Oct. 20, 1936. R. P. WHITE 2,058,118

UMBRELLA ATTACHMENT FOR NOZZLES

Filed Dec. 9, 1935

Fig. 1.

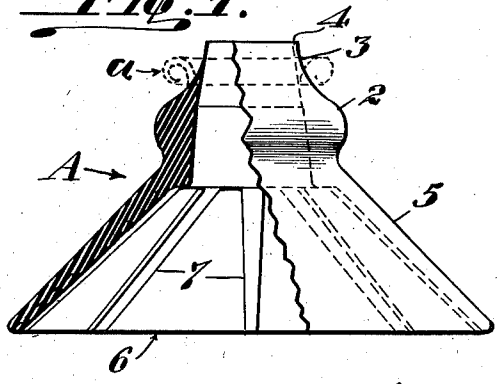


Fig. 2.

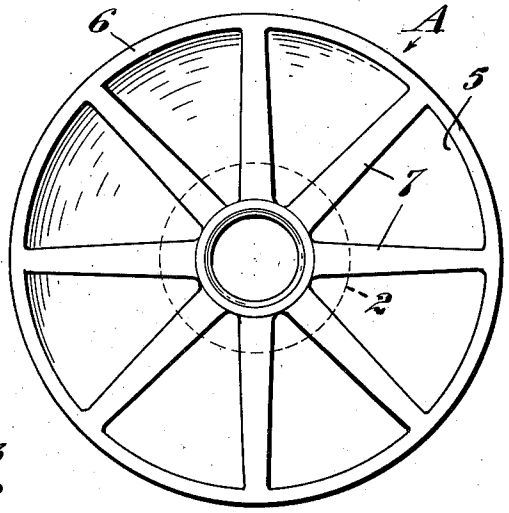


Fig. 3.

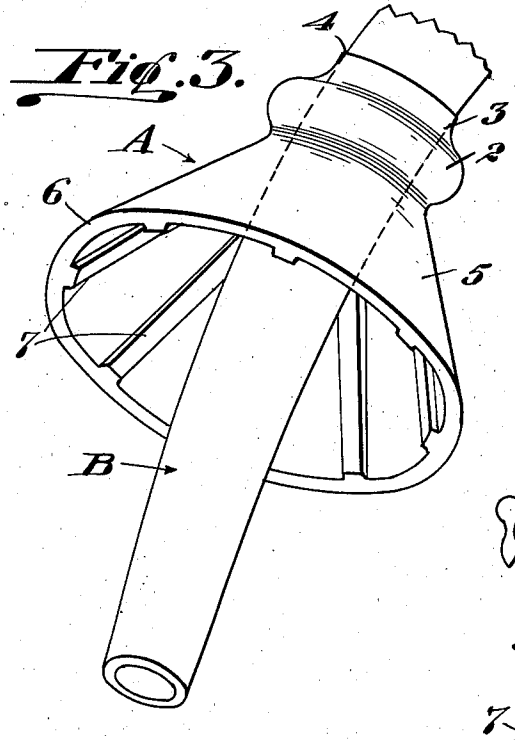


Fig. 4.

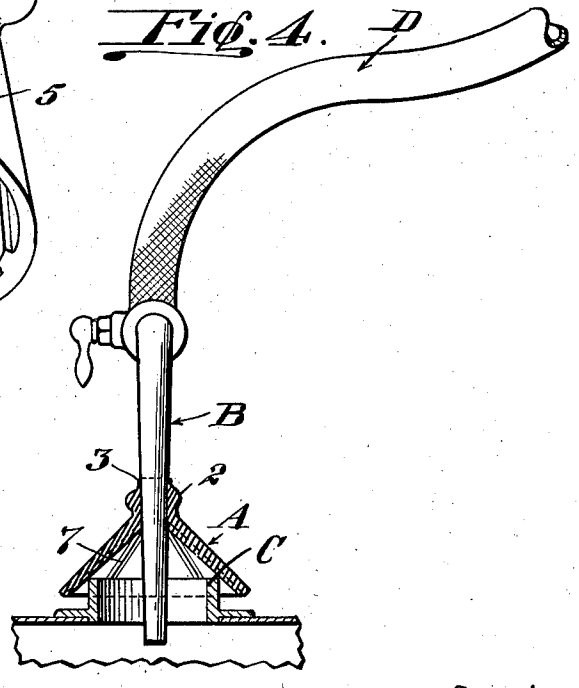
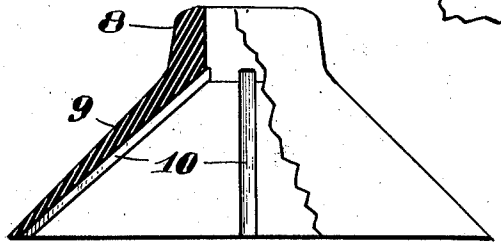


Fig. 5.



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UMBRELLA ATTACHMENT FOR NOZZLES

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Application December 9, 1935, Serial No. 53,570

2 Claims. (Cl. 221—84)

This invention relates to an umbrella attachment for nozzles and has as its primary object the provision of a water shedding appliance for the fuel delivery nozzles of liquid fuel dispensing pumps or tanks, such as are employed in fuel supply stations in delivering fuel to the reservoirs of motor vehicles, as a means for preventing the flow of water into the reservoir around the nozzle where the filling operation is effected in the open during a rain.

Another object is to provide an umbrella attachment for fuel delivery nozzles which may be easily and quickly applied to a nozzle and removed therefrom and which is so formed as to effect shedding of water which may be deposited on the upper portion of the nozzle, as by rain, or which may shed onto the nozzle from the hose to which the nozzle is attached, to prevent the water from entering the intake of a reservoir into which the discharge end of the nozzle is inserted.

Another object is to provide an umbrella attachment of the above character which may be formed in one piece, as by molding of rubber, or rubber composition, and which is so formed as to effect a gripping engagement with the nozzle to which it is applied without the aid of extraneous fastenings.

Another object is to provide a construction in the umbrella attachment whereby while affording a water shedding cover for the fuel intake of a reservoir will permit the escape from the reservoir of air displaced by the volume of liquid being delivered to the reservoir.

With the foregoing objects in view together with such other objects and advantages as may subsequently appear the invention is carried into effect as hereinafter described and claimed, and illustrated by way of example in the accompanying drawing, in which:

Fig. 1 is a view in side elevation and partly in section of the umbrella, showing it as detached;

Fig. 2 is an inverted plan view of the umbrella;

Fig. 3 is a perspective view illustrating the umbrella as applied to a fuel delivery nozzle;

Fig. 4 is a view in section and elevation illustrating the mode of operation of the invention;

Fig. 5 is a view in section and elevation depicting a modified form of the invention.

Referring to the drawing more specifically A indicates generally the umbrella, and B designates a nozzle on which the umbrella A is mounted. In the construction shown in Figs. 1, 2 and 3, the umbrella embodies an annular resilient collar 2, on the upper margin of which is formed a flexible resilient lip 3 which tapers to a thin edge 4 and which lip converges inwardly relative to the inner periphery of the collar 2 whereby the outer margin of the lip is formed of an internal diameter slightly less than that of the collar. The collar has an internal diameter slightly less than the portion of the nozzle B to be encompassed thereby, whereby, in applying the collar to the nozzle, the collar will be extended under tension in a fashion to grip the nozzle. The lip 3 will also be distended but to a greater degree than the collar so that its thin margin will closely conform to the surface portion of the nozzle encircled thereby, in a manner to insure against the passage of water between the lip and nozzle.

Formed on the collar 2, and projecting from the under side thereof is a flexible resilient apron 5 which flares outwardly from the collar and terminates in an annular margin 6 of an internal diameter exceeding the external diameter of the rim C of the filler opening of the fuel reservoir of a motor vehicle, so that when the nozzle B is inserted in such opening the apron will protrude over the outer margin of the rim of the filler opening, as particularly shown in Fig. 4, in a fashion to prevent entrance of water through the opening around the nozzle.

As a means for permitting escape of air displaced during delivery of fuel to the reservoir, the inner periphery of the apron is formed with a series of spaced ribs 7 extending radially from the intersection of the apron with the collar to the outer margin of the apron.

In the construction shown in Fig. 5, the umbrella is formed with a circular resilient collar 8 of an internal diameter slightly less than that of the portion of the nozzle B to be encircled thereby, and from the lower edge of the collar extends a resilient apron 9 which diverges outwardly from the collar and is formed on its interior with a plurality of channels 10 extending radially from the collar to the lower margin of the apron.

The umbrella A may be formed of any suitable material, but the construction as illustrated in the drawing is especially suitable for forming of molded rubber, or rubber composition, and whereby the umbrella A may be readily made in one piece, and as thus formed will be resilient and flexible throughout.

In the application and operation of the invention the umbrella A is applied to the nozzle B by inserting the nozzle through the upper end of the collar, so that the outer end portion of the nozzle will project through the apron and beyond the lower margin thereof; the collar by reason of being of lesser internal diameter than the portion

of the nozzle encircled thereby being expanded and thereby placed under tension so that when contracted against the nozzle will frictionally grip the latter under such tension as to securely retain the umbrella in place on the nozzle.

Where the construction shown in Fig. 1 is employed, that is with the thin lip **4**, in applying the umbrella to the nozzle the lip **4** may be rolled outwardly as indicated in dotted lines *a* in Fig. 1, so as to facilitate insertion of the discharge end of the nozzle B through the collar **2**, and also facilitate advancing the nozzle longitudinally through the collar. After the collar has been disposed at the desired position on the nozzle the curled lip may be restored to its extended position in which position the lip will be under tension and will tightly grip the nozzle with its thin margin presented upwardly on the nozzle so as to present no obstruction to the flow of water from the surface of the nozzle above the umbrella onto the outer surface of the latter.

However in some instances the lip **3** may be dispensed with in which event the construction shown in Fig. 5 may be employed in which the collar **8** is devoid of an upper marginal lip.

When the umbrella A has been positioned on the nozzle B as illustrated in Fig. 3 the nozzle may be inserted into the filler opening of a fuel reservoir with the apron seating on the rim C of the opening as shown in Fig. 4, whereupon any water flowing down the nozzle B from above the umbrella A will be obstructed and deflected by the latter and will be directed over the exterior of the apron clear of the intake opening thus preventing flow of water into the fuel reservoir.

The invention is particularly applicable for use on nozzles of fuel dispensing tanks where the hose D leading from a dispensing tank to the nozzle B is exposed to the weather, as is frequently the case in service stations, since in such locations water accumulates on the hose during a rain and frequently drains therefrom along the nozzle into the fuel reservoir on delivering fuel to the latter. The umbrella A also serves to prevent rain from directly entering the reservoir filler opening where the latter is exposed to rain during the filling operation.

By providing the interior of the umbrella with the ribs **7**, or channels **10**, spaces are provided through which air displaced by the volume of fuel entering the reservoir will flow through the filler opening and to atmosphere around the lower edge of the umbrella.

While I have shown and described a specific embodiment of my invention I do not limit myself to the exact details of construction and arrangement shown but may employ such changes in the parts and in their arrangement as occasion may require coming within the meaning and scope of the appended claims.

I claim:

1. An attachment for nozzles comprising a resilient collar formed to encircle a nozzle, a flexible flared apron on one end of said collar, and a flexible converging lip on the other end of said collar.

2. An attachment for nozzles comprising a resilient collar formed to encircle a nozzle, a flexible flared apron on one end of said collar, and a flexible converging lip on the other end of said collar, said lip tapering to a thin edge to closely conform under tension to the surface of a nozzle encircled by said collar.

RALPH P. WHITE.