

HINTS FOR The Motorist

BY ALBERT L. CLOUGH

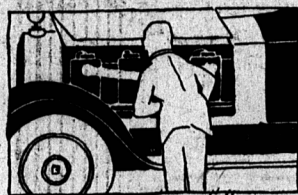
IDLING ATTACHMENT IS DERANGED

F. N. asks: What do you think is wrong with my carburetor, which is a...? It runs perfectly when the engine is pulling, but when I close the throttle, to make the engine run slowly when standing, it stops almost immediately. His trouble has come on within a few days, although I have changed none of the adjustments.

Answer: In this make of carburetor, spraying from the jet is not depended upon to produce mixture for the engine to run on at extremely low speeds—a special "idling" attachment being provided, constructed as follows: A very small passage, controlled by a regulating valve, extends from above the throttle, down into the float chamber below the normal fuel level, and when the throttle is practically closed, gasoline is raised by the heavy suction in the intake, through this passage and sprayed into the mixture pipe to form a rich mixture that the engine can idle on. You will probably find either that this passage is clogged or that the fuel level runs so low that gasoline cannot enter it.

PECULIAR FUEL FEED TROUBLE C. A. W. asks: What is the cause of the peculiar trouble which I have with my vacuum feed system? The only time that it ever fails to supply gasoline is when I drive up a very long grade, which is all that the engine can handle on high. Several times the engine has stopped under such circumstances, but after being started again it goes on all right.

Answer: Perhaps you have a leak in the suction line from the manifold



to the tank, but not one had enough to prevent sufficient fuel being supplied under ordinary conditions. When on a very long, "stiff" grade, the conditions for keeping the vacuum tank filled are at their worst, for not only is the demand for fuel very great, but the vacuum in the intake pipe is at its least, because the throttle is wide open and the engine is slowed down, thus making the tendency to stick fuel from the main tank very slight indeed. This, coupled with the loss of suction effect through the assumed leaks, would account for your trouble. When you start the engine, with the throttle nearly closed, of course, the strong suction thus created soon fills the tank.

DEFECTIVE ENGINE OFFERED CUSTOMER

F. O. L. writes: I ordered a car and the local agency has one, which it wishes to deliver to me, but my mechanic says that it has one very leaky piston. They tell me that it will wear in and become tight, very soon. Should I accept this car?

Answer: It is inadvisable for you to accept it, unless you are in a great hurry or unless your failure to do so would prevent you of any delivery. Pistons and rings do improve in tightness with use, but only if they are initially well fitted. A badly fitted piston, can hardly be expected ever to become anything else. Questions of general interest to motorists will be answered in this column, space permitting. Address Albert L. Clough, care of this office.

FACTS ABOUT DRY CELLS

Time is Their Worst Enemy. Always Buy Fresh Ones Dry cell batteries, although now

used comparatively little on motor cars, are still quite extensively employed for the following purposes: To operate side and tail lamps and occasionally spotlights on cars not equipped with storage batteries. To operate electric horns on such cars. To furnish ignition current, at starting, for cars on which magneto ignition is regularly used and to serve as an auxiliary or as an emergency substitute for the storage battery on cars having full electrical equipment. Here are a few facts regarding such cells on the market in the familiar cylindrical form, that measure two and one-half inches in diameter by six inches high, namely the "ignitor" or ignition and heavy duty cell, the ordinary or general purpose cell and the telephone, bell-ringing and other light service types. The first named is supposed to test 30 amperes, the second approximately 25 amperes and the last named, 20 amperes or less. In buying cells one should insist on obtaining cells which test at least up to the average of the lot from which they are taken. The test consists in seeing how much current a cell will give, for an instant, through its own internal resistance, that is by short-circuiting it from terminal to terminal with a low resistance ammeter and noting the reading at the moment of closing the circuit. The fresher a cell is from the factory, the better it is and, in general, the higher it will test, so the ammeter test gives some idea as to how recently a cell was made. They are also dated, either in plain figures or by secret marks and the purchaser is entitled to know the date of manufacture. One should always try to obtain cells that were made within a month or two and which test up to the ampereage characterizing good cells of their class, but it is unwise to buy those that show a "fancy" high ampere test, as such cells usually lose their power early and, in fact, the higher the test the more rapidly deterioration progresses with age. A dry battery should not be placed where it is much affected by engine heat, as the hotter it is kept the sooner it loses its power. It should not be placed where it can get wet, as there will then be leakage of current, unless the cells are waterproofed. The cells forming a battery should be packed so that they cannot shift or strike together, as shocks tend to loosen the filling, the increasing the internal resistance and also to break the connections between cells, which should be made with flexible cable connectors having clips on their ends. Wedging the cells into a box with wooden blocks is good practice.

DRY BATTERIES IN MOTOR CAR SERVICE

Different Conditions Demand Cells of Different Character.

Dry cell batteries become useless in two ways, first by being exhausted in service through furnishing all the current they are capable of supplying and second, by the effects of time, it being a fact that in from a year and a half a battery deteriorates practically completely, even though it never is called upon to furnish current. For lighting service or as a regular "ignition" source the heavy duty or ignition type of cell is to be preferred, as the probability is that it will be exhausted by current draft before it has greatly deteriorated through age. To use with a magneto merely to furnish ignition current to start the engine, it is a question whether it pays to use the ignition type of cell for here the actual service is very light indeed and what is wanted is a battery that will act as "standby" for as long as possible without renewal. In this service the "general purpose" or even the telephone type of cell will give the necessary current for the brief periods it is required and will resist deterioration by age considerably longer. The same thing is true of a dry battery used as an auxiliary ignition source, while an engine is being cranked by the storage battery that furnishes the regular ignition. Here also a long lived battery is desirable and heavy current capability is unimportant. There is upon the market a type of dry cell which is "extra dry," that is it contains no free moisture and will give no current until after water has been supplied it. Moreover it will keep indefinitely without deterioration and can be put into service at any time by the addition of water. A battery of such desiccated cells constitutes a reserve source of ignition current, which can be put into action within a few hours after water is added to the cells. It can be placed temporarily, of a storage battery that has run down or is otherwise not available. In making up batteries from dry cells, it is necessary to use one cell for each volt required by the apparatus to be operated for example to take the place of a six-volt storage battery, six dry cells, connected in series, i. e., with the zinc terminal of one connected to the carbon terminal of the next, are necessary.

LAPPING IN PISTONS

A. P. writes: One cylinder of my six "pumps" oil excessively two others do so quite badly while the remaining three are in fine shape. The defective cylinders seem not to be scored, but I have tried three different makes of rings in them without success and presume that they are out of round. Is it practicable to lap in oversize pistons and, if so, how is this work done? Is it necessary to treat all the cylinders alike?

Answer: Lapping consists in grinding one part upon another, with emery paste between them, until they fit together evenly, but as it is very slow and tedious process, it is used only to secure a final fit, after the parts are machined to conform with one another as closely as possible. We fear that some of your cylinders are so greatly out of round that they are beyond cure by lapping and that you will either have to have them bored out and finished by grinding or replace the block with a new one. If you have a reboring job done, you will have to have new pistons of oversize diameter for all cylinders, as there must be no difference in weight among the different moving parts. As your car is not a very expensive one and as labor is expensive just now, it might prove best to obtain the new block. You can get prices on this and on the reboring job and decide which is more economical.

DRESSING FOR TOP

F. F. asks us: ... What is the best preparation to use for dressing the top and leather upholstery of my

car, which are both beginning to crack and become shabby?

Answer: There are numerous compounds upon the market which are highly recommended for these purposes by their manufacturers and we have no doubt that they are of value, but we have had no opportunity to test any of them. We advise you to go to some reputable carriage or automobile trimmer or painter who has constant experience in these matters and get some of the preparation which he finds best for this purpose, telling him of what material your top is made. He will probably give you directions for applying this or perhaps better results would be obtained by getting him to do the work.



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STORAGE BATTERY LOSES CAPACITY

O. B. G. writes: I have a storage battery that I use for running the side and tail lamps of my car—the headlights being acetylene. There is no generator. At first I did not have to get this battery charged oftener than once every two months, but now it will not serve for more than two weeks, although I do not use the lights any more than I used to. What is the cause of this?

Answer: The capacity of all storage batteries decreases progressively with age, for the following reasons among others: More or less of the active material of the plates (the lead oxides that take part in the electrochemical changes) become detached and sheds from the plates and in proportion as the active material is thus lost, the storage capacity of the cell is reduced. The pores of the active material tend to fill with purities, or some of the active material loses effective electrical contact with the plates and there is a formation of permanent lead sulphate which is inactive. The insulating separators tend to become clogged with impurities and of high resistance. Detached active material sometimes collects in such quantities as to short-circuit the plates and cause current to leak away without useful effect.

STARTER DRIVE NEEDS CLEANING

W. A. McP. asks: Can you suggest what is wrong with the starter on my 1917 car? When I press the starter pedal, I can hear a loud buzzing but the engine does not turn over.

Answer: We believe that this car is equipped with the popular form of starter drive, in which the motor pinion gear automatically moves along the armature shaft and meshes with the flywheel gear, the shock of starting the engine into motion being cushioned by the action of a spring. The meshing motion of the pinion does not move along, so the shaft instead of turning on the axle as to reach the flywheel the cause of this probably being that there is dirt or sticky oil on the thread, move sticky substances. This may so as to engage the flywheel gear.

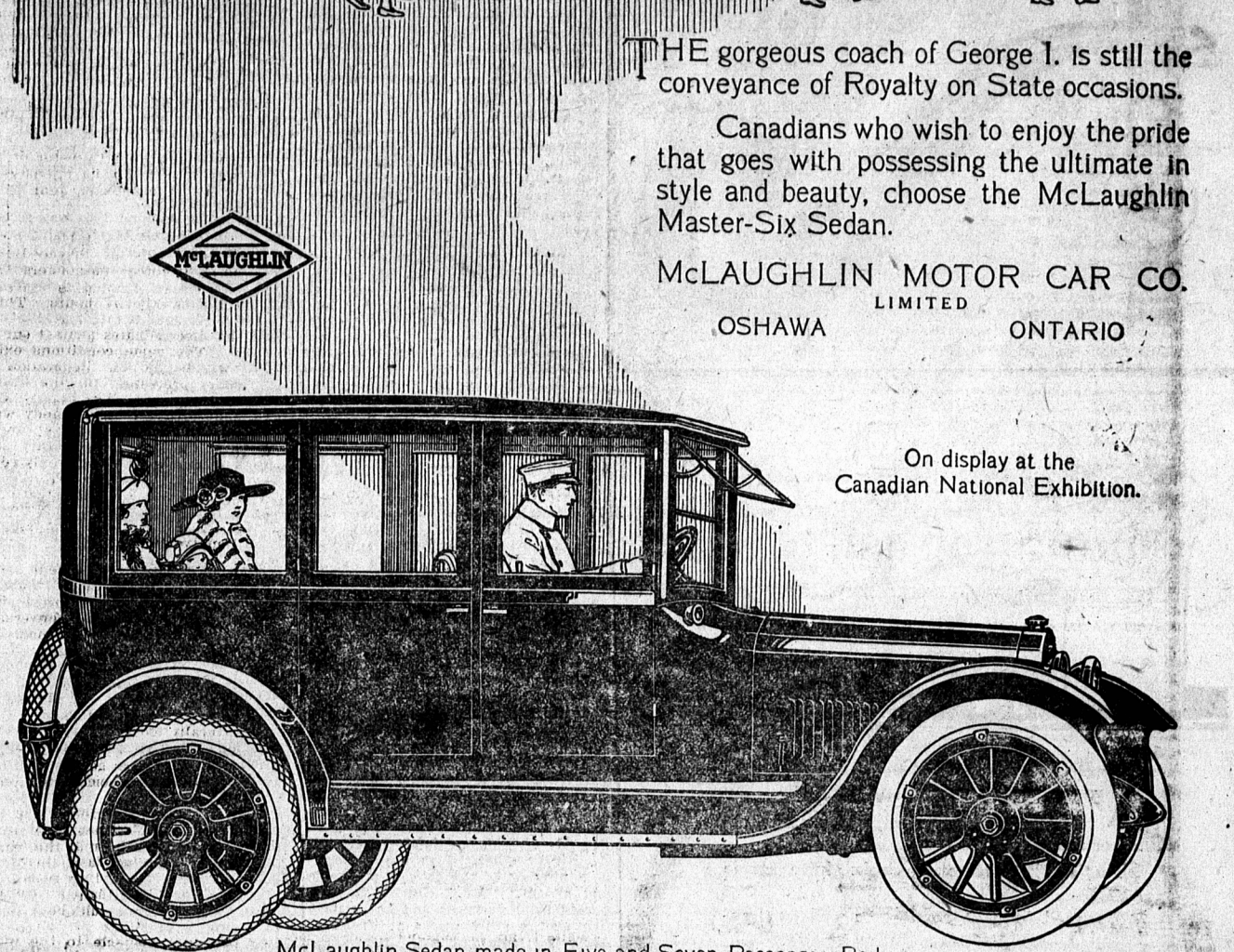
DIGNITY



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Advertisement for V.D.L. TIRES. Includes text: 'Every Size a Supersize', 'The motorist who rides on V.D.L. Tires is protected against blow-outs...', 'VAN DER LINDE RUBBER CO. LIMITED TORONTO CANADA'. Also features an illustration of a car on a tire tread.

Advertisement for Ford Runabout. Text: 'Make Every Hour Count', 'FOR the salesman, collector, contractor—the man who "must get there"—the Ford Runabout.', 'Through the traffic of the city, over rough country roads to the outlying town, the Ford Runabout travels rapidly and economically.'

Advertisement for Kennedy, Webster & McKinnon. Text: 'KENNEDY, WEBSTER & McKINNON. Dealers—Charlottetown. L. IVES & SON, Dealers, Montague. A. Horrie & Co., Dealers, Summerside.'

Advertisement for shoe polishes. Text: 'SAVE the Leather IN 1 SHOE POLISHES', 'The F.F. DALLEY CORPORATION LTD. HAMILTON, CANADA'. Includes an illustration of a shoe and a tin of polish.