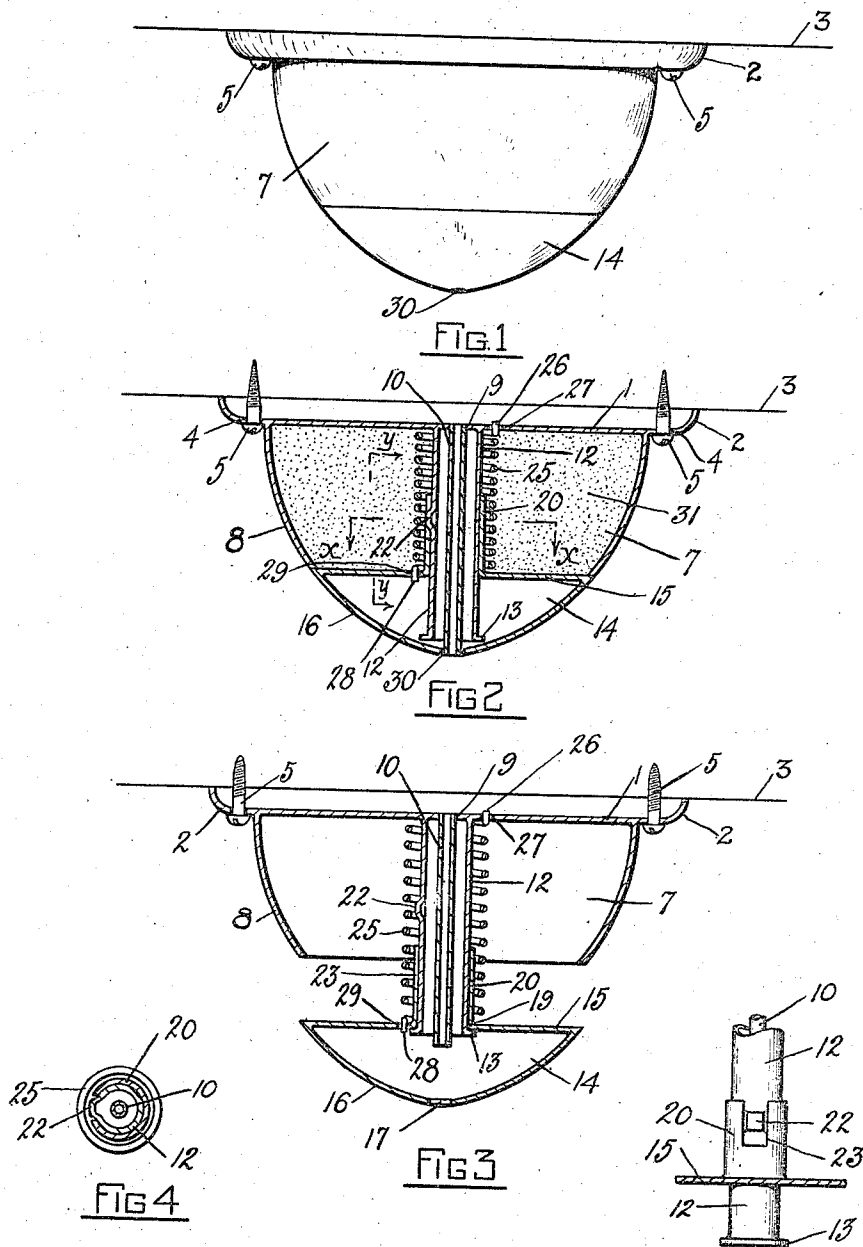


G. A. THORNTON.
FIRE EXTINGUISHER.
APPLICATION FILED MAY 23, 1912.

1,063,228.

Patented June 3, 1913.



WITNESSES

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FIG 5

INVENTOR

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FIRE-EXTINGUISHER.

1,063,228.

Specification of Letters Patent.

Patented June 3, 1913.

Application filed May 23, 1912. Serial No. 699,168.

To all whom it may concern:

Be it known that I, GEORGE A. THORNTON, a citizen of the United States, residing at Pawtucket, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Fire-Extinguishers, of which the following is a specification.

My invention relates to automatic fire extinguishers and its primary purpose is to automatically distribute fire extinguishing material when the temperature reaches a predetermined point.

A further object is to attain these ends in a structure adapted to use in the house, automobiles, launches, and elsewhere.

A further object is to attain these ends in a structure that is inexpensive to manufacture and certain in operation.

To the above objects essentially my invention consists in such parts and such combination of parts as fall within the scope of the appended claims.

In the accompanying drawings which form a part of this specification, Figure 1 is a side elevation of my extinguisher, Figs. 2 and 3, vertical central sections of the same in closed and open positions respectively, and Figs. 4 and 5, sections on lines *x-x* and *y-y* respectively of Fig. 2.

Like reference characters indicate like parts throughout the views.

My device in its present and preferred form comprises a base plate 1 provided with upwardly bent ends 2 adapted to bear against the ceiling 3 or other surface from which my device is intended to depend. In some instances the base plate 1 near its margin is provided with a plurality of openings 4 adapted to receive screws 5 for attachment.

In the majority of instances, however, as will be later pointed out, perforations and screws may be omitted and my device may be suspended otherwise. Extending downwardly from the base plate 1 is a receptacle 7 comprising an inwardly curved side wall 8 with an open lower end. The center of the plate 1 is provided with an opening 9 and in this opening is fixed by solder or otherwise a downwardly depending rod 10 which in the present instance is tubular. Surrounding this rod, and interspaced therefrom concentrically thereto, is a tube 12, whose upper end is soldered or otherwise fixed to the base 1, and whose lower end is

provided with an integral annular external shoulder 13. The tube 12 is somewhat shorter than the rod 10. A slidable head 14 comprises a flat plate or disk 15 and a rounded plate 16 integral with or fixed to the plate 15 and provided with a central opening 17. The plate 15 is provided with a central, circular opening 19 around which extends vertically a sleeve 20 integral with the plate 15 and in slidable contact with the tube 12. The tube 12 is provided intermediate in its length with a lug or projection 22 preferably pressed up from the metal wall of the tube and adapted to register in a vertically disposed open slot 23 in the upper portion of the sleeve 20. Surrounding the tube 12 and the sleeve 20 and preferably interspaced therefrom is a helical spring 25, whose upper end 26 extends through an opening 27 in the plate 1, and whose lower end 28, extends through an opening 29 in the plate 15. This spring is of considerable length and is made of resilient material, so that it will not substantially set in coiled position, but will tend to uncoil if released. The end of the rod 10 is adapted to enter the opening 17 and is of less diameter than the latter to permit the insertion therein of solder 30, which connects the rod with the portion 16 of the head. The solder is of such consistency as to fuse at a predetermined degree of heat, the degree of heat being determined by the temperature by which it is desired that the device shall operate. The receptacle 7 is provided with a fire extinguishing material, in the present instance powder, 31.

The operation of the device is as follows:—When the heat fuses the solder 30 the head 14 is released and under the pressure of spring 25 and is forced downwardly from the position shown in Fig. 2 to that shown in Fig. 3, and rests upon the flange or shoulder 13. During its initial descent the head 14 is prevented from rotation by the lug 22 in slot 23, but after the upper end of the sleeve 20 passed below the lug 22 the head 14 begins to rotate under the tension of the spring 25, and the rotation continues with the plate 15 resting upon the shoulder 13 until the pent-up energy in the spring is exhausted. Thus the head 14 has a rectilinear movement and a contemporaneous rotary movement, which permits the material 31 to fall downwardly by

gravity out of the receptacle 7 upon the plate 15 of the head, whence the material is scattered over an extended area below the device by centrifugal action.

5 The rod 10 may be solid, but it is preferably tubular, as herein shown, in order to permit the passage therethrough of a gas pipe or electric lighting wires when it is desired that my device be employed within
10 doors. When used in this manner the attaching screws 5 may be omitted, and support will be afforded the device by the engagement of the tubular rod 10 with the gas pipe by friction or otherwise.

15 What I claim is,—

1. In an automatic fire extinguisher, the combination of a hollow body provided with an open end, a fixed suspension rod in the body, a rotary head removably connected
20 with the rod and in contact with the open end of the body, and means independent of the rod for rotating the head.

2. In an automatic fire extinguisher, the combination of a hollow body provided
25 with an open end, of a rod fixed in the body and extending below the same, a vertical tube fixed in the body adjacent with the rod and provided with a shoulder upon its lower end, a head detachably connected to the rod
30 below the body, a sleeve upon the head slidable upon the tube, and a spring in the body pressing downwardly upon the head.

3. In an automatic fire extinguisher, the combination of a body comprising a base
35 and a side wall, said base being provided with an opening, a tube fixed to the base and surrounding the rod and provided with a shoulder, a head detachably connected to the rod below the body, a sleeve upon
40 the head slidably engaging the tube, and a spring having one end pressing against the

base and the opposite end pressing against the head.

4. In an automatic fire extinguisher, the combination of a body comprising a base 45 and a side wall, a vertical rod fixed to the base and extending below the wall, a tube fixed to the base, adjacent to the rod, provided with a shoulder, and provided with a lug above the shoulder, a head detachably 50 fixed to the rod below the wall, a sleeve upon the head slidable upon the tube and provided with a longitudinal slot adapted to receive the lug, and a spring surrounding the tube and sleeve and abutting at one end 55 against the base and at the other end against the head.

5. In an automatic fire extinguisher, the combination of a body comprising a base 60 and a side wall, a rod fixed in the body and extending below the wall, a tube in the body adjacent to the rod and of less length than the rod, and provided with a shoulder, a head comprising a top plate adapted to contact with the end of the wall, and provided 65 with a central opening, a curved plate fixed to the top plate and provided with an opening in a line with the opening in the top plate, and a sleeve fixed to the top plate around the first mentioned opening and 70 slidably engaging the tube, the rod entering the opening in the curved plate and engaged therein by solder, and a vertical spring within the wall of the body having one end abutting against the base and the other end 75 abutting against the top plate.

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

GEORGE A. THORNTON.

Witnesses:

HORATIO E. BELLOWES,
FRED W. PERKINS.