(Model.)

J. JAEGER.

SCREW FAUCET.

No. 347,609. Patented Aug. 17, 1886.

Fig. 1.

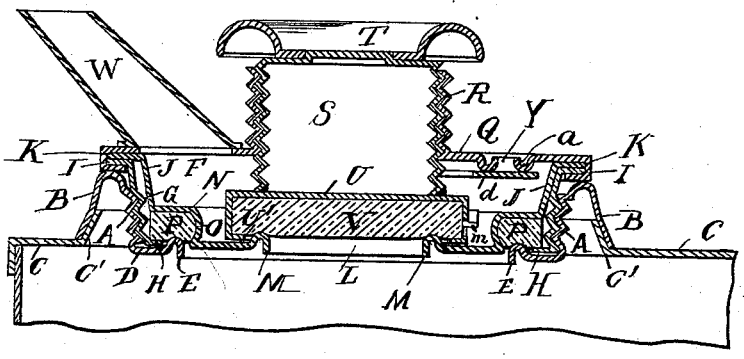


Fig. 2.

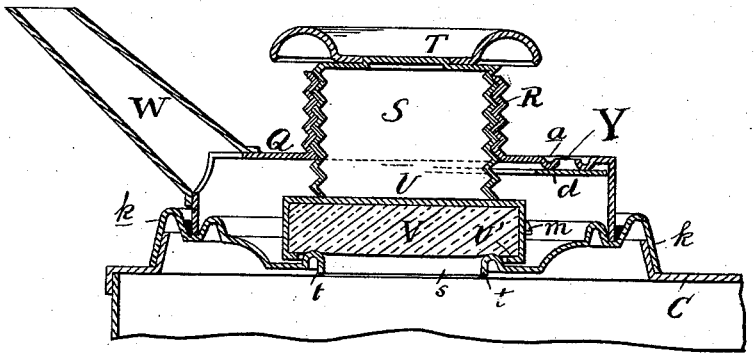
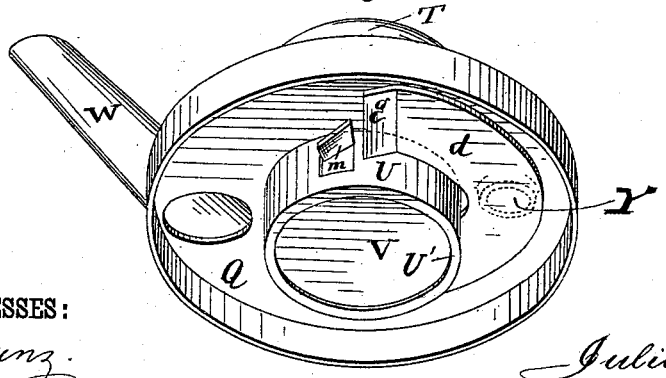


Fig. 3.



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JULIUS JAEGER, OF RUTHERFORD, NEW JERSEY, ASSIGNOR TO JAEGER & CO., OF SAME PLACE.

SCREW-FAUCET.

SPECIFICATION forming part of Letters Patent No. 347,609, dated August 17, 1886.

Application filed December 19, 1885. Serial No. 186,113. (Model.)

To all whom it may concern:

Be it known that I, JULIUS JAEGER, a citizen of the United States, and a resident of Rutherford, in the county of Bergen and State of New Jersey, have invented certain new and useful Improvements in Screw-Nozzles, of which the following is a specification.

This invention relates to certain new and useful improvements in screw-nozzles for metal cans usually used for shipping and storing oils—for example, such as kerosene, lubricating oils, &c.

The object of my invention is to provide a new and improved screw-nozzle, which occupies very little space, facilitates the drawing of liquid, closes absolutely tight, is inexpensive, can be attached to any can, and which prevents any loss of liquid, and which, by means of an automatic valve at the vent, prevents leakage when the valve is first opened.

The invention consists in the construction and combination of parts and details, as will be fully described and set forth hereinafter, and then pointed out in the claims.

In the accompanying drawings, Figure 1 is a cross-sectional view of my improved screw-nozzle, the same being closed. Fig. 2 is a cross-sectional view of a modification of the same. Fig. 3 is a perspective view of the under side of the top plate of the screw-nozzle.

Like letters of reference indicate like parts in all the figures.

The sheet-metal screw-neck A is provided with the flange B on its top edge, which flange is inclined outward and downward, and is to be soldered to the raised part C′ of the top of the can C. At its bottom edge the said screw-neck A is provided with the inwardly-projecting flange D, at the inner edge of which the bead E is formed by pressing or stamping up the metal of the flange, the said bead projecting from the upper surface of the flange.

In the screw-neck A, the stopper or plug F is screwed, which is constructed in the following manner: The screw-ring G, which can be screwed in the screw-neck A, is provided with the inwardly-projecting flange H at its bottom edge and with the outwardly-projecting flange I at its upper edge. The ring J, fitting in the screw-ring G, is provided at its upper edge with the outwardly-projecting flange K and in its bottom with the circular aperture L, on the edge of which the annular bead M is formed, which projects from the upper surface of the bottom of the ring J. The said ring J is provided with the annular shoulder N, near its bottom edge, and with the annular groove or recess O at the the inner edge of the shoulder. A packing-ring, P, of any suitable packing material, is placed in the groove O, below the shoulder N, and extends to the bottom of the ring J. The top plate, Q, is provided at its center with the upwardly-projecting screw-neck R, into which the screw-tube or valve-stem S is screwed. If desired, a solid screw may be used. Said screw or valve-stem S is provided on its top with the head T, and at its lower end with the inverted cup U, provided at its bottom edge with the inwardly-projecting flange U′. The said cup is filled with the packing material V. The top plate, Q, is also provided with the spout W, which may be straight or curved, and opposite the same with the vent-aperture Y, at the edge of which the annular bead *a* is formed, which projects from the under side of the top plate. A spring-strip, *d*, is secured at one end to the under side of the top plate, Q, and rests against the bead *a*, at the vent aperture Y, and the free end of said spring-strip is bent down to form the lip *g*. If desirable, the vent-hole may be formed in the side of the casing or plug of the nozzle. A packing-strip of any suitable material may be secured on the spring *d*. Part of the side of the cup U is punched out to project from the side of said cup and to form the beveled or inclined lug *m*. The ring J is placed in the ring G in such a manner that the flange K of said ring J rests on the flange I of the ring G, and the flange H of the ring G rests against the under side of the packing-ring P, thus holding the said packing-ring in place on the lower part of the ring J, and leaving an annular surface of the packing, which can be pressed against the bead E when the plug or stopper is screwed down in the screw-neck A, thus making a perfect seal. The top plate, Q, is then placed on the flange K of the inner ring, J, and the edge of said top plate is then bent over the flanges K and I, to rest against the under side of the flange I, and thereby holds the screw-ring G, the inner ring, J, and the top

plate, Q, firmly together to form the plug or stopper F, which can be screwed into the screw-neck A.

When the can is filled, the stopper or plug F is screwed into the screw-neck A until the packing-ring P rests on the bead E, thus forming a tight and close joint through which no liquid can pass. The valve-stem S is then screwed down until the under side of the packing V in the inverted cup U on the lower end of said valve-stem rests against the bead M on the bottom of the ring J, thus also forming a tight and close joint. The cam is thus closed effectually, and no liquid can escape.

When it is desired to draw liquid from the can, the valve-stem S is screwed up to remove the packing V from the bead M, thus permitting the liquid to flow from the can through the aperture L, the ring J, and the spout W. When the valve-stem S is screwed up almost as far as possible, the lug *m* is forced under the lip *g* on the end of the spring-strip *d*, which is thus forced downward and from the bead *a*, surrounding the vent-aperture Y, which is thus opened long enough to form a vacuum sufficient to overcome the outward pressure of the liquid through the vent. The closed vent prevents the liquid from coming out of the vent until the nozzle has been opened. When the flow of liquid is to cease, the screw or valve-stem S is screwed down until the packing V rests upon the bead M, thereby the lug *m* is moved from above the strip *d*, which snaps upward and against the bead *a*, surrounding the vent-aperture Y, which is closed effectually.

When the can is to be refilled, the stopper or plug F is removed, the can filled, and then the stopper or plug is replaced.

In the construction shown in Fig. 2, the top Q is soldered on the flat cap *k*, which is soldered on the top of the can, and is provided with the central aperture, *s*, at the edge of which the upwardly-projecting bead *t* is formed, against which the packing V in the cup U can be pressed to close the can.

When the can is provided with the screw-nozzle, shown in Fig. 2, the can cannot be refilled, and the nozzle is soldered on the can after the same has been filled.

The above described screw-nozzle can be used on any can. It prevents all leakage, it is simple in construction, and is not very expensive.

The great defect of all of the vented nozzles made heretofore has been that the pressure of the liquid forces the air back from the vent when first opened, causing the nozzle to leak out of the vent-hole.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a screw-neck, of a screw plug or stopper having an annular shoulder, and provided with a threaded ring having a bottom flange, and of a packing-ring resting against said annular shoulder and held in place by the flange of the above-mentioned threaded ring, substantially as herein shown and described.

2. The combination, with a stopper or plug, of a valve in the same, a spring-strip on said stopper or plug for closing the vent-aperture in said stopper, and of a projection on the valve, which projection acts on the said spring, substantially as herein shown and described.

3. In a nozzle, the combination, with a stopper having a vent-aperture surrounded by a bead, of a spring secured on said stopper and resting against the said bead, substantially as herein shown and described.

4. The combination, with a stopper having a vent-aperture, of a spring-strip secured on said stopper for closing the said aperture, and having its end bent down, and of a valve in said stopper, which valve is provided with a projection which acts on the said spring-strip, substantially as herein shown and described.

5. The combination, with the screw-ring G, provided with the outwardly-projecting top flange, I, and the inwardly-projecting bottom flange, H, of the ring J, provided with the shoulder N, and with the outwardly-projecting flange K at its top edge, the packing-ring P, surrounding the ring, the top plate, Q, having its outer edge bent over the flanges K and I, of the ring J and the screw-ring G, respectively, and of a screw-valve in a screw-neck of the top plate, for the purpose of closing an aperture in the bottom of the ring J, substantially as shown and described.

6. The combination, with a stopper or plug having a vent-aperture, of a spring within the stopper or plug for the purpose of closing the vent-aperture in said stopper or plug, and of a screw-valve in the screw stopper or plug in which the vent-spring is provided, which valve can act on the spring, substantially as herein shown and described.

7. The combination, with a screw-neck, A, having a bottom flange, D, of a screw stopper or plug provided with a packing along the rim of its bottom, and with a central aperture, a screw-valve in the said screw plug or stopper, a packing held on the bottom of the screw-valve, and a nozzle or spout in the screw plug or stopper, substantially as herein shown and described.

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