

10B

At *D* is a  $\frac{1}{2}$ -inch stopcock. This is screwed into one end of a  $\frac{1}{2}$ -inch elbow, which is screwed to a  $\frac{1}{2}$ -inch close nipple tapped into the head *B*.

This stopcock is the inlet for the air which is to be carbureted and is connected to the elbow and placed in an upright position that gasoline may be poured into it when it is necessary to change the carbureter.

In the opposite head is placed the stopcock *E*, which con-

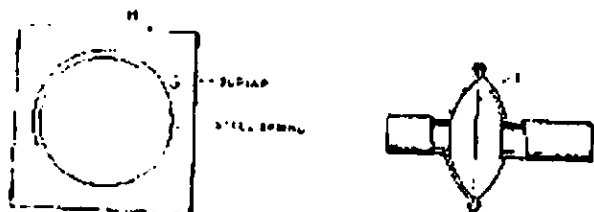
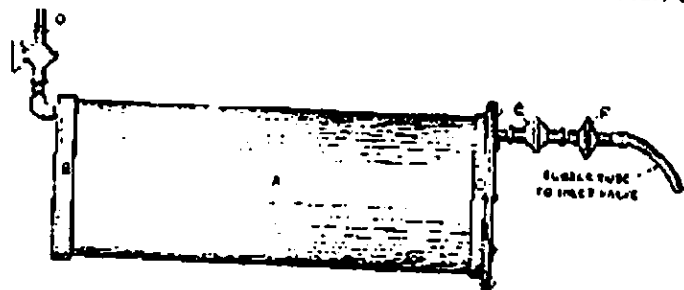


FIG. 132.—CARBURETER.

nects the outlet of the carbureted air or gas which passes through the rubber hose on its way to the inlet valve of the gas engine.

*I* represents a small safety device to prevent any possibility of the flame from the gas engine cylinder reaching the carbureter. This can be placed next the stopcock *E*, as shown in the cut, or in the tubing nearer the inlet valve.

A cross section of this device is shown in the lower part of the cut. *J* represents one of the two saucer-shaped

pieces of copper or other ductile metal. These are made of two sheet metal disks 2 inches in diameter and about  $\frac{1}{8}$  inch thick. They are formed to shape by hammering with a ball peen hammer into a depression cut or hammered in a piece of hard wood. The edges should be left flat, as shown. In the center of these pieces a hole is punched and a piece of brass tubing driven through and soldered. *L* represents a piece of fine brass wire gauze which is cut into a disk the same diameter as the pieces *K*, and when placed in the position it is to occupy between the two saucer-shaped pieces *F* the edges of all three are soldered together. The material for this device can be procured in any tin shop.

We now come to the most important part—the fitting of the inside of carbureter.

Gasoline is a liquid which possesses the property of rapid evaporation when placed in intimate contact with air, and the more thoroughly the two can be brought into relation with each other the richer will be the gas produced. In this carbureter the desired result is obtained by passing the incoming air through a great number of thicknesses of bur-lap or other coarse cloth.

In the lower half of Fig. 132 *G* represents a piece of thin spring brass or spring steel about 20 inches in length for this diameter of carbureter and  $\frac{1}{2}$  inch wide. It is bent around with the fingers until it forms a hoop about 5 inches in diameter, and while held in this position is laid down on a piece of bur-lap *H* about 9 inches square. Holding the spring together with the fingers of one hand, the corners of the bur-lap are folded over into the center of the spring, after which they are gathered into one hand and the spring thereby prevented from distending.

The carbureter should be previously set on one end with the upper end open. The spring and bur-lap are placed

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