Sept. 28, 1926. 1,601,593

A. R. NELSON

OIL CAN

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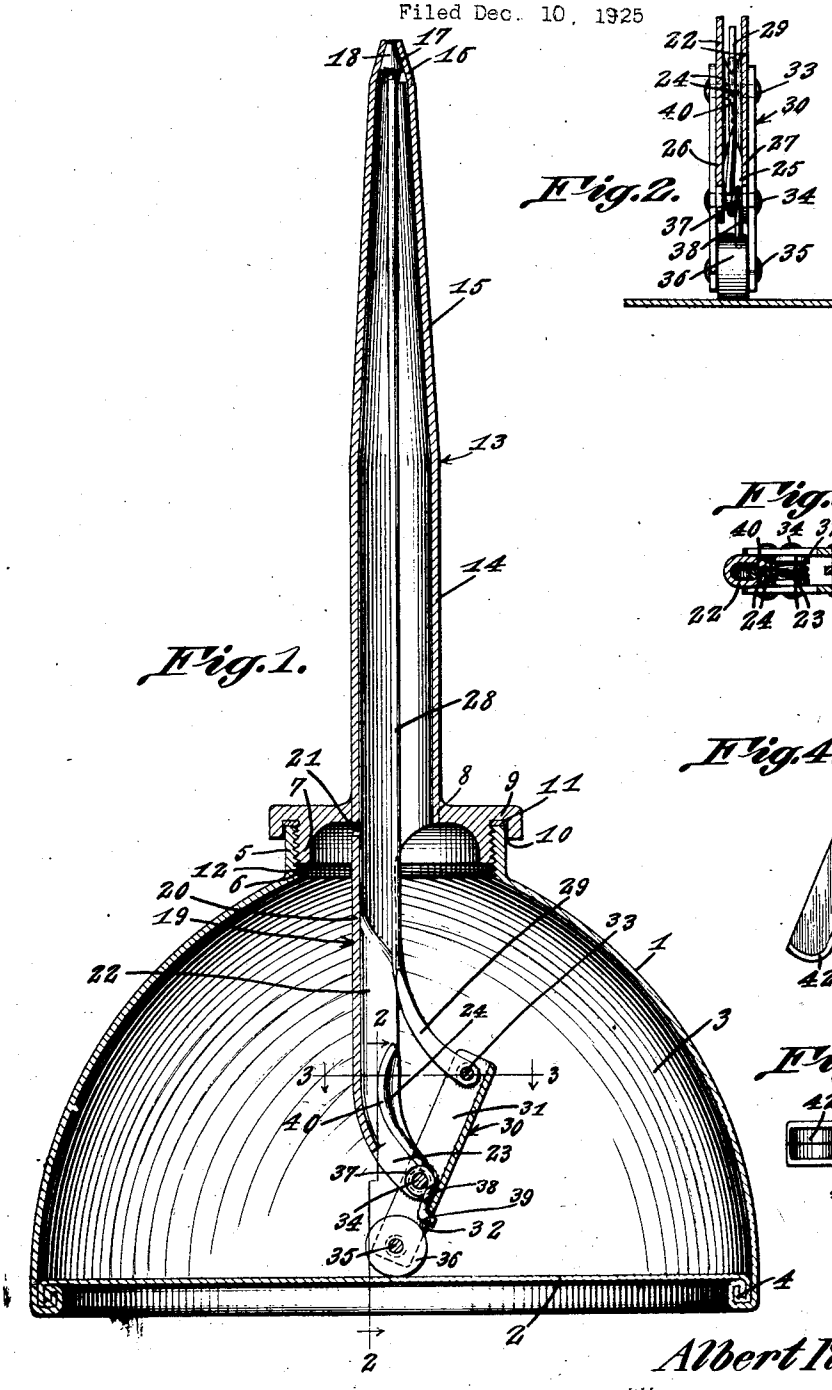


Fig. 1.

Fig. 2.

Fig. 3.

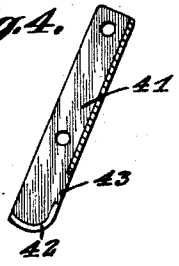


Fig. 4.

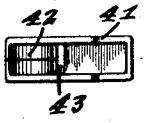


Fig. 5.

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UNITED STATES PATENT OFFICE.

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OIL CAN.

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This invention relates to oil cans, more particularly to that type known as hand-oilers, and has for its object to provide a can of such class, in a manner as hereinafter set forth, with valvular means for normally closing the discharge spout of the can to prevent the discharge of oil when the can is accidentally upset, and further capable of being shifted to open position for controlling the discharge of oil from the can.

Further objects of the invention are to provide, in a manner as hereinafter set forth, an oil can of the class referred to, which is simple in its construction and arrangement, strong, durable, compact, thoroughly efficient in its use, conveniently operated to provide for the discharge of oil, and inexpensive to manufacture.

With the foregoing and other objects in view, the invention consists of the novel construction, combination and arrangement of parts, as hereinafter more specifically described and illustrated in the accompanying drawings, wherein is shown an embodiment of the invention, but it is to be understood that changes, variations and modifications can be resorted to which come within the scope of the claims hereunto appended.

In the drawings wherein like reference characters denote corresponding parts throughout the several views:—

Figure 1 is a vertical sectional view of an oil can in accordance with this invention.

Figure 2 is a section on line 2—2, Figure 1.

Figure 3 is a section on line 3—3, Figure 1.

Figure 4 is a longitudinal sectional view of a modified form of valve shifting element.

Figure 5 is a top plan view of the element shown in Figure 4.

Referring to Figures 1 to 3 of the drawings, 1 denotes the body portion of the can which can be set up of any suitable contour, preferably semi-elliptical as shown and which in connection with a resilient bottom 2 provides an oil receiving chamber 3 of a container. The body portion 1, as well as the bottom 2, is constructed of sheet metal of the desired gage, but the body portion 1 is rigid whereby the bottom 2 is resilient. The lower end of the body portion 1 and the marginal portion of the bottom 2 are bent to interengage with each other to provide a closed, non-leaking joint 4. The upper end of the body portion 1 is formed with a vertically disposed cylindrical collar 5 provided with interior threads 6, which are engaged by the peripheral threads of a closure cap 7. The cap 7 is formed with a centrally disposed opening 8 and with a laterally extending flange 9, which is angle-shaped in vertical section, thereby providing between the depending portion of the flange 9 and the body of the cap an annular groove 10, into which extends the collar 5. Interposed between the horizontally disposed portion of the flange 9 and the top edge of the collar 5 is a washer 11 to prevent leakage when the cap 7 is mounted in the position as shown in Figure 1 to close the body portion 1 at the filling opening 12 thereof. The inner face of the collar 5 forms a continuation of the wall of said opening.

Extending into the opening 8 of the cap 7, as well as being secured to the latter by soldering or otherwise, is a discharge spout of appropriate length and which is generally indicated by the reference character 13. The spout 13 consists of a tubular cylindrical portion 14, which has its lower end positioned within the openng 8 and secured to the cap 7 by soldering or otherwise, and the portion 14 terminates at its upper end into a tapered tubular portion 15 which merges at its upper end into a short tubular portion 16 formed upon a greater taper than the portion 15. The inner face of the portion 16 provides a valve seat 17 for a tapered valve 18. The lower end of the portion 14 merges into an extension, referred to generally by the reference character 19 and which depends into the chamber 3. The upper portion of the extension 19, and which is indicated at 20, is semi-cylindrical in cross section and formed in proximity to the lower end of the portion 14 with an opening 21. The extension 19, below the portion 20, is compressed to provide a trough 22, and the inner terminal portion of the extension 19 is curved, as at 23. The sides of the trough are bent to close a part of the front thereof, as indicated at 24. The curved inner terminal portion of the extension is bifurcated, as indicated at 25, to provide a pair of arms 26, 27.

Connected at its upper end to the valve 18 and extending through the portions 14, 15 and 16 of the discharge spout and into the chamber 3 is a valve stem 28 having

its lower terminal portion 29 curving away from the extension 19 and somewhat of the same curvature as the lower terminal portion 23 of the extension 19. Slidably mounted on the bottom 2 and connected with the valve stem 28 is a spring controlled shifting member for the latter, and the said shifting member is generally referred to by the reference character 30 and consists of a normally inclined channel-shaped member 31 having a bifurcated lower portion 32. The inclination of the member 31 is away from the vertical median of the can and the extension 19 is positioned at one side of the vertical median of the can and the upper portion of the member 31 is positioned on the other side of said vertical median. The lower terminal portion 29 of the stem 28 extends into the upper end of the member 31 and is pivotally connected thereto, as at 33. The lower terminal portion 23 of the extension 19 extends into the member 31 at a point between its horizontal center and its lower end and is pivotally connected therewith, as at 34. Mounted in the bifurcated lower end 32 of the member 31, upon a pin 35 carried by said member 31, is a roller 36 which when the discharge spout 13 is closed is positioned at the vertical median of the can. The controlling spring for the element 30 is indicated at 37, is coiled around the pivot between the extension 19 and member 30 and has the lower end terminal portion 38 thereof bent to engage a shoulder 39 formed at the top of the bifurcated portion 32. The upper terminal portion of the spring 37, and which is indicated at 40, extends into the trough 22 and bears against the inner faces of the bent portions 24 of the sides of the trough.

The spring 37 normally acts to maintain the valve 18, stem 28 and element 30 in the position as shown in Figure 1, and further acts to return the aforesaid parts to such position after the parts have been shifted. By pressing inwardly on the bottom 2, the element 30 will move therewith and shift on its pivot 34 against the action of its controlling spring, and the movement of the element 30 will be such that its upper portion will move away from the extension 19 and lower the valve stem, thereby shifting the valve 18 to open the discharge spout 13. When inward presure is removed from the bottom 2, the valve 18, stem 28 and element 30 through the action of the controlling spring 37 will be shifted to the position shown in Figure 1, thereby closing the discharge spout 13 and maintaining it closed until inward pressure is applied again to the bottom 2.

The modified form of valve stem shifting element shown in Figure 4 consists of a channel-shaped member 41 opens at its top and having a closed bottom 42 of arcuate form. The member 41, in proximity to its bottom, is provided with a transverse opening 43 for the passage of the lower terminal portion of the controlling spring. Other than that as stated, the shifting element 41 is constructed in the same manner as element 30 and is connected to the valve stem 28 and extension 19 in the same manner as element 30. The curved bottom 42 of the member 41 is seated on the bottom 2 and when inward pressure is applied to the latter the member 40 operates in the same manner as element 30.

It is thought the many advantages of an oil can, in accordance with this invention, can be readily understood, and although the preferred embodiment of the invention is as illustrated and described, yet it is to be understood that changes in the details of construction can be had which will fall within the scope of the invention as claimed.

What I claim is:—

1. In a hand oiler of the valved spout type, in combination, a tubular spout having its outer end provided therein with a valve seat, said spout formed at its inner end with an extension of curvilinear cross section, said extension provided with a lengthwise curved inner terminal part, a valve arranged within the spout and normally engaging said seat to close said spout, a valve stem within and positioned at the longitudinal axis of the spout, said stem having a lengthwise curved inner terminal portion spaced from said curved terminal part, the rear end of said curved inner terminal part positioned inwardly of and below the rear end of said curved terminal portion, a channel-shaped permanently inclined stem shifting element adapted to be actuated by the bottom of the oiler for unseating said valve, means for pivotally connecting the forward end of said shifting element to the rear end of said curved terminal portion, a pivot between the rear end of said curved inner terminal part and shifting element, said pivot positioned intermediate the ends of said shifting element, a controlling spring for said shifting element to normally maintain it in position to seat the valve, said spring mounted on said pivot and having one end anchored to said shifting element intermediate the ends of the latter, and said curved terminal part provided with means for anchoring the other end of the spring therein.

2. In a hand oiler of the valved spout type, in combination, a tubular spout having its outer end tapered to provide a valve seat, said spout formed at its inner end with an extension of curvilinear cross section having a lengthwise curved inner terminal part, a valve permanently within the spout and normally engaging said seat for closing the spout, a valve stem within and posi-

tioned at the longitudinal axis of the spout and having a lengthwise curved inner terminal portion spaced from said curved inner terminal part, the rear end of said curved inner terminal part arranged inwardly of and below the rear end of said curved terminal portion, a permanently inclined stem shifting element adapted to be actuated by the bottom of the oiler for unseating said valve, means for pivotally connecting the forward end of said element to the rear end of said curved inner terminal portion, a pivot between the rear end of said curved inner terminal part and said element, said pivot positioned intermediate the ends of said element, a controlling spring for said permanently inclined element to normally maintain it in position to seat said valve, said spring mounted on said pivot and having one end anchored within said curved inner terminal part and its other end anchored to said permanently inclined element intermediate the ends of the latter, and said shifting element including a roller at its rear end.

In testimony whereof, I affix my signature hereto.

ALBERT R. NELSON.