations Officer and Sri B. G. Balakrishnan, Sr. Accounts Officer and others spoke. There was a variety programme which included a dance item by Baby Kalaivani and Baby Chandraleka, and an one-act play by children entitled "Kattabomman" in Tamil. Sri L. Balasubramanian, son of Sri M. P. Lingeswaran, Accts. Dept., played the leading role of Kattabomman, which drew repeated applause from the audience. This was followed by display of muscle and body building by Sri Muthu and Sri R. Gopalakrishnan, both I.C.F. employees, vocal music by Sri T. Jayaraman of the Accounts Department, PER, and a film show of few documentaries arranged by the Public Relations Officer. Earlier Mr. R. S. Maniam welcomed the officers and members present. Sri Ratnavelu, Secretary of the Association, proposed a vote of thanks.



COURTALAM (in Tirunelveli District) is a famous bathing place and health resort. Best season— from about the middle of June to September. The bathing place is under a shelving rock which forms a natural shower bath. The water is also said to contain mineral properties good for health.

None but the Brave

(Continued from page 39)

shouts of the youths who join battle are matched by the rending sound of torn flesh and broken bones. As the excitement mounts the fair spectators forget themselves and shout for joy or lament over some mishap. The air is thick with variegated sounds—very Pandemonium is let loose upon the rolling plains.

The bull fights are drawing to a close. Not a bull remains standing in the arena but not a young man has emerged unscathed. But these very wounds of the young men shall form the subject of many a ballad and the fairest maidens of the village shall sing them. The young men and the young women join their hands in a pleasant dance inside the arena after taking care of the bulls that had suffered.

Beggars can be Choosers

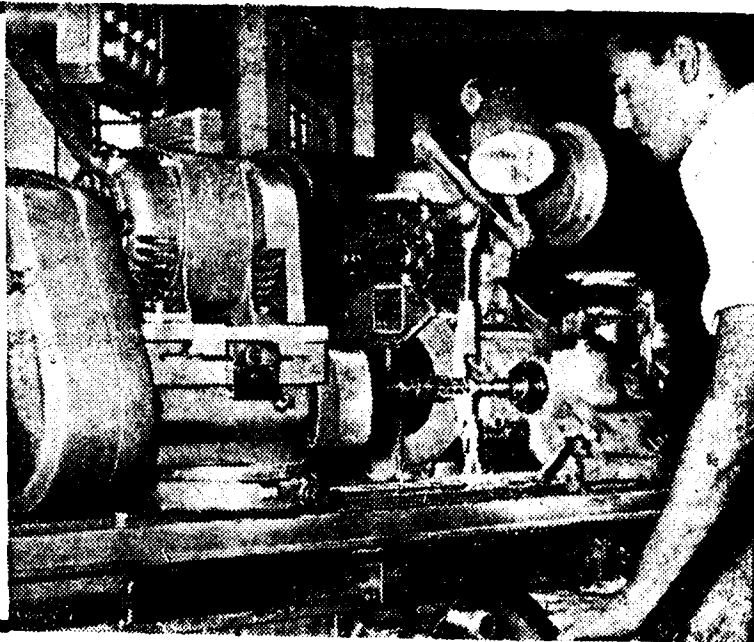
(Continued from page 21)

before. Remember the meeting at the 'Authors and Journalists Club' when you gave a talk on 'Where to find Your Material'. I congratulated you and took your advice. You did the talking and I did the writing. Thanks for the tip. And, by the way, enclosed is a cheque for fifty rupees. My other generous benefactors have also been repaid. I think you will have another book to review. Yours sincerely, R.W."

The other package contained a book which had been sent to me for review. The title was "Beggars can be Choosers," and the author, "R.W." the begging stranger.

I sighed. Well, there was a book I would never write.

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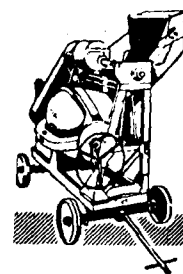
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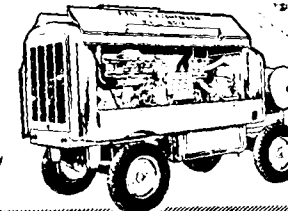
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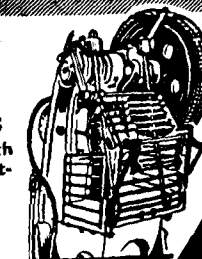
and



MAW - INDIA
AIR COMPRESSORS

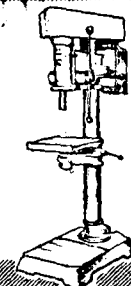
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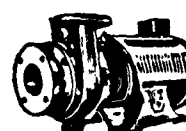
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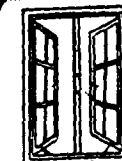


**SAVE
FOREIGN
EXCHANGE**

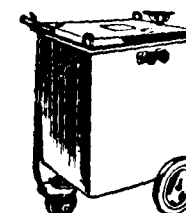
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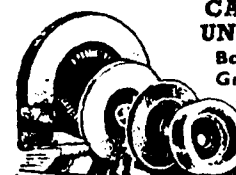


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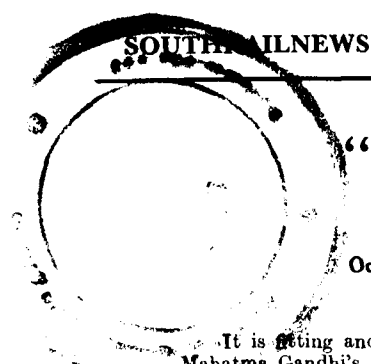
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Reg. No. 6437

SEPTEMBER 1960

"SOUTHRAILNEWS"

NOTICE

October Number of the 'Southrailnews' to be published
on 2nd October 1960, Mahatma Gandhi's Birthday

It is fitting and proper that the October Number of the 'Southrailnews' is brought out on Mahatma Gandhi's Birthday. The Father of the Indian Nation gave some advice to railwaymen, besides setting an example by his austere life.

The advertisements in this Number will be a constant reminder of the products and their utility, as this Number is associated with the Father of the Nation. The Indian public can be expected to take special interest on perusing some of its pages. Kindly advise your space requirements before the 20th September so that we may reserve the space and ensure the best possible position for you.

The Mechanical details and rates are given below for your ready reference :

RATES FOR ADVERTISING							Per insertion
ORDINARY :							Ra.
Full Page	..	..	..	..	..	..	100
Half Page	..	..	..	..	..	..	55
Quarter Page	..	..	..	..	..	..	30
COVER :							
Front	..	..	..	..	..	..	Not available
Back	..	..	..	..	..	..	250 [Booked]
Inside Back	..	..	..	..	..	..	200 [Booked]
Inside Front	..	..	..	..	..	..	200
SPECIAL POSITIONS :							
Facing—							
Front Inner Cover	..	..	..	..	..	..	150 [Booked]
(i) Back Inner Cover	{	(a) Full Page	..	..	..	..	125
(ii) Contents Page		(b) Half Page	..	..	..	..	70
(iii) Editorial Page	..	..	..	..	..	..	125 [Booked]
By the side of—							
(i) Contents	..	..	..	..	..	..	70 [Booked]
(ii) Editorial Notice	..	..	..	..	..	..	70

MECHANICAL DATA							
Blocks	..	..	..	..	..	..	Screen 100
Full Page	..	..	..	..	..	..	8" x 5½"
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Cover Page	..	..	..	..	..	..	Art paper two colours
Inside Pages	..	..	..	..	..	..	Imitation art paper

CIRCULATION

The 'Southrailnews' circulates over the entire area covered by the Southern Railway which includes the States of Madras, Andhra, Kerala, Mysore and parts of Bombay. The Minister and Deputy Ministers for Railways, the Chairman, Members and Directors of Railway Board, General Managers, Controllers of Stores, Chief Engineers (Civil, Mechanical, Electrical and Signal and Tele-communications) of Indian Railways, Industrialists and Commercial Firms are on our permanent mailing list. Copies are available at Railway Book-stalls.

Though this will be a special number with a multicolour front page it will be sold at the usual price of 37 Naye Paise to the public and 25 Naye Paise to the Railwaymen per copy.

18-A, Mount Road }
MADRAS-2

EDITOR
• Southrailnews •