

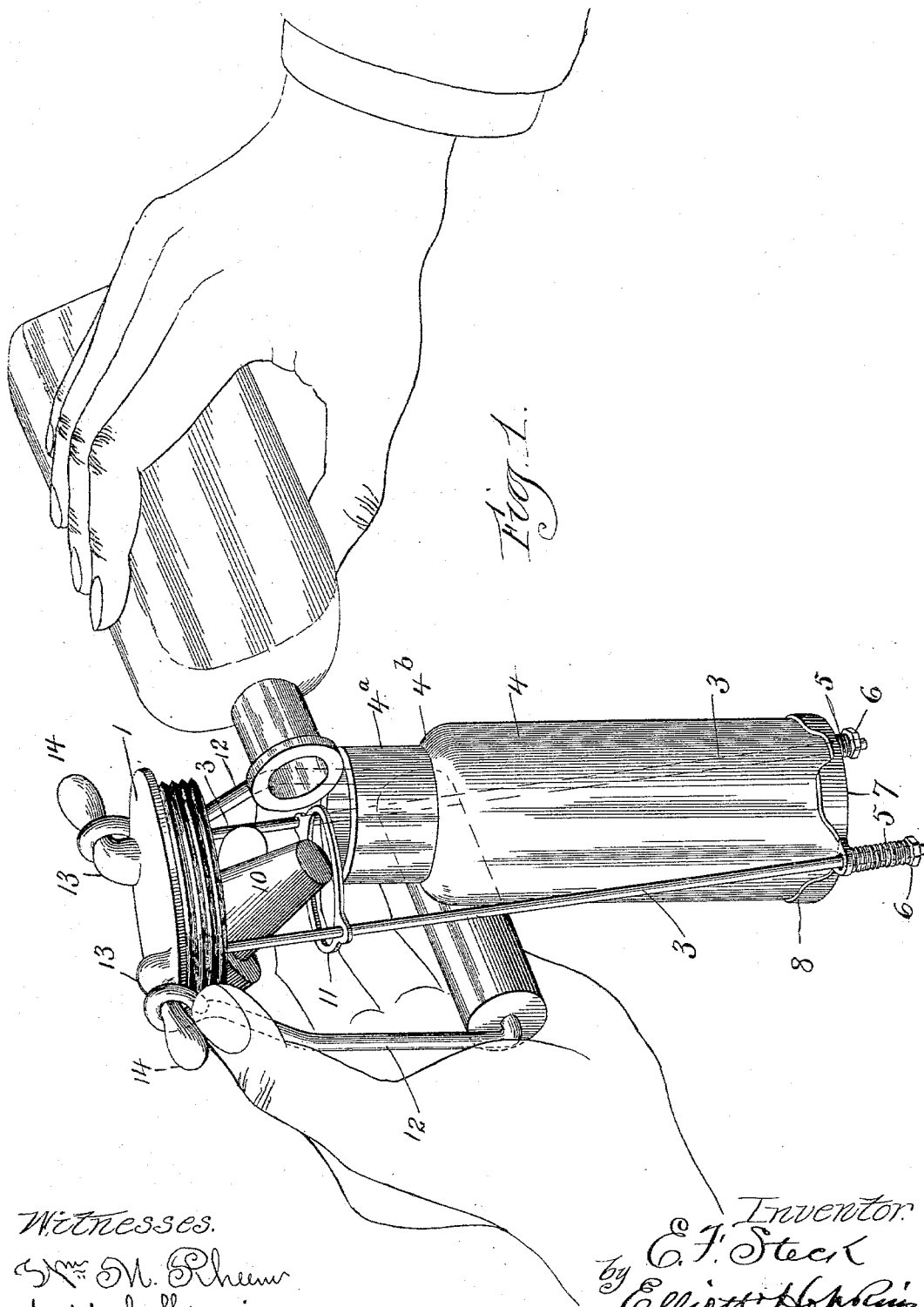
(No Model.)

2 Sheets—Sheet 1.

E. F. STECK.
CHEMICAL FIRE EXTINGUISHER.

No. 552,880.

Patented Jan. 7, 1896.



Witnesses.

Wm. M. P. P. P.
Wm. J. P. P.

Inventor.
E. F. Steck
by Elliott & Hopkins
Attys

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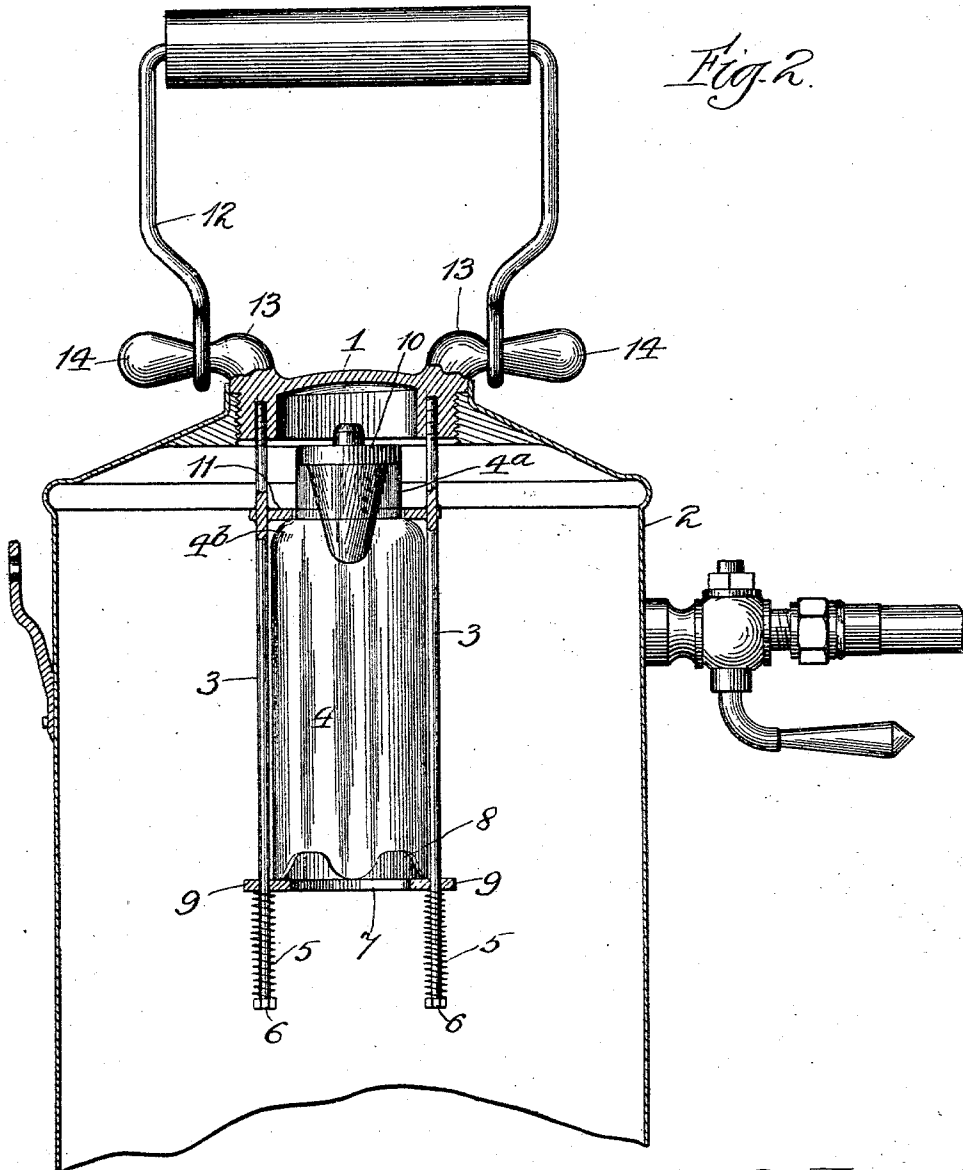


Fig. 2.

Witnesses.

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Inventor.
E. F. Steck
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UNITED STATES PATENT OFFICE.

ERNST F. STECK, OF CHICAGO, ILLINOIS.

CHEMICAL FIRE-EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 552,880, dated January 7, 1896.

Application filed December 26, 1894. Serial No. 532,921. (No model.)

To all whom it may concern:

Be it known that I, ERNST F. STECK, 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 Chemical Fire-Extinguishers, of which the following is a full, clear, and exact specification.

My invention relates to chemical fire-extinguishers in which the acid is retained in a separate receptacle in the alkaline-water tank until the device is ready for action; and the invention has more especial reference to improvements in the acid-receptacle-carrying mechanism of that class of extinguishers which are designed to discharge the acid into the tank when the latter is inverted or held in an abnormal position.

The primary object of my invention is to enable the acid-receptacle to be refilled without removing it from its carrying cage or frame or detaching such cage or frame from its support.

A further object of my invention is to simplify and cheapen the carrying cage or frame for the acid-receptacle, whereby the same will be lighter and may be more readily manipulated.

With these ends in view my invention consists in certain features of novelty in the construction, combination and arrangement of parts by which the said objects and certain other objects hereinafter appearing are attained, all as fully explained with reference to the accompanying drawings, and more particularly pointed out in the claims.

In the said drawings, Figure 1 is a perspective view of the acid-receptacle and its carrying-cage, showing the improved manner of filling the same; and Fig. 2 is a vertical transverse sectional view of the upper end of the tank and the carrying cage or frame for the acid-receptacle.

In carrying out my invention I provide the under side of the cap or cover 1, which is screw-threaded in the upper end of the tank 2, as usual, with a number of depending rods 3, preferably two in number, which are arranged one on either side of the acid-receptacle 4. The lower end of each of these rods is provided with a spring 5 coiled thereon and being held from downward displacement by

means of nuts or heads 6, and supported upon these springs is a seat 7, upon which the bottom of the receptacle 4 rests, the seat being provided at suitable intervals around its outer edge with flanges or lips 8 to prevent the lower end of the receptacle from being pushed off of the seat 7. A convenient way of supporting the seat 7 upon the spring 5 and at the same time holding the lower ends of the rods 3 against relative movement consists in providing each side of the seat 7 with a perforated ear 9 through which the rods 3 pass, respectively. By thus providing the receptacle 4 with a cushioned seat upon its carrying frame or cage it will be seen that the normal tendency of the receptacle is to rise up into contact with the top of the tank or cap 1; but in order that its upward movement caused by the springs 5 may be limited and the stopper 10, which closes the receptacle, prevented from coming in contact with the cap 1 and thereby preventing the discharge of the acid when the device is inverted, I provide the upper side of the carrying-frame with means for engaging with the receptacle 4 and limiting its upward movement, and also holding the upper end of the receptacle in place. This means preferably consists of a ring or band 11 secured to the rods 3 and adapted to embrace the neck 4^a of the receptacle. The formation of the neck 4^a on the receptacle produces a shoulder or projection 4^b, which abuts against the under side of the ring or band 11 and holds the receptacle against further upward movement under the influence of its cushioned seat, so that when the device is inverted the receptacle will be supported by the ring 11, and the stopper 10, which is composed of heavy material, as usual, will drop out and permit the acid to escape, the inner end of the stopper remaining in the neck of the receptacle, as heretofore.

When it is desired to refill the receptacle 4 the cap 1 is unscrewed and removed with the receptacle and its carrying frame or cage, and the receptacle is then forced downward on its cushioned seat 7 until the upper end of the neck 4^a may be engaged under the ring or band 11. The stopper 10 is then raised and supported on the forefinger without entirely removing its lower end from the mouth of the

receptacle, and the upper end of the receptacle is then pulled to one side in the manner shown in Fig. 1, whereby the acid may be poured into it from an ordinary bottle or other convenient means. When filled the upper end of the receptacle is pushed back to its original position, whereupon the stopper will drop into place and the spring-seat will force the receptacle up into the position shown in Fig. 2.

To the cap 1 of the tank is secured a handle or carrying-bail 12, and the lugs or ears 13 to which the ends of the bail are hinged are provided with elongations or thumb-pieces 14 to afford leverage for unscrewing the cap.

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

1. In a chemical fire extinguisher, the combination with a tank and an acid receptacle, of a skeleton frame supported in said tank and being provided with a cushioned support or seat for one end of the receptacle and a band for receiving the other end of the receptacle, said seat being sufficiently compressible to permit the mouth of the receptacle to engage under said band, substantially as set forth.

2. In a chemical fire extinguisher, the combination with a tank, of a receptacle having a shoulder or projection arranged at a distance below its mouth or outlet, an open sided cage

or frame supported in said tank and having an abutment for said shoulder or projection and a cushioned seat for receiving said receptacle and holding said shoulder against said abutment, said frame or cage being adapted to permit the receptacle to be withdrawn from the side thereof and said cushioned seat being sufficiently elastic to permit the mouth or end of the receptacle to be depressed and engaged under said abutment, substantially as set forth.

3. In a chemical fire extinguisher, the combination with a tank and a receptacle having a neck, of a skeleton frame supported in said tank and adapted to permit the receptacle to be withdrawn from the side thereof and having a band for receiving said neck and a seat for supporting said receptacle and a spring for holding the mouth of the receptacle against said band, while the receptacle is being filled, substantially as set forth.

4. In a chemical fire extinguisher, the combination with a tank, of a pair of rods depending in said tank, the seat having eyes through which said rods pass, springs supported on said rods beneath said seat, a ring secured to said rods and an acid receptacle seated on said seat and having a neck arranged in said ring, substantially as set forth.

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Witnesses:

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