L. KESSLER.

DRAW-OFF DEVICE FOR EXPLOSIVE LIQUIDS OR THE LIKE.

APPLICATION FILED JUNE 23, 1916.

1,306,150.

Patented June 10, 1919.

Fig. 1.

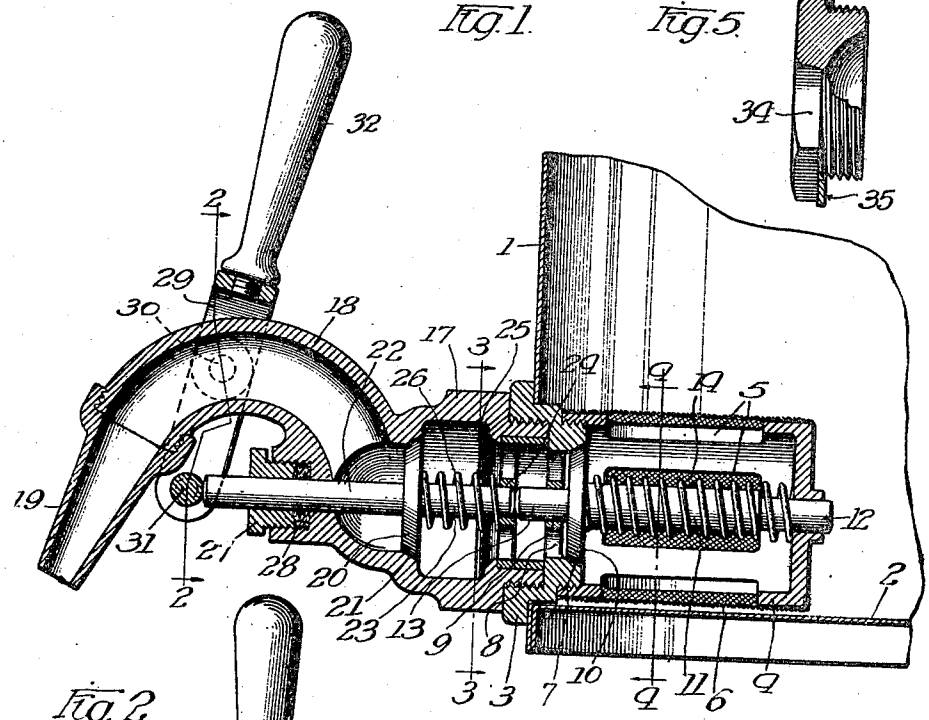


Fig. 5.

Fig. 2.

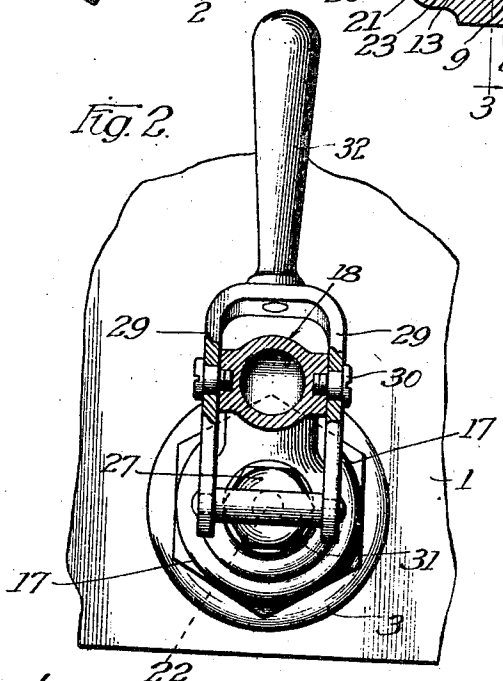


Fig. 3.

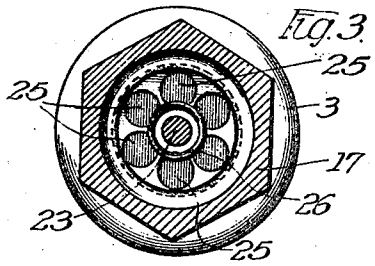
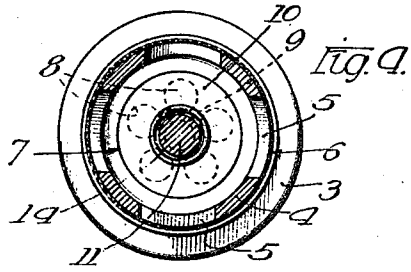


Fig. 4.



Witnesses:
Robert N. Lurie
Arthur W. Carlson

Inventor
Louis Kessler,
By Kiel & Kiel Attys.

UNITED STATES PATENT OFFICE.

LOUIS KESSLER, OF CHICAGO, ILLINOIS, ASSIGNOR TO NON-EXPLOSIVE CAN AND TUBE COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

DRAW-OFF DEVICE FOR EXPLOSIVE LIQUIDS OR THE LIKE.

1,306,150. Specification of Letters Patent. Patented June 10, 1919.

Application filed June 23, 1916. Serial No. 105,391.

To all whom it may concern:

Be it known that I, LOUIS KESSLER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Draw-Off Devices for Explosive Liquids or the like, of which the following is a description.

My invention belongs to that general class of devices for drawing off liquids from tanks or containers, and relates particularly to a draw-off device for explosive liquids. It is suitable for cans, tanks, or other receptacles containing explosive and volatile liquids, such for example as gasolene, benzin, naphtha, and similar oils. The same is particularly applicable for use on tanks where varying quantities are drawn off from time to time by retail dealers for supplying their customers. The invention has among its objects the production of a device of the kind described that is simple, safe, efficient, compact, and satisfactory for the purpose indicated. It has particularly as an object the production of a device that will effectually prevent the explosion of the contents, and yet be exceedingly simple and compact, and which can be manufactured at comparatively low cost. It has among its further objects the production of a device in which the spigot at the exterior of the cans may be removed, and yet the contents prevented from leaking out from the can. This is particularly desirable, for should the spigot be broken off, the can would be sealed against leakage. Other objects and advantages of the construction herein shown and described will be obvious to those skilled in the art from the disclosures herein made.

To this end my invention consists in the novel construction, arrangement and combination of parts herein shown and described, and more particularly pointed out in the claims.

In the drawings, wherein like reference characters indicate like or corresponding parts,

Figure 1 is substantially a sectional view through the device, and portion of the same;

Fig. 2 is a sectional view taken substantially on line 2—2 of Fig. 1;

Fig. 3 is a sectional view taken substantially on line 3—3 of Fig. 1;

Fig. 4 is a sectional view taken substantially on line 4—4 of Fig. 1, and

Fig. 5 is a side elevation of an auxiliary closure.

Referring to the drawings, portions of the side wall 1 and bottom 2 of the tank or receptacle are shown, it being understood that the tank may be of any size or shape, and constructed in any desired manner. The draw-off device is preferably arranged near the bottom of the tank in one of the side walls thereof, and in the construction shown consists of a portion carried by the tank and projecting thereinto, and an exterior or spigot portion, which may be removed from the tank if desired.

Referring to Fig. 1, 3 is a member secured to the tank in any suitable manner, and projecting thereinto, the same being so arranged that the contents of the tank cannot leak out through the opening about the member. Carried by member 3 is a shell or chambered part 4, provided with a plurality of inlet openings 5 of the desired size and shape. It may be mentioned that member 4 may be made cylindrical, so that it may be inserted through the opening in the tank wall, the opening in most cases being circular. Arranged over the openings is a wire gauze 6, or the equivalent, of comparatively fine or small mesh. When the gauze is arranged as shown it cannot be easily fractured from the outside of the tank through the discharge outlet. In the construction shown the same extends around the part 4, and is soldered or otherwise secured in place. The member 3 is provided with a transverse partition 9, having a plurality of openings 8 therethrough, the inner side being formed with a valve seat 7. Arranged to coöperate with the valve seat 7 is a valve 10, which is carried by a valve stem 11—13, one end of the same being preferably reduced as at 12, and carried by one wall of member 4, while the stem end 13 is slidably carried by the partition 9. The valve 10 is normally kept shut by a spring 14, or equivalent means for the purpose. In the construction shown the spring bears against the wall of part 4 and the valve. By providing a shoulder at the juncture of the stem 11 and its extension 12, a convenient stop is provided for limiting the movement of the valve in opening.

Arranged to be carried by the part 3 is a detachable part 17, which is preferably formed and communicates with the tubular goose neck 18, at the end of which may be arranged a nozzle 19, if so desired. For convenience in remvoing the part 17, I have shown the same threaded to engage part 3, the exterior being so formed that it may be engaged with a wrench, or the equivalent, to remove the part. The passage of fluid through the part 17 and goose neck 18, is controlled and normally prevented by a shut off valve 20 arranged to coöperate with the valve seat 21. The valve 20 is provided with a stem 23 on one side, and a similar stem 22 on the other side. I have shown a partition 24 arranged to support the stem 23, the partition having openings 25 therethrough, through which the fluid may pass from the tank. The stem 22 is supported by the structure, a stuffing box member 27, and packing 28 being provided to prevent the leakage of the fluid thereat, the stem projecting to the exterior of the part, as shown. Normally the valve is maintained shut by a spring 26, or the equivalent. As most clearly shown in Fig. 1, the stems 13 and 23 are so proportioned that their ends abut one another.

Any suitable means may be employed to actuate valve 20. As shown, the goose neck 18 is provided with lugs (see Fig. 2) at which point a yoke 29 is pivoted by the screws 30, or the equivalent. The yoke 29 carries a cross piece 31, arranged to coöperate with the exterior end of the valve stem 22, and the same is also provided with a controlling or operating handle 32.

Assuming that the device is constructed as shown and the oil or fluid contained in the tank. When it is desired to draw off some of the fluid, handle 32 is moved so that the bar 31 co-acting with the valve stem 22 opens the valve 20. As valve 20 is opened, however, stem 23 abutting against stem 13, simultaneously opens valve 10. The shoulder on the stem at the juncture of 11—12 limits the movements of the parts, upon its engagement with the casing. The contents of the tank 7 then flow through the screen 6, past valve 10, and through openings 8, through openings 25 in the partition 24, past valve 20, and up through the goose neck 7, and are discharged from the inlet into the desired receptacle.

As soon as handle 32 is released, however, the springs 14 and 26 immediately shut both valves, so that the flow of liquid is shut off. As the tank becomes empty, in the case of a small tank, the same may be slightly tilted, so as to completely empty the tank. If part of the draw-off device projecting from the exterior of the tank is removed or broken off accidentally, valve 10 will prevent any leakage of the contents of the tank. The spigot or part at the exterior of the tank may therefore be readily transferred from one tank to another, and if it is desired to store or ship the tanks when filled or when empty, the part at the exterior of the tank may be removed, and a cap similar to 34 shown in Fig. 5, may be positioned in lieu of the spigot, effectually closing the device and preventing any accidental operation of the valve 10. A packing ring 35, may, if desired, be arranged as shown.

The device is particularly suitable for use on small cans or containers of say one, five or ten gallons, in drug or paint stores, and the like, for containing explosive fluids, or fluids of obnoxious odors, and sold at retail in small quantities. It is, however, applicable to other tanks or containers, regardless of the size or purpose for which same is used. While the wire gauze or fabric 6 in the construction shown is primarily intended to obviate explosions by preventing flame from entering the tank, for example gasolene containers, it might be desirable to omit the gauze entirely or to use the same merely as a screen or strainer, in which case the mesh might be made larger, this depending largely upon the use for which the device is to be used.

Having thus described my invention, it is obvious that various immaterial modifications may be made in the same without departing from the spirit of my invention; hence I do not wish to be understood as limiting myself to the exact form, construction, arrangement and combination of parts herein shown and described, or uses mentioned.

What I claim as new and desire to secure by Letters Patent is:—

1. A draw-off device for tanks, comprising a tubular part carried by the tank, a valve positioned on the inner side of the tank and a shut off valve positioned on the outer side of the tank, said valves both arranged to normally prevent the passage of the contents of the tank passing through said tubular part, independent means for normally maintaining said valves closed, and means for simultaneously opening said valves from the exterior of the tank.

2. A draw-off device for tanks comprising a tubular part arranged for attachment to the tank, and having a wire gauze in the path of the fluid passing through the part, and provided with a valve on the tank side thereof for controlling the discharge of the contents of the tank, means for normally independently maintaining said valve closed, a coöperating part arranged on the exterior of the tank, and detachably carried by said first part, a valve controlling the passage of the contents of the tank through said coöperating part, means for normally maintaining said valve closed, said second valve arranged to coöperate with the first valve, whereby movement of the second valve to open the

valve will simultaneously open the first mentioned valve, and means for controlling said second valve.

3. In a device of the kind described, a main chamber constructed to admit fluid thereto and provided with an outwardly seating valve seat thereon, a longitudinally movable valve stem slidingly supported within the chamber, a coöperating valve for the valve seat carried by the stem, and resilient means arranged to normally hold the valve to its seat, in combination with an outer chamber into which the main chamber discharges provided with a discharge spout, an outwardly seating valve seat between the chamber and spout, a valve stem slidingly supported and extending into the chamber, arranged in its inner movement to contact with and longitudinally move the first valve stem, a coöperating valve mounted upon the seat, resilient means for normally holding the valve to its seat, and external means for longitudinally moving the second valve stem.

4. In a device of the kind described, a main chamber adapted to be positioned within a receptacle and having formed therein screened apertures for the admission of fluid, an outwardly seating valve seat formed in the chamber, a longitudinally movable valve stem slidingly mounted within the chamber, a coöperating valve for the seat mounted in the stem, and resilient means for normally maintaining the valve upon its seat, in combination with an outer chamber into which the main chamber discharges, provided with a discharge spout, an outwardly seating valve seat between the chamber and the spout, a valve stem slidingly supported in the chamber in alinement with the first valve stem and adapted to contact therewith as it is forced inward, a cooperating valve carried by the stem, resilient means for normally holding the valve to its seat, and external means for longitudinally moving the second valve stem.

5. In a device of the kind described, a drum constructed to be positioned within a receptacle, said drum provided with openings to admit fluid thereto and screens covering the openings, an outwardly seating valve arranged within the drum carried by a longitudinally movable valve stem, and resilient means for normally holding the valve closed, in combination with an auxiliary chamber into which the main chamber discharges, a longitudinally movable valve stem supported therein in alinement with the first valve stem and adapted to contact therewith as it is forced inward, an outwardly seating valve carried by the stem, resilient means for normally holding the valve to its seat, external means for longitudinally moving the second valve stem, and a spout into which the auxiliary chamber discharges.

In testimony whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

LOUIS KESSLER.

Witnesses:
RAY W. HILL,
CHARLES I. COBB.