N. A. BERNA.

VALVE.

APPLICATION FILED APR. 29, 1919.

1,315,079. Patented Sept. 2, 1919.

Fig. 1.

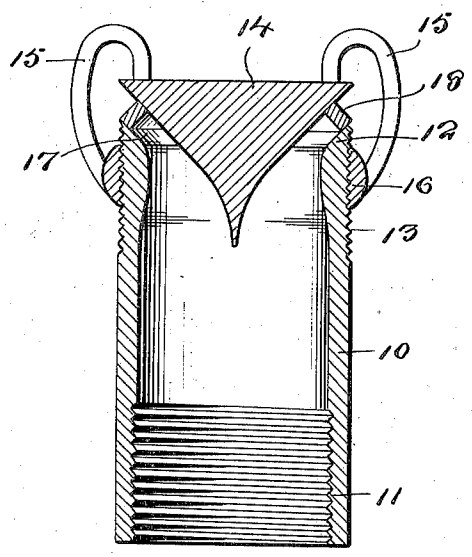


Fig. 2.

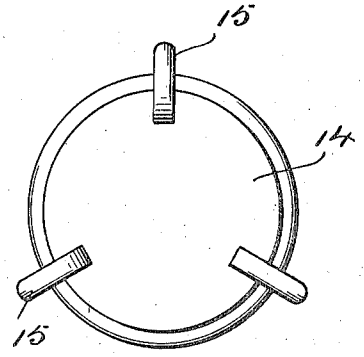
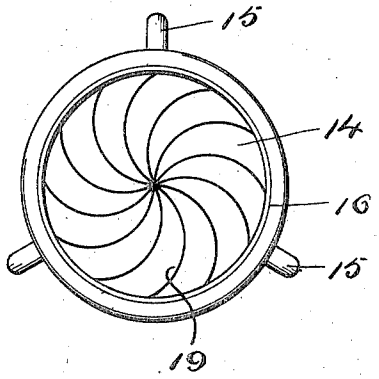


Fig. 3.



Witnesses

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VALVE.

1,315,079. Specification of Letters Patent. Patented Sept. 2, 1919.

Application filed April 29, 1919. Serial No. 293,392.

To all whom it may concern:

Be it known that I, NICK A. BERNA, a citizen of the United States, residing at Racine, in the county of Racine and State of Wisconsin, have invented new and useful Improvements in Valves, of which the following is a specification.

This invention relates to valves and particularly to thermostatically controlled valves as used in automatic fire extinguishing systems.

The invention, therefore, aims to provide a normally closed valve or sprinkler head, which will be automatically opened when the temperature reaches a predetermined degree.

With the above and other objects in view, the invention includes a valve, which is normally separated from its seat by a gasket of highly fusible metal, the gasket acting to normally close the passage through the valve but which, when melted, will permit of the free passage of the extinguishing fluid therethrough, the novel construction of the valve head acting to distribute the fluid over a wide area.

The invention further includes the following novel features and details of construction, to be hereinafter more fully described and illustrated in the accompanying drawings.

In the drawings:

Figure 1 is a longitudinal sectional view of a valve constructed in accordance with the present invention.

Fig. 2 is a top plan view of the same.

Fig. 3 is a plan view looking at the underside of the valve head, the latter being detached from the valve casing.

Referring more particularly to the drawings, like characters of reference denote corresponding parts throughout the several views.

In the practical embodiment of the invention, as herein illustrated, there is provided a casing 10, which is preferably cylindrical in form and may be provided at one end with threads 11 for detachable connection with a sprinkler system. The opposite end of the casing 10 is provided with a beveled seat 12, the casing being also exteriorly threaded at this end, as shown at 13. The valve further includes a valve head 14, which is preferably of conical formation and which has extending from its base outwardly curved radially disposed arms 15. The extremities of these arms are threaded, as shown at 16, for adjustable engagement with the threads 13 of the casing 10. The valve head 14 is normally spaced from the seat 12, the apex of the cone extending within the casing so as to form an annular outwardly directed passage 17. This passage is normally closed by means of a gasket 18, which is formed of a highly fusible metal, which is adapted to be melted by a predetermined degree of heat, so as to open the passage 17 for the distribution of water or other extinguishing fluid.

The shape of the passage 17 and the valve head 14 is such as to direct the water or other fluid outwardly to distribute the same over a wide area to add to the extent of this area of distribution. The conical surface of the head 14 is spirally grooved, as shown at 19, these grooves imparting a centrifugal action to the escape fluid, so as to cover a greater area.

The invention is susceptible of various changes in its form, proportions and minor details of construction and the right is herein reserved to make such changes as properly fall within the scope of the appended claims.

Having described the invention, what is claimed is:

1. A valve comprising a cylindrical casing formed at one end with a valve seat, a valve head, means carried by the head and threadedly secured to the seat for adjustably securing the head and seat together and a fusible gasket secured between the head and seat.

2. A valve comprising a casing formed at one end with a valve seat, a substantially cone-shaped head, means carried by said head and threadedly secured to said seat for adjustably securing the head and seat together, spirally arranged grooves formed in said head and a fusible gasket secured between the head and seat.

3. A valve comprising a cylindrical cas-

ing formed at one end with a valve seat, a substantially cone shaped valve head, radially disposed arms carried by the valve head and threadedly connecting the same with the cylindrical casing, so that the apex of the head enters the casing and is spaced from the valve seat to provide an annular outwardly directed passage and a gasket of highly fusible metal for closing the passage and spacing the valve head from the seat.

In testimony whereof I affix my signature.

NICK A. BERNA.