E. A. MAGINNESS.

Fire-Extinguisher.

No. 169,013. Patented Oct. 19, 1875.

Fig 1

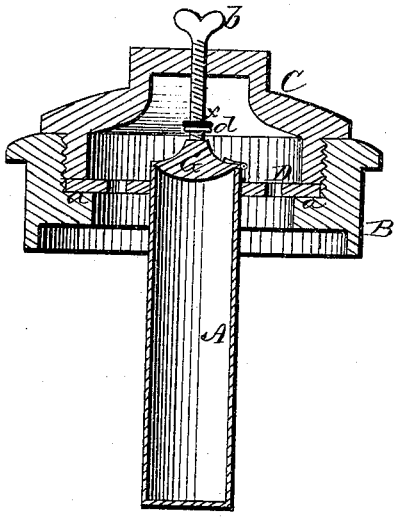
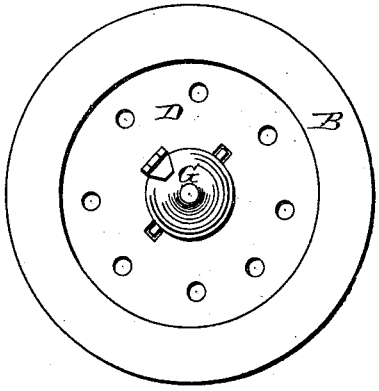


Fig 2



WITNESSES

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EDMUND A. MAGINNESS, OF NEW ALBANY, INDIANA.

IMPROVEMENT IN FIRE-EXTINGUISHERS.

Specification forming part of Letters Patent No. **169,013**, dated October 19, 1875; application filed July 19, 1875.

To all whom it may concern:

Be it known that I, EDMUND A. MAGINNESS, of New Albany, in the county of Floyd and in the State of Indiana, have invented certain new and useful Improvements in Fire-Extinguishers; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

My invention relates to chemical fire-extinguishers; and it consists in the construction of the top of the tank and the devices for holding, closing, and opening the acid-bottle, as will be hereinafter more fully set forth.

In the annexed drawing, Figure 1 is a section of my invention. Fig. 2 is a plan view of the same with the cover of the tank removed.

A represents the bottle, made of any suitable material, for holding the acid, the mixture of which with the solution in the tank of the extinguisher forms carbonic acid gas. B is the mouth of the tank, with the cover C fitting and screwing tightly therein. The mouth B has at its bottom an offset or shoulder, *a*, for the purpose of supporting the acid-bottle A, which is secured near the top to a perforated diaphragm, D. This diaphragm is of such size that it will pass down into the mouth B, and rest on the shoulder *a*. When the cover C is screwed down in its place it holds the diaphragm firmly against the shoulder *a*, thus preventing any movement or displacement of the acid-bottle. G is a valve, hinged to the top of the bottle, or to the parts surrounding the same. The under side of this valve is lined with rubber or other suitable material not affected by acid. It is made quite heavy, so that its own weight will cause it to fall to its place. The valve is made cone-shaped, being quite high in the center. A rod, *b*, having suitable thread cut upon it, passes down through the cover C, and the lower end of it rests upon the raised center of the valve G. When the screw-rod *b* is raised enough to clear the raised center of the valve it is high enough to let the valve open sufficiently to let out the acid. If the valve was flat the rod would have to be raised a distance nearly equal to the diameter of the valve to accomplish the same purpose. The rod *b* has a flange, *d*, beneath the cover C, on top of which flange is a rubber ring, *x*, forming a tight packing, which, when the rod is raised, is compressed between the flange and the cover.

The operation of my invention is as follows: After the tank has been filled to the proper level with the alkaline solution, and the bottle with acid, the bottle is put into its place, supported by the diaphragm D, on the shoulder *a*. The cover C is then screwed to its place, and the rod *b* screwed down upon the valve G, to hold it securely to its place, and prevent the escape of any of the acid, when the machine is ready for use. In discharging the machine, the tank may be in any position, either horizontal or vertical, care being taken that the discharge stop-cock is at the bottom, so as to allow the escape of all the contents of the tank. When in position the rod *b* is unscrewed, releasing the valve G, and compressing the rubber ring *x* above the flange *d*. The valve G then swings open of its weight, letting out the acid, thus mixing the two ingredients. Carbonic-acid gas is at once generated in great quantities, and passes through the discharge-hose with great force.

This invention may be used on hand-machines, as well as on larger machines mounted on wheels.

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

1. The perforated diaphragm D, attached to the bottle A, and suspended on the shoulder *a* in the top B of the tank, substantially as herein set forth.

2. In a fire-extinguisher, the combination of the acid-bottle A and the hinged valve G, made in conical shape, or raised in the center, and screw *b*, for holding the valve down, substantially as and for the purposes herein set forth.

3. The combination of the top B, with shoulder *a*, perforated diaphragm D, acid-bottle A, valve G, cover C, and screw *b*, with flange *d* and packing *x*, all constructed substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 7th day of June, 1875.

EDMUND A. MAGINNESS.

Witnesses:
FRED D. CONNOR,
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