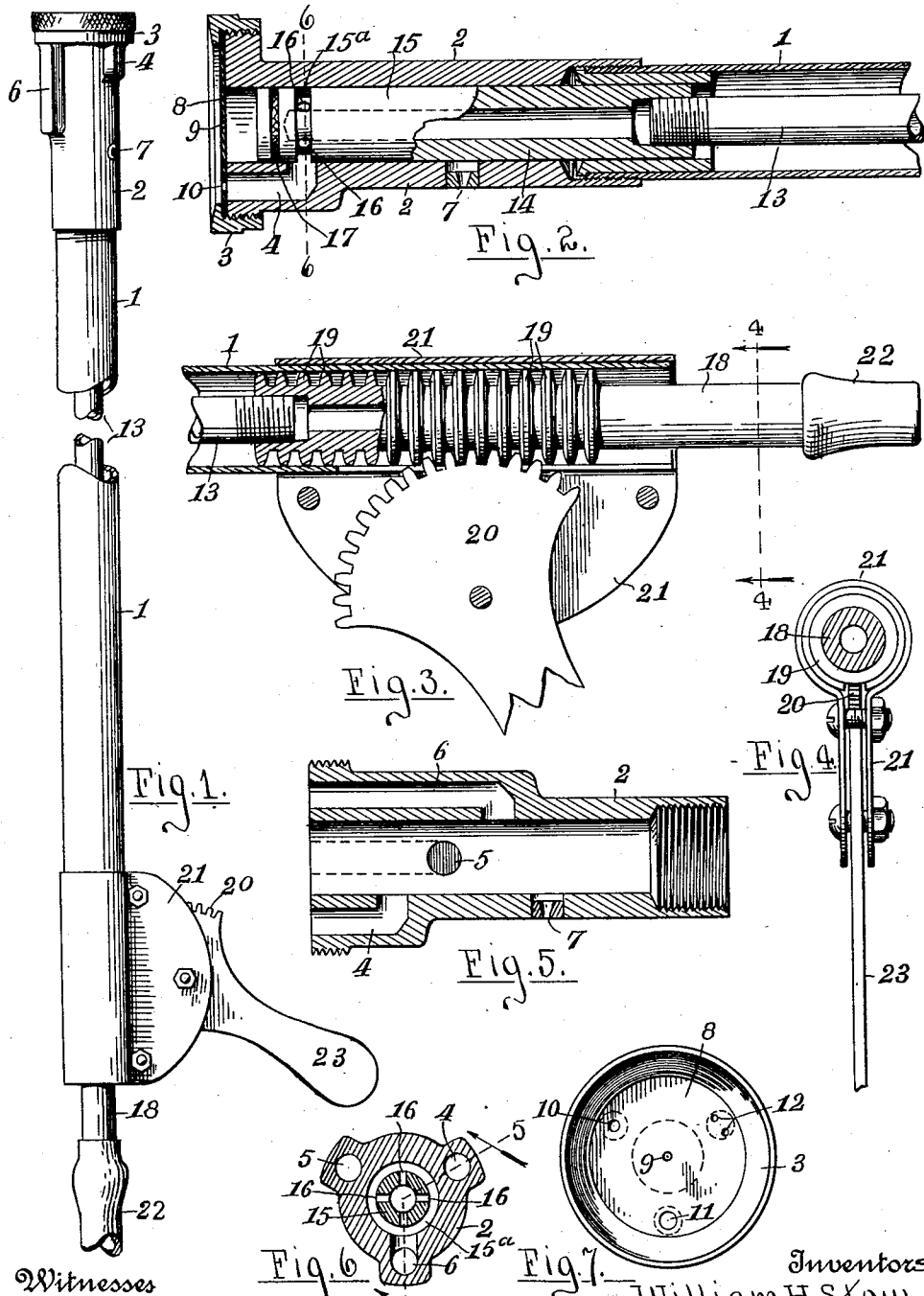


W. H. STOW & N. VICKERY.
ADJUSTABLE NOZZLE FOR SPRINKLER PIPES.
APPLICATION FILED JUNE 22, 1911.

1,033,486.

Patented July 23, 1912.



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UNITED STATES PATENT OFFICE.

WILLIAM H. STOW AND NELSON VICKERY, OF FENNVILLE, MICHIGAN.

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Specification of Letters Patent.

Patented July 23, 1912.

Application filed June 22, 1911. Serial No. 634,688.

To all whom it may concern:

Be it known that we, WILLIAM H. STOW and NELSON VICKERY, citizens of the United States of America, residing at Fennville, in the county of Allegan and State of Michigan, have invented certain new and useful Improvements in Adjustable Nozzles for Sprinkler-Pipes; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to improvements in sprinkler pipes having adjustable nozzles, and its object is to provide the same with an adjustable nozzle having a variety of openings any one of which may be utilized at pleasure, and to provide the device with various new and useful features hereinafter more fully described and particularly pointed out in the claims, reference being had to the accompanying drawings, in which:—

Figure 1 is an elevation of a device embodying our invention with portions broken away; Fig. 2 an enlarged longitudinal section of the upper end of the same; Fig. 3 an enlarged longitudinal section of the lower end of the same; Fig. 4 a transverse section of the line 4—4 of Fig. 3; Fig. 5 an enlarged detail in longitudinal section of the head 2 at the upper end of the device; Fig. 6 a transverse section on the line 6—6 of Fig. 2; and Fig. 7 a plan view of the upper end of the device.

Like numbers refer to like parts in all of the figures.

1 represents a tubular case of any convenient length on the upper end of which is mounted a head 2 having a removable ring 3 on the end thereof. This head is tubular and closed at the upper end by a disk 8 held in place by the ring 3. Opening laterally into the interior of this head are a series of passages extending along the outside of the head closed at their outer end by the disk 8. These passages extend downward along the outside of the head different distances from the end as at 4, 5 and 6. There is also a lateral discharge opening 7 still farther down the head and in the disk 8 opposite each one of these passages is an opening or openings as shown in Fig. 7, these openings differing in character and size to vary the discharge therethrough as at 10, 11, and 12, in which 10 is a small

opening, 11 a larger opening, and 12 a double opening. These small openings obviously may be increased in number as desired. There is also a small central opening 9 in the disk to admit air.

13 is a supply pipe extending within the axis of the case 1. On the upper end of this supply pipe is a tubular body 15 fitting the head 2 and both slidable and rotative therein. The upper end of this body is closed and provided with a packing 17 to prevent the passage of fluid beyond the same. A short distance from the upper end and below the packing is a circumferential groove 15^a and a series of openings 16 connect this groove with the interior of the said body. The tube 13 and body 15 are longitudinally adjusted by means of a circular rack 19 on the lower end of the tube 13 engaged by a segment pinion 20 operated by a lever 23 whereby the rack is adjusted longitudinally within the casing 1. This rack being circular is rotative in the casing. This segment is mounted in a sheet metal bracket 21 folded around the casing and having parallel jaws between which the pinion is pivoted. This circular rack is tubular and projects below the casing 1 sufficient to permit attachment of a hose 22 thereto to furnish the fluid from any source of supply to the device.

It will be noted that the rack, tube and body 15 are all rotative within the device whereby the device will turn freely in any direction without inconvenience. It will also be seen that the disk 8 is easily replaced by any other disk having other openings as occasion may require.

In operation, fluid under pressure is brought through the hose 22 and supplied to the device and by moving the rack longitudinally the body 15 may be adjusted to bring the annular groove 15^a opposite any one of the various openings 4, 5, 6 or 7 as occasion may require, the small central opening 9 permitting air to enter and escape to permit free movement of the body 15. The fluid thus escapes through one of these openings at pleasure whereby the character or direction of the escaping stream may be determined as occasion may require.

What we claim is:—

1. A sprinkler pipe, comprising a head, having a tubular opening in its axis closed at the outer end and a series of outside passages parallel therewith opening laterally

into the said axial opening, a hollow body adjustable in said axial opening and closing the same, said body being closed at the outer end, and laterally open to communicate with
 5 any one of said passages, and a pipe inserted in the inner end of said body to convey fluid thereto and to adjust the said body in the head.

2. A sprinkler pipe, comprising a tubular
 10 case, a tubular head on the case, a series of longitudinally disposed passages on the outside of the head opening laterally into the head at one end, a plate closing the other
 15 end of said passages and the interior of the head and having various openings opposite the several passages, a removable ring to hold the plate on the head, a body adjustable within the head and adapted to direct fluid
 20 to any one of the said passages according to adjustment, means for supplying fluid to said body and means for adjusting the same in the head.

3. A sprinkler pipe, comprising a tubular
 25 case, a tubular head on the case having a series of longitudinally disposed passages on the outside opening laterally into the interior of the head at different respective distances from the end thereof, a body longitudinally adjustable in the head and adapted
 30 to direct fluid to any one of said passages according to such adjustment, means for supplying fluid to said body and means for longitudinally adjusting the same.

4. A sprinkler pipe, comprising a tubular
 35 case, a tubular head on the case having a series of longitudinally disposed passages on the outside opening into the interior of the head at various respective distances from the end thereof, a tubular body longitudinally adjustable in the head closed at the
 40 outer end and having a circumferential groove communicating with the interior thereof, a pipe to supply fluid to the said body, and means for adjusting the pipe and

body to bring the groove opposite the re- 45
 spective passages.

5. A sprinkler pipe, comprising a tubular
 case, a tubular head on the case having a series of longitudinally disposed passages
 50 opening laterally into the interior of the head at various respective distances from the end thereof, a longitudinally adjustable body in the head to direct fluid to any one
 of the said passages according to such adjustment, a pipe communicating with said
 55 body at one end and extending within the case, a circular tubular rack connected to the other end of the pipe, a segmental pinion engaging the rack and pivotally mounted on the case, and means for connecting a
 60 hose to the rack to supply fluid to the device.

6. A sprinkler pipe, comprising a tubular
 case, a tubular head on the case having a series of longitudinally disposed passages on
 65 the outside opening into the interior of the head at various respective distances from the end thereof, a removable plate closing the end of the head having various openings opposite the respective passages, a tubular
 body longitudinally adjustable in the head
 70 closed at one end and having a packing near said end and a circumferential groove near the packing communicating with the interior of said body, a pipe in the case inserted
 75 in said body at one end, a circular tubular rack attached to the other end of the pipe, means for attaching a hose to said rack, a bracket attached to the case and a segment pinion pivoted in the bracket and engaging
 80 the rack.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM H. STOW.
 NELSON VICKERY.

Witnesses:

WILL BRYAN,
 FLOYD LAMOREAUX.