

W. W. WILSON.
 COMBINED SPOUT AND VALVE FOR LIQUID CONTAINERS.
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1,393,331.

Patented Oct. 11, 1921.

Fig. 1.

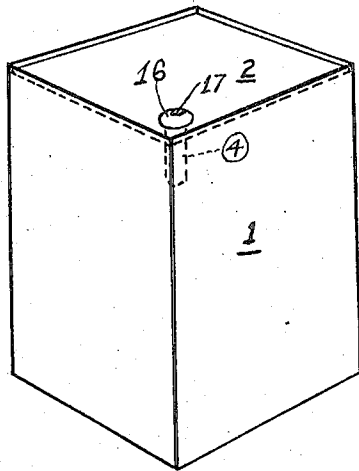


Fig. 2.

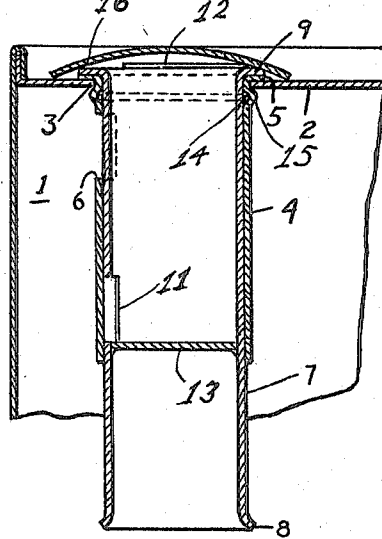


Fig. 4.

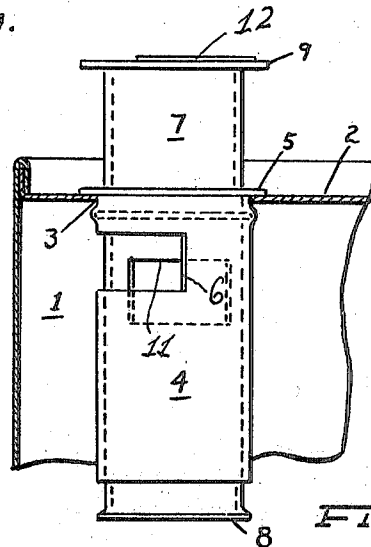
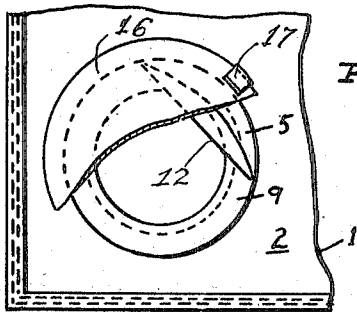


Fig. 5.

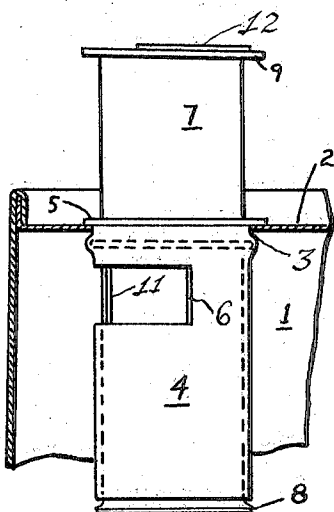


Fig. 3.

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COMBINED SPOUT AND VALVE FOR LIQUID-CONTAINERS.

1,393,331.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WALTER W. WILSON, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented new and useful Improvements in Combined Spouts and Valves for Liquid-Containers, of which the following is a specification.

This invention relates to improvements in valved spouts or outlets for liquid containers.

One of the objects of the invention is to provide a valved spout of the character described, which is comparatively simple and inexpensive in construction, which consists of few parts, and which when closed will lie substantially flush with the top of the container whereby a saving in packing space and provision for a more compact packaging of liquid containers are provided.

Another object of the invention is to provide a valved spout in which the spout may be opened or closed by a rotary or a vertical movement and the flow of the liquid regulated by either of these movements or by a combination of these movements, whereby it is possible to readily and easily regulate the flow to the desired extent, the spout being also constructed so that it may be used for filling purposes.

Another object of the invention is to provide novel means for sealing the spout in closed position so as to insure effective sealing for shipping purposes, the sealing means being arranged whereby it can readily be removed when it is desired to open the spout.

A further object of the invention is to generally improve and simplify the construction and operation of valved spouts for liquid containers, whereby said spouts will be more reliable and easy to operate and possibility of loss of the stopper element and of damaging or breaking the spout are eliminated.

The invention possesses other advantages and features some of which, with the foregoing will be set forth at length in the following description where I shall outline in full that form of the invention which I have selected for illustration in the drawings accompanying and forming a part of the present specification. In said drawings I have shown one form of the construction of my invention, but it is to be understood that I do not limit myself to such form since the

invention as expressed in the claims may be embodied in a plurality of forms.

Referring to the drawings,

Figure 1 is a perspective view of a container showing my invention applied thereto and in sealed and closed position.

Fig. 2 is an enlarged fragmentary vertical sectional view of the valve closed and sealed.

Fig. 3 is a fragmentary side elevation partly broken away and showing the valve fully open.

Fig. 4 is a fragmentary top plan view broken away in part and showing the valve when closed and sealed.

Fig. 5 is a fragmentary side elevation partly broken away and showing the valve partly opened.

Referring to the present embodiment of the invention as illustrated in the drawings, 1 designates a rectangular liquid receptacle of the oil type, with which my invention is primarily intended for use, although the invention may be used with any other type of liquid container. The top wall 2 of the container is provided with an opening 3 therein depending from which opening is a tubular spout casing 4. The casing 4 is provided with an annular flange 5 on its upper end, which flange engages upon the upper side of the wall 2 and is soldered or otherwise secured thereto. On one side of the casing near its upper end, there is provided a rectilinear opening 6. Mounted within the casing is a tubular spout or valve member 7 which fits snugly within said casing and is permitted both rotary and vertical movement therein. The lower end of the spout 7 is provided with an outwardly extending lateral flange 8 which is adapted to engage the lower end of the casing 7 to limit the outward movement of said spout. A similar flange 9 is provided on the outer end of the spout to limit the inward movement thereof. The spout 7 is provided on one side and at a point intermediate of its ends with a rectilinear opening 11 of substantially the same size as the opening 6 and adapted to register with said opening. The flange 9 is bent back and inwardly to provide a lip 12 which may be grasped in operating the spout. This lip is on the side of the spout opposite to that in which the opening 11 is formed and when this lip is brought on the side of the opening 3 opposite to the corner of the container, and the spout is

pulled outwardly to its full extent, the spout or valve will be fully opened, both openings being in complete registration with one another.

5 I provide a closure or partition wall 13 within the spout so as to prevent liquid from entering through the lower end of the spout. This closure or partition is placed preferably at the lower edge of the opening 11 in
10 the spout so that after a pouring operation, little or no liquid will collect or be trapped within the spout, when the valve is closed and will run out of the spout back into the container. However, this partition may be
15 placed at any suitable point within the spout.

If desired, I may provide packing 14 between the casing and the spout at a point adjacent to the upper end of the casing. I
20 prefer in using this packing to provide a groove 15 in the casing and insert suitable packing therein.

As a means for tightly sealing the spout in closed position, so as to provide a reliable seal for shipping purposes, I employ a concavo-convex sealing plate 16 of
25 just sufficient size to cover the upper end of the spout when the latter is in closed position. This cap is sealed to the wall 2 by being soldered thereto and is provided with
30 a tab or tongue 17 which is preferably bent back so as to lie on top of the cap. When it is desired to open the spout, the lip is pulled with a pair of pliers or similar tool
35 so that the sealing cap will be removed and the operator may then insert a finger or suitable tool under the lip 12 and lift upwardly on the spout so as to bring the openings 6 and 11 into registration. This communi-
40 cates the interior of the spout with the interior of the container and disposes the spout in a position to pour out the contents of the container over the adjacent corner of the can. With the spout pulled out to its full
45 extent, and the lip 12 disposed on the side of the opening 3 opposite, to the corner, the spout is fully open. To now regulate the flow, the spout is turned or pushed inwardly,

either movement causes the size of the opening which communicates the interior of the 50 spout with the interior of the container to be varied. This turning of the spout is facilitated by having the lip 12 bent inwardly whereby proper purchase may be had upon the upper end of the spout. Thus 55 it will be seen that a combined rotary and longitudinal, movement inwardly or outwardly, of the spout, the flow may be varied as desired.

I claim:—

1. In combination with a liquid container having a wall provided with an opening therein, of a tubular casing secured to said wall and extending through said opening into the container, said tubular casing hav- 60 ing an opening in one side thereof, a tubular spout member rotatably and longitudinally movably mounted within said casing and having an opening in one side thereof adapted to register with the opening in said casing, a wall closing said tubular spout at a point adjacent the lower edge of the opening and spaced from the lower end of said spout member and means for preventing the with- 65 drawal of the spout from the casing.

2. In combination with a liquid container having an opening in one wall thereof, of a tubular member secured to said wall and extending through the opening into said container, a tubular spout longitudinally and 80 rotatably mounted within said member, an annular laterally extending flange on the inner end of said spout, an annular laterally extending flange on the outer end of said spout, said last-named flange being bent inwardly 85 at one portion thereof to provide a lip to facilitate the moving of said spout, said spout and tubular member having openings in the sides thereof, said openings being normally out of registration with one another and adapted to be brought into registration with one another upon movement of said spout and a wall closing said spout at a point just below the lower edge of the open- 90 ing therein.

WALTER W. WILSON.