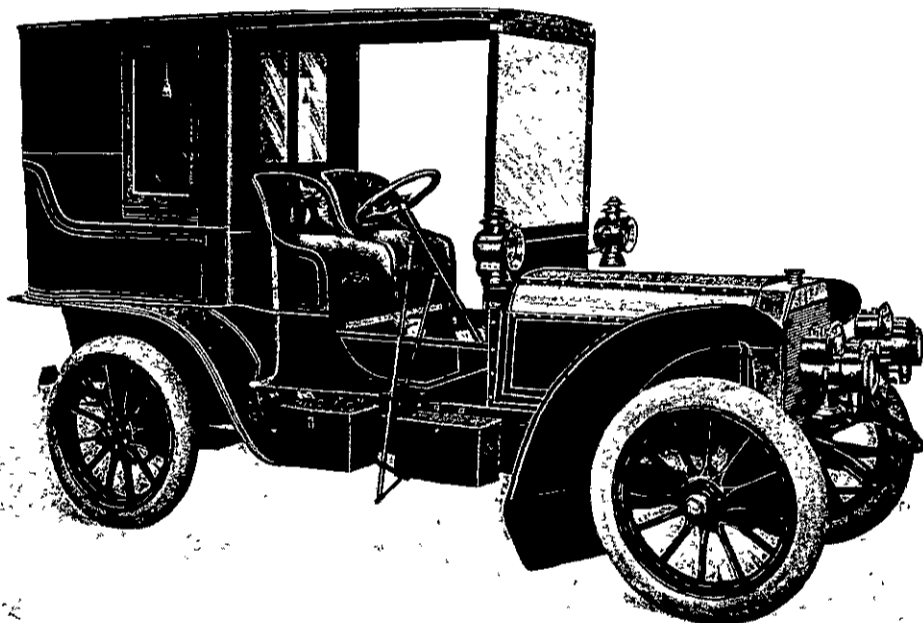


MOTORS and MOTORING.

The number of workmen employed in the automobile industry of France in 1904, according to the President of the Automobile Syndicate, is at least 55,000 skilled mechanics and 25,000 employees, clerks, etc., to which should be added about 20,000 chauffeurs, making a total of 100,000 persons who are directly identified with the industry.

The increased use of automobiles during the past few years has been so enormous that the manufacture of motor cars and their accessories has become one of the most important French industries. From a total of 1,850 automobiles in 1898, valued at £320,400, the output in 1904, according to the Chambre Syndicate de l'Automobile de France, has grown to 22,000 cars, of an estimated value of £6,800,000. The yearly output of automobiles from 1898 to 1904 was as follows:—

YEAR.	NUMBER.	VALUE.
1898	1,850 ..	£ 320,000
1899	1,900 ..	367,000
1900	5,000 ..	1,062,000
1901	8,800 ..	2,046,000
1902	16,500 ..	3,821,000
1903	19,500 ..	5,250,000
1904 (estimated)	22,000 ..	6,800,000



THE TARRANT ENCLOSED TONNEAU, 12-15 HORSE POWER.

In buying a motor car note these eight points:—

First.—Buy a machine that has been on the market at least one season and proven satisfactory.

Second.—Buy of a reputable firm that has a business standing in the trade. Don't buy a freak, or any experimental machine, or be led astray by new ideas of wonderful things.

Third.—Buy the machine that suits your fancy best, and with capacity and strength to fill your requirements.

Fourth.—Touring on country roads requires more power and heavier running gear than city streets.

Fifth.—If you have never owned a motor car and object to hiring a chauffeur, select a single-cylinder or two-cylinder car, as a four-cylinder one would be too complicated to begin with.

Sixth.—Almost any good machine will last three or five years with ordinary care, but in these days of evolution only the exceptional buyer will retain a machine longer than the second year.

Seventh.—If you have a mechanical turn and are so inclined, then calculate to operate your machine all the time, and take care of all adjustments and some of the light repairs. This will be extremely interesting, the machine will last longer and do better work, and at far less expense than if operated by the average high-priced chauffeur. Of course, it is very desirable to have the tanks filled, lamps cleaned, and coach work washed and polished.

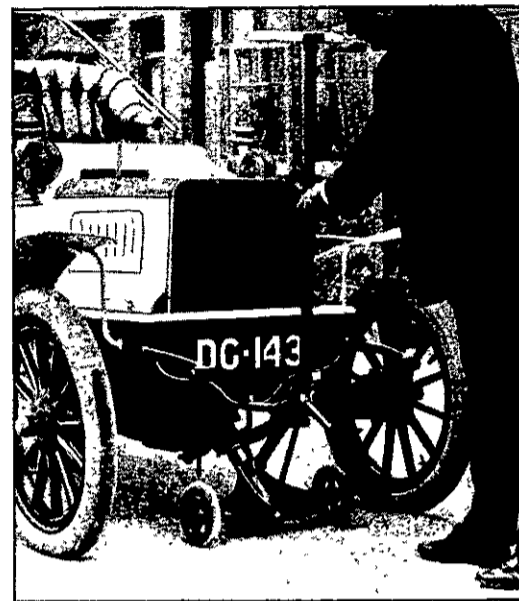
Eighth.—If you have owned a machine heretofore, then get one with four cylinders and plenty of power, although it should be light, and be careful with it. You will have less mechanical

troubles as well as less tyre troubles with a light machine. Remember, the manufacturers must make their machines very heavy to withstand the treatment of the ordinary man without experience, who is usually an ignoramus. If you have had experience and are careful, you can afford to take the chance of damaging a light car by misuse.

THE novel and ingenious quick-lift and short-locking motor jack, devised by Mr. Henry Adams, of 30, Monson Colonnade, Tunbridge Wells, England, is undoubtedly the most convenient and effective contrivance of the kind introduced. This jack has been specially designed to bodily lift the front or back part of any motor car. As depicted in the accompanying illustration, by tilting the jack towards the car, placing the claw under the axle, and then by simple leverage pulling the handle down to a convenient position, the car is immediately raised. The jack being on wheels, it may be readily seen that the heaviest of cars can be transferred either backwards or forwards to any desired place, in the shortest area possible. If desired the car can be turned entirely round in its own length. By allowing a leg under the handle to rest upon the floor, the car is placed in a firm position, resting on the jack ready for repairs, cleaning or removing tyres, thus saving a large amount in labour alone.

A SPECIALLY encouraging feature of the industrial vehicle movement is the way in which the petrol

is at night time. The pity of the matter is that noise can, and should be, avoided, as much in the interests of those who own the machines as of those who reside along the routes which are used by this traffic. In the present state of public feeling on the whole motor question, we most strenuously urge upon all who have the larger types of steel-tyred lorries in their service to do all in their power to discountenance the over-driving which gives rise to such complaints. There are several cogent reasons, if that of consideration for the public requires any support, why owners should be very strict on this question of noise. Suppose it proceed from the tyres alone to a degree sufficient to be objectionable to passers-by or occupants of houses fronting the thoroughfares used,



RAISING A MOTOR CAR WITH THE ADAMS JACK.

the direct inference is that the driver does not use his head—that he pushes along over bad pavement without discrimination. Quite apart from any question of the public nerve, which, in these days of rush, is becoming more and more sensitive daily, it is a matter of £ s. d. to the owner to prevent this noise which is a measure of the wear on the vehicles springs, steering pins, transmission and all the bearings. It is a factor which finds expression in the annual repair bill, with an occasional breakdown on the road by way of variation. We know, full well, that drivers are only human, and that they will often force the pace regardless of anything but their intention to be booked in at the depot as early as possible. But the necessity for this hard driving not infrequently arises from the fact that too much is expected of a machine in the working day. Then it is that the blame attaches to the owner, as does the extra cost after the first twelve months.

The *Yorkshire Daily Observer*, in connection with the recent International Tramways Exhibition in London, states that one of the most notable features was the remarkable evidence of the motor omnibus as a rival to the tramcar. We do not agree with the statement that the motor omnibus is a rival to the tramcar, because each has its proper sphere of usefulness. The crux of the matter cannot be too strongly insisted upon, and it is that the tramcar is usually inadmissible unless a 12-minute service in each direction can be supported by the traffic. In the case of the motor omnibus, services can be successfully instituted with a much less frequent service on any particular route.



NINETTE II.

10-h.p. Motor Boat, constructed by the Lozier Company.

Abatement of Noise.

As the dust nuisance brings curses on the motor car, so does the rattle from their tyres cause anathemas to be heaped on the motor wagon. No greater source of complaint exists than the row which some of these heavy vehicles make, especially when it