

(No Model.)

J. KANE.
AUTOMATIC SPRINKLER.

No. 484,321.

Patented Oct. 11, 1892.

Fig: 1.

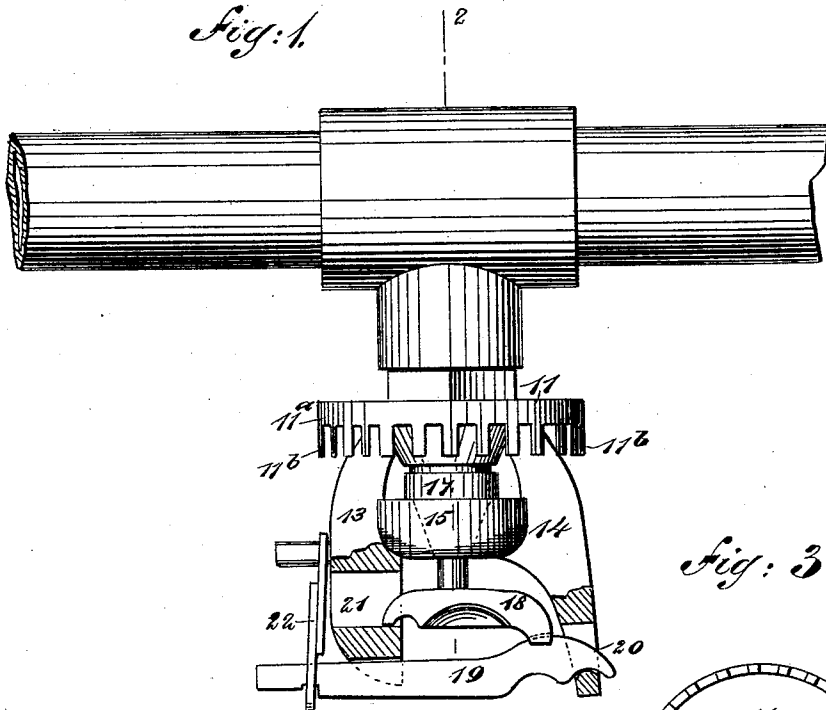


Fig: 3.

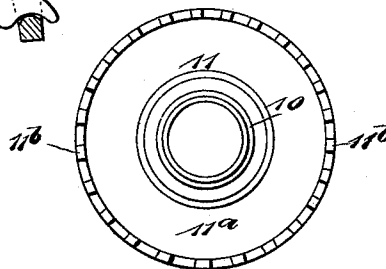
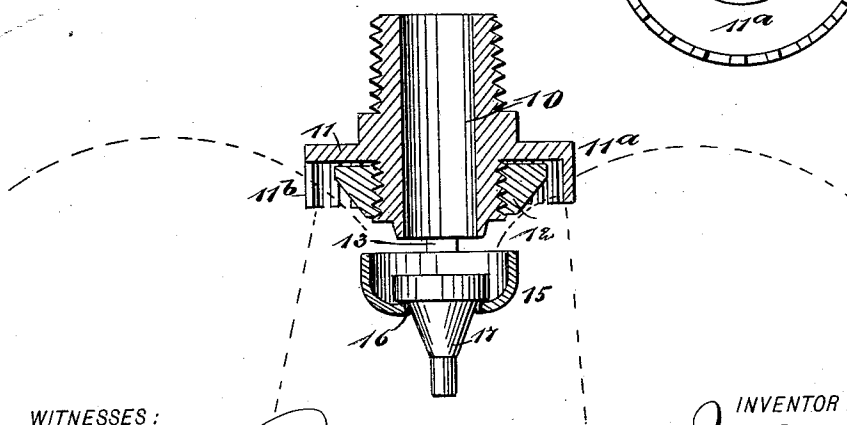


Fig: 2.



WITNESSES:

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JOHN KANE, OF PHILADELPHIA, PENNSYLVANIA.

AUTOMATIC SPRINKLER.

SPECIFICATION forming part of Letters Patent No. 484,321, dated October 11, 1892.

Application filed November 13, 1891. Serial No. 411,775. (No model.)

To all whom it may concern:

Be it known that I, JOHN KANE, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Automatic Sprinklers, of which the following is a full, clear, and exact description.

My invention relates to an improvement in automatic sprinklers especially adapted for use in extinguishing fires; and the object of the invention is to so construct the sprinkler that it will be provided with a distributor capable of deflecting the water in a manner to spray it downward and also outward, and to further construct the sprinkler so that it will be exceedingly simple, durable, and economic.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the sprinkler, partly in section. Fig. 2 is a vertical section taken, practically, on the line 2 2 of Fig. 1, the parts being in position to discharge water; and Fig. 3 is a bottom plan view of a portion of the sprinkler, illustrating the especial construction of distributor.

The prime feature of the invention consists of the location and construction of what I term the "distributor"—that is, that portion of the device whereby the stream of water is deflected and made to pass downward or upward from the deflector and also out from the sides thereof.

The body of the sprinkler consists of a sleeve 10, threaded at both ends, and integral with the sleeve the deflector 11 is formed, which deflector is of circular shape and comprises a disk-like body or plate 11^a and teeth 11^b, projected at an angle, preferably a right angle, from the plate or body, the threaded surfaces of the sleeve being above and below the deflector. Upon that portion of the sleeve located within the distributor a collar 12 is secured, which collar has formed upon opposite sides arms 13 and 14, the said arms being connected by a cup 15, provided with an aperture 16 in the bottom thereof. The cup is

adapted to carry a valve 17, which valve is provided with a conically-shaped body and preferably with a straight stem. The valve is normally held to cover the opening at that end of the sleeve contained within the distributor, which is accomplished by means of two locking-levers 18 and 19, the locking-lever 19 being the lower one, and one end of said lever is passed through an opening 20 in the arm 14, which is longer than the arm 13, and through a recess in the arm 13. The upper lever 18 is shorter than the lower one and has a bearing at one end upon the lower lock-lever and at the other end against a wall of an opening 21, produced in the shorter arm 13, as shown in Fig. 1.

The stem of the valve 17 rests upon the upper or shorter lever 18, and when both levers are in the horizontal position—that is, practically parallel—the valve is forced upward to an engagement with the sleeve 10 and closes the exit end thereof. The levers are held in a position to accomplish this result by means of a link 22, constructed in two sections, the sections being united by a fusible connection, and one end of the link engages with one extremity of the lower lock-lever 19, while the other end of the link is supported by a stud formed upon the arm 13 of the frame of the device.

When the temperature is at a certain degree of heat, the fusible connection uniting the sections of the link is melted and one section leaves the other, thus freeing both of the lock-levers 18 and 19, which at that time drop from the device, and the valve 17, being released, finds a seat within the cup 15, unclosing the exit end of the sleeve 10 and permitting the water to escape therefrom. In escaping the water strikes the cup and the valve and is deflected in a direction to impinge upon the distributor 11, whereupon the teeth 11^b of the distributor forces the water downward or upward, according to the location of the device, and the water also finds an exit through the spaces intervening the teeth and is sprayed laterally, covering a suitable area.

The shape of the lock-levers 18 and 19 may be changed, and I do not lay claim to the particular description of said levers or to the application of the levers to a valve for the purpose of maintaining that valve in a certain

position; nor do I claim the fusible link whereby the levers are, under certain degrees of temperature, maintained in their locking position, and under higher degrees of temperature released or freed from connection with the device.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

10 An automatic sprinkler consisting in the tube 10, having an external circular flange or plate 11^a, provided with depending peripheral teeth 11^b, an inclined collar 12, screwed upon the lower end of the tube and provided with
15 depending arms 13 14, apertured, as at 21 20,

respectively, and connected above the apertures by a cup 15, having a perforated bottom, a valve 17, closing the lower end of the tube and having a stem extending down through the aperture in the cup, a lever 18, on which 20 the stem rests, supported at one end in aperture 21, a second lever 19, supporting the lever 18 and resting at one end in aperture 20, and a link supporting the other end of the lever 19 and formed of two overlapped fusibly- 25 connected sections, substantially as set forth.

JOHN KANE.

Witnesses:

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THOS. A. LYNN.