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PRIMING SYSTEM FOR INTERNAL COMBUSTION ENGINES

Filed March 13, 1926

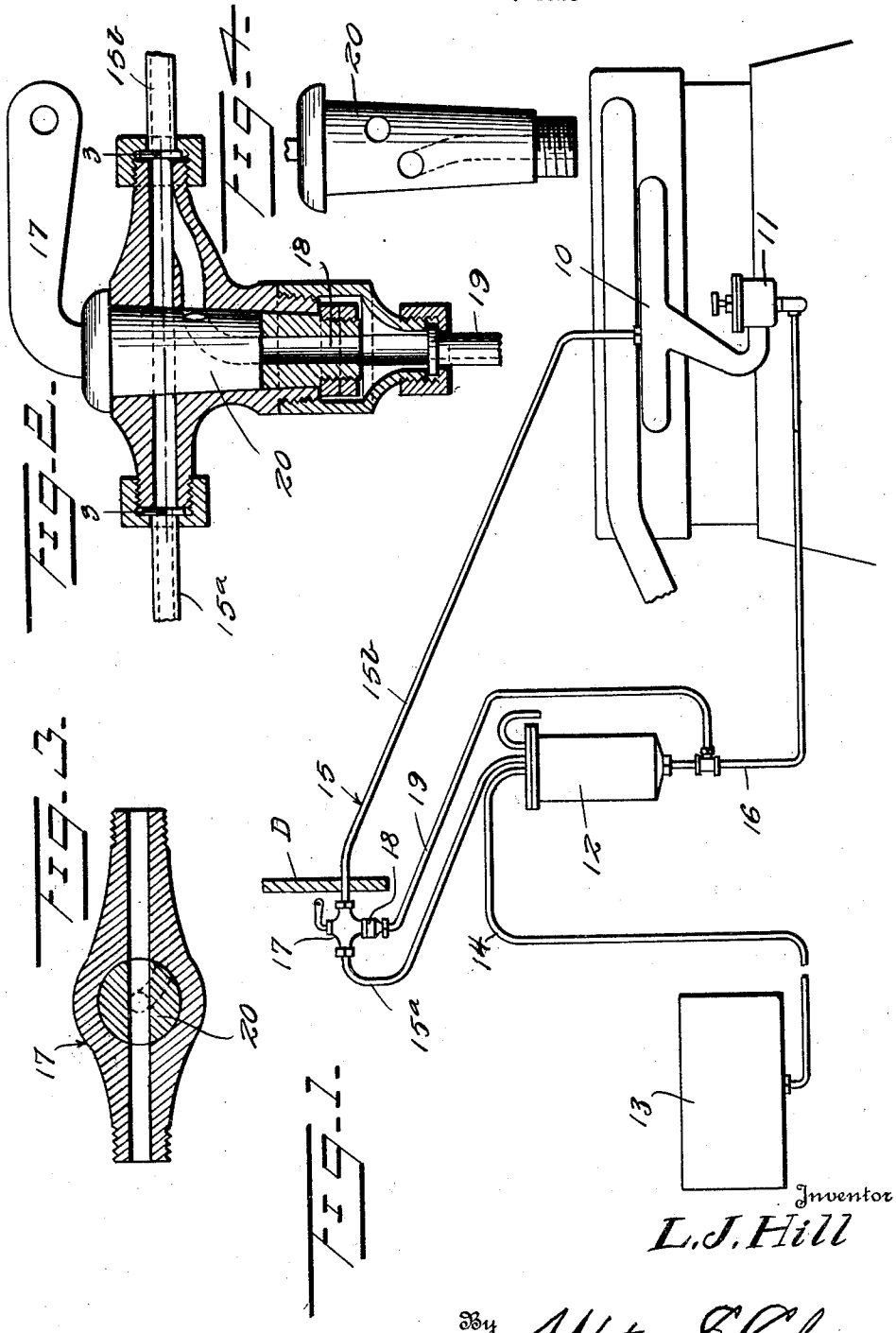


FIG. 2.

FIG. 3.

FIG. 4.

FIG. 1.

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PRIMING SYSTEM FOR INTERNAL-COMBUSTION ENGINES.

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This invention relates to priming systems for internal combustion engines and more particularly to a priming system especially adapted for use in connection with internal combustion engines, the fuel feed of which includes a vacuum tank.

A further and more specific object of the invention is to provide a connection between the carbureter feed line leading from a vacuum tank and the suction line connecting the vacuum tank with the intake manifold of an engine whereby communication between the intake manifold of the engine and the vacuum tank may be cut off and communication established between the intake manifold and the feed line to the carbureter.

These and other objects I attain by the construction shown in the accompanying drawing, wherein for the purpose of illustration is shown a preferred embodiment of my invention and wherein:—

Figure 1 is a side elevation partially diagrammatic showing a priming system constructed in accordance with my invention;

Figure 2 is an enlarged sectional view through the valve;

Figure 3 is a section on the line 3—3 of Figure 1;

Figure 4 is a view of the rotatable element of the valve removed.

Referring now more particularly to the drawing, the numeral 10 generally designates an intake manifold of an engine, 11 the carbureter thereof and 12 the vacuum tank by means of which fuel is fed to the carbureter from a fuel tank 13. The connections of the vacuum tank 12 include the usual intake line 14 leading from the fuel tank 13, the suction line 15 connecting the upper end of the vacuum tank with the intake manifold and the fuel feed line 16 connecting the lower end of the vacuum tank with the carbureter 11.

In accordance with my invention, I install in the suction connection 15 a three-way valve 17 and connect a third port 18 of this valve with the fuel feed line 16 by a conduit 19. The valve element 20 of the three-way valve is so constructed that it may either connect the two sections 15^a, 15^b of the conduit 15 lying at opposite sides of the valve or connect the section 15^b which leads to the intake manifold with the conduit 19 and close communication between the sections 15^a and 15^b. The valve 17 is preferably located upon the dash D of the automobile so that it may be readily accessible to the driver. It will, of course, be obvious that when the valve is arranged to connect the section 15^b of the conduit 15 with the conduit 19, the suction created within the intake manifold will draw raw fuel from the fuel feed line 16 to the intake manifold, thus priming the engine. When the valve is arranged to connect the sections 15^a and 15^b, the vacuum tank operates in the usual manner. The valve will, of course, be placed in the last named position immediately after starting of the engine.

Since the construction hereinbefore set forth is obviously capable of a certain range of change and modification without materially departing from the spirit of the invention, I do not limit myself to such specific structure except as hereinafter claimed.

I claim:—

In combination with an internal combustion engine and a fueling system therefor including a vacuum tank, a fuel tank connected with the vacuum tank, a connection between the vacuum tank and the intake manifold of the engine and a fuel feed connection between the vacuum tank and the carbureter of the engine; means placing the connection between the intake manifold and the vacuum tank in communication with the connection between the vacuum tank and carbureter comprising a three-way valve arranged in the connection between the intake manifold and the vacuum tank including a valve element positionable to establish communication between the intake manifold and the vacuum tank and close communication between the intake manifold and the connection between the vacuum tank and carbureter or to establish communication between the intake manifold and the connection between the vacuum tank and carbureter and close communication between the intake manifold and vacuum tank.

In testimony whereof I hereunto affix my signature.

LOUIS J. HILL.