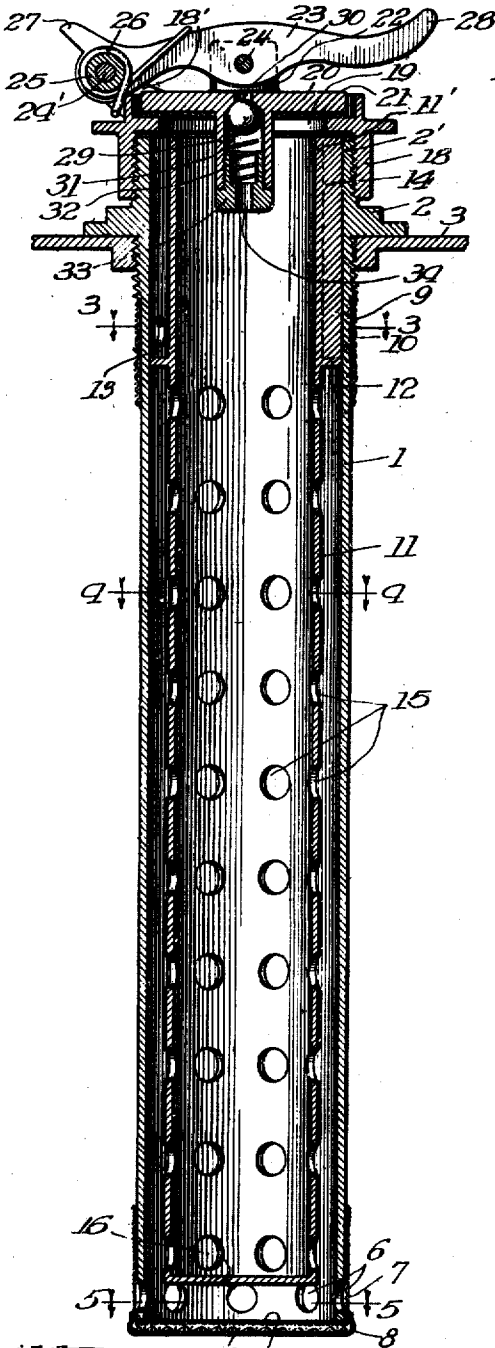
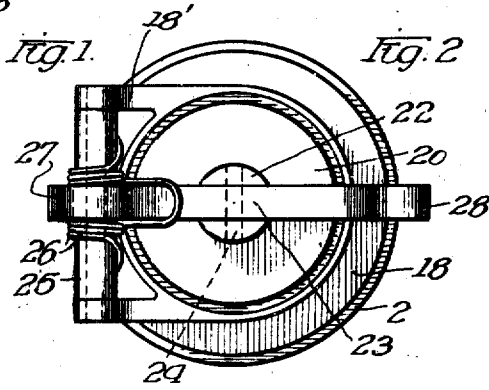
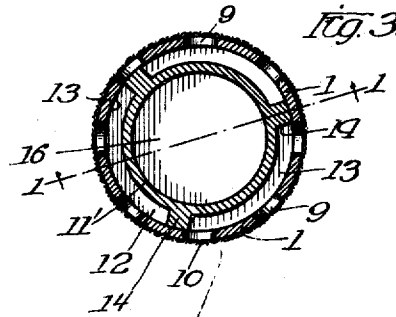
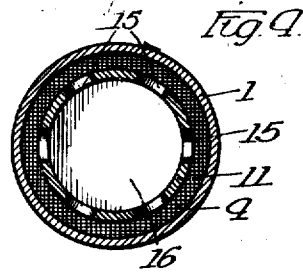
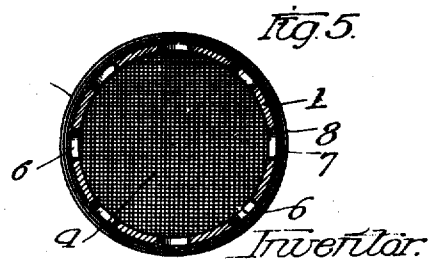


L. KESSLER.  
FILLING TUBE FOR EXPLOSIVE LIQUID RECEPTACLES.  
APPLICATION FILED JUNE 23, 1916.

1,310,240.

Patented July 15, 1919.



Witnesses:  
Arthur W. Carlson  
Robert F. Weir

Louis Kessler,  
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# UNITED STATES PATENT OFFICE.

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

## FILLING-TUBE FOR EXPLOSIVE-LIQUID RECEPTACLES.

1,310,240.

Specification of Letters Patent.

Patented July 15, 1919.

Application filed June 23, 1916. Serial No. 105,389.

*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 Filling-Tubes for Explosive-Liquid Receptacles, of which the following is a description.

My invention belongs to that general class of devices known as filling tubes, and relates particularly to that class of devices that are employed on tanks, cans and the like for holding the gasoline, naphtha, benzine, or other explosive liquids provided with means for guarding against explosion. The invention has among its objects the production of a device of the kind described that is safe, simple, efficient, compact, durable, and satisfactory, for use wherever found applicable. It has among its further objects the production of an improved device of the kind described that will permit the air to escape from the tank while filling, and which will not be injured by the force or shock of the fluid entering the tank.

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 a sectional view through my improved filling tube and closure therefor taken substantially on the line 1-1 of Fig. 3;

Fig. 2 is a top plan view of the same;

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 sectional view taken substantially on line 5-5 of Fig. 1.

Referring to the drawings, 1 is a tube of suitable material having its upper end flanged as at 2, and extended at 2', and suitably threaded as shown, it being understood that the flange and threaded portion may be formed integral with the tube, as shown, or a separate portion secured thereto. The tube is arranged in the tank 3, and secured thereto in any preferred manner. As previously mentioned, the same is threaded and thus removably secured to the

tank, the flange 2 being ordinarily formed similar to a nut, so as to permit its being readily engaged by a suitable wrench, or the equivalent. The tube is shown open at its lower end, and provided with a wire gauze 4, which may be reinforced and protected by the coarser wire gauze 5, the coarser gauze preventing the fine gauze from being fractured accidentally. The same is also formed with apertures 6 thereabout, preferably near the bottom, which are covered by wire gauze 7, and which may be reinforced if desired. I have shown the gauze 4 and 5 and the lower end of gauze 6 secured in place by a flanged collar 8, the parts being soldered or otherwise secured to the tube. The tube is also shown with a series of openings or apertures 9 arranged substantially near the upper end of the tube, these being covered by gauze 10, secured in place on the tube in any desired manner.

Arranged within the tube 1 and spaced therefrom is an inner tube 11, the upper end 11' of the same extending to adjacent the top 2' of the outer tube. The inner tube is formed with a flange 12, of a size to closely fit the inner wall of the tube 1, and with ribs 14 at the top for spacing the upper end from the tube as at 13 and maintaining the inner tube against rocking or displacement. The inner tube may be inserted and secured in place in any desired manner. The tube 11 is provided with a series of apertures or perforations 15 below the partition 12, the same being of any desired shape and size, and the bottom is preferably closed as at 16.

The closure on the tube may be of any desired construction, that shown comprising a cap 18 having an opening 19 therethrough, which is normally closed by the cover 20, suitable packing 21 being arranged between the same and the tube. The packing may be of leather or other suitable material, and is shown secured to the top 20. The top or cover 20 is provided with one or more lugs 22, and the same pivotally secured to an arm or lever 23 by a pin 24, or the equivalent. The arm 23 is pivotally carried by the shaft or pin 24, supported by the lugs 18' on part 18, a collar 25 on each side maintaining the arm 23 against lateral movement. The closure is normally maintained shut by a spring 26 bearing

against the arm 23, or by equivalent means for the purpose.

The cover 20 is formed with a depending tubular part 29, and with an aperture 30.

5 At the inner side of the aperture is formed a valve seat arranged to cooperate with the valve 31, which is normally maintained closed by the spring 32, or the equivalent, which bears against or is supported by the cap 33, which is formed with a shoulder, as shown. The cap 33 has an opening 34 there-  
10 through.

To fill the tank arm 23 is raised, the same being formed with a convenient end 28 for  
15 example, and with a stop 27, arranged to bear against the part 18 and limit the opening movement. The liquid may be poured into the tube and passes through the apertures 15 between the tubes. Owing to the bottom 16 the same does not fall directly on the gauze 4, so that that is not injured by the shock. The bottom 16 also protects the gauze in case  
20 measuring sticks or the like are inserted in the open end of the tube. It passes through the apertures 6 and out through the side and bottom wall, through the gauze 7, 4 and 5, into the tank. The air in the tank, as the same is filled, escapes through the openings 9, and up through the passages 13 to the out-  
25 side. After the tank is filled to the desired level the arm 23 is released and the closure automatically drops into closed position. In case of any pressure in the tank, caused for any reason whatever, when the same reaches  
30 the point where it overcomes springs 26, the closure may open, relieving the pressure, after which the closure drops back into position, closing the receptacle. As the liquid is drawn off from the tank, air may enter through the aperture 30, thereby preventing  
35 a partial vacuum that would interfere with the operation. It will be noted that the opening 30 is below the arm 23, so that dirt does not readily enter the same and close it up. It is impossible for any flame to get through  
40 the gauze covering the various apertures and igniting the contents of the tank. The device therefore is an efficient safety device, preventing the contents of the tank from becoming ignited and exploding. Owing to the  
45 method of attaching the cover, the cover or closure cannot be mislaid after filling the tank, nor can it be left off through forgetfulness and negligence. Owing to the valved opening 30 the contents of the tank may be  
50 drawn off without creating a vacuum in the tank, and consequently impairing the supply. As constructed, the tube is extremely durable.

60 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, and I reserve the right to prosecute in divisional application or applications certain subject matter herein disclosed, but not specifically covered by the claims. 70

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

1. A filling tube for tanks or the like, comprising two tubular shells arranged one 75 within the other with a space therebetween, a transverse partition arranged in said space intermediate the ends of the outer shell, said outer shell having an opening arranged in the side wall thereof above said partition and 80 an opening at the lower end, wire gauze arranged over said openings, a guard arranged on the exterior side of the gauze at the lower end and a guard arranged on the inner side of said gauze, said inner shell arranged with 85 the interior thereof communicating with the interior of the outer shell below said partition.

2. A device of the kind described comprising the combination of an outer tube provided with a screened opening at its bottom 90 and screened openings through the wall thereof near the top, in combination with an inner tube extending to a point near the bottom of the outer tube having its lower end closed 95 to protect the screened opening at the bottom of the outer tube, said inner tube provided with means to space the same from the outer tube, a transverse wall dividing the spaced portion below the apertures in the 100 outer tube, said inner tube provided with a plurality of openings in the wall thereof, permitting free intercourse between the said space and the inner tube.

3. In a device of the kind described, the 105 combination of inner and outer tubes spaced from each other, with a partition extending between the tubes between the ends thereof, the outer tube formed with screened openings in its wall above said partition, and 110 with a screened opening adjacent its lower end, the inner tube of a length to project adjacent the lower end of the outer tube and closed to protect the lower screened opening of the same, and with openings through its 115 wall below said partition substantially as described.

4. In a device of the kind described, the combination of an outer tube, an inner tube arranged within the outer tube and spaced 120 therefrom, one of said tubes flanged to transversely divide said space into upper and lower spaces, the outer tube formed with screened openings therethrough above said flange, and a screened opening at its lower 125 end with a coarser guard screen protecting the screened opening at the lower end of the outer tube, the inner tube formed with a closed end adjacent the lower end of the outer tube to protect the lower screened 130

opening of the latter, and with a plurality of apertures through its walls between the flange and its closed end.

5 In a device of the kind described, the combination of inner and outer tubes spaced from each other, with a transversely disposed partition wall extending between the tubes intermediate the ends thereof, the outer tube having screened openings in its wall  
10 above said partition, and a screened opening at its bottom, the inner tube being of a length to project adjacent the lower end of

the outer tube and closed at its bottom and provided with openings through its wall below said partition, and an automatically releasable closure for the outer ends of said tube.

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

LOUIS KESSLER.

Witnesses:

ROY W. HILL,  
CHARLES I. COBB.