

# All Vehicles In London Must Carry Lights After October 1

## Car Becoming Proper Vehicle For All Year

Greater Adaptability of Automobile Has Tendency to Stabilize Industry

A few years ago the automobile was looked upon as a six months' proposition. At the first signs of cold weather the owner would run his car into the garage, jack up the wheels, remove the tires, take out the battery, drain the water and gasoline tank, carefully cover it and there it would remain until spring. This meant that the owner of an automobile realized only 50 per cent. on his investment.

year around, possibly except in the extreme northern parts of the country. This has had a tendency to stabilize the entire industry. Up until a short time ago practically all buying of motor cars was done three or four months in the year. There was a mad rush for cars in the spring, with the result that factories could not supply the demand. They would speed up production and then the demand would fall off as quickly as it came. This made it a difficult matter for manufacturers to hold their organizations together. It also made manufacturing costs very high, because there was a great deal of waste caused by the rush to build cars.

To-day the well-established organized automobile manufacturer, with a strong dealer's organization, runs production at about the same rate this year round. Of course, there still remains the extraordinary heavy demand in the spring months, but the majority of owners buy cars when they need them, regardless of the season.

This has been a big factor in reducing costs. The manufacturer can lay out a

## Passing the Buck



—BY WOOD COWAN.

## Has Your Motor Good Compression?

schedule, buy the necessary material, eliminate labor shortages; in fact, practice many economies that would be impossible under the old method.

Another factor that has entered into winter business is the enclosed car. Production of this type of car has increased until it will be a matter of only a few years until the demand for closed cars will equal, if not exceed, the demand for open cars.

### KEEP THEIR NEATNESS.

"Look down along the procession of cars and notice the excellent condition of the tops, even of cars that have been used for years," said an auto dealer. "You rarely see the shabby, dilapidated top that used to disgrace even good automobiles. In no other detail has there been greater improvements. Tops today are built of the best materials, braced, stayed and padded to keep their shape and neatness, and covered with heavy rainproof material. It used to take two or three persons to put them up. Now they are easily managed by one."

No matter how well all the other parts of a motor are working unless every cylinder has good compression the motor is not working at its best. Power, "pep," "pick-up," miles per gallon and general satisfaction in driving never exist to any great degree in a motor without good compression. "Compression" is a thing which exists in all degrees among motors. A gasolene motor should show a maximum compression pressure of 70 pounds per square inch on the compression stroke. A great many new motors leave the factories to-day with one or more cylinders where it is not much more than half that amount, and once such a motor has run a few years the chances are it will be giving but a poor account of itself. Compression is not a thing

which "just happens" in the building of an engine. The designers of motors design them so that if they are correctly made the compression will be there. If it is not present it is a fault of the machine shop. The cylinder must be true round and not vary in diameter by even as much as one-thousandth of an inch. The piston must fit the cylinder wall closely; if this we do not mean that it is possible to judge the "fit" or clearance of a piston by feel or eyesight because such is not possible. A thickness gauge measuring down to .001 of an inch is necessary. The lower, or open end, of a piston, known as the skirt, should have about .001 of an inch of clearance for every inch of piston diameter. Thus a 4-inch piston should have about .004 of an inch clearance at the skirt and about half again as much at the closed or upper end. The clearance is necessary to prevent the pistons from binding in the cylinders when subject to the tremendous heat of the explosions. The measurements apply to cast iron pistons; if aluminum alloy is used more clearance must be provided depending upon the coefficient of expansion of the alloy used.

The rings which are fitted to every gas engine piston are for the purpose of sealing the clearance necessary between the piston and cylinder wall. They are spring walls and will "hug" the cylinder wall closely at all temperatures. In order to fulfil their share of compression making they must fit the ring slots in the piston closely. There must be absolutely no perceptible play of the piston transversely in the slot. The rings must be thick so as to reach deeply into the groove and yet expand sufficiently to seal the piston clearance. Piston rings wear thin and must be replaced when worn, while the slots themselves wear on the shoulders so that the sides of the slots are no longer at right angles with the piston sides. When this condition of piston and rings is reached good ring fit is impossible and new pistons must be installed.

No process but that of fitting each ring to its slot by means of grinding them down to fit can give the best possible compression. The valves of an engine play a large part in compression losses, but they are essential to four-cycle engine operation, so that we must put up with them and keep them in shape. When the compression on a cylinder seems to be getting poor it is well to inspect the valves. The seat is likely to be pitted or perhaps a layer of carbon has been deposited. A new seat must be made and the process necessary is called valve grinding. If, however, well-seated valves do not remedy the lack of compression the only other place which can possibly be at fault in the cylinders are piston and rings.

Poor compression should not be tolerated by any car owner because of the following reasons:

- 1.—It does not pay; the fuel and oil consumption of such engines is far greater than it should be.
- 2.—It causes overheating, impairs engine operations and may do damage by causing warping of valves and scoring of cylinders.
- 3.—The mileage possible per gallon of fuel and oil will be decreased while the motor will not give signs of having any surplus power. This is expensive as well as discouraging to any driver who takes pride in his car's performance.

Don't forget to wash your car because you have driven it a few years and have the idea it is only "an old bus." Once an owner does not wash his car everything else is neglected as well. The oil in your crankcase should be changed every thousand miles. Your engine will run better and last longer for it.

Take the hub caps off the rear wheels occasionally and jack the wheels off the ground so as to make sure that they are not loose on the shaft. Once they get started much damage will soon result.

Go over your wiring once in a while and if any wires are resting on iron parts of the car raise them off such places and tape them or put them in conduits.

Some day, when your gas tank or vacuum feed tank is almost empty, drain everything out of it and flush it clean; you will be surprised how much dirt gathers there.

Get the habit of running over the mechanical parts of your car in your mind and you will find they will not be so easily neglected.

## Chicago To Test High Speed Lane

Section of Michigan Avenue Reserved For Express Automobile Traffic.

CHICAGO, Sept. 29.—Construction of an "express" motor lane along half of Michigan avenue, in the downtown business district, may be resorted to in Chicago to help solve multiplying automobile transit problems. Such a speedway would be the only one ever built in the very heart of a large city. The object would be to divide the slow moving, from the through traffic, and enable cars to get in and out of the busy "Loop" district more quickly. City officials will take up at the first session of the transportation committee this fall the proposal to construct a curb along the center of the boulevard, partitioning the two kinds of motor traffic since this boulevard is for automobile passenger travel exclusively.

FOR 20-MILE SPEED RATE. The side of the avenue toward the lake and removed from the busy loop area it is proposed to make for "express" traffic moving at least 20 miles an hour. Only at a few major streets would access be given to this portion of the boulevard. The balance for local business would move at about eight miles an hour.

This arrangement, it is said, would mean a considerable saving. It is the opinion of Major R. F. Kelker, superintendent of transportation for Chicago, that the average speed on the boulevard is now less than eight miles an hour in nonrush hours and between two and four during the busy periods. This unique speedway plan is practical in Chicago on Michigan avenue, according to Major Kelker, because this great boulevard, which forms the principal feeder for traffic to and from the loop both from the north and the south, is a boulevard on which most of the cross streets dead end. It is sufficiently wide to enable the passage of two lines of cars in each direction on the "express" and the slow lanes of travel.

BOULEVARD ON FILLED LAND. The increasing use of automobiles has called for other ingenious schemes from the city officials here. There is under construction and nearly ready for use a continuation of the boulevard north of new land made by filling in Lake Michigan. Eight months ago where the foundation of the wide automobile avenue is now being laid there was several feet of water. A rocky fishing pier projected from the shore line and life guards had their station at another point along the lake.

The waters were shoved back, piles were driven and engineers are undertaking to lay a pavement on the foundation put in. Their efforts are attracting national attention from engineers, since this new fill made on lake bottom has brought up problems in engineering.

The street, which is to be 55 feet wide, is being paved with asphaltic concrete, a foot thick specially reinforced. It is a part of the North Shore boulevard drive, being on Sheridan road.

## Appearance Of Car Depends On Care Given It

Lack of Luster and Rust Spots Frequently Due to Carelessness

The finish and appearance of your motor car depends on the care you take of it. Lack of luster, cracks, rust spots, may result from old age or poor workmanship on the automobile. But, in many cases, they are due to neglect on the part of the owner. Dried mud spots, excess of water, strong soap, exposure to all sorts of weather are some of the causes. The luster is the first to go. Then come cracks in the varnish. The cracks deepen into the paint and down to the metal or wood. That makes it easier for water to seep in under the paint and cause rust spots to form. By that time the only remedy is an entirely new coat of paint and varnish.

not merely by dabbing the new paint on the old, but by scraping off everything down to the body before the new covering is put on, which entails quite an expense and a long wait while the car is laid up. An easy way to obviate this is to correct the wrong at the start when the luster shows signs of dulling. Then a new coat of finishing varnish is all that would be needed to make the car look like new.

If cracks begin to develop in the outer coat they should be caught immediately. If only in the varnish the cracks do little harm and a little sandpapering with a new coat of varnish would correct that.

But if allowed to spread and go deeper into the paint the only remedy is entire removal of the paint and repainting. Mere filling and painting to cover the cracks will not do. The cracks would still be there and continue to develop in the undercoating. Result—room for water to seep in and cause rust blisters.

The only effective remedy for rust blisters and deep cracks is entire removal of the old paint and application of a new paint and varnish job. The only effective preventive is care on the part of the owner. Washing should be done carefully and often. This is especially urgent during warm weather when the varnish is apt to lose

its luster. Polishing should not be attempted, for polish rubs off the varnish. "Short measure" selling of gasoline is estimated to be costing motorists in the U. S. \$30,000,000 a year. This is based on an estimate that each of the 10,000,000 motorists of the United States buys two gallons of gasoline daily, and that the average flicking from "short-measure artists" amounts to two pints in each five gallons, resulting in a total daily loss to purchasers of 1,000,000 gallons, valued at \$250,000.



## London - the Automobile Market of the World

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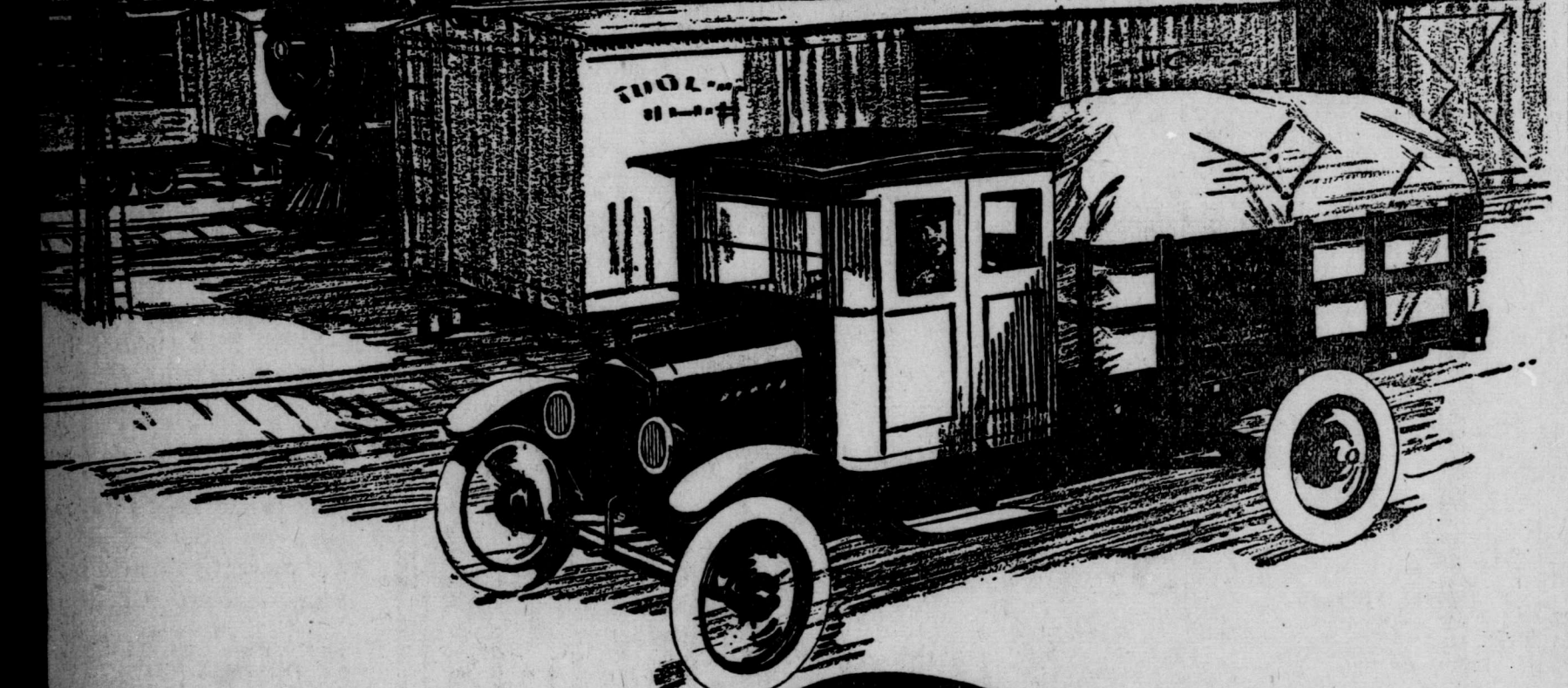
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