(No Model.)

# J. BRITTO.

## CHEMICAL FIRE EXTINGUISHING APPARATUS.

No. 332,229. Patented Dec. 15, 1885.

Fig. 1.

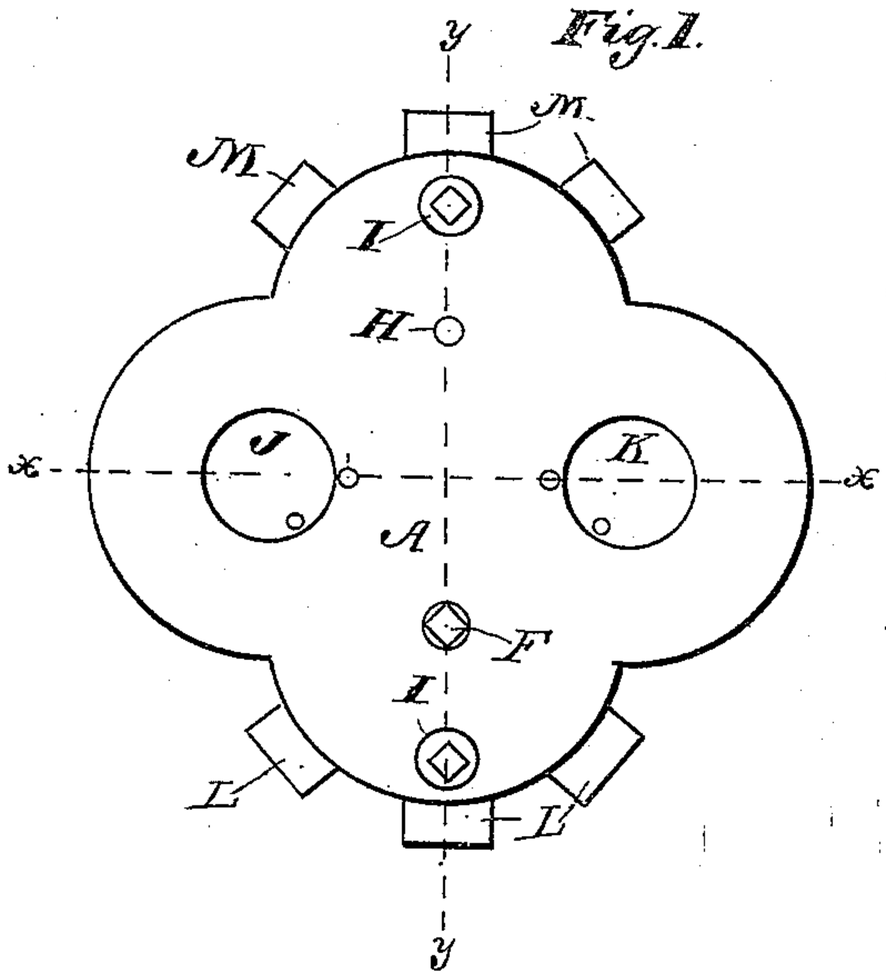



Fig. 2.

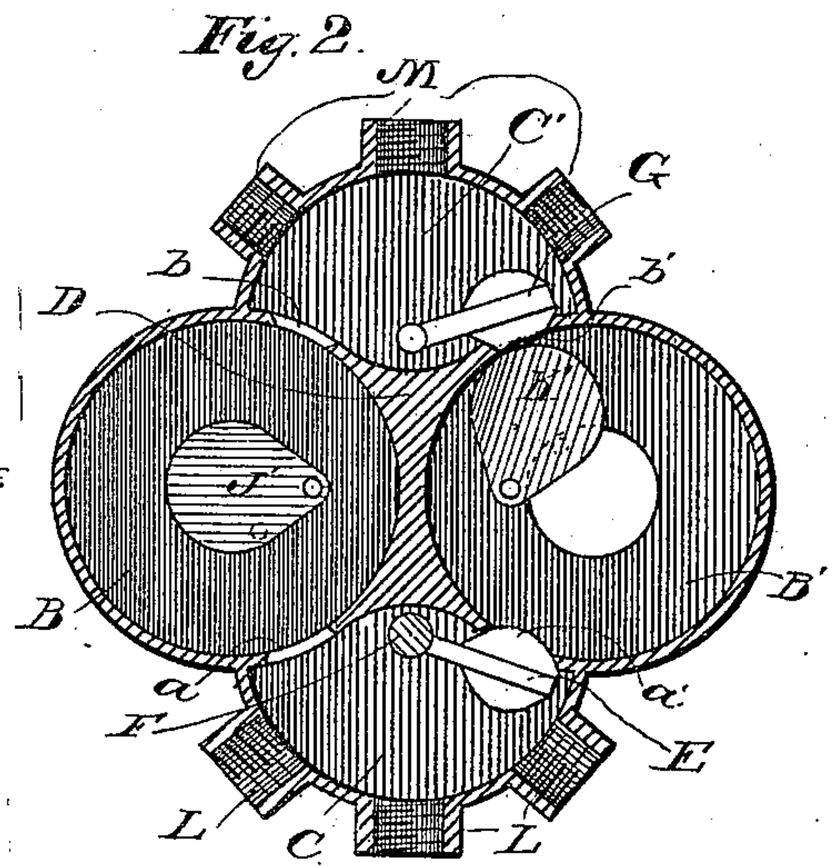



Fig. 3.

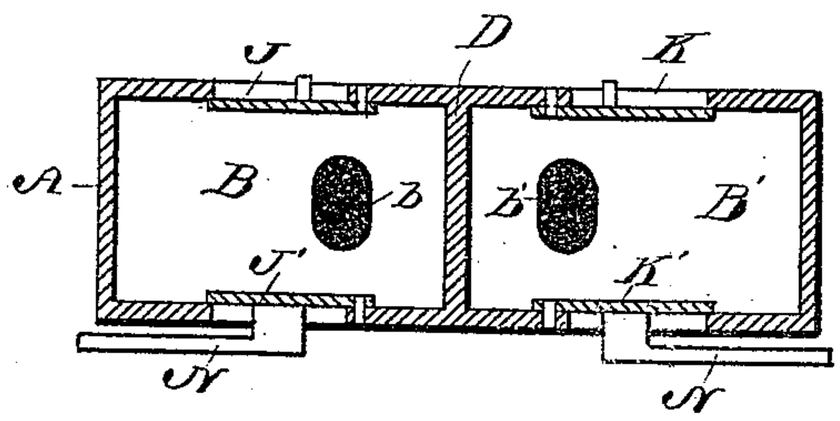
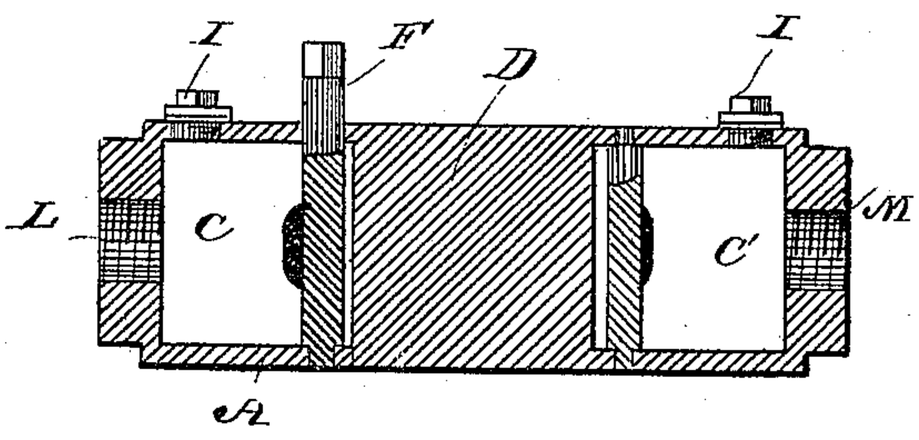



Fig. 4.

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# UNITED STATES PATENT OFFICE.

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## CHEMICAL FIRE-EXTINGUISHING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 332,229, dated December 15, 1885.

Application filed July 22, 1885. Serial No. 172,266. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN BRITTO, a citizen of the United States of America, residing at South Norwalk, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Chemical Fire-Extinguishing Apparatus, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to certain novel and useful improvements in apparatus for extinguishing fire, and has for its object to provide a device in which a suitable chemical may be placed so as to mix and combine with water passed through the apparatus, and also which shall have a reserve reservoir for chemicals, through which the water may be directed at will; and with these ends in view my invention consists in certain details of construction and combination of elements hereinafter fully explained, and then specifically designated by the claims.

In order that those skilled in the art to which my invention appertains may fully understand its construction and operation, I will proceed to describe the same in detail, referring by letter to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a plan of my device. Fig. 2 is a plan section; Fig. 3, a section at the line *x x*, Fig. 1, and Fig. 4 a section at the line *y y*.

Similar letters denote like parts in the several figures of the drawings.

A is a shell cast of one piece or constructed of any convenient number of parts of sufficient strength to withstand the pressure usually applied to fire apparatus. This shell is divided into four compartments, B, B′, C, and C′, by means of the partition D, communication being had between said compartments through the passages *a a′* and *b b′*.

E is a double valve attached to a stem, F, which latter is pivotally secured within the shell, its upper end extending out and forming a wrench-hold. This valve E is adapted to close either of the passages *a a′* for the purpose presently explained.

G is a double valve, similar to the valve E, attached to a stem, H, and adapted to close one or the other of the passages *b b′* automatically, as hereinafter specified.

I I are plug-bolts, which close openings by which access is had to the valves E G in case cleaning or repair becomes necessary.

J J′ and K K′ are slide-valves in the top and bottom of the reservoirs B B′, respectively, for use in filling and emptying said reservoirs. The valves J′ K′ may have handles N N, as shown, which extend within easy reach of the attendant.

L are threaded passages through which the water is admitted to the shell. I have shown three of these passages; but this is not essential, as more or less may be found advantageous.

M are the outlet-passages threaded, as shown, of which there may be any desired number.

From the foregoing description of my improvement its operation will obviously be as follows: The reservoirs B B′ having been filled with the desired chemical, and the apparatus coupled to suitable water-supply, the water will flow through one of the reservoirs—say B—mixing and combining with the chemical contained therein, and, passing out by way of the outlet, be applied to the fire to be extinguished. The force and pressure of the water in its passage through the compartment C′ will cause the valve G to seat in the passage *b′*, thus preventing any flow of the water into the reservoir B′. When the chemical becomes exhausted in the reservoir B, it is only necessary to reverse the valve E, opening the passage *a′* and closing the passage *a*, when the water will flow through the reservoir B′, reversing the valve G, and passing through the outlet as before. Now, as the reservoir B is closed against the inflow of the water by the valves E G, it will be readily seen that by opening the valves J J′ easy access is had to said reservoir for emptying and refilling with chemical, so that by the time the reservoir B′ is exhausted the reservoir B will be ready for use. Thus without discontinuing the flow of water a constant supply of chemical is kept within its course, whereby the water is rendered more effective as an extinguisher.

Having thus described my invention, what I claim as new and useful is—

1. In a fire-extinguishing apparatus, two or more reservoirs containing suitable chemicals, each reservoir having inlet and exit openings connected directly with water supply and dis-

charge pipes, in combination with controlling-valves adapted to close all but one of said inlets, and automatic valves at the exit-openings adapted to be opened by pressure inside of the reservoirs and be closed by pressure outside thereof, whereby a single direct and continuous passage is afforded for the water through but one reservoir at a time, thereby enabling the renewal of the chemicals to be accomplished as fast as they are exhausted and without loss of time, substantially as shown and set forth.

2. In an apparatus as described, the reservoirs B B′, having valves J J′ and K K′, in combination with the controlling-valve E, automatic valve G, and compartments C C′, for the purpose specified.

3. The herein-described combination of the inlets L, controlling-valve E, arranged within the compartment C, passages *a a′*, reservoirs B B′, passages *b b′*, automatic valve G, arranged within the compartment C′, outlets M, and valves J J′ and K K′, all combined to operate as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN BRITTO.

Witnesses:

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