A. E. HUGHES.

Chemical Fire-Extinguishers.

No. 156,794. Patented Nov. 10, 1874.

Fig. 1.

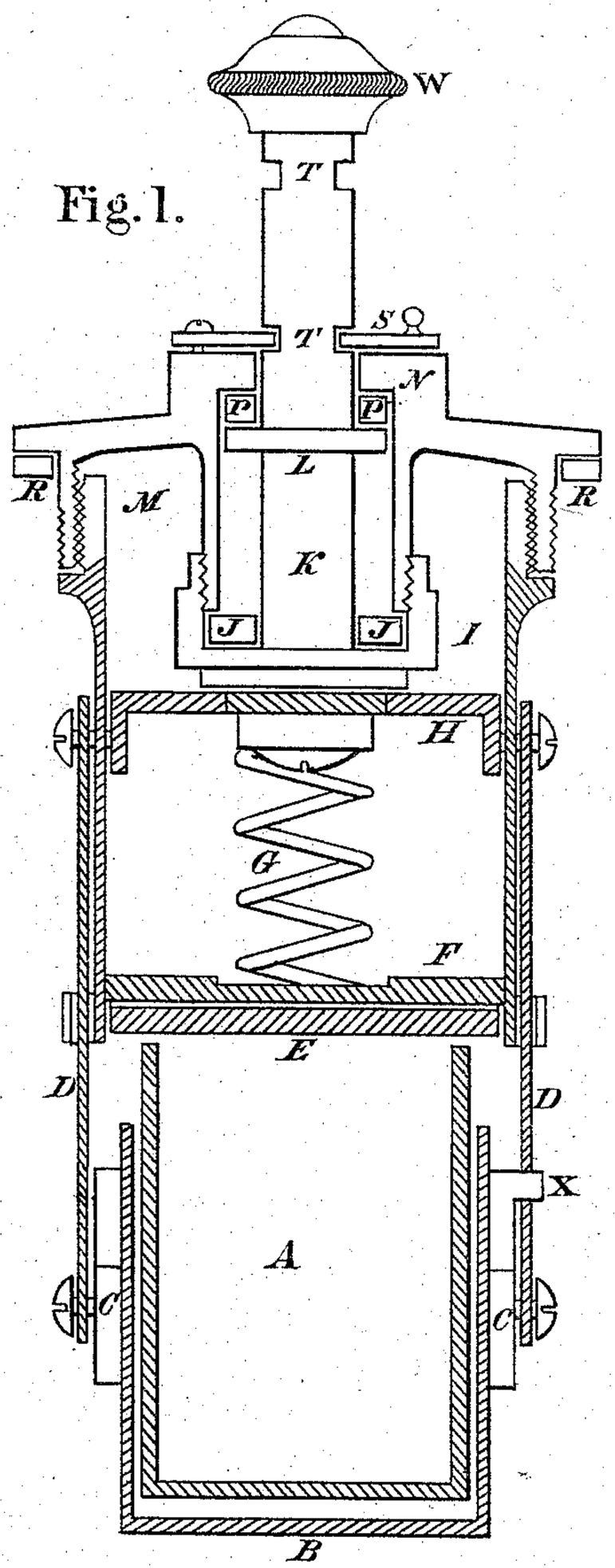
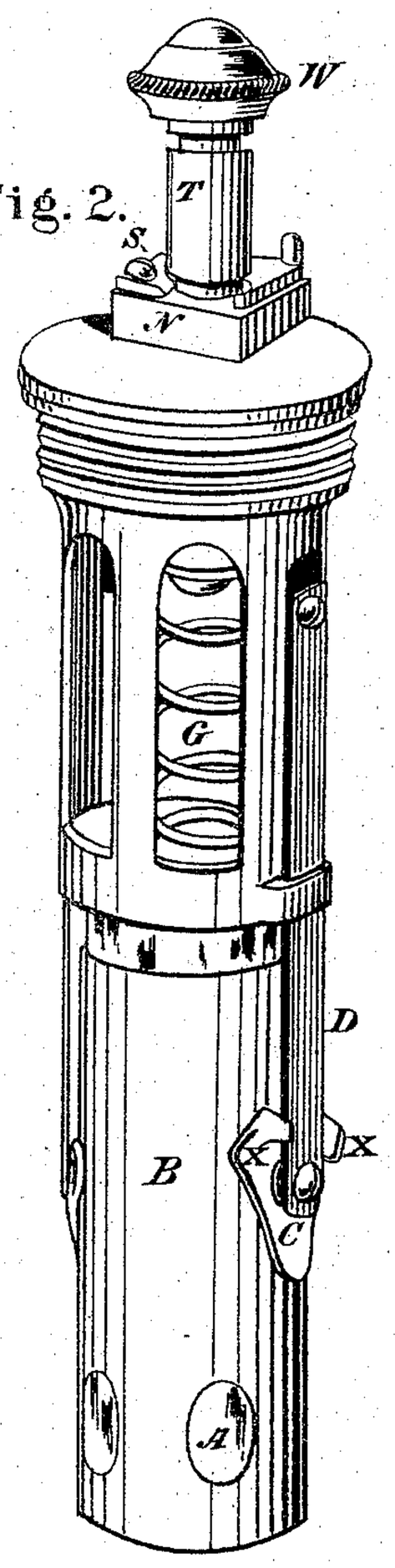


Fig. 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

ALEXANDER E. HUGHES, OF LOUISVILLE, KENTUCKY, ASSIGNOR TO GREAT AMERICAN FIRE-EXTINGUISHER COMPANY, OF SAME PLACE.

IMPROVEMENT IN CHEMICAL FIRE-EXTINGUISHERS.

Specification forming part of Letters Patent No. **156,794**, dated November 10, 1874; application filed June 24, 1874.

To all whom it may concern:

Be it known that I, ALEXANDER E. HUGHES, of the city of Louisville, in the county of Jefferson and State of Kentucky, have invented a certain new and useful Improvement in Chemical Fire-Extinguishers; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a sectional view of the device, showing its general construction. Fig. 2 is a perspective view of the same, showing the stops on the side to hold the acid-vessel in position to be charged.

Similar letters of reference indicate corresponding parts.

This my invention relates to improvements in chemical fire-extinguishers, but more especially in the arrangement of the acid-vessel, and the use of valves formed in the reservoir-cap, in such a manner as to render the operating stem water-tight, either while in use or when the acid-vessel is charged preparatory to using.

In the drawings above referred to, A is the acid-vessel, which is made of glass or other suitable material, and in form as shown in the drawings. B is the casing by which it is protected, all of which is made of metal. C C are lugs secured to the side of this casing, by means of which it is hung to the sliding bars at the side of the stopper-cage, in such a manner as to be easily turned out to one side in charging, and may be held in that position by means of a suitable spring-catch inside of the bar D. X X are stops on the casing-lugs to prevent the acid-vessel from turning out too far. D D are the sliding bars, to which the acid-vessel and casing are hung. These bars are attached to the cross-bar H at the upper ends, while the lower ends are attached to the casing-lugs by means of bolts, on which it turns loosely, the cross-bar H being made to work in slots in the sides of the stopper-cage, so as to permit the acid-vessel to be drawn down to charge the water in the reservoir, and also to place it in a position to be easily charged with acid when exhausted. F is a bottom cast solid in the stopper-cage. E is a rubber stopper held by a slot or recess in the cage, in order to render the mouth of the acid-vessel perfectly water-tight when pressed up against it, which is done by means of the spring G in the stopper-cage. I is the bottom seat of the valve-chamber in the stopper-cap, which is secured firmly to the cross-bar H. J J is a gum ring in the bottom of the valve-chamber, in order to render the operating-stem K water-tight, when the collar L is pressed down upon it, which is always done when charging the water with acid ready for use. K is the operating-stem, which is made of any kind of suitable metal, with the lower end secured firmly in the base-block I, as shown in the drawings. L is a collar on the operating-stem K, made to answer as a double valve when resting on either of the gum rings P P or J J in the chamber M, one of which is always in use. The upper ring may be secured to the valve-collar L if necessary. N is the stopper-cap. R R is a leather collar on the under side of the flange, to render it water-tight when screwed into the reservoir. T T are grooves in the operating-stem. S is the trigger, by which it is held in position while charging the water with acid, or while charging the acid-vessel preparatory to using it. W is the head of the operating-stem.

The object of this my invention is to provide a means of rendering the operating-stem water-tight, either when the water is charged with acid ready for use, or when the acid-vessel only is charged preparatory to using it, and also to provide a means for turning the acid-vessel to the side for convenience in charging when empty.

Having thus fully described the nature and object of this my invention, its operation is simply that of setting down the reservoir in an inverted position, so that the entire weight may rest upon the head of the stem W, which will drive it in where it will be held firmly in position by the trigger S, and, as a consequence, the acid-vessel will be discharged into the water, and the usual pressure caused by its impregnation; but will be prevented from leaking at the operating-stem by means of the

valve-collar L and gum rings in the chamber M for that purpose; therefore,

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

1. In an acid-bottle holder for fire-extinguishers, the combination, with the stem K, of the collar L and packing-rings J P, arranged substantially as described, for the purpose of preventing leaking.

2. In an acid-bottle holder for fire-extinguishers, the tilting sliding cage B, provided with stops X, substantially as and for the purpose described.

In testimony that I claim the foregoing I have hereunto set my hand.

ALEXANDER E. HUGHES.

Witnesses:

FRANK PARDON,

CHAS. A. LEHMANN.