

[54] **PORTABLE SYPHONIC PUMP**

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 137/351, 565; 141/67, 38; 123/198 C

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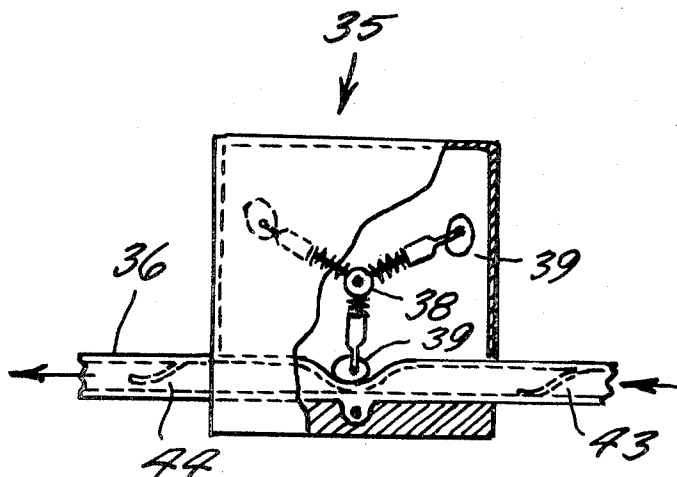
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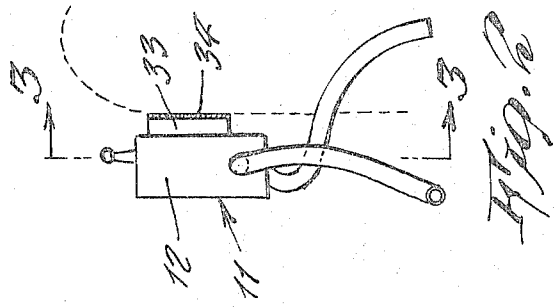
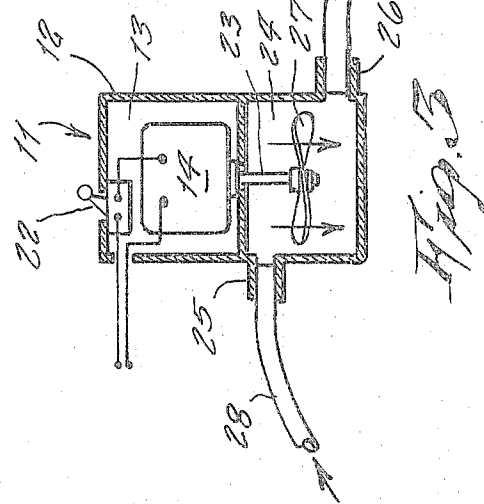
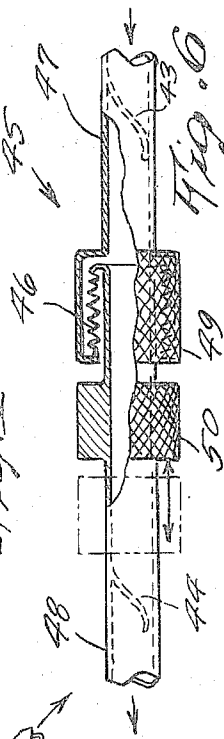
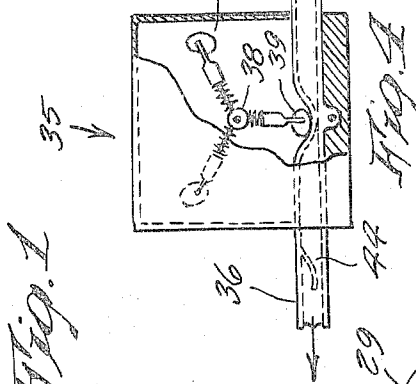
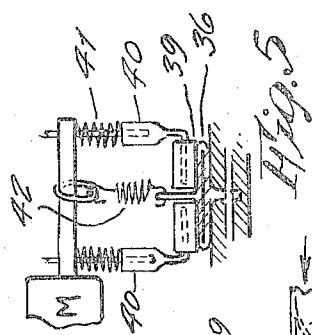
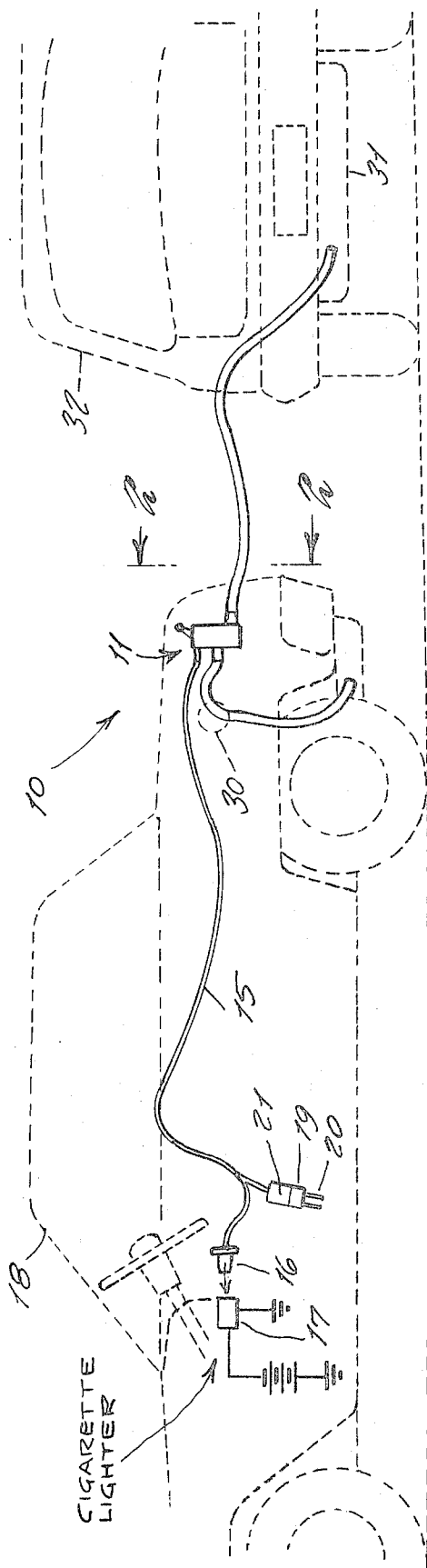
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[57] **ABSTRACT**

A handy pump of portable type for use by a motorist to transfer gasoline from one automobile to another in case one vehicle has run out of gas on a highway; the device consisting of hoses inserted into each of the vehicle gas tanks, and the outer ends of the hoses being connected to a pump that can be either hand operated or motor-driven by electric power from the vehicle cigarette lighter.

4 Claims, 6 Drawing Figures





PORTABLE SYPHONIC PUMP

This invention relates generally to emergency accessories for automobiles. More specifically, it relates to gasoline pumps.

A principal object of the present invention is to provide a portable pump that can be conveniently carried in a car so to be handy for use in case the car runs out of gas on a highway far from a gas station; the pump allowing the motorist to transfer some gas from another vehicle into his own car so that the car can resume travel in order to get to a gas station for then being fully refuelled.

Another object is to provide a portable pump that can be effortlessly operated by electric power from a cigarette lighter of the vehicle, thus preventing the need to syphon the gas by placing the hose in a person's mouth and sucking on it, which practice is dangerous due to lead and other harmful ingredients being in the gas.

Yet another object is to provide a pump that can be supported by a permanent magnet to a side of the vehicle where it is convenient to control, instead of placing down upon a ground.

Other objects are to provide a centrifugal syphoning pump which is simple in design, inexpensive to manufacture, rugged in construction, easy to use, and efficient in operation.

These and other objects will be readily evident upon a study of the following specification and the accompanying drawing, wherein:

FIG. 1 is a side view of the invention shown in operative use.

FIG. 2 is an end view of the pump unit supported by a magnet to a body of the car.

FIG. 3 is a cross section on line 3—3 of FIG. 2.

FIG. 4 is a side view of a modified design of the invention.

FIG. 5 is a cross section on line 5—5 of FIG. 4.

FIG. 6 is a cross section of still another form of the invention.

Referring now to the drawing in detail, and more particularly to FIGS. 1 to 3 at this time, the reference numeral 10 relates to a centrifugal syphoning pump that includes a unit 11 having a case 12 with a chamber 13, in which there is an electric motor 14 of six or twelve volt type so to be powered by a battery of a car. An extension cord 15 from the motor is attached to a plug 16 that is designed so to fit into a cigarette lighter outlet 17 of a car 18. The extension cord 15 is forked so to include a plug 19 with prongs 20 receivable in a 110 Volt A.C. household electric outlet socket, in which case the plug can include a transformer 21 to step down the voltage for the motor, so that either power source can drive the motor. A switch 22 is on the case.

A motor shaft 23 extends into a pump chamber 24 having inlet port 25 and outlet port 26; the shaft having impeller 27 mounted on it. A hose 28 is connected to the inlet port, and a hose 29 is connected to the outlet port.

In use, when a car 18 runs out of gas along a road, the hose 29 is inserted into the gas tank filler pipe 30, while the hose 28 is inserted down into the gas tank 31 of any stopped, assisting automobile 32 that has gas. The case 12 has a permanent magnet 33 on its rear side so that it can be held to any steel surface of a car in order to be convenient for operation. A soft thin felt pad 34 on the surface of the magnet will prevent the magnet to

scratch any car body finish. The plug 16 is inserted into the cigarette lighter outlet and the switch 22 is turned on. Thus, enough gas is put into the empty car tank so it can resume travel.

In FIGS. 4 and 5, a modified design of pump 35 is shown which has the advantage of no moving mechanism within the stream of the gasoline so that the pump can be marketed without the necessary U.L. approval requirements.

The pump 35 simply comprises a squeezable hose unit 36 extending between the gas tanks of the two vehicles, and the hose portion between the cars extends uninterrupted through a unit 37 having a motor driven wheel 38 that carries elliptical rollers 39 that squeeze the hose so to urge the movement of gasoline through it. The rollers are retractable along wheel spokes 40 against springs 41 so that the rollers travel for a distance along the hose. A pull from a spring 42 can be included so that the hose immediately restores rounded out after a roller passes so that lower pressure develops in order that pumping action from the supply tank is obtained. One-way flap valves 43 and 44 could be located in opposite ends of the hose. The elliptical rollers give pulsation to the flow.

In FIG. 6, another design of pump 45 would be hand operated by including an axially compressible accordion section 46 connected between hose sections 47 and 48. Flap valves 43 and 44 would be included. Simply squeezing the knurled handles 49 and 50 toward and away from each other causes pumping action, without need of any electric motor.

Thus different forms of the invention are provided.

I claim:

1. In a pump for syphoning gasoline from a tank of one automobile to a tank of another automobile, the combination of hose means, each end being inserted into one said tank, said hose means communicating with a pump unit located along said hose means, said pump unit including a case with a permanent magnet on one side for holding to a steel body of one said automobile, said case containing an electric motor that is powered from a cigarette lighter outlet of said automobile, said motor driving a gasoline pump, and one way flap valves along said hose means, being located on each side of said pump so to prevent return flow.

2. The combination as set forth in claim 1, wherein said hose means comprises a single hose extending straight through said case, said pump comprising a plurality of radially extending spokes secured to a shaft of said motor, each spoke slidably supporting an L-shaped holder slidable against a compression spring around said spoke, and each holder supporting a freely rotatable elliptical roller rollable along a surface of said hose so to squeeze said hose and force a pulsed flow of gasoline therethrough.

3. The combination as set forth in claim 2, wherein flaps on opposite sides of said hose provide means to restore roundness to said hose after being rolled flat by said rollers.

4. The combination as set forth in claim 1, wherein said hose means comprises two hoses with an accordion section therebetween, a knurled cylindrical handle enclosing said accordion section integral with one hose, and a second knurled handle integral with the other hose.

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