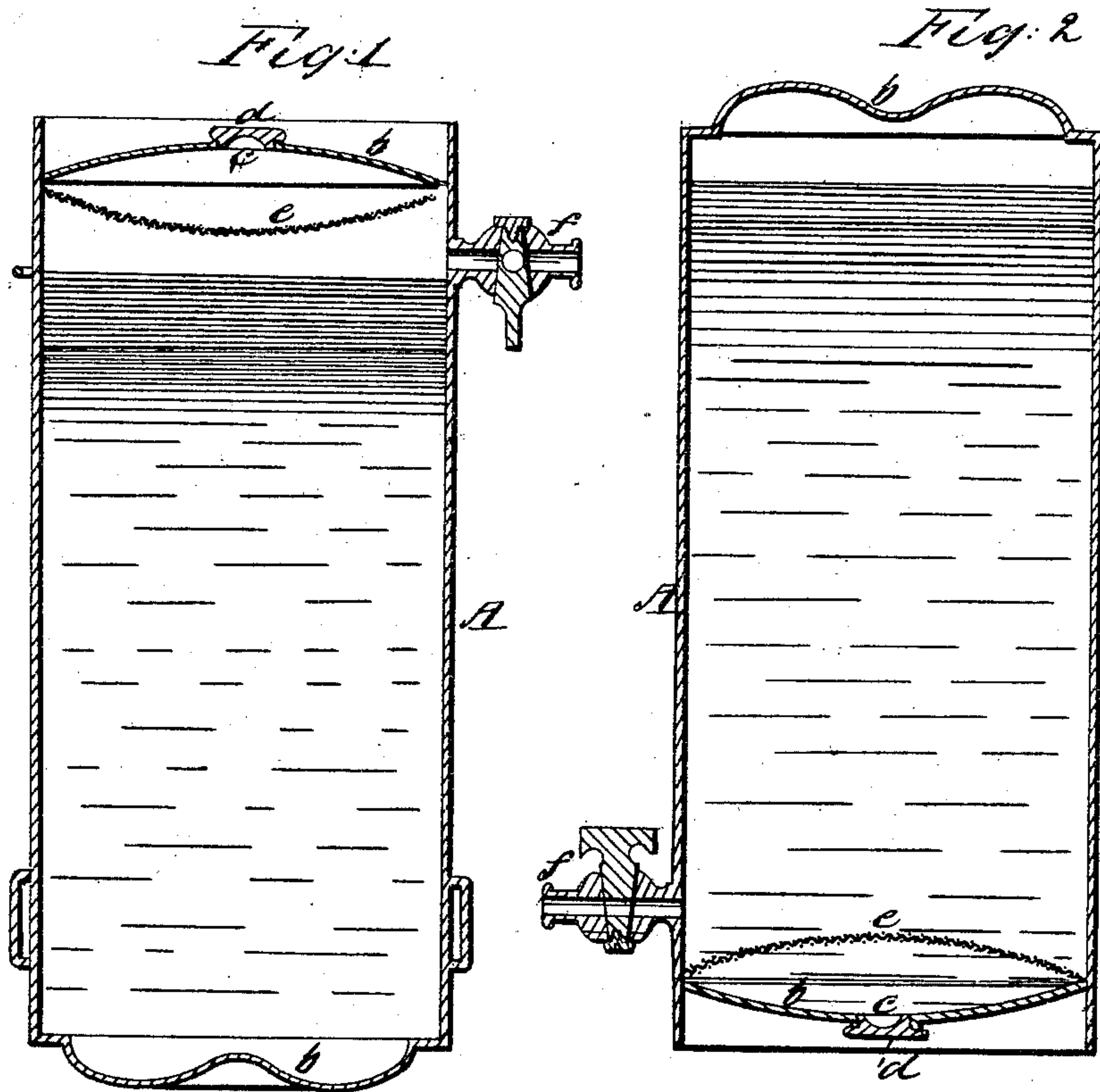


W. MULLALLY.
FIRE EXTINGUISHER.

No. 78,636.

Patented June 2, 1868.



Witnesses
Geo. A. Long
Edward Griffith

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by his Attorney
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United States Patent Office.

WILLIAM MULLALLY, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 78,636, dated June 2, 1868.

IMPROVEMENT IN APPARATUS FOR EXTINGUISHING FIRES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Be it known that I, WILLIAM MULLALLY, of Boston, in the county of Suffolk, and State of Massachusetts, have invented certain new and useful Improvements in Apparatus Designed for Extinguishing Fires; and do hereby declare the following to be a full, clear, and exact description thereof, due reference being had to the accompanying drawings, and in which—

Figures 1 and 2 are vertical sections of the apparatus constructed in accordance with the ideas of my invention.

My present invention has reference to a class of apparatus, now coming into practical use, for extinguishing fires, in which is employed water charged with carbonic-acid gas, the expanding properties of which serve to eject such water and gas, with considerable force, from the apparatus.

Several objects I have had in view in making my present invention, as well as its advantages over others in use, will be hereinafter explained.

This invention consists in the employment of a cylindrical or other proper-shaped vessel or reservoir, capable of withstanding considerable internal pressure, and with both ends tightly closed, with the exception of a filling-orifice, and screw-plug or valve inserted in one of them, the vessel being provided with an escape-cock, near to one end thereof, for the discharge of its contents, and being, furthermore, provided with a foraminous or perforated shelf or partition, disposed within it in such manner as to leave a small chamber between it and the screw-plug before mentioned, such chamber being for reception of one portion of the chemical ingredients used in charging the water, in manner as hereinafter described.

Referring to the drawings above referred to as accompanying this specification and illustrating my invention, the reader will see that it denotes a cylindrical vessel or reservoir, constructed of a material and in such manner as to be capable of withstanding considerable internal pressure, and at the same time sufficiently light to be carried, with its contents, upon a person's back or in any other manner.

Both ends of the cylinder A are closed by heads *b b*, in one of which a filling-orifice, *c*, is made, such orifice being filled by a screw-plug, *d*.

Within the interior of the reservoir A, and near the orifice *c*, is inserted a foraminous or wire-gauze partition or shelf, *e*, so disposed therein as to leave a small enclosure between it and the end of the reservoir, sufficient for the reception of a small quantity of bicarbonate of soda or tartaric acid or other ingredients, the interstices of the shelf *e* being of sufficient fineness to prevent such acid-powder from escaping through them under ordinary circumstances. An escape-cock, *f*, is applied to any suitable part of the reservoir A, but preferably in proximity to the foraminous shelf *e*.

The above is a description of the mechanical construction of my apparatus, which, though very simple, is very easily prepared and effective in operation.

To adjust it in readiness for use, it is to be placed in the position shown in fig. 1 of the accompanying drawings, or with its filling-orifice uppermost. Water is then poured into the vessel A until it is nearly filled, (care being taken, however, that the water shall not reach the foraminous shelf,) and a quantity of bicarbonate of soda or tartaric acid introduced; and thoroughly incorporated with the water.

The apparatus is now ready for use, with the exception of the admixture with the charged water of the opposite acid or ingredient from that contained in it; that is, if the water is charged with bicarbonate of soda, tartaric acid or its equivalent is to be added.

This second ingredient is to be placed within the vessel A, and upon the foraminous shelf *e*, before referred to, at any time subsequent to the use of the apparatus, although this mode of charging the vessel may be varied considerably, as I do not confine myself to any detail in this respect.

In case of fire, the apparatus is to be immediately inverted, and maintained in the position shown in fig. 2 of the drawings. This has the effect of mixing the dry acid contained on the foraminous shelf with the water already charged with the opposite acid or ingredient, which has the effect of instantly producing and charging the water with carbonic-acid gas.

Upon opening the cock *f*, the pressure of the gas within the vessel *A* has the effect of discharging, with considerable force, the combined water and gas, which is to be directed upon the fire to be extinguished through a suitable discharge-tube or nozzle.

The advantages of my construction of a portable fire-extinguisher are several.

First, as, when charged with gas and ready for use, its filling-orifice (its only opening) is at bottom, its upper part, or that requiring the most strength, may be made very strong, and perfectly tight, so as to prevent the escape of the carbonic-acid gas.

Secondly, as a final charging of the apparatus is attained by simply inverting it, I dispense with all contrivances to effect this purpose, thus preventing a leakage or escape of gas from the apparatus, and enabling the charging of it to be done instantaneously and with little or no trouble.

Another advantage, and by no means an unimportant one, is the great simplicity of this machine, and the low cost at which the apparatus may be manufactured and sold.

I am aware that, previous to the introduction of my invention, several devices have been employed in which water charged with carbonic-acid gas is used as a medium for extinguishing fires. As this use of water charged with carbonic-acid gas is an invention of old date, and has been patented and in common use in Europe and in this country, I lay no claim broadly to its employment.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. An apparatus for extinguishing fires, composed of the vessel *A*, the foraminous shelf *e* or its equivalent, and the escape-cock *f*, the vessel *A* being provided with a filling-aperture, and the whole being constructed, adjusted, and operating essentially in manner and for the purpose as herein shown and described.

2. I claim the employment of the foraminous shelf or its equivalent, as before set forth and explained.

WILLIAM MULLALLY.

Witnesses:

FRED. CURTIS,
GEO. A. LORING.