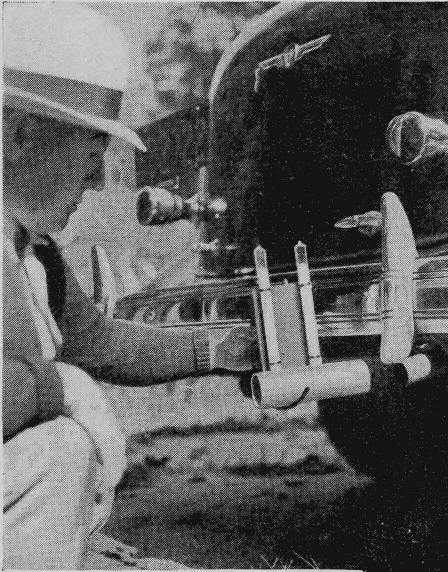


Car-Exhaust Analyzer for Motorists

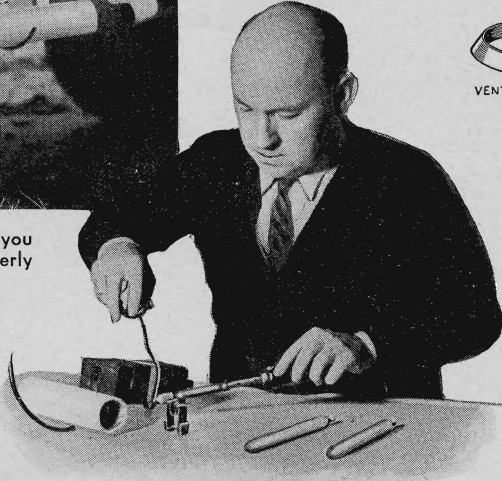
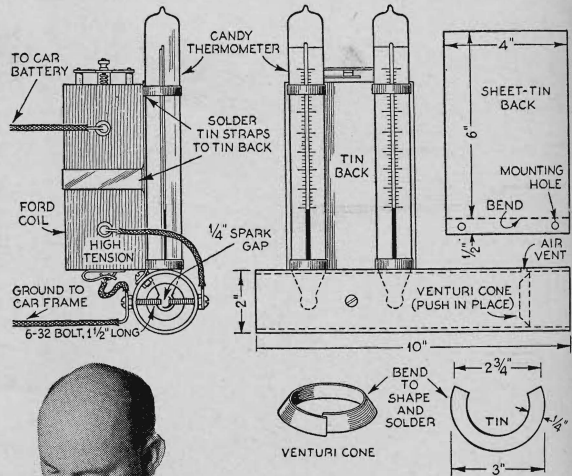


This exhaust analyzer helps you adjust your carburetor properly

MOTORISTS who aim for good gasoline mileage are careful to adjust their carburetors, but perfect adjustment is next to impossible unless you can analyze the exhaust gases coming from your engine. For a dollar or less you can make a simple but accurate analyzer that will let you put your carburetor into whack whenever you feel that adjustments are needed.

The device makes use of the carbon monoxide gas always present in the exhaust gases of a car. Carbon monoxide burns—if it gets enough air or oxygen. The analyzer described here supplies the oxygen, ignites the monoxide with an electric spark, and compares the temperature of the burned gas with that of the unburned gas from your exhaust. Since an efficient motor gives a minimum of carbon monoxide in the exhaust, the best carburetor adjustment is obtained when the temperatures of the burned and unburned gases are nearly equal.

Parts for the simple analyzer include a piece of sheet tin, a spark coil from a Model T Ford (an automobile junk yard can supply this), a 10" length of cardboard mailing tube, two thermometers of the type used in cooking candy, which you can get at a five-and-ten-cent store, a few nuts and bolts, and wire.



How the analyzer is assembled. Solder should be used to fasten the tin straps holding the coil and thermometers

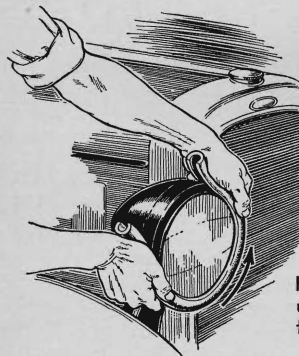
drilled to admit the ends of the thermometers, and to take the two 1½"-long, 6-32 bolts which form the spark gap. Insert the venturi in the mailing tube just ahead of the air vent to draw in the air. It is advisable to solder tin straps to the tin back to hold the spark coil and the thermometers.

Before using the analyzer, warm the engine thoroughly. Clamp the venturi end of the tube firmly over the exhaust pipe. Adjust the carburetor to make the mixture lean, until the engine runs unevenly. Now turn it back slowly until the engine runs smoothly and turn on the analyzer by connecting the wire to the car's battery. After ninety seconds, the rear thermometer will probably give a higher reading than the forward one. This shows that considerable carbon monoxide is present. Repeat the operations, always waiting ninety seconds before making new readings and turning off the spark between tests. When you have obtained the highest possible equal readings on the thermometers—about 130 degrees Fahrenheit—your carburetor will be in perfect adjustment.—A.K.



Helping a Driver To Back into a Parking Space

MOST persons who attempt to help a driver back into a crowded parking space stand on the curb and make a series of beckoning, traffic-cop gestures with their hands. A much better method, I have found, is for the helper to hold his hands approximately as far apart as the remaining distance between the backing car and the parked automobile behind, moving them together as the driver inches the car into place. In this way, the driver will be able to control his car more accurately, as he can regulate the movement with reference to the space available.—W.F.F.



CUT RUBBER AWAY TO MAKE A CHANNEL

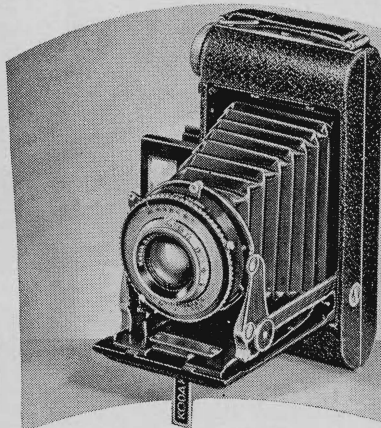
RUBBER HOSE

How to prepare and use the handy grip to remove a lens

Hose Grips Lens Holder

HEADLIGHT-LENS holders that are hard to remove can be started easily with an old scrap of garden hose about two thirds as long as the circumference of the lens. Slice off lengthwise the top third of the hose to form a channel as shown in the inset above. Placed along the lens rim, the hose provides a safe and efficient nonslipping grip with which to turn the lens.—A.H.W.

KODAK



KODAK SENIOR SIX-20 (f.4.5)... Combination of body shutter release and eye-level finder offers new picture-making certainty... minimizes camera movement, catches the scene when it's exactly right. Kodak Anastigmat f.4.5 lens; 1/200 Kodamatic shutter. One-finger bed release. 2¼x3¼-inch pictures. **\$28**



CINÉ-KODAK EIGHT

"Economy" movie camera. Gives you 20 to 30 movie scenes of newsreel length on a roll of film costing \$2.25, black-and-white, finished, ready to show. Kodachrome (full-color) movies cost just a few cents more a scene. **\$32⁵⁰**

CARBURETOR KAYWOODIE

Pat. No. 2,082,106

\$4



To the Rescue

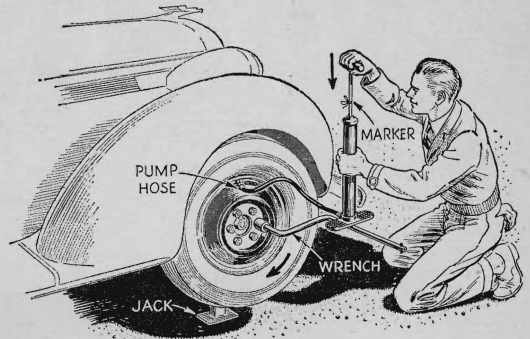
On busy days, some smokers puff so hard that their pipes, out of sheer sympathy, get pretty hot. To these men, that little carburetor in a Carburetor Kaywoodie comes to the rescue like spring water to a parched tongue. Yes, that little carburetor lets an *updraft* of air into the bowl, so that the harder you puff, the more air comes in, and instead of heating up, the smoke *stays cool*. Has brought new comfort to thousands of pipe smokers.

Shape pictured No. 71B, called DUBLIN (Long). Slightly less than actual size. Color: "Tobacco Brown," an exclusive Kaywoodie color.

Super Grain \$5, Flame Grain \$10, Meerschaum \$15, Matched-Grain Sets \$100 to \$1,000.

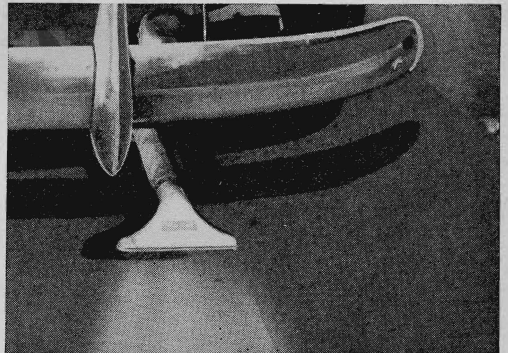
KAYWOODIE COMPANY
Rockefeller Center, NEW YORK and LONDON

Easy Test with Tire Pump Checks Brake Adjustment



MOTORISTS can make sure that all four brakes on a car are adjusted evenly by a simple method employing an ordinary tire pump and a piece of string. Connect the pump hose to the tire valve of a jacked-up wheel, with the base of the pump resting on a wheel wrench as shown, and press the pump handle down until the air pressure moves the wheel. Mark this spot on the pump rod with a piece of string. Then adjust the brakes on the other wheels so that the same pressure, as measured by the position of the string on the pump rod, will move each wheel.—T.W.B.

Nozzle Deflects Exhaust



Vacuum-cleaner suction head set on exhaust pipe.

TO PREVENT automobile exhaust fumes from discoloring the chrome finish on the rear bumper of my car, I attached the suction head of an old vacuum cleaner to the exhaust pipe to carry away gases from the engine. Because the head is well designed for air flow, there is no danger of back pressure on the exhaust line interfering with motor operation.—A.J.K.