

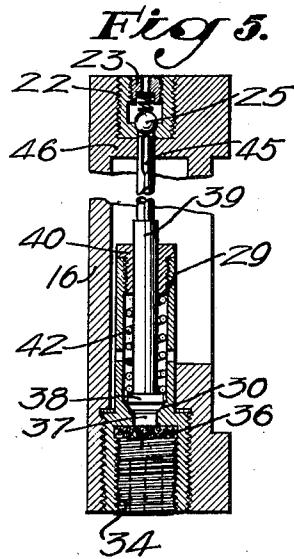
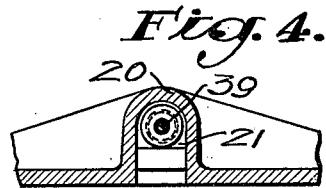
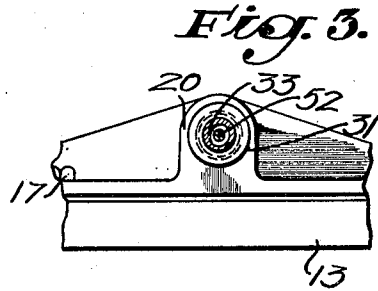
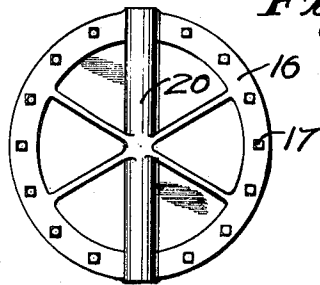
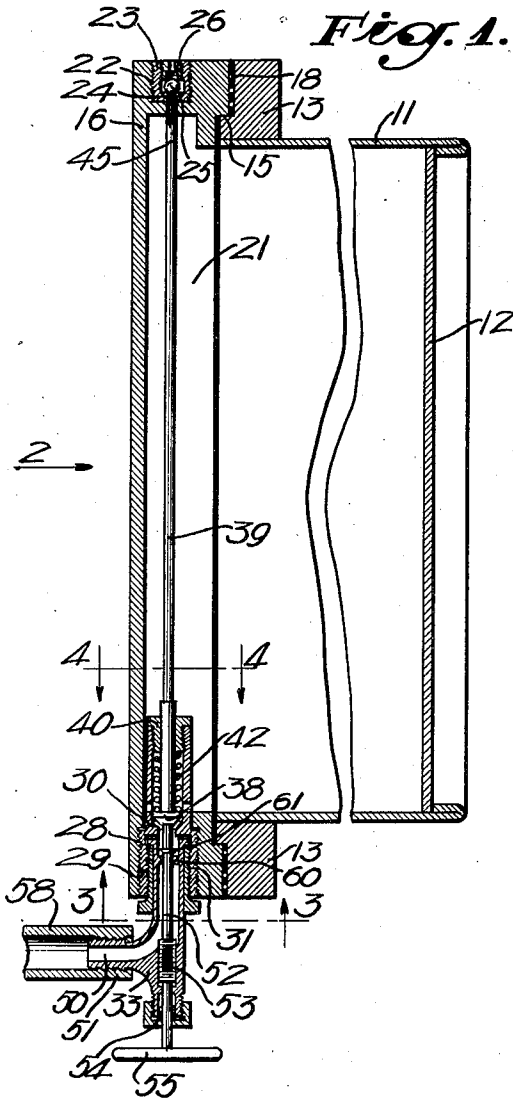
July 6, 1926.

1,591,726

J. D. NEULS

CONTAINER

Filed April 9, 1923



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Patented July 6, 1926.

1,591,726

UNITED STATES PATENT OFFICE.

JOSEPH D. NEULS, OF LOS ANGELES, CALIFORNIA, ASSIGNOR, BY MESNE ASSIGNMENTS, TO CALIFORNIA CYANIDE COMPANY, INCORPORATED, A CORPORATION OF DELAWARE.

CONTAINER.

Application filed April 9, 1923. Serial No. 631,039.

My invention relates to containers suitable for storing, shipping and dispensing poisonous, inflammable or otherwise dangerous fluids and relates particularly to a container having an improved form of flow controlling valve.

It is an object of the invention to provide a container which may be used as a shipping container for sealed transportation of a liquid such as described, and can also be used as a service container for dispensing or supplying liquid at various points of consumption, thereby avoiding the danger to operatives which ordinarily results from transferring the contents of the shipping container to service containers.

It is a further object of the invention to provide a container of this type having interiorly situated valve structure, and to provide an improved and simple means for operating the valve. The use of the invention makes possible the shipping of a poisonous or otherwise dangerous liquid in an original container which is adapted, by the peculiar and novel means I employ, for use as a service or dispensing device from which the liquid may be drawn off in such quantities as desired without exposure of the operatives to the fumes thereof.

The especial advantages and further objects of the invention will be made evident hereinafter.

Referring to the drawings which are for illustrative purposes only,

Fig. 1 is a longitudinal vertical section through a container embodying the features of my invention.

Fig. 2 is an elevation looking at the head of the container, as indicated by the arrow 2 in Fig. 1.

Fig. 3 is a section taken upon a plane represented by the line 3—3 in Fig. 1.

Fig. 4 is a section taken upon a plane represented by the line 4—4 in Fig. 1.

Fig. 5 is a slightly enlarged condensed section showing the disposal of the valve parts situated in the head of the container when the draw off or flow fixture is removed from the flow opening of the container.

In the drawing, 11 indicates a shell having a bottom 12 and being provided with a flange 13 at the open end thereof. This flange 13 interlocks at 15 with a head or cover member 16 which is bolted to the

flange 13 by bolts 17, a gasket 18 being provided therebetween to prevent leakage. The cover 16 is provided with an outstanding diametral rib 20 which is recessed from the inner face of the cover to provide a diametrically extending channel 21. At one end of the channel 21 a vent opening 22 is provided in which a valve plug 23 is screwed, this valve plug providing a seat 24 against which a ball 25 is held by a spring 26. The spring 26 is of sufficient strength to prevent the escape or leakage of the contents under ordinary conditions but permits the escape of gases which may be generated within the container.

At the opposite end of the channel 21 is formed a flow opening 28 in which a sleeve member 29 is threaded. This sleeve member 29 provides a valve seat 30 and also provides a threaded recess 31 into which a suitable draw off or flow fixture 33, as indicated in Fig. 1, or a plug 34 as shown in Fig. 5 may be screwed. When the container is employed for shipping or storage, the plug 34 is firmly seated against a gasket 36 and positively seals the opening 37 through the valve seat 30, this closure of the opening being accomplished from the exterior of the container. There is, however, operative at this time an internally situated valve means consisting of a valve plate 38 having a stem 39 extending upwardly therefrom through a bushing 40 mounted in the upper end of the sleeve member 29. The valve plate 38 is normally held pressurably against the valve seat 30 by a spring 42 which is compressed by the bushing 40. The upper end 45 of the stem 39 extends through an opening in the wall 46 against which the valve plug 23 is screwed and is therefore disposed in a position before the ball 25.

The draw off fixture 33 provides a passage 50 which communicates with the valve opening 37 and extends through a hose attachment end 51. A shaft 52 having a screw 53 formed thereupon extends centrally through the member 33 and a suitable stuffing box 54 is provided at the outer end of the member for preventing leakage of liquid. By rotating a hand wheel 55 mounted upon the outer end of the shaft 52, this shaft may be axially advanced or retracted. In Fig. 1 the shaft 52 is shown

advanced and the upper end thereof is shown in engagement with the underside of the valve plate 38, holding the valve plate in a position raised from the valve seat 30, thereupon allowing a flow from the interior of the container into the flexible hose 58 or other conductor attached to the attachment end 51 of the flow fixture 33. In this manner an internal valve is provided in the container which may be operated by external means and yet does not require a separate opening to provide access to the valve, but operates entirely through the flow opening of the container.

It will be noticed that when the valve plate 38 is raised, the upper end 45 of the stem 39 lifts the ball 25 from the seat 24 and therefore provides a vent through which air may pass into the interior of the container as the contents are drawn off through the fixture 33.

The fixture 33 is also provided with a valve seat as indicated at 60. This valve seat being cooperative with an annular formation 61 upon the stem 52 to form a means for closing the passage 50, so that when the shaft 52 is rotated in such a manner that it advances downwardly and permits the closing of the valve plate 38 against the seat 30 by the spring 42, the passage 50 will be closed in such a manner that any liquid contained in the flexible hose cannot escape through the flow fixture. It will therefore be seen that the valves constituted by the seat 30 in the plate 38 and the seat 60 in the cooperating annular projection 61, close substantially simultaneously as the stem 52 is moved downwardly. This makes it possible for the fixture 33 to be removed without escape or loss of liquid from the container or from the hose which communicates between the container and the point of application of the liquid. When the fixture 33 has been removed, the plug 34 may be inserted thus providing an additional precaution against leakage through the flow opening.

A device of this character may be conveniently employed for the purpose herein described. It will be recognized that the simple structure thereof permits the utilization of the contents without escape of any large amount of the contents owing to the fact that the flow fixture 33 must be inserted before it is possible to raise the valve closure plate 38. The valve in the flow fixture is also of considerable value, as the delivery hose may often contain a considerable quantity of the liquid which would ordinarily escape.

I claim as my invention:

1. In combination with a container having a flow opening and a vent opening: a resiliently retained closure member for said vent opening; an internally disposed valve

normally closing said flow opening, and being operable by cooperating mechanism carried by a flow fixture inserted in said flow opening; and means operable between said valve and said closure member for removing said closure member from said vent opening when said valve is open.

2. In combination with a container having a flow opening and a vent opening: a resiliently retained closure member for said vent opening; and internally disposed valve normally closing said flow opening, and being operable by cooperating mechanism carried by a flow fixture inserted in said flow opening; and a shaft operable between said valve and said closure member for removing said closure member from said vent opening when said valve is open.

3. In combination with a container having a flow opening and a vent opening: a valve seat disposed in said flow opening; a closure member resiliently held against said valve seat; a flow fixture removably situated in said flow opening; means associated with said flow fixture for lifting said closure member; a resiliently retained closure member for said vent opening and means operative in consequence of the raising of said first named closure member, to remove said second named closure member from said vent opening.

4. In combination with a container having a flow opening and a vent opening: a valve seat disposed in said flow opening; a closure member resiliently held against said valve seat; a flow fixture removably situated in said flow opening; means associated with said flow fixture for lifting said closure member; a resiliently retained closure member for said vent opening; and a shaft extending from said first named closure member to a position before said second named closure member, for the purpose of removing said second named closure member from said vent opening when flow is permitted through said flow opening.

5. In combination with a container having a flow opening and a vent opening: a sleeve member, having a valve seat formed therein, threaded into said flow opening; resiliently retained means for resisting a flow through said vent opening; a shaft having a valve plate at one end cooperative with said valve seat, and the other end extending to an operative position before said resiliently disposed means; means normally holding said valve plate against said seat; and a flow fixture, adapted to be screwed into the outer end of said sleeve member; having means associated therewith for lifting said valve plate from said seat.

6. In combination with a container having a flow opening and a vent opening: a sleeve member, having a valve seat formed therein, threaded into said flow opening; resiliently

retained means for resisting a flow through said vent opening; a shaft having a valve plate at one end cooperative with said valve seat, and the other end extending to an operative position before said resiliently disposed means; means normally holding said valve plate against said seat; and a flow fixture, adapted to be screwed into the outer end of said sleeve member, providing an attachment for a tubular member and having a screw advanced shaft associated therewith for lifting said valve plate from said seat.

7. In combination with a container covering device having a flow opening and a vent opening: a sleeve member, having a valve seat formed therein, threaded into said flow opening; resiliently retained means for resisting a flow through said vent opening; a shaft having a valve plate at one end cooperative with said valve seat, and the other end extending to an operative position before said resiliently disposed means; means

normally holding said valve plate against said seat; and a flow fixture, adapted to be screwed into the outer end of said sleeve member, providing an attachment for a tubular member and having a screw advanced shaft associated therewith for lifting said valve plate from said seat.

8. The combination with a container having a flow orifice and a vent orifice, of valve means normally closing the flow orifice and valve means normally closing the vent orifice, a flow fixture having valve means removably situated in the flow orifice and having means associated therewith for actuating the flow orifice valve, and means extending from said flow orifice valve for actuating the vent orifice valve whereby the flow orifice and the vent orifice are opened when the flow fixture is opened.

In testimony whereof, I have hereunto set my hand at Los Angeles, California, this 3rd day of April, 1923.

JOSEPH D. NEULS.