

No. 889,972.

PATENTED JUNE 9 1908.

A. SCHMIDT.
DISTRIBUTING NOZZLE.
APPLICATION FILED JULY 19, 1907.

2 SHEETS—SHEET 1.

Fig. 1.

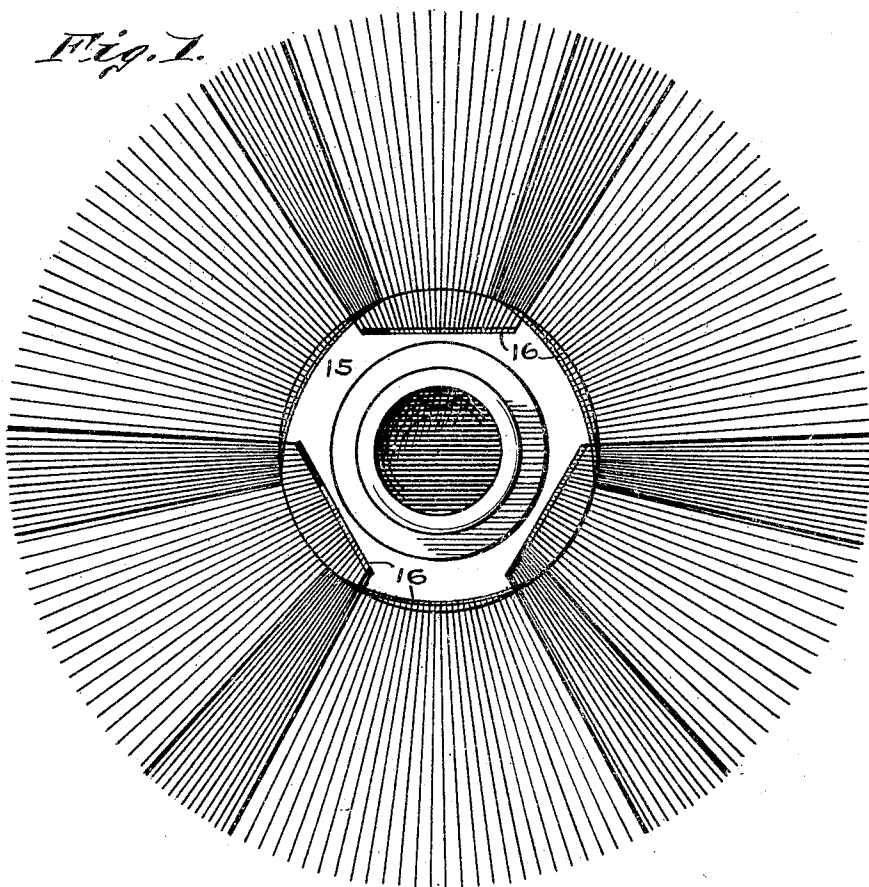
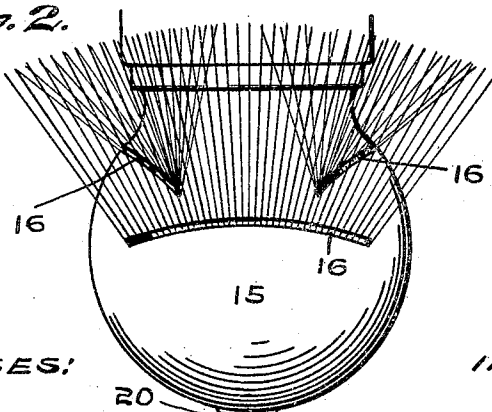


Fig. 2.



WITNESSES:

L. B. Moerner

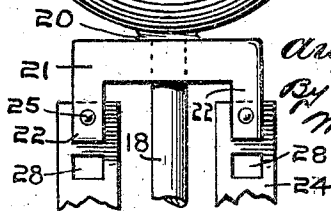
Wm. H. Shurtz

INVENTOR

Augustus Schmidt,

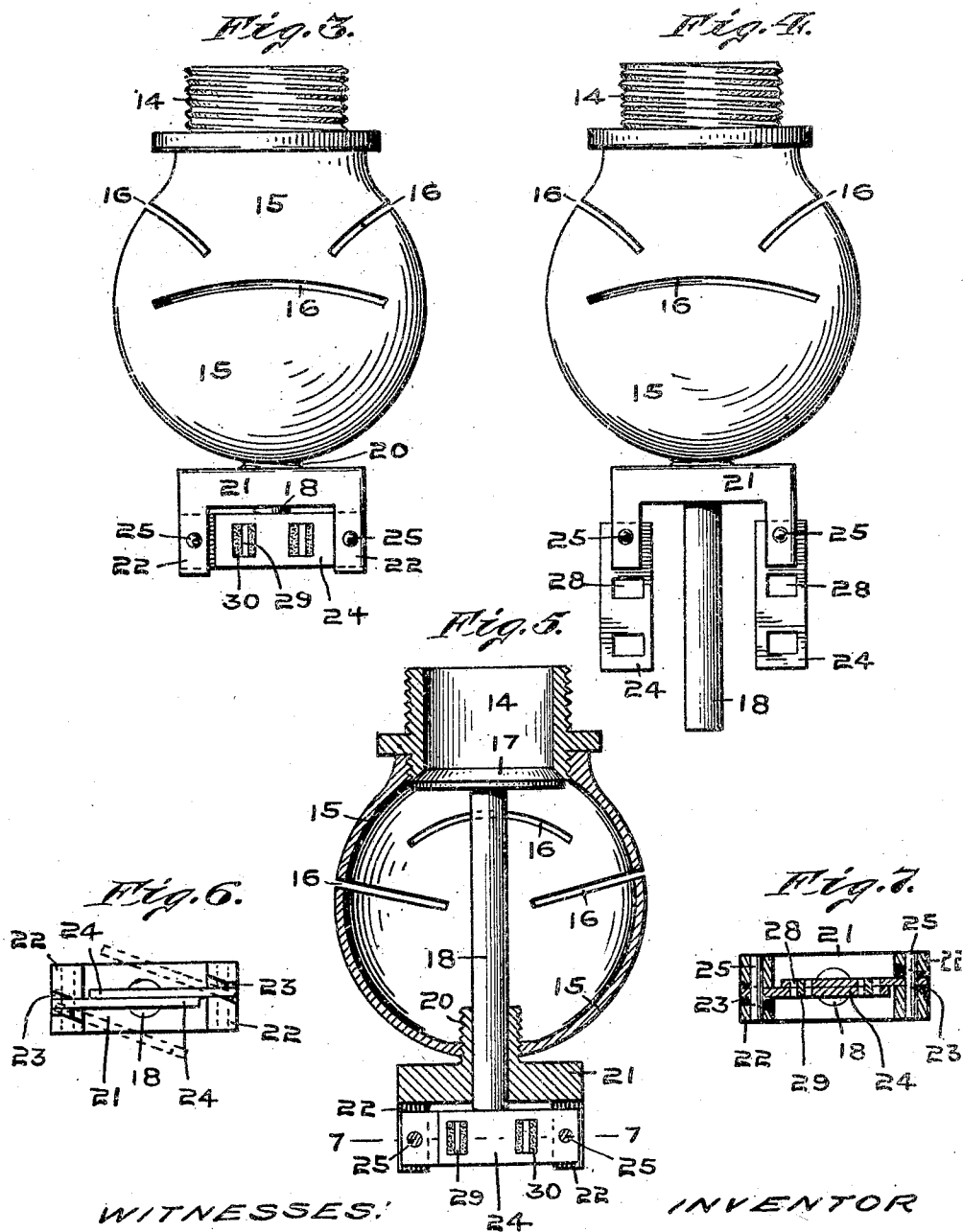
By Minton Moerner

ATT'YS.



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2 SHEETS—SHEET 2.



WITNESSES:
L. B. Woerner
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UNITED STATES PATENT OFFICE.

AUGUSTUS SCHMIDT, OF INDIANAPOLIS, INDIANA.

DISTRIBUTING-NOZZLE.

No. 889,972.

Specification of Letters Patent.

Patented June 9, 1908.

Application filed July 19, 1907. Serial No. 384,493.

To all whom it may concern:

Be it known that I, AUGUSTUS SCHMIDT, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Distributing-
Nozzles, of which the following is a specification.

This invention relates to nozzles for distributing water, and contains principles of construction to permit it to be classified with those nozzles known as the "fusible" type, which are attached to the pipe lines employed for protecting buildings against the spreading of fire; the nozzle being provided with a fusible-lock that is capable of being set off by the action of the heat and thus cause the water to be released automatically.

The object of the invention is to provide nozzles for distribution of water which are capable of throwing wide radial sheets of water; the nozzle being provided with slots which are staggered, or in other words, their ends overlap one another, so that the sheets of water will overlap as they are emitted and flow from the nozzle, thereby precluding the possibility of any portion of the surface area, within the capacity of the nozzles, from being thoroughly drenched.

Figure 1 is the top or plan view of my distributing nozzle in action, and shows how the several sheets of water overlap one another to form a continuous circular sheet of water around said nozzle. Fig. 2 is the side elevation of the nozzle in operation and further illustrates the relation and courses of the several sheets of water as they recede from the nozzle. Fig. 3 is a side elevation of the nozzle and shows the relative location of the slots through which the water is discharged. Fig. 4 is a view similar to Fig. 3 except that the fusible-lock and valve are open, as when the nozzle is in operation. Fig. 5 is a central vertical sectional view of the nozzle. Fig. 6 is a plan view of the fusible-lock. Fig. 7 is a horizontal sectional view of the fusible-lock on the dotted line 7—7 in Fig. 5.

The distributing nozzle consists of an almost spherical hollow shell or ball 15, provided with an inlet orifice at its top. This orifice has internal threads and receives a threaded sleeve 14, having its lower and inner edge cut flaringly to form a valve-seat for the valve 17. The upper portion of the sleeve 14 is provided with external threads by which suitable connection can be made

with hose or piping, this depending on the nature of the work expected of the nozzle.

The chief feature of my invention, consists in providing the hollow ball 15, with a plurality of long, narrow, slots 16, which are staggered with relation to one another, so that thin, wide, sheets of water which overlap one another, are thrown from the nozzle, thereby insuring a thorough drenching of the surface area lying within the capacity of the nozzle. The distribution of water from the slots and their relative arrangement, as shown in the drawings, will insure a more perfect drenching within the capacity of the nozzle than those nozzles having numerous perforations, for, in the latter, there is no arrangement whereby the streams may positively be directed so that they will overlap one another.

The nozzle is provided with a valve 17 which rests normally against and seals the lower end of the sleeve 16, and holds the water back. The valve is provided with a stem 18 which extends downward and through an aperture in the boss 20 on the yoke 21, which forms a frame for a fusible locking device. The boss 20 has external threads and is screwed in to the threaded aperture located in the hollow ball 15. The yoke 21 is formed by cutting away its central portion and leaving the end extensions 22. These extensions are provided with slots 23, which receive the plates 24, and these plates are pivotally retained by the transverse pins 25. These plates are secured together with fusible metal and form a support for the valve stem 18, and by which means the valve 17 is held to normally close the inlet to the hollow ball 15. I have found by experience that the pressure of the water against the face of the valve 17 may be of such force as to cause accidental separation of the plates 24, thereby prematurely opening the valve and thus causing damage by water. To obviate disaster resulting from this source, I provide each plate 24 with a plurality of holes 28 which register when the plates are brought together. Through each set of registering holes 28, I place a metal block 29, which fits the vertical diameter of said holes. These blocks extend the entire thickness of the two plates and thus help to sustain the weight supported by said plates. The blocks 29 are held into position by the fusible metal 30, which secures the plates 24. To prevent interference with the action of

the valve-stem 18 when the plates 24 separate, I form the slots 23 in the extension 22 of the yoke 21 somewhat wider than the thickness of the plates 24, while the opposite sides and ends of said slots are cut on a taper (see Figs. 6 and 7) which permit the plates to spread (as shown by the dotted lines in Fig. 6) and allow the valve stem 18 to pass uninterruptedly between them.

10 Having thus fully described my said invention, what I desire to secure by Letters Patent, is—

1. In a nozzle of the character described comprising a hollow shell provided with long narrow slots through which sheets of water of like degree may discharge, a valve for controlling the inlet to said nozzle, a fusible locking device including the frame, extensions on said frame, said extensions provided with slots having their opposite sides and ends cut on a taper, overlapping plates provided with registering apertures pivotally secured to said extensions and resting in the said slots, blocks adapted to be inserted into said registering apertures and fusible metal to hold said blocks in said apertures.

2. The combination, with a nozzle comprising a hollow shell provided with long narrow slots arranged to overlap one another, a valve to normally close the inlet to said nozzle and provided with a valve-stem adapted to extend centrally through and to the exterior of said nozzle, an adjustable means adapted to take over said valve-stem and to form a base for securing the valve supporting plates, plates pivotally secured to said adjustable means and adapted to nor-

mally support the valve, non-fusible blocks extending through said supporting plates and adapted to normally hold them together and fusible metal to hold said blocks in position.

3. The combination, with a nozzle comprising a hollow shell provided with long narrow slots which are arranged to overlap one another, a valve within said nozzle adapted to normally close the inlet thereto and provided with a valve-stem adapted to extend centrally through and to the exterior of said nozzle, an adjustable means engaging said nozzle and adapted both to take over said valve-stem and form a base for securing the valve supporting plates, means for changing the relationship of the nozzle and said adjustable means, the latter means being provided with registering slots cut on oblique planes, valve supporting plates pivotally arranged within the oblique slots and adapted to normally overlap each other and support the valve, said plates being provided with registering apertures, non-fusible blocks adapted to be introduced into said registering apertures in both plates, to normally hold said plates in contact with each other and fusible metal to hold said blocks within the apertures of said plates.

In witness whereof, I have hereunto set my hand and seal at Indianapolis, Indiana, this 15th day of July, A. D. one thousand nine hundred and seven.

AUGUSTUS SCHMIDT. [L. s.]

Witnesses:

F. W. WOERNER,
E. E. MILLER.