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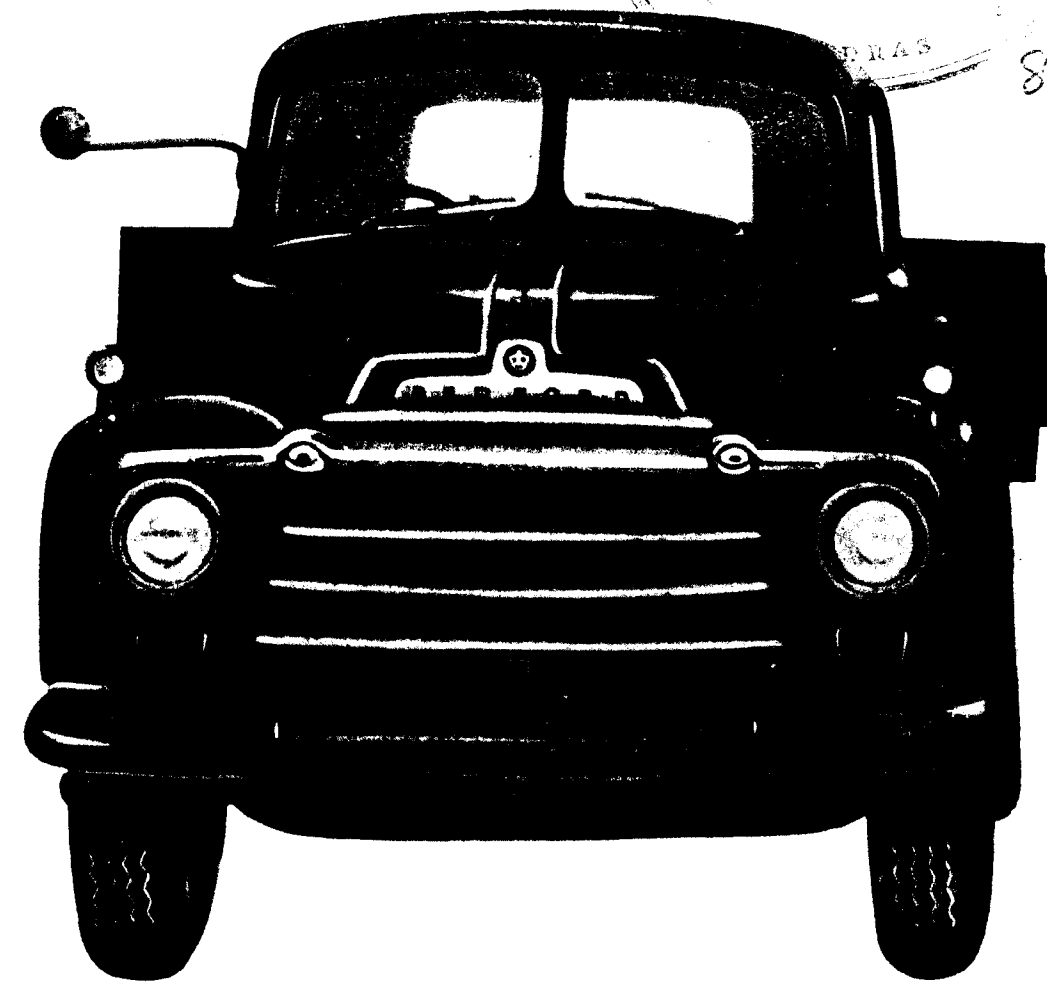
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VOLUME 3

JANUARY 1959

NUMBER 6



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experience in this
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DA 58/330

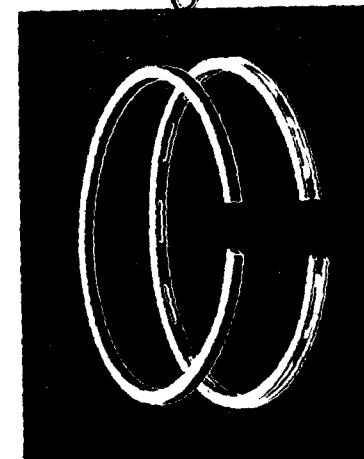


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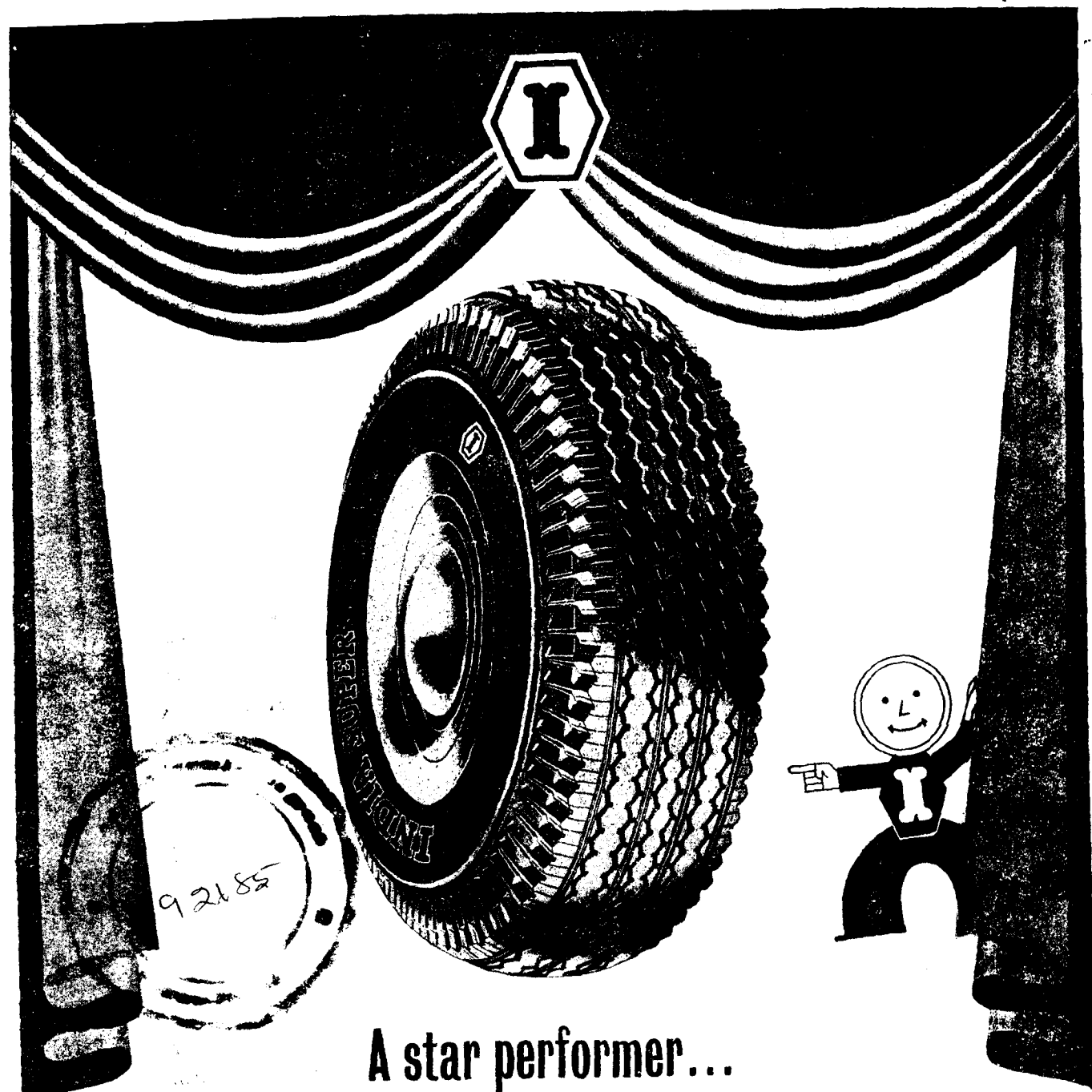
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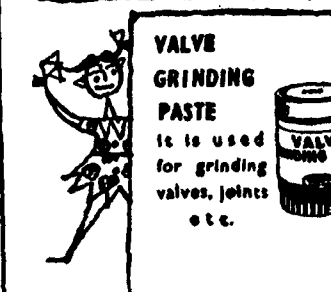
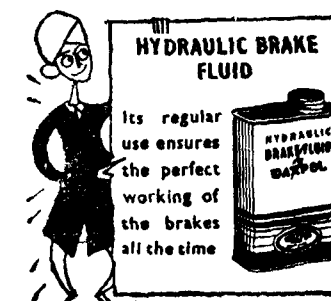
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MOTORINDIA

January 1959

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Vol. 3

JANUARY 1959

No. 6

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CONTENTS

	PAGE
Editorial	7
The Ubiquitous Motor Vehicle	9
Madras Motor Sports Club	13
The European Letter	17
Our Delhi Letter	23
Madras State Lorry Owners Association	26
Madras Motor Parts Dealers' Association	33
Mysore Automobile Parts & Allied Merchants' Association	34
Battery Banterings by A. Holden	35
Lead Acid Storage Batteries by V. Chokkiah	37
How a Battery Functions by Meharwan J. Patel	39
Tourism in India	49
MOTORINDIA News Section	50
Models and their Prices	52

INDEX TO ADVERTISERS

Amco Batteries Private Ltd.	36
Asbestos Magnesia & Friction Materials Ltd.	10
Bharat Motors	26
Bower Battery Manufacturing Co. (P) Ltd.	40
Carborandum Universal Ltd.	32
Chimanlal Desai & Co.	30
Coir Board	14
Department of Tourism (Govt. of India)	Second Cover
Dunlop Rubber Co., (I) Ltd.	22
Firestone Tyre & Rubber Co., (I) Ltd.	Back Cover
Glass & Miniature Bulb Industries	24
Goodyear Tyre & Rubber Co., of (I) Private Ltd.	12
Government of India	4
Gujarat Auto Stores	30
Goetze (I) Private Ltd.	1
Greaves Cotton & Crompton Parkinson (P) Ltd.	16
Himco Batteries (Madras) Private Ltd.	Back Cover
Hindustan Motors Ltd.	5
Indian Engineering & Trading Co.	30
India Pistons Private Ltd.	Facing Editorial
India Tyre & Rubber Company (India) P Ltd.	2
Kasi & Sethu	30
Lucas Indian Service Private Ltd.	28
Madras Mercantile Agencies Private Ltd.	30
Miniature Bulb Industries of India	34
Modern Automobiles	28
Modern Distributing Co.	24
Motor Industries Co., Ltd.	8
Mysore Electro-Chemical Works Ltd.	47
Oldham & Son (India) Ltd.	48
Pandyan Automobiles Private Ltd.	27
Popular Manufacturing Co.	29
Popular Trading Co.	30
Purushotham Murarjee	29
Ruby Auto & Radio Corporation	30
Shantilal C. Mehta	29
Standard Batteries Ltd	45
Standard Rubber Moulding Co.	20
Super Power Batteries (I) Private Ltd.	32
Tata Locomotive & Engineering Co., Ltd.	18
Waxpol Industries Ltd.	3
Western Battery Corporation	30

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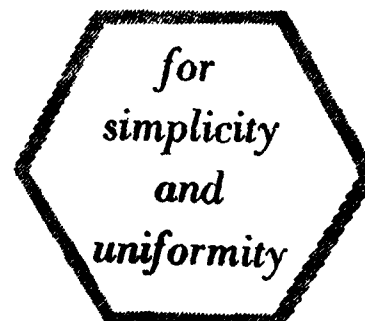
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20	2	200	10	2		200	20	2	
10	1	100				100	10	1	
1 KILOGRAM=1,000 GRAMS=86 TOLAS									

METRIC SYSTEM

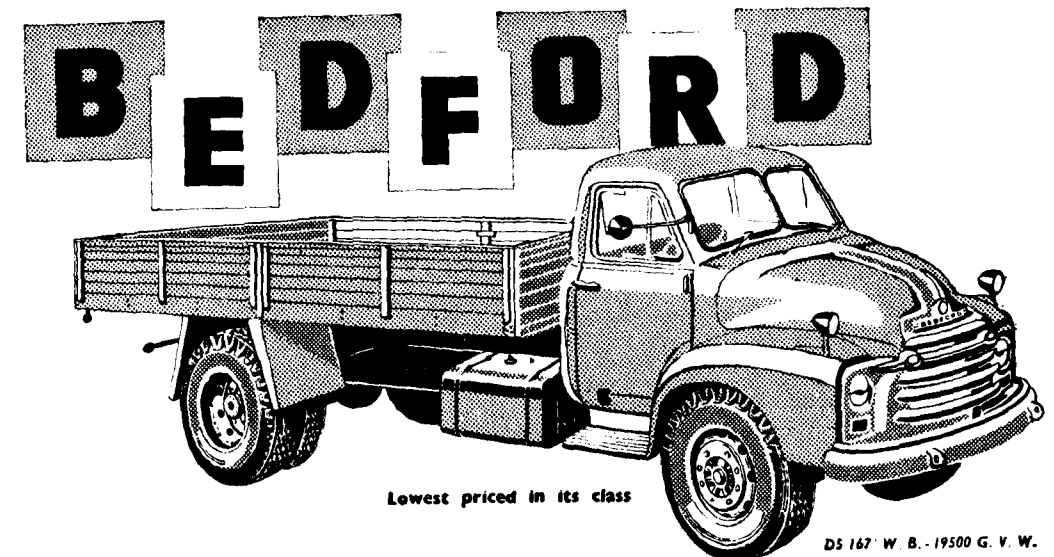
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DA 58/580

MOTORINDIA

January 1959



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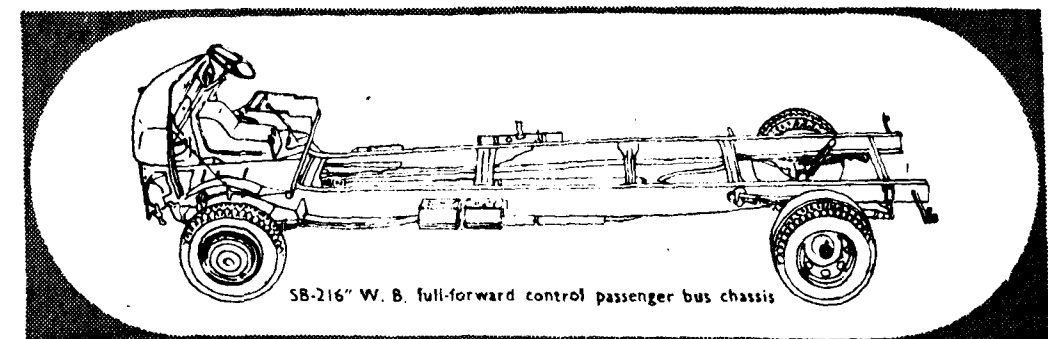
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M-1b



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editorial

NATIONALISATION

A controversy on the subject of nationalisation has always been in existence in various countries of the world for quite a long time now, and in India the same has been considerably strengthened particularly after the decision of the party in power at Avadi some years ago to direct the country on a Socialistic Pattern of Society. We are not so much interested in the politics of nationalisation, but we are very much alive to consequences and to economic aspects of the principle of nationalisation and its effect as and when it is applied to industries.

Our interest in the subject has grown recently, and naturally with the application of the principle, though in parts, to the question of transport. Road Transport today is run both private enterprise and in some instances by nationalised undertakings. While economists as well as politicians are keenly watching the trends in the transport industry with a view to justifying changes or stiffening opposition to the question of nationalisation, the Prime Minister has recently come forward with a categorical statement about the role of the public as well as the private sector in the country. Now, it is very important for the industry that is covered by this journal to note that the Automobile Industry has been classified a borderline industry in regard to the sphere in which it should operate in the future.

It was not many years ago that the first attempts at nationalisation were made and at that time, the Automobile Industry was definitely assigned a role among private enterprise. Now, what is it that has occurred since then that should have prompted the Prime Minister to clarify the same as a borderline industry, instead of an industry assigned for the private sector. The reasons are simple and not very difficult to find. The industry in the private sector was given all the necessary protection to enable its proper functioning. It is true that there was some difficulty during the last year or so in Government allotting all the foreign exchange that was demanded of it by the automobile industry for the proper and indigenous manufacture of vehicles and parts. But, much as we would dislike the public sector coming near this field of automobile and road transport, it is difficult to overlook the lapses in the manufacturing industry in the recent past. The case of the consumer has been sadly neglected in many an instance with the result that prices of not only vehicles, but also of parts are going up and the commodities getting so scarce that before long, ownership of an automobile in this country will come under the category of luxury than of necessity as it should be.

If the Automobile Industry is to be pulled back from the borderline position into which it has now moved, it is up to the manufacturer of automobiles and automobile parts to realise the great sense of urgency about the matter and plan in such a way that their products may be available to the consumer easily and that at a not very unreasonable price. We are constrained to say so because there can be no two opinions just now about the mounting cost of automobile spares and the difficulties and hardships to which nearly a million owners of automobiles in this country are subjected to in their attempt to keep the vehicles moving.

It is our earnest hope that not only the present manufacturers will bring down prices gradually thus passing on the benefit of experience and research to the consumer—as at least one manufacturer has recently done—but also more and more people associated with automobile parts, and there are plenty of them in this country, will take to manufacture of some item or other of the thousands of parts that go to make the automobile and make them successfully on a mass production scale so that the cost of production can be kept down to the minimum. Indian labour is supposed to be fairly cheap compared to other automobile producing countries and with all the pinpricks that may come from time to time from artificial leadership of labour in this country, it should be possible for manufacturers to produce quality goods at reduced prices.

The future of road transport in this country is indeed very bright and it is to be hoped that private enterprise will snatch the opportunity and act so as to keep it within its fold.

January 1959
M-2

MOTORINDIA

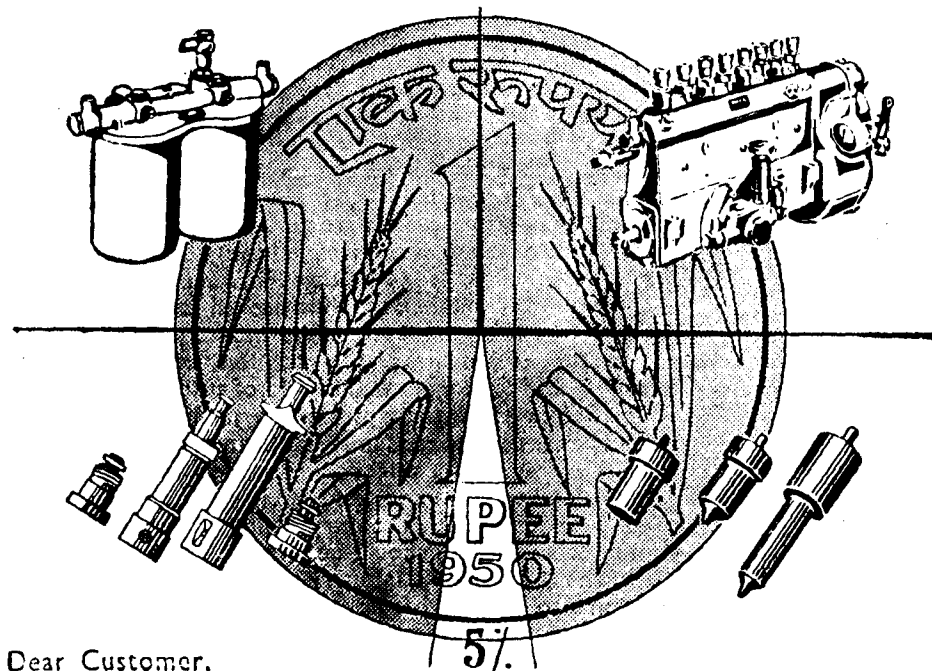
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We Proudly Announce
5% REDUCTION

ON LIST PRICES OF

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Dear Customer,

This is indeed Good News to you for the NEW YEAR. You may wonder how we can bring about a reduction in prices of our Fuel Injection Equipment at a time when prices of raw materials, electricity charges, labour costs, social contributions etc., are all on the increase. Only due to the high level of efficiency we have attained in production techniques and due to the goodwill and co-operation of our employees in an effort to maximise production targets, we can reduce our prices and pass on the benefit to you.

Yours in service,
for MOTOR INDUSTRIES CO., LTD.,
BANGALORE-1.

S. S. Sankar

THE UBIQUITOUS MOTOR VEHICLE

Despite the recent recession, the year 1958 has witnessed a further substantial increase in the number of motor vehicles on U.S. roads. The U.S. Automobile Manufacturers' Association estimates, in the recently published 1958 edition of *Automobile Facts and Figures*, that there will be in the country, by the end of this year, some 57 million cars and nearly 11.5 million commercial vehicles, both figures being about 2 per cent above the former records reached a year previously (see Table). Production of cars in the U.S.A. has fallen from over 6 million in 1957 to, say, about 4½ million in 1958 though, with inventories now very low, next year's output is likely to be 5½ million or higher. Also, it is expected that fewer vehicles, say, about 3½ million cars, will be scrapped during 1958 owing to the recession, compared with annual record figures of around 4.3 million in 1956 and 1957. The number of cars more than ten years old and candidates for scrappage will therefore increase.

The recent temporary decline in production has at no time halted the boom on the U.S. market of the small h.p. European car. Having risen from 108,000 in 1956 to 259,000 in 1957, car imports are expected to reach about 375,000 in 1958 and Mr. Henry Ford has recently forecast that they may go up to about 450,000 in 1959. It is, however, doubtful whether the import boom will continue into 1960 as the main U.S. manufacturers are then expected to bring out their own models of relatively small cars. Of the 259,000 cars imported in 1957, 100,000 were from Western Germany, 96,000 from the U.K., 37,000 from France, 12,000 from Sweden and 10,000 from Italy. For the time being, the U.S.A. is a net importer of cars and is the world's largest car import market while maintaining her position as the world's leading exporter of commercial vehicles.

As in earlier years, the new issue of *Automobile Facts and Figures* contains a great deal of useful information about car ownership. Out of nearly 50 million households in the U.S.A. last year, it is

estimated that 60.7 per cent had one car, 10.8 per cent two cars, and 1.5 per cent (750,000) households three or more cars; only 26 per cent were without cars. Furthermore, of the 17.3 million families with an income of \$5,000 or more, as many as 68 per cent had one car, and 23 per cent had two or more cars, with the proportion of households owning two or more cars going up to 50 per cent among those with an income of \$10,000 or more. On the other hand, of the 15.6 million families with an annual income of less than \$3,000, the majority—8.3 million—were without cars, and these accounted in fact for over 60 per cent of the 13,450,000 U.S. households having no cars of their own. Before World War II, car ownership had been confined to about half the U.S. families, and multiple ownership was then rare; as recently as 1948, a representative survey showed that only three per cent of all families then had two or more cars. Eighty-seven per cent of all families in suburbs own cars, but in towns of 500,000 or more inhabitants, the proportion is about 56 per cent. In these localities, public transport facilities are usually better than elsewhere, while traffic congestion and parking difficulties are worse. California leads the eight states that account for half the country's total car registrations, the West Coast region having nearly 7 million cars owned by 81 per cent of the households there.

The average annual income of families buying new cars is computed to be \$11,000, most owners disposing of their new cars, on average, after a little over four years. The lower and medium income groups buy mainly in the second-hand market. In 1957, 8.4 million used cars changed hands, while 4.4 million cars were sold new. Over 60 per cent of all cars, whether new or second-hand, are normally purchased with the aid of instalment credit or other forms of borrowing, and at the end of last year, outstanding credits given to private persons for the purpose of car purchases reached a record of \$15,496 million. This year, however, outstanding

credits have declined as repayments exceeded new credits during the months of the recession.

Of the employed persons, excluding those who walk to their place of employment, 80 per cent go to work by car. The annual mileage done by passenger cars is as high as 9,350, and the mileage decreases progressively with the ages of vehicles and drivers. Of persons of 15 years of age and over, more than three-quarters of males and nearly half the women of the U.S.A. have a driving licence. Indicating the significance of the motor vehicle industry in the economic life of the country, it is estimated that the automobile gives rise, directly and indirectly, to employment for some 10 million people, also that the motor vehicle industry consumes nearly a fifth of the steel and about two-thirds of the natural and synthetic rubber used in the U.S.A.

Motor vehicle production of major companies in 1957

(In thousands of Cars and Commercial Vehicles)

North America

G.M.C.—U.S.A.	... 3,238
Ford—U.S.A.	... 2,172
Chrysler—U.S.A.	... 1,299
International	... 122
American Motors	... 114
G.M.C.—Canada	... 182
Ford—Canada	... 134
Others	... 370

Total ... 7,631

Western Europe (a)

Volkswagen	... 473
British Motors	... 397
Renault	... 314
Fiat	... 308
Ford-Dagenham	... 294
Opel	... 229
Citroen	... 206
Simca	... 171
Peugeot	... 167
Vauxhall	... 150
Daimler-Benz	... 120
Rootes	... 117
Ford—Germany	... 87
Others	... 610

Total ... 3,643

(a) West Germany, U.K., France and Italy, i.e., excluding Sweden and other smaller producing countries.

Source: Regie Nationale des Usines Renault.

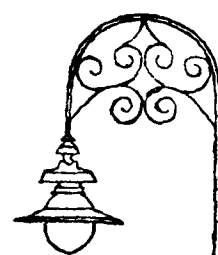
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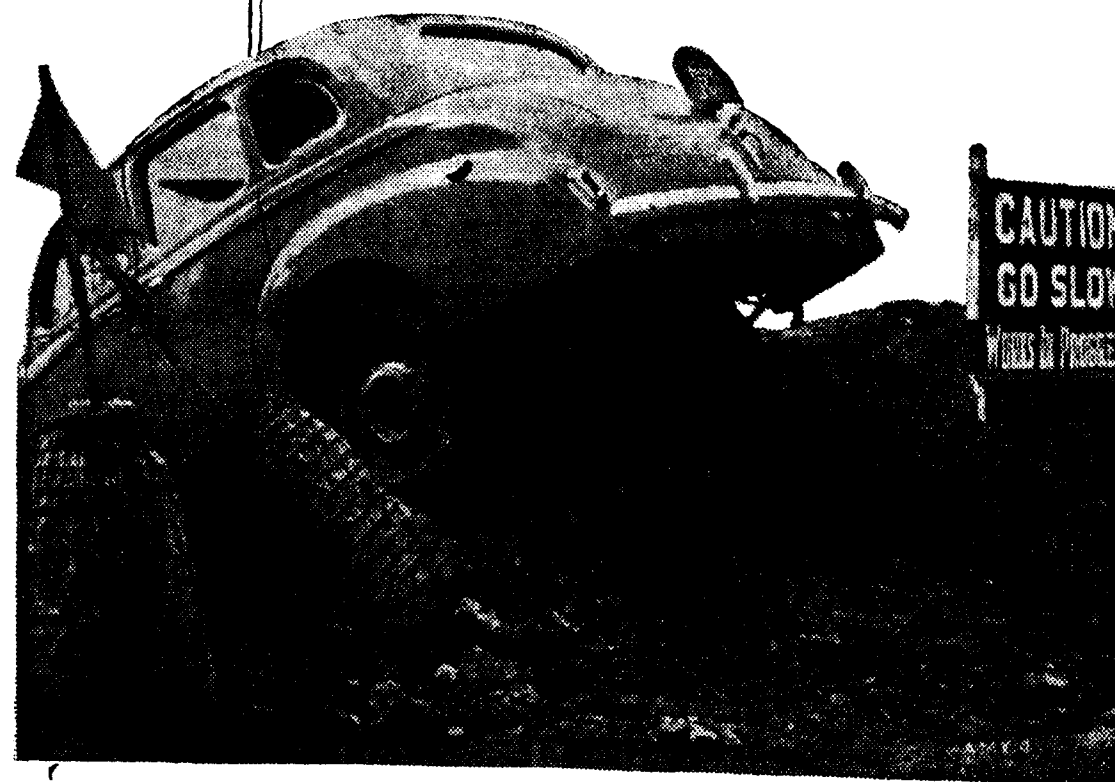
are you sure you can stop in time ?

If not, it's time you had your brakes tested. Regular brake testing every 2,500 miles means greater road safety for you... for others. Always fit **FERODO** brake linings for long service and smooth trouble-free braking.



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MATERIALS LIMITED**
(Turner & Newall Ltd.)
(Incorporated with limited liability
in England)
CALCUTTA - BOMBAY - MADRAS



U.S.A. Motor Vehicles

(In thousand units)

		Total Registered (a)		Production		Home Sales of U.S. produced new vehicles (b)		Foreign Sales of U.S. produced new vehicles (c)		Imports		Estimated numbers scrapped	
		Cars	Trucks, Buses	Cars	Trucks, Buses	Cars	Trucks, Buses	Cars	Trucks, Buses	Cars	Trucks, Buses	Cars	Trucks, Buses
1947	...	30,845	6,996	3,558	1,239	3,290	976	261	251	1	0	1,374	437
1954	...	48,461	10,082	5,559	1,042	5,350	802	207	195	35	0	3,840	513
1955	...	52,136	10,592	7,920	1,249	7,661	1,024	254	193	57	1	3,773	619
1956	...	54,201	10,982	5,816	1,104	5,610	864	193	206	108	3	4,327	621
1957	...	55,906	11,257	6,113	1,107	5,935	856	161	212	259	8	4,250	625
1958 (d)	...	57,000	11,470	...	...	...	...	...	...	...	...	...	...

(a) At end of year : excluding military vehicles.

(b) Sales to U.S. Federal Government agencies are excluded.

(c) Not identical with exports. According to U.S. Department of Commerce, 1957 exports were : cars 142,000, trucks and buses 194,000.

(d) Estimate by Automobile Manufacturers Association.

Source : Automobile Facts and Figures, 1958 Edition.

World Motor Vehicle Production (a)

(In thousand units)

		Passenger Cars			Lorries and Buses			All Vehicles			
		Jan.-June 1957	July-Dec. 1957	Jan.-June 1958	Jan.-June 1957	July-Dec. 1957	Jan.-June 1958	Jan.-June 1956	Jan.-June 1957	July-Dec. 1957	Jan.-June 1958
U.S.A.	...	3,359	2,754	2,251	579	528	447	3,807	3,938	3,282	2,698
Canada	...	219	121	182	44	27	32	277	263	148	214
Total N. America	...	3,578	2,875	2,433	623	555	479	4084	4,201	3,430	2,912
W. Germany	...	510	530	651	94	78	90	544	604	608	741
U.K.	...	389	472	551	139	151	166	592	528	623	717
France	...	373	365	486	100	90	103	432	473	455	589
Italy	...	155	163	193	18	15	18	168	173	178	211
Total W. Europe (a)	...	1,427	1,530	1,881	351	334	377	1,736	1,778	1,864	2,258
Grand Total (a)	...	5,005	4,405	4,314	974	889	856	5,820	5,979	5,294	5,170

(a) In major producing countries only. Production in other producing countries of the free world (mainly Japan, Sweden, Australia) totalled about 480,000 vehicles in the whole of 1957. (Source : S.M.M.T., London)

January 1959

M-3

MOTORINDIA

Confidence on the road

with the tyre that doesn't skid!



Inspiring confidence around the world, the Goodyear Supercushion and Deluxe Rib Tyres have been designed to grip any road surface in any weather. These tyres offer greater economy with deeper treads giving extra mileage.

TUBELESS OR TUBE TYPE

GOODYEAR

More people, the world over, ride on Goodyear tyres than on any other kind

PS 11

SURVEY OF BENZ BUSINESS YEAR 1958

The Daimler-Benz AG has taken full part in the continued 1958 growth of the automobile industry.

The entire vehicle production of the Daimler-Benz AG in 1958 will reach about 155,000 units. That means an increase of more than 25% in comparison to 1957. In this figure the car production shows an increase of about 18,000 vehicles, approximately 23%, while the truck and bus production increased by more than 15,000 vehicles — over 40%.

Engine production shows also a considerable rate of increase. An output of approximately 11,000 engines manufactured in 1958 stands in comparison to the output of 7,717 engines in 1957. This means an increase of approximately 45% in comparison to the previous year.

The gross sales figure of 2 billion DM estimated at the beginning of this year will be exceeded by about 5%. It shows in fact an increase of approximately 18% as compared to 1957. While domestic sales increased by about 11%, export sales rose by approximately 27%, thereby reaching about 45% of the total sales.

The company has succeeded in further increasing its share in the Federal Republic's total automobile exports, in the passenger car field as well as in commercial vehicles.

Incoming orders rose considerably in proportion to last year (all figures approximately): cars by 24% in comparison to 1957; commercial vehicles by 36%, thus showing a total increase of orders of 28%.

The number of employees in the 5 plants and 33 branches rose from 53,000 by the end of 1957 to about 58,000 at the end of this year.

The company believes that the automobile industry will have to face difficult tasks in the coming year: the Common Market will intensify international competition, particularly since the problem of a Free Trade Area, in which the automobile industry shows a keen interest, has not yet been solved.

The Daimler-Benz group will achieve in 1958 an annual sales figure of more than 3 billion DM.

MADRAS MOTOR SPORTS CLUB

Race Meet at Sholavaram

The Third All India Motor/Motor Cycle Race Meet was held at the Sholavaram Airstrip on Jan. 11 when a number of competitors took part in 9 events held. There were many participants from Coimbatore, Bangalore, Ceylon and Deccan Motor Sports Clubs.

A very large crowd of approximately 10,000 turned out to witness the Races and bandobust and seating arrangements proved very good.

Mr. B. Mirando of the Ceylon Motor Cycle Club achieved the hat trick by winning the three events for 250 c.c., 350 c.c. and 500 c.c. Mr. E. Arnolds of Ceylon, driving Jaguar XK 120 set up the best timing in the car event of 2.46 minutes per lap. He thus won a purse of Rs. 555.55 offered by the Proprietor of the Spade Clover Beedi Factory, Mr. Md. Noorullah.

From the increasing number of competitors from India and abroad, we can easily say that racing has come to stay in Madras.

Results

THE GURU DAS TROPHY: Open Race for Scooters and Motor Cycles up to 150 c.c.: 1st Mr. Mahendranath Shiva, The Enfield Club, Royal Enfield—148 c.c. 2nd Mr. John Webb, The Bangalore Motor Sports Club, Lambretta—150 c.c. Time: 7m. 12 secs. Fastest Lap—Mahindranath Shiva 3m. 31 secs.

THE MADRAS MOTOR SPORTS CLUB TROPHY: Open Race for Motor Cycles upto 250 c.c.: 1st Mr. B. Mirando, The Ceylon Motor Cycle Club, Gilera—175 c.c. 2nd Mr. B. S. Hari Rao, The Madras Motor Sports Club, N.S.U.—250 c.c. Time: 12 m. 9.4 secs. Fastest Lap—B. Mirando—2m. 47 secs.

THE UPPER INDIA TROPHY: Handicap Race for Stock Cars. For Madras Motor Sports Club Members only: 1st Mr. Marshal, Fiat 1100. 2nd Mr. Noorullah, Fiat 1100. Time: 10m. 22 secs.

THE ENFIELD TROPHY: Handicap Race for Motorcycles. For Madras Motor Sports Club Members only: 1st Mr. R. Hebbar, Royal Enfield 350 c.c. 2nd Mr. T. S. Srinivasan, Royal Enfield, 350 c.c. Time: 12m. 12 secs.

THE M.M.S.C. TROPHY: 1st Mr. A. D. Jayaram, Bangalore Motor Sports Club, Standard 10. 2nd Mr. Rajagopalan, Coimbatore Auto Sports Club, Fiat 1100. Time: 16m. 27 secs.

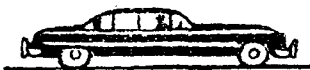
THE VISRAM TROPHY Handicap Race for Cars 1100 c.c. to unlimited: 1st Mr. E. Arnolds, Ceylon Motor Cycle Club, Jaguar XK-120. 2nd Mr. A. K. Siddanna, Coorg Motor Sports Club, Hindustan Ambassador. Time: 14m. 12 seconds.

THE CURRIMBOY TROPHY: Junior Open Championship for Motorcycles upto 350 c.c.: 1st Mr. B. Mirando, Ceylon Motor Cycle Club, Gilera 175 c.c. 2nd Mr. Pravin Kumar, Deccan Motor Cycle Sports Club, B.S.A. 350 c.c. Gold Star.

THE WAKEFIELD TROPHY: Handicap Race for Sports Cars unlimited: 1st Mr. Rajagopalan, Coimbatore Auto Sports Club, Fiat 1100. 2nd Mr. Dayanidhi, The Madras Motor Sports Club, Standard 10. Time: 15m. 22 secs.

THE WAKEFIELD TROPHY: Senior Open Championship Race for Motorcycles upto 500 c.c. 1st Mr. B. Mirando, Ceylon Motor Cycle Club, Norton Manx 500 c.c. 2nd Mr. Ashok Shah, Deccan Motor Sports Club, Tri-Star Special 500 c.c. Time: 25 m. 35 secs. Fastest Lap: Krishnaswamy, Mirando and Tyrewalla 2m. 29 secs. Lap Record: Chandra D'Costa, 2m. 28 secs. in 1958.

MR. MD. NOORULLAH PRIZE FOR 3 FASTEST LAPS IN PRODUCTION CAR RACE: Mr. E. Arnolds, 2.46 per lap.

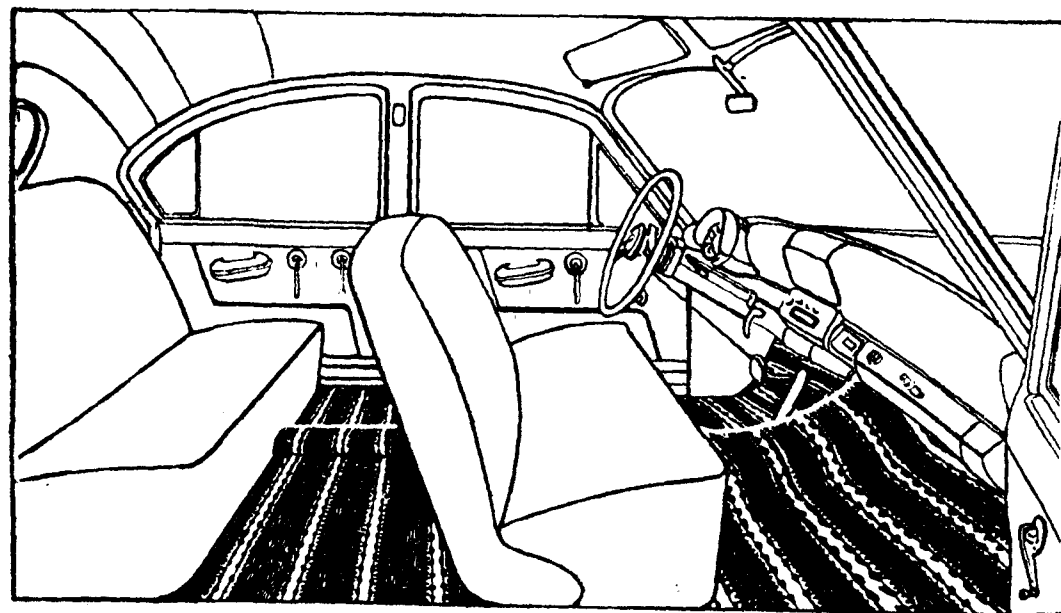


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5, STADIUM HOUSE, CHURCHGATE, BOMBAY.

COIR BOARD, (GOVERNMENT OF INDIA), ERNAKULAM

DRAMA OF THE DISC BRAKE

BY TREVOR PHILPOTT

In last year's Motor Show eight high-performance cars—seven British, one French—were fitted with disc brakes. All these cars are of considerable power, all are more or less expensive, and to all of them performance is more important than cheapness. But their adoption of this revolutionary method of braking clearly shows the way progressive car-designers are thinking.

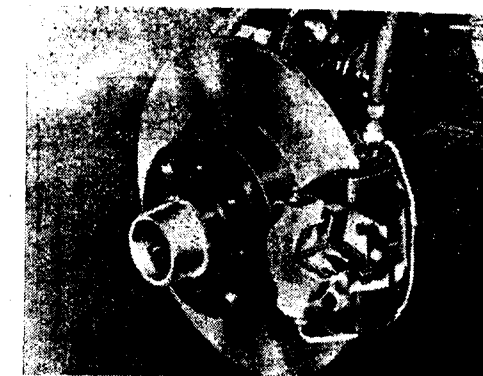
Now it needs only one of the "big five" to place an order and the other four are likely to follow. For this is not only a big-car problem. On today's crowded roads the power to stop is too often a matter of life and death.

For some years, in order to reduce unsprung weight, wheels (and therefore drum-type brakes) have become smaller; and they are now shielded from the cooling air by streamlined body panels. The result is that much of the tremendous heat of braking is trapped inside the drum, reducing the friction coefficient of the linings, sometimes making the drum expand and warp. Quite suddenly the driver may find his power to stop has been decreased. "Brake fade" has become an experience known not only on the race track, but on the road.

It was the Dunlop Aviation Division who eventually solved the problem when it was first encountered with aircraft, with a brake in which comparatively small friction pads were pressed on to the sides of a metal ring keyed into the aircraft wheel. The first aircraft using these brakes landed at Elmdon, Birmingham, in 1946.

Disc brakes are now being produced in mass and should soon be very nearly as cheap as any other kind. The latest improvement enables pads to be renewed in about twenty minutes for a complete car instead of the full day's work now needed to renew and test a set of brake linings.

For the car manufacturer it is no small thing to make such a radical change on his production lines. It involves extensive re-design and re-tooling. The established brake



The Current Production Disc Brake

companies which have been making drum brakes for thirty years will also have major problems to face, although some are already making disc brakes under licence. Licences have also been issued in France and America.

With even the unspectacular family saloon claiming eighty-five miles an hour as a perfectly attainable speed, the fitting of the best possible braking system has become, not so much an engineering necessity, as a moral question. Disc brakes, a great British invention, are the best answer yet devised to today's high speeds. (By courtesy, *The Sunday Times*).

ZIL-111

The Moscow Likhachov Motor Works has started production of a new de-luxe seven-passenger model, the ZIL-111.

An eight-cylinder, 220 h.p. engine mounted on the ZIL-111 permits a top speed of 170 km. per hour. The latest make has hydraulic transmission with push-button controls on the dashboard. It does not have a shift gear lever or a clutch pedal.

Installed in the new car is a vacuum brake booster reducing the pressure on the pedal. A hydraulic wheel booster makes car-driving easier and safer. The ZIL-111 has a special windshield washer, and the car tyres are low-pressured and tubeless.

The ZIL-111 body has some novelties. The driver can open or close any window with a special device from where he is seated. Powerful heating appliances are installed as well as a radio set with remote-control effected both from the driver's and passengers' compartments.

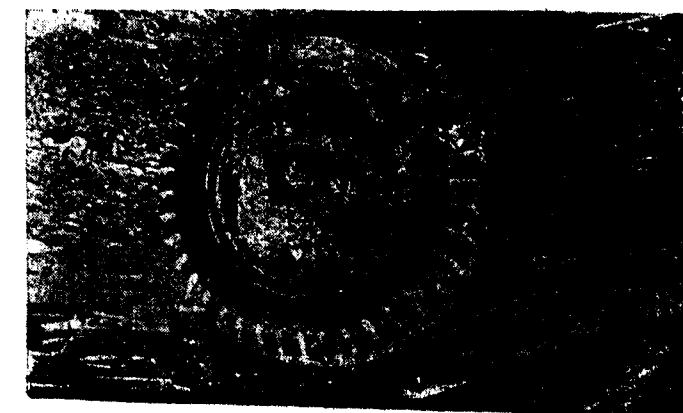
Some of the new cars will have an air-conditioning system.

LEAK PROOF

During last summer, the Port of London Authority were dredging in the Victoria Docks, London, a job which had not been done for many years. Among the debris pulled up was a two-wheel trailer which had been blown into the dock during an air-raid in 1940.

The trailer itself was in very bad condition, but the extraordinary thing about it was that the Firestone tyres and tubes with which it was equipped were still inflated at their normal pressure—eighteen years under water and the tubes were still holding all their air!

NOTE: The gash in the sidewall of the tyre in the picture below was made by one of the teeth of the dredger when the trailer was lifted up from the bottom of the dock.



MOTORINDIA

January 1959

M-4

MOTORINDIA

EP

January 1959

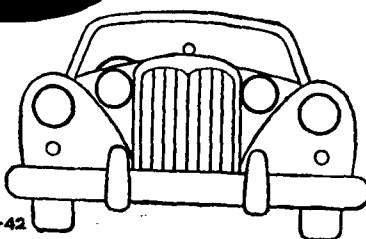
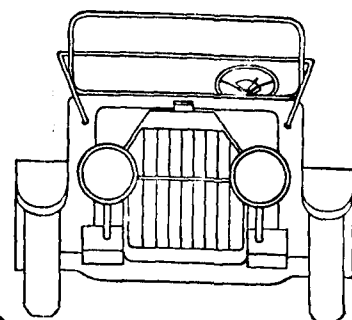
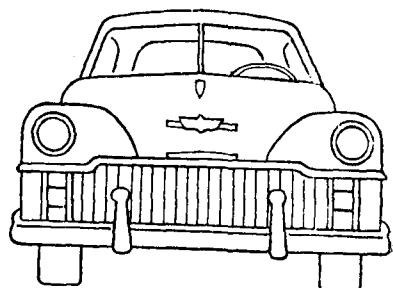
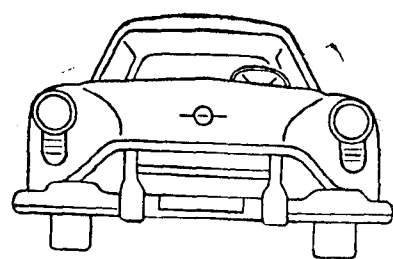


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CPE-42

NEW WOLSELEY

**First B.C.M. model with
Farina-designed Four-door
Saloon body**

From GORDON WILKINS

Following introduction of the Austin A-40, the B.M.C. have lost no time in getting the second of their Farina-designed bodies into production. The Wolseley 15/60 which replaces the 15/50 has an entirely new 4-door body-chassis, longer, wider and lower than before, with basically the same mechanical elements, except for bigger brakes.

It is a modern car with crisp lines and slim tail fins but the traditional Wolseley radiator grille has been skilfully worked into the frontal design and the interior is conventionally finished in real leather and walnut, with pile carpets on the floor. Front seats are separate, with high broad backrests and foam rubber cushions with soft rolled edges. The drop centre wheel carries a half horn ring operating two wind tone horns; the short central floor gear lever is nicely placed and the pull-up handbrake is alongside the driving seat. All four corners of the car are easily visible from the driving seat. Rear seats are somewhat shorter from front to rear and rear headroom at 34 in. (86.4 cm.) is not as great as the long flat roof line, with its slight rear overhang leads one to expect, but there is a central armrest and armrests on both rear doors.

Unusually complete equipment includes heater and demister with fresh air intake on the scuttle, screen washer, four ventilation panes in the doors, four ashtrays, lockable glove box and a full width parcel shelf with protective roll on the edge, placed where it will not catch the knees, two rose-tinted interior lights operated by door switches, mountings for two radio speakers and locking fuel filler. Reversing lamps are provided and a resistance is brought into circuit with the flashing direction indicators when the side lamps are switched on, to cut out dazzle at night. Door locks are a new kind known as the Zero-torque, using a simple rotating cam on the door and carry safety catches on the door edge where they cannot be reached by children once the door is shut.



WOLSELEY 15/60 : Fashioned by Farina, the striking, modern lines of this family saloon encompass all the traditional Wolseley features of luxurious appointments combined with sound, robust engineering to produce big car comfort at reasonable cost.

The luggage trunk is of fine size, offering 19 c.ft. of space (0.538 m³) an increase of 60 per cent over that on the big Wolseley 6/90. It has a flat unobstructed floor, and a lid counterbalanced on torsion bars, the spare wheel being carried in a wind-down tray underneath.

Overall length is 14 ft. 10 in., the car being 5 in. longer, 1 in. lower and 2½ in. wider than the 15/50 but ground clearance has been maintained at 6½ in. wheelbase is 2½ in. (7 c.m.) shorter.

The B.M.C. B-type 1½ litre engine is basically unchanged but has a new SU semi-down draught carburettor with simplified jet assembly fed by a new miniature SU pump with increased output, referred to as the "pepper pot" and mounted at the rear on the fuel tank. Steel ball joints in nylon sockets are used for the throttle linkage and all electric wiring uses the new Lucas clip-on connectors, eliminating screwed terminals. The carburettor is mounted on a single casting forming inlet and exhaust manifolds and hotpot.

At a kerb weight of 2,460 lb. the car is about 30 lb. up on the previous model and power output is unchanged. Tyres are 5.90-14 against 5.60-15 and the axle ratio is 4.55 to 1 against 4.875, giving slightly lower r.p.m. in top gear (15.63 m.p.h. per 1,000 r.p.m.) but the intermediate gear ratios are more widely spaced.

Brakes by Girling have two leading shoes at the front in 9-inch drums which are 2½ in. wide. Rear drums are 9 × 1½ in. Total lining area is 147 sq. in. an increase of 40 per cent.

Front suspension and front engine mountings are carried on a detach-

able cross member attached to the main structure by four bolts with slim rubber pads as insulation. Steering is by cam and peg instead of the former rack and pinion, to reduce kick-back. Maximum speed is said to be 79 m.p.h. and steady-speed fuel consumptions are quoted as 37 m.p.g. at 40 m.p.h. or 29.5 at 60.

Wolseley 15/60

Engine : 4 cyl. 73.025 × 88.9 m.m. 1,489 c.c. Compression 8.3 : 1 (7.2 on request) OH.V pushrod operated SU semi-down draught carburettor. Full flow oil filter. 55 b.h.p. at 4,400 r.p.m. nett 82 lb. ft. torque at 2,100 r.p.m. Centrifugal and vacuum ignition control.

Transmission : Dry single plate clutch hydraulically actuated 4-speed gearbox with top three synchronised. Central lever. Open propeller shaft. Hypoid final drive. Overall ratios 17.95, 10.93, 6.78, 4.55 to 2. Reverse 23.47 to 1. Brakes Girling hydraulic with two leading shoes at front. Brakes 8 in. (22.8 c.m.) diameter. Width front 2½ in. (6.35 c.m.) rear 1½ in. (4.44 c.m.) Total friction area 147 sq. in. 948 sq. in.

Suspension : Independent front with wishbones and coil springs. Half elliptic rear. Piston dampers. Cam and peg steering.

Dimensions : Wheelbase 99½ in. (251 c.m.) Track front 48½ in. (124 c.m.) Track rear 49½ in. (126.7 c.m.) Length 178 in. (452 c.m.) width 63½ in. (161 c.m.) Ht. 59 in. (150 c.m.) Ground clearance 6½ in. (15.8) c.m. Tyres 5.90-14. Fuel tank 10 imp. gal. (45.4 lit) Performance 15.63 m.p.h. 1,000 r.p.m. in top. 25.15 kmh/1,000 r.p.m. Kerb weight 24,640 lb. 1,120 kg.

"Sona hai, Sardarjee, yeh Sona hai!"

"I've watched you staring at my TATA-MERCEDES-BENZ truck. That is not just any truck; it's gold Sardarjee, it's gold..."

I bought that truck over 3 years ago. Since then I have driven it almost 1,50,000 miles! Yes, I've driven it every single day, hauling freight from Ambala to Nangal and back. And never once has my truck let me down. Let the rivers flood, let the rains come, let the roads burn under brilliant sun—but to my TATA-MERCEDES-BENZ truck it matters not.

That, Sardarjee, is my TATA-MERCEDES-BENZ truck—yeh mera Sona hai!"

TATA-MERCEDES-BENZ

TATA LOCOMOTIVE & ENGINEERING COMPANY LIMITED
Automobile Division: 148, Mahatma Gandhi Road, Bombay-1.



Round the World

From January the Rootes Group will be shipping 3,000 Humbers and Hillmans a month to the U.S.A., the Humbers being the new 2.6 litre snipe with 6-cylinder engine offered with cross over push rods and hemispherical chambers. Singers are also being imported into the U.S.A. and a dealer network is being built up. Since the o.h.c. camshaft engine was dropped, Hillman and Sunbeam spares can be used for the Singer.

A California distributor (Bill Curtis) is co-operating with Leslie Ballamy, well-known British specialist in modifying Fords for competitions. Their project is a new "personal" car for the West Coast market to be built either as a roadster or hard top. It is a compact job with 9 ft. wheel-base and 15 ft. overall length and present plans are to build it in the Republic of Ireland, using largely stock car parts. Body will probably be in plastic.

Turner sports cars for 1959

The Turner sports car with Morris Minor 1,000 engine continues for 1959 but with larger front brakes 8 in. x 1½ in. with two leading shoes. Instrument panel is redesigned with matched speedometer and tachometer flanked by additional instruments. A new model basically the same car but fitted with a Mark I Coventry Climax engine of 1100 c.c. is now being shipped to buyers in the U.S.A. and South Africa. A team of 950 c.c. sports cars recently won the 1958 Autosport series production sports car championship and the team award. The Coventry Climax car has already been seen in Florida where it took second place in the six-hour Sam Collier memorial race which was won the previous year by another Turner.

Jaguar

One of the first of the Mark IX Jaguars was delivered to Queen Ingrid of Denmark. This is her third Jaguar.

Citroen ID 19 for South Africa

The Citroen ID 19 is being assembled by Stanley Motors Ltd. in Johannesburg for the South African market. Annual output is expected to be 1,000 to 1,500 cars.

Frank Costin joins Lister

Frank Costin, famous aero dynamics wizard who has been responsible for body design of Vanwall and Lotus cars is collaborating with Brian Lister, designing bodies for the 1959 Lister sports cars and working on development projects for other manufacturers.

Ford and Vauxhall

Towards the end of 1958 the 100,000th British Ford was shipped to the U.S.A. Shipments during the first half of 1959 will be 50 per cent above the 20,000 shipped in the preceding period of 1958. American manufacturers are securing a big proportion of British export business through their English subsidiaries. Ford claims to provide one-quarter of British car exports to the U.S.A. and Vauxhall, the General Motors subsidiary claims that their Victor is currently the largest selling single British model on the U.S. market.

Ferrari States his terms

Breaking silence after the bitter Italian Press Campaign against him, the Italian Constructor replies to his critics.

For months Ferrari has remained silent while the Italian press and Church bitterly attacked him following the deaths of Castellotti, Musso and Collins. He also refused to intervene in the impassioned arguments which followed announcement of the new Formula I under which

By GORDON WILKINS

Grand Prix races will be run from 1961. But early in December he invited the press to Modena for the annual luncheon where he traditionally reviews the past year, showed them the new Formula I single-seater for 1959, the new Dino 196 2-litre sports car and the 250 G.T. Spyder by Scaglietti, then sat down with two microphones, two tape recorders and three secretaries taking notes, to open a press conference in which he answered all the questions and pulled no punches.

He first announced the retirement of Hawthorn, which had been kept secret until that moment, then ranged over the whole field of motor racing. Here are his main points:

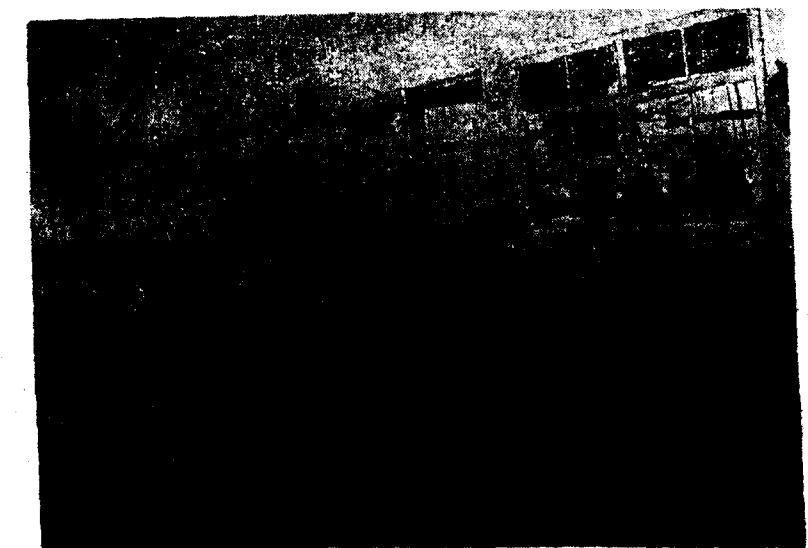
He accused race organisers and sporting authorities of contributing to the death of Musso by expecting Grand Prix cars to race on a circuit already rendered slippery by other events during the previous 24 hours.

— blamed dangerous kerbs and low earth banks at the edge of the circuit for contributing to the deaths of Collins and Castellotti.

— announced that he will not race in Italy, even in World Championship events unless public opinion becomes less hostile, and will not take the responsibility of employing Italian drivers while the campaign against him continues.

But will race if the Russians enter Western events.

FERRARI: Formula I. Single Seater for 1959. Longer wheelbase, Dunlop Disc Brakes. Dunlop Tyres. Telescopic dampers inside coil springs.

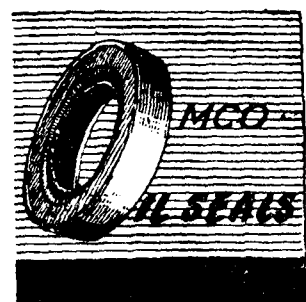


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— will not compete in the Targa Florio again unless the circuit is closed for official practice and will not complete in other events where the organisers do not take action to meet what he regards as minimum safety requirements—which will be stated in advance.

— will not compete in races where the organisers impose their own chosen brand of fuel as permitted under the new Article 10 voted at Paris, if this means breaking his contract with Shell. He will not join any Anglo-American secession move from the C.S.I. — will build cars for the new Formula 1 provided he is still building racing cars in 1961, but he already has three American production experts at Maranello advising on ways of speeding production to meet the fast expanding demand for Ferrari cars in the U.S.A.—which might lead to his retirement from racing.

New Ferrari cars for 1959

Formula 1 single-seater

Slightly longer wheelbase than 1958. Slightly lower built. Wider frame, using taper tubes in the lower members. Coil spring suspension all round, with telescopic dampers inside the coils. Koni dampers at present on test. The first prototype has Girling discs outboard to all four wheels but Dunlop disc brakes will be used for all racing. Better body streamlining, with windscreen faired into the headrest. Wheel far away from the driver. Arrangement of De Dion axle and transmission similar to last season.

250 G.T. California Spyder. New lightweight body by Scaglietti destined for American market. Developed from the coupe as used by Gendebien in this year's Tour de France. Maximum speed with 9/33 axle 252 k.m.h. 156 m.p.h. approx. Acceleration 0-100 m.p.h. using first and second gears in 12.5 sec. approx. according to works figures.

DINO 196 Sports Car—2-litres V6 (For sale to public)

Based on prototype already raced, but with single instead of twin camshafts. 60 deg. V6 77 x 77 m.m. 1983.7 c.c. Compression 9.8 to 1 200 b.h.p. at 7,200 r.p.m. on 98/100 octane fuel. Light alloy block with

dry liners. 4-bearing crankshaft. Single ignition by coil and distributor. Three twin-choke Weber downdraught carburetters. Chain drive to camshaft with externally accessible chain tensioner.

Dry clutch connected via flexible joint to four-speed gearbox. Rigid rear axle with radius arms, triangulated reaction arms and coil springs. Front suspension by coil springs. Telescopic dampers. Disc brakes on all four wheels.

Wheelbase 2,250 m.m.—88.6 in. Track front 1,250 m.m.—49.2 in. Track rear 1,260 m.m.—49.6 in. Weight dry 660 kg.—1,450 lb. Fuel consumption 17.6 miles/imp. gal. Tyres front 5.50 x 15 rear 6.00—15.

JENSEN MOTORS LIMITED ENTER THE LIGHT COMMERCIAL VEHICLE MARKET

British made to a German design, a new and interesting Front Wheel Drive Vehicle being offered to light commercial vehicle users.

Designed by Tempowork of Hamburg and built at West Bromwich, England by Jensen Motors Ltd., it is an Elevator Truck of unique characteristics.

Power from the British Motor Corporation B-series engine (4 cylinders, overhead valves 52 b.h.p.) is transmitted to the front wheels instead of the rear pair, thus banishing the normal propeller shaft.

Without this obstacle the entire floor of the vehicle can be lowered right to actual ground level for easy loading.

Small hand trollies as used in factories, warehouses and business premises can be wheeled straight into the Jensen's hold.

The same lever that lowers and raises the floor hydraulically will also regulate the height of the body, adjusting it to loading platforms of varying elevations.

The Elevator Truck is one of a five-model range of Tempo vehicles that Jensen are building.

The others are a 13/14 seater bus, a six-seater crew cabin pickup, an hydraulic tower vehicle and a low-loading platform truck, all with front wheel drive, 1½ litre B.M.C. engine and all independent suspension.

OUR NEXT ISSUE

WILL CARRY
A
SPECIAL
COVERAGE OF
the Proposed
Bangalore
Conference of
Transport
OPERATORS

SPECIAL ARTICLES
OF ROAD TRANSPORT
INTEREST

BY

T. A. S. BALAGOPAL

N. S. ANANTH

★

Exclusive Articles on

BITUMEN
U. S. HIGHWAY
ENGINEERING
etc., etc.

MOTORINDIA

MADRAS 6

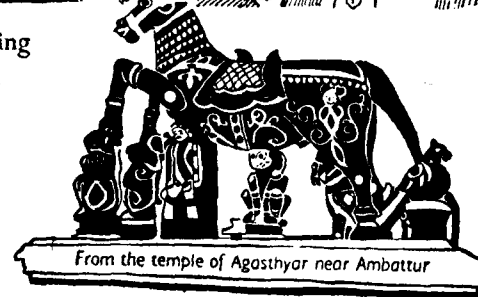
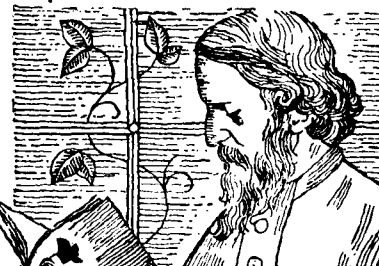
When Dunlop first opened an office in Bombay at the end of 1898, there was no fanfare, no handouts, no headlines.

Just about 10 years earlier, John Boyd Dunlop, a veterinary surgeon, had invented the first practicable pneumatic tyre. With the opening of the Dunlop office in Bombay the pneumatic tyre had come to India.

The old century was about to say its quiet farewell. Tagore had not yet started work on "Gitanjali" and Jamsetji Tata was yet to launch his epic search for iron ore. There was nothing, then, of the furious bustle that marks our days.

Soon, very soon, all these were to change as India was caught up in the swift currents of 20th-century history.

Dunlop has moved with the times and in 60 years it has become a familiar and intimate name throughout the country. The Dunlop factory at Sahaganj has grown to become Asia's largest rubber manufacturing enterprise, and this sixtieth year of Dunlop in India is marked by the setting up of a new tyre factory at Ambattur.



the long road to Ambattur



The Dunlop Rubber Co. (India) Ltd.

DC-508

Foreign Exchange released for all Auto Manufacturers

INDIAN CONTENT WILL BE 80% by 60-61

(From our Special Correspondent)

Shri Manubhai Shah, Minister said in Parliament during the discussion on Tariff Amendment Bill about the automobile industry, the prices of auto components—that he was confident that in the case of two commercial vehicles and one car, by the end of 1959, almost 70 to 75% Indian content could be reached. This was based, he said, not on any guess but on a phased programme. The cars are Hindustan, Willys Jeep and Mercedes Benz. He also disclosed that two commercial vehicles and one passenger car are expected to reach 70 to 75% of indigenous content by the end of 1959. Further he said that during the last two years the industry came up to Government several times for release of foreign exchange for the minimum necessary capital goods, jigs, fixtures tools and equipment, and it was not possible for Government to release that much amount at that time. AND NOW GOVERNMENT HAVE RELEASED THE NECESSARY FOREIGN EXCHANGE FOR ALL THE AUTOMOBILE MANUFACTURERS. AND IT WAS HOPED THAT BY THE END OF 2nd PLAN PERIOD, BY 1960-61, WHETHER IT WAS PASSENGER CARS, TRUCKS, OR JEEPS, THEY WOULD REACH ROUND ABOUT 80% INDIGENOUS CONTENT.

About the price obtaining here he said that price is necessarily a function of the volume of production if said in economic terms. Because of great demand, the handicap on the foreign exchange front and also because motorisation in this country has not developed—for with the growth of economy alone motorisation can go forward—that the price front are suffering from a handicap.

Regarding the question why foreign countries are able to produce it at a lower price and what are the circumstances here which make the prices higher, the Minister said that we in this country while going through the price structure have to consider the quantities produced, the man-hours put in,

the volume of production in a particular unit, the overheads, etc.

Answering a question whether the indigenous content of 75% hoped for in the two indigenous commercial vehicles and one indigenous passenger car, is measured by the number of parts used or by the value of the car, the Minister said that we have a very rigid international standard and we take the value of a c.k.d. pack at the factory-site and then remove a certain percentage. Of course the local manufacturers have been saying that this method of calculating the indigenous content is very harsh on them. But Government has accepted the most rigid international standards.

Production down in 1958

Automobile production by progressive manufacturers of cars and trucks was much lower in 1958 compared to the previous year. While there has been a steady increase in the output of automobiles in India from 1954 to 1957, when production rose from 14,000 to nearly 32,000, during the first 9 months of 1958, however, the total production of cars and trucks stood only at about 19,000.

Bicycle Progress

Another interesting point mentioned by Mr. Shah was the remarkable progress made by the bicycle and grinding wheels industries in India. Bicycle production during the current year touched over one million compared with just under two lakhs in 1952. Actually, the Industry was now well on its way to develop an export market. This was in contrast to the slow progress made in dye-stuffs and automobile industries.

Auto Progress

According to a written reply in the Lok Sabha by Mr. Lal Bahadur Sastri, Minister for Commerce and Industry, the indigenous content in different models of automobiles now being progressively manufactured in India are as follows (as on 1-4-58).

CARS : *Hindustan Ambassador*, 60 per cent ; *Fiat "1100"*, 37 per cent ; *Standard Vanguard* 33 per cent ; and *Standard "10"*, 33 per cent.

TRUCKS and bus chassis : *Tata Mercedes-Benz* 53 per cent ; *Dodge* (medium diesel) 52 per cent ; *Dodge Power Wagon* 26 per cent ; *Dodge* (light petrol) 26 per cent ; *Leyland Royal Tiger-Titan* 9 per cent and *Willys* (Jeep) 58 per cent.

Photo taken at Begumpet Airport on 14th December, when Messrs V. A. Watts and M. V. Venkataraman of M/s. India Pistons Ltd., Madras were en route to Delhi. From left : Sri M. K. Desai, Sri Chandulal P. Trivedi, Mr. Watts, Sri Venkataraman and Sri K. C. Mehta.



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ALLOW PRIVATE OPERATORS TO RUN BUSES DELHI CORPORATION RESOLUTION

It may be recalled that the D.T.U. Workers Union called upon its members sometime back to go on strike since one conductor could not manage the double door buses because of large capacity. There are about 129 double door vehicles now. A committee including the representatives of Union went into the whole question and submitted its report, the consideration of which was postponed till February next. Meantime it had been agreed to give helper conductors during peak hours. It is estimated that it would cost Rs. 1 lakh and 5 lakhs respectively if helper conductors and two conductors were employed respectively.

It is also understood that a Jan Sang resolution was passed in the Delhi Corporation to allow private agencies to run buses on certain routes in Delhi. There was strong opposition by Congress members, it is learnt. But in spite of this it is further understood that backed by Communists and P.S.P. they got a victory. In this connection it was also said that several Congress members were absent on that day. The resolution expressed dissatisfaction at the inadequate transport system and immense inconvenience to the public. Therefore, it was resolved that the Delhi Transport Committee should formulate a detailed and effective scheme for the re-organisation of the transport system, and further it was resolved that till such time

as the D.T.U. was in a position to satisfy the transport requirements adequately it was desirable to allow private transport agencies to operate on certain routes. It is understood that there are certain legal difficulties in implementing the resolution and the authorities are studying the same.

It is also understood that the Congress has taken a serious view of the Jan Sang resolution passed since it was contrary to Government policy of nationalisation of the transport system in Delhi.

Some important points against the present Delhi Transport are serpentine queues, erratic and unpunctual in running which call for drastic improvements. At least 750 buses are required according to an estimate.

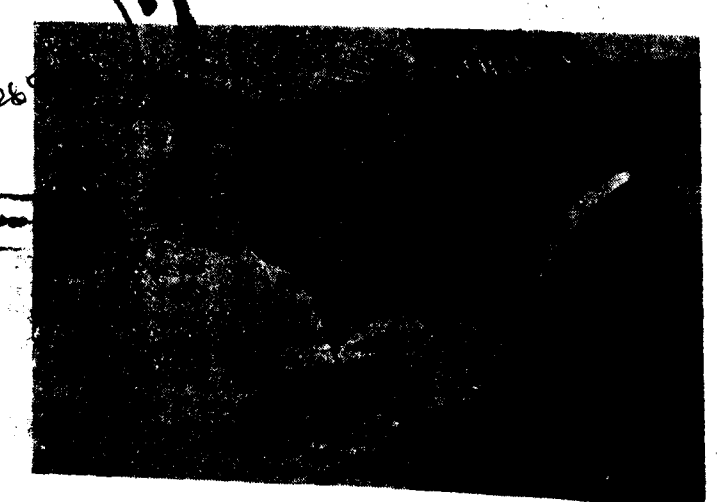
On the other hand it is stated for the D.T.U. that the difficulty is only experienced during peak hours and so if buses on the basis of peak hour demand are purchased and put on roads, naturally additional conductors and other complement of staff are to be employed, which would be a very heavy financial burden.

In Delhi it is a one way traffic unlike in Bombay and so traffic flow is different.

By speeding up repairs the authorities plan to put on roads shortly about 400 buses, and they are hopeful of having about 600 buses by 1960-61, the end of the 2nd Plan period.

Mr. T. S. Rajam replying to felicitations at a reception given to him by Murugan Transports, Cuddalore.

Mr. Murugesu Padayachi, Proprietor of Murugan Transport presenting a welcome address to Mr. Rajam.



ROAD TRANSPORT. BEST IN MADRAS

SAYS T. S. RAJAM

Road Transport in Madras was perhaps the best in the whole of India. Bus services, particularly private service, were working very well indeed, though the taxation was very high. There was no such heavy taxation on transport service in any other State in India.

These facts were stressed recently by Mr. T. S. Rajam, Chairman, T.V.S. & Sons, Madurai at a reception given to him at Cuddalore by M/s. Murugan Transport.

Mr. Murugesu Padayachi, Proprietor of the firm presented Mr. Rajam with an address of welcome enclosed in a silver casket, and paid tributes to the organisation of T.V.S. Another address of welcome was also presented to Mr. S. S. Ramasami Padayachi, M.L.A.

The workers of the Murugan Transport Union and other bus transport services in the area welcomed Mr. Rajam in their midst.

Mr. Rajam in reply paid a tribute to the working of road transport in Madras State where the present complaint was just inadequacy of buses and nothing more. He traced the organisation of labour in other countries, where unions entered into contract with industrialists and management and so were responsible for output as well as the behaviour of labour. It was unfortunate that in India workers did not realise their responsibilities while they were only too willing to insist on their rights. He wished very much that the workers would increase their output so that they could claim a due share in the profit.



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Madras State Lorry Owners' Association

The following communication regarding Registered Laden Weight of transport vehicles, from the All India Motor Unions Congress is published for the benefit of readers:

It is now reliably learnt that Government of India are bringing into force with effect from 15th January 1959, the provisions of the amended Motor Vehicle Act, which would radically change the present Registered Laden Weight limits of all the vehicles in the country.

The Government of India have, it is understood, addressed to the State Governments to the effect that from 15th February 1959, they should allow R.L.W. of 25% over and above the gross vehicle weight as certified by the manufacturers in their 'F' Form for all vehicles marketed from 1953 onward and 12½% more in case of those marketed earlier.

This will result now in that different make of vehicles will have different R.L.W. The change will come into effect from 15th January, 1959, and will also apply to the existing vehicles.

There is a provision however in the amended M.V. Act enabling State Governments to permit heavier weight than what is contemplated by the Government of India hereabove. However, the Government of India have asked them not to resort to these provisions generally because the idea is to permit heavier weight only in respect of particular type of vehicles and in a particular locality or to meet some emergent or special demands. Any general rise of load then permitted under the Act by the State Governments according to the Government of India would be unauthorised and should not be done.

The Government of India have also made it clear that this would be the maximum R.L.W. The State Governments can if they so desire, take into consideration the conditions of the road and the traction power of the engine fitted to the

vehicle in fixing lesser loads on individuals routes.

From the above, it may be clear that henceforth the different makes of vehicles in the country will have different R.L.Ws. but these R.L.Ws. will be more or less uniform throughout the country and this will be 25% more than the gross laden weight as certified by the manufacturers in the 'F' Form. Ordinarily the State Governments will not be in a position to go beyond this maxima though they are given powers in emergent cases. However, for fixing loads less than the maximum, States have been allowed to take into consideration the conditions of the road and or the traction power of the engine, etc.

S.T.A.'s. order set aside

In an appeal to the State Transport Appellate Tribunal, Madras, against the orders of the State Transport Authority, Madras, Sri K. S. Venkataraman, I.C.S., set aside the order of the S.T.A. which granted some standardised routes to the applicant who had applied for renewal of certain routes granted to him earlier. The Tribunal ordered that the applicant Sri A. R. Manickam of Nagari, Chittoor District, should be heard again and the application must be disposed of according to law. The Tribunal also expressed the view that the matter of standardised routes was of a general importance. Sri K. Ramachandran, Advocate, Madras, appeared for the appellant.

Following is the text of the order:

The appellant held a lorry permit (Lorry APC 799) on three routes emanating from Nagari in Andhra State. He applied for renewal. The Assistant Secretary, State Transport Authority, Madras did not however give him the extension for the actual routes for which the appellant applied for renewal but granted him renewal on three other standardised routes. The appellant has preferred this appeal, aggrieved

LADEN WEIGHT— NEW RULES

by this order. The main contention of his learned Counsel, Sri Ramachandran is that the routes on which he has been given renewal by the Assistant Secretary, State Transport Authority do not touch Trivellore which is his main centre of business and that they will not serve his purpose. He also contends that the Assistant Secretary, State Transport Authority, had no jurisdiction to grant the renewal for routes for which he did not apply. Section 58 (2) of the Motor Vehicles Act says that an application for renewal should be disposed of as if it were an application for a permit and Section 56 dealing with the grant of permits empowers the Regional Transport Authority to grant a public carrier's permit in accordance with the application or with such modification as it deems fit or to refuse to grant such a permit. There is a proviso that no such permit shall be granted in respect of any area or route not specified in the application. The contention of the learned Counsel is based upon the proviso. The learned Counsel also questions the jurisdiction of the Assistant Secretary, State Transport Authority, to standardise the routes. He also levels a charge of discrimination in favour of Southern Roadways (Private) Ltd., because it would appear they had been granted permits on non-standardised routes as they wanted.

Though the remarks of the Assistant Secretary, State Transport Authority deal with some of the points, they do not specifically deal with the contention based on the proviso to Section 56 of the Motor Vehicles Act, nor do they deal sufficiently with the contention that the Assistant Secretary, State Transport Authority had no jurisdiction to standardise the routes. This is a general matter of importance and I would like the Assistant Secretary, State Transport Authority to consider these points. Unfortunately, the appellant did not appear before the Assistant Secretary, State Transport Authority on the date of hearing of his application. His learned Counsel explains that the applicant absented

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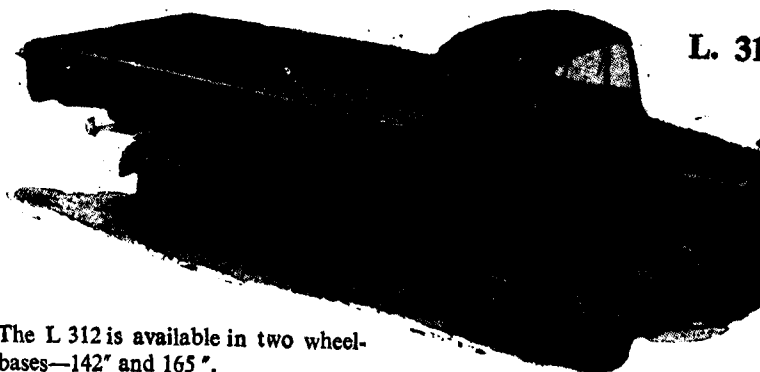
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himself because the notification merely mentioned that his application on the routes mentioned by him would be considered and did not intimate that it was proposed to give the permit on the standardised routes. Normally speaking, it is the duty of the applicant to be present at the time of hearing of his application, but under the circumstances of this case, I am prepared to give an opportunity to the appellant to appear before the Assistant Secretary, State Transport Authority and make his representations. I think that will be the better course particularly because of the general importance of the question involved. ACCORDINGLY THE ORDER OF THE ASSISTANT SECRETARY, STATE TRANSPORT AUTHORITY IS SET ASIDE AND THE CASE IS SENT BACK FOR DISPOSAL AFRESH AFTER HEARING THE APPELLANT. It does not seem to be necessary to issue a fresh notification under Section 57 (3) of the Motor Vehicles Act and it will be sufficient if a date of hearing is fixed and intimation is put up on the notice board and sent individually to the appellant. The application will of course have to be disposed of as expeditiously as possible. I may add that I gave an opportunity to the appellant's Counsel to see whether any other standardised route instead of the standardised routes chosen for him by the Assistant Secretary, State Transport Authority would suit him, but the learned Counsel admitted that there were no such standardised routes which would suit him. If it had been possible for him to select some other standardised routes, I would have substituted them for the routes now selected and the remand might have been averted, but as things stand, I feel that the remand will be the proper course.

NATIONALISATION DOES NOT NECESSARILY MEAN BETTER TRANSPORT

—Says T. S. KRISHNA

“By and large the motor services in Madras State have been doing excellent work. They were the first to introduce the half-anna per mile rate and very many amenities for their staff,” said Mr. T. S. Krishna, Managing Director of T.V.S. & Sons at a function at Ramanathapuram.

He was confident that private bus operators maintaining their rich tradition would make it unnecessary for this State to think of interfering with their useful service.

Mr. Krishna was inaugurating the new offices, workshop, Burmah-shell Petrol and Diesel Pumps of M/s. Swarnambigal Motor Service.

Mr. Krishna and others present were welcomed by Mr. R. Soma-sundaram Servai, Proprietor of M/s. Swarnambigal Motor Service.

Mr. Krishna referred to the need for a big workshop of the type at Ramanathapuram and congratulated Mr. Servai on securing a most up-to-date set-up in installing the new station. Mr. Servai had built up a fine motor service purely by personal toil and attention during the last 30 years.

On the question of nationalisation, Mr. Krishna said that it was no doubt a good principle in theory, but its enforcement on a uniform basis all over the country would mean loss to the public of well organised private service. *Nationalised transport did not necessarily mean better transport. In fact some of the nationalised bus routes are now being offered to private individuals to be run on behalf of the State on efficient lines.*

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By means of a TV bulb, an engine tester, called the “Auto Scope” is now able to indicate at one glance how the engine is working. By using this “Auto Scope,” not only the electrical appliances, such as the spark plugs, condenser, distributor, but also the wear and tear of the valves can be detected on the TV bulb.

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At Secunderabad



Home Minister Sri Ranga Reddy sitting at the wheel on Chevrolet. To his right Mr. C. P. Mehta and K. C. Mehta are standing



Hon. The Home Minister Shri Ranga Reddy delivering a speech of blessings to the enterprise of Defiance Automobiles.

CHEV Introduction at Secunderabad Minister participates at Defiance Automobiles

The re-introduction of "CHEVROLET" chassis was marked by cutting a tri-colour ribbon by Sri K. V. Ranga Reddy, State's Home Minister, on December 10 at Defiance Automobiles, Secunderabad (Proprietors of M/s Chandulal Mehta & Co. Private Ltd., Bombay) before a large gathering of distinguished guests, businessmen and Government Officials.

The Minister expressed that it was a matter of deep gratification that Indian businessmen had taken to automobile industry and were making much headway. He expressed the hope that in time to come the automobile industry in the country would attain perfection. He thanked the management for providing him an opportunity to associate himself with the pleasant function. **THE MINISTER, AMIDST APPLAUSE, HANDED**

OVER THE 500th VEHICLE TO Mr. S. PANDAPPA, A STONE CONTRACTOR OF NAVANGI, AS A TOKEN OF FINALISATION OF THE SALE.

This marked the sale of 500th vehicle by the firm. Earlier Mr. M. K. Desai, Superintendent of Defiance Automobile branches, welcomed the Home Minister. Giving a brief account of the firm, Mr. Desai pointed out that the concern owned by M/s. Chandulal Mehta & Co., Bombay, started branches in Hyderabad and Secunderabad in the year 1928, and has been catering to the needs of their patrons by supplying popular automobiles such as Oldsmobile, Bedford Trucks, Rover, Morris Minor, Studebaker Trucks and Cars, Hindustan Traveller and Baby Hindustan.

Mr. Desai announced that by about next month another popular

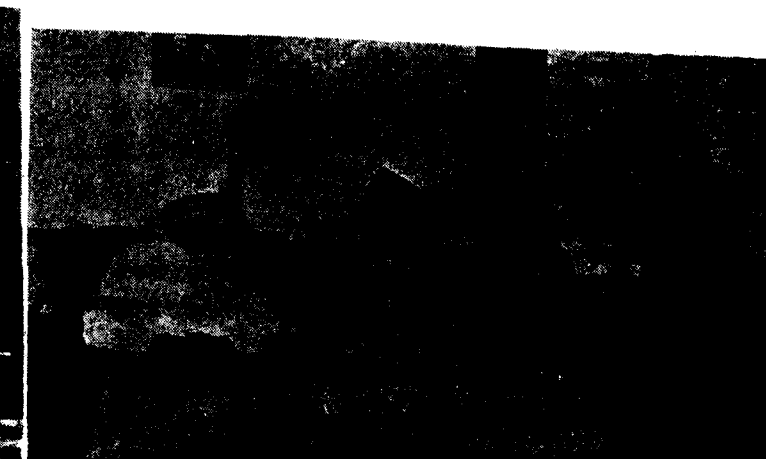
class of vehicle "BEDFORD" in its different wheel bases would also be available with the firm. The vehicle, he said, was imported and assembled by their Principals M/s. Hindustan Motors Ltd., Calcutta. The Hyderabad Auto Service situated at Secunderabad, who are distributors of the various important components, he said, were registered with the Government and were on the "approved list of manufacturers." In conclusion Mr. Desai thanked the Minister and the invitees for readily responding to their invitation.

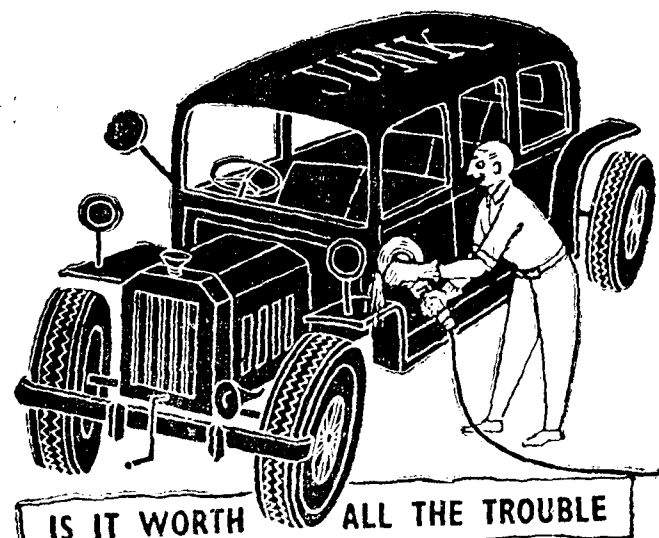
On arrival the Home Minister was received by Mr. C. P. Mehta, Director of Defiance Automobiles, M. K. Desai, Superintendent Branches, Mr. K. C. Mehta, Manager, Defiance Automobiles, and Mr. C. P. Trivedi, Manager, Hyderabad Auto Service.

The guests were entertained to tea.

Hon. Home Minister, Shri Ranga Reddy cutting a tape to inaugurate the pening for exhibition and sales of Chevrolet Truck. Others in the picture are Shri C. P. Mehta, Director and Mr. K. C. Mehta, Manager.

Mr. M. K. Desai, Superintendent, Branches, welcoming the guests. Sitting to his right are Mr. C. P. Mehta, Director and the Hon. Home Minister Shri Ranga Reddy.





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(Under the auspices of All-India Motor Unions' Congress)

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Minister for Transport and Communications

Problems concerning Road Transport Industry
will be discussed.

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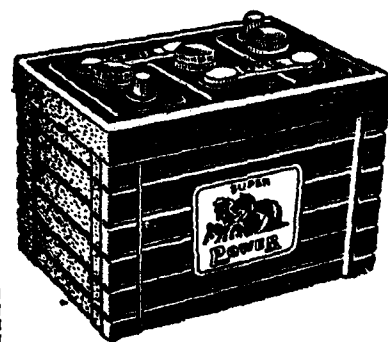
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Further details will be available from: The Secretary
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The Madras Motor Parts Dealers' Association

As already reported in our last issue, the Annual Day of the Madras Motor Parts Dealers' Association was celebrated at the New Woodlands Hotel under the presidency of Mr. K. V. Srinivasan. Following is the full text of the speech made on the occasion by Mr. Inder Sain, President of the Association:

It gives me great pleasure in welcoming you to this Annual function and I must, at the outset, thank the Members of the trade for electing me as your President.

We are happy to have in our midst to-day Mr. K. V. Srinivasan, who, as you know, has been elected as the President of the South India Chamber of Commerce and the Rotary Club, Madras. We are proud that one connected with the Motor Industry has been conferred these high honours and I am sure, you will join me in wishing him greater success. The trade looks forward to co-operation and support from leaders of Motor Industry, like Mr. K. V. Srinivasan and I appeal to him to support our Association, whenever the need arises, by giving us his valuable guidance. Needless to say that if he can see fit to join this Association, we will be honoured and grateful.

MEMBER-DEALERS WILL BE GLAD TO LEARN THAT PLANS ARE AFOOT TO FORM AN ALL INDIA FEDERATION OF MOTOR PARTS DEALERS, THE BENEFITS OF WHICH ARE ALMOST OBVIOUS. BY GETTING AN ALL INDIA BODY TO VOICE THE FEELINGS OF THE DEALERS, WE WILL GET MORE STRENGTH TO SPEAK TO THE GOVERNMENT REGARDING OUR DIFFICULTIES.

Formation of an All India Federation will naturally mean setting up of a Central Office and will naturally entail some extra expenses. I am sure that our members will not mind paying a nominal fee to defray the expenses of this Federation. Of course, further details will be sent to you by our Secretary.

With the shortage of imported goods, more and more consumers

have to rely on Indian made goods and this throws a big responsibility on our trade, to give them quality products. There is a general complaint from consumers that the quality of Indian goods sold in the market is far inferior to the imported stuff, and people, therefore, prefer to pay much higher price for imported goods. This complaint is not universally true because the products of many Indian manufacturers are very good and can be improved further if the trade lay stress on quality rather than price.

I appeal to the Trade to encourage our Industry, both small and big, and I go further and suggest that we ask our suppliers to have their goods passed by the Indian Standards Institution, which the Government has set up to help industries attain quality perfection and supply a standard quality all the time.

If the trade rigidly follows the policy of selling only quality goods, I am sure that our people will, within a couple of years, supply most of our requirements in India itself and thus give the Motor Parts business considerable self-sufficiency. AS IT STANDS TO-DAY, MANY IMPORTERS WHO HAVE A LONG STANDING REPUTATION TO KEEP UP ARE AFRAID OF SPOILING IT BY SELLING INDIAN GOODS, OF WHICH THE QUALITY IS UNPREDICTABLE. I hope the All India Federation, when it comes into being, will take steps in the direction of controlling quality supplied to the trade.

Holidays for 1959

The following holidays have been fixed by the Managing Committee of the Madras Motor Parts Dealers' Association, for the year 1959 and Members are requested to strictly observe the same.

New Year's Day (1st January); Pongal (14th January); Republic Day (26th January); Mahasivarathri (7th March); Tamil New Year's Day (14th April); Independence Day (15th August); Avani

Avittam (18th August); Vinayaka Chaturthi (6th September); Mahalaya Amavasya and Mahatma Gandhi's Birthday (2nd October); Ayudha Pooja (10th October); Deepavali (31st October); Guru Nanak Devji's Birthday (15th November); Christmas Day (25th December).

It has also been decided to close at 2 p.m. on the Aruvathimoorar Festival Day. Members' cooperation in strictly observing the above holidays is solicited.

New Member

The firm of Messrs. Annamalai Trading Co., 82 Harris Road, Mount Road, Madras-2, has become a member of the Association from 26-12-1958.

Insulators

The Central Government have passed orders exempting insulators (not fitted with central electrodes) imported into India or the State of Pondicherry for use in the manufacture of sparking plugs and falling under item 75 (16) of the First Schedule to the Indian Tariff Act, 1934 (32 of 1934) from the whole of the duty of customs leviable thereon under the Act.

This notification shall be in force upto and inclusive of the 29th May, 1959.

Grease nipples

Classification of Grease Nipples for I.C.T. and I.T.C. purposes is indicated below for information of the Importers, Clearing Agents and the Public.

Grease Nipples are correctly classifiable under item 71 (b) I.C.T. corresponding to S. No. 275 (a)/IV of the I.T.C. Schedule, and their clearance under motor vehicle parts licences issued for S. No. 293, 295 and 297/IV will not be allowed.

However, with a view to avoiding hardship in regard to the clearance of Grease Nipples adapted for use in Motor Vehicles licences for Garage Tools under item 275 (b)/IV I.T.C. would also be accepted for their import until further order.

THE MYSORE AUTOMOBILE PARTS & ALLIED MERCHANTS' ASSOCIATION

The Mysore Automobile Parts and Allied Merchants Association arranged a picnic for the members of the Association on December 28, 1958 at Thippagondanaballi (20 miles from Bangalore.) The picnic was a great success and enabled members forget their day-to-day cares and spend a day care free during the Christmas season.

Sales-tax in Mysore

Members are hereby informed that as per MYSORE ACT No. 31 of 1958 (first published in the Mysore Gazette on the First Day of January 1959) (Part IV.) with the heading THE MYSORE SALES-TAX (SECOND AMENDMENT) ACT, 1958 (An Act further to amend the Mysore Sales-tax Act, 1957,) the following items are liable to sales-tax at the rates shown against each:

1. Motor vehicles including motor cars, motor taxi cabs, motor cycles and cycle combinations, motor scooters, motorettes, motor omnibuses, motor vans and motor lorries—Seven per cent (Gazette Sl. No. 70.)
2. Chassis of motor vehicles—Seven per cent (Gazette Sl. No. 71.)
3. Component parts of motor vehicles—Seven per cent (Gazette Sl. No. 72)
4. Articles (including rubber and other tyres and tubes and batteries) adapted for use as parts and accessories of motor vehicles, not being such articles as are ordinarily also used for purposes other than as parts or accessories of motor vehicles—Seven per cent (Gazette Sl. No. 73.)
5. Tarpaulins and water-proof cloth not manufactured in mills or power-loom factories—Three per cent (Gazette Sl. No. 75.)

The prices of Tyres and Batteries as mentioned in the Price Lists sent to members with our Circular No. B-32, dated 14th January 1958 shall, therefore, be increased by 2 per cent in view of the above Act.

REPRESENTATIONS BY M.V.A.M.A. PROMPT ACTION BY GOVERNMENT

Following representations made by the Madras Motor Vehicles and Allied Merchants Association, in regard to difficulties experienced in the matter of getting refund on security deposits under the Madras Sales of Motor Spirit Taxation Act, the Government have informed the Association that the Board of Revenue has issued instructions to subordinate officers to take action to refund the security deposits made by retail dealers in motor spirit.

The Association is also informed that the question of revising the forms of the registers and accounts to be maintained by dealers in motor spirit is now engaging the attention of the Government. The Government consider that the retail dealers should maintain the register in Form 'E' and submit returns in Form 'F' at least till March 1959. It will not be necessary for the retail dealers to submit returns in Form 'F' when the new forms are introduced.



MOTORINDIA

January 1959

BATTERY BANTERINGS

BY A. HOLDEN

I've been thinking about car batteries lately. In fact, I've had cause to think rather deeply on the subject, having been stranded on two occasions in isolated parts through the sudden demise of this appliance, which in modern motoring forms so important a part of the common or ordinary automobile.

Mind you, I don't intend to "run down" batteries, but when such devices "run down," you are apt to look into the matter, and to come up with some thought-provoking thoughts.

At the outset we must remember that there are many types of car batteries and by the same token there are batteries of a type. It all depends on the degree of "battering" the appliance receives that proves the efficacy or alleged indifference.

Technically, a battery consists of a number of negatives and positives immersed in a solution of sulphuric acid and distilled water. The trouble often arises when the negative is not in a positive position, and vice versa.

A "battery," for those who may not fully understand or appreciate the technicalities of the English language, can also signify a number of Lyden jars, an embattlement complete with equipment of a military kind, while the term is also applied to the American sport of baseball.

You have perforce at first to decide which one you require in your car to perform the job necessary for it, and if any of the batteries listed above can do the right job, it's up to you. But I feel certain that for long and efficient service there's only one battery for you, and that's the one having both the positive and negative devices, as mentioned a little earlier.

Batteries are usually purchased, but they can be begged, borrowed or stolen, but none of these methods of acquisition pay in the long run,

so pay your money and take your pick. Batteries can be traded-in or exchanged.

A battery is a very amazing piece of work, and part of its job is not only to drive the car, but to provide power for lighting, for a fan or cooling system, for a car electric shaver, an electric kettle, etc., etc.—depending on the amount of ready money available in your bank balance or in petty cash.

A battery, however, like many a pedestrian in these times of an over-population in the form of automobiles, is not the only thing to be run down. So watchfulness should be the constant order of the day and/or night.

A battery, by way of identification for the uninitiated, is—er shaped like a battery, and usually has or comes with six sides. It is or can be of a square shape, or rectangular rarely round, otherwise you would have a problem "anchoring" it in your vehicle.

However, batteries can—to many a motorist's chagrine—flat, but the meaning of "flat" has to be fully appreciated when describing it.

And a "flat" can be a place in which to live; it can also denote a level plain, an untuneful note and, naturally enough, an indication that your battery is prostrate, insipid, prone—or in plain words Dead.

And when a battery is flat it is the customary thing to recharge the thing—pretty quick. A dead battery can be caused by many things, several of which could be a discharge or an overcharge in power. The battery could be 'undercharged.'

But the price of batteries these days, perhaps that word seems out of place! Whoever heard of a battery being the subject of a business exchange and the recipient being "undercharged?"

To try and ascertain the reason for a flat battery, some manufacturers suggest the cause may be in one of ten things, ranging from a faulty terminal connection, loose battery cables, also starting switch, starting motor, while a dubious generator may be the culprit. The ignition coil, condenser, distributor spark plugs and ignition cables need looking into, and if the trouble cannot be laid at any of these—then there's nothing else for you. You need a new battery.

A "hot" battery, we are told, can be just as vexatious and troublesome as a "cold" battery, and while neither state of affairs is desired for happier motoring, it is a fact that on a hot day one can easily sustain "a cold" battery, and how often the same in the opposite extreme?

It has also been said that the battery is "the heart" of the automobile's electrical equipment. But the shock comes to the motorist with the battery failure, who is apt to find that it is not only the car's "heart" that he has to take pains with—but his own.

It's a funny thing, but a battery, like a human being, can be affected by extreme change of climate, and if your battery's not functioning on a hill, how then can you "clim-ate"?

And isn't it an unusual facet of a battery that it will invariably fail when you least expect it or want it so to do?

There are some authorities who advise and advertise a "battery tonic" to ensure that the battery is in tip top condition and can be "revitalized" for better performance. However, the manner in which the poor old motorist is at the "paying end" of modern motoring and its associated "head-aches," "driver tonic" should also be available—from battery manufacturers.

The expression "assault and battery," while a common enough term in the language of the law, has no connection with the battery of the car type. Though I might hazard a guess that it evolved after an angry and angered motorist had been discovered "setting about" his car—because of a flat battery,

January 1959

MOTORINDIA

35

Our 25th Year...



Yet another milestone in the steady progress of Amco during these 25 years is the issue of a licence by the Indian Standards Institution to the use of ISI certification mark for Amco Automobile batteries.

This mark with the relevant number of the Indian Standard (IS : 395) written as shown, guarantees to you that Amco Batteries (for motor vehicles, light duty) carrying this mark are produced in accordance with that standard.

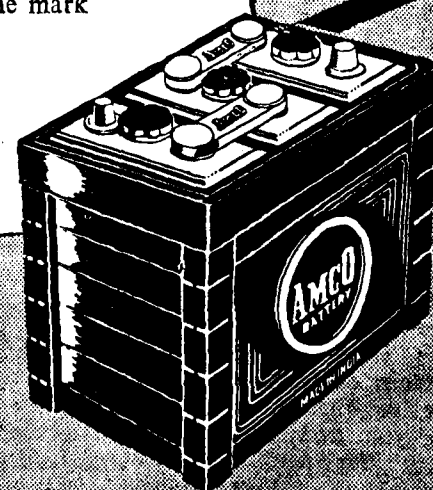
We manufacture lead acid storage cells and batteries for automobiles (light and heavy duty), tractors, telephone exchanges, train lighting, electric propulsion vehicles, and in short for all purposes where batteries of the highest quality are required.

You are requested to make sure when buying batteries falling within the scope of the mark to ensure that they carry this ISI certification—a mark of quality.



AMCOS for ENDURANCE

AMCO BATTERIES (PRIVATE) LTD.
MYSORE ROAD, BANGALORE - 2.



which he was abusing and applying his boot and fist to—in the manner that only a thoroughly disgruntled driver can.

A battery in most cars is usually borne in the front of the automobile—and beneath the bonnet so that it can be handy to the driver, and can be easily inspected and maintained.....before and after a journey. If it is stuck in the back of the car, the average motorist might forget all about it—until the last moment.

“Don’t,” runs a statement on car starting, “crank an engine too much when it refuses to start, even though the cause may be a flat battery.” No, don’t do that, because the trouble might be caused merely by the “crank” cranking the handle in the first place!

Most people when they acquire for the first time their very own motor conveyance, are not wholly “au fait” with its mechanism, idiosyncrasies, ability, capabilities, etc., and can be, in terms of motoring experience—uninitiated and unversed in repair and maintenance. Therefore, it comes as odd to read in the Manual given with the new vehicle “do not trust your battery to inexperienced and unskilled hands.”

Meantime, the book does give some information and details on battery care, but if YOU are a newcomer to the realm of motoring—and who isn’t at one stage or another—aren’t you “inexperienced and unskilled?” In other words, don’t muck about with your battery, take it to the nearest battery man or garage, who should know his business—and who will charge you handsomely for being “allowed” to inspect and advise and operate on it.

It is nice to know that on the whole a battery can be expected to last for 2 years or for about 25,000 miles of motoring. But, often a battery will fail before both limitations have been reached, proving, while the most used part of your vehicle, a battery can also be the most “abused” part. Treat the battery as your friend, and look after it—and it will look after you—to the satisfaction of all concerned.

Batteries have often caused some

LEAD-ACID STORAGE BATTERIES

By V. CHOKKIAH

A storage battery is nothing but a device used repeatedly for storing energy at one time for use at other times. This energy is stored in a chemical form and is delivered out as electricity. Thus the process of putting energy into a battery is termed “CHARGING” and delivery of current from a battery is called “DISCHARGE.” The battery plays the part of a reservoir from which electrical energy is supplied to crank the engine, to light the lamps, besides the engine-combustion and other electrical devices.

The essentials of the Automobile Battery are the two unlike plates called positive and negative plates well dipped in diluted sulphuric acid. In between these two plates micro-porous sheets of insulating materials (either in wood or in rubber) called separators are inserted in order to prevent the positive and negative plates from coming

into contact with each other and to avoid internal short circuit. A battery contains several cells as the case may be, connected in series. Each cell has a normal voltage of two volts. As the two volts pressure is not enough for automobile use, three cells or six cells are connected in the series.

The battery is defined as the heart of a car and therefore it is indispensable to follow the simple instructions for maintenance of batteries to ensure trouble-free performance and long standing service.

(1) Before fitting up a new battery in a vehicle ensure that the correct type of battery is fitted and not a smaller unit for economy’s sake. To choose incorrect type of battery for the particular vehicle would cause heavy strain on the battery and will result in the premature failure of the unit.

(2) Always use thick cable wires to connect the terminals of the battery. Using undersize cables will increase the resistance in flow of current. The connecting cable wires should be sufficiently long and flexible to prevent pulling on the battery terminals.

(3) Do not allow the battery to become loose in its box. Tighten the bolts of the brackets that hold the battery firm and tight in its place. A loose fitted battery is apt to get damaged and sometimes shall damage other parts as well.

(4) Do not forget to top up the cells with pure distilled water whenever necessary. Never use acid for refilling. Acid filling may ruin the battery.

(5) Keep the battery terminals and terminal clamps of the cables

embarrassment, like the English-woman proudly “showing off” a new British model in New York, only to have the car stop in the middle of the 5th Avenue, and while she hoped the vehicle would be the “cynosure of all eyes,” she had to be unceremoniously towed away—because, while perfect in every other detail, she had a “flat” battery.

And, then there was the thoughtful friend, who learning that a neighbour’s car wouldn’t start on a cold morning, helpfully suggested it be pushed out into the street and to run down the hill to make the battery “start.” This was accomplished, and when the vehicle had not responded on the downhill descent (it was a long hill), the owner suddenly remembered that the car wouldn’t start—because he had TAKEN the battery out the night before.

It took a lot of “push” to get the vehicle home again, too.

If you don’t mind—I’ll have to end here, as I’ve just remembered my battery’s flat—again, but try this poem for size!

“You are a first class driver.

In fact, one of the best.”

“Oh, go on, you flatter me.

I couldn’t go anywhere

’cept with this new battery.”

EQUAL TO THE WORLD'S BEST

A small, but very significant exhibit at the 'India 1958' Exhibition, Delhi is the Standard Batteries Limited's section in the Bombay Government's industries pavilion.

STRATEGIC INDUSTRY

Standard Batteries Limited, a completely Indian company, were the first to make storage batteries in India on modern lines and so pioneered in establishing a strategic industry within the nation's borders.

Today, Standard Batteries Limited have the largest and most modern

clean and free from corrosion. Always apply a thin coat of vaseline over the terminals to prevent sulphation.

(6) Do not lay metal tools on the top surface of the battery or on the lead connectors of the battery.

(7) Do not crank the engine with the self-starting motor continuously if ignition or starting does not take place after few revolutions. This trouble may be due to some loose connection in the wiring system of ignition or due to some wrong adjustment in the timing of the Firing Order.

(8) Always choose the right grade of Engine Oil (as per recommendations of the manufacturers of your vehicle). If the oil is too heavy the starter of the vehicle places much strain on the battery and the battery may become discharged.

(9) If the self-starting motor does not work even after a fully charged battery is fitted, the trouble may be traced to the 'pinion-drive-stuck,' which may be removed by slightly cranking the engine with the handle.

(10) Do not blame the battery suddenly for every trouble you may be having in the car. Most of the troubles arise due to loose wiring and defective switches. Ensure that the electrical system in the vehicle, is in proper condition. Faulty wiring system may spoil the battery in a short period.

national battery-making plant—an important aspect of their very interesting exhibit. The main features, of course, will be the Pg and 'MITEX' sections, showing how these two great battery-making patents are being used in India.

Pg BATTERIES FOR INDIA

In addition, the Pg section displays Pg Batteries—made in India exclusively by Standard Batteries Limited—for Railway, Traction and Stationary purposes.

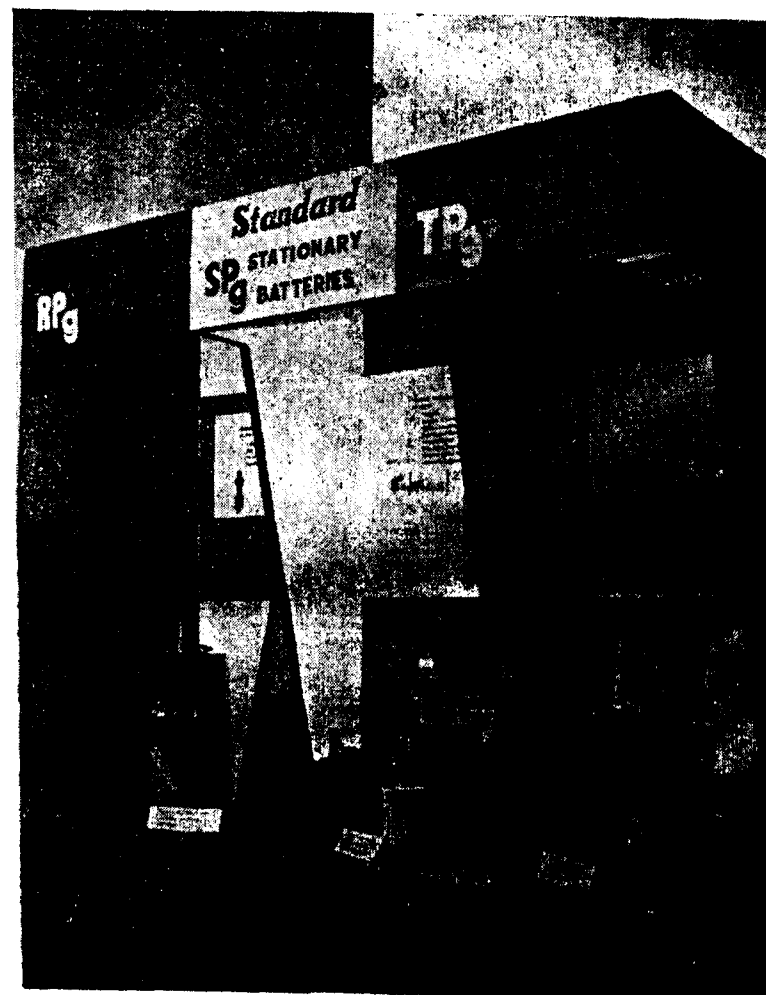
The Special-purpose section shows batteries that have been specially developed for the HT-2 Trainer

Aircraft, for Dakotas, for Army Wireless, and many other specialised uses.

Prominent in the Automotive section are the 'Reduced Charge' and 'Instant Power' Batteries—also available in India for the first time and made by Standard Batteries.

These highly-advanced batteries, now being made in India by Standard Batteries, are more than fine examples of what Indian enterprise can accomplish. For they have put our country abreast of the world in battery manufacture—a fact that is helping to establish export markets for Indian-made batteries.

A view of the Standard Batteries Ltd.'s stall at the India 1958 Exhibition at New Delhi



MOTORINDIA

January 1959

HOW A BATTERY FUNCTIONS

By M. J. PATEL

It is a well-known fact in physics that any two dissimilar metals when immersed in acid will generate an electrical current. In building a storage battery 'NEGATIVE' and 'POSITIVE' plates are used which contain chemical paste lead-oxide. The battery will function only when the chemical properties of the plates are changed with the help of chemical action. This is done by immersing the plates in diluted sulphuric acid and passing a 'DIRECT' current through it. The acid is used because pure water is non-conductor of electric current and at the same time it helps to provide a path for electric current. Therefore the technical name for dilute acid is known as 'ELECTROLYTE.'



MEHERWAN J. PATEL

There are four essential chemicals present in a battery :

Chemicals	Chemical symbol
(1) Lead-peroxide in positive plates	PbO_2
(2) Lead in spongy form in negative plates	Pb
(3) Sulphuric acid and water (electrolyte)	H_2SO_4

Chemical action while charging a battery

In a battery we have two dissimilar metal plates immersed in acid having gravity 1.210. While passing the direct current, the formation current has the effect of transferring one atom of oxygen from the negative plate to the positive plate. The lead-oxide in the negative plate, having lost its one part of oxygen becomes pure spongy-lead that is (Pb) and positive plate becomes Lead-peroxide (PbO_2).

The chemical action of a fully charged battery is :

Positive plate, Lead-Oxide (PbO_2); Negative plate, pure spongy lead (Pb); and Electrolyte is sulphuric acid—water (H_2SO_4).

Chemical action while discharging a battery

When an electric circuit is made, the battery commences discharging. The circuit is completed through the electrolyte and the positive plate loses one part of oxygen, which is transferred to the negative plate, and at the same time the acid in the electrolyte combines with both the plates. The battery is fully discharged when both plates are chemically the same. Both plates become lead-sulphate ($PbSO_4$), and electrolyte having lost its sulphuric acid becomes water (H_2O).

The chemical action of a fully discharged battery is :

Positive Plate Lead-sulphate	...	($PbSO_4$)
Negative Plate Lead-sulphate	...	($PbSO_4$)
Electrolyte Water	...	(H_2O)

Gravity test of a battery

The test which determines the state of charge of a battery with the help of float type hydrometer is known as gravity test. We know that in a case of fully charged battery electrolyte is in a form of sulphuric acid and in fully discharged battery the electrolyte is in form of water. Sulphuric acid is heavier

than water, and the weight of sulphuric acid in a fully charged battery is 1.250 times heavier than the weight of water. In case of completely discharged battery the weight of electrolyte is 1.100 times the weight of water.

The following 'Scale' indicates the state of charge of a battery (For Indian climate and temperature).

Fully charged	Specific gravity	...	1.250
Three-quarter charged	Specific gravity	...	1.225
Half charged	Specific gravity	...	1.175
Quarter charged	Specific gravity	...	1.125
Fully discharged	Specific gravity	...	1.100

Storage capacity

The storage capacity of a battery depends on :

- (1) Number of plates in each cell
- (2) Size of plates (thickness)
- (3) Total surface area of the plate.

Capacity of a storage battery is measured in "Ampere-Hours." If a fully charged battery is discharged at a steady 5 amperes and takes 10 hours to reach discharge condition, it has given $5 \times 10 = 50$ amperes hours. Again if the same battery equally fully charged was discharged at a steady 50 amperes, it would not last for about one hour.

Causes of battery failure

- (1) Improper charging rate, that is over-charging or under-charging.
- (2) Leakage or short-circuit in wiring.
- (3) Less running per day (The average running should not be less than 15 miles per day).
- (4) Slow running or slow driving speed.
- (5) By using tap water instead of distilled water.
- (6) Manufacturing defect.

MOTORINDIA

January 1959



T. M. PARIKH

Sales & Technical Director :

BOWER BATTERY MFG. CO., PRIVATE LTD.

takes pride & pleasure
in informing their

HUNDREDS OF EFFICIENT DEALERS &
THOUSANDS OF SATISFIED USERS
of their

NEW FACTORY

EQUIPPED WITH THE LATEST MACHINERY

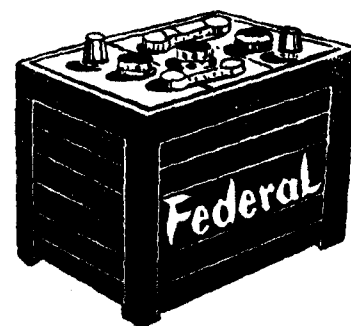
MANUFACTURING :

THE FAMOUS **FEDERAL** FIBRE GLASS BATTERY
FEDERAL BATTERY CABLES & STRAPS
FOR CARS, TRUCKS, TRACTORS & MOTOR CYCLES

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Grams :
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Factory : Plot No. 54, GHODBUNDER ROAD, Goregaon West
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ASIA'S LARGEST BATTERY FACTORY

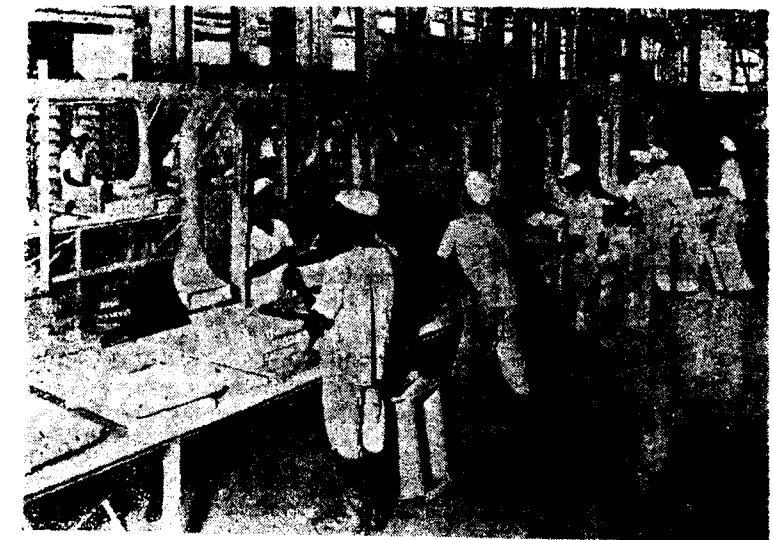
India's Five-Year Plans envisage considerable expansion of road and rail transport, generation of electric power, etc., all of which entail an increase in the use of storage batteries. While the estimated production of storage batteries in the country in 1955-56 was about 2,58,086 the target for the Second Plan (1960-61) has been set at 4,20,000. An increase of about 70% in the total production figure within five years, though very substantial, is by no means impractical because the Indian battery industry has both the efficiency and the capacity to deliver the goods.

Historically speaking, production of storage batteries in India started in the late 'thirties during the 'depression'; but the industry has never looked back, and with the advent of World War II, it took a gigantic stride forward. Ever since, it has kept pace with the expanding demand generated by a programme of rapid industrialisation.

The largest unit in the industry in India is the Exide factory situated on a twenty-acre site at Shammagar near Calcutta. It is also reputed to be the largest and best equipped battery manufacturing plant in Asia with the capacity to manufacture batteries for all purposes. Demand for batteries in India is mainly for automobiles but the Five-Year Plans have increased the need for Train-Lighting cells and Stationary Batteries as sources of power in Telephone Exchanges, Hydro-Electric, Projects, Heavy Industries, Tea Estates and Hospitals. Adequate measures have been adopted by the Exide organisation to meet this demand.

A distinguishing feature of Exide production is the great care taken over quality. This is backed by constant research which pools the experience of Exide factories and sales offices all over the world. One remarkable example of the practical benefits derived from such research in the Silver Exide battery which was introduced to this market in 1955.

Three features mark this popular battery, viz., Porvic Separators, C.B. 95 Alloy Grids and a Hard Rubber container. Ever since the



A view of the plate pasting department in the Exide Factory

storage battery came into use, the industry was faced with the problem of finding a suitable separator material which could serve the purpose of preventing an internal short circuit and at the same time allow a free circulation of the electrolyte. Specially treated fir wood is porous but it is prone to chemical attack with the result that the life of a battery is shortened. Provic—a material made from Polyvinyl Chloride—is chemically inert and indestructible even under high temperatures. This long lasting separator also gives the user the full benefit of the improved alloys used in the manufacture of the plates to increase electrical efficiency and lengthen battery life. The container of the Silver Exide is of the best quality hard rubber—tough, leak-proof and shock resistant, to outlast even the long lasting plates it holds.

But more technical changes do not provide a first class product unless they are supported by careful manufacturing techniques. 'Know-how' and quality control must be applied to all the stages of production. The Exide factory employs a well-trained, efficient inspection staff to ensure that each battery matches up to the exacting standards of quality which are associated with this manufacturer. Where checking is too minute to be performed by the human eye or touch, electrical devices are used.

A feature of the inspection department is the chemical laboratory set up for testing raw materials before they are used in production. A finished product undergoes rigorous testing for capacity and life.

In order to be as self-sufficient as possible, the Exide factory has installed a high capacity rotary furnace to recover lead from scrap material. Though this is by no means sufficient to cover the entire requirement, it has resulted in a large reduction in the quantity of imported lead. Further improvements in tooling and machinery enable indigenous manufacture of a greater variety of hard-rubber containers. Installation of this modern plant, apart from increasing the efficiency of production, has brought indigenous materials into greater use with a resultant saving of considerable foreign exchange.

MR. GREGSON STUDIES NEW DEVELOPMENTS IN U.K.

Mr. H. R. Gregson, Director and General Manager, Chloride and Exide Batteries (Eastern) Private Ltd., and of the manufacturing organisation, Associated Battery Makers (Eastern) Private Ltd., has recently returned to India after a visit to Europe.

Apart from visiting various associate factories of Chloride Electrical Storage Company Limited in the



Mr. H. R. Gregson

U.K., Mr. Gregson made a tour of other factories in the U.K. and on the Continent. One of the most important new developments in the United Kingdom, states Mr. Gregson, is the completion of a new Chloride Research and Development Centre at Swinton near the main Exide Works. This new establishment, built at a cost of Rs. 30 lakhs, houses the greatly expanded research and development wings of the Chloride group, benefiting Exide factories all over the world.

New developments in the rubber and plastic factories of the Chloride group were studied with particular interest by Mr. Gregson. These developments have considerable importance for India because the Exide Battery plant in India, the largest of its kind, manufactures a whole range of rubber and plastic components and has in hand additional important projects in this field. The Exide Battery Factory in India, Mr. Gregson remarks, is far more self-contained than most of the large battery factories in the U.K., U.S.A. and Europe.

The U.K. Storage Battery industry continues to lead the world in developments and its products and practices are being used and followed in the U.S.A., Canada, Germany and other countries advanced in technological practice. The technical assistance which the Exide Indian factory receives from the U.K. is, therefore, of considerable value.

German Machinery Steps Up Federal Battery Production

BOWERS PLAN PLATES SALES TOO

M/s. Bower Battery manufacturing Co Private Ltd was started in 1954 by Shri T. M. Parekh, Sales and Technical Director of the firm in collaboration with Shri Chimanlal Desai, well-known automobile businessman of Bombay.

Recently a new factory equipped with latest machinery from Germany and other continental countries was erected with a view to stepping up the efficiency of production of the battery, which is already enjoying a good name in the market. Batteries of all sizes and power for most types of cars, trucks and motor-cycles are being turned out in this new factory.

The Firm also plans to produce shortly battery plates not only for their own use, but for sale outside. It is claimed that the Federal Fibre Glass Batteries are subjected to rigid tests before the unit leaves the Factory. Fibre glass is pure glass stretched to one-fifth of the thinness of human hair and is claimed to be much stronger than the silk thread.

The Electric Automatic Mixture at work at Bowers.



A view of the Bower Battery Manufacturing Co's Battery Factory



A view of the Casting Section at Bowers.

A view of the assembly section where Federal Fibre Glass Batteries are assembled.



Himco Batteries (Madras) Private Ltd.

To trace the history of Himco Batteries (Madras) Private Ltd. is to trace the origin and development over the past 22 years of its parent Organisation—Himco (India) Private Ltd., the pioneers in the manufacture of replacement batteries and other allied products in India, whose products have gained a national reputation.

Back in 1939, the Hindustan Manufacturing Co. now Himco (India) Private Ltd., whose founder, Shri K. R. Anand, deserves all the credit for having conceived an enterprise like this years back, emerged into the industrial world as a small manufacturing unit. During these 22 years of progress, this organisation has been serving the automobile trade and industry by constant improvements in its products—the growing demand for which justifies the reputation for quality established by HIMCO products.

Starting first with Battery Cables, Himco (India) has been gradually extending its manufacturing activities and it now covers a wide range including the most complicated line of Ignition Parts and today many of their products are original equipment on most of the vehicles produced in India. As a result of constant research the Himco (India) Private Ltd. are now marketing Himco Electric Horns, Ignition coils, generator cut-outs, Horn Relays, Contact Points, Ignition Switches and various other

Oxides mixing is done mechanically at the Alandur Factory of Himcos.

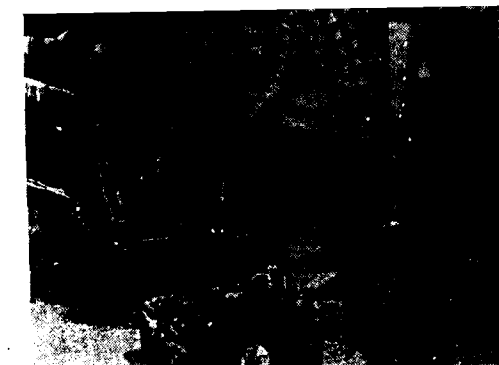
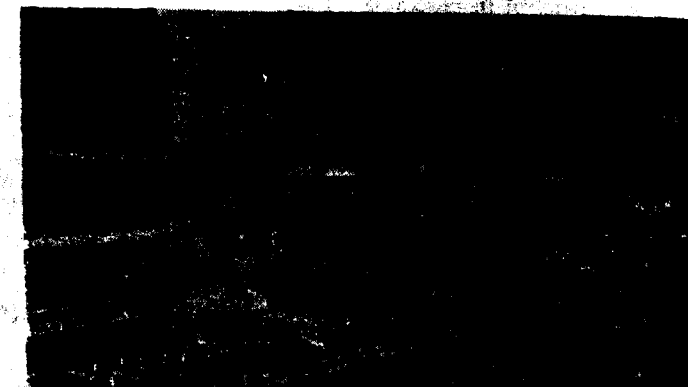


items. A noteworthy point in all these is that Himco have been able to use entirely Indian skill and raw materials by avoiding dependence on foreign experts and materials. After attending to International Electro Technical Commission meetings at Munich (Germany), as a delegate of I.S.I., Mr. Anand undertook a world tour in 1956 to make an intensive and detailed study of similar industries in the other parts of the world. Ambitious programmes for the future covering the manufacture of battery chargers, water distilling stills, hot ovens, etc., have been undertaken to increase the activities of the company. To explore the fullest possibilities of developing this industry for which there is abundant scope, it was decided in 1954 with the late Mr. V. A. Shenoi as in-charge to start unit in the South to cater to the requirements of the Trade and the Industry alike for the HIMCO Products.

The Himco Batteries (Madras) Private Limited, an independent organisation thus came into being in the year 1957. With a spacious factory in Guindy, the firm effectively extends its efficient and quick service to Transport and the Trade alike in the South.

The main Sales Office of Himco Batteries (Madras) Private Ltd. is situated at 144, Mount Road, Madras-6, with Mr. I. K. Luv, as Director-in-charge.

Final assembly Checking and Finishing of Himco Batteries at Alandur



The Battery Charging Section of Himcos, Alandur



The Battery Assembling Section of the Himco Factory at Alandur

Photo shows grids casting on automatic machine



THE BATTERY INDUSTRY IN INDIA

(Contributed)

The lead-acid battery is indispensable to a modern country. The working of several important services, such as road transport, railways, shipping, electric supply, telephone and telegraph communications depend on batteries. In fact, without batteries, many amenities of modern living may not be available. Since so much depends on batteries, it's essential that every country has its own battery industry.

It's essential, too, that this strategic industry be highly developed in order to produce high-quality batteries for every battery requirement—especially in India where modernisation and rapid industrialisation have created an unprecedented demand for batteries for many types of applications.

The manufacture of batteries is a complex of highway specialised operations and until a few years ago, India had to import all the batteries needed. In fact, automobile batteries alone used to cost over one crore of rupees yearly in vital foreign exchange!

Again, in the case of special batteries for railways, telephones, telegraphs, power stations, fork-lift trucks and other special purposes, India, till recently, depended entirely on imports which involved about two crores of rupees in foreign exchange.

Pioneering effort

Were this situation to exist in these days of exchange stringency, the transport industry would be hard hit indeed. That such is not the case is due to the efforts of an Indian company, Standard Batteries Limited, who pioneered in the manufacture of batteries in India. Their attempt proved successful, and soon others were manufacturing batteries in the country.

Today India has her own battery industry. But just how good is it? All those interested, will be glad to know that some of the greatest advancements in battery manufacture are now being utilised in our country. For this, the credit

goes once again to Standard Batteries Limited, who are now our largest national battery manufacturers, with 100% Indian capital and labour.

Standard Batteries Limited have entered into technical collaboration with M/s. A. B. Tudor of Sweden and secured from them several world-famous battery-making developments for use in India. M/s. A. B. Tudor are one of the leading Continental battery manufacturers, whose technical 'know-how' is also being used by leading battery manufacturers in the U.S.A., the U.K. and other European countries.

This same highly-advanced technical experience is at the disposal of Standard Batteries Limited who use it to produce the finest for India's battery needs. Standard Batteries Limited have also their own special Development Department where better methods of battery manufacture, quality control and inspection are evolved. Through their continuous foreign training scheme, Standard Batteries Limited have already had two of their

technicians trained at the A.B. Tudor factory in Sweden.

How much these developments mean in terms of progress to the Indian battery industry and in terms of actual benefits to Indian battery needs, can be easily realised when one considers the latest trends in battery making and the types of batteries produced by the world's leading battery manufacturers.

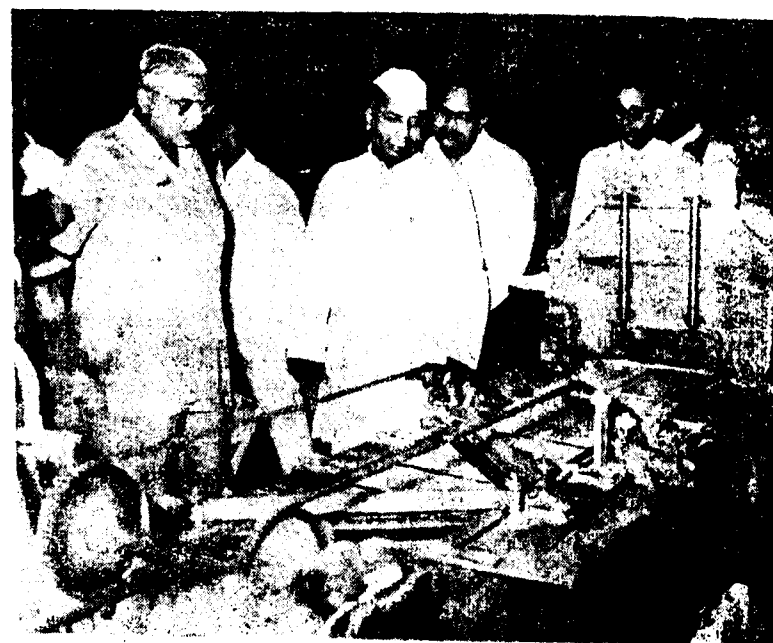
Earlier developments abroad

Many are of the opinion that batteries have not changed much during the last hundred years. This impression exists mainly because battery types developed during the 19th century are still being used.

The primitive lead-acid battery was made by putting lead sheets into sulphuric acid. Capacity and quality were occasionally improved by minor improvements. But practical progress came to an end with the common battery as we know it with pasted plates and wooden separators.

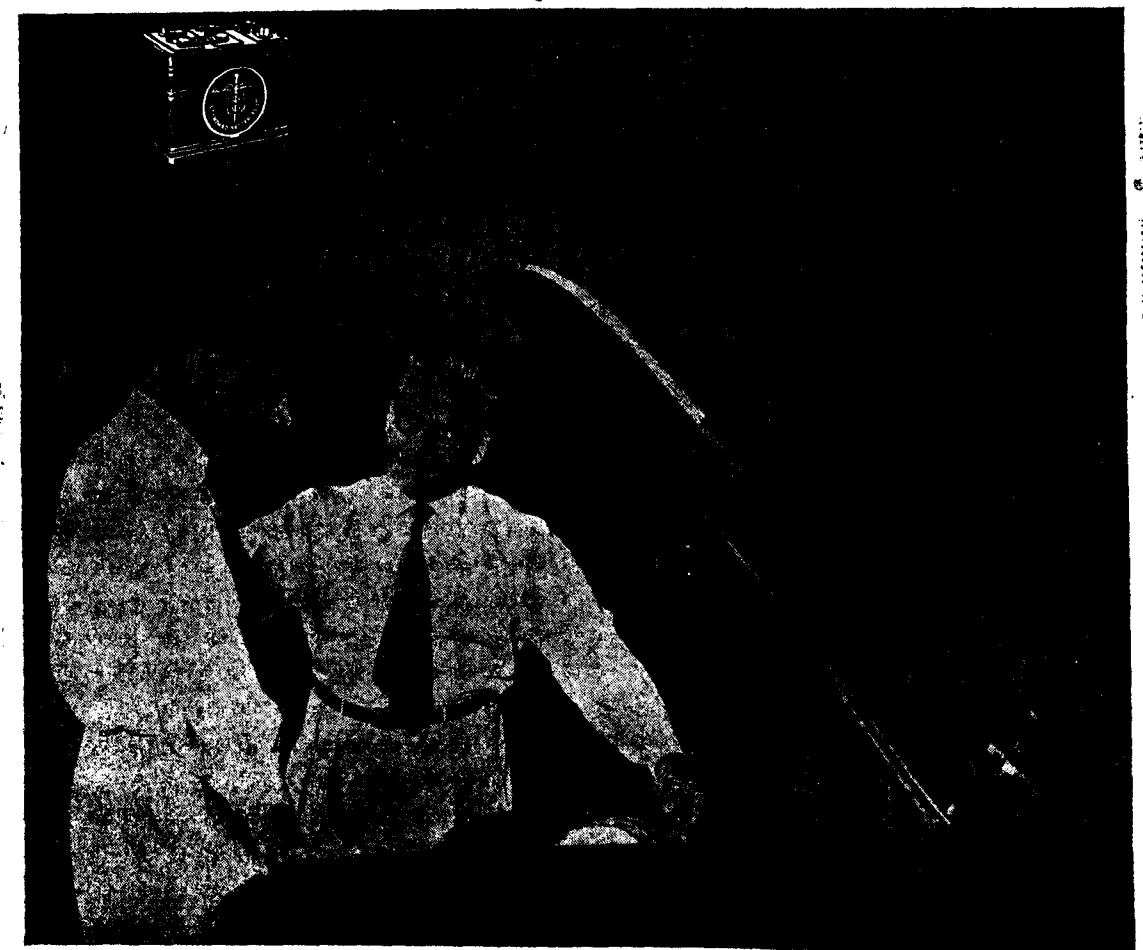
But now conventional batteries

Photograph taken when Shri Y. B. Chavan, Chief Minister of Bombay State visited Messrs. Standard Batteries Ltd's factory recently. On the extreme left is Shri R. D. Char, Chairman of Messrs. Standard Batteries Ltd.



MOTORINDIA

January 1959



**"Quality is remembered
long after price is forgotten"**

Customer: "All car batteries are much alike. So why not buy the cheapest?"

Dealer: "For one thing, Sir, there is a lot of difference between batteries. And cheaper in the first place doesn't at all mean cheaper in the long run!"

Customer: "And why not?"

Dealer: "To work out the real value of a battery, you've got to reckon the length of service it gives you. A cheap battery, made of poor-quality materials obviously needs replacing more than a high-quality battery."

Customer: "But within the guarantee period, a faulty battery is replaced free!"

Dealer: "Yes, but now you're overlooking how much you depend on your battery. If it lets

you down when you need your car urgently, or when you're way out in the country — well, that's going to upset your immediate programme and will mean taking the car to the battery supplier; even if he does give a free replacement, you're going to spend some money not to mention the inconvenience.

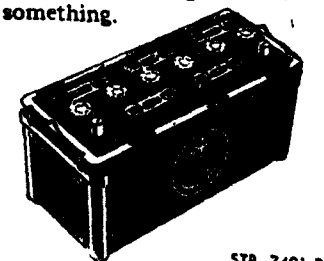
Customer: "So which battery do you suggest?"

Dealer: I always tell my customers, go for quality, and the price will take care of itself. Take a Standard battery, for example, it's made of top-quality materials, in an ultra-modern plant, and it's backed by a guarantee that really means something.



You're better off with a *Standard* every time

STANDARD BATTERIES LTD., BOMBAY 25



STB. 7491 R.

January 1959

MOTORINDIA



A section of the chemical testing laboratory at Standard Batteries Factory.

Electrical testing section in Standard Batteries Factory

have rapidly lost popularity, specially for heavy-duty purposes. They cannot compete with modern batteries that have great improvements, such as the tubular plate.

The tubular plate, which came out ten or fifteen years ago, proved to be a tremendous advancement. The positive plate, instead of being flat, consists of a row of tubes made of slitted hard rubber. These tubes contain the active material within, unlike the flat plates which had the active material pasted on the outside. Since the main cause of battery failure is the shedding of the active material by the positive plates, the tubular positive plates proved far more efficient in retaining the active material than the pasted plates. Thus the tubular plate increased battery life up to *two and a half times*.

Also, a tubular plate can hold more active material than a pasted plate of the same size. Since the capacity of a battery also depends on the quantity of active material contained, batteries with tubular plates naturally have a far higher power capacity.

Many types of slitted tubular plates were soon developed, but none proved to be an appreciable advancement on the earlier tubular plates.

The latest development

Then came what is regarded as the greatest battery development in recent years—the Pg Tubular Posi-

tive Plate—a really great advancement over the old slitted tubular plate. Today the Pg technique is very popular in Sweden, Norway, Denmark, Germany, the U.S.A. and the U.K.

Pg Batteries are now being manufactured in India exclusively by Standard Batteries Limited with foreign collaboration for trucks, tractors, fork-lift trucks and other industrial trucks, as well as for railways, telephones, power stations and several other special purposes

The Pg technique

Of radically new construction, the Pg Tubular Positive Plate consists of a row of thin, perforated P.V.C. tubes with spun glasswool lining. Inside each tube is packed the active material which, in turn, surrounds a thin special alloy lead spine that runs through the middle of the tube.

The Pg Tubular Positive Plate has several advantages over slitted tubular plates. In the first place, the other tubular plates have tubes made of hard rubber or ebonite. These materials are weak and brittle in acid, and so the walls of the tube have to be very thick, leaving less space for the active material. On the other hand, P.V.C. tubing has such great mechanical strength and rigidity that the walls can be kept very thin, so that the Pg tube can contain about 30% more active material than the ordinary tube. Since the capacity of a battery is also determined by the amount of active material that can be

contained in the plate groups, it is easy to see that, size for size, the Pg Tubular Positive Plate has a higher power capacity than an ordinary slitted tubular positive plate.

Another great advantage is in the spun glasswool lining of the Pg tube. It easily allows the electrolyte to pass through to the active material inside, but does not allow the active material to be shed (unlike the slitted tubes which still lose quite a lot of active material through the slits) and so contributes to an even longer battery life. A secondary advantage of the prevention of shedding by the glasswool is that the space left at the bottom of other batteries for active material sediment is not needed in a Pg Battery; hence the plates can be made longer—almost reaching the bottom—to increase the power capacity by another 10%.

Again, since the P.V.C. wall is well perforated and the glasswool lining inside is very porous, the electrolyte has greater freedom of access to the active material. This has the effect of reducing the electric resistance inside the battery.

Thus the Pg technique and also the 'MITEX' Separators, as used in a 'Standard' Pg Battery, offers larger power capacity, lower weight and smaller size, far longer service life, and lower battery costs per annum!

'MITEX' Separators

The second great battery advancement to be introduced into India

by Standard Batteries Limited is the world-famous 'MITEX' Microporous Rubber Separator with spun glasswool mat reinforcement.

Another weak point in an ordinary battery is its separators. Decomposition of the separators due to corrosion by acid and oxidation is the second basic cause of battery failure. 'MITEX' Separators, however, easily withstand the effects of sulphuric acid up to 50% concentration at temperatures upto 80°C. are not damaged by the severest jolting, and actually last even longer than the battery itself! In fact, 'MITEX' Separators are used by many countries for batteries for their defence services, and are specially chosen for submarine batteries which have to work under the severest conditions.

In spite of this toughness, however 'MITEX' Separators are only a fraction of the weight and volume of ordinary separators. 'MITEX' Separators have a very high porosity of 80% of the volume and hence contribute to a lower internal resistance in the battery.

'MITEX' Microporous Rubber Separators are made in India by Standard Batteries Limited and are

being used in every 'Standard' Pg Battery for heavy-duty and special purposes. They are also used in automobile batteries.

Two other patents that are widely used abroad, and of special interest to the transport industry, are those used by Standard Batteries Limited for their 'Reduced Charge' Battery and 'Instant Power' Battery—also available in India for the first time.

The 'Reduced Charge' Battery has a reduced first charge time, which enables it to be put into service much faster than ordinary batteries. This method saves as much as 25% of the charging time, and is incorporated in 'Standard' Batteries at no extra cost.

The 'Instant Power' Battery is of even greater importance in our country where charging facilities are not always easily available for lack of electricity. This dry, pre-charged battery needs only to be filled with the electrolyte to be ready for use!

Thanks to these tremendous battery advancements introduced by Standard Batteries Limited, India is today keeping abreast of the latest battery-making trends in the

world. Such, then, is the magnitude of our battery industry's progress: **INDIAN - MADE BATTERIES, ARE FAR MORE POWERFUL, DEPENDABLE AND ECONOMIC THAN EVER BEFORE. IN FACT THEY'RE EQUAL TO THE WORLD'S FINEST IN QUALITY AND TECHNICAL EXCELLENCE.**

OBITUARY

Mr S. G. JEYARAJA NADAR

We regret to announce the death on 28th January 1959 of Sri S. G. Jeyaraja Nadar, the well-known transport magnate of the South. Mr Nadar, who was ailing for some time, was aged 63 and leaves behind his sons and a number of relations and friends to mourn his loss.

The late Mr Jeyaraja Nadar was well known for his charitable disposition. His powers of organisation can well be imagined by the remarkable progress that has been made during the last 35 years and over by various business concerns in the automobile field under the name and style of S. G. Jeyaraja Nadar & Sons. This organisation includes Modern Tyre Retreading Factory at Periakulam, Diesel Servicing and Repairs with modern machinery at Madurai and the dealership of popular motor vehicles and trucks at their showroom at Madurai.

Make a good start
fit a
"MEC" BATTERY
BUILT FOR BETTER PERFORMANCE

THE MYSORE ELECTRO - CHEMICAL WORKS LIMITED

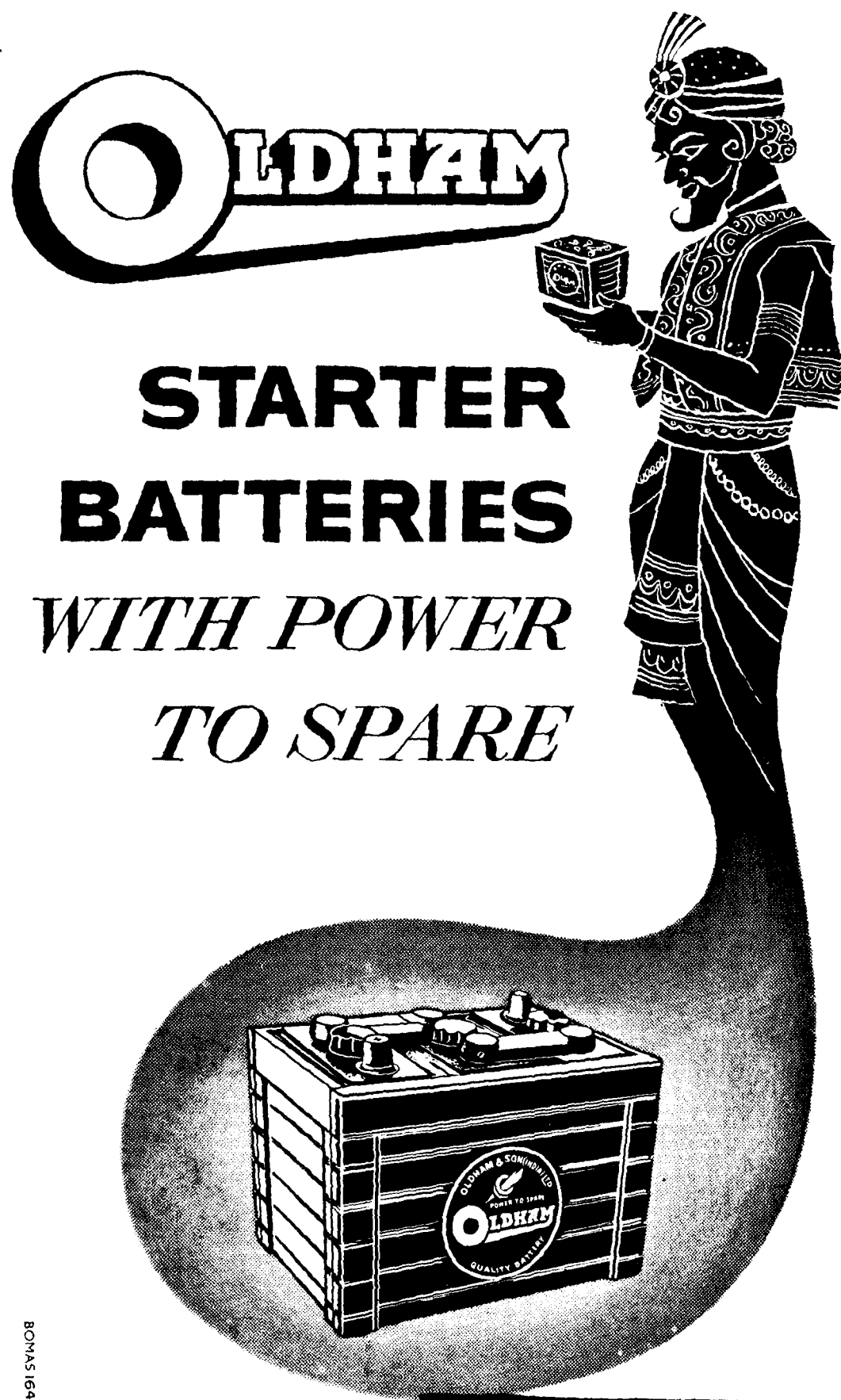
POST BOX No. 1022

RAJAJINAGAR

BANGALORE 3

MANUFACTURERS OF:

Storage Batteries for all types of Automobiles, Radios, Railway Signals, Fire alarm systems, Emergency Stand-by, Train lighting, Electrical and Industrial Trucks etc



BOMAS 164

AGENTS FOR
INDIA
EXCLUDING
WEST BENGAL
BIHAR &
ASSAM

THE
SOUTH
INDIAN
EXPORT
CO. LTD.,

20, GENERAL
PATTERS ROAD
MADRAS - 2.

TOURISM IN INDIA

India's ancient and modern cities, art and architecture, hill stations and health resorts, lakes and gardens, temples and mosques, monuments and memorials, festivals and folk-life, crafts and arts, centres of industry and seats of education, people and culture are objects of more than ordinary interest to the tourist from the West who seeks to see something "that's different."

Few lands can rival India in its geographical diversity. From the tropical Southern tip of the peninsula to the temperate north stretching over two thousand miles, the country offers a rich variety of soil, flora and fauna, scenery and sights.

Among the outstanding examples of natural scenery are the verdant ghats of Western India, the palm-studded backwaters of Kerala, the valleys of Kashmir, the hills of the Nilgiris, the land end at Kanya Kumari, and of course the Himalayas, the world's greatest range of mountains.

South India which formed "the cradle of an ancient civilization"—a civilization which was perhaps the oldest known to Man—offers a rich and variegated field for the tourist. A visit to India will be incomplete without a visit to this part of the country. Tamil Nad is well known for its rich archaeological treasures. This part of the country has always been associated with temples which were nurseries of ancient Indian culture. The various shrines with the towering Gopurams besides being the Centres of Religion stands as landmarks of the culture and monuments of the art of the people.

Before we go into the details of places of tourist interests it will be fitting to know in bare outlines the History and Development of Tourism.

History of Tourism

Its tradition in Europe goes back to about 100 years but its importance as a social phenomenon was only felt in the twenties when Americans started coming to Europe in large numbers and the people in Europe turned to Eastern Countries as a means of relief from the strenuous conditions created by heavy industrialisation.

The need to develop tourism as a

major industry for earning foreign exchange particularly Dollar exchange—was strongly felt for the first time after the last war.

Apart from the economic aspect it has become one of the most important social and to some extent political phenomena.

In India, the first step to organise Tourism was taken in 1945 when the Government of India appointed a committee under the chairmanship of Sir John Sargent to survey the potentialities of developing tourist traffic in India. It presented the report in May 1946. In its report Sargent Committee said, "Successful steps to promote tourism will result in substantial addition both direct and indirect to India's revenues. If properly organised every aspect of business can benefit greatly by influx of tourists. Especially cottage industry will thrive."

Because of the political situation this report did not receive the careful consideration it deserved.

In 1949 a small tourist traffic branch was set up in the ministry of transport. Immediately thereafter four regional tourist offices were established at Delhi, Bombay, Calcutta and Madras. Then it was decided to establish overseas tourist offices. The first such office was opened in December, 1952 in New York; then in San Francisco and then in London.

From the present trends it is expected that tourist traffic can match and even surpass in course of time. The foreign exchange earning capacity of this industry is about Rs. 120 to 140 crores annually. The number of foreign tourists visiting India in 1956 was about 70,000.

Some problems

India is a place somewhat distant to foreign tourists and travel charge is one of the major factors that come to be considered by a prospective tourist. There is a first class world recognised Air service between India and a large number of countries of the world. Ways and means should be found to reduce the travel charges for tourists. As tourism is bound to promote prosperity of the country in other directions it might not be difficult to

introduce a low air fair. For instance Germany was able to attract more tourists by offering more Marks to the Pound than the official conversion rate.

What is not so easy in a vast and backward country like India is to provide the foreign tourists with essential facilities and amenities. Except in the important cities and more popular resorts the tourist is at present compelled to rough it for himself and even in the former he has to allow himself to be pestered and fleeced by unscrupulous traders touts and beggars.

Spreading a network of hotels at all tourist centres may be a long and laborious process but the authorities can at any rate take immediate steps to rid of the tourists of the attention of pests and parasites.

Internal tourism

We ourselves should set about discovering the glory that is Ind. travelling for pleasure we have not yet taken to the idea. Barring those who are religious-minded who undertake pilgrimage to holy places and shrines, most people limit their travel to the absolute minimum. And yet what a vista of æsthetic delight and rich experience they deny themselves by not planning their holiday travel. The Union Minister for Transport considers that Internal tourism would help us to surmount differences based on province, language and caste. He believes that internal tourism is as important as foreign tourism and urges its speedy development. On the other hand the Railway Minister hold out no hope at all for improvement in rail conditions for years to come. The present overcrowding is already compelling "travel only when absolutely essential."

Being intended primarily for foreign visitors the new hotel facilities that are being provided are generally beyond the means of Indian tourists. If the aim is to attract the maximum number of tourists the emphasis must shift from luxury to utility.

Personal contact between foreigners and this country is the one thing most essential for a proper understanding of the foreign policy of India as laid down by our Prime Minister. They must know what we stood for, and what we are doing. It is also necessary for Indians to get to know more intimately the people of the other countries.

MOTORINDIA NEWS SECTION

(BY OUR SPECIAL CORRESPONDENTS)

ACKNOWLEDGMENT OF DOCUMENTS

Government Order on M.V.A.M.A. Representation

The Motor Vehicles and Allied Merchants' Association recently presented to the Government that when for renewal or departmental checks 'B' permits, insurance, other certificates, etc., are held up in the Offices of the Police or the Transport Departments and when the vehicles ply with duly executed letters of authority executed by the operators or their duly authorised persons stating that the original documents have been presented to, and are held up in departmental offices, the crew are being charged and hauled up before the magistrate for non-production of the documents. As this is causing hardship they have requested the Government to instruct the police and transport authorities who inspect and check 'B' permits, etc., to issue written acknowledgment of the said documents or to accept in lieu of the original letters of authority endorsed by the Departmental Officers concerned that the documents have been presented to them.

The Government examined the suggestion of the Association in consultation with the Secretary, State Transport Authority. The Secretary, State Transport Authority stated that it is desirable to issue written acknowledgment for all road permits, fitness certificates and licences issued under the Motor Vehicles Act, with periods of validity of the documents and to accept them in the absence of the original.

The Government have accepted the recommendation and direct that whenever road permits, fitness certificates, licences, etc., under the Motor Vehicles Act are produced for inspection or any other purpose, a written acknowledgment with periods of validity of the documents should be given and that the written acknowledgment should be accepted by all the checking officials in lieu of originals.

U. K. Motor Firm's Oversea Representatives Meet

K. Gopalakrishna attends Coventry Conference

Mr. K. Gopalakrishna, deputy chairman and managing director of Standard Motor Products of India Ltd., Madras, is one of 11 senior executives of the Standard Motor Company's associate and subsidiary companies overseas who attended a 14-day conference at the parent company's headquarters at Coventry, England. The conference was part of a campaign to formulate a single sales, service and spares policy throughout the world.

One of the main objects of the conference, which ended on November 28, was to allow the delegates to study the company's training organization so that they will be able to develop similar facilities on return to their own territories. They also had discussions on future plans and policy in relation to their own areas. The executives present represented territories accounting for 90 per cent of the company's sales overseas.

Standard Motor Products of India Ltd., was founded in 1948 and has a modern factory near Madras, where about 1,200 men are employed. The current development programme involves an expenditure of £ 1,000,000 over two years, and will allow the conversion of the tractor programme from assembly of "partially knocked down" units to assembly with an ever-increasing percentage of Indian components.

The current manufacturing programme calls for an output of 2,000 small cars (Standard 10s), 1,000 large cars (Vanguards), and 2,000 Ferguson tractors a year. The Vanguard engine is 100 per cent Indian manufactured, as will be the Standard 10 engine and the Vanguard gearbox by January next year.

EXPORT OF INDIAN BICYCLES

At the instance of the Ministry of Commerce and Industry, the All-India Cycle Manufacturers' Association were attempting to formulate a scheme to promote exports of bicycles as a collective effort of all those engaged in the cycle industry.

This was stated in the Lok Sabha recently by the Minister for Industry, Shri Manubhai Shah, in reply to a question by Shri A. S. Sarhadi.

Shri Shah said it would not be correct to say that there were great potentialities of export of bicycles from India to South East Asian countries. THE INTERNAL RULING PRICES OF INDIAN CYCLES WERE APPRECIABLY HIGHER THAN THE PRICES AT WHICH THE IMPORTED FOREIGN MADE CYCLES WERE NOW AVAILABLE IN SOUTH EAST ASIAN MARKETS. No appreciable exports of Indian cycles had so far been possible despite the efforts made by the Engineering Export Promotion Council and certain Indian manufacturers of cycles.

TECH. ADVISORY COMMITTEE FOR S.T.

Madras: The Government has appointed a Technical Committee to advise the State Transport Department on all technical problems relating to the department.

The Committee which is to be headed by the Secretary to Government in the Industries, Labour and Co-operation Department, will have three non-official members, Messrs. N Mahalingam, M.L.A., P. Subramaniam, retired Railway Engineer and A. R. Venkatacharya, retired Chief Engineer of Madras. The Honorary Director, Madras State Transport will be an ex-officio member of the Committee while the Mechanical Engineer of the State Transport will be its Member-Secretary.

PATTERN OF PETROLEUM CONSUMPTION IN INDIA

The present annual consumption of petroleum in India is nearly 5 million tons of which about 0.40 million tons is being produced mainly from the Digboi oilfield in Assam.

The pattern of energy consumption in India indicates that our demand is likely to rise at an annual rate of about 10 per cent. It is thus estimated that the demand for oil by the end of the Second Five-Year Plan will be 7 million tons, rising to 14 million tons by the end of the Third Plan.

The production of crude oil by 1961 is expected to be nearly 3 million tons including the production from the newly discovered oilfields of Nahorkatiya, Hugrijan and Moran in the Assam plains.

The main task of the Government of India is to narrow down the gap between the demand for and the production of oil and natural gas as much as possible by an early assessment of the country's oil resources and the discovery of new potential oilfields.

Nearly 4,00,000 square miles comprising parts of the Punjab, Ganga Valley, Assam, West Bengal, Gujarat, Cutch, Rajasthan and the East and West Coasts, are considered as areas deserving exploration for petroleum on geological, geophysical and other considerations.

Many of these areas are mantled by variable thicknesses of river alluvium and desert sand. For a quick assessment of the country's oil resources, simultaneous operations have been undertaken in some of these areas. The main effort of Government of India is directed at locating and testing suitable structures for the accumulation of oil by geological mapping, geophysical surveys and drilling.

A number of drill holes, both deep and shallow will be needed to ascertain the nature of the burial rocks and to decipher their structure. All these are costly operations. A test well may cost upto Rs. 50 lakhs or more. A deep drilling rig may cost anything upto Rs. 50 lakhs.

January 1959

In spite of all the risks and high exploration costs India must make every effort to become independent and self-sufficient in her oil requirements. She cannot afford to pay the progressively increasing cost of imports in foreign exchange which are estimated to rise upto Rs. 500 crores by 1976 if we fail to discover oil.

RECEIPTS TO BE ISSUED WHILE SEIZING PERMITS

On representations from the Central Road Traffic Board, the Inspector-General of Police, Madras has issued a Memorandum to the Commissioner of Police, Madras and Superintendents of Police in various districts regarding the checking of motor vehicles by police officers and seizing the permits of those vehicles. The Memorandum says:

The Secretary, Central Road Traffic Board, Madras, has brought to my notice that during the inspection of Motor Vehicles in several Districts the Deputy Superintendent of Police, Central Flying Squad found that many permits and licences were not available in Police. The Commissioner of Police, Madras and all District Superintendents of Police are therefore requested to issue suitable instructions to their subordinates that unless it is absolutely necessary the permits of the vehicles or licences should not be

WATER SPEED RECORD ATTEMPT: Mr. Donald Campbell broke the water speed record recently at Comiston, Lancashire recently in his speed-boat "Bluebird" with a speed of 248.62 m.p.h. using BP fuel and lubricants.



MOTORINDIA

THE "LIGHTNING"

Britain's latest and fastest jet fighter, the English Electric P-1B, was named the "Lightning" by the Chief of the Air Staff, Marshal of the Royal Air Force Sir Dermot Boyle, at the Royal Aircraft Establishment, Farnborough (Hampshire).

Sir George Nelson, Chairman of the English Electric Co., announced at the ceremony that within the last few weeks a U.S. Air Force team had tried out the Lightning.

"We believe that they have taken back to their own people the most glowing accounts of its quality," he said:

No official figures of the performance of the Lightning have been announced. Sir Dermot gave a hint of its top speed, however, when he said: "I am sure it is going to produce a genuine Mach II (twice the speed of sound) with full war equipment."

During a demonstration flight, the plane carried the "Firestreak" air-to-air missile.

Sir Dermot said the Firestreak was a more advanced and powerful weapon than the American "Sidewinder."

seized and kept with them unnecessarily and that if they seize permits or licences for any specific reasons, a receipt should invariably be issued to the persons from whom the permits or other records of the vehicles are seized.

MODELS AND THEIR Prices

CARS

	Rs. nP.
Plymouth Cars, (Sundaram Motors Private Ltd.) Ex-Premier Automobiles Factory, Karla	20,270 00
Plymouth Suburban (Sundaram Motors, Ltd.)	22,646 00
Hindustan Ambassador 1957 (Southern Automotive Corporation Private Ltd.) ex-plant Uttarpara	11,161 00
Dodge kingsway sedan (Rane Madras, Ltd.)	20,371 00
Dodge Suburban (Rane Madras, Ltd.) ex-Bombay	22,899 00
Vanguard Phase III (Union Co. (Motors) Ltd.)	14,700 00
Standard Super Ten Saloon (Union Co. (Motors) Private Ltd.) on the road	10,022 12
Standard Estate Car (Union Co. (Motors) Private Ltd.) on the road	14,889 12
Studebaker 'Parkview' Station Wagon 1956 model (Reliance Motors Ltd.) ex-plant Calcutta	20,280 00
Studebaker 1956 Commander (V.S.T. Motors Private Ltd.) Including S.T. & Delivery Charges	22,239 86
Studebaker 1956 President Classic (V.S.T. Motors Private Ltd.)	24,499 78
The Fiat 1100 The Elegant (Sundaram Motors Private Ltd.) Ex-Factory	9,755 00
Willys C.J. 3B Universal Jeep ex-plant Bombay	12,570 00
Willys Model Station Wagon ex-plant Bombay	18,150 00
Jeep 1 ton truck	13,046 00

MOTOR CYCLES

Royal Enfield (The Madras Motors (Private) Ltd.)	
"150 Ensign" (any dealer point in India)	1,995 00
"350 Bullet" with spring frame (any dealer point in India)	3,559 00
Royal Enfield three wheel chassis	4,654 00

SCOOTERS

Lambretta, manufactured by Automobile Products of India Ltd. Distributors, South India Automotive Corporation Private Ltd., Madras.	
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(At Visakhapatnam—Western Automobiles Ltd.) Prices are ex-Factory, Bhandup, Bombay.

VANS

Standard Delivery Van, (Union Co. (Motors) Private Ltd.) on the road	10,628 56
Hindustan Traveller, price on the road (Reliance Motor) Co.	14,700 00

TRUCKS & COMMERCIAL CHASSIS

Sundaram Motors (P) Ltd.

Leyland Comet "203" WB Passenger Diesel Chassis including S.T. & dely. charges

Leyland ECPO 2/2R-176 WB full forward control Passenger Chassis S.T. & dely. charges

Leyland ECOS 2/1R-163 WB goods chassis including S.T. & dely. charges

Leyland ECOS 2/2R-118 full forward Tipper chassis including S.T. & dely. charges

(V.S.T. Motors Private Ltd.) Tata-Mercedes-Benz, Diesel Truck and Bus Chassis L 312/42 165" W.B. 5-Ton Truck Chassis ex-Works, Jamshedpur

LP 312/42 165" W.B. Full Forward Control Truck Bus Chassis ex-Works, Jamshedpur

LP 312-48 190" W.B. Full Forward Control Bus Chassis ex-Works, Jamshedpur

L 312/36 142" W.B. 5-Ton Truck Chassis ex-Works, Jamshedpur

LK 312/36 142" W.B. 5-Ton Truck Chassis ex-Works, Jamshedpur

Fargo (at Sundaram Motors Private Ltd.) Dodge (at Rane Madras Ltd.) Prices duty paid ex-factory Premier Automobiles Ltd., Kuria, Bombay.

C3D6-116" (4) 7.00x16-6 Ply

C4D6-126" (4) 7.00x16-6 Ply

C6D6-126" (4) 9.00x16-10 Ply

C4G-153" (6) 34x7-1 Ply

C4G-153" (6) 34x7-1 Ply

C4G-153" (6) 34x7-1 Ply

C4G-153" (6) 34x7-1 Ply

C4G-153" (6) 34x7-1 Ply

C4G-153" (6) 34x7-1 Ply

C4G-153" (6) 34x7-1 Ply

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C4G-153" (6) 34x7-1 Ply

Rs. nP.

C4H6-153" (6) 34x7-10 Ply

C4H6-153" (6) 34x7-12 Ply

C4H6-193" (6) 34x7-10 Ply

C4H6-193" (6) 34x7-12 Ply

C4H6-193" (6) 34x7-10 Ply

C4H6-193" (6) 34x7-12 Ply

K6D200-116" (4) 7.00x16-6 Ply

K6D200-116" (4) 7.00x16-8 Ply

K6D300-126" (4) 7.00x16-6 Ply

K6D300-126" (4) 7.00x16-8 Ply

K6W300-126" (4) 9.00x16-10 Ply

K6D400-129" (6) 34x7-10 Ply

K6D400-153" (6) 32x6-10 Ply

K6D400-153" (6) 34x7-10 Ply

K6D400-171" (6) 34x7-10 Ply

K6D500-129" (6) 34x7-10 Ply

K6D500-129" (6) 34x7-12 Ply

K6D500-153" (6) 34x7-10 Ply

K6D500-171" (6) 34x7-10 Ply

K6D500-171" (6) 34x7-12 Ply

PICKUP

C3D6-116" (4) 7.00x16-6 Ply

C4D6-126" (4) 7.00x16-6 Ply

K6D200-116" (4) 7.00x16-6 Ply

K6D200-116" (4) 7.00x16-8 Ply

DIESEL CONVERSION

C4H6-153" (6) 34x7-10 w.b.

C4H6-153" (6) 34x7-12 w.b.

C4H6-171" (6) 34x7-10 w.b.

C4H6-171" (6) 34x7-12 w.b.

K6D500-153" (6) 34x7-10 w.b.

K6D400-171" (6) 34x7-10 w.b.

K6D500-153" (6) 34x7-12 w.b.

K6D500-153" (6) 34x7-10 w.b.

K6D500-171" (6) 34x7-12 w.b.

K6D500-171" (6) 34x7-10 w.b.

K6D500-171" (6) 34x7-12 w.b.

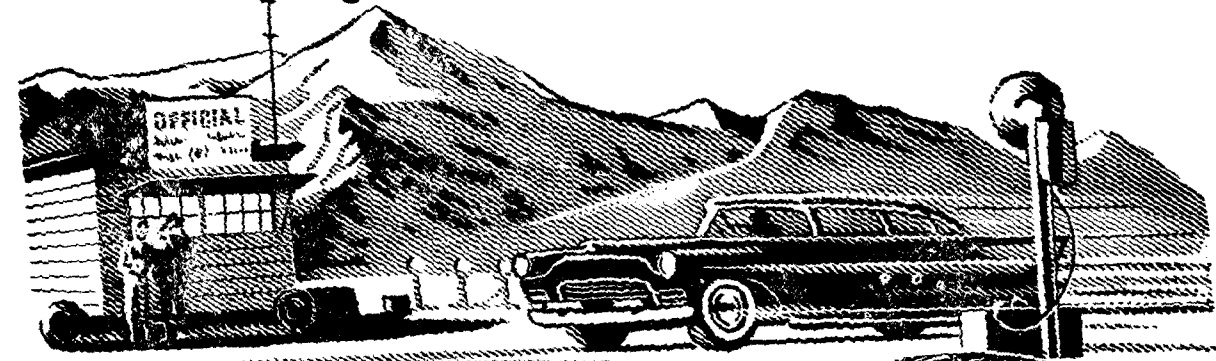
K6D500-171" (6) 34x7-10 w.b.

K6D500-171" (6) 34x7-12 w.b.

K6D500-171" (6) 34x7-10 w.b.

The prices and specifications are subject to change without notice.

Stock Car Endurance Records



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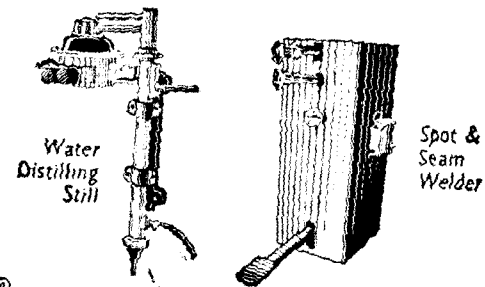
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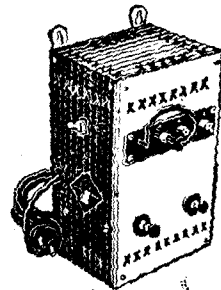
Regd. No. M 6788



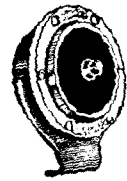
Water
Distilling
Still

Spot &
Seam
Welder

AT THE CROSSROADS OF THE COUNTRY'S PROGRESS...



Rectifier



Electric Horn

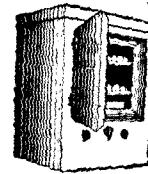
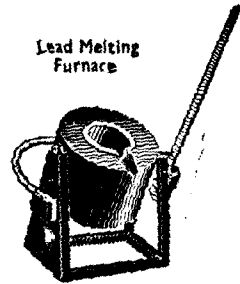


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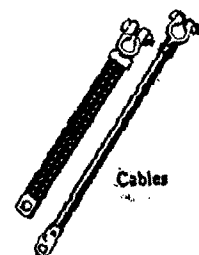


Electric Oven

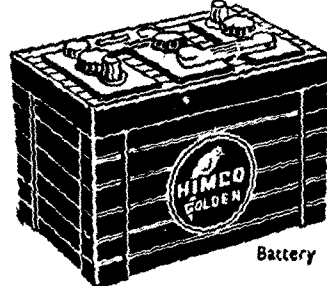
Rly. Track
Bond



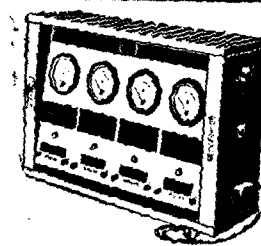
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