G. J. FINNEGAN.

FIRE EXTINGUISHER.

APPLICATION FILED MAR. 16, 1912.

1,042,541.

Patented Oct. 29, 1912.

FIG. 1.

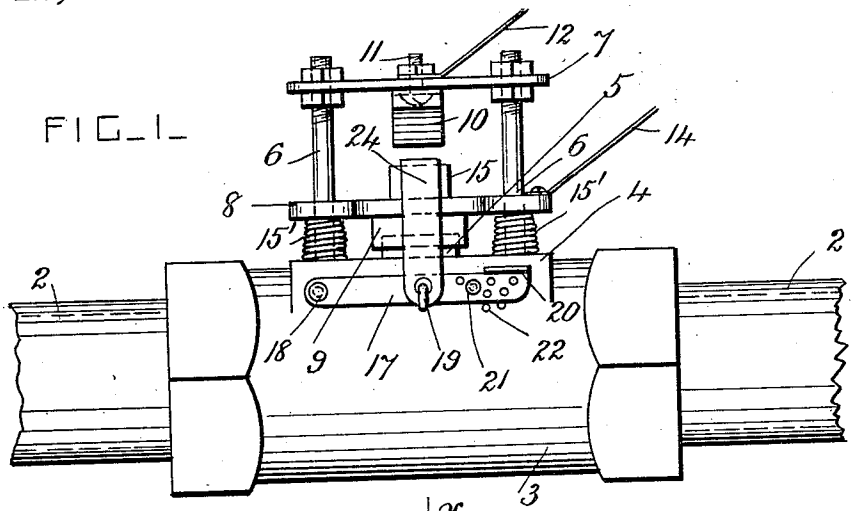


FIG. 2.

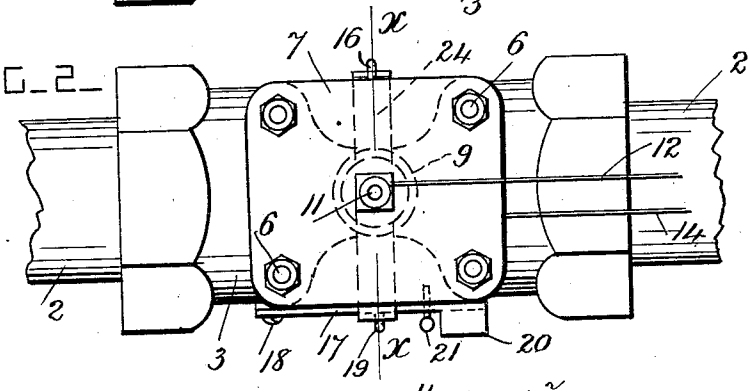
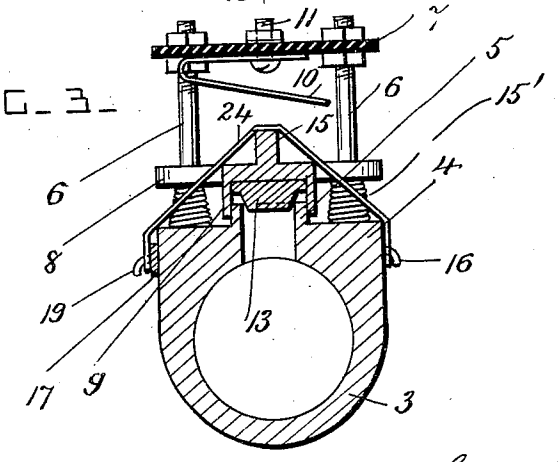


FIG. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

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FIRE-EXTINGUISHER.

1,042,541. Specification of Letters Patent. Patented Oct. 29, 1912.

Application filed March 16, 1912. Serial No. 684,254.

To all whom it may concern:

Be it known that I, GEORGE J. FINNEGAN, a citizen of the United States, residing at Lockport, in the county of Niagara and State of New York, have invented certain new and useful Improvements in Fire-Extinguishers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to automatic fire extinguishers which come into operation when subjected to a predetermined high temperature and which also cause an alarm to be sounded; and it consists in the novel construction and combination of the parts hereinafter fully described and claimed.

In the drawings, Figure 1 is a side view of a fire extinguisher valve mechanism constructed according to this invention. Fig. 2 is a plan view of the same. Fig. 3 is a cross-section through the valve, taken on the line *x*—*x* in Fig. 2.

In carrying out this invention a supply pipe 2 for water is provided, and 3 is a short pipe section inserted in the supply pipe and provided with an enlargement or shoulder 4, upon its upper side, which shoulder is arranged horizontally. A short tubular nozzle 5 projects upwardly from the middle part of the shoulder 4. Four guide bars 6 project upwardly from the four corners of the shoulder 4, and 7 is a plate of insulating material secured to the upper ends of the guide bars 6. A valve plate 8 is arranged to slide vertically upon the guide bars 6, and it has a cup-shaped valve 9 on its underside, which valve normally incloses the nozzle 5 and prevents any water from issuing through it. A contact spring 10 is secured to the plate 7 by a screw 11, and a circuit wire 12 is also secured to the screw 11. The valve has a plug-shaped facing 13. A second circuit wire 14 may also be secured to the valve plate 8, or to any other suitable part of the device. The wires 12 and 14 have a call-bell and battery of approved construction connected to them, so that an alarm is sounded when the electric circuit is closed. The valve plate 8 has a projecting lug 15 on its upper side which when raised bears against the contact spring and closes the electric circuit. Springs 15′ are provided on the guide bars 6 between the shoulder 4 and the valve plate, for raising the valve plate and valve. The contact spring 10 also serves as a spring buffer for the valve and its valve plate. A fastening hook 16 is secured at one side of the pipe section or shoulder 4, and a lever 17 is pivoted by a pin 18 at the other side of the pipe section. A hook 19 is arranged at the middle part of the lever, and the lever has a foot plate or handle 20 at its free end. A pin 21 is provided for engaging with any hole of a series of holes 22 in the pipe section, and this pin operates to retain the lever in position when depressed. A strip or narrow plate 24 of fusible metal is provided. One end of this plate 24 is hooked onto the fastening 16, and its other end is attached to the hook 19. The lever is pressed down so as to strain the fusible strip 24 tightly over the projecting lug 15 on the valve plate and hold the valve in its closed position, and the pin 21 is then inserted in one of the holes 22 so as to hold the lever in place. The fusible metal strip is made of an alloy which melts when exposed to a predetermined high temperature. When a fire occurs in the vicinity of this device the fusible strip melts, and the springs 15′ open the valve, and close the electric circuit so that an alarm is sounded. The water is discharged through the nozzle, and is deflected and sprayed in all directions by impact against the cup-shaped valve. The action of the valve is regulated in a measure by the spring buffer above it, which permits it to adapt itself automatically to variations in the pressure of the water in the pipe.

What I claim is:

1. In a fire extinguisher, the combination, with a pipe section provided with a nozzle, of guide bars secured to the pipe section, a plate slidable on the guide bars and provided with a valve for closing the nozzle, springs arranged between the said plate and pipe section for opening the valve, and a strip of fusible metal strained over the said plate and having its ends secured to the respective sides of the pipe section and normally holding the valve closed.

2. In a fire extinguisher, the combination, with a pipe section provided with a nozzle, of guide bars secured to the pipe section, a plate slidable on the guide bars and provided with a valve for closing the nozzle, springs arranged between the said plate and pipe section for opening the valve, a strip of fusible metal secured to one side of the pipe section at one end and extending over the

said plate, a lever pivoted to the other side of the pipe section and operatively connected to the other end of the said strip, and a fastening device for securing the said lever after the valve has been closed.

3. In a fire extinguisher, the combination, with a pipe section provided with a nozzle, of guide bars secured to the pipe section, a plate slidable on the guide bars and provided with a valve for closing the nozzle, springs arranged between the said plate and pipe section for opening the valve, a stationary plate of insulating material secured to the guide bars above the slidable plate, a contact spring for the valve plate secured to the stationary plate, and a strip of fusible metal strained over the valve plate and having its ends secured to the respective sides of the pipe section and normally holding the valve closed.

In testimony whereof I have affixed my signature in the presence of two witnesses.

GEORGE J. FINNEGAN.

Witnesses:

EDWARD G. PARKER,

MABEL L. LERCH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."