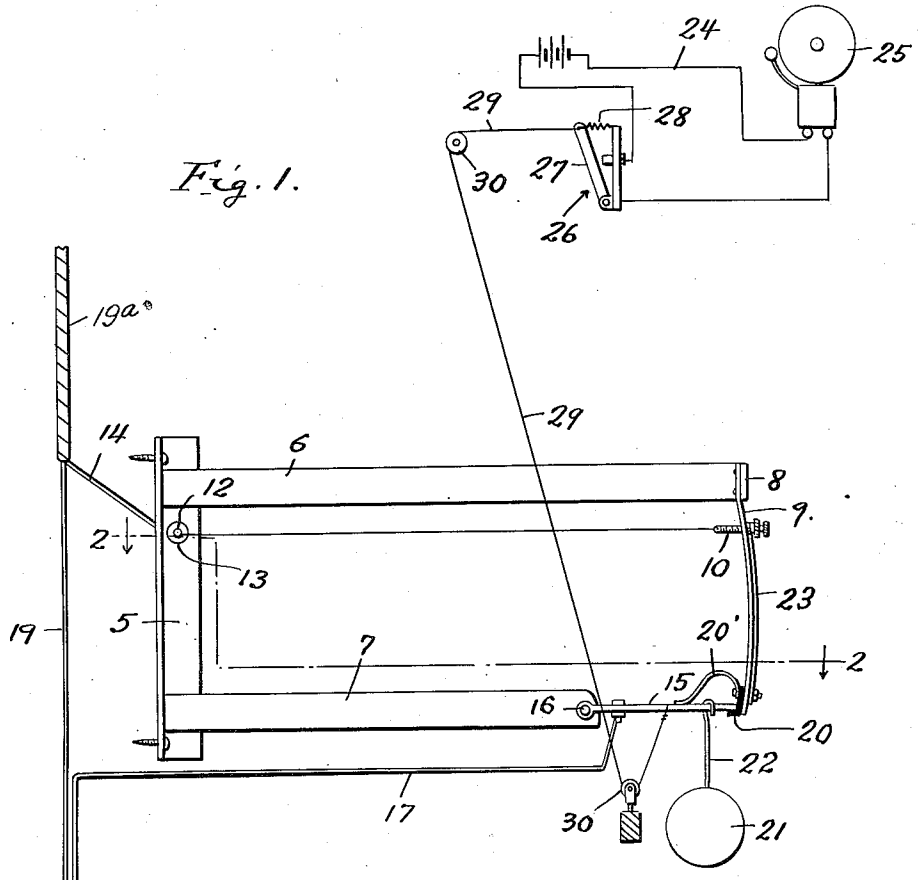
Feb. 11, 1936. F. C. RAHLMANN 2,030,468

FIRE EXTINGUISHER

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Fig. 1.



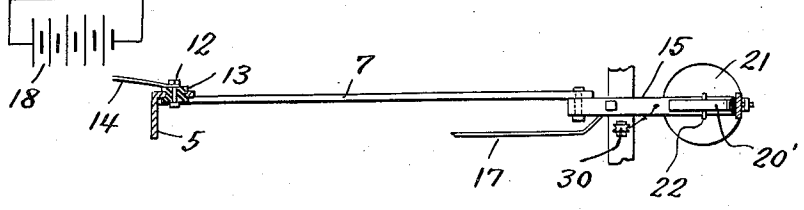


Fig. 2

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Fig. 3.

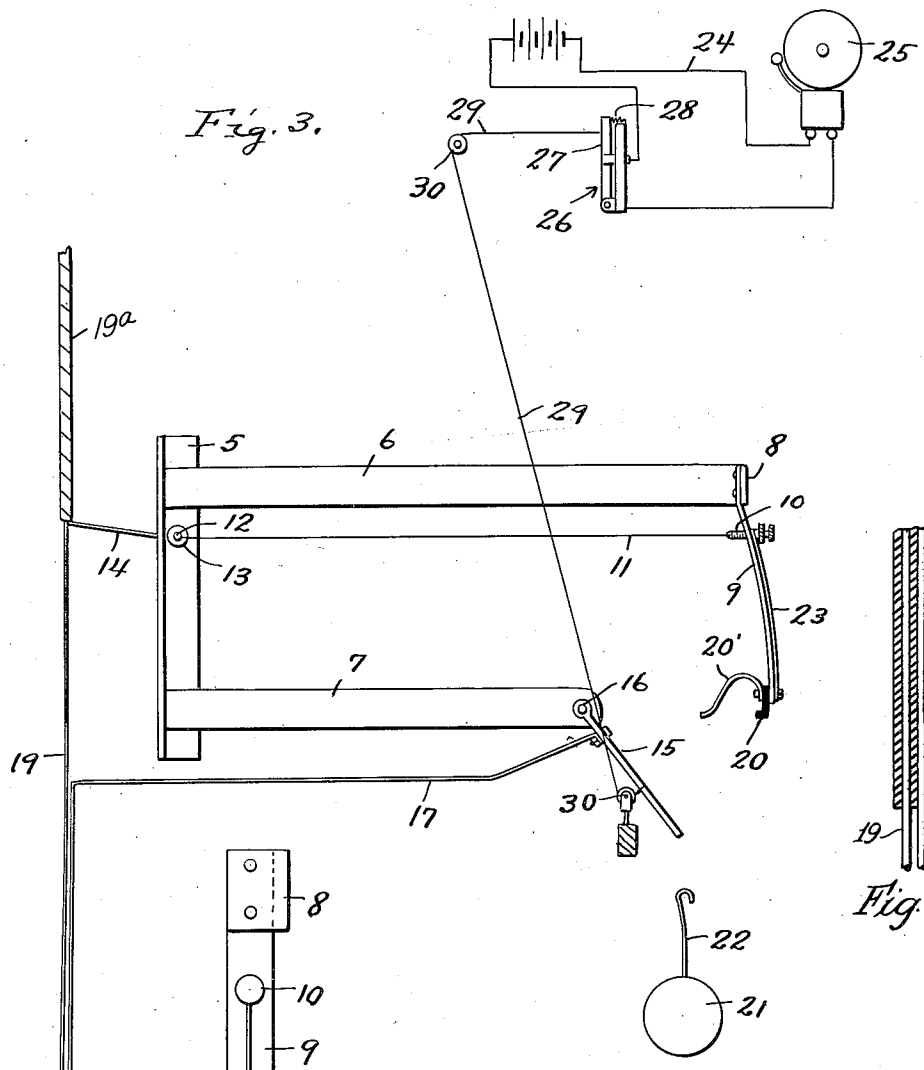


Fig. 5.

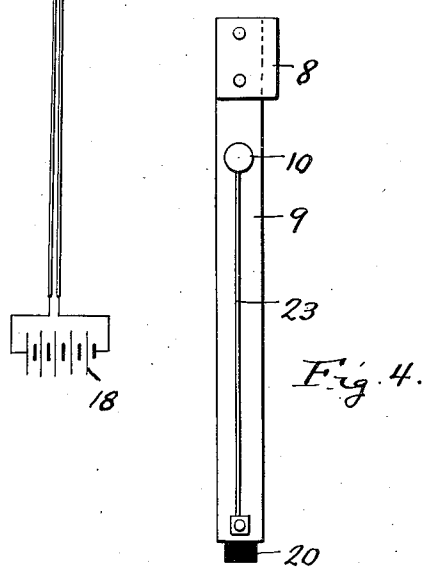


Fig. 4.

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UNITED STATES PATENT OFFICE

2,030,468

FIRE EXTINGUISHER

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Application October 16, 1934, Serial No. 748,538

2 Claims. (Cl. 169—26)

This invention appertains to new and useful improvements in and more particularly to extinguishers of the type employing releasable bombs containing fire extinguishing material.

The principal object of the present invention is to provide an extinguisher which incorporates a thermostatic element so that when the said element is affected by heat, the same will act to release a fire extinguishing bomb, a sprinkler valve, or other fire extinguishing means, and if desired, simultaneously energize an alarm.

Other important objects and advantages of the invention will become apparent to the reader of the following specification.

In drawings:

Figure 1 is a side elevational view of the switch, and diagrammatically showing the electrical connections between the switch and the alarm.

Figure 2 is a sectional view taken substantially on line 2—2 of Figure 1.

Figure 3 is a side elevational view of the switch and associated electrical connections, said switch being shown in released position and dropping a fire extinguishing bomb.

Figure 4 is a front elevational view of the strip spring.

Fig. 5 is a fragmentary longitudinal sectional view showing the destructible insulation and conductor wires.

Referring to the drawings wherein like numerals designate like parts, it can be seen that the switch proper includes a frame made up of the vertical angle iron 5 and the horizontal spaced bars 6 and 7 extending therefrom, the bar 6 being substantially longer than the bar 7 and being provided with a foot portion 8 to which the upper end of the elongated strip spring 9 is secured, the spring having a natural tendency to spring to the position shown in Figure 3.

Feedable through a threaded opening in the spring 9 is the adjusting screw 10 and to this screw is attached one end of the thermostatic wire 11, the opposite end being attached to the post 12 which extends through an insert of insulation material in one flange of the vertical frame member 5, this insert being denoted by numeral 13.

The post 12 is connected by a jumper 14 to one of a pair of adjacent wires insulated from each other by insulation of a fire destructible character and extending over the room or space to be protected. A swingable trip arm 15 is pivotally connected as at 16 to the free end of the bar 7 and this arm 15 is connected by the jumper 17 to one side of a source of current 18, the other side of the source of current having one end of a free wire 19 secured thereto and disposed in close proximity to the jumper 14 as shown in Figure 5 so that whenever the insulation 19a which covers and separates the same burns off and the wire comes together, a circuit is established through the conductor 19, jumper 14, thermostatic wire 11, spring 9, arm 15, jumper 17 and battery 18 or other source of current which results in the heating of the wire 11 and the expansion thereof to release the spring 9 so that the fibre lug 20 at the lower end thereof disengages from the arm 15. To insure good connection between the adjusting screw 10 and the arm 15 a copper wire 23 is trained along spring 9 to a copper or bronze arch contact 20' to arm 15. And to insure against burning and sticking at point of suspension lug 20 is a fibre support. Numeral 21 represents a bomb containing carbon tetrachloride or some other chemical of fire extinguishing property, the bomb being provided with a hook 22 for engagement over the arm. Obviously, when the arm is released to the position shown in Figure 3, the hook 22 will slide off of the arm and will perform its function as it breaks against the floor or some other structure.

Numeral 24 represents an alarm circuit containing the annunciator 25 and a switch generally referred to by numeral 26 which includes a contactor 27 normally maintained in closed position by a spring 28. Extending from this contactor 27 is the cable 29 trained over a suitable number of pulleys 30 to connect to the aforementioned swingable arm 15.

Obviously, when the arm 15 is released to the position shown in Figure 3, the cable 29 will be slackened sufficient to permit the contactor 27 to regain circuit closed position and result in the energization of the alarm 25, simultaneously with the dropping of the bomb 21.

While the foregoing specification sets forth the invention in specific terms, it is to be understood that numerous changes in the shape, size and materials may be resorted to without departing from the spirit and scope of the invention as hereinafter claimed.

Having described my invention, what is claimed as new is:

1. In combination, a support, a swingable arm on the support adapted to swing from a horizontal to a vertical position, a thermostatic element secured at one end to the support, a lug on the opposite end of the element for sustaining the arm in horizontal position, said thermostatic element adapted to flex under an increased tem-

perature to move the lug from the arm, a spring on the element in normal tensional engagement with the arm to urge said arm downwardly when released by the displacement of the lug, and a fire extinguishing bomb slidable on the arm and adapted to be released from the arm when the arm moves downwardly.

2. In combination, a support, a swingable arm on the support adapted to swing from a horizontal to a vertical position, a thermostatic element secured at one end to the support, a lug on the opposite end of the element for sustaining the arm in horizontal position, said thermostatic element adapted to flex under an increased temperature to move the lug from the arm, a spring on the element in normal tensional engagement with the arm to urge said arm downwardly when released by the displacement of the lug, a fire extinguishing bomb slidable on the arm and adapted to be released from the arm when the arm moves downwardly, a source of current, said arm, thermostatic element and spring being of current conducting material, a connector extending from one side of the current source to the arm, a pair of remotely extending conductors provided with fire destructible insulation between the same, one of said conductors being connected to the other side of the source of current and the other conductor to the said thermostatic element.

FREDERICK C. RAHLMANN.