

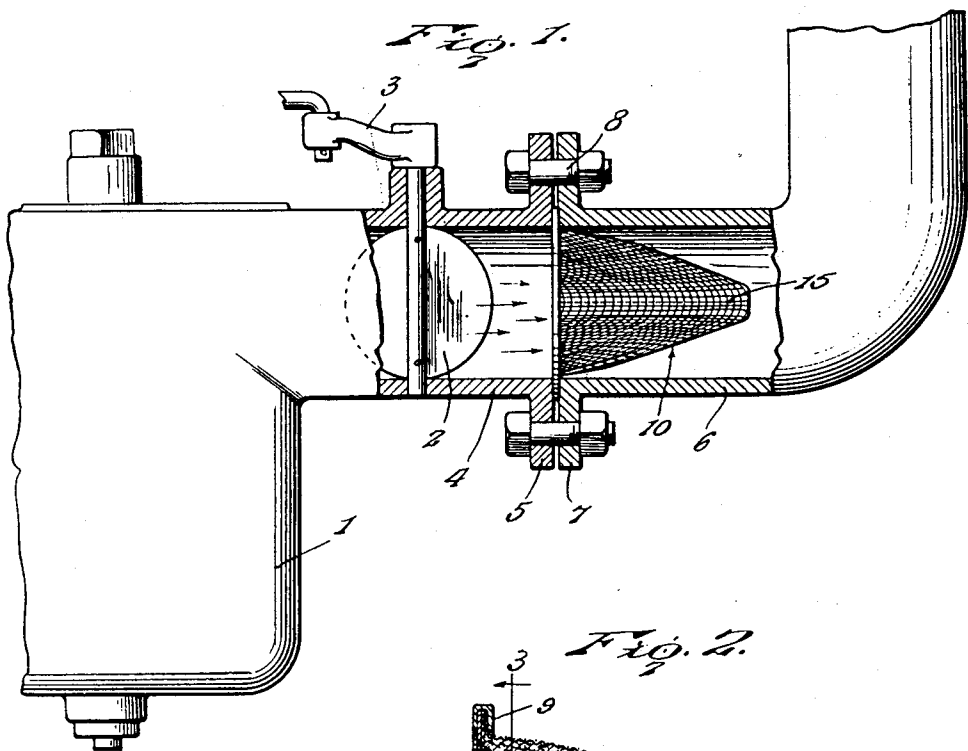
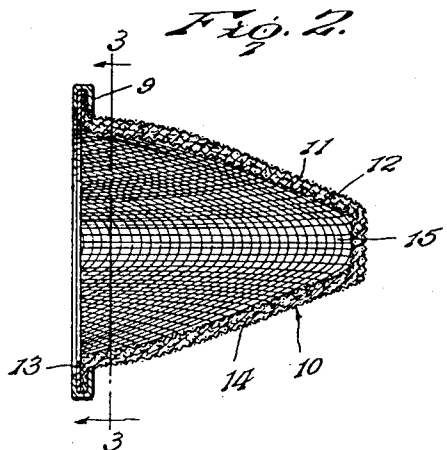
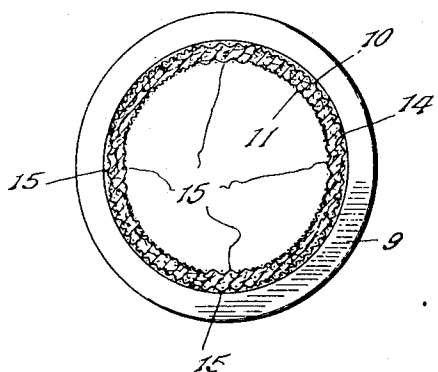
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A. LOEBS

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VAPORIZER

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VAPORIZER

Albert Loebs, Richmond Hill, N. Y.

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1 Claim. (Cl. 48—180)

This invention relates to an improved vaporizer, and seeks, among other objects, to provide a device of this character wherein a double screening wall is employed and has disposed between said walls a filling of material which will cooperate with said walls to insure full vaporization of a fuel mixture flowing from the outlet pipe of the carburetor into the intake manifold of an internal combustion engine.

10 Another object of the invention is to provide a vaporizer the double walls of which will be conical in shape and wherein the filling disposed between the conical walls will be disposed uniformly within the entire area defined by said walls.

15 And the invention seeks, as a still further object, to provide a vaporizer which will be characterized by the utmost simplicity and which may be manufactured cheaply.

20 Other and incidental objects of the invention, not specifically mentioned in the foregoing, will be readily apparent during the course of the following description.

In the drawing,

25 Figure 1 is a side elevational view of the device as it would appear when in operative position, portions of the carburetor outlet pipe and the intake manifold inlet pipe being broken away and shown in section,

30 Figure 2 is an enlarged longitudinal sectional view of the device,

Fig. 3 is an enlarged transverse sectional view of the device taken on the line 3—3 of Fig. 2, looking in the direction indicated by the arrows.

35 Referring now more particularly to the accompanying drawing, the numeral 1 indicates a carburetor which may be of any conventional construction and which is provided with a butterfly valve 2 having a throttle lever 3. The butterfly valve is mounted in an outlet pipe 4 which is provided at its outer end with a radial flange 5. The outlet pipe and radial flange are, of course, both well-known in carburetor construction. Associated with the outlet pipe 4 is an intake manifold inlet pipe 6 having a radial flange 7 mating with the radial flange 5. Extending through said flanges and normally rigidly connecting the same are bolts 8.

45 In carrying my invention into effect, I employ an annular channeled ring 9 which is formed of brass or any other lightweight metal and is normally clamped between the flanges 5 and 7 of the carburetor outlet pipe and intake manifold inlet pipe, respectively. Associated with the ring 9 is a vaporizing member 10 which comprises

spaced inner and outer walls 11 and 12 which are substantially conical in shape. The free edges of said walls are turned laterally at the mouth of the vaporizing member and are rigidly clamped to each other and to the ring 9 by said ring. Overlying the upper marginal surface of the out-turned portion of the inner wall 11 and clamped within the ring 9 is a flat annular reinforcing ring 13.

50 Disposed between the walls 11 and 12 of the vaporizing member 10 is a filling of metallic material, such as the well-known steel wool or a like substance, said filling being indicated by the numeral 14. Attention is directed to the fact that the filling is uniformly distributed throughout the entire area defined between the spaced walls. This feature is particularly advantageous for the reason that a uniform vaporization will be accorded and escape of fuel gases at any particular point or points within the vaporizing member 10 will be prevented. It is to be pointed out that the walls of the vaporizing member are particularly dense throughout the major portions of their surfaces but define oppositely disposed aligned thinned portions which extend longitudinally of the vaporizing member and are indicated by the numeral 15.

55 In use, the device is first placed in the inlet pipe of the intake manifold with the smaller end of the cone being directed toward said manifold. The ring 9 is, as before stated, firmly clamped in position between the radial flanges 5 and 7.

60 It will be seen that the fuel gases which pass the butterfly valve 2 when the same is opened by actuating the throttle lever will flow into the interior of the vaporizing member 10. As said gases flow against the inner wall 11 of said member, said gases will, due to the conical shape of the inner wall, be caused to circulate about the interior of the cone, thus providing a rapid and complete vaporization. In this manner, the fuel, after passing the vaporizing member, will be completely vaporized and mixed so that complete combustion of the mixture within the cylinder will be accorded. Accordingly, a less amount of fuel will be used. Attention is directed to the fact that the screen will not only provide complete vaporization but will also remove any foreign substance which may have passed through the carburetor and thereby will insure quick starting of the engine to which the device is attached.

65 Attention is further directed to the fact that, inasmuch as the vaporizing member is provided with aligned thinned portions, the gases will be

permitted readily to be drawn through and insure quick starting although the complete vaporization thereof will not be sacrificed.

It will be seen from the foregoing description that I have provided a simple and highly efficient vaporizer which may be manufactured cheaply and in large quantities and which may be readily installed on automobile engines.

Having thus described the invention, I claim:

10 A vaporizer including a ring, a vaporizing member comprising inner and outer walls formed

of fine mesh screen defining a cone, said walls being formed at intervals throughout their circumference with straight alined thinned portions extending longitudinally of the cone, and a filling carried between said walls, said walls and said filling cooperating to effect substantially complete vaporization of a fluid passing through the vaporizer and said thinned portions permitting the product of said vaporization to be drawn into the intake manifold readily.

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