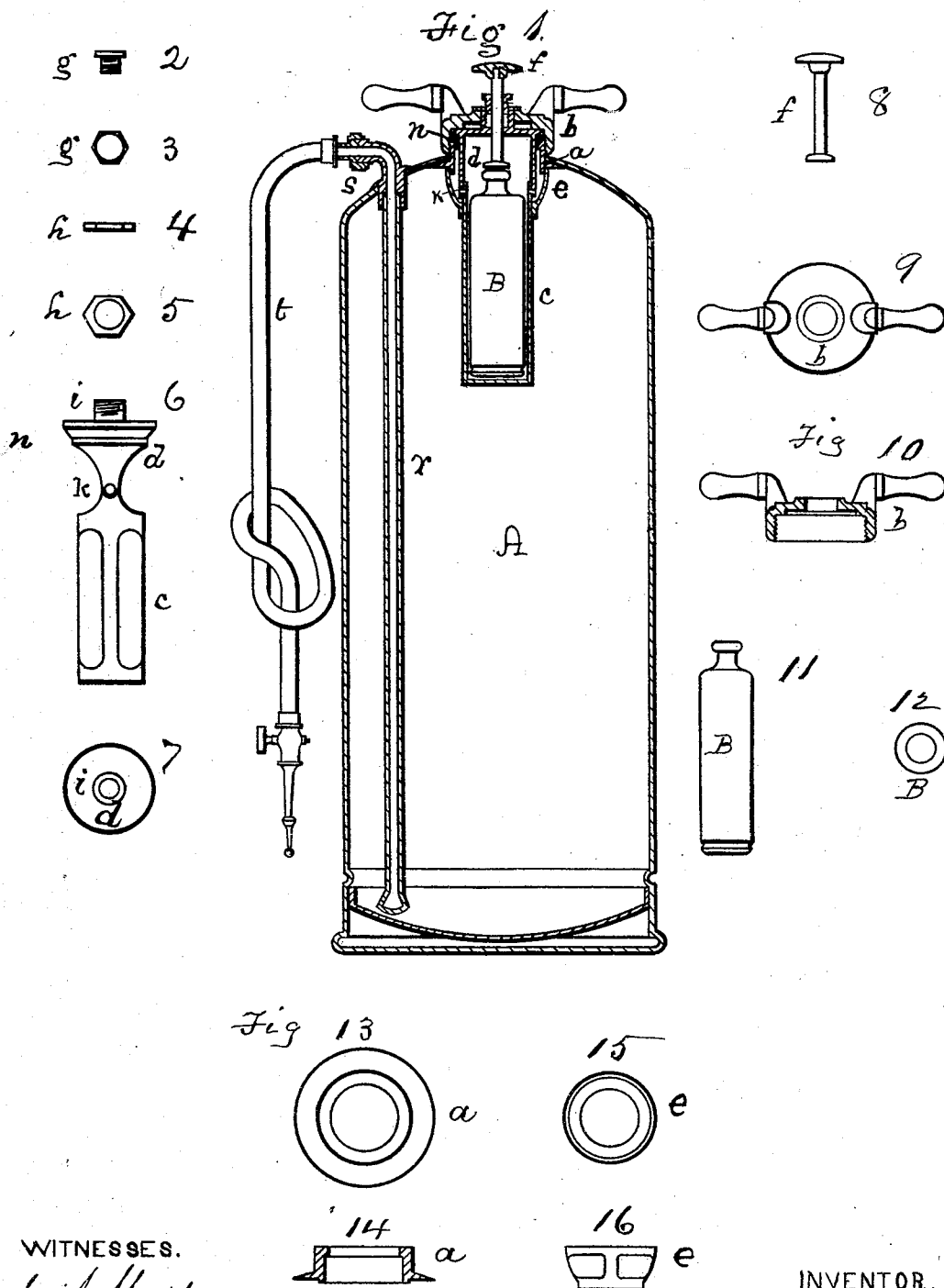


J. A. KLEY.
Chemical Fire-Extinguishers.

No. 149,044.

Patented March 31, 1874.



WITNESSES.

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JOHN A. KLEY, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE BABCOCK MANUFACTURING COMPANY.

IMPROVEMENT IN CHEMICAL FIRE-EXTINGUISHERS.

Specification forming part of Letters Patent No. **149,044**, dated March 31, 1874; application filed October 25, 1873.

To all whom it may concern:

Be it known that I, JOHN A. KLEY, of the city of Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Chemical Fire-Extinguishers, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical section. Figs. 2 to 16 inclusive are details.

My invention consists, first, in providing a hinged bottle-holder to receive the glass bottle containing the acid; in providing a guard to keep the bottle-holder in an upright position while in use; in providing a lead packing for the cover, as described; and in the other devices and combinations herein claimed.

In the drawings, A is a cylindrical reservoir, constructed, in the main, as usual, of any suitable material. *a* is a neck, provided with a screw-thread to receive the cover *b*. *c* is a bottle-holder, hinged at *k* to the part *d*, which is provided with a lead band, *n*, beveled to correspond with the beveled portions of the neck *a*, thus forming a lead packing upon the part *d*, so that when screwed down, until the packing comes in contact with its seat, the cover can still be turned down farther to tighten the same without carrying the packing around with it, which grinds and injures the packing, as in the use of the ordinary packing and arrangement of the same. *d* is provided with an extension at the top, *i*, having a screw-thread on the inside and outside thereof. On the outside of *i* a nut, *h*, is placed, and *g* is screwed into *i*. These parts form a stuffing-box for the rod *f*, which is used to break the bottle by forcing the same down thereon. *f* passes through *g h i* and the upper part of *d*, as seen in Fig. 1, and is provided at the lower end with a nut after it has been inserted. *e* is a guard, permanently secured at the top to the inside of the receptacle, and open at the bottom; it extends a little lower down than the point *k*, and its object is to prevent the bottle-holder and bottle from tipping.

It has been customary to provide this class of extinguishers with an opening and stop-cock near the bottom, through which to discharge their contents. This construction is

liable to the objection that the stop-cock, by the action of the chemicals thereon, may become corroded, so that it cannot be readily turned. I obviate this difficulty by discharging the contents, at or near the top of the receptacle, through the tube *r*, placed within the receptacle and extending nearly to the bottom thereof. This tube *r*, as represented, passes through the top of the receptacle at *s*. *t* is a piece of hose, connected to the tube *r*. A stop-cock might be placed in the tube *r* just outside of the receptacle, if desired.

The construction described enables me to place the small glass bottle, in which the acid is kept, into the bottle-holder, where it will be ready for use, instead of turning the acid into a lead bottle, as has been the usual custom.

The bottle-holder *c* being connected with the cover *b*, as described, when this cover is removed the bottle-holder can be removed also, and withdrawn from the receptacle; then, by turning over the cover and part *d*, which is pivoted to *c*, as described, a suitable bottle containing the acid can be inserted into the bottle-holder *c*, when the bottle-holder and the bottle therein contained can be inserted in the receptacle. In screwing the cover to place the bottle-holder *c*, rod *f*, and stuffing-boxes will all rotate with the cover until the lead packing *n* comes in contact with the top of the neck *a*; then the cover proper only will rotate, the other parts remaining stationary. The position of the part *d*, when it is turned over so as to permit the insertion of the bottle into the holder, is represented by the dotted lines in Fig. 6. In this figure the part *d* is represented as disconnected from the cover, stuffing-boxes, and rod *f*, though in use these parts are all together.

In all respects not herein mentioned the operation of the extinguisher is substantially the same as that of those now in use. The receptacle A is to be filled with an alkaline solution. The glass bottle B containing the acid is to be placed in the receptacle *c*. When used this bottle is to be broken by means of the plunger *f*. By the mixture of the acid and alkali the contents of the extinguisher will be forced out through *r*.

What I claim as new is as follows:

1. The bottle-holder *c*, pivoted to the part *d*, in combination with the receptacle *A*, substantially as specified.
2. The combination of the receptacle *A*, pivoted bottle-holder *c*, and guard *e*, substantially as specified.
3. The part *d*, provided with the lead pack-

ing *n*, corresponding in form to the neck *a* of receptacle *A*, constructed and arranged substantially as and for purpose specified.

JOHN A. KLEY.

Witnesses:

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