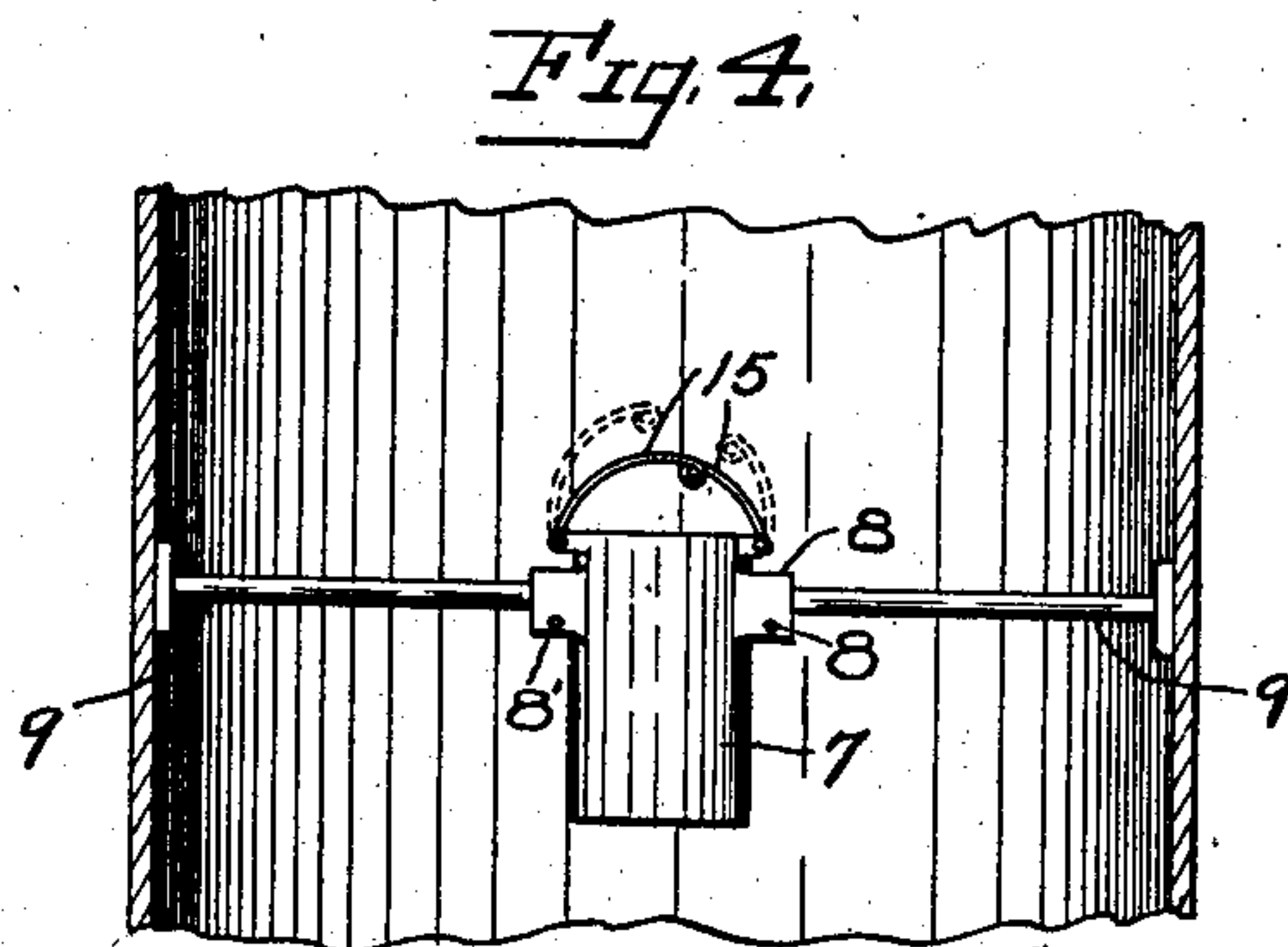
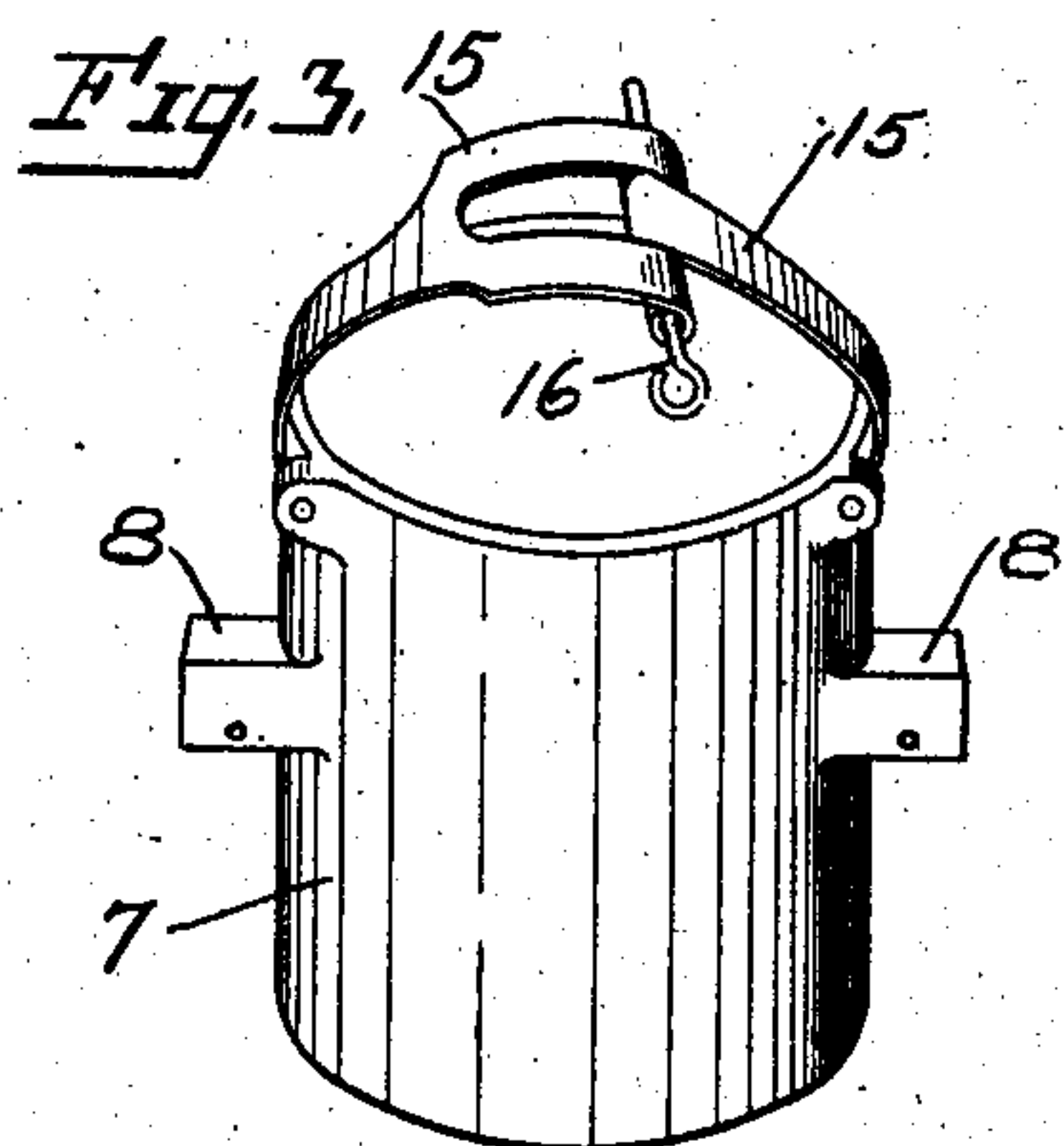
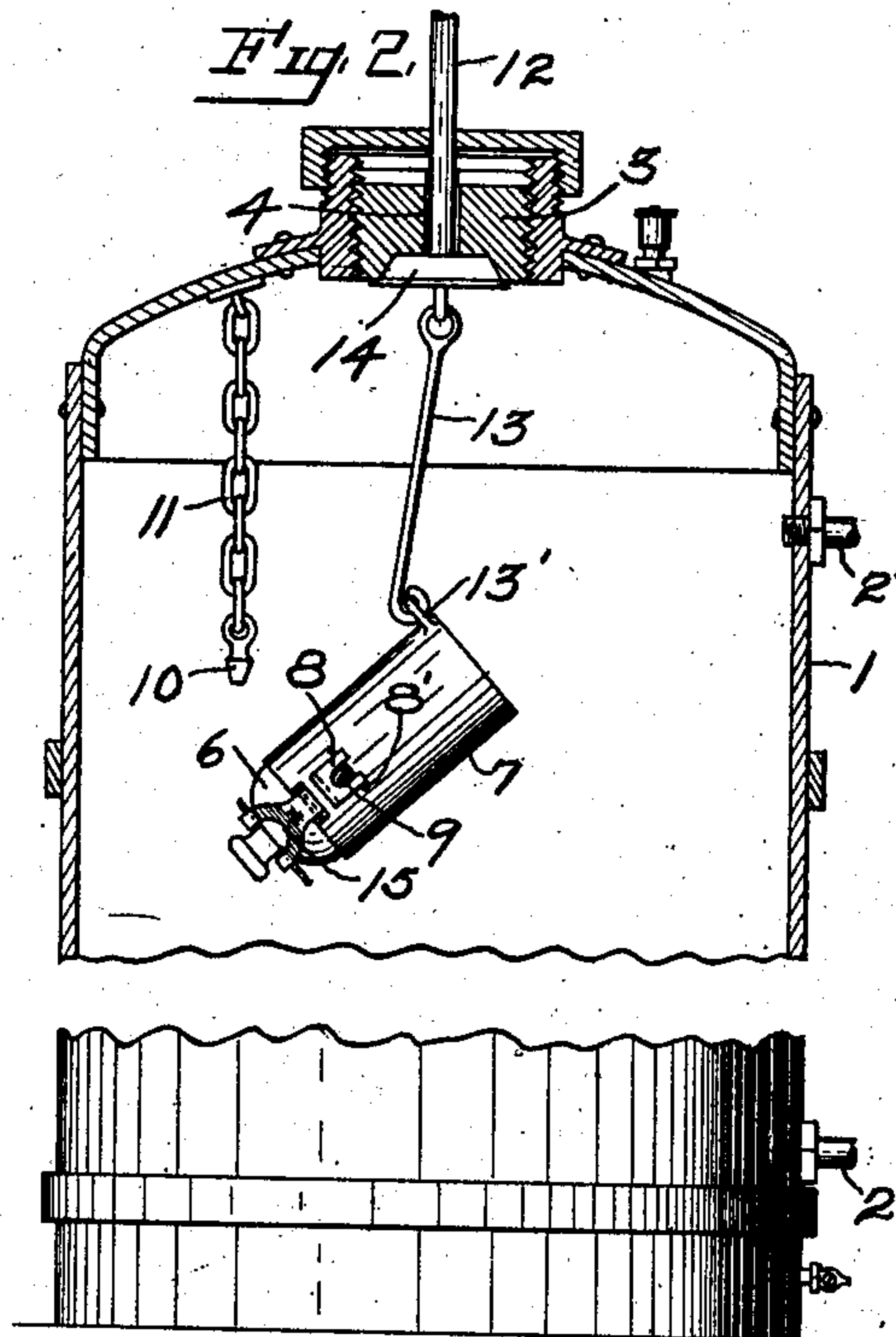
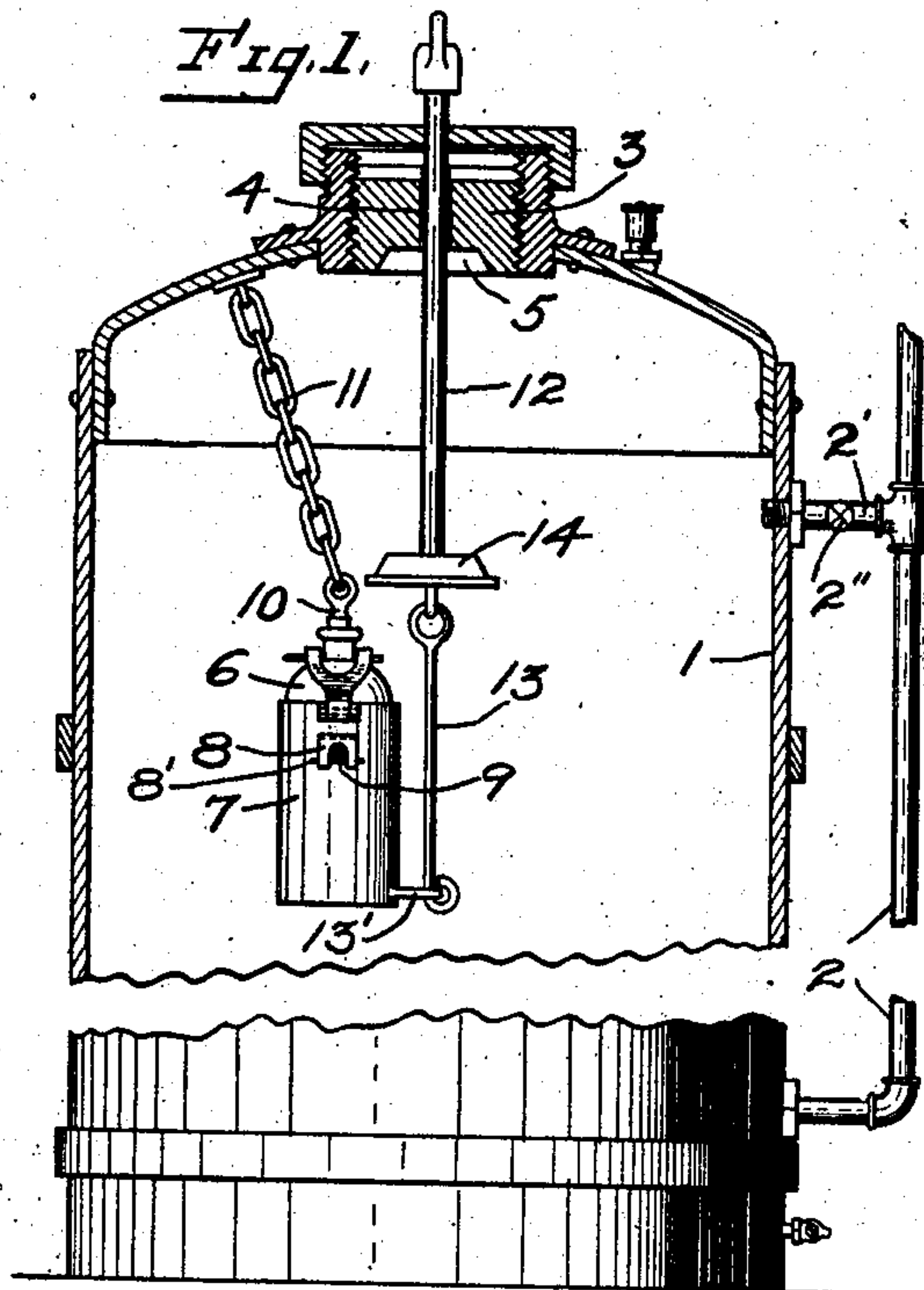


No. 827,255.

PATENTED JULY 31, 1906.

H. W. MIX.  
FIRE EXTINGUISHER.  
APPLICATION FILED JULY 20, 1905.



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# UNITED STATES PATENT OFFICE.

HARVEY W. MIX, OF SEATTLE, WASHINGTON.

## FIRE-EXTINGUISHER.

No. 827,255.

Specification of Letters Patent.

Patented July 31, 1906.

Application filed July 20, 1905. Serial No. 270,560.

*To all whom it may concern:*

Be it known that I, HARVEY W. MIX, a citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Fire-Extinguishers, of which the following is a specification.

My invention relates to certain new and useful improvements in fire-extinguishers; and the primary object thereof is to improve and simplify the same.

With this object in view the invention consists of the parts, arrangement, and combination of parts referred to in the following description and succinctly pointed out in the appended claims.

In the accompanying drawings, in which like numerals of reference indicate like parts throughout the several views, Figure 1 is a fragmentary view showing the upper portion of the tank in vertical section, the bottle or vessel containing the acid being stoppered. Fig. 2 is a similar view, the bottle, however, being tilted and unstoppered. Fig. 3 is a detail view in perspective of the bottle-holder, and Fig. 4 is a detail fragmentary view showing more particularly the means for supporting the bottle-holder.

Referring more specifically to the drawings, 1 indicates the tank, having the discharge-pipe 2 and provided in its top with a removable plug 3, which is preferably threaded, as shown. This plug is formed with an opening 4 and a seat 5, the latter being formed in the inner face of the plug and encircling said aperture 4 for a purpose made apparent in the following. The acid-bottle (indicated by numeral 6) is loosely mounted in a holder 7, which is swingingly mounted, the same having opposite apertured ears 8, which engage over the inner end portions of rods 9, secured to tank 1.

The bottle-stopper 10 is movably supported by flexible connection 11, which is secured at one end to the top of the tank and is of such length as to limit the movement of the stopper to less than that of the bottle. Therefore said stopper will be removed from the bottle when holder 7 is tilted. (See Fig. 2.)

The means for tilting holder 7 consists of a slidable rod 12, which projects into the tank through the aperture in plug 3, and a link 13, which is pivoted to the lower end of said rod and to a lug 13', secured to the lower portion of holder 7.

Rod 12 is manually operated, and by suitable connections with the upper end thereof it can be readily operated from various points—for example, in a building, as is obvious—and on this rod I mount a pressure part 14, which when said rod is elevated to the limit of its movement snugly fits in seat 5 and prevents any escapement of the chemical solution through opening 4. Pressure part 14 after being seated will be held by pressure, and therefore accidental returning of holder 7 will be prevented.

As heretofore stated, holder 7 loosely receives the bottle. This is desired in order to facilitate the insertion and removal of the bottle in position, and in order to prevent displacement of the bottle when the holder is tilted I provide a yoke consisting of opposite pivoted or hinged members 15, having their free ends secured together by a pin 16 and one of which is bifurcated, as shown, so as to embrace the neck of the bottle.

The bottle, as heretofore stated, is loosely received in the holder 7 to facilitate the insertion and removal of the bottle therefrom. In order to prevent displacement of the bottle when the holder is tilted, a yoke is provided consisting of opposite hinged members 15, having their free ends secured together by a pin 16, one of said members being bifurcated, as shown, so as to embrace the neck of the bottle. Pins 8' prevent accidental displacement of the holder 7 from rods 9.

The discharge-pipe 2 is of novel construction, the same having a branch pipe 2', which communicates with the tank at a point adjacent its upper end, and this branch pipe is provided with a valve 2''. The object of this branch pipe is to provide a means of egress for that gas which will remain in the tank after the liquid has been discharged. Thus the improvement is made more effective and all of the fire-extinguishing agent can be directed onto a fire before refilling of the tank is necessitated.

In operation, therefore, valve 2'' is preferably opened before the bottle is tilted, as shown in Fig. 2. Then when the contents of the bottle are discharged the gas generated will first force the liquid through the main discharge-pipe 2, the gas being prevented from passing through the branch pipe by reason of the valve therein having an opening which is smaller than the bore of pipe 2, and therefore the liquid passing through pipe 2 under greater pressure; but when all



of the liquid has been discharged the gas will obviously be permitted to pass through branch pipe 2' unresisted.

I reserve the right to make alterations in the details of construction and relative arrangement of parts as defined in the appended claims without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a fire-extinguisher, in combination with the tank, a bottle-holding means pivoted therein, means for tilting said first means, and means acted upon by pressure in said tank for holding said first means tilted.

2. In a fire-extinguisher, in combination with the tank, a bottle-holder pivoted therein, a means projecting into the tank and connected to said bottle-holder for swinging the same, and means movable with the last-named means for closing the opening in the tank through which it passes.

3. In a fire-extinguisher, in combination with a tank, a bottle-holder swingingly mounted therein, movable means projecting into the tank for swinging the bottle-holder, and a pressure part fixed to said means and being adapted to be held about the opening in the tank through which it projects by pressure in the tank.

4. In a fire-extinguisher, in combination

with a tank provided with an opening, a stopper removably held in the opening of said tank, said stopper being formed with an aperture and a seat encircling the same, a bottle-holder swingingly mounted in said tank, means slidable through the aperture in said stopper and being connected to said bottle-holder for swinging the same, and a means connected to the first means and being adapted for engagement in the seat of said stopper.

5. In a fire-extinguisher, in combination with the tank, and the acid-holding means therein, a means on the exterior of the tank for permitting the egress of the liquid and gas therefrom, said last means communicating with the tank at its upper and lower portions.

6. In a fire-extinguisher, in combination with the tank, a bottle-holder therein, means for supporting said holder for swinging movement, and means independent of said first means for swinging said holder, said last means consisting of a rod projecting into the tank, and a flexible connection between said rod and the lower portion of the holder.

In testimony whereof I affix my signature in presence of two witnesses.

HARVEY W. MIX.

Witnesses:

R. L. FULLERTON,

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