(No Model.)

E. A. DEVERALL.

NOZZLE FOR OIL CANS.

No. 385,447. Patented July 3, 1888.

Fig. 1.

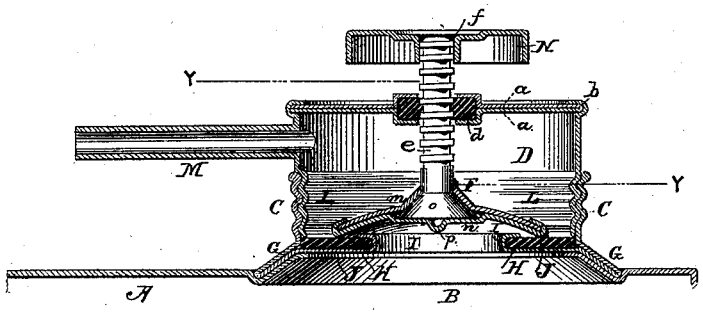
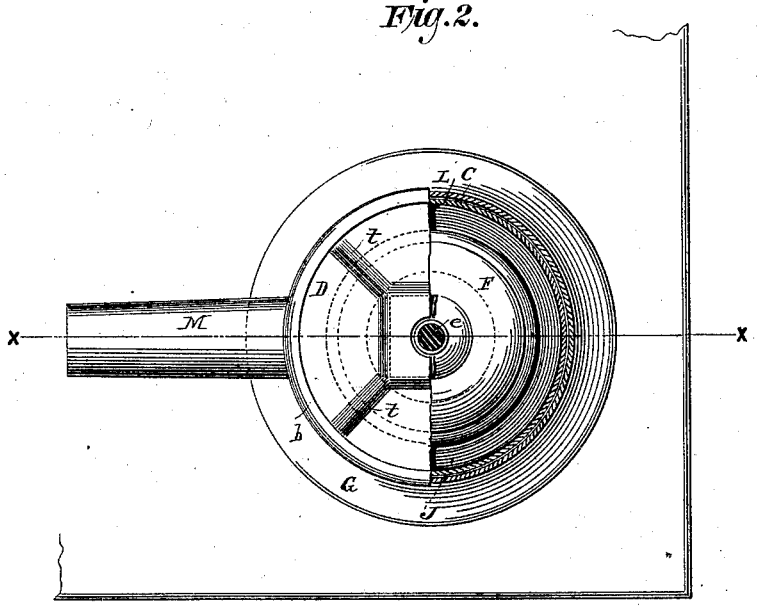


Fig. 2.

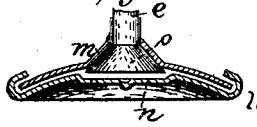


WITNESSES:

Gustave Dieterich.

F. A. C. Matthieu.

Fig. 3.



loose

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NOZZLE FOR OIL-CANS.

SPECIFICATION forming part of Letters Patent No. 385,447, dated July 3, 1888.

Application filed December 5, 1887. Serial No. 256,985. (No model.)

To all whom it may concern:

Be it known that I, EMILY A. DEVERALL, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Nozzles for Oil-Cans and Analogous Receptacles, of which the following is a specification.

The invention relates to improvements in nozzles for oil-cans and analogous receptacles; and it consists, in combination with a threaded flange encircling the mouth of the can, of a screw-cap having a discharge-spout at one side thereof and carrying a valve secured to the lower end of a threaded stem which passes upward through the vertical center of said cap, the said screw cap and valve possessing certain novel features of construction hereinafter specifically pointed out, and referred to in the claims.

In the accompanying drawings, Figure 1 is a central vertical section of a nozzle embodying the invention and applied to a detached portion of an oil-can, also shown in section, the section being on the dotted line X X of Fig. 2, which is a top view of the same, partly in section, on the dotted line Y Y of Fig. 1. Fig. 3 is a detached enlarged section of the valve secured to the lower end of the threaded stem.

A in the drawings indicates the body of the well-known form of oil-can; B, the usual aperture or mouth in the top thereof; C, the threaded flange encircling the said mouth, and D the screw-cap applied within said threaded flange and carrying the discharge-spout M and valve F.

The threaded flange C extends outward around its base and then turns inward upon itself, as indicated at G, forming a rib which affords a suitable base for the threaded flange and a suitable surface by which it may be soldered to the can A around the mouth B, this portion of the can being conformed to the general outline of the base G of the threaded flange. The metal of which the threaded flange C is formed extends horizontally inward from the base G, forming an annular flange, H, and then turns upward and outward a short distance, as at I, in order to form a suitable means for holding the flexible washer J, as illustrated in Fig. 1.

The washer J, it will be observed, is immediately over the outer edges of the opening B of the cam, and is in suitable position to be acted upon by the lower edges of the screw-cap D and the outer depending edges of the valve F, thus affording a means of preventing leakage either below the valve or the screw-cap.

The screw-cap D has a vertical threaded flange, L, which enters within and engages the threads of the flange C, and upon one side of said cap is provided the discharge-spout M, which will be of suitable length to extend slightly beyond the side of the can A when the cap D is turned to permit the discharge of the oil from the can.

The top of the screw-cap D consists of two thicknesses of sheet metal (lettered *a a*) secured to the flange *b* of the cap, and inclosing between their central portions the edges of the internally-threaded nut *d*, the adjacent portions of the two thicknesses of metal *a a* being formed to closely hug the edges of the nut, leaving the central portion or aperture thereof exposed for the reception of the threaded stem *e*, which carries at its lower end the valve F, and is supplied upon its upper end with the cap N, by which the stem *e* may be operated by hand. The cap N is open at its center, as shown, to receive the upper end of the stem *e*, and is rigidly affixed thereto by solder, *f*, applied upon the upper end of the stem and adjacent portions of the cap.

The valve F is of novel construction, in that it is composed of two plates lettered *m n*, respectively, inclosing at their center the head *o*, at the lower end of the threaded stem *e*, whereby the valve is secured to said stem, the plate *m* being rigidly secured to the said head *o* by solder or otherwise. The plate *n* is suitably ribbed at its center, as at *p*, for the purpose of strengthening the valve, and depends downward at its outer edges, so as to impinge the packing J by a single narrow edge, which enables me to effectually seal the can, said edge being made as narrow as possible by turning the outer edges of the plate *n* upward at a sharp angle. If the outer edges of the valve F were flat, a particle of sand or other hard substance on or in the packing would prevent the can from being securely sealed. When, however, the outer edge of the valve is so formed as to constitute substantially a narrow

edge or knife-edge as distinguished from a flat surface, the presence of a grain of sand on or an unevenness in the packing will not be likely to interfere with the proper sealing of the can. The outer edges of the lower plate, *n*, turn upward over the outer edges of the plate *m*, whereby the two plates are secured together and may be given a simultaneous vertical movement. The outer edge of the plate *n*, while rather closely impinging the outer edge of the plate *m*, is not in rigid contact therewith, but allows an independent revolving movement of the upper plate or disk, *m*, upon the lower plate or disk, *n*, and the purpose of this is to facilitate the sealing of the mouth of the can. If the plates *m n* were rigidly secured together, the outer edge of the plate *n* would scrape against the packing J during the latter portion of the revolution of the stem *e* while the can is in process of being sealed; but under the present construction the plates *m n* will revolve together while the stem is being turned until the outer edges of the plate or disk *n* come into slight contact with the packing J, at which time the friction then created between the packing J and plate *n* will cause the latter to cease its revolution, and the plate *m* will then revolve with the stem *e* and cause the plate *n* to have a direct downward movement upon the packing J. The double thickness of metal *a a*, constituting the top of the screw-cap D, will preferably be provided with ribs, as shown at *t* in Fig. 2, for the purpose of strengthening the same.

In the use of the nozzle above described the spout M may be turned outward, so as to extend beyond the edge of the can when it is desired to pour the oil therefrom, and during the rotation of the cap at any time the spout affords a suitable handle or lever by which to move the same.

It will be evident from an inspection of Fig. 1 that when the valve F is depressed on the packing J the mouth of the can will be sealed, whether the spout M projects outward beyond the edge of the can or not; hence when in the hands of the consumer the screw-cap may, if desired, be left with the spout projecting outward. The said spout, however, will be turned inward when the cans are being packed for shipment.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a nozzle for oil-cans, the threaded flange C, having the base G and inwardly-extending flange H, combined with the packing J, the screw-cap D, applied within said flange C, the discharge-spout secured to the side of said cap, the valve F and stem *e*, the bottom of the cap D being open and the packing J serving as a seat for both the cap and said valve, substantially as and for the purposes set forth.

2. In a nozzle for cans, the detachable threaded screw-cap D, the threaded flange C, secured to the can and adapted to receive within its circle the threaded cap D and the packing J, the top of said cap consisting of a double thickness of metal inclosing the internally-threaded nut *d*, combined with the threaded stem *e*, engaging said nut, and the valve secured to the lower end of said stem and adapted when depressed to engage the packing J, substantially as and for the purposes set forth.

3. In a nozzle for cans, the threaded flange C and the packing J, encircling the mouth of the can, combined with the detachable threaded cap D, carrying the discharge-spout M on its side, the threaded stem *e* and the valve F, the upper end of the stem having a cap, N, and the valve consisting of two plates or disks inclosing the head on the lower end of the stem and having their outer edge depending downward to engage the packing J, substantially as and for the purposes set forth.

4. In a nozzle for cans, the threaded flange C and packing J, encircling the mouth of the can, combined with the threaded cap having the discharge-spout M, the threaded stem *e* and valve F, said valve consisting of plates *m n*, inclosing the head on the lower end of the stem *e* between them, and the plate *n* having at its outer edge a flange which turns upward upon but does not rigidly hold the outer edge of the plate *m*, substantially as set forth.

5. The can having the opening B, the encircling threaded flange C, and the packing J, combined with the threaded cap D, carrying the discharge-spout M and passing within the flange C, the vertical threaded stem *e*, passing downward through said cap, and the valve F, secured on the lower end of said stem, the outer edge of the valve being turned downward toward said packing, so as to engage the same by a single narrow edge, substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 30th day of November, A. D. 1887.

EMILY A. DEVERALL.

Witnesses:

F. J. DEVERALL,

EDGAR W. CROWELL.