

No. 871,029.

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G. BUELNA & A. R. POETT.

SPRINKLER.

APPLICATION FILED JUNE 13, 1906.

Fig. 1.

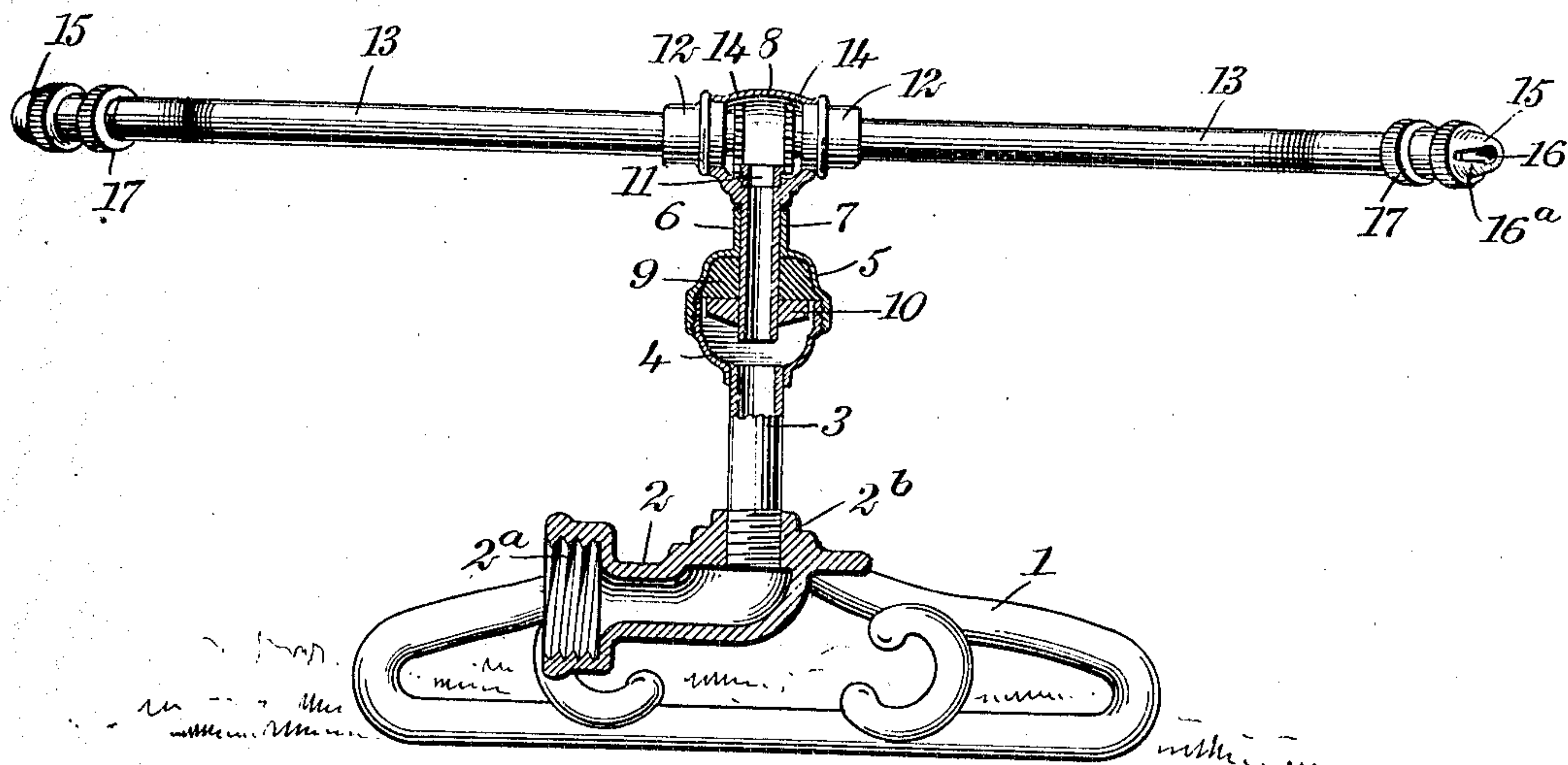


Fig. 2.

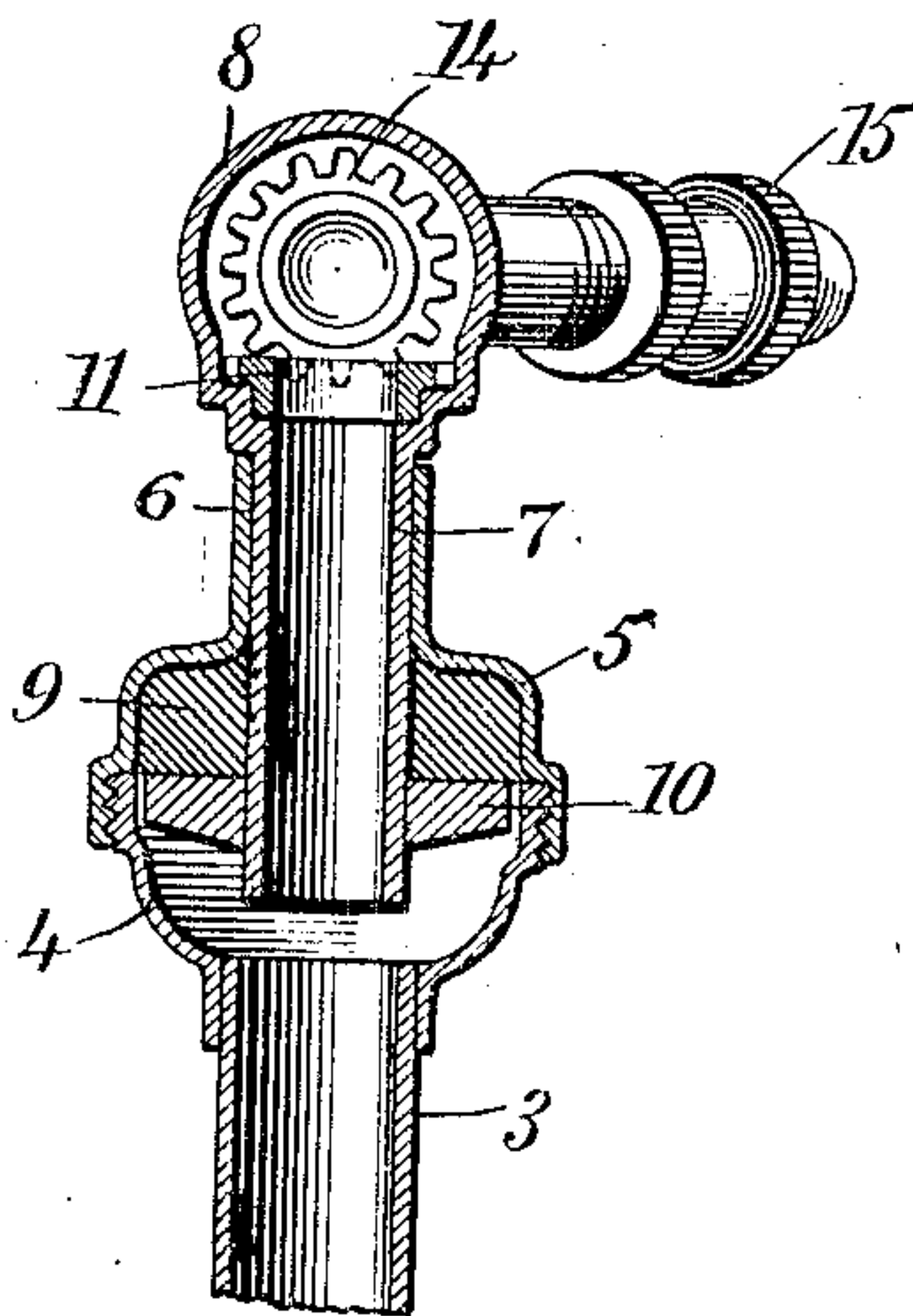


Fig. 3.

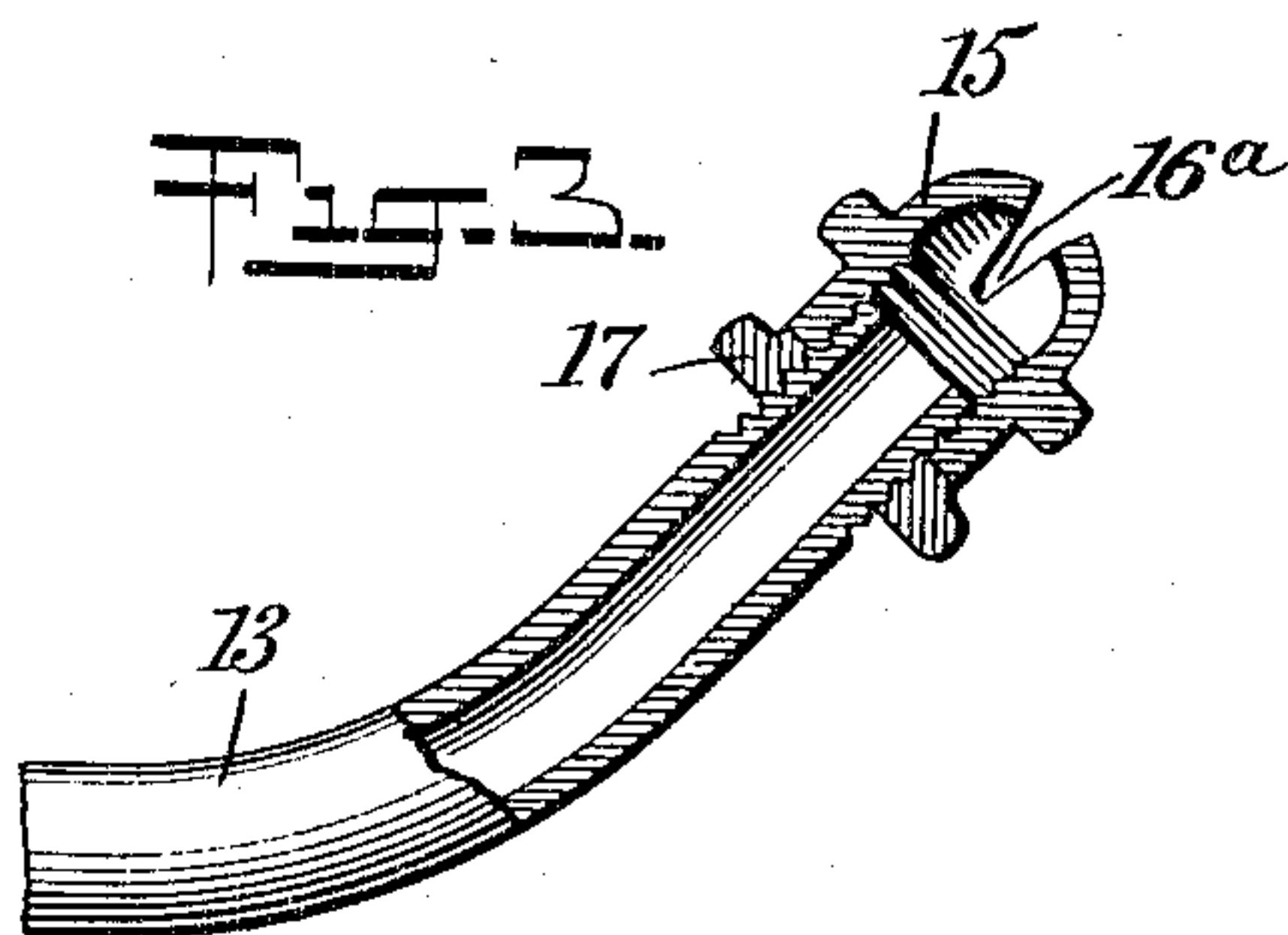
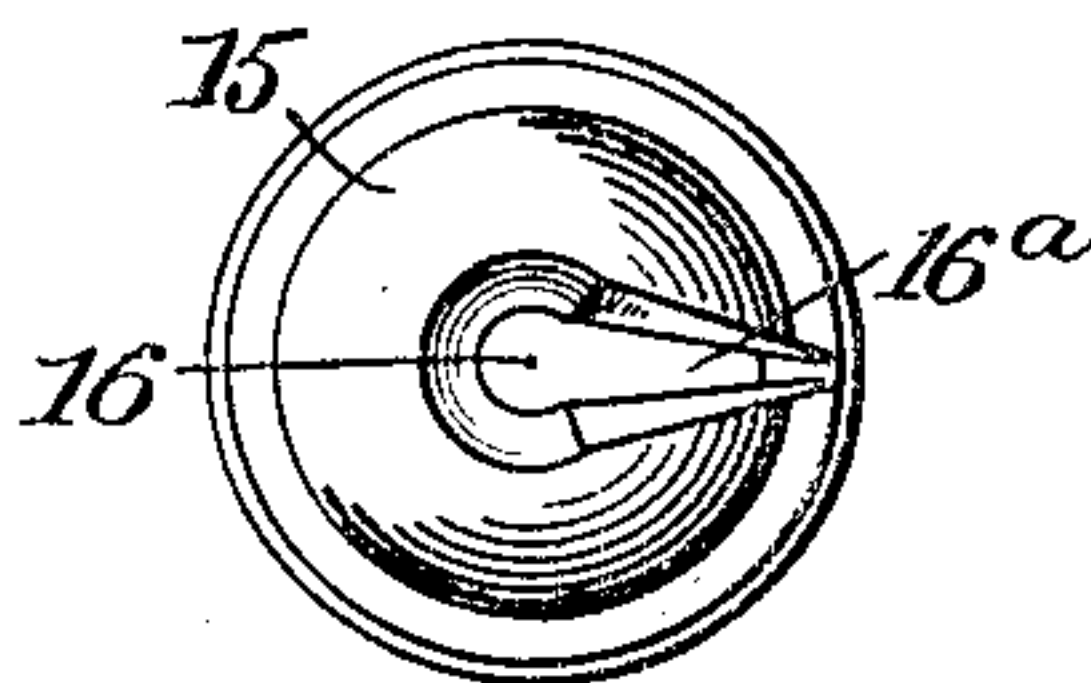


Fig. 4.



WITNESSES

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GUADALUPE BUELNA AND ALFRED REDINGTON POETT, OF SANTA BARBARA, CALIFORNIA.

SPRINKLER.

No. 871,029.

Specification of Letters Patent.

Patented Nov. 12, 1907.

Application filed June 13, 1906. Serial No. 321,492.

To all whom it may concern:

Be it known that we, GUADALUPE BUELNA and ALFRED REDINGTON POETT, citizens of the United States, and residents of Santa Barbara, in the county of Santa Barbara and State of California, have invented a new and Improved Sprinkler, of which the following is a full, clear, and exact description.

This invention is an improved sprinkler as used in sprinkling lawns, etc., relating to sprinklers which are placed at any point of the lawn and automatically revolved by the reactive force of the water and throwing the same thereabout.

One object of the invention is to produce a sprinkler of this character which is adjustable to throw a spray of water at any desired angle, thereby increasing or decreasing the radius at which the major part of the water falls; or if desired, the angle may be changed 180 degrees, in which case the rotation of the sprinkler will be reversed.

Another object of the invention is to provide an improved form of nozzle for the sprinkler to throw a fan-like spray, thereby distributing the water with equality and lightness.

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

Figure 1 is a longitudinal, central section of the sprinkler; Fig. 2 is a fragmentary, vertical section taken at right angles to Fig. 1; Fig. 3 is a fragmentary view of one of the sprinkler arms and in section, showing the application and construction of one of the nozzles, and Fig. 4 is an end elevation of a nozzle.

Referring to the drawing figures, the numeral 1 indicates a suitable base, preferably of ornamental construction as shown, and supporting at its center an elbow 2 having a horizontally disposed hose 2^a, a nut at one end and a vertical threaded aperture 2^b at its opposite end. Threaded into the aperture 2^b is a short, straight pipe 3 having fixed at its upper end an externally threaded cup 4 over which a dished cap 5 is engaged. This cap has, as shown, a vertical extension 6 at its center for receiving and rotatably embracing the depending stem 7 of a "T" fitting 8. The cap 5 is filled to the bottom of its threads with lead and then faced off, forming a bearing 9 against which a collar 10, preferably of brass and fixed upon the lower end of the stem 7, is adapted to bear. A shoulder is provided at the juncture of the stem with the head of the "T" 8 and rests on the top edge of the extension 6 when the water pressure from the sprinkler is removed, sufficient play being allowed between these parts to dispense with undue friction.

Seated in a recess in the head of the "T" 8 over the stem 7 is a pinion 11, said pinion having a hole through it of the size of the bore of the stem and freely rotatable

by means of a boss at one side thereof fitting in the recess. The openings in the ends of the "T" 8 have collars 12 threaded into them through which pass axially rotatable arms 13 of the sprinkler. The opposed ends of these arms in the "T" 8 have fixed to them pinions 14 of equal size meshing with the pinion 11 at diametrically opposite points. The arms, as shown in Figs. 1 and 3, are curved in opposite directions at their outer ends when they are in proper mesh with the pinion 11 and have threaded extremities to which is attached our improved nozzle. Each of these nozzles comprises a cap 15 threaded onto the outer end of each arm and having a perforation 16 at its center countersunk from the outside from which leads a V-shaped slit 16^a with outwardly beveled edges. The nozzle on each arm is held in proper relation therewith by a jam nut 17 which is manually adjusted, as is also the nozzle, by peripheral knurled flanges formed thereon.

In the use of the sprinkler, a hose or other pipe leading from any source of water supply is connected with the elbow 2 at 2^a and the sprinkler seated on the lawn. The pressure of the water in the cup 4 forces the brass collar 10 against its lead seat and prevents any leakage of the water thereabout. The reaction of the force of the water is imparted to the arms 13 which revolve on the stem 7 as a center, throwing a fan-shaped spray from the nozzle circumferentially about the sprinkler.

If it is desired to increase or decrease the radius of the throw of the water for each arm respectively, one of the arms 13 can be revolved at an angle to the horizontal, which, through the intermediary of the gearing, will revolve the other arm at a corresponding angle but in the reverse direction, thereby increasing or decreasing the range of the water according as to whether the nozzles are projected above or below the horizontal. This increase of range will be at a maximum when the nozzles are pointed upward at an angle of 45 degrees. By revolving the arms axially, carrying the nozzles 180 degrees, the rotation of the arms can be reversed, which is of advantage in sprinkling at the corner of the house or hedge, in that water is thrown at different sides thereof for each direction of rotation.

If it is desired that the nozzles do not rotate, they should be axially turned to lie in a vertical plane with their arms, where they will cease to revolve. This use of the sprinkler will be found desirable in watering narrow strips of lawn or borders.

Although we have described the invention embodying our preferred form of construction, it is evident that the details thereof can be modified as desired; and we consider that we are entitled to such changes as fall within the scope of the invention as claimed.

Having thus described our invention we claim as new and desire to secure by Letters Patent:

1. In a sprinkler, a base, an elbow connected to the center thereof, a short, vertical pipe threaded into the elbow,

- a cup supported at the upper end of the pipe, a dished cap over the cup, a lead bearing in the top of the cup, a "T" having a vertical spindle rotatable in the cap and having a brass collar at the lower end thereof bearing on the lead in the cap, a pinion seated in a recess in the "T" over the stem thereof, a collar threaded into each end of the T, arms having reversely curved ends passing through the collars, a pinion fixed to the opposed ends of the arms, and in mesh with the pinion seated in the "T," and nozzles carried at the outer ends of the arms.
2. In a sprinkler, the combination of a support through which water is adapted to be conducted, a "T" rotatably mounted on said support, a stem carried by the T, a lead bearing about the stem, means fixed at the end of the stem for pressing on the bearing and preventing the withdrawal of the "T," a pinion rotatably mounted in the "T," arms having pinions fixed at the opposed ends meshing with the pinion in the "T," said arms having reversely bent ends, and nozzles carried by said reversely bent ends, for the purpose described.
3. A sprinkler comprising arms each having a curved outer end lying in the same plane as its respective arm, a

pinion fixed to the inner end of each arm, a revoluble member in which said arms are journaled and inclosing said pinions, and a pinion revolubly seated within said member and meshing with the pinions fixed to said arms. 25

4. A sprinkler comprising arms, a revoluble member in which said arms are journaled, a pinion fixed to the inner end of each arm and inclosed within said member, and a pinion rotatably mounted within said member and meshing with the pinions fixed to said arms. 30

5. A sprinkler comprising a base, a T vertically and revoluble supported on said base, collars threaded in the opposite ends of said T, an arm journaled in each collar, a pinion fixed to the inner end of each arm within the T, and a pinion seated within the T and meshing with the pinions fixed to the arms. 35

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

GUADALUPE BUELNA.

ALFRED REDINGTON POETT.

Witnesses:

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