

105

MOTOR INDIA

Vol. 6. No 3

Sep. 1961



Deb, P. M. D. H., N. S. C.

Vol. 6. 3

92764

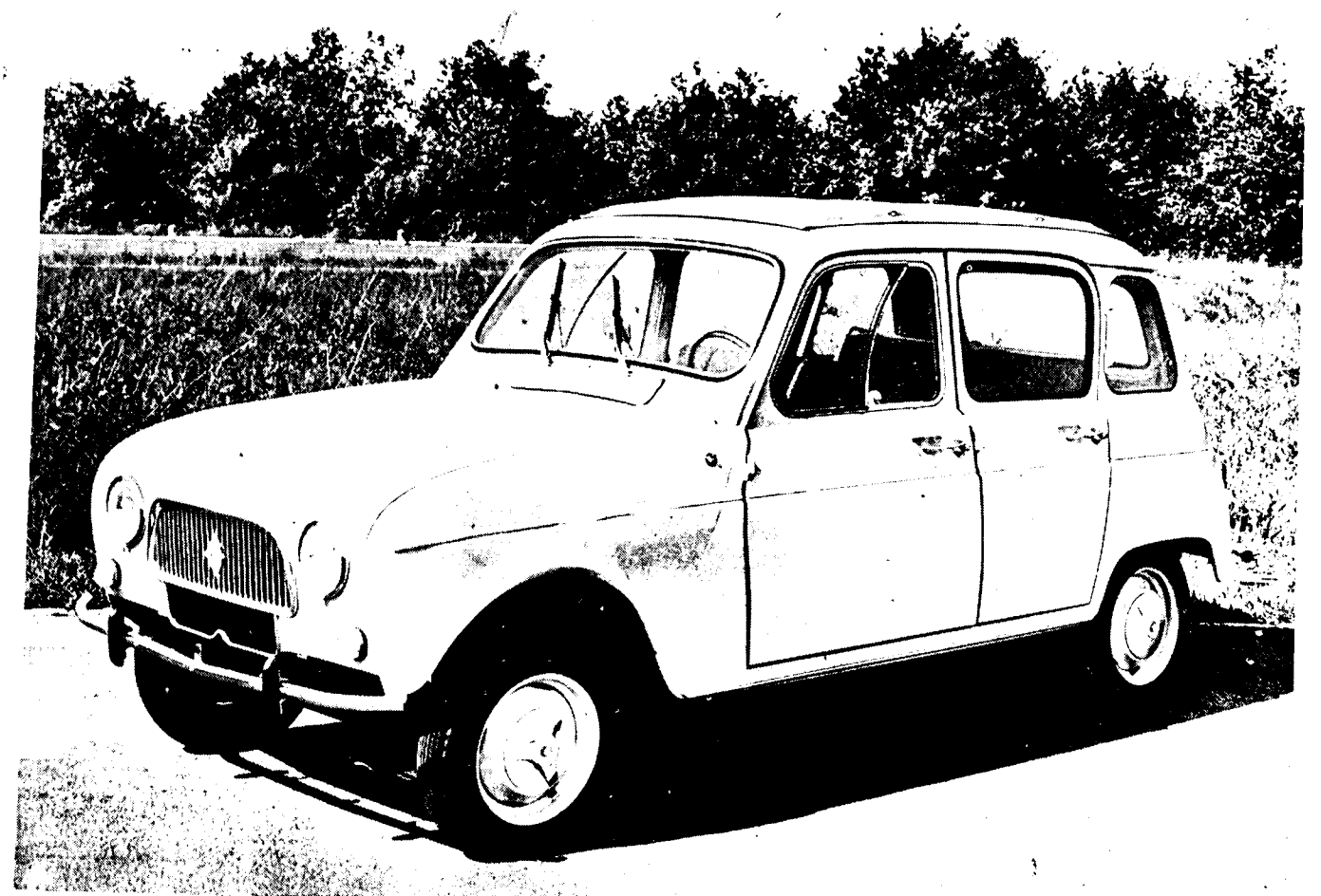
MOTORINDIA

7.9.61
FORTNIGHTLY

Vol. 6 : No. 3

Price : 50 nP.

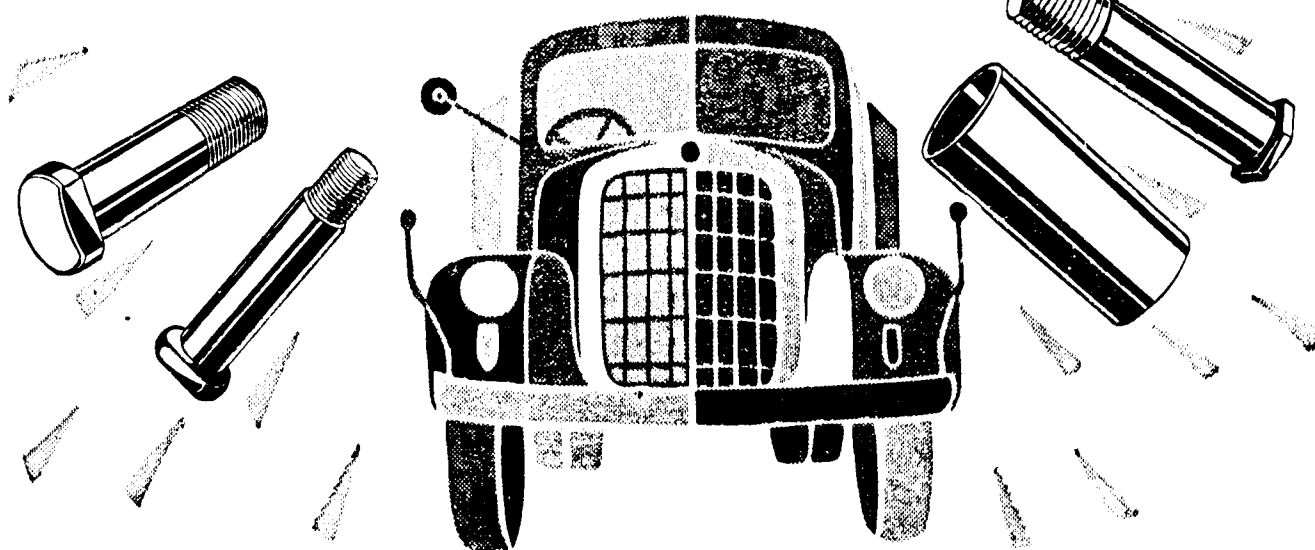
7th September 1961



Picture shows a new Renault car to be introduced at the Paris Salon in October. It will be an addition to the Renault range and will not replace the Dauphine. *See story on page nine*

CRAFTMANSHIP COMBINED WITH PRECISION AND EXACTING STANDARDS

All products are made of finest quality materials to exact specifications and to function exactly as intended. The same precision and the same scrupulous care is taken in producing each part, to retain high standard of performance



ASSOCIATED MOTORS

MANUFACTURERS OF AUTOMOBILE PARTS, CHASSIS PARTS & BRAKEDRUMS

270, LEHRI BUILDING, SARDAR VALLABHBHAI PATEL ROAD, BOMBAY 4

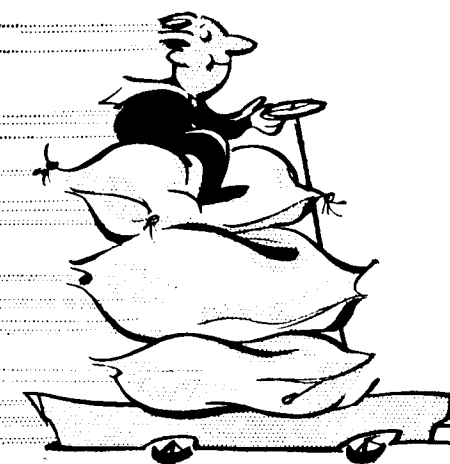
Distributors for South India: INDIAN AGENCIES, P. B. 1418, MADRAS-17.

SQUEAKS?



No problem at all. Give your car a Marfak Lubritection. It makes your driving pleasanter, smoother and quieter. Drive into Caltex for Marfak.

FOR THAT CUSHIONY RIDE



CAL. M. S. 61

September 1961

FOR PROFIT &
PERFORMANCE

**S
L
E
X**

**P. V. C.
AUTOMOBILE
CABLES**

Sole Selling Agents :

**EVEREST
AGENCIES**

P. Box No. 4096, BOMBAY - 7.

Distributors :

**M/s. SPEED-A-WAY
PRIVATE LTD**

35/5 MOUNT ROAD, MADRAS - 2.

MOTORINDIA

TELEPHONE : 85287
TELEGRAMS : GOPALIS
POST BAG : 460

Vol. 6

7-9-61

No. 3

Price : 50 nP.

Annual Subscription Rs. 10

CONTENTS

	Page
Editorial	5
From our London Bureau	9
Fiat	12
Salt Paved Roads	15
Accidents	16
News on Innovations Etc.	17
Telco News	20
Our London Letter	21
News in Pictures	22
M. M. P. D. A.	23
The Peak Hour Problem	24
Murarka Factory	27
Raman and Raman's Service Saves Town	28
Entertainment	30
Madras Motor Sports Club	31
New Firms	34
Landmarks	35
M. V. A. I. A.	36
Premier Automobiles News	37
Paradise for tourists—By S. N. Rajan	38
Models and their Prices	44

MOTORINDIA

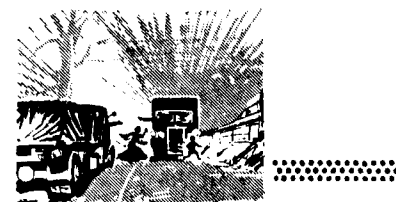
**DEPENDABLE
QUALITY**



**BETTER
PERFORMANCE**



QUICKER STOPS



GREATER SAFETY



HUBS & DRUMS PRIVATE LTD.

because of



products

Manufacturers of
**HUBS, BRAKEDRUMS &
AUTOMOTIVE
COMPONENTS**

Mody Chambers,
French Bridge, Bombay 4

Grams: "HUBDRUMS"
Phone Works: 60395

South Area Representatives
M/s. Madras Auto Service (P) Ltd.
Madras.

MOTORINDIA

Fortnightly

INDEX TO ADVERTISERS

Page		
25	A	Armstrong Smith Limited
Cover II		Associated Motors
7		Auto Lamps Limited
17	B	Baitou Cables Limited
1	C	Caltex India Limited
6		Canara Workshops Limited
Cover III	D	Dunlop Rubber Co. (I) Limited
2	E	Everest Agencies
Cover IV	G	Goodlass Nerolac Paints Private Limited
18		Gurmukh Singh & Sons (Regd)
8	H	Hindustan Motors Limited
34		Himco Batteries (Madras) Private Ltd.
3		Hubs & Drums Private Limited
35	I	Indian Engineering & Trading Co.
11		India Tyre & Rubber Co. (India) Private Limited
19	M	Madras Mercantile Agencies Private Limited
15		Miniature Bulb Industries of India
10	P	P.M.P. Industries
4	S	Simpson & Co. Limited
10		S. K. F. Ball Bearing Co. Private Limited
37	U	Upper India Trading Co. Private Limited
21	V	Vir Bhan Sharma & Co.

**ONLY FORTNIGHTLY IN INDIA FOR MOTORISTS,
OPERATORS & THE AUTOMOTIVE TRADE**

ECAFE SEMINAR

Madras is in the News! Under the auspices of the Economic Commission for Asia and the Far East, an organisation of the United Nations, a Seminar on road passenger transport is to be held in the city of Madras in the second week of October this year. Better late than never. There are any number of organisations affiliated to or connected with the United Nations and most of these are functioning in India. Periodical conferences and seminars are being arranged every now and then, but it is invariably Delhi that is the venue of all such meets. The easiest excuse is that Delhi can take them. True, Delhi is known more intimately to the world and to the world figures at any rate. But if Delhi is to monopolise all the international meets, then the world personalities may not know anything more of India except Delhi. So, an Ecafe Seminar outside Delhi is very desirable; and we are particularly glad that it is in Madras.

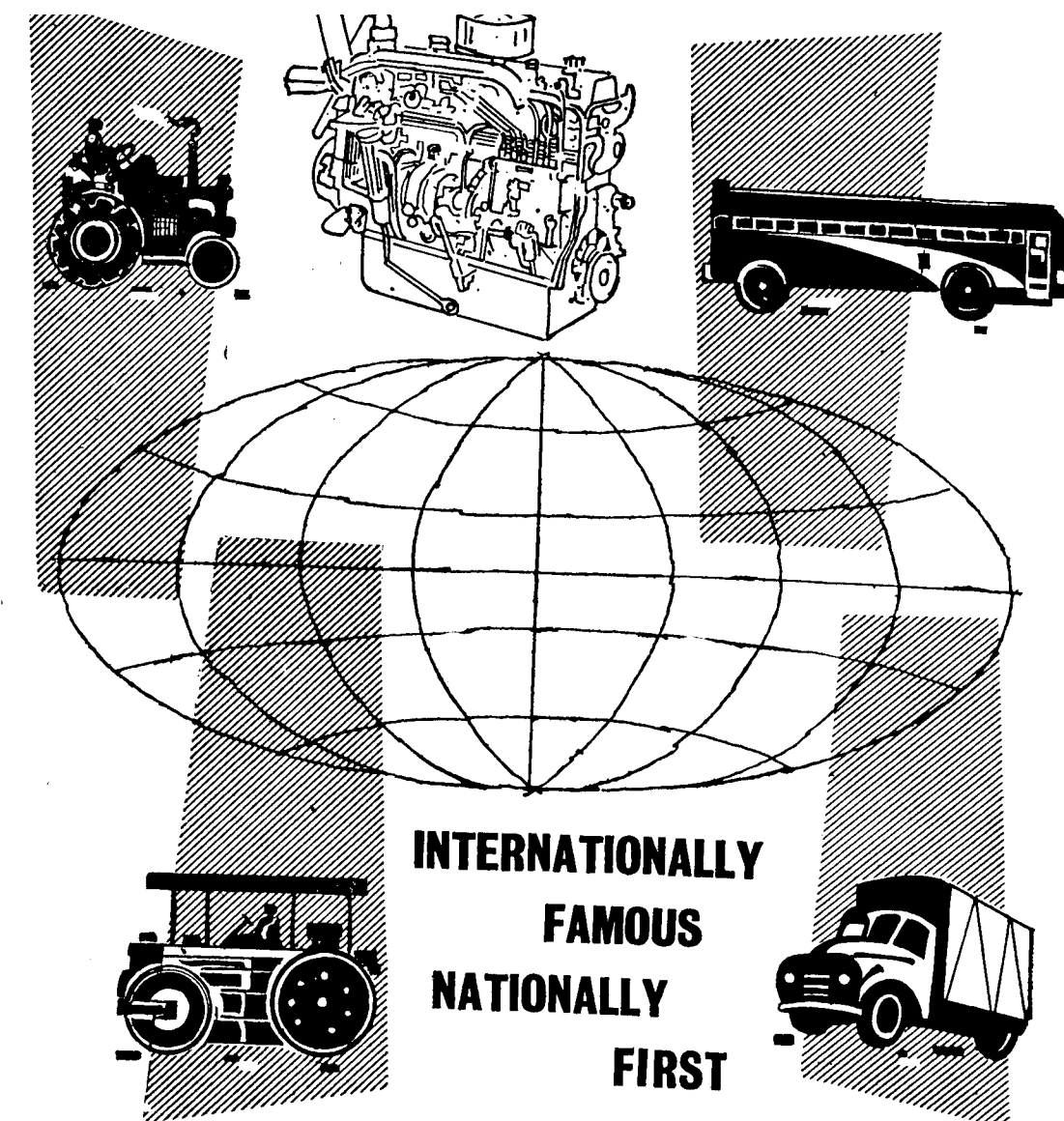
We have no doubt that it will be ideal for one reason that perhaps the most organised and efficiently run of all passenger transports is in the Madras State. We have also the most crowded form of passenger transport in the nationalised sector in Madras City where passengers not only don't get seats but stand-a majority of them-but they don't get even courtesy from those in charge of running the buses.

Madras city offers an ideal place for comparing the excellent private run services and what is being dubbed everyday in the press and by the public as the most arrogant and inefficient type of public sector bus service.

It is our hope that institutions like the Indian Road Transport and Development Association, the Indian Institute of Road Transport and other allied organisations which are co-operating with the Ecafe Seminar authorities will take advantage of the Ecafe meet and tell the world at large of the comparative services and disservices in the private and Public sectors respectively of road transport. The world also should know that in India, 65 per cent of road passenger transport is still handled by the private sector. The seminar should also make out a clear case against further nationalisation in the interest of the travelling public.

Another very important point on which light should be thrown is how to bring down the bus fares. These have been shooting up on every convenient excuse in the city of Madras ever since nationalisation. Even the changeover to Naye Paise meant increase of bus fares for the travelling public.

We appeal to all those interested in orderly growth of efficient transport for catering to the travelling public to put forth their views and suggestions before the seminar, through its organising secretary at the office of the road transport authority at Chepauk.



**INTERNATIONALLY
FAMOUS
NATIONALLY
FIRST**



Perkins Diesels are internationally famous—and with good reason! Perkins P6V is nationally famous as the FIRST Vehicle Type Diesel Engine ever to be made in India.

Preferred for their Power, Performance and PROFITS, Perkins are the first choice everywhere—make Perkins your choice too!

Manufactured in India by

Simpson & Co. Ltd

MADRAS - 2

Branches: OOTACAMUND—BANGALORE—TIRUCHIRAPALLI—SECUNDERABAD (Dn.)

S-35

MOTORINDIA

September 1961
2



QUALITY IS INVISIBLE-INVINCIBLE TOO


**CANARA
SPRINGS**

"Quality is never an accident. It is always the result of an intelligent effort. There must be the will to produce a splendid thing"

— John Ruskin

You cannot measure. You cannot feel. You can only discover quality by use, as you have done in the case of CANARA SPRINGS.

THE CANARA WORKSHOPS LIMITED
Works at: Muroli, Mangalore—Amraoti Road, Nagpur

CW-529

ALUMINIUM IN AUTOMOBILES

LARGE INCREASE IN U. S.

While the uses of aluminium have been rising steadily in the United States in recent years, one of the most spectacular advances made by the lightweight metal has been its greatly increased use in automobiles.

For a number of years aluminium in automobiles was confined largely to pistons. Gradually, it spread to the "bright work,"—the decorative strips attached to the body's sheet metal, and to radiators and bumpers.

Now one major manufacturer has put a six-cylinder aluminium engine on the market. It powers a small, lightweight car. The engine is 68 kilograms lighter than a cast iron engine of the same type.

Aluminium automobile brakes, already in use in some cars, are expected to be adopted to a steadily increasing extent because they dissipate heat rapidly. Hot brakes cause "fade"—that phenomenon that robs a motorist of his ability to stop—and aluminium brakes are much less susceptible to "fade."

One of the largest United States manufacturers of automobile horns switched from copper wire coils to aluminium strip conductor coils for use on 1960 automobiles. Even automobile number plates are now made of aluminium in more than a dozen States. Corrosion-free, they need to be replaced only once every five years, instead of once a year.

As a result of these new uses, consumption of aluminium has jumped from an average of less than six kilograms in an American-made car in 1948 to more than 23 kilograms in 1959.

Better Light Better Sight

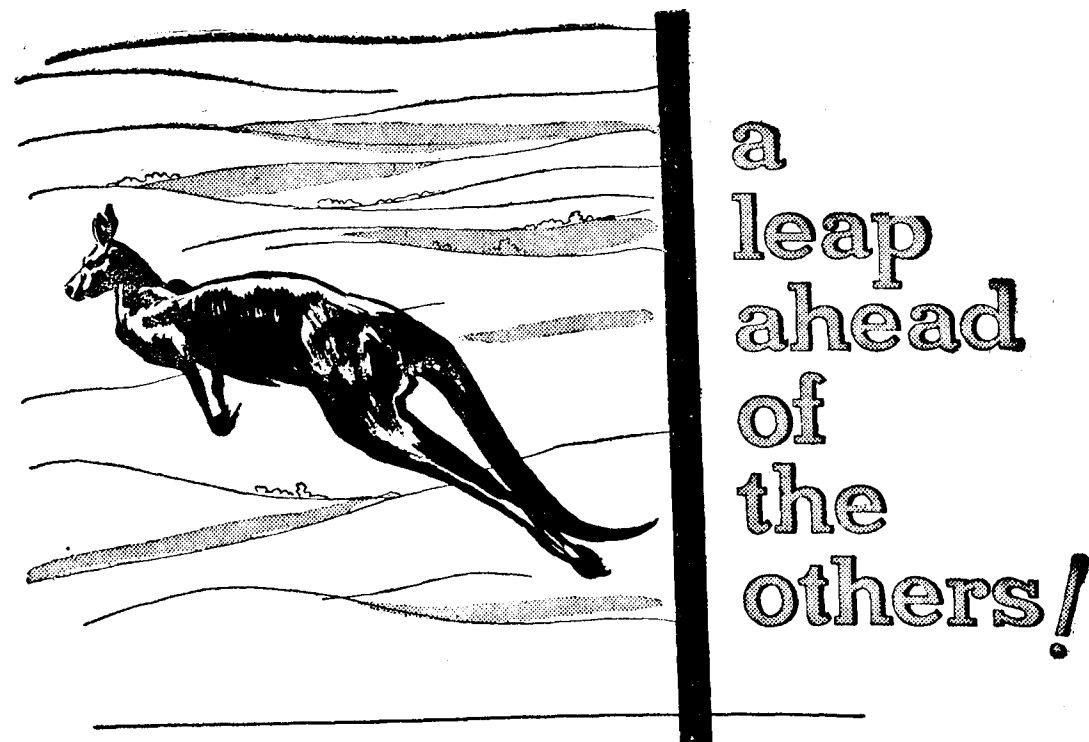


Auto Lamps Ltd.
6, ALIPUR ROAD • DELHI-8

PHONE
225800
CABLES - CARBULB

RENAULT'S NEW ECONOMY CAR IN OCTOBER

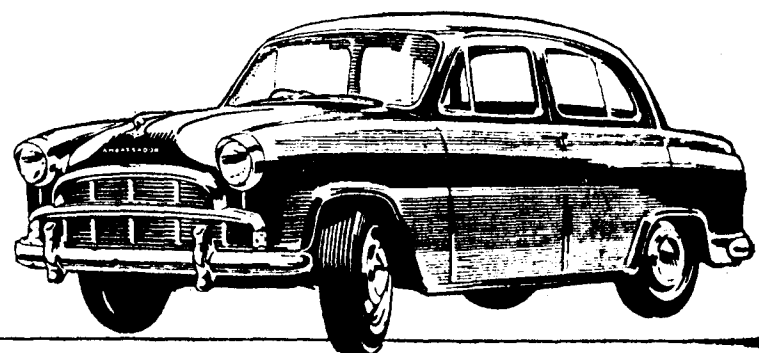
R4 and R4L with Front wheel drive Replace the Rear Engined 4 CV



a
leap
ahead
of
the
others!

With a quick take-off, sprightly acceleration, capacity for sustained high-speed cruising, sure-on-the-road Ambassador sets the pace in verve and reliability. Equipped with the vigorous O.H.V. Engine, its power is instantly responsive—whether you wish to avail of a momentary gap in heavy traffic or an exciting burst of speed on the open highway. It has big-car comfort and roominess, yet low fuel consumption and exceptional upkeep economy. Thus, the Ambassador represents top value for money.

POWER
PERFORMANCE
ECONOMY



HINDUSTHAN **Ambassador**

HINDUSTAN MOTORS LTD., CALCUTTA.

DEALERS:

Agra; Ambala Cantt; Ajmer; Ahmedabad; Ahmednagar; Allahabad; Baroda; Bangalore; Barampur; Bellary; Bombay; Bareilly; Calcutta; Cuttack; Coimbatore; Colombo; Dibrugarh; Dumka; Dhanbad; Gwalior; Gauhati; Imphal; Indore; Jaipur; Jabalpur; Jodhpur; Jalgaon; Jorhat; Jamshepur; Jullundur City; Jammu; Kanpur; Kolhapur; Kurnool; Lucknow; Madras; Madurai; Mangalore; Meerut; Nagpur; New Delhi; Nepal; Patna; Poona; Pondicherry; Patiala; Palayamcottai; Rajkot; Ranchi; Sambalpur; Shillong; Secunderabad; Silchar; Srinagar; Satna; Tezpur; Thana; Tiruchirapalli; Trivandrum; Varanasi Cantt; Vijayawada; Vizianagaram.

In producing a replacement for their little rear engined 4 CV, well over million of which have been built since 1947, Renault did not just try to design a modernised small car. They took a fresh look at the whole question of economy motoring in the 1960s and they have come up with an answer which looks like the most versatile and economical utility car since the model T Ford. They have abandoned the conception of small smalls built for small people and have turned their backs on the whole current trend of low built cars with low ground clearance. The new R4 and its slightly more luxurious R4L are surprisingly big cars with four wide doors, liberal head room and a high ground clearance which allows them to turn off the road and go careering across country without risk of catching mechanical parts on rocks or boulders. If you want to know why they have switched on to front engine and front-wheel drive after all these years of building rear engined cars, you have only to look at the enormous lift up door at the back which gives this car all the carrying capacity of a light van or station wagon. This might, of course, have been done by designing a new Flat Four engine to fit under the rear floor but Renault have enormous capital investment in automatic machine lines to produce four-cylinder in line engines at extremely low cost and this kind of engine simply had to go at the front. In fact they have utilised the 747 cc engine, clutch and drive unit of the 4 CV with relatively little change but with new compact and very light 3-speed gearbox. In this utilitarian approach to motoring as expressed by the easily replaceable body panels, its controllable fresh air intake underneath the windscreen and the instantly removeable lightweight seats, consisting of elastic bands stretched

over tubular frames, the R4 inevitably invites comparison with the Citroen 2 CV but Renault reply that they took out the first patents for this kind of seating as long ago as 1935. With the rear seat lifted out there is big floor space for freight carrying which will make this an excellent car for holiday camping or for mid-week used by tradesmen. At extra cost it can be supplied with an extraordinarily simple two section folding roof. The front part lifts back and the rear half rolls forward meeting in middle to open up practically the whole of the roof area in a few seconds.

Elimination of all regular chassis greasing

Conforming with the rigid utility character of the car is the elimination of all regular chassis greasing. This has been achieved by use of rubber bushes and ball joint pivots lined with ptfе plastic. An even more striking innovation is the use of a sealed cooling system. The radiator is connected to an expansion tank in the right front wing and the system is filled with anti-freeze and anti-corrosion mixture suitable for temperatures down to -40°C (-33°F). The system uses a conventional radiator, water pump, fan and thermostat. As engine temperature rises, the coolant expands, and rising pressure forces some of the fluid into the expansion tank which has a two-way valve permitting air to escape into the atmosphere. When the engine is stopped and the system cools, the liquid contracts, the pressure decreases, the liquid previously expelled is drawn back into the radiator and air enters the two-way valve on the expansion tank to replace it.

The engine is the well known 747 cc 4-cylinder with wet centrifugally cast cylinder liners in a cast iron block and pushrod operated

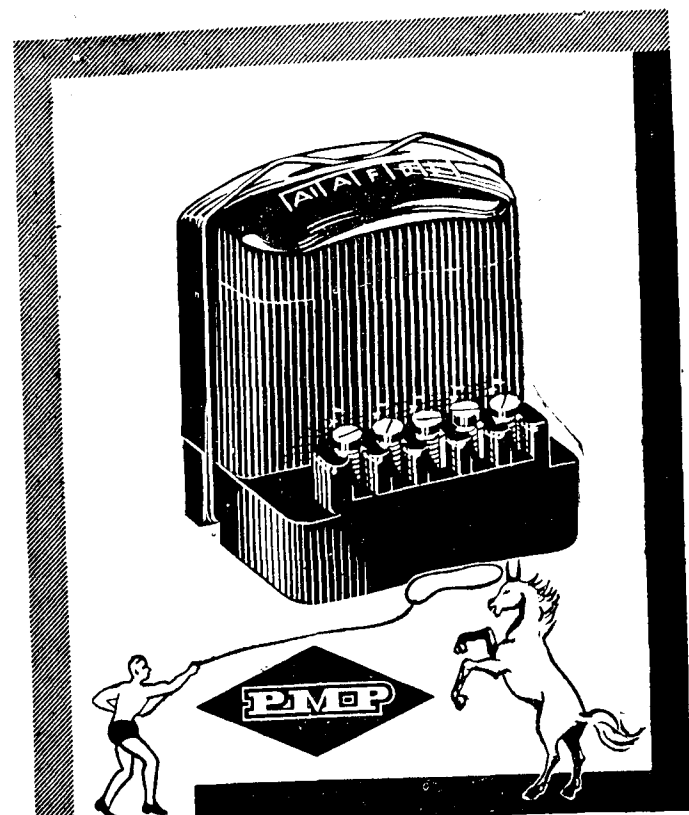
valves in a light alloy head. With a compression ratio of 8.5 to 1 it delivers 26.5 b.h.p. SAE at 4,500 r.p.m. with gross torque of 40.5 lb. ft. at 2,000 r.p.m. The new three-speed gearbox is a very light unit with a housing split down the centre line and synchromesh for the top two speeds. The drive shafts to the front wheels have Weiss ball bearing Universal joints on their inner ends and a constant velocity joint consisting of two needle roller Hooke type joints coupled together at their outer ends.

Freedom from Shock

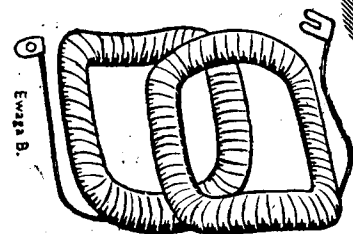
Front suspension which uses longitudinal torsion bars is similar in principle to that used on some other European and American cars. The torsion bar is splined to a lower arm which carries the bottom ball joint pivot for the suspension and it is braced against braking torque by a light diagonal tie running forward to a pivot on the chassis. The upper steering pivot is also a ball joint carried on a pressed steel wishbone. There is rack and pinion steering with centering springs inside the rack housing, the assembly being completed by telescopic dampers and an anti-roll bar. The castor angle is not less than 8° and the king pin inclination is 13°. This ensures a satisfactory freedom from shock and vibration at the steering wheel but probably helps to account for the fact that the steering is heavier than usual for a car of this weight.

For the rear suspension a very simple layout has been adopted with wheels hung on single trailing arms of box section attached to transverse torsion bars. As the torsion bars lie one behind the other and suspension parts are interchangeable between one side and the other, we have the extraordinary result of a car with two different wheelbases; 94.3 in. on the left and 96.2 in. on the right.

September 1961



VOLTAGE REGULATORS AND FIELD COILS



maintain
Standard
and quality
in the
best tradition of
automobile electrical engineering

PMP AUTO INDUSTRIES Block G-1, Model Industrial Colony, Off
Aarey Road, Goregaon East, Bombay 62

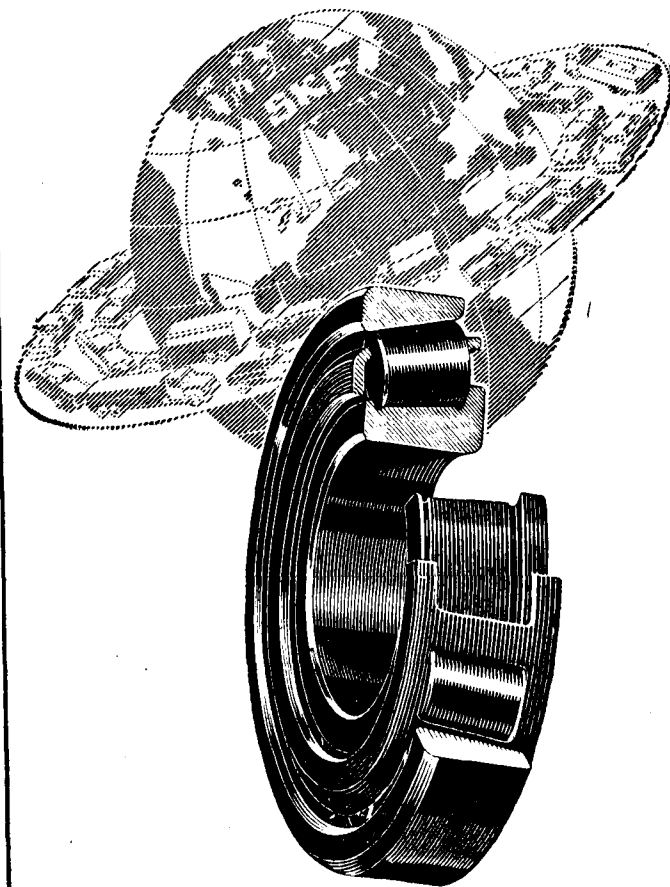
Manufacturers of Automobile Electrical parts and Components

Distributors for South India :

INDIAN AGENCIES, P. B. 1418, MADRAS-17.

SKF

**THE FINEST
AUTOMOTIVE BEARINGS
IN THE WORLD**



**ALL SIZES ALL TYPES
FOR TRUCKS AND CARS
ALWAYS AVAILABLE**

SKF

The SKF Ball Bearing Co. Private Ltd.,
P.O. Box 71, Sir Pheroze Shah Mehta Road, Bombay.
P.O. Box 588, Netaji Subhas Road, Calcutta.

Efficient and powerful fresh air heater system

The interior trim matches the strictly utilitarian character of the car. The floor coverings are rubber and the only upholstery is light cloth spread over the elastic bands. The interior door handles consist of no more than light bent rods inside the doors reached through holes in the panelling. In front of the driver is a very simple instrument case comprising speedometer with total distance recorder and warning lights for direction indicators, dynamo charge, engine temperature and fuel level. There is no fuel gauge but a graduated dip stick is provided in the neck of the filler. The fuel tank and spare wheel lie under the floor at the back, the wheel being carried in a cradle which is released by using the starting handle. Apart from the adjustable fresh air intake with gauze fly screen below the windscreen there is a very efficient and powerful fresh air heater system built in just below the

instrument panel. The gear lever with enormous white knob almost as big as a tennis ball projects through the instrument panel. The pull out hand brake consisting of a piece of tube with rubber cap over the end lies under the steering wheel. Front doors have sliding windows: windows in the rear doors are fixed.

The basic car which will appeal to those who are going to use it as a light van as well as a passenger car has no rear quarter windows, no trimmed panels on the inside of the doors, no steering lock or bumper overrides. It has simple pierced slits in the front panel instead of a polished metal radiator, smaller grille, turn indicator lamps and only one sun visor. The R4L has rear quarter windows, a combined ignition switch and steering lock and bright polished frames for the rear lamps. It also has spring on polished nave plates to cover the three nuts which secure the wheels. In addition, the 4L has an ash tray, a double jet windscreen washer,

and interior light. Both cars have twin electric horns with town and country switches, two blade electric screen wipers, door locks on driver's door and rear door and heaters but only the heaters on the 4L has a booster fan.

Drum Brakes on all four wheels

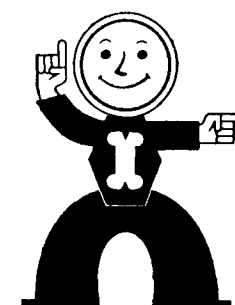
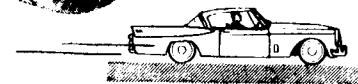
There are drum brakes on all four wheels hydraulically operated, with cable-operated parking brake acting on the front wheels. Front drums are 7.1 in diameter, rear are 6.3 in and total friction lining area is 54.4 sq. in. A pressure relief valve prevents locking on the rear wheels during heavy braking. Tyres are 1.35 x 3.30 and the turning circle is 28 ft. Ground clearance fully laden is 7.9 in. Although it has dimensions far beyond those of the 4CV which it replaces, with a length of 142 in., width of 58 in., a height unladen of 60.3 in., the Renault 4 weighs only 1257 lb. ready to drive or 1323 lb in the De Luxe version.



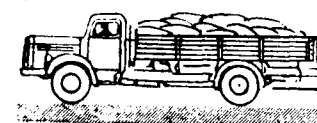
For the finest in car or truck tyres

Rely on **INDIA
SUPER**

- * Greater safety
- * Stronger grip
- * Cooler, quicker running



- 1 India Super All-Purpose
- 2 India Super Special
- 3 India Super G 17



INDIA TYRE & RUBBER CO. (INDIA) PRIVATE LTD.



1800 with modern technical solution.

The 1300 originates, as a new model, with a 1300 c.c. engine (whence its name), exactly 1295 c.c. displacement. But the same car, with identical coachwork, is made also with a 1500c.c. engine (1481c.c.) for those who desire greater performance, although a 1300 c.c. engine gives sufficient power for a medium car.

Therefore, in practice, together with the 1300 comes also the 1500. Two distinct cylinder capacities in the same type of car, which the public will know respectively as 1300 and 1500. In consideration of its brilliant performance the 1300-1500 is equipped with disc brakes on the front wheels. Thus it is the first mass production saloon in the medium capacity class to have this type of brake as standard equipment.

The Mirafiori Factory was built in 1938 for a daily production of up to 750 cars and was later extended to produce up to 1500 units. Only with the successive extension of Mirafiori-South, to which the whole of the Press Department was transferred, did the daily productive capacity rise to over 2000 cars. But now it was necessary to bring the capacity up to 2500-2700 cars a day, with rational production methods.

And so in November-December 1959 the following arrangements were made: the transfer to the Lingotto Factory of the assembly lines for model 1100 (one of the major successes of the Fiat range) and the extension of the Mirafiori South Works to transfer to them all the machining departments.

This work was performed in record time; already in February 1960 the building of the "Mirafiori-Meccanica" shops was begun and at the beginning of November the first departments moved in. By Christmas 1300 machine tools were already at work there. The "Mirafiori-Meccanica" is now one of the most modern machine shops in Europe.

And that is how the 1300-1500 was planned and how it is being made. Made to last. A sturdy car.

A car of high quality; quality which is built into the car right from the design stage and which is carefully safeguarded during manufacture by scrupulous tests and inspections. As regards means of production (machinery, tools, manufacturing processes) the 1300-1500 benefits, like all the other models, by an efficiency

which is constantly kept up to date with technological progress.

Someone recently said that today's problem is not to produce a new car, but to produce a better car than the others. The 1300-1500 will show that it is truly a medium sized car of great class.

FIAT PRODUCTION DETAILS

In 1960 Fiat implemented the first part of the new plant projects and this year they will be substantially completed involving new constructions, conversions and reorganisations. New buildings and new factories have been provided for assembling Fiat cars abroad for use by sales branches and dealerships besides those for servicing Fiat products both in Italy and abroad.

Cars: Fiat and OM together produced 533,665 motor vehicles (100,383 more than 1959—An increase of 23%).

Fiat Car production continues to expand based on models 500, 600, 1100, 1500 1800—2100, these models enjoying consistent success throughout the world.

In Nov. 1960 the company presented new and much improved versions of the 1100, more powerful and selling at a lower price. The new model for 1961 is the Fiat 1300. It enters the range of Fiat models next in size below the 1800. It has a 4-cylinder 1295 c.c. 65 h. p. engine developing a speed of over 140 Km per hour with a high degree of acceleration especially desirable for safe driving in the traffic of to-day. It is a 4-door saloon model seating 4-5 passengers comfortably.

The new Fiat model 1300 is also to be supplied with a 1500 c. c. engine for those desiring even higher performance.

Commercial vehicles: The total number of medium to heavy commercial vehicles produced in 1960 by Fiat and OM was 32840 as against 20583 in 1959 (increase in production 60%).

Tractors: In 1960 Fiat and OM produced 26908 Tractors for agricultural and civil engineering purposes. (Of these 12,425 were sold in Italy itself.)

Spare Parts: The production of spare parts essential both for servicing of all vehicles in operation and to sustain sales always receives special attention. Spare parts volume in 1960 was 31% more than in 1959 when 11,794 tons were handled.

Total Fiat's and OM sales of cars, commercial vehicles and tractors in 1960 amounted to 457,000 million lire.

Large Engines: Fiat new 900s Diesel engine with 9 cylinders and 900 m.m. bore has met with international success.

SALT PAVED ROADS: JAPAN SHOWS THE WAY

The use of salt for the pavement of roads has gradually drawn public attention in Japan.

It has been known for centuries that salt stabilizes earth. Early writings regard that, when salt was accidentally spilled on ancient Roman roads, observers noted that the road's surface became harder and chariot wheels raised less dust.

Experiments

The Japan Monopoly Corporation has conducted various experiments in this specific field for the last two years at various localities, mostly in the rural areas, and has been producing promising results. These experiments were motivated chiefly to create a new outlet for surplus domestic salt, whose use is entirely different from that of the imported industrial salt.

The salt monopoly system has been in existence since 1905 when the Japanese Government promulgated the Salt Monopoly Law. This law empowers the Monopoly Corporation to approve all of the manu-

facturing, purchasing, importing, refining, processing and selling of salt, enabled it to exert great efforts to maintain the balance of demand and supply for salt: to regulate prices and to promote domestic production within reasonable bounds.

Against this background, the Corporation embarked on the experimental project for paving roads with salt in March, 1959. For this project, the Corporation formed a committee of specialists and has conducted, for the last two years, extensive experiments on "earth and sand" road with the traffic volume of about 200 and 400 vehicles a day, and also, on tennis courts and playgrounds. The experiments have not yet reached the final conclusion, but the projects conducted at Bofu, Matsuyama and Takamatsu have proved successful so far.

The Advantages

Recently conducted experiments have revealed the following advantages of paving the road with salt.

(1) eliminates dust from roads

even during periods of sparse rainfall;

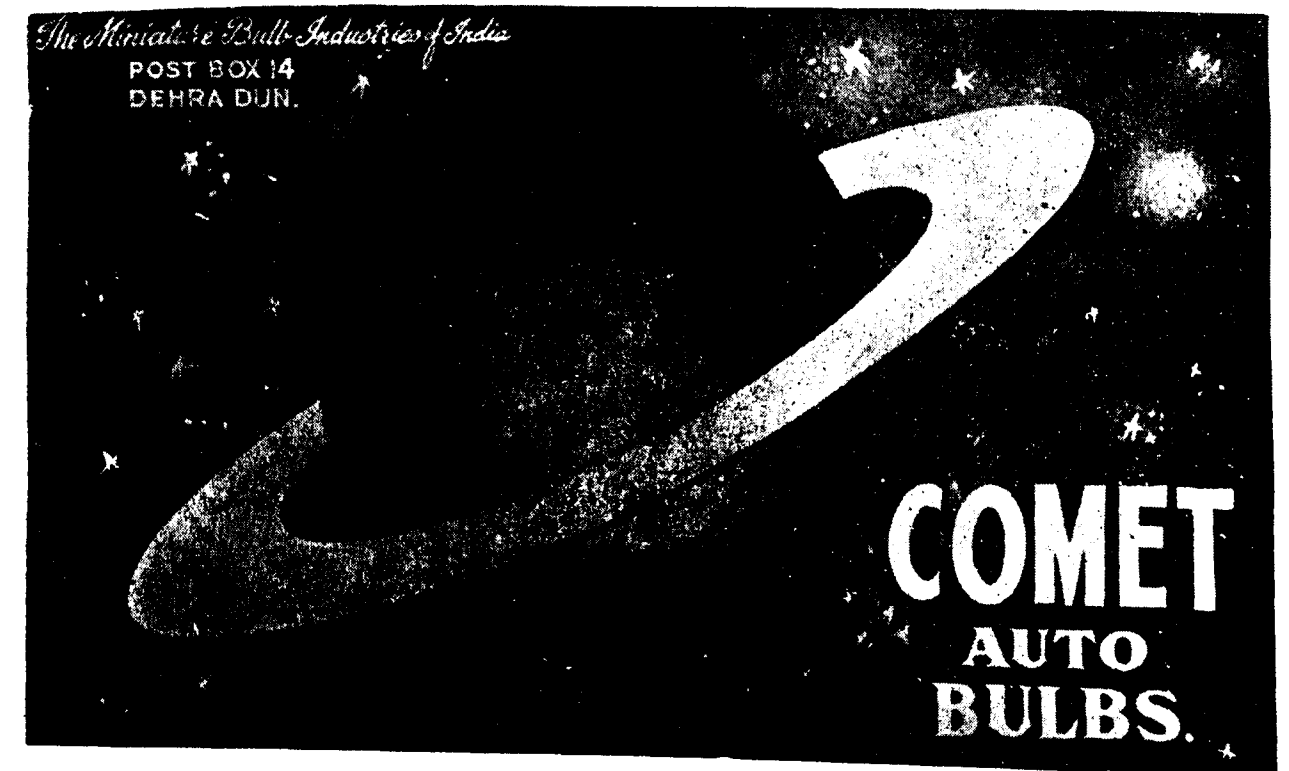
(2) eliminates muddiness during seasons of heavy rainfall;

(3) eliminates bristling frost during cold spells;

(4) prevents growth of grass on the roads. Other experiments carried out on school grounds, tennis courts and basketball courts have also proved effective.

Another advantage is the relatively low cost of paving roads with a mixture of salt and earth as compared to the enormous expenses involved in surfacing roads with concrete and other materials.

A kilogramme of salt costs 12 yen (3 US cents). It takes about two kilogrammes of salt mixed with earth to pave one square metre of road. The paving expenses are estimated to be from 50 yen (14 US cents) to 150 yen (42 US cents) per square metre depending upon the quality of the earth. So far as maintenance is concerned, simple work once or twice a year is sufficient to keep the road in good condition.



Sole Selling Agents in India: M/s THE DOON INDUSTRIAL CORPORATION, DEHRA DUN

ACCIDENTS

WHAT EVERY CAR DRIVER OUGHT TO KNOW

You are out in your car. Suddenly a child darts across the road. You slam on the brakes...*How quickly your car will stop is a matter of life and death.*

Do you know how far a car will travel, at a given speed, before you can get your foot on the brake?

Do you know how much further it must travel even with good brakes and on a good road before it stops?

This article will tell you.

An assessment of the various degrees of responsibility for accidents involving injury or death on the roads of Europe gives first place (70 per cent) to faulty roads and allots less than a third of this percentage (20 per cent) to the drivers of vehicles themselves.

A 20 per cent responsibility, however, is still a responsibility for one case in every five.

What can be done to improve standards of driving?

An expert makes the following point. "The results of road safety teaching to school children are striking. Countries which have made the greatest efforts in this direction have declared that the number of road deaths among children has become stationary or has even fallen while the number of adult victims of road accidents has continued to increase at a rate roughly equal to the increase in circulation."

Preaching gets nowhere

His suggestion is that what is good for children should be equally good for adults, that "preaching" at people will get us nowhere and that what is needed is simple instruction and information.

In this connection readers who are drivers of motor vehicles may be interested in some figures published by a French car manufacturing firm and circulated to users of their cars. The comments are those of the writer.

The first comment is that the

average driver might circulate with more circumspection if he would learn to think of his speed not in terms of kilometres an hour but in metres per second.

Consider the figures:

Kms per hour	equal	metres per second
140		38.8
60		17
25*		7
20		5

Emergencies on the road call for action in terms of second and split second. It is therefore realistic to consider speed which reduces the time available for action in terms of seconds also.

Second comment: road safety might improve if drivers would think less of the time taken to get from A to B and more about the time taken to stop a car in motion.

A motorcar moving at 100 kms an hour is covering 28 metres every second. An obstacle appears. It is estimated that normally about half a second passes between a driver seeing the obstacle and applying the brake. In that half second the car has already covered 14 metres.

If the road is good and dry, if the car's brakes are efficient and the tyres in new condition, four more seconds are required before the car stops. In those four seconds it will have travelled a further 57 metres.

To sum up: from 100 kms an hour to a stop takes five seconds in all, during which time the car cannot be prevented unless it hits an obstacle from travelling a distance of more than 70 metres. On a wet road, and with worn brakes, this distance may be increased to as much as 200 metres.

The occasional drink

Note. For those who like even an occasional drink while "out for a run", alcohol, even in small quanti-

ties, has two effects on a car driver. The first is that he tends to drive faster, the second that his "reaction time"—the time between his becoming aware of an obstacle and his taking action to stop or avoid it is increased. Read the above paragraphs once more.

Third comment: instead of thinking about how powerful the car engine is, drivers would be wise to think instead how powerful their brakes are.

Consider the following facts:

Suppose that a car of 55-60 BHP weighing 1,000 kg, is moving at a speed of 50 kms an hour. The driver can double its speed within 17 seconds.

Suddenly, a lorry swings across the path from a side-road. Down goes the brake pedal.

If the road surface is good, if the brakes are efficient, the car can be brought to a standstill within 4 seconds. This means that a retarding force of 190 HP has had to be applied—equal to three times the engine power of the car.

In doing this the energy of motion is transformed into heat, which is dissipated through the brakes and brake drums of the car. The amount of heat thus generated is very great.

For instance, there is the case of a well-known model which can be brought to a stop from a speed of 140 kms an hour within five seconds.

The heat generated by the brakes within these five seconds is sufficient to melt a mass of iron weighing 1 kg. 300 grams.

Yet despite all the mechanical strains and stress on motor vehicle mechanisms which these figures indicate, the share of faulty vehicles in the toll of injury and death on European roads is put at only 5 per cent...four times less than that attributed to faulty driving.

NEWS ON MANUFACTURE, EXPANSION PROGRAMMES, INNOVATIONS ETC.

Air-Conditioned Bus

Prime Minister immensely pleased

The air-conditioned luxury coach built by Simpsons on the Leyland Comet chassis, had won all-round praise from the Union Ministers and the Prime Minister.

The most distinguished personage who boarded the coach was Pandit Jawaharlal Nehru, Prime Minister of India. Accompanied by his daughter Smt. Indira Gandhi and his grandson, Mr. Nehru spent more than ten minutes inside the bus. Mrs. Raksha Saran, one of the directors of Ashok Leyland Ltd. told Mr. Nehru, in answer to his question that this was the first coach of its type to be built in India. Mr. Nehru's immediate remark was that it was an ideal vehicle for tourists and commented that such air-conditioned coaches were very good conceptions and should give maximum comforts to tourists, especially to foreign tourists visiting India.

Another notable personage who viewed the coach was Smt. Padma Naidu, Governor of West Bengal. She was very pleased to see the coach and added that she would definitely witness the demonstration of this vehicle in Calcutta on its arrival there.

Mr. K. C. Reddy, Union Minister for Commerce and Industry, preferred to travel in the air-conditioned coach to Palam Airport whence he boarded the plane to Bangalore to attend the inaugural function of the second plant of the Hindustan Machine Tools Ltd. Before embarking, he remarked "my journey to Palam in the coach was extremely comfortable".

Dr. P. Subbarayan, Minister for Transport and Communications, who travelled in the coach was heard to say, "this is an indication of the development of road transport to suit modern conditions".

When the coach was demonstrated to the members of the Rail-

way Board, one of the members said, "it is a revolution in road transport. It looks like competing with the air-conditioned railway coaches".

Among the other prominent invitees who travelled in the air-conditioned coach were the senior

officers of Air Headquarters, the Mayor of Delhi, the General Manager of the Indian Airlines, the Chief Commissioner for Delhi Administration and others.

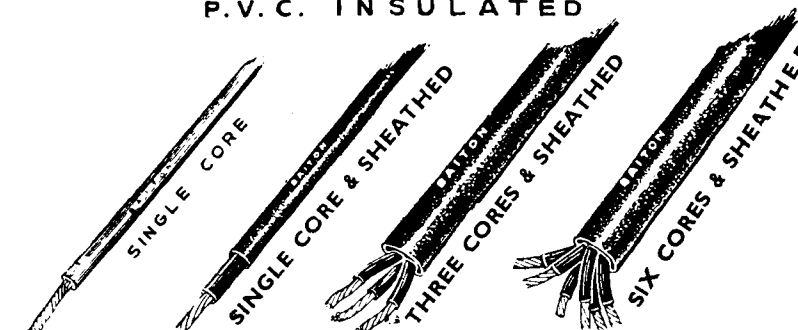
New Bodies for new comets

Commissioning of the new workshop of Associated Indian Enter-



BAITON AUTO CABLES

P.V.C. INSULATED



AND RUBBER INSULATED, BRAIDED & LACQUER COATED

Now Available in Various Colours, Sizes and Types

Made to British Standard Specifications

Manufactured on Latest Imported Automatic Machinery

Contact your Zonal Distributor or Write to us:

BAITON CABLES LIMITED

பெய்டன் கேபிள்ஸ் லிமிடெட்

POST BOX 126, JAIPUR

Grams: BAITON

Phone: 4065

Mg. Agents:

BAISIWALA AND TANDONS

Member: Indian Standards Institution

Distributors:—

- (1) M/s. Orient General Agencies, Kashmere Gate, Delhi-6.
- (2) M/s. Motor Cyclists, Hamilton Road, Delhi-6.
- (3) M/s. The Motor and General Trading Co. P.O. Box No. 361, Madras-2.
- (4) M/s. DGL Private Ltd, 10 Shah Nazif Road Lucknow.
- (5) M/s. Vora Brothers, New Queen's Road, Near Opera House, Bombay-4.
- (6) M/s. The Eastern Auto Parts Co. (Cal.) Pvt. Ltd-55, Bentinck Street, Calcutta-1.

prises Private Ltd., main dealers for Ashok Leyland Ltd. in West Bengal and Bihar, which is situated in Mahatma Gandhi Road, Calcutta, has coincided with a repeat order placed on them for 10 Ashok Leyland Comet ECOS2/1R 163" wheelbase haulage chassis equipped with 0.350 diesel engines by Burmah-Shell.

The chassis will be equipped with high-speed power take-off units and will be fitted with all-steel cabs fabricated in the new workshops of Associated Indian Enterprises Private Ltd.

All the vehicles will be operated by Burmah-Shell after tanks of a capacity of 2000 gallons each have been mounted on them for trans-

porting petroleum products from their main installation to various distributing centres.

Associated Indian Enterprises Private Ltd. will also be building an all-steel cab and a suitable body on a Comet 176" wheel-base goods chassis for carrying oxygen acetylene cylinders for the use of Indian Oxygen Ltd. who are operating a number of Comet vehicles.

This new fully equipped workshop commissioned by Associated Indian Enterprises Private Ltd. is intended mainly for heavy repairs and for body building activities and is part of their expansion programme which also covers Patna and Muzzafarpur. In Patna, a modern workshop is in operation

and the company is developing a similar workshop in Muzzafarpur to serve Leyland operators in Bihar.

Goodyear Tyre's new factory

The new factory of Goodyear Tyre Co. at Ballabgarh, 20 miles from New Delhi built at a cost of Rs. 5.7 crores was completed in record time of 11 months. It is spread out on an area of 70 acres.

The factory has a capacity of 210,000 tyres annually. Its maximum capacity is 510,000. It is expected that the factory would reach the full capacity by December next.

Besides tyres for cars, trucks and tractors, the factory would produce tubes, cement and other repair materials.

The Goodyear Tyre Company now registered as a public limited company in India has 80 percent of its shares in the United States and the rest in India. The number of Indian share-holders amounted to nearly 40,000. The factory would employ about 450 workers. Arrangements were being made to train them in various aspects of production.

Enfield's Chief Visits U. K. Cycle Works

Mr. K. R. Sundaram Iyer, chairman of Enfield India Ltd., Madras, flew to the United Kingdom last month and visited the Enfield Cycle Co.'s works at Redditch and Westwood.

His company, an associate of Enfield of U. K., was established five years ago and is manufacturing a range of Royal Enfield motorcycles. Close co-operation has been maintained by the visits of executives and technicians from India who have spent long periods at the Enfield works on exhaustive training in production methods and all matters concerned with the marketing of Royal Enfield products.

The modern factory at Madras employs about a thousand people and produces at present 5,000 machines a year. Distribution and sales are undertaken by the parent

company, Madras Motors Private Ltd., which was founded in 1946 and which has developed a network of more than 100 dealers and sub-dealers throughout India.

Mahindra Educational Trust 1961 Scholarship Award

Following the announcement during November 1960 for the award of financial assistance to Indian students for higher technical education abroad, the following candidates have been awarded scholarships by the Mahindra Educational Trust:

Mr. S. V. Venkatarama Rao left on July 25, for the United States to join the Johns Hopkins University for a doctorate in Chemistry.

Mr. Joseph C. Malaikal will shortly join the University of Wisconsin, U. S. A., for a course in Physics culminating in a doctorate.

Mr. Udyavar P. Shenoy will undertake a course in Electrical Engineering leading to the M. S. degree at the Pennsylvania University, U. S. A.

Mr. H. S. Ahluwalia has secured a research assistantship from the University of Maryland to conduct research work in Physics.

Mr. A. S. Patel will be joining the Purdue University, U. S. A. for a course leading to M. Sc. in Electrical Engineering.

Mr. R. Mahalingam will also be joining the Purdue University, U. S. A. for advanced studies in Chemical Engineering culminating in a Master's degree.

Mr. N. S. Reesinghani will proceed to the United States to join the Northwestern University, to complete his Ph. D. in Chemical Engineering.

Mr. H. V. Patel, a student of Mechanical Engineering, has undertaken a Master's Degree course at the Illinois Institute of Technology, U. S. A.

Electric horns

Messrs Sharco Industries (Private)

Ltd. have been granted a licence to manufacture electric horns in collaboration with a U. S. firm, Sperton Automotive. They will manufacture 75,000 pairs of electric horns a year.

Oil filters

The scheme for the manufacture of oil filters and elements for automobiles in collaboration with Messrs Lee filter Corporation, New Jersey U. S. A. has been approved by the Govt.

Power brake

A new power brake unit called the Master-vac has been announced by Bendix. The installation of this unit reduces the pedal effort and pedal travel required to apply the brakes as compared with that of a conventional non-powered brake system.

Madras Plant to make auto electrical parts

A factory for the manufacture of electrical equipment for cars and trucks will be set up in Madras in the private sector, it is learnt.

Messrs. T. V. Sundaram Ayyanar and Sons will set up this factory in collaboration with a U. K. firm which will have 60 per cent participation in the paid-up capital of Rs. 2.4 crores.

The factory is expected to go into production in June next year and will provide employment for 1,000 persons. It will also save foreign exchange to the extent of Rs. 1.5 crores per year.

Contributions for flood relief

Caltex (India) Limited have issued a cheque for Rs. 15,000 to the Prime Minister's Relief Fund, earmarked for flood relief.

Over the last five years, Caltex

have given a sum exceeding Rs. 3 lakhs to different deserving charities in India.

The Madura Ramnad Tyre Syndicate Madras — have donated 150 dhothies, 81 sarees, 48 small dhothies for boys and 52 Davani cloths for girls to the value of Rs 1001/- to be distributed to the flood victims of Tanjore District.

Mr. V. Chokkiah, Mg. partner, The Imperial Trades, Tiruchy, has contributed Rs. 101/- by cheque through Tiruchy Dist. Collector, for relief to the victims in the flood-affected area of Chintamani-the dwelling centre of most of the bus drivers and lorry cleaners.

Expansion schemes

The Government of India to have approved the expansion scheme of some of the automobile concerns in the country for the manufacture of more passenger cars, jeep and trucks. These concerns are TELCO, Standard Motors, Ashok-Leyland and Mahindra & Mahindra.

*There Are No Better
Brake Linings*

MINTEX

*Popular British product
well known for quality,
efficiency and durability.*

Available in ready drilled sets for all cars and trucks and roll lining in all sizes.

We solicit forward orders against your import licences. Please contact us for your requirements.

*Distributors for Andhra, Mysore,
Madras & Kerala*

**THE MADRAS MERCANTILE
AGENCIES PRIVATE LTD**

1/18 MOUNT ROAD
MADRAS 2

DAWN OF NEW ERA IN AUTOWORLD



G.S. TRADE MARK

GURMUKH SINGH & SONS (REGD)
MANUFACTURERS & SUPPLIERS OF AUTOMOBILE SPARE PARTS
LUDHIANA, (INDIA)



Mr. N. Annaswamy, Sales Manager Tata Engineering & Locomotive Co. Ltd., seen handing over the key of the Telco-deluxe Airline bus to Mr. S. Graf Bassewitz, Asst. Manager of Lufthansa German Airlines at Calcutta.

First Telco-Built Airline Bus FOR "LUFTHANSA"

The first Telco-built deluxe Airline bus was handed over recently to the Lufthansa German Airlines, Calcutta, by the Sales Manager of Telco, Mr. N. Annaswamy, at a pleasant ceremony attended by the International Airlines' clientele, representatives of important travel agencies and prominent businessmen of Calcutta.

Mr. S. Graf Bassewitz, Assistant Manager of Lufthansa, accompanied by Mr. R. Battacharya, Sales Promotion Manager, took delivery of the bus. Mr. F. G. Shoobridge and Mr. A. C. Duarte of Messrs. French Motor Car Co. Ltd., the local dealers for Tata-Mercedes-Benz vehicles, were present at the function.

The sleek deluxe bus, mounted

on a Tata-Mercedes-Benz long wheelbase bus chassis, providing luxurious travel to 27 passengers, was built at the Telco Works at Jamshedpur, using 100% Indian material. The body is fabricated from pressed-steel electrically welded, with aluminium roof and side panels. Mounted on fourteen rubber mountings the body is shock and vibration proof, while the constellation type seat cushions and back rests upholstered with leather and velvet cloth, provide the maximum in passenger comfort. Wide windows fitted with safety glass, and rubber profiles, allow the passengers to have unobstructed view of the countryside as the bus glides smoothly on its journey. Two curved safety glass windcreens provide maximum visibility for

the driver, while the engine hood is insulated with thermocole to prevent heat transmission to the driver's compartment.

Built with an eye to providing luxury travel of the standard expected by airline passengers, this Telco deluxe bus indeed stands on a par with the world's best transport vehicles. By choosing the first Telco-built bus, Lufthansa-an International Airway Company have further cemented the Indo-German relations already set in good stead by the fruitful collaboration of Messrs. Daimler Benz A. G. of West Germany with Messrs. Tata Engineering & Locomotive Co. Ltd., in the production of the popular Tata-Mercedes-Benz vehicles at their Works at Jamshedpur.

The First Telco-built airline bus recently handed over to Lufthansa German Airlines at Calcutta.



★ OUR LONDON LETTER ★

New Deputy Managing Directors for BMC

In preparation for further expansion and a stronger export drive, BMC have appointed two new deputy managing directors. There are now three of them. Mr. J. R. Woodcock, already holding this title, is now responsible for home and export sales, service and advertising.

Mr. W. H. Davis, director of vehicle production, becomes deputy managing director in charge of vehicle, tractor and domestic appliance factories. Mr. S. J. Wheeler, previously director and secretary, becomes deputy managing director in charge of finance.

Col. A. C. R. Waite, son-in-law of Lord Austin becomes a director and several new appointments have been made to the boards of subsidiary companies.

It is interesting to note that Mr. Davis is only 41 years old. He began as an engineering apprentice at Austin. He is 12 years younger than Mr. George Harriman, second in command to Sir Leonard Lord, and by the time he has reached Mr. Harriman's present age, his two colleagues as deputy managing directors will have passed the retiring age of 65.

Observers have commented on the fact that the new appointments seem to establish the final ascendancy of Austin management over that of the Nuffield Group in control of the BMC.

New B. M. C. Warranty

A new form of B. M. C. Warranty is now in operation. It covers both parts and labour and extends to second hand cars, if they are less than a year old.

The changes follow a campaign by Mr. J. R. Lucas, an Oxford don and a Fellow of Merton College, Oxford, who is also a B.M.C. Shareholder. He complained that in accepting the guarantee buyers were being forced to sign away their normal legal rights. B. M. C. have now acted on his suggestions.

The new Warranty will run with the car for twelve months whether or not it remains with the first owner.

Certain parts not manufactured by the B. M. C. companies and hitherto excluded now come within the scope of the Warranty.

Previously the Warranty included parts only. It now includes any labour charges necessary in fitting the new parts.

Previously allowances have been made to cover labour charges, but on an unofficial basis. The buyer now has a right to them.

It will no longer be necessary for the purchaser to sign the Warranty. Any owner of a B. M. C. product whose Warranty is still current on 1st August will automatically enjoy the new benefits for the unexpired portion of his Warranty period. If any dispute arises it is to be decided by a referee appointed by a motoring organisation or other agreed body. Use for competitions, racing or record attempts still exclude a car from the Warranty.

Bigger Engine and Lower Price for Hillman Minx

The 1592 cc. Rootes engine, recently adopted for the Singer Gazelle, is now used also on the Hillman Minx. At the same time price at the works at Coventry has been cut by £ 41 before tax. The

"Special" sedan with simple trim is no longer produced. Compression ratio is 8.3 to 1 against 8.5 on the smaller engine. Maximum power is 53 b.h.p. nett at 4,100 r.p.m. with nett torque of 87 lb. ft. at 2,100 r.p.m. The axle ratio goes up from 4.44 to 4.42 to 1 but contrary to current trends, first and reverse gears have been given greater reduction. Overhaul ratios are now 15.82, 9.04, 5.88 and 4.22 to 1. Road speed at 1,000 r.p.m. in top gear is now 17.2 m.p.h. Reverse 21.09 to 1, Smiths Easidrive three-speed automatic transmission is optional. A central gear lever is normally used; steering column shift is optional for export.

As on the Gazelle, there is now a stronger front cross member and greasing requirements have been reduced by using nylon ball sockets for track rod ends. The speedometer has trip and total distance recorders and the sedan, like the convertible and estate cars, has two horns. Exterior styling is unchanged but "1600" badges on the front door's identify the latest model.

Later, Rootes are expected to announce an additional model using the same body shell as the new Singer Vogue.



"SUREFIT"

CARBURETTOR

GASKETS

for

PETROL-DRIVEN

VEHICLES



Mfd. from English
Petrol Resistant Paper by:

VIR BHAN SHARMA & Co.

442, Faiz Road, Karol Bagh, New Delhi-5

Post Box 2514

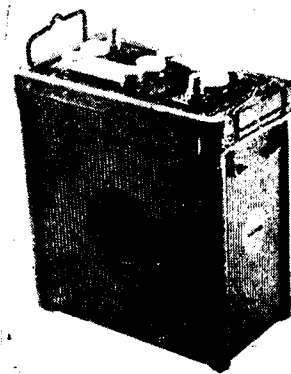
Ph ne: 54793
Grains: GASKETHOME

New 'Standard' Batteries for Heavy Vehicles

HEAVY diesel buses and trucks can now use the new Type 3 DH9 batteries made in monobloc containers by Standard Batteries Ltd.

Manufactured in the same dimensions as the old-type 3 SBMT/13 batteries which had wooden containers, these B. E. S. T. type batteries have greater resilience because of their hard-rubber containers. Thus, they develop a greater resistance to shock from extreme road and weather conditions and are ideally suited to heavy vehicles.

Standard Batteries Ltd., who manufacture all the components of their batteries under their direct supervision are fabricating the new hard-rubber monobloc containers in their factory in Bombay.



New "Standard" battery, type 3 DH-9 for heavy duty buses and trucks manufactured in monobloc hard-rubber containers. The battery has greater resilience, and resistance to shock from rough road and weather conditions.

Mr. H. R. J. TAYLOR



Mr. H. R. J. Taylor returned to India in July after completing an assignment with Dunlop, U. K. He has been designated General Sales Manager.

Before arriving in India, Mr. Taylor visited Canada, Japan and other Far Eastern countries and made a special study of marketing and distribution techniques in those territories.

NEWS IN PICTURES



Mr. C. D. Heckman, Export Sales Manager, Aviation Products Division, Goodyear International Corporation, Akron, U.S.A., recently visited India in connection with the spearheading of a programme on Collapsible Type Pillow Tanks in this area.

Photo shows Mr. Heckman (with a book in hand) explaining the uses of Pillow Tank to the members of Indian Air Force and other invitees. Mr. K. E. Allison, Sales Manager, Industrial Products, Goodyear-India is seen at the extreme left.



Messrs T. E. K. Muhammed Amirudeen's concern dealing with the distribution of JAWA-CZ Motorcycles and Scooters, was inaugurated at 99, Nageswaran North Street, Kumbakonam on May 17, 1961 by Mr. Arokya-swami Pillai, Director, and General Manager of Sri S. R. V. S. Kumbakonam by giving delivery of the first motor cycle.

M. M. P. D. A. CELEBRATES INDEPENDENCE DAY



The Madras Motor Parts Dealers Association celebrated the Independence Day this year on 15th August at the Bharat Building Quadrangle. Quite a large number of members was present. There was the usual breakfast following the unfurling of the National Flag by the President of the Association Sri T. S. Krishnamurthi. Sri Indu Chandhok, Hony. Secretary, proposed a vote of thanks.

Photos on this page show:

(1) Sri T. S. Krishnamurthi performing puja at the flagstaff. (2) Sri Sardar Manohar Singh, Joint Hon. Secretary garlanding the President. (3) Sri Krishnamurthi exhorting the gathering to follow the footsteps of the leaders who fought and won freedom for India and to contribute its mite to the progress of the nation. (4) Sri Indu proposing a vote of thanks. (5, 6 & 7) some of the members present at the breakfast table.



THE PEAK HOUR PROBLEM

["The problem of transport during peak hours both in the morning and evening is not peculiar to this city alone. Every city with its growing population is faced with this problem and it will be interesting to know how a great metropolis like London tries to solve this problem."

We reproduce here a portion of the speech of Mr. Kurshid Alam Khan, Traffic manager Delhi Transport Undertaking, who recently visited U.K.]

This subject is well known in its general aspects both to the road passenger transport industry and to the public and I really find it difficult to say anything new about the topic. Briefly I should like to say that this subject is treated like Milton's "Paradise Lost" which is appreciated by all, but read by none. However, here it may be mentioned that this problem can well be divided under three broad general headings: (i) extent of problem (ii) its effects (iii) steps taken to cope with the problem.

The most serious problem which the urban transport system is faced with in big cities these days is the rush hour or peak load demand. No doubt, the peaks in urban transport business are expensive and unavoidable. If the maximum peak service is used as basis, it is found that off peak varies from 40 to 65% in various undertakings. However, it is surprising that in London the off peak service is approximately 65% of the full peak and this appears to be very unusual, as compared to other big cities of the country. Normally effects of the peak traffic have a serious bearing on vehicles, staff, cost of operation and passengers. The fleet must be large enough to meet peak hour demand, with the result that the large portion of the fleet is in use not more than four to five hours per day. The limited utilisation imbalances the cost of operation and affects the operators adversely. High peaks of short duration also affect staff utilisation in more than one way and there is no wonder that awkward working hours with shifts and spread-overs discourage good people from seeking employment in the transport industry and in any case fails to attract them to continue service in such undertakings. Peak hour traffic demands increase in the cost of operation as the greater part of the fleet is not in use for larger portion of the day. Perhaps, it may be interesting to

note that the cost of the peak hour vehicle mileage when compared with that of normal day vehicle mileage, calculating and taking into consideration fixed charges per bus, time charges per hour, is almost double. Apart from the increased cost of the operators which is passed on directly to the passengers, there are very considerable indirect costs to the community due to street widening and other improvements.

Way to Solve the Problem

The steps which have to be taken to cope with the problem fall into two groups:

- (a) Action by operators regarding provision and use of vehicles.
- (b) Co-operation of the passengers

There is no doubt that in order to cope with heavy peak it is necessary to have the vehicles with the biggest capacity which can be used effectively. But in order to retain and utilise highest capacity, all possible aids to the conductors should be introduced, such as simple fare system, and electrically driver operated front doors. Limited stops services with as far as possible few traffic signals enable extra journeys to be obtained from the same vehicle resulting into most valuable staff and vehicle utilisation. On the continent, they have gone a step further and even trailer buses are used to meet the situation as economically as possible. All the steps taken to obtain assistance from the passengers are interpreted as an interference with the private life of the people and, therefore, should be handled with more care; otherwise may be resented by the travelling public. No doubt, staggering the working hours, which has been given effect to to some extent in Central London, is the proper answer to this rush or crush hour problem. But passengers' resistance is unavoidable whenever and wherever this suggestion is made or implemented. The other com-

mon suggestion is that lower fares in the off peak hours would attract passengers from peak hours, thus providing more transport capacity for the must passengers. The fares are, however, not so high that some slight reduction would persuade passengers to make so substantial a change in their times of travelling. Time and convenience are rated as much more valuable than a small saving in the bus fares. The basic idea of having different fares for peak and non-peak hours is, however, justified, if cost is the main consideration. But higher fares for peak will be most unpopular with the majority of the travelling public as public utility services are patronised to the maximum during peak hours only.

This problem was discussed with various executives of several transport undertakings and officials of the British Institute of Transport and I found that they all were deeply interested in the subject and considered the problem most acute and taxing.

However, as a result of my discussions, I got an impression that except in Central London, no practical approach has so far been made to solve this acute problem which is becoming more and more acute every year. But, keeping in view the traffic and transportation position in big cities in U. K., I am sure that a stage is bound to arise in due course when the undertakings and the general travelling public will have to give this matter more serious consideration.

I have been deeply impressed by the patterns of operation and route organisation in Birmingham, Manchester, and Hull. In these cities the number of cross city routes has absolutely been minimised and majority of the routes emanate and terminate at important focal points in down town area. This has enabled the authorities to plan the routes from different central hubs like spokes of bicycle wheel and advantages of this pattern of routes over conventional cross city routes are too obvious to be stressed. In

Delhi we should very much like to reorganise our pattern of operation on the lines in vogue in Birmingham and Manchester and I am confident it is bound to improve operational efficiency and show more favourable results in regard to economics of operation.

Time keeping

Great importance is attached to the punctuality of services in all the transport undertakings and severe disciplinary action is taken against the crew, particularly for earlier runnings. In London Transport, mobile inspectors are posted at important loading points and intersection of routes whose job is to note whether the services are operating according to schedule or not. At a few places in Manchester, Birmingham and London, time recording clocks are installed in various route sectors where the conductors have to clock in their time cards. The increasing congestion of traffic in London streets has been a major concern to London

The finest
and fastest
plug on earth...

SMITHS
K.L.G



Distributors: Armstrong Smith Limited

BOMBAY • CALCUTTA • MADRAS • NEW DELHI

DEALERS: M/s J. V. Mehta & Co., Bombay 4 • M/s Orient General Agencies, Delhi • M/s Ramkumar Surajbhai, Jaipur
M/s George Oakes (Prvt) Ltd., Madras 2 • M/s United Sales & Service Co., Bangalore-3 • M/s Darragh, Smail & Co., Cochin-3
M/s G. M. C. Brothers & Co., Calcutta • M/s Howrah Motor Accessories Agency Prvt. Ltd., Calcutta

AS.G.R.

Transport Executive and, therefore, they have developed a new method for maintenance of service regularity. This is done by recognition of moving buses by electronic means as a few scanning units and cameras are fitted at important junctions which indicate the movement of the vehicles by number in Control Room and adjustment is made in operation according to schedules.

An Ideal vehicle

The controversy regarding the tramcar, trolley bus, and motor bus has since been decided in England and motor bus has universally been accepted as an ideal vehicle for city services. Tramcars have been replaced with motor buses in most of the cities and except in places like Glasgow, and Blackpool, street cars are nowhere to be seen in operation. Trolley buses, no doubt, are still in operation in many cities mainly for their over-all larger carrying capacity. But I was given to understand that as a policy matter decision has already been taken that no more new units would be added and the existing stock will be kept in service till the end of the normal economic span of life of these vehicles. The reasons for this decision to operate buses only are so obvious and oft-repeated that I need not repeat them here. The tendency, however, is for pressing into service larger carrying capacity vehicles. In view of ever increasing operational cost and heavy peak transport demands, it is felt that the smaller carrying capacity buses will gradually prove most uneconomic and therefore their replacement with larger carrying capacity units is absolutely essential. Before the war, double deck buses generally had a seating capacity of 56, 55, 52 passengers and even less.

The Biggest surprise

Buses are today available with 78 seats i.e. roughly 50% higher seating capacity. The introduction of the Leyland Atlantic chassis sometime back with its designs and advances never before seen on vehicles in the British industry was probably the biggest surprise of the 1956 Commercial Motor Show and an event

of very great importance in the transportation industry of the country. At present conventional double deck buses have an overall carrying capacity from 61 to 65 passengers including 5 or 8 standees. As a result of re-designing of chassis and body fabrication, the new type of buses having rear engines, which have recently been commissioned to cater for services, have an overall carrying capacity of 77 to 84 passengers including 5 standees. This is a big improvement and will help the operator in regard to the economics of operation as well as clearing and meeting the heavy peak transport demand.

Effect of Television

There is a general recession in traffic due to more use of private transport. Thus, the industry has not only lost traffic to the private automobiles but it is also struggling desperately for road space, particularly during peak hours. In addition to this, the television is proving a great disadvantage to the industry as it has imposed increased immobility on a lot of people who instead of travelling extra journey for amusement in the evenings prefer to stay at home and watch programmes on their T. V. sets. The general five-day week has comparatively reduced two journeys of the working people on Saturdays and similarly opening of more stores & shops in suburbs has curtailed rides of the house-wives. All these factors have hit the city transit industry very adversely and the future also does not appear to be very promising. But I am sure that something will be done in due course to eliminate passengers' resistance by providing more attractive services or reasonable rates. However, it is yet to be seen as to how long the Municipal Transport Undertakings can be run on commercial basis. Besides this, it will also be interesting to note the steps which will be taken to solve the general peak hour problem and traffic congestion and hold-ups as a result of increase in the number of automobiles on roads with little prospects for increasing already over-taxed road capacity in down town area. These are some of the urgent and important problems

facing the city transportation and traffic authorities in the big cities of U. K. and we shall certainly watch with interest the results of their efforts to solve them.

The only answer

No doubt, at present in India we are not facing such problems, but surely this kind of situation will present itself in due course in our big cities and therefore, it is time when we should plan for future well in time and adequately. While planning for future it is essential to keep in view that nowhere in the world road passengers transport organisations have solved city transport problems without co-ordinated and well-organised suburban rapid transit services on surface, whether elevated or underground. Time factor in the life of citizens of the modern cities is the most important item these days and the rapid transit system by virtue of its exclusive right of way is the only answer to the needs for a fast, dependable mass transport system.

Road Transport Corporation: Some States not willing to set up

Only the States of Madras, Assam, Punjab, Uttar Pradesh, Kerala and Rajasthan have not yet agreed to set up road transport corporations, stated Mr. Raj Bahadur, Union Minister of State for Transport and Communications, in a written reply to Shri Ram Krishan Gupta and Shri Narayanankutty Menon, in Lok Sabha.

The main reasons given by them for not setting up such corporations were that their existing arrangements for running nationalised road transport services were satisfactory and that by setting up Road Transport Corporations they would lose a part of their present revenue to the Central Government by way of Incometax which the Corporations would be liable to pay.

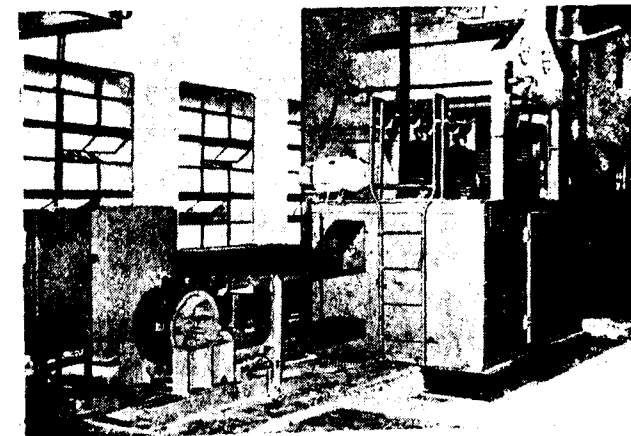
The matter, was under correspondence with these States and efforts were being made to persuade them to fall in line with the policy of the Central Government in this regard he said.

MURARKAS

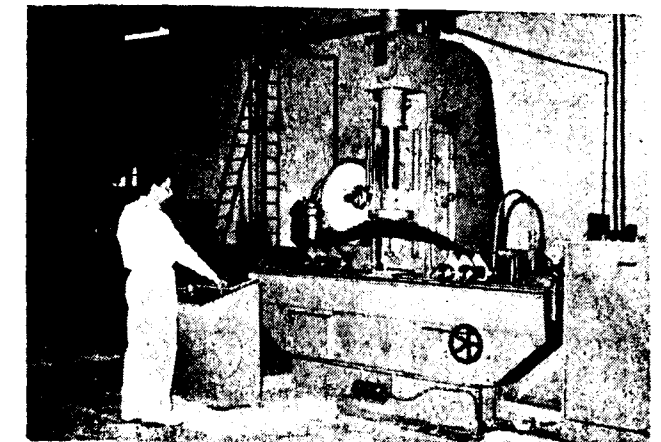
LEAF SPRING FACTORY



1. Front view of Factory



2. Shot Peening Machine in operation



3. I.S.I. officer inspecting 7th spring assembling on Local Testing Machine



Minister M. Shah after opening the factory took keen interest and watched the various departments of the plants and machinery at work.



Sri K. Kamaraj, Chief Minister of Madras, inaugurating the distribution of the Strees, dholies etc. to the distressed people donated by M/s. Raman & Raman (Private) Ltd., leading transport operators of the district.

FLOODS IN THE CAUVERY BASIN

Raman & Raman's Humanitarian Service Saves Town

Readers from far and near are aware of the recent floods in the Cauvery basin. The people of the southern districts of this State who have been so accustomed to the placid benevolence of the Cauvery, have had to encounter the sudden fury and unprecedented bund-

bursting floods since the 8th July, 1961. It is unanimously voiced that the recent floods have absolutely no comparison to the earlier disastrous floods of the 1924 and 1907. This time it was much worse. Damage is expected to exceed a crore of rupees.

The readers are aware that Tanjore district is always called the 'Granary of the South.' The recent destructive floods have caused irreparable damage and have dislocated the life in many villages predominantly occupied by humble peasants who entirely depend upon

the yield of the lands for their livelihood. They had to leave their humble hearth—lock, stock and barrel—to safer zones. Places which very recently depicted smiling country sides were submerged under the furious floods or water-logged. The fury of the floods has now abated and the water is draining away in the affected areas.

Roads no Longer Traceable

Besides the unfortunate plight of the agriculturists and peasants, the floods have definitely been a serious blow to the fleet operators and lorry owners of all categories of this district. The roads to the south and south-east of the river Cauvery and her branches were cut open indiscriminately by the villagers to save their respective humble hamlets from the furious onrush of the floods and thus divert their course to the fields instead allowing them to gain dangerous heights at strategic places. As a result many roads, which have recently been traffic-worthy, have turned out to be nothing but uneven tracks, full of awkward potholes. It is equally amazing to find that a few of the roads which prior to the floods existed are not to be traced now. The present conditions of the roads and highways naturally have a terrific impact on

the vehicles, resulting in very heavy wear and tear.

Heavy Loss to Operators

It is, therefore, evident that apart from the heavy financial loss which the Transport Operators have had to incur owing to suspension of services on most of the flood affected routes, they should also be prepared for A FURTHER INEVITABLE



Breaches in Arasalar River on the western side of Kumbakonam Town are being closed by the workers of Raman & Raman (P) Ltd., Kumbakonam. These breaches were mainly responsible for the inundation of Kumbakonam Town.

DRAIN ON THEIR RESOURCES BY WAY OF FREQUENT REPLACEMENTS / RENEWALS OF SPARES TO THEIR VEHICLES. The State Government is already seized of the huge problem and responsibility of giving relief and rehabilitating flood affected people. Therefore, it remains to be seen how soon they can divert their attention TO RESTORING HUNDRED PERCENT TRAFFIC-WORTHINESS OF THE HIGHWAYS AND OTHER ROADS AND THUS RELIEVE THE TRANSPORT OPERATORS OF THE EXTRA BURDEN.

Raman and Raman saved the situation

It will not be out of place to make a brief note of the activities of Raman and Raman Private Ltd., in collaboration with the Government and non-Government officials and the public, in successfully plugging the wide breaches of the Arasalar-river (one of the branches of the Cauvery) and thus averting in time the imminent catastrophe of the major portion of Kumbakonam town being flooded. (see photographs). Besides this, the valuable humanitarian service rendered by them to the distressed people will ever remain green in everybody's memory.



Breaches in Arasalar River near Mangudi (3 miles West of Kumbakonam) Closing of breaches in progress.

September 1961

8

SARDAR BHAGAT SINGH ENTERTAINED

To meet Sardar Bhagat Singh of Messrs. Gurmukh Singh & Sons of Ludhiana, well known auto parts manufacturers, Sardar Roshan Singh of Madras Auto Centre gave a reception at Kwality on Aug. 16th. A large number of members of the auto trade was present.

After tea, Sardar Manohar Singh of Singsons, in a short speech thanked Sardar Roshan Singh for having arranged the function and thus given an opportunity for the dealers to meet Shri Bhagat Singh whose firm and its products were extremely popular with the trade. He made special mention of the fact that such popular products were made by Gurmukh Singh & ons Sons indigenously designed and built machines and that without any collaboration from abroad. This spoke well of the capacity of those in charge of the factory.

Sardar Bhagat Singh expressed his thanks in response. Sardar Roshan Singh thanked the dealers for their generous response to his invitation.

Expansion Scheme

It was revealed during the discussions that Gurmukh Singhs are planning to move to an even bigger factory premises as part of their plan of expansion to meet the ever growing demand for their G. S. products.



A view of the tea table at the reception to Sardar Bhagat Singh of Ludhiana



Sardar Manohar Singh paying a tribute to the original work being done by M/s. Gurmukh Singh and others



Sardar Roshan Singh welcoming the guests.



Sardar Bhagat Singh being received at the Kwality reception at Madras.

Rally to Pondy

MOTORINDIA PRIZES TO M.M.S.C. RALLY WINNERS

The miniature Rally for the Motorindia Price organised by the Madras Motor Sports Club to Pondicherry on 13th August was an unqualified success. Twentynine motor cycles, cars, and scooters left Madras at two minute intervals. There were two check points en-route one at Mahabalipuram. Besides these two static check points, there were four secret check points.

The winners are as follows :

- First.....Mr. K. Rajendran in a Hindusthan Ambassador.
- Second.....Mr. K. Balasubramanian in a Fiat 1100.
- Third.....Mr. L. S. Sreenivasan in a Standard Ten.

At Pondicherry the prizes were distributed at Garage Colandhuni where Mr. S. K. Dutta Ray, Chief Commissioner of Pondicherry, presided over the function and Mrs. Dutta gave away the prizes. Mr. K. Venkataraman of Motorindia congratulated the club on its activities and winners on their success.

This Rally was intended as a practice for the South Indian Rally which is to be held on September 30th, October first, and which will almost be the longest in India. It will go through Bangalore, Coimbatore, Udumalpet, Munnar, Kodaikkanal, Trichy and back again to Madras.

The prizes for the Miniature Rally were offered by Motorindia. Each competitor started with



Sri S. K. Dutta Ray, Chief Commissioner of Pondicherry who presided, complimented the M. M. S. C. on their emphasis on safety and reliability instead of speed only.

thousand points and points were lost by competitors for arriving either early or late at static and secret check points.

The following was the overall score :

Mr. K. Rajendran	987 points
Mr. K. Balasubramaniam	982 "
Mr. L. S. Sreenivasan	977 "
Mr. V. V. Chandrasekhar	976 "
Mr. L. N. Anantaraman	974 "
Mrs. Madan	966 "
Mr. R. Swaminathan	966 "
Mr. C. Prabhakaran	963 "
Mr. Mani Ramanathan	963 "
Mr. B. C. Bushan	951 "
Mr. Venkatachalam	951 "

Mr. U. N. Shiva Rao	951 "
Mr. Balram Asrani	950 "
Mr. M. K. Belgamwala	948 "
Mr. T. S. Sreenivasan	946 "
Mr. M. C. Krishnamurthy	945 "
Mr. Yogu Rao	937 "
Mr. P. Mulla	923 "
Mr. Hayatt	916 "
Mr. S. J. Shah	893 "
Mr. B. Hitaishi	874 "
Mr. R. Radhakrishnan	863 "
Mr. A. K. Krishnaswamy	844 "
Mr. Marwah	837 "
Mr. P. N. Sawhney	761 "
Mr. Simon	687 "
Mr. Jenkins	682 "
Mr. Jayagopal	539 "
Mr. Zahir Ahmed	527 "



A section of the large crowd of enthusiasts who gave a reception to the competitors at Pondicherry.



K. Venkataraman of Motorindia speaking at the prize-giving function.

M. M. S. C. RALLY TO PONDY



Mr. Marwah of the South India Corporation driving his Ambassador, at the Rally start.



Some of the Motor cyclists and Scooter riders who took part in the rally seen lined up at the Union Company premises from where the rally started.

Sri T. S. Srinivasan and Kailasam, two of the most enthusiastic members of the club who have taken part in practically every rally or race organised by the Madras Motor Sports Club.



Mr. Jenkins of the British Council at the start.

Starting Scenes In Pictures

MOTORINDIA

the
winner
and
the
runners-up
receive
the
motorindia
prizes
from
mrs.
dutta
ray



A Tanjore plate of exquisite workmanship was presented to Mr. L. S. Srinivasan who stood third in the rally.



Sri K. Rajendra who won the rally with 987 points is seen receiving the gold inlaid silver bowl presented by Motorindia from Mrs. Dutta. Mr. Dutta is seen sitting behind, clapping.



Sri K. Balasubramanian, who was second in the rally is receiving the Tanjore cigarette case from Mrs. Dutta. At the extreme right is Mr. Columbiani.

PRODUCTION OF TRACTORS Yugo to assist Madras

Tractors and Farm Equipment Limited, Madras, manufacturers of Massey-Ferguson tractors and implements in India, are likely to obtain tractor components and implements from Industria Motora-i-Tractora, who manufacture farm equipment near Belgrade, Yugoslavia, under licence from Massey-Ferguson Limited, Toronto. Negotiations have already reached an advanced stage.

Mr. Eric J. Davies, Director, Massey-Ferguson (Export) Limited, Coventry, England, accompanied by Mr. D. Boskovic, Director, and Mr. R. Pavlovic, Sales Manager, Industria Motora-i-Tractora, has arrived in India. The Overseas Massey-Ferguson team is currently visiting Madras, headquarters of Tractors and Farm Equipment Limited.

Over 15,000 Ferguson System tractors, accompanied by over 30,000 Ferguson System Implements have already been sold in India. Tractors and Farm Equipment

Limited commenced manufacturing operations, and sole distribution throughout India of all Massey-Ferguson products, on 1st January, 1961. Production of 30 h.p. Massey-Ferguson 1035 tractors from TAFE's No. 1 Tractor Production Plant in Madras commences in a fortnight's time.

A very substantial Trade Agreement was recently signed between the Governments of India and Yugoslavia. Massey-Ferguson Ltd. believes that the co-operation visualised between Tractors and Farm Equipment Limited, Madras, and Industria Motora-i-Tractora, Belgrade will have a significantly beneficial effect on the modernisation, through farm mechanisation of Indian farming in line with the targets set under the Third Five Year Plan.

Ecafe Seminar on Road Transport To be held in Madras

The Government of India propose to hold a Seminar on "Passenger Road Transport Development and

Operation in Madras between 9th and 13th October, 1961 under the auspices of the Economic Commission for Asia and Far East (ECAFE). Delegates from the countries in the ECAFE region will be participating. Experts from countries like U.S.A. and U.K. will be invited to contribute papers on different subjects proposed to be discussed during the Seminar.

Subjects to be discussed

The following subjects are proposed to be discussed:

General characteristics of the road passenger transport in the region, its organisational structure and management, its operation, statutory regulations, taxation and ways and means of securing economic efficiency in road passenger transport.

The Hon. Secretary of the Indian Roads and Transport Development Association in a communication says that those who want to attend the Seminar should write to Mr. T. S. Sivagnanam, Assistant Secretary, State Transport Authority and Liaison Officer, Chepauk, Madras-5 and send a copy to him.

NEW

Vasundara Lorry Service

Vasundara Lorry Service (Regd.) Bangalore have opened a branch office at Madras on 21st June at no. 6 Singanna Naick Street.

This service is serving the transport needs of large textile mills and reputed business houses and leading firms for over a decade.

Coimbatore - Nilgiris Automobile Spare Parts Co-operative Stores

The Coimbatore-Nilgiris Automobile Spare Parts Co-operative Stores Ltd., Mettupalayam have announced that they will be opening Automobile Spare Parts Stores at 6/1, Main Road, Mettupalayam.

Janata Auto Sales & Service

Janata Auto Sales & Service Bombay have opened Fuel Injection Service at Chopra Garage near Princess Dock 54, Frere Road, Bombay 9. Repairs are being carried out in air conditioned room by qualified and experienced engineers and technicians.

MOTORINDIA



[By oversight some projects have been left out in our article published in the Annual. We are including them and request the readers to read them along with that article. We do not claim this is an exhaustive list but we have only attempted to codify all the important events connected with this industry so that it could be used as a ready reference by those connected with this industry.—Ed.]

1898—First pneumatic tyre arrived in Bombay. *Dunlop's* association with India started. Dunlop office was opened in Bombay.

1922—*Goodyear* office started in India.

1924—*Firestone* products first known in India.

1988—Dunlop House opened in Bombay.

1931—Simpsons started a repair workshop in Madras.

1935—Sahaganj factory started in Calcutta. Next year started production.

1939—Simpsons produced gas plants.

1940—Firestone first tyre manufactured in Sewree (Bombay).

1941—Simpsons started manufacturing small garage tools and equipment.

Simpsons took up in 1948 the franchise for the world famous Perkins "P" series Automotive type and manufactured the Perkins P-6 Automatic type Diesel Engines. This factory in Madras is the first one to complete the indigenous manufacture of the Automotive Type Diesel Engines.

1948—*Ashok Motors* incorporated in September—Originally engaged in the assembly and sales of Austin Cars and trucks in India 1950 the company acquired the rights of manufacture and sales in India of Leyland comet vehicles. The name of the company was changed to Ashok Leyland in 1955.

The Standard Motor Products of India Ltd. was registered. The Standard Motor Company of Coventry offered to set up a factory in Madras in co-operative with the Union Company Co. (Motors) Ltd. for the manufacture of Standard cars. The offer was approved by the Government.

1949—Erection of 'India Pistons'

factory at Sembium 1950—Piston rings, 1951 Grey iron foundry, 1952 Pistons 1953 Cylinder liners, 1954 Gudgeon Pins, 1955 Expander type steel rings, 1956 Exceeded ten millions in ring production 1957 Aluminium foundry, 1959 Vacrom rings. Piston production exceeded one Million 1960—100% expansion.

1951—First "Vanguard" was assembled at Standard Motors factory at Vandalur.

1954—They started assembling and progressive manufacture of Standard Ten cars.

1954—Programme to manufacture Leyland "Comet" chassis was accepted by Govt. of India 1955. Active implementation of the programme.

The programme for the progressive manufacture of Tata-Mercedes-Benz diesel trucks and buses in India was inaugurated in Oct. 1954.

1960—First tyre bearing *Ceat* stamp was produced. *Ceat* the Italian tyre firm with the collaboration of *Tatas* started a factory in Bombay to manufacture tyres.

FOR INCREASED EFFICIENCY WITH ECONOMY Rely on

HIMCO
BATTERIES (MADRAS) PRIVATE LTD.
144, MOUNT ROAD, MADRAS-6.
PHONE. OFFICE: 86203 & 86204. FACTORY: 80758
GRAMS: HIMBATTERY.
ASSOCIATES AT: BOMBAY, 7-DELHI, 6

GRAMS:
FUELPUMP

for **DIESEL ENGINES**
Spare parts **TRUCKS & TRACTORS**
THE INDIAN ENGINEERING & TRADING CO.,
26, Wallers Road, Mount Road, Madras-2.

PHONE:
85789

September 1961

Vehicles must be used to the maximum extent possible

Only way to solve the Goods Transport Problem

Motor Vehicles and Allied Industries Association's request to Southern State Governments

Pointing out that the transport of goods will pose a serious problem even at the end of Third Plan because of substantial all-round enlargement of industries and agriculture, the *Motor Vehicles and Allied Industries Association*, in their representation, dated Aug. 8, to the Governments of Madras, Mysore, Andhra and Kerala have urged for the increase in the permissible gross laden weight of the Goods Vehicles to 12 tons.

They point out that even at the end of Third Plan "our vehicle population will be more or less as low as it is now, although their need and work would have increased several fold by that time. The available vehicles are being terribly under utilised by needless restrictions on permissible laden weight."

Text of the Memorandum

"We realise that the subject is not being placed before Government for the first time, and that we have approached you more often about this than about many other subjects affecting the road transports industry. But, we submit that this only shows its importance and urgency, especially at this juncture when our big Third Plan is to be ushered in. We feel sure that the time is now propitious for a substantial increase in the permissible laden weight of goods vehicles, in proportion to the increase in the size of the Third Plan over its predecessors.

Our earlier representations have shown that, for our population, our country has comparatively a very low mileage of roads. Against 3½ miles of road per sq. mile and for 3878 in road per lakh of population in the U.K. for example, we have about ½ mile of road per sq. mile, and only about 87 miles of road per lakh of population; and against 25 vehicles per mile of that much of roads in the U.K., and 9575 vehicles per lakh of people there, we have only an average of under 1 vehicle per mile of our few roads, about 102 per lakh of people. And admittedly, our population grows so rapidly that we have to progress faster than many of those countries in the West, to save sliding further down.

Our indigenous production of trucks is about 30,000 per annum. It is proposed to be doubled, in the Third Plan. However, according to the figures of the Ministry, the actual rate of production for the first half year of the Third Plan is to be only at 30,000 vehicles per annum, since our production depends greatly on our available foreign exchange; and the Government of India have enunciated in clear terms that they will increase their allocation of foreign exchange, for increase in the production of trucks in our country, so that indigenous production of truck will increase only to the extent we increase indigenous production of truck components. It is thus too much to hope for more than 40,000 trucks to be produced in our country in a year. As on 1-4-1961, there are 2,25,000 vehicles on the road; and the annual mortality rate is 5%. The total increase in the number of vehicles, during entire period of the Third Plan, can be, judged from the above figures, only about 1,50,000, so that, even at the end of the Third Plan our vehicles population will be more or less as low as it is now, although their need and work would have increased several-fold by that time, due to the substantial all-round enlargement of our industries and agriculture, and the steady, and rapid increase in our population.

Bottlenecks

Transport has its important role in every industry, and in agriculture and marketing. The shortest bottle-neck in transport will upset everything else. It is admitted that the railways have not been able to, and cannot cope with, the available transport even now. More than one conference has been called together by the Central Government to find out ways and means to relieve the congestion. The role that road transport is to play has become even more important than hitherto. Any road transport industry is more labour intensive than the rail (8.8 : 1.8). It is therefore imperative that the few available vehicles must be used to the maximum extent possible. Increase in Permit Laden Weight is the solution. South India is acknowledged to be in the vanguard in many matters; and in road transport, we have been the pride of our country. Comparatively, our roads are very good. But, the available vehicles are being terribly under-utilised by needless restriction on permissible laden weight. Mysore permits only 24,000 lbs on highways; Andhra only 21,000 lbs. (only on some specified route); Madras only 20,160 lbs.; and Kerala only 19,500 lbs.

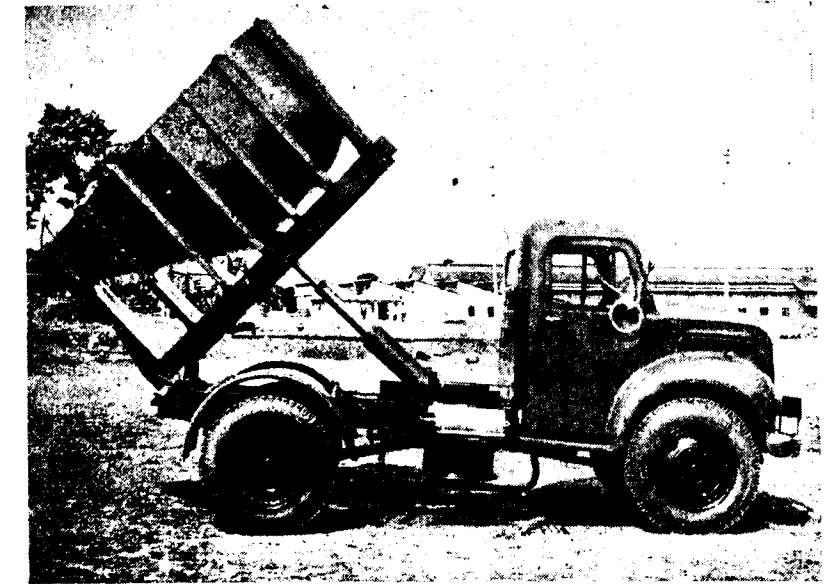
Time was when it could be argued with some force that all our culverts could not bear the weight of fast-moving automobiles of a gross weight of about 12 tons. Thanks to our Plans, many of our bridges and culverts have since been strengthened or rebuilt; and actually they have well withstood even the heavily overlaid vehicles plying inter State in all the southern States, and also to Bombay and beyond.

In the circumstances, we request that the permissible gross laden weight of goods vehicle may be raised at an early date to 12 (twelve) tons.

Premier's dumpsters for ready-mixed concrete

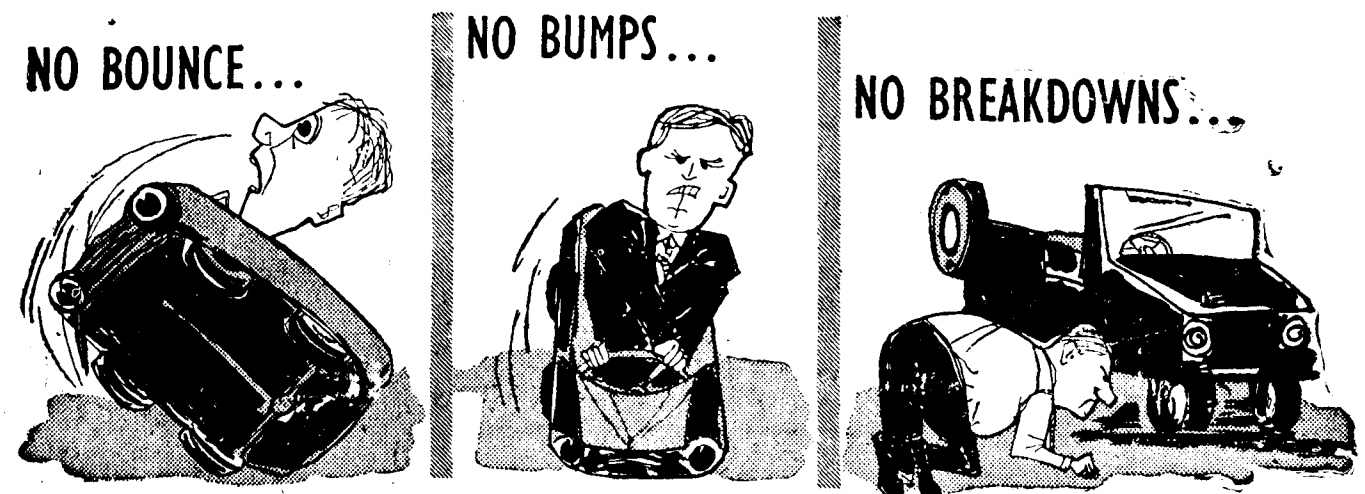
Efficient transportation of liquid concrete is a great asset to the construction engineers at factory and building sites. Keeping this in mind, the Premier Automobiles have developed a concrete dumpster to be mounted on their Dodge and Fargo 115' w. b. diesel truck chassis.

The dumpster has an all-steel, welded container which can carry 2½ cub. yards ready-mixed concrete. All sides and corners of the container are radioised to prevent sticking of concrete. It has a "Tele-hoist", under-body, tipping mechanism operated hydraulically from driver's cabin with all controls conveniently located in the cab within driver's easy reach, which means the entire process of carrying and dumping the concrete in plastic condition is done by only one man. A great economy and time-saving feature!



The 'half-egg' like shape of the container, with a narrow mouth, enables easy discharge of the contents on the site.

Two of these dumpsters have been recently supplied to Messrs. Lummus & Co., Construction Engineers for Synthetics and Chemicals Ltd., Bareilly.



when you use **JAI** springs



Always use **JAI Springs** Stronger by far

'JAI' Springs possess just the right tension and resiliency to give the right spring. That is why 'JAI' Springs are so right for your vehicle.

Progressively manufactured by:

THE JAMNA AUTO INDUSTRIES,
Yamunanagar (Punjab)

Distributors for South India:

UPPER INDIA TRADING CO., PRIVATE LTD.
1/18, Mount Road, MADRAS-2

Temples and Monuments

in and around Madras City

Madras and its environs are known historically, to have been busy centres of cultural and religious activity from very early times. Hence the existence of a number of important and interesting places along the coast of Madras (Coromandal coast) such as Tiruvotriyur, Triplicane, Mylapore, Tiruvanmiyur and Tirupporur, some of which are important for Muslims and Christians too. Almost parallel to the coast and at a distance ranging between 10 and 20 miles may be found places like Poonamallee, Tirumullaivayal, Vadapalani, Kunnathur etc.

Mylapore

Historians infer that the present temple dedicated to Kapaleeswarar should have been constructed recently about 300 years ago. They say according to their research that the older shrine had been near the seashore of San Thome and that it might have faced destruction by the Portuguese who invaded Madras. This statement is proved by the fact that there are no inscriptions in the present temple.

Another view is that the ancient Mylapore with its beautiful temple been had submerged in the sea. It is said that about 12 miles of land had been lost and the present temple was built later.

This place was once dominated

by Jains and the fact that it was a flourishing port is seen in many Tamil classical literary works. One Mr. John Newhop who had visited this place in 1662 had stated that Mylapore was a commercial port. The famous merchant Elalo Singan was one of the fabulous merchants who lived here carrying maritime trade. Marco Polo had also visited this place.

The temple is associated with one of the four Saiva saints, Gnana-sambandar. He established a great Saivaite centre in Mylapore and is said to have performed the miracle of reviving to life a Chetti girl-Poombavai from her cremated remains.

There is also another shrine in this temple for "Vayilar" (because he observed silence throughout his life)—one of the 63 Nayanmars and—who was born in Mylapore and attained salvation by meditating and offering pujas mentally to the God within himself.

Triplicane

The temple of Shri Parthasarathyswamy at Triplicane is a famous shrine and it is one of the Divyadesams glorified by Alvars. "Brindaranya" is the traditional Puranic name of Tiru-Alli-Keni. It is said that for several centuries it has been a halting place

for pilgrims who came down from Tirupathi to have bath in the sea on the days of Solar and Lunar eclipses and other auspicious days.

The origin of the temple dates back to more than 1,200 years. There are a few inscriptions in this temple, the earliest being ascribed to the 12th year of the Pallava ruler Dantivarman. The Mahamandapam and the Thiruvaimozhi Mandapam contain specimens of architecture of pre Pallava period.

The temple was for some time under the authority of the Dutch merchants who occupied the front part of the temple during their attack on San Thome in the 17th century AD. Later on they handed over Triplicane and the temple to the East India Company. Providentially the temple has escaped the insurgence of the troops of Hyder Ali and Tipu Sultan during the 17th and 18th centuries. The temple was under the management of East India Company till 1813 when it was handed over to three prominent persons of the locality to administer it according to the usages and traditions of the institutions. The temple owns rare and costly jewels.

In Triplicane there is the Big Mosque where Muslims congregate every Friday for special prayers. On the Muharram day the Muslims

pay a visit to the Mylapore tank.

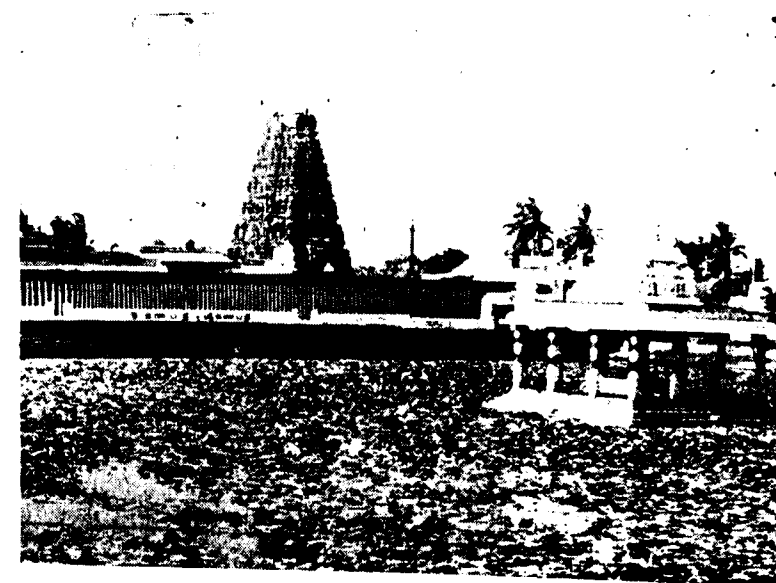
Tiruvanmiyur

It is a village on the sandy sea coast six miles south of Madras city and 2 miles from Adayar. It is noted for its ancient Siva temple. Inscriptions show that this temple has been in existence from the days of Chola rulers of 11th century. There is a small temple dedicated to Sage Valmiki, the author of 'Ramayana'. In the foreshore stands the samadhi of Shri Pamban Swamigal a pious devotee of the last century.

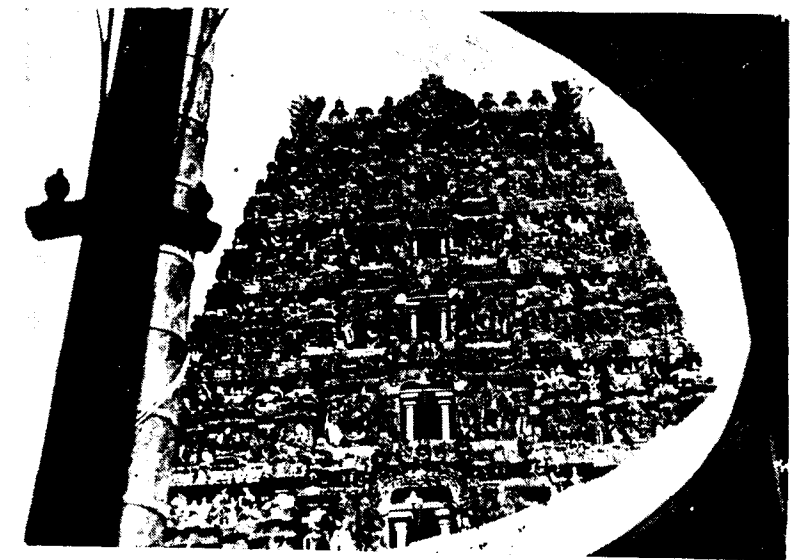
Kalakshetra, the school of Indian Art, is establishing its own buildings near here. Founded by Srimathi Rukmini Devi Arundale its aim is to train young people to be creative artists as painters, dancers and musicians. The college of fine arts offers a variety of courses including those in Bharatanatyam, Kathakali and Carnatic music. Weaving is a specialised art at this place and hand woven textiles, particularly sarees of exquisite old patterns are produced here and they are highly popular for their typical Indian designs and artistic colour schemes

Tiruvotriyur

Another ancient temple which dates back to the days of Kaviri-



Tirupporur Temple



Tiruvotriyur Temple.

pumpattinam of "Silappathikaram" is that of Tiruvotriyur. It is stated Adi Sankara visited this place and did his best to put an end to the annual sacrifices. This is the place where Sundaramurthy Nayanar one of the four important Saiva saints was married to Paravaiyar. The temple is rich in having inscriptions and rock edicts. The great Chola King Raja Raja had made it a point to visit this temple during the annual festival without fail. The place is also important since the Samadhi of sage

Pattinathar is situated near the sea shore.

Tirupporur

This temple is on the road leading to Mahabalipuram (34 miles from Madras) dedicated to Lord Muruga. According to inscriptions in the temple the place was called Samarapuri. It contains inscriptions of Vikrama Chola and Vijayakondadeva referring to some gifts to the shrine. Chidambara Swamigal a sage from Madurai built this temple, and there is a small shrine allotted to him. The Sthalapurana mentions that Agastya was taught the meaning of "Pranava" over the hillock which is known as "Pranavamalai".

Apart from its religious importance this place is well suited for a week-end excursion.

Tiruneermalai

Three miles from Pallavaram is a small hill on the top of which there is a temple dedicated to Neervanna Perumal. This place has become very popular and more marriages are performed at this Samadhi during the marriage season.

Koroor

The temple here is an ancient one which has an inscription

belonging to the age of Sundara Chola, father of Raja Raja the Great. This shrine though small had captivated Shri Thyagaraja Swami that he stayed there for over a week and composed five gems of Kirthanas (Kovoor Pancharatnamas) about the presiding diety. The vimanam in the temple is in the shape of "Gaja Prishtha" (back of an elephant). This indicates that it is of later Pallava style.

Kunnathur

Very near Kovoor is Kunnathur, the birth place of Sekkizar, the author of Periya Puranam (History of Saiva Saints). He was much enamoured of the place Tirumageswaram in Tanjore district and named this place as Tirumageswaram.

George Town

The Chennakesava Perumal and Chennamalleswarar temples in George Town have originated the name of city, which is known as also Chennapatnam, installed in a much older temple within the Fort St. George and it was removed from that area when the British Settlement was established there. It was installed in its present location about 200 years ago by one Muthukrishna Mudaliar, Dubas of Governor Pigot.

The other popular temple in this area is Ekambareswar temple in Mint street built in 17th century by Alangadu Pillai, one of the leading merchants who traded with the East India Co. The temple is a replica of the Ekambareswar temple, Kancheepuram.

Other temples worth mentioning are Kandaswamy Koil, Kachaleeswarar temple and Malleswarar temple.

Vadapalani

Shri Vadapalani Andavar temple, a shrine of recent origin, is at Kodambakkam, a suburb of Madras. This temple has gained popularity and thousands throng to this shrine on Krithikai day every month.

Tirumullaivayal

It is situated at a distance of about 13 miles to the west of

TONDAI MANDALAM

Tondaiman was ruling over the region comprising the modern districts of Chingleput, North Arcot, Chittoor and Madras from Kancheepuram, the region which later on came to be called after him as Tondaimandalam. There is no authentic historical information relating to Tondaiman.

It is interesting to note that a good number of temples built in Tondaimandalam between 900 and 1100 AD. were in Gajaprishta in plan in which the backside of temple is round. (Gajaprishta means backside of an elephant.)

Madras and is only a mile or so to the east of Avadi, where the historic 60th session of the Indian National Congress was held. Adopting Socialism. There are three temples of which the most prominent is the ancient and beautiful temple of Siva. The association of Sundaramoorthy Nayanar with the place affords a definite historical evidence for its antiquity. Inscriptions of Uttama Chola (975-985 AD.) Rajendra Chola (1012-1043 AD.) and of Hari Hara and Bukka the

founders of Vijayanagar dynasty are found in the temple. During the raids of Hyder Ali of Mysore it suffered much. In the beginning of the 19th century one Masilamani Mudaliar tried to restore the temple to its former glory and splendour.

Gandhi Mandapam

The memorial to the Father of the Nation at Raj Bhavan Gardens, Guindy was built at a cost of Rs. 4 lakhs.

The semi circular Mandapam has one Gopuram in the Chola style and two Pallava Pagodas. The structure has a large number of pillars which are noted for their excellent carvings. On the last Friday of every month people gather here for the evening prayer and bhajan. The Mandapam which has become a pilgrim centre stands as an embodiment of love, truth and ahimsa.

Christian Monuments

Christianity has had a long history in Madras and numerous monuments left here down the centuries speak for themselves.

Santhome

The place near the seashore takes its name from Saint Thomas. This has long been a residential area devoted to the homes of those who

were at one time the merchant princes of the trading community of Madras.

One of the earliest versions of St. Thomas martyrdom is given by Marco Polo, late in the 13th century. It tells how the Apostle was accidentally killed whilst praying on his little mount by a stray arrow of a huntsman in search of a peacock.

Dominating this scene is the noble Cathedral of San Thome closely associated with the legend of St. Thomas called Dydimus one of the 12 Apostles of Christ. Built and consecrated in 1896 this specimen of excellent Gothic architecture stands exactly over the small original Chapel dedicated to St. Thomas where it was piously believed the remains of the saint were laid to rest.

Recording his visit to Mylapore Marco Polo, the great Venetian traveller says.

"Christian pilgrims carry away the earth from the spot where the saint was killed, and this they afterwards employ in cases of tertian and quartan fever and by Grace of God and through the merits of the Saint these maladies are cured" (quoted from Zaleski "The Apostle of St. Thomas").

St. Thomas Mount

The entire village of St. Thomas Mount is a Christian monument in Madras. The place has acquired celebrity long before the English made it their strategic military port. Marco Polo mentions that numerous Christian communities lived at St. Thomas Mount even in the thirteenth century when he visited this place.

The historian D'orcey (in his "Portuguese Discoveries") writes:-

"To this day and from time immemorial the city of Meliapour to which Christians of India have given the name of St. Thomas sees every year two neighbouring hills (meaning the Little Mount and St. Thomas Mount close by

ANCIENT CITY

Multi legged earthenware sarcophagi of the larnax type have been discovered in the Kilpauk division of the city. Though these burial sites have not been exactly dated it is presumed that they are of the early centuries of the Christian era. The archaeological relics show very conclusively that the region that is now Madras city has been inhabited and was within the stream of Indian culture from Marayan times.

—Dr. A. Aiyappan,
"Ancient Monument in Madras."

each other) covered by a multitude of Christians to deposit their offerings and to pray at the shrine of the Holy Apostle."

The Portuguese took possession of the hill in 1545 and from that day the hill is known as 'Parangimalai' the word Parangi referring to the Portuguese.

Two objects of attraction on the hill to the historian and the tourist are the "bleeding cross" and the picture of Madonna said to have been painted by St. Luke an Apostle of the Christ and preserved in the church on the top of the hill. The former is a stone cross on which the blood of St. Thomas is said to have splashed when he died.

St. Mary's Church

Within the walls of Fort St. George is the oldest Protestant Church in India and it is the oldest building in Madras city. It dates from 1680. The large and well executed painting, "The last supper" is believed that it was a spoil of war from Pondicherry when that town was captured by British.

Industrial Madras

A number of industries big and

small is coming up in and around the city.

The Integral Coach Factory

which has been built in Perambur is one of the largest coach building units in the world. Started in 1955 it cost over Rs. 7 crores to set up. The factory now produces 50 coach shells per month with almost all the components made in India. With a double shift working the factory can produce 700 all-welded light weight steel coaches for the broad-gauge lines on the Indian Railways. A furnishing unit costing Rs. 3.7 crores is being set up in the factory with view to providing interior requirements of the coaches.

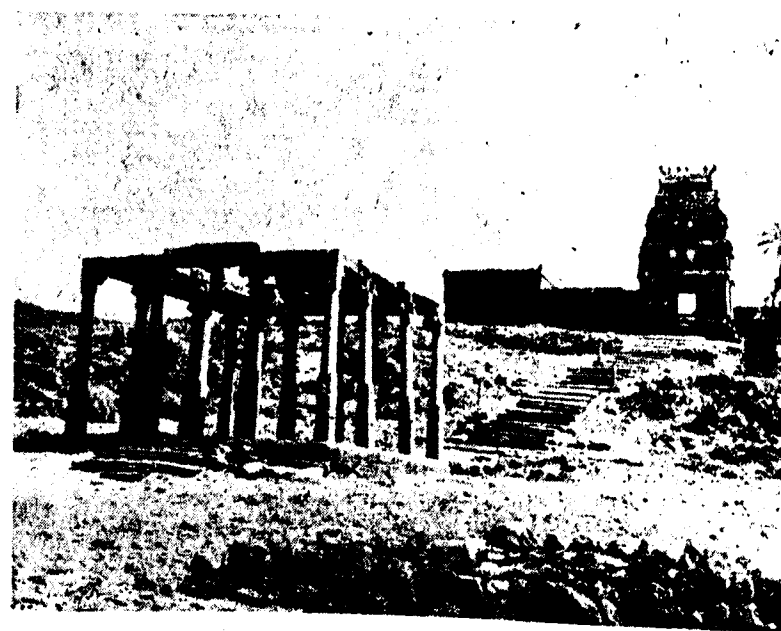
The Buckingham and Carnatic Mills

If the Integral Coach Factory is an outstanding example of State enterprise, the B & C Mills is a typical instance of private enterprise, news doing their best to maintain high standards. Originally the B & C Mills were two units. The Buckingham Mill named after the Duke of Buckingham and Chandos, then Governor of Fort St. George, started as a spinning mill in 1877. The mill took up weaving in 1893. Dyeing was started a couple of years later. The Carnatic Mill started as a spinning and weaving mill in 1883. The amalgamation of two mills took place in 1920 and the B & C Mills are the biggest composite unit 'under one roof' in Asia. They produce 200,000 yards of cloth every day and employ 15,000 workers.

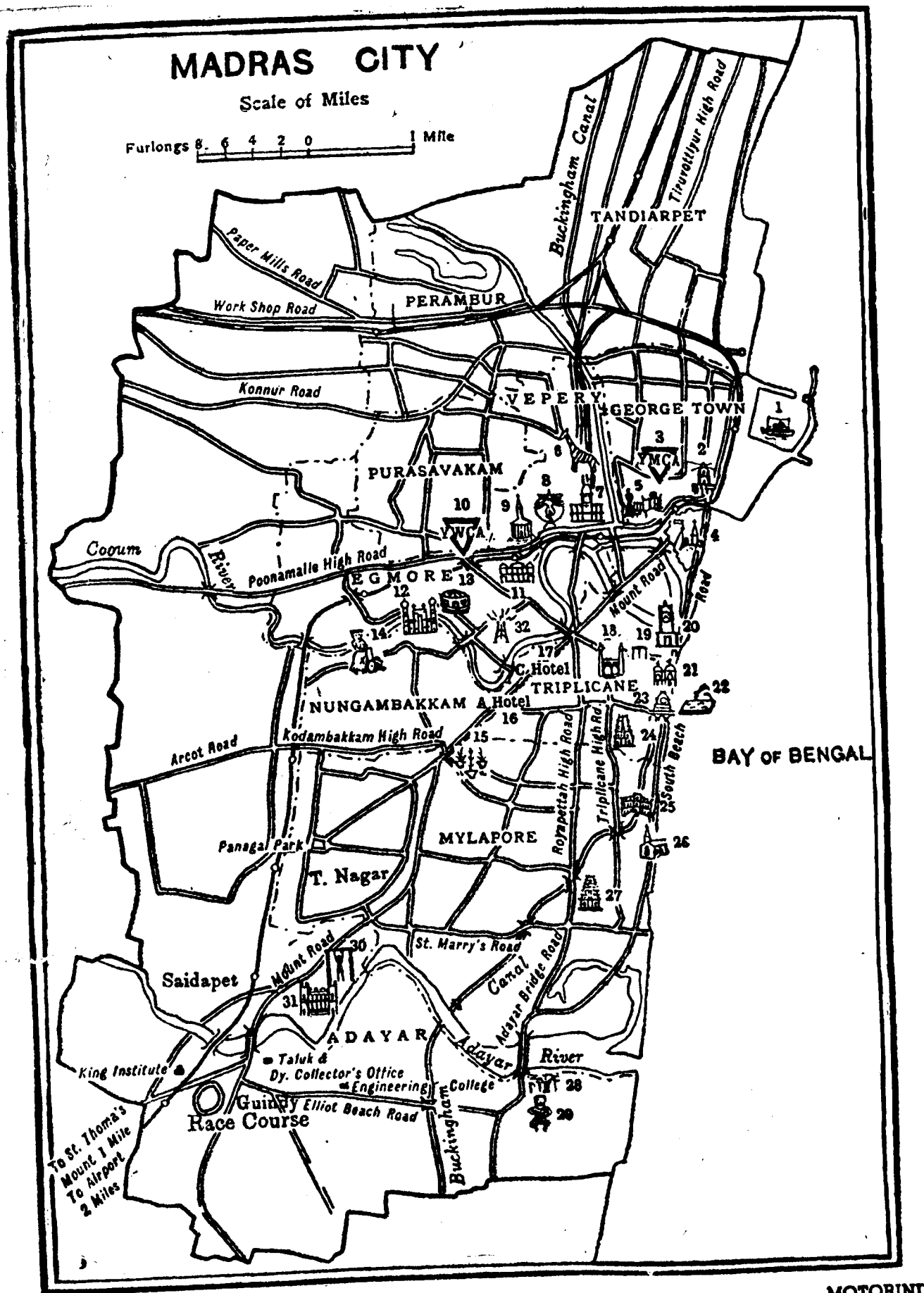
In North Madras a series of factories is established and more are coming up. Winceo Match factory, Tobacco factory, Rubber factory, Carborundum, Universal, Enfield factory, Ashok Leylands, and Amalgamation Group factories in Sembian are some of these that can be mentioned.

The Industrial Estate

Guindy is a growing centre of small industries. This is one of the industrial estates which the



Kunnathur temple situated on a small hill



MOTORINDIA

REFERENCE TO NUMBERS

—in the map

1. Madras Harbour, George Town
2. High Court & Light House
3. Y. M. C. A. Esplanade
4. Fort St. George & St Mary's Church
5. General Hospital, Park Town
6. Peoples Park, Zoological Garden & Moore Market
7. Central (Railway) Station
8. School of Arts, Poonamallee High Road, Egmore
9. St. Andrew's Church, Egmore
10. Y. W. C. A. Poonamallee High Road
11. Egmore Railway Stn., Egmore
12. National Art Gallery, Pantheon Road, Egmore
13. Govt. Museum, Pantheon Road, Egmore
14. Willingdon Nursing Home, Pycrofts Garden Road, Nungambakkam
15. Agri-Horticultural Gardens, Teynampet
16. Ambassador Hotel
17. Connemara Hotel
18. Big Mosque, Triplicane
19. Madras Cricket Club, Chepauk
20. University Library and Senate House, Marina
21. Chepauk Palace, Chepauk
22. Swimming Pool
23. Presidency College, Triplicane
24. Triplicane Temple, Triplicane
25. Queen Mary's College for Women, Marina (Mylapore)
26. Santhome Cathedral, Santhome
27. Mylapore Temple, Mylapore
28. Theosophical Society, Adyar
29. Kalakshetra, Adyar
30. Y. M. C. A. Saidapet
31. Teachers' College, Saidapet
32. All India Radio Broadcasting Station

September 1961

Govt. have helped to start all over the country with a view to stimulating the growth of small scale industries.

Sport and Pastime

The ideal part of the year to visit Madras is from November to February which coincides with the Madras racing season, the track being located at Guindy (4 miles from the city). For those interested in golf there are two courses one at Saidapet and the other within the Guindy race course.

Madras is also one of the principal centres for all-India cricket and test matches against the visiting

FOR WORLD PEACE

The greatest value of tourism is that it can be made a lever to transform the world divided into mutually antagonistic power blocs into One World. Through development of tourism the dream of world wide peaceful co-existence and mutual respect for each other's territories and cultures can be realised, goodwill among peoples of various continents and colours can be fostered and oneness of humanity can be made a reality.

—Arnold Toynbee.

teams usually take place in January. It also offers excellent arrangements for tennis and other sporting activities. For art lovers there are music festivals and dance performances which are usually held during the December-January season. For sea bathing, the most popular spots are Elliotts beach and Cathedral beach.

Worthy of a visit is Guindy Park adjacent to the official residence of the Governor of the State in Guindy. It is the only national park within easy reach of any city in the country and it contains a fine collection of black buck, spotted deer and is rich in jungle fowl, quail and hares. The flora, too, is very interesting.

SEND YOUR DIWALI GREETINGS



Through
Motorindia
7th Nov. Issue



Which will be
with readers just
on Diwali Day



Remember Motorindia
is the only fortnightly
publication on auto,
road transport and
tourism in India



MOTORINDIA
5A/147 Mount Road,
Madras-6

MODELS AND THEIR Prices

CARS

	Rs. nP.
Hindustan Ambassador 1957 (South India Automotive Corporation Private Ltd. Madras, Reliance Motor Co. Private Ltd. Madras) and Associated Accessories Private Ltd. Kurnool ex-plant Uttarpara ...	11,554 00
Standard Super Ten Saloon...	10,036 00
Standard Herald (Union Co. (Motors) Private Ltd.) ...	10,040 00
The Fiat 1100 Select (Sundaram Motors Private Ltd.) Ex-Factory ...	10,586 00
Willys C.J. 3B Universal Jeep ex-plant Bombay ...	12,621 00
Willys Model Station Wagon ex-plant Bombay ...	18,628 00
Willys 4-75 4 W.D. 118" Truck Chassis ...	13,108 00

MOTOR CYCLES

Royal Enfield (The Madras Motors (Private) Ltd.) -	
"150 Ensign" (any dealer point in India) ...	2,003 00
"350 Bullet" with spring frame (any dealer point in India) ...	3,568 00
Royal Enfield three wheeler chassis ...	4,670 00

SCOOTERS

Lambretta, manufactured by Automobile Products of India Ltd. Distributors, South India Automotive Corporation Private Ltd., Madras. Prices are ex-Factory, Bhandup, Bombay.	
48 c.c. Scooterette ...	827 00
150 c.c. 'LD' Model Deluxe Scooter ...	1,800 00
New Vespa 150 cc Scooter (sold in Madras by Sundaram Motors Private Limited) explant Bombay ...	2,079 00

VANS

TEMPO Three wheeler Vans (Manufactured by Bachraj Trading Corporation Private Ltd. Bombay and sold by M/s T. V. Sundram Iyengar & Sons, Madras at Madras and Stanluc Services at Bangalore). Prices are ex-plant Bombay. Hauscat ...	6,129 00
Delivery Van ...	8,118 00
Prichet Van ...	7,776 00

TRUCKS & COMMERCIAL

CHASSIS

CHEVROLET

(Assembled at Hindustan Motors Ltd., Calcutta and sold at Madras by Rane (Madras) Private Ltd. and Reliance Motor Coy. (Private) Ltd. at Kumbakonam by Kasi & Sethu and at Madurai by S. G. Jayaraj Nadar & Sons). Prices are ex-plant Calcutta for Petrol Chassis.	
132 1/2" W.B. ...	20,563 00
156 1/2" W.B. ...	20,800 00
174 1/2" W.B. ...	21,300 00
196 1/2" W.B. Diesel ...	22,400 00

BEDFORD

(Assembled at Hindustan Motors Ltd., Calcutta and sold at Madras by Rane (Madras) Private Ltd. and Reliance Motor Coy. (Private) Ltd. at Kumbakonam by Kasi & Sethu, at Madurai by S. G. Jayaraj Nadar & Sons and at Kurnool by Associated Accessories Private Ltd.)	
167" W.B. Petrol Chassis ...	17,880 00
167" W.B. Diesel Chassis ...	23,842 00
216" W.B. Full Forward Petrol Chassis ...	19,430 00

LEYLAND

The ex. plant prices are:

Leyland ECPO 2/1R-203" WB full forward control Passenger Chassis ...	35,690 00
Leyland COMET ECOP 2/2R-176" WB Full Forward Passenger chassis ...	35,260 00
Leyland Comet ECOS 2/2R 163" WB full forward goods chassis ...	34,400 00
Leyland "Comet" ECOS 2/2R 118" WB full forward Tipper chassis ...	34,185 00

TATA BENZ

(V.S.T. Motors Private Ltd. and Pandyan Automobiles Ltd.) Tata-Mercedes-Benz. Diesel Truck and Bus Chassis	
L 312/42 165" W.B. 5-Ton Truck Chassis ex-Works, Jamshedpur ...	26,390 00
LP 312/42 165" W.B. Full Forward Control Truck Bus Chassis ex-Works, Jamshedpur ...	27,350 00
LP 312/48 190" W.B. Full Forward Control Truck Bus Chassis ex-Works, Jamshedpur ...	28,140 00
L 312 36 142" W.B. 5-Ton Truck Chassis ex-Works, Jamshedpur ...	26,045 00
LK 312/32 126" W.B. 5-Ton Truck Chassis ex-Works, Jamshedpur ...	29,690 00

FARGO

Fargo (at Sundaram Motors Private Ltd.) Prices duty paid ex-factory Premier Automobiles Ltd., Kurla, Bombay.	
Fiat 1100 (5) 5.20x14-4 Ply Select BSW ...	10,586 00

DODGE/FARGO PETROL TRUCK

CHASSIS:	
M & P series D200 - 116" (4) 7.00x16 - 8 Ply ...	15,955 00
do do (4) 7.50x16 - 8 Ply ...	16,194 00
do D300 - 126" (4) 9.00x16 - 8 7 Ply ...	15,966 00
do do (4) 7.50x16 - 8 Ply ...	16,205 00
do W300 - 126" Power Wagon chassis (4) 9.00x16 - 10 Ply ...	22,569 00
KFW105 & 109PA6 - 165" w.b. load chassis (6) 8.25x20 - 12 Ply ...	22,003 00

DODGE/FARGO KEW DIESEL

TRUCK CHASSIS:	
105 & 109P6 - 165" (6) 8.25x20 - 12 Ply ...	28,648 75
105 & 109M4 - 165" do ...	29,131 75

DODGE/FARGO KEW DIESEL

BUS CHASSIS:	
87 & 89 P6 - 190" (6) 8.25x20 - 12 Ply ...	29,222 75
87 & 89 P6 - 142" (6) 8.25x20 - 12 Ply ...	29,036 75
87 & 89 Deutz 190" (6) 8.25x20 - 12 Ply ...	30,088 75
87 & 89 M4 - 190" (6) 8.25x20 - 12 Ply ...	29,286 75
89 P6 - 206" (6) 8.25x20 - 12 Ply ...	2,9525 75
89 M4 - 206" (6) 8.25x20 - 12 Ply ...	2,95825 75

The prices and specifications are exclusive of taxes and are subject to change without notice.

The scorching sands of Morocco... Treacherous, slippery gradients in the Terai during the monsoons... Snowbound mountain passes of the Alps... A tyre whose name you have not yet heard being tested —for tens of thousands of miles, over every kind of road. All the findings will be pooled at the Dunlop Research Centre in the U.K. Scientists will get to work rejecting, improving, perfecting. At the end of it all, a finer product from the Dunlop factories in India...

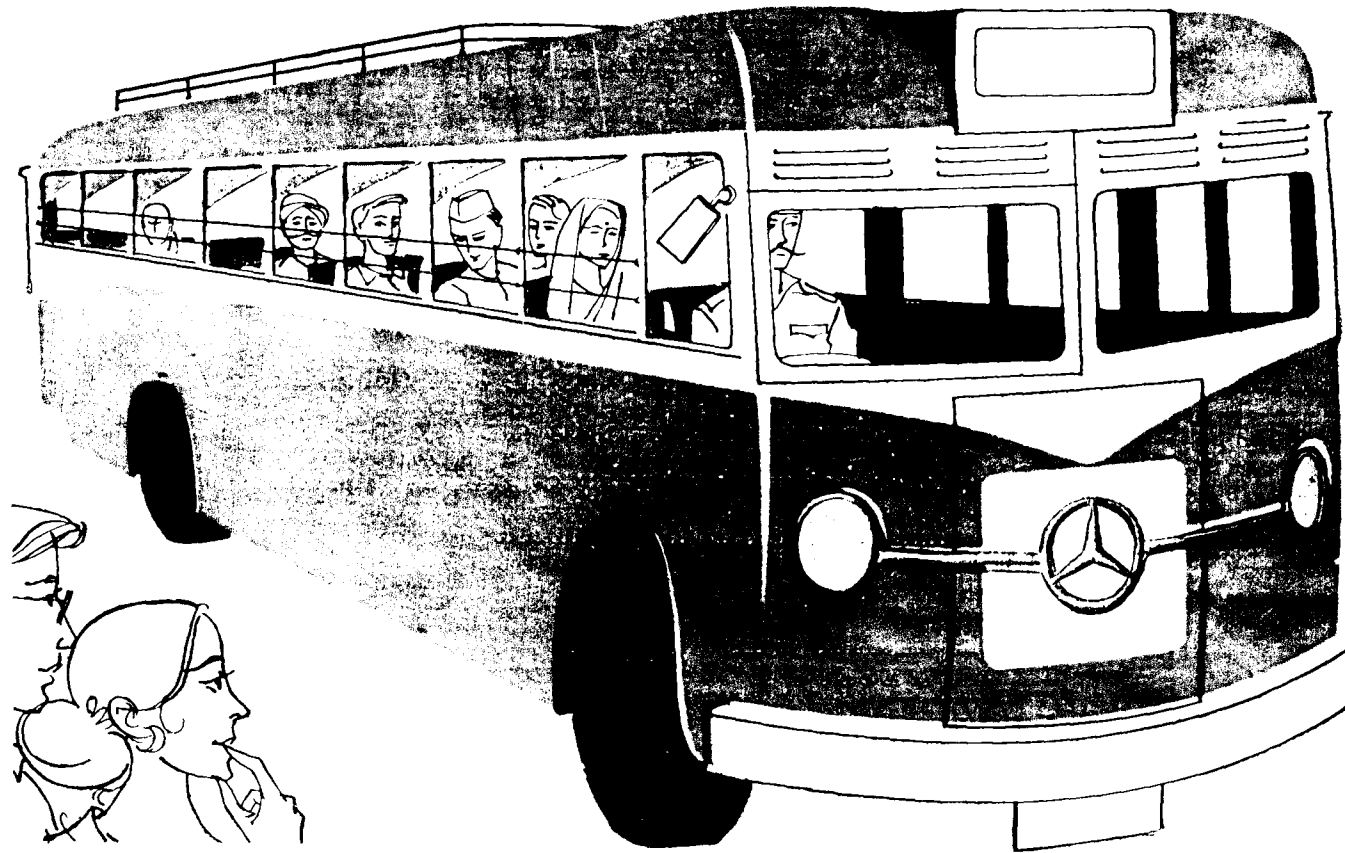
It is such technical aid and co-operation which symbolises the Dunlop commonwealth of industry. This is the principle that enables every Dunlop company, in India and elsewhere, to draw upon a world of experience and surpass what was yesterday considered perfect. This is the substance behind the new Dunlop symbol.

DUNLOP the symbol of progress



THE DUNLOP RUBBER CO. (INDIA) LTD.

Regd. No. M. 7440



For your vehicle

Valuable Protection!
Longer Life! with

NEROLAC

SYNTHETIC ENAMEL

Nerolac Synthetic Enamel

- * gives a glossy, extra-hard finish.
- * protects surfaces under all climatic conditions.
- * dries quickly...is suitable for all purposes.
- * gives years of satisfactory service.

Goodlass Nerolac Paints Private Limited

Forbes Building, Home Street, Bombay I
Managing Agents: Forbes, Forbes, Campbell & Co. Ltd.

JWT-GN 2484

GOODLASS NEROLAC PAINTS SERVE INDIA'S TRANSPORTS!