March 13, 1934. R. B. HARGROVE 1,950,794

OIL BOTTLE TOP

Filed Nov. 19, 1932

Fig. 1.

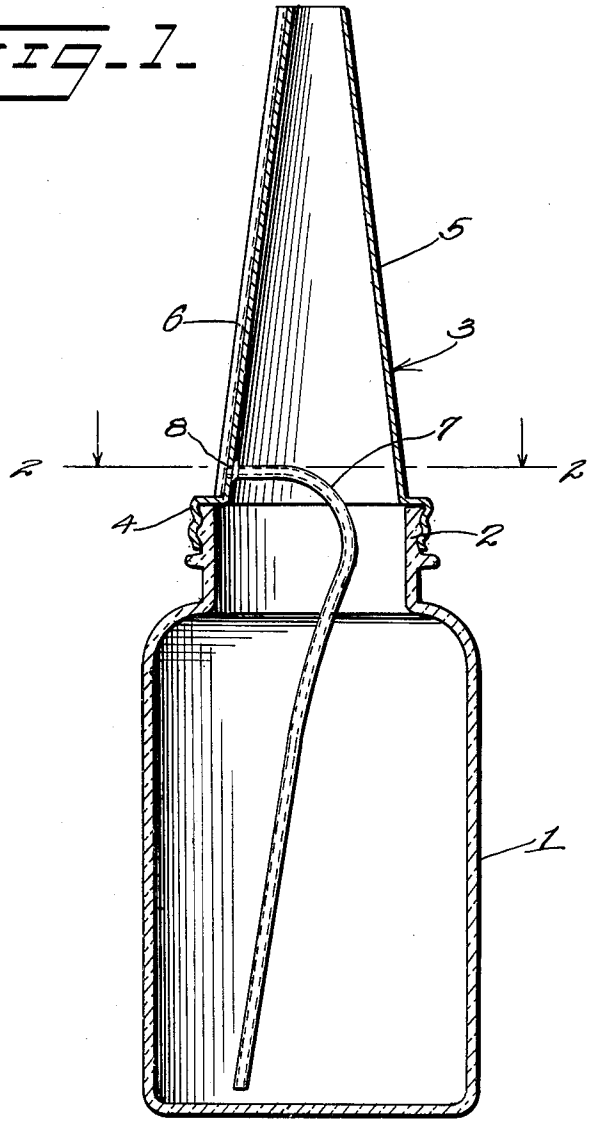
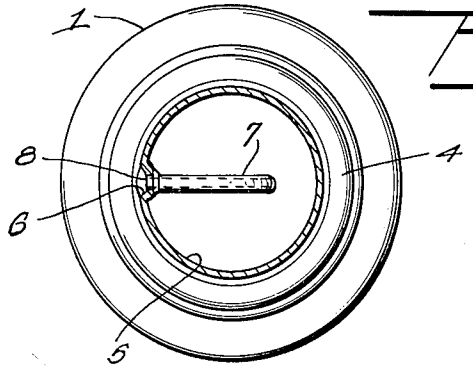


Fig. 2.



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Patented Mar. 13, 1934

1,950,794

UNITED STATES PATENT OFFICE

1,950,794

OIL BOTTLE TOP

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Application November 19, 1932, Serial No. 643,475

3 Claims. (Cl. 221—28)

This invention relates to improvements in discharge nozzles or spouts for dispensing receptacles and pertains particularly to an improved discharge spout for an oil bottle.

The present practice of gasoline service stations is to keep on hand a supply of quart jars of oil ready for its dispensing directly into the crank cases of automobiles when desired. These jars are provided with removable covers or caps which have integral therewith relatively long tapered discharge spouts which are inserted into the breather tubes of the vehicle crank case to convey the oil from the jar into the case. With these nozzles two difficulties are encountered, one being that no means is provided for refilling the bottle with air as the oil runs out and the oil, therefore, flows extremely slowly due to the fact that air must force its ways up through the spout into the oil, and the second difficulty lies in the fact that the spouts are of cylindrical cross section and fit tightly into the oil tube so that the crank case is tightly plugged up and the air therein cannot escape as the oil flows in. It is, therefore, necessary for the attendant to hold the oil jar so that the spout will not tightly close the oil pipe and he is, therefore, prevented from performing other services during this period.

The present invention has for its primary object to provide an oil bottle spout in which means is provided whereby air may flow freely into the oil bottle to replace the oil removed therefrom, so that the said flow of oil from the bottle will not be interfered with.

Another important object is to provide a spout or nozzle for an oil bottle which is so formed that it may be introduced into the crank case pipe and permitted to support itself therein without interfering with the escape of air from the engine crank case, or, in other words, it is so formed that air may pass between it and the oil spout when it has been introduced thereinto.

The invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawing forming part of this specification, with the understanding, however, that the invention is not confined to any strict conformity with the showing of the drawing but may be changed or modified so long as such changes or modifications mark no material departure from the salient features of the invention as expressed in the appended claims.

In the drawing:—

Figure 1 is a longitudinal sectional view through an oil bottle and the discharge spout or nozzle embodying the present invention;

Figure 2 is a view in transverse section taken upon the line 2—2 of Figure 1.

Referring now more particularly to the drawing wherein like numerals of reference indicate corresponding parts throughout the several views, the numeral 1 indicates generally a glass jar or bottle of the character commonly employed for measuring and dispensing oil at service stations. These bottles have a threaded neck portion 2 by means of which the dispensing nozzle is attached thereto.

The dispensing nozzle embodying the present invention is indicated as a whole by the numeral 3 and comprises the annular base portion 4 which is suitably threaded as shown for facilitating its attachment to the threaded neck portion 2 of the bottle. This portion 4 has integral therewith the relatively long tapered or frusto-conical nozzle 5, the wider end of which is connected with the base as illustrated. So far the nozzle structure described is of the same character as the nozzles at present in use.

The present invention consists in forming the tapered nozzle portion 5 of the spout with the exterior longitudinally extending groove or channel 6 which leads from the inner end adjacent the base portion 4 to the outer end thereof. Within the nozzle is located one end of a tube 7 which is secured in the wall thereof and opens therethrough into the channel 6 at the inner end of the latter as indicated at 8.

This tube extends through and a substantial distance beyond the base portion 4 of the device in a direction opposite that in which the nozzle 5 extends so that when the base portion 4 is threaded into position upon the neck 2 of the bottle this tube will extend into the bottle to a point adjacent the bottom thereof as illustrated.

From the foregoing it will be readily apparent that when the bottle 1 is filled with oil or other liquid and is inverted for the discharge of the liquid through the nozzle 5, no reduction of pressure will be created in the bottle at the upper end due to the outflowing of the liquid, as air will flow in by way of the tube 7 to replace the liquid as it flows out. The flow of the liquid will not be retarded, therefore, by air forcing its way in through the nozzle.

By the provision of the channel 6 which communicates with the outer end of the tube 8, any of the liquid which may enter the tube when the bottle is inverted and flow therethrough to the outside of the discharge spout, will follow along

this channel and find its way into the body into which the contents of the jar are discharged.

It will also be readily apparent that when the nozzle is introduced into the filling pipe of an engine crank case the channel 6 will provide a means for the escape of air therefrom.

It will thus be seen that by the provision of the channel 6 and the tube 7 the rapid discharge of the contents of the bottle may be effected and, where it is employed for handling lubricating oils, the person dispensing the same may perform other duties while the oil is being discharged into the receiving body such, for example, as the engine crank case previously mentioned.

This device is especially designed to fit the ordinary fruit jars that are now on the market, such as are commonly referred to as the "Mason" fruit jar.

Having thus described the invention, what is claimed is:—

1. In an oil dispensing bottle, a discharge spout comprising a base portion detachably connected with the mouth of the bottle and a nozzle integral with the base, said nozzle having a channel in and extending throughout the length of the wall thereof, and a tube opening at one end through said wall and into said channel and arranged to have its other end open into the bottle adjacent the bottom of the latter.

2. In an oil dispenser, a bottle having a mouth, a relatively long tapered nozzle connected at one end with the mouth, a channel formed in the wall of the nozzle upon the outside and extending throughout the length thereof, and an air conducting tube having one end within the nozzle and opening to the outside thereof through the bottom of said channel and having its other end arranged to position adjacent the bottom of the bottle.

3. In an oil dispenser, a receptacle, a relatively long discharge nozzle connected with the receptacle, an open channel extending longitudinally of the outside of the nozzle, and an air conducting tube having one end within the nozzle and opening to the outside thereof through the bottom of said channel and having its other end arranged adjacent the bottom of the receptacle.

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