

Little Helps for the Motor Enthusiast

Ideas Others Find Valuable

Tank Measures Gasoline by the Mile—Radiator Thawed by Steam—Emergency Grease Gun—A Runway Over a Curbstone

THE simple auxiliary gasoline tank shown in Fig. 1 will prove very useful to the experimentally inclined motorist. With one of these tanks on your car you can determine gasoline consumption in miles per gallon with the greatest ease. You can quickly determine the most economical speed at which to run your car either on the hills or on the level. It will enable you accurately to check the adjustment of the carburetor and it will make it possible to test the efficiency, in the motor of your own car, of the various grades of gasoline now offered to the public.

Fig. 1 shows the location and piping of the tank. If you make the tank exactly $2\frac{23}{32}$ inches inside diameter, one inch on the float scale will equal exactly $1/10$ of a quart. The float should be a loose fit and the scale rod attached to it can be a piece of quarter-inch dowel rod. The

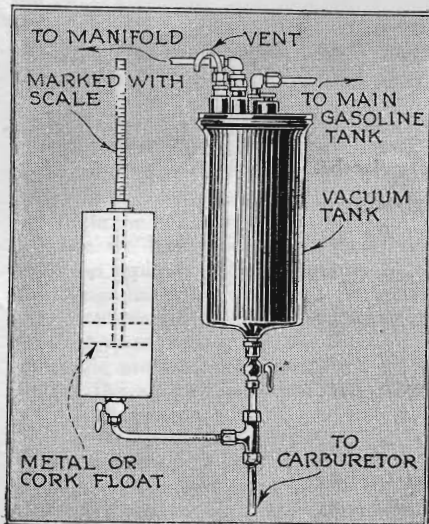


Fig. 1. An auxiliary gasoline tank with a gage that enables you to determine gas consumption and to check carburetor adjustment.

tank should be located just low enough so that the vacuum tank will almost fill it with gasoline.

To test for gas consumption, stop at the beginning of a level stretch, turn petcocks so that gas will flow from the test tank, note the scale reading, drive over the test stretch, and again read the scale. Two inches on scale indicates twenty miles to the gallon. Economical carburetor setting is obtained by running over the test course after each change, and so on. The vacuum tank will automatically refill the test tank when both cocks are left open.

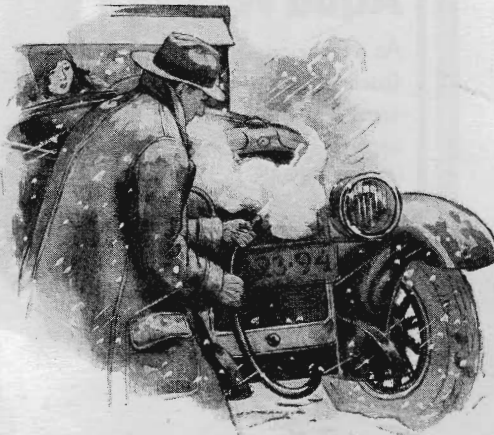


Fig. 2. With a length of hose attached to the lower outlet of your overflow pipe, you can convey steam through the fins of a frozen radiator and speedily thaw it out.

Steam Thaws Radiator

IF YOUR radiator freezes while you are driving, a simple way to thaw it, as shown in Fig. 2, is to attach a short length of rubber hose to the overflow pipe from which the steam is flowing and squirt the steam through the fins of the radiator. Start at the top and work downward. Keep the motor idling slowly

and when the flow of steam stops you will know that all the ice which has clogged the lower portion of the radiator has melted.

Emergency Grease Gun

ONE of the messiest jobs about an automobile is filling the differential housing with grease if you have no grease gun. To avoid this difficulty, make up a cone from several thicknesses of newspaper, fill it with grease, and insert the end of the cone in the filler hole in the rear end housing. Now start rolling the large end of the cone as shown in Fig. 3, and if the cone has been carefully made, you will get all the grease in the hole without soiling your hands. If the grease is very stiff because of cold, it will be well to warm it a trifle before attempting to do the job, so that it will flow into the hole easily.

Ten Dollars for an Idea!

FRED J. SEVERS, of St. Louis, wins this month's \$10 prize with his suggestion for a gasoline gage (Fig. 1). **POPULAR SCIENCE MONTHLY** awards \$10 each month, in addition to regular space rates, to the reader sending in the most valuable suggestion for motorists. Other published contributions are paid for at regular rates.

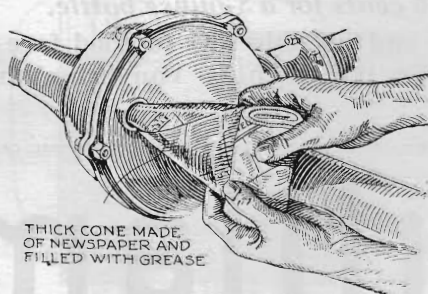


Fig. 3. To fill the differential housing conveniently put the grease in a cone made of newspaper and squeeze it out like tooth paste.

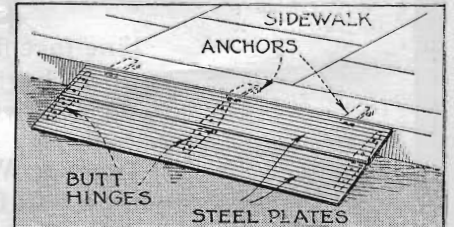


Fig. 4. Steel plates fastened together make a folding runway to take your car over the curb that stands between garage and street.

Fig. 5. Sectional diagram showing runway open and closed and details of its construction.



Novel Folding Runway

IN CASES where it is desired to have a curb on the sidewalk opposite the driveway to your garage, some provision must be made to eliminate the constant pounding your tires will get if they are forced to climb the curb every time you drive the car in. A simple solution of this problem is shown in Figs. 4 and 5. Two steel plates of equal width and as long as the driveway is wide are fastened together with extra heavy butt hinges. Three hinges will do for a light car but for a heavy model use five or six. The upper hinges, or anchors, can be imbedded in the concrete when the curb is formed; if the curb is already made, they can be bolted to it by means of lag screws in expansion shields.