No. 718,475. PATENTED JAN. 13, 1903.

L. KESSLER.

SAFETY ATTACHMENT FOR CANS OR VESSELS.

APPLICATION FILED OCT. 16, 1902.

NO MODEL.

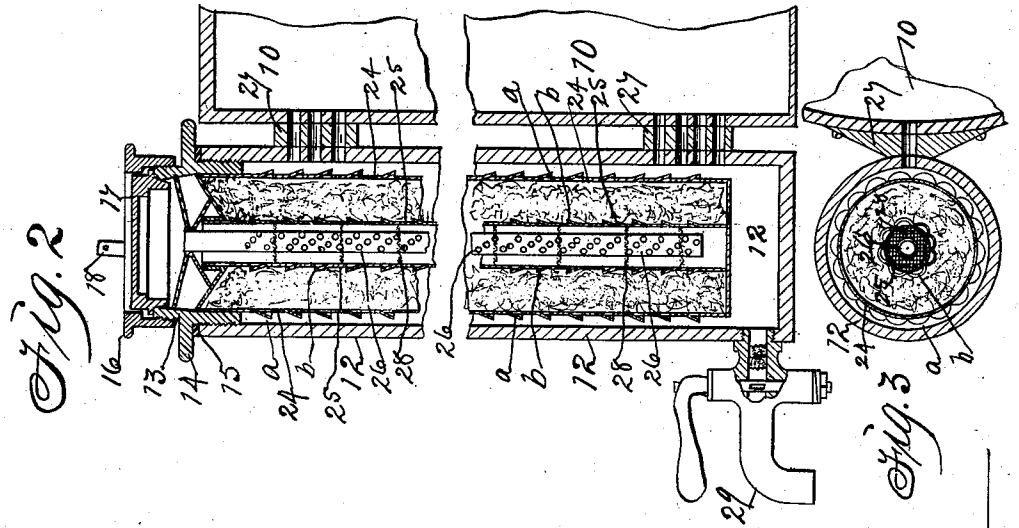


Fig. 2

Fig. 3

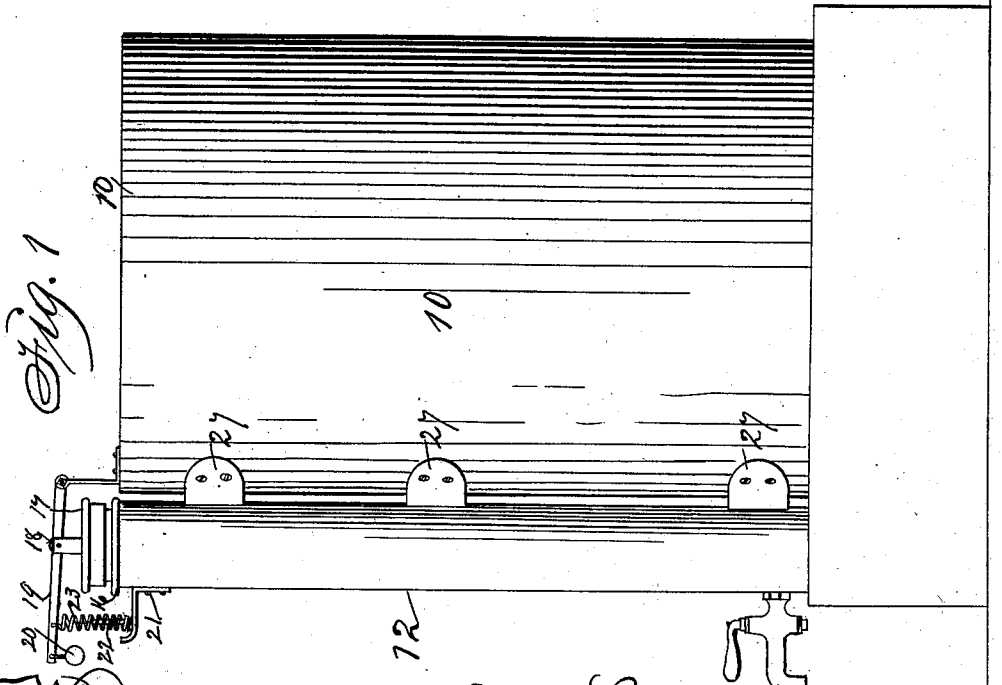


Fig. 1

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UNITED STATES PATENT OFFICE.

LOUIS KESSLER, OF DES MOINES, IOWA.

SAFETY ATTACHMENT FOR CANS OR VESSELS.

SPECIFICATION forming part of Letters Patent No. 718,475, dated January 13, 1903.

Application filed October 16, 1902. Serial No. 127,488. (No model.)

To all whom it may concern:

Be it known that I, LOUIS KESSLER, a citizen of the United States, residing at Des Moines, in the county of Polk and State of Iowa, have invented a new and useful Non-Explosive Can or Tank for Gasolene, &c., of which the following is a specification.

My object is to prevent the dangers, accidents, and loss of life incident to the explosions occasioned by gasolene, naphtha, and other volatile liquids inclosed in cans, tanks, and other kinds of vessels.

My invention consists in the construction and combination of means for confining and controlling the gaseous inflammable vapor of liquids with air-tight vessels, as hereinafter set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a can, showing my invention applied to its exterior. Fig. 2 is a sectional view showing the construction of the safety means and the manner of connecting the same with the can as required to communicate therewith. Fig. 3 is a transverse sectional view that shows a plurality of tubes in concentric position within the main tube that is fixed to the can.

The numeral 10 designates a vessel that may vary in size and material as desired, and 12 is a tube adapted to be fixed to the can or vessel, preferably on the exterior, as shown. It is closed at the bottom and provided with an internal screw at its open top.

A valve-chamber 13 is seated in the top of the tube and provided with a continuous flange 14, adapted to overlie a packing-ring 15, fitted on top of the tube. The upper portion of the valve-seat is screw-threaded on its exterior, and a cap 16, that has a central opening, is fitted on the valve-seat to retain and restrict the upward movement of a safety-valve 17, fitted on the valve-seat, as shown, or in any suitable way as required to allow undue pressure of vapor or gas in the vessel to escape through the tube and valve. A stem 18 projects up from the valve, and 19 is a lever fulcrumed to the vessel 10 and provided with a weight 20 on its free end to normally retain the valve closed. A bracket 21, fixed to the tube 12, has a pin 22 projecting upward therefrom, and 23 is a coil-spring placed on the pin and connected with the lever 19.

Two concentric tubes 24 and 25 are fitted in the tube 12 and fixed together at their ends and provided with rows of transverse incisions to produce openings *a* in the outer one and openings *b* in the inner one, as shown, to direct oil, vapor, and gas in opposite directions relative to their ends. The annular space between the tubes is filled with cotton or other suitable material, through which oil, vapor, and gas will filter.

A third tube 26 is fixed in the center of the tube 25 and is closed at its bottom and open at its top, so that oil can be filled into the central tube and filtered through the cotton into the outer tube 12 and from there pass into the vessel 10 through coinciding perforations in the tube and vessel and brackets 27, fixed to them, as shown in Fig. 2, and as required for securely fastening the tube 12 to the vessel 10. When oil is thus passed through the perforated central tube 26 into the annular space between it and the tube 25 and from thence through the perforations in that tube then through the cotton filling between the and two concentric tubes 25 and 24 and through the perforations in the tube 24 into the annular space between the tube 24 and the outer tube 12 and from the tube 12 into the can 10 through the coinciding perforations in the can, the brackets 27, and the tube 12, it is obvious the same circuitous passage-way will resist the pressure and escape of any gaseous vapor that may be generated in the can as required to limit the quantity of such vapor from passing out at the top of the tube 12 at any time, so that when such vapor is set on fire it will burn slowly and without danger of causing an explosion of the supply of vapor and oil confined in the tube 12 and can 10. It is also obvious that the vapor confined in the tube 12 and can 10 will not interfere with drawing oil from the can and tube 12 through the faucet fixed to the lower end of said tube.

A plurality of wire screens 28 are fixed to the tube 26 to aid in regulating and restricting the upward and outward flow of vapor or gas from the tube 12 as required to prevent fire from descending in the tube and affording protection by preventing explosions.

A faucet 29 is fixed to the lower end of the tube 12 to draw oil from the tube and vessel as required in selling therefrom or emptying the vessel whenever desired.

Wire partitions *c* are fixed in the faucet and cotton placed between them to restrict the passage of vapor, gas, and oil and to promote safety in drawing off and measuring the oil.

Having thus described the purpose of my invention and the construction, arrangement, and combination of the operative parts, its practical operation and utility will be understood by persons familiar with the art to which it pertains, and

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

1. In a non-explosive safety attachment for cans and vessels consisting of a tube closed at its bottom and open at its top, a safety-valve fitted in its top, perforations along its length to communicate with a vessel, two concentric tubes connected and closed at their bottoms and top and provided with openings along their lengths, cotton filled in the annular space between the tubes, and a third perforated tube fixed in the center of said two concentric tubes, and means for fixing the outer tube to a can or vessel, arranged and combined to operate in the manner set forth for the purposes stated.

2. In a non-explosive safety attachment for cans and vessels consisting of a tube closed at its bottom and open at its top, a safety-valve fitted in its top, perforations along its length to communicate with a vessel, two concentric tubes connected and closed at their bottoms and top and provided with openings along their lengths, cotton filled in the annular space between the tubes, and a third perforated tube fixed in the center of said two concentric tubes, means for fixing the outer tube to a can or vessel and a faucet fixed to the lower end of the outer tube and provided with a filter, arranged and combined to operate in the manner set forth for the purposes stated.

3. In a non-explosive safety attachment for cans and vessels consisting of a tube closed at its bottom and open at its top, a safety-valve fitted in its top, perforations along its length communicating with a vessel, two concentric tubes connected and closed at their bottoms and top and provided with openings along their lengths, cotton filled in the annular space between the tubes, and a third perforated tube fixed in the center of said two concentric tubes, means for fixing the outer tube to a can or vessel, a faucet fixed to the lower end of the outer tube and provided with a filter and wire screens fixed to the inner tube at intervals along its length, arranged and combined to operate in the manner set forth for the purposes stated.

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