

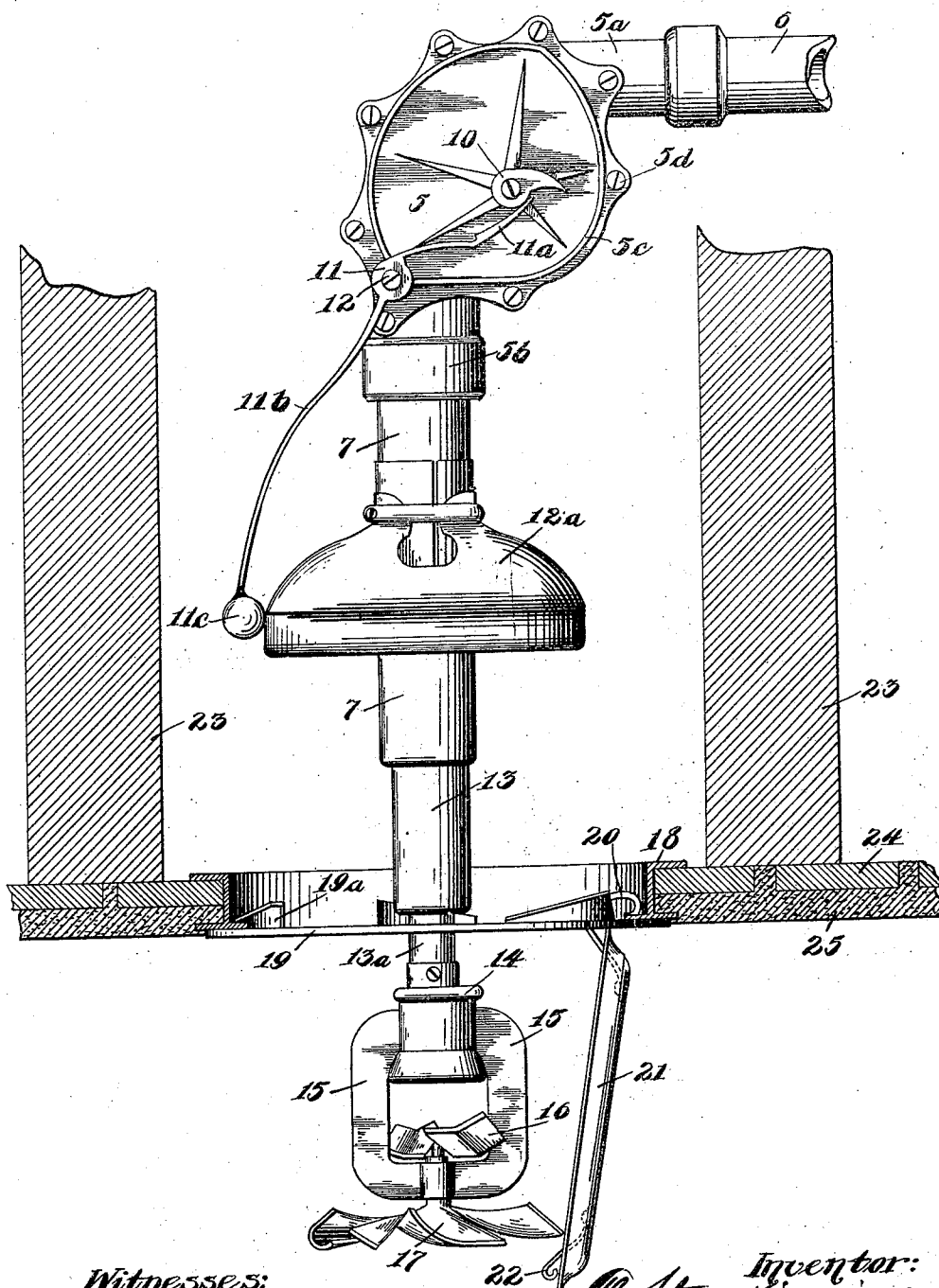
T. J. STANKIEWICZ.
 AUTOMATIC SPRINKLER SYSTEM.
 APPLICATION FILED NOV. 25, 1911.

1,031,740.

Patented July 9, 1912.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses:
 M. H. Cichelman.
 M. J. Milord

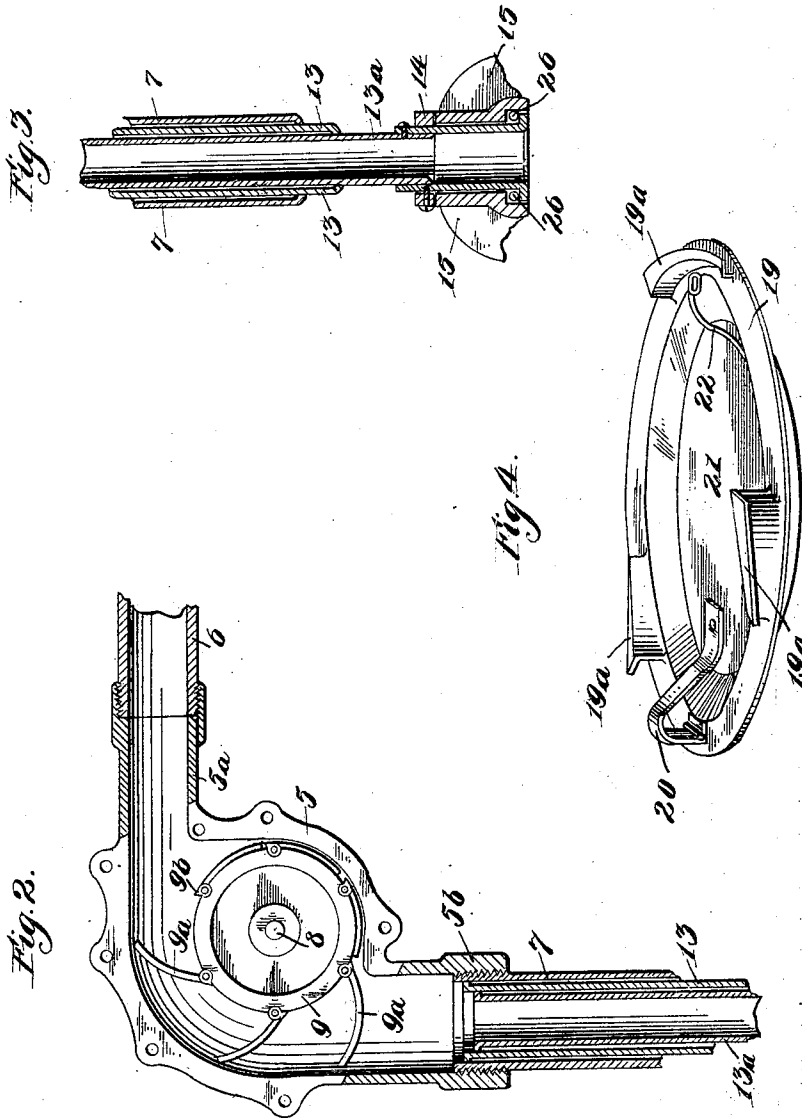
Inventor:
 T. J. Stankiewicz
 By Edmund S. Sullivan
 Atty.

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Witnesses:
 M. C. Eichelmann
 M. A. Milord

Inventor:
 T. J. Stankiewicz
 By *Lebanon* *Att'y.*

UNITED STATES PATENT OFFICE.

TADJUS J. STANKIEWICZ, OF CHICAGO, ILLINOIS.

AUTOMATIC SPRINKLER SYSTEM.

1,031,740.

Specification of Letters Patent.

Patented July 9, 1912.

Application filed November 25, 1911. Serial No. 662,347.

To all whom it may concern:

Be it known that I, TADJUS J. STANKIEWICZ, citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Automatic Sprinkler Systems, of which the following is a specification.

This invention relates to certain improvements in automatic sprinkler-systems and the particular improvements which constitute the subject matter upon which I claim a patent relate to the means for discharging the water into a room where the system is installed and to the operation of a suitable alarm device connected with such discharge and operated by the flow of water through the discharge device.

More specifically, my invention relates to a discharge nozzle having extensible or telescopic functions, the means for supporting said nozzle when in inoperative position, and a rotatable alarm operating device which forms a part of the nozzle construction.

Some of the objects attained by the said improvements are certainty in the operation of the sprinkler when the conditions which call for its use are present; the concealing of the apparatus until it is needed in operation, and the thorough distribution of the system of water discharged from the nozzle through a suitable sprinkler head.

In the accompanying drawings, I have shown a preferred adaptation of my invention and improvements in the following views:—

Figure 1 shows partly in elevation and partly in section, my automatic sprinkling nozzle in operative position and relation when erected in the ceiling of an ordinary room; Fig. 2 is a cross-section of the automatic alarm operating device with its adjacent pipe sections; Fig. 3 is a longitudinal section of a portion of the telescoping members of the nozzle, and Fig. 4 is a perspective view of a cap or closure which serves to conceal the nozzle when not in use and which is automatically opened when water is flowing through the nozzle.

Referring to the details of the drawing, 5 represents generally a cast metal casing which has connected thereto and communicating therewith pipe extensions 5^a, 5^b, which are placed respectively at the upper and lower portions of the casing and serve as

conductors for water to and from the casing. This casing is supplied with a cover 5^c on one side which is removably connected therewith by screws 5^d. Arranged transversely of the casing having suitable bearings in the rear wall and cover thereof is a spindle 8 on which is rotatably mounted a wheel 9, to the periphery of which are pivotally mounted a series of curved blades 9^a the pivoted ends of which are formed with shoulders 9^b which limit the outward movement of the blades as clearly indicated in Fig. 2, while permitting the blades to fold against the wheel in the opposite direction.

The spindle 8 projects through the casing cover 5^c and has mounted thereon a curved pawl 10 which rotates with the spindle. At one side of and near the lower portion of the casing is a stud screw 12 on which is pivotally mounted a two-arm lever 11, one arm of which 11^a is in the path of rotation of the pawl 10, and the other arm 11^b of which is supplied with a hammer 11^c at its extremity which is so placed as to be brought into intermittent contact with a bell 12^a secured to a pipe 7 which extends from the branch 5^b of the casing 5.

The upper end of the pipe 7 is screwed into its connection 5^b as shown in Fig. 2, and telescopically mounted in this pipe are two other pipes 13, 13^a, formed with outwardly extending shoulders at their upper ends and inwardly extending shoulders at their lower ends. At the lower extremity of the inner pipe 13^a is a pipe coupling 14, having formed integrally therewith a yoke 15. In the lower portion of this yoke is rotatably mounted a water distributing member having diverging and twisted blades 16, so arranged as to effect the rotation of this member as the water discharged through the coupling 14 impinges thereon.

The device above described is preferably arranged and suitably supported between the joists 23 and the ceiling and floor which form the usual construction in buildings of the class to which my invention is applicable.

24 and 25 represent respectively the lath and plaster attached to the joists 23 in the usual manner. The lath and plaster have been cut away, in part to provide a suitable opening for an annular socket plate 18 which is set into the opening and supported by the laths. This plate has connected therewith a collar 19 on the upper face of

which are a series of beveled lugs 19^a formed with the overhanging flanges which serve to engage the lower flange of the socket plate 18 and thus removably attach the collar 19 to said plate. Connected with the collar 19, by a hinge 20, is a cover 21 which is provided with a spring latch 22 so formed and arranged as to engage the collar 19 and hold the cover in closed position until the latter is subjected to sufficient pressure from above to overcome the tension of said latch.

From the construction above described, assuming that the nozzle is housed between the joists 23 and above the ceiling connected with said joists, water permitted to flow through the casing 5 will force the blades 9^a outwardly and thereby rotate the spindle 8 with its pawl 10 which will produce an intermittent movement in the lever 11 and a consequent pounding of the hammer 11^c against the bell 12^a. Pressure of the water flowing through the pipe connection 5^b and impinging on the shoulders at the upper ends of the pipes 13, 13^a, and the members 16, 17, will cause said pipes to move downwardly their full limit, thus bringing the discharge end of the nozzle to a position within the room where the water will be distributed most effectively by the rapidly rotating members 16, 17. The same water pressure, it will be understood, will be sufficient to force the cover 21 to its open position as shown, thus permitting the extension of the sprinkler head proper to its full operative position. In order to facilitate the free rotative movement of the collar 14 with its yoke 15, I provide ball bearings 26 arranged as shown in Fig. 3.

I have not shown nor described any means for automatically permitting the water to flow through the nozzle described because same forms no part of this invention, which as heretofore stated, relates particularly to the nozzle or discharging mechanism in a sprinkler system and the means for supporting same within a ceiling.

Having thus described my invention what I claim as new, is:—

1. In a sprinkler system, a water-discharge

nozzle, comprising a casing, an extensible discharge pipe connected and communicating with said casing, means for extending said pipe through the pressure of water in said nozzle, and a water distributing head at the discharge end of said nozzle.

2. In a sprinkler system, a water-discharge nozzle, comprising a casing, a rotary valve mounted in said casing, an alarm sounding device operable by said valve, an extensible discharge-pipe communicating with said casing, and a rotatable head at the discharge end of said nozzle.

3. In a sprinkler system, a water distributing device, comprising a casing, a telescopic sectional nozzle communicating with said casing, and a rotatable sprinkler head mounted on the free end of said nozzle and consisting of a yoke and radial blades rotatably mounted on said yoke.

4. In a sprinkler system, an extensible sectional nozzle arranged above the ceiling of a room, a sprinkler head mounted on said nozzle, means for supporting said nozzle within the ceiling, said means adapted to release the nozzle when subjected to the pressure of water flowing from the nozzle.

5. In a sprinkler system, an extensible sectional nozzle arranged above the ceiling of a room, a sprinkler head on said nozzle, a collar set in the ceiling and a cover connected with said collar and adapted to conceal the nozzle from view and to release it when subjected to the pressure of water flowing through the nozzle.

6. In a sprinkler system, a nozzle formed in sections telescopically arranged, a sprinkler-head rotatably mounted on the discharge end of said nozzle, means for supporting and concealing said nozzle within a hollow wall, said means adapted to release and uncover said nozzle when water flows through the latter.

In testimony whereof I affix my signature in the presence of two witnesses.

TADIUS J. STANKIEWICZ.

Witnesses:

HATTIE B. LEHMAN,

M. A. MILORD.