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ROTATABLE WATER SPRINKLER

Filed May 26, 1924

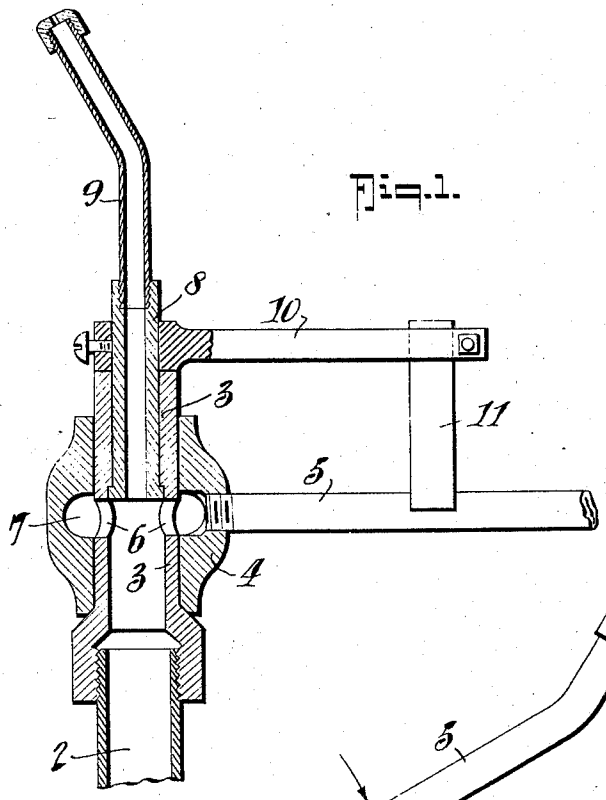


Fig. 1.

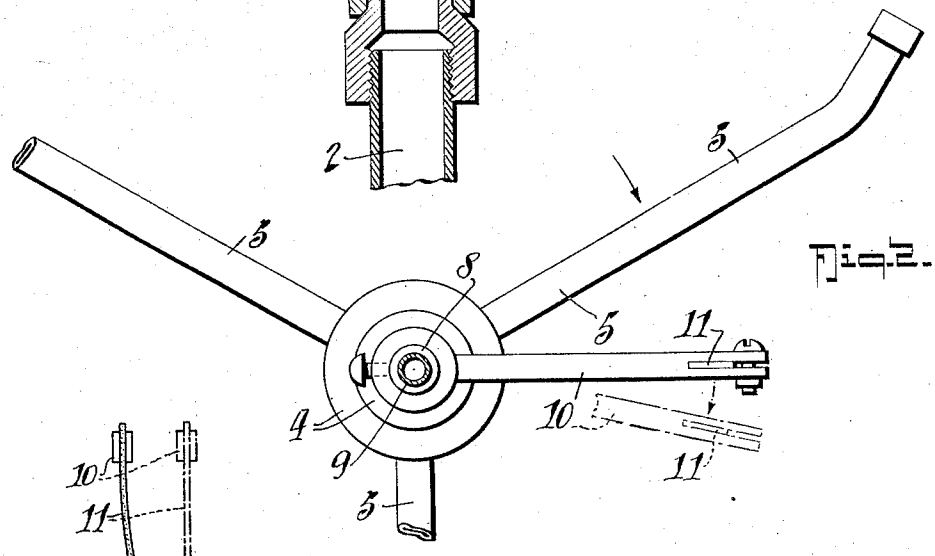


Fig. 2.

Fig. 3.

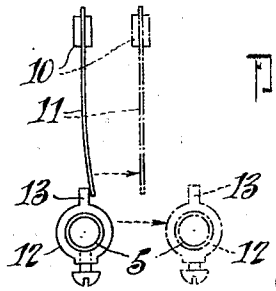


Fig. 4.

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UNITED STATES PATENT OFFICE.

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ROTATABLE WATER SPRINKLER.

Application filed May 26, 1924. Serial No. 716,022.

To all whom it may concern:

Be it known that we, WILLIAM C. TODD and JAMES W. POMEROY, citizens of the Dominion of Canada, residing at Victoria, in the Province of British Columbia, Canada, have invented certain new and useful Improvements in Rotatable Water Sprinklers, of which the following is a specification.

This invention relates to a rotatable water sprinkler of that class wherein a reaction sprinkler head is rotatably mounted on a hollow stem through which it derives its water supply and a central jet tube is independently rotatable about the same axis and upwardly projects from the hollow stem, and the improvement, which is the particular subject of this application, relates to a means for slowly rotating the central jet tube from the reaction sprinkler head in a simple and effective manner without the requirement of gearing in the usually accepted meaning of the term.

The invention is fully described in the following specification, reference being made to the drawings by which it is accompanied, in which:

Fig. 1 is a vertical longitudinal section showing one of the tubes of the reaction sprinkler head in position to impart fractional rotation to the central jet tube.

Fig. 2 is a plan of the same, and

Fig. 3 is a detail end elevation of one of the tubes of the reaction sprinkler head as imparting movement to the central jet tube, and

Fig. 4 is a similar view of a slightly modified construction.

In these drawings 2 represents a water service pipe to which is secured an upright hollow stem 3. On this stem 3 is rotatably mounted the hub 4 of a reaction sprinkler head having tubes 5 radially projecting from it, the ends of which are backwardly directed to impart the required rotational effort.

The water is delivered to the tubes 5 of the reaction sprinkler head through ports 6 in the central stem delivering into an annular chamber 7 in the hub 4 immediately adjacent the connection of the tubes 5 to it.

Within the upper part of the fixed stem 3 is rotatably mounted a hollow central stem 8, shouldered within the stem and projecting beyond the upper end of it, and to the upper end of the stem 8 is secured the jet tube 9 having an apertured cap.

On the outwardly projecting end of the central stem 8 an arm 10 is secured to project outward from it parallel to the tubes 5 of the reaction sprinkler and from this arm depends a flexible strip 11, the lower end of which projects in the path of the tubes 5 of the reaction sprinkler head.

This strip 11 may be of relatively substantial flexible material, such as rubber, or rubberized fibre, as shown in Fig. 3, or of thin resilient metal as illustrated in Fig. 4, so that when engaged by the tubes 5 it will yield to permit the tubes to pass but will provide sufficient resistance to such passage as to rotate the central stem 8 to which it is connected, through a short arc of its rotational movement.

Under ordinary circumstances the lower end of the strip 11 will be engaged by the tubes 5 themselves, so that three fractional movements will be imparted to the stem for each revolution of a three-tube reaction sprinkler, but if considered desirable a collar 12 may be secured to one or the other of the tubes 5 having a projection 13 to engage the strip 11 whereby the tubes not provided with such collars may pass without engaging the strip.

The device is extremely simple to manufacture and is not liable to derangement in use and is effective in slowly rotating the central jet tube to sprinkle a zone beyond the area sprinkled by the reaction head 4, 5.

Having now particularly described our invention, we hereby declare that what we claim as new and desire to be protected in by Letters Patent, is:

1. A rotatable water sprinkler, comprising in combination, a hollow stem, a reaction sprinkler freely rotatable on the stem through which it derives its water supply, a central jet tube independently rotatable on the axis of the fixed stem from the upper end of which it projects, and a yieldable driving member for effecting intermittent operating engagement between a tube of the reaction sprinkler and the central tube whereby the central tube is, for each revolution of the reaction sprinkler, carried through a short arc of its rotation and is relieved from its engagement.

2. A rotatable water sprinkler, compris-

ing in combination, a hollow stem, a reaction sprinkler freely rotatable on the stem through which it derives its water supply, a central jet tube independently rotatable on the axis of the fixed stem from the upper end of which it projects, and a flexible resilient driving member adapted to effect periodic operating connection between the reaction sprinkler and the central stem that will move that stem periodically through a short arc of its rotation.

3. A rotatable water sprinkler, comprising in combination, a hollow stem, a reaction sprinkler freely rotatable on the stem through which it derives its water supply, a central jet tube independently rotatable on the axis of the fixed stem from the upper end of which it projects, and a flexible driving member secured to the central jet tube to depend therefrom to be engaged by a tube of the reaction sprinkler and carried through a short arc of its rotation and thereafter released.

4. A rotatable water sprinkler, comprising in combination, a hollow stem, a reaction sprinkler freely rotatable on the stem through which it derives its water supply, a central jet tube independently rotatable on the axis of the fixed stem from the upper end of which it projects, an arm secured to the central jet tube to project outward therefrom, and a flexible driving strip depending from this arm in the path of one of the tubes of the reaction sprinkler, the length of the depending strip being such that it will yield and permit the tube to pass.

In testimony whereof we affix our signatures.

WILLIAM CHARLES TODD.
JAMES WILLIAM POMEROY.