

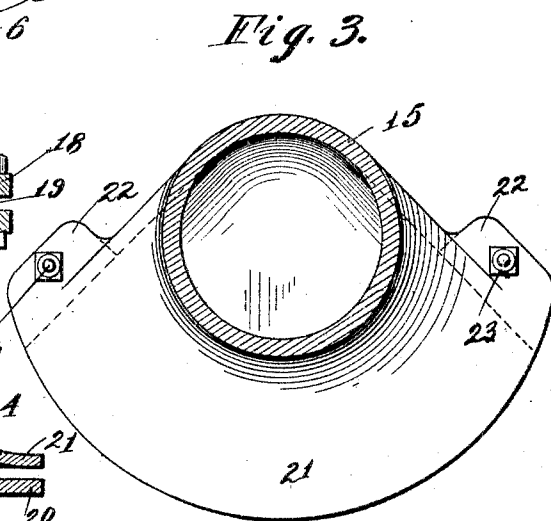
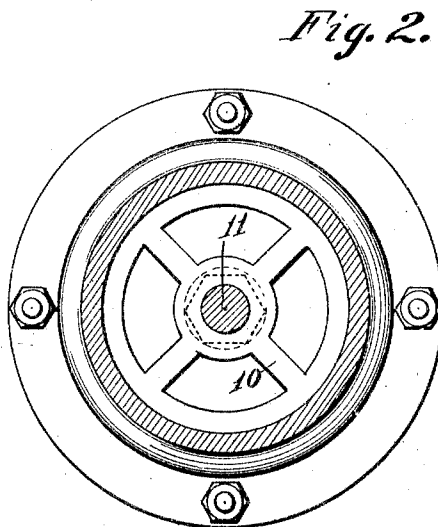
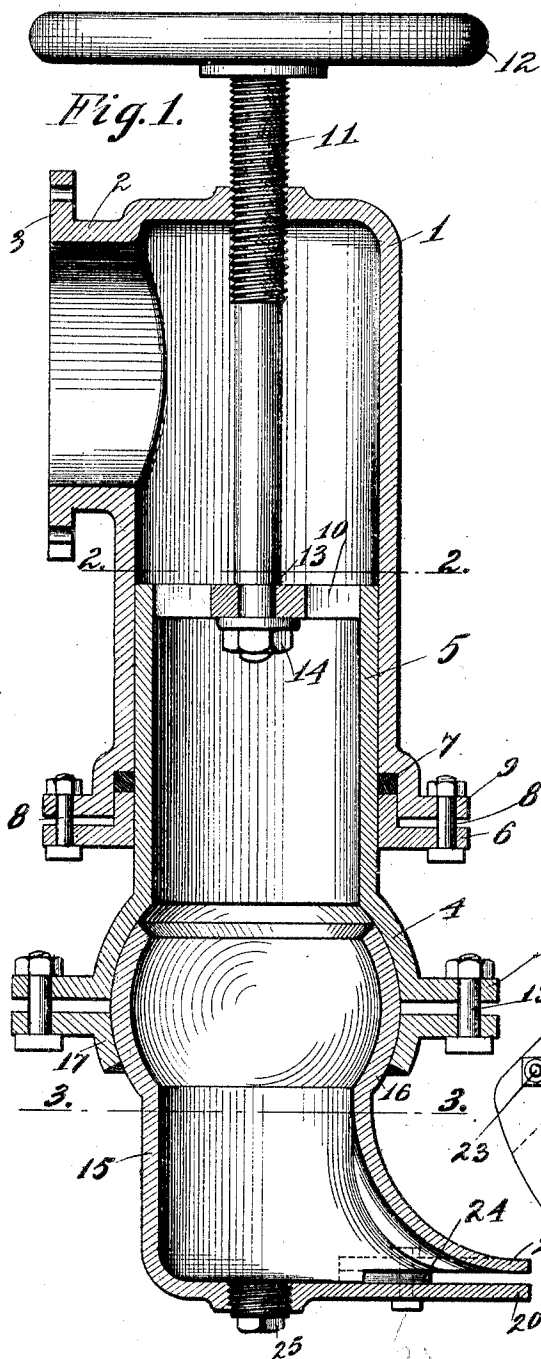
No. 777,053.

PATENTED DEC. 6, 1904.

J. C. WILSON.
ADJUSTABLE FLUSHING NOZZLE.

APPLICATION FILED JULY 27, 1903.

NO MODEL.



Attest:
William Ratican
J. B. Megown.

Inventor
James C. Wilson,
by Candace,
Att'ys.

UNITED STATES PATENT OFFICE.

JAMES C. WILSON, OF ST. LOUIS, MISSOURI, ASSIGNOR TO ST. LOUIS STREET FLUSHING MACHINE COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION.

ADJUSTABLE FLUSHING-NOZZLE.

SPECIFICATION forming part of Letters Patent No. 777,053, dated December 6, 1904.

Application filed July 27, 1903. Serial No. 167,137. (No model.)

To all whom it may concern:

Be it known that I, JAMES C. WILSON, a citizen of the United States, and a resident of the city of St. Louis and State of Missouri, have
5 invented a new and useful Adjustable Flushing-Nozzle, of which the following is a specification.

My invention relates to street-flushing devices; and its principal objects are to vary the
10 height of the delivery-orifice from the surface of the pavement, to vary the angle at which the flushing-stream is delivered, to vary the size of the delivery-orifice, and other objects hereinafter appearing.

15 My invention consists in the parts and in the arrangements and combinations of parts hereinafter described.

In the accompanying drawings, which form a part of this specification, and wherein like
20 symbols refer to like parts wherever they occur, Figure 1 is a vertical longitudinal section through my adjustable flushing-nozzle. Fig. 2 is a horizontal section taken on the line 2 2 of Fig. 1, the parts below the flange 9 being
25 omitted; and Fig. 3 is a horizontal section taken on the line 3 3 of Fig. 1.

In flushing streets it is desirable to use different amounts of water and to apply the stream at different angles, depending upon the
30 character of the pavement. By my invention I am enabled to adjust the flushing-nozzle so as to apply the water, both as to amount and direction, in a manner proper for the pavement being flushed.

35 A casing 1 is provided near its upper end with a laterally-extending cylindrical section 2, having a flange 3, by means of which the nozzle is connected to the usual delivery-pipe of a tank. The lower portion of the casing 1
40 is cylindrical in shape, so as to receive the cylindrical upper portion 5 of the connecting-section 4. The portion 5 is so fitted as to permit its reciprocation in the casing 1, the joint being made water-tight in the usual manner
45 by means of the flanged packing-ring 6 and the gasket 7, the pressure on the gasket being exerted by means of bolts 8 passing through

the flanged packing-ring 6 and the flange 9 on the casing 1.

At its upper end the section 4 is provided 50 with an integral spider 10, having a hole at its center for the reception of the lower end of the adjusting-screw 11. The adjusting-screw 11 passes through a screw-threaded opening in the top of the casing 1 and is provided with
55 a hand-wheel 12 at its upper end. It is screw-threaded throughout a portion only of its length and is reduced in section at its lower end, so as to provide a shoulder which rests on the spider 10 and between which and a nut 14 the
60 spider 10 is held, so that the section 4 will move vertically with the screw 11, but independent rotary motion of the screw 11 will be permitted.

The lower portion of the section 4 is given 65 a concave spherical shape to fit the spherical upper portion 16 of the delivery-section 15. The portion 16 is retained in the socket of the section 4 by means of a flanged socket 17, secured to the flange 18 of the section 4 by means
70 of bolts 19. A ball-and-socket joint between the connecting-section 4 and the delivery-section 15 is thus provided, whereby universal adjustment of the delivery-section is possible. The delivery-section 15 is provided with a de-
75 livery-orifice between spreading lips 20 and 21. The lips 20 and 21 terminate at either side with projections 22, through which bolts 23 pass. Between the upper and lower
80 projections 22 at either side are washers 24, forming the side walls of the delivery-orifice and through which also the bolts 23 pass. This arrangement provides for the adjustment of the vertical dimension of the delivery-orifice. The delivery-section 15 is preferably a single
85 casting and is preferably made of cast-steel and is thus capable of sustaining the spring necessary for the requisite adjustment. At the lower part of the section 15 is a screw-threaded hole 24, through which access to the
90 interior may be had. The hole 24 is normally closed by a screw-threaded plug 25.

The operation of the nozzle is as follows: By rotation of the hand-wheel 13 and the

screw 11 the connecting-section 4 and the delivery-section 15 may be raised and lowered so as to vary the height of the delivery-orifice above the surface of the pavement. The angle from the horizontal at which the stream is delivered is varied by turning the delivery-section 15 about in the spherical socket of the section 4 to the desired degree. When adjusted, the section is clamped in position by tightening the nuts on the bolts 19, so as to clamp the spherical portion 16 in its socket. The vertical width of the delivery-orifice is adjusted by tightening or loosening the nuts on the bolts 23, so as to compress or release the washers 24 and draw the lips 20 21 together or permit them to spring apart.

Obviously the construction hereinbefore described admits of considerable modification without departing from my invention, and I do not wish to be restricted to the specific construction hereinbefore described.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A flushing-nozzle comprising a section for connection with a supply-pipe, and a delivery-section depending below said section and provided at its lower end with a delivery-orifice in a plane at an angle to the longitudinal axis of the nozzle, said sections being relatively longitudinally adjustable to a material extent without modifying the width of said delivery-orifice, and the longitudinal axis of the nozzle being vertical, whereby the stream may be delivered at variable heights from the ground.

2. A flushing-nozzle comprising a section for connection with a supply-pipe, a delivery-section depending below said section and having near its lower end a discharge-orifice in a plane at an angle to the longitudinal axis of the nozzle, and means connecting said sections to have relative longitudinal adjustment and angular adjustment, whereby the stream may be delivered at variable heights from the ground and at variable angles to the surface.

3. A flushing-nozzle comprising a casing, a connecting-section, a delivery-section connected to the said connecting-section and means connecting the said casing and connecting-section so as to permit relative adjustment longitudinally of the nozzle, the longitudinal axis of the nozzle being vertical.

4. A flushing-nozzle comprising a casing, a connecting-section telescoping within the said casing, means for relatively longitudinally adjusting the said casing and section, and a delivery-section connected to the said connecting-section, the longitudinal axis of the nozzle being vertical.

5. A flushing-nozzle comprising a casing, a connecting-section telescoping within the said casing, a screw loosely engaging said connecting-section and having screw-threaded engagement with said casing whereby the said sec-

tion and casing may be relatively adjusted, and a delivery-section connected to said connecting-section.

6. A flushing-nozzle comprising a casing, a connecting-section connected to the said casing, a delivery-section adjustably connected to the said connecting-section.

7. A flushing-nozzle comprising a casing, a connecting-section connected to the said casing, a delivery-section connected to the said connecting-section so as to permit relative angular adjustment of the said delivery-section.

8. A flushing-nozzle comprising a casing, a connecting-section connected to the said casing, a delivery-section and a universal joint connecting said connecting-section and delivery-section.

9. A flushing-nozzle comprising a casing, a connecting-section connected to said casing, a delivery-section connected to the said connecting-section by a universal joint provided with means for fixing the said section in any position of adjustment.

10. A flushing-nozzle comprising a casing, a connecting-section adjustably connected to the said casing and a delivery-section adjustably connected to said connecting-section.

11. A flushing-nozzle comprising a casing, a connecting-section longitudinally adjustably connected to the said casing and a delivery-section angularly adjustably connected to the said connecting-section.

12. A flushing-nozzle comprising a casing, a connecting-section telescoping within said casing, and a delivery-section connected to said connecting-section by a universal joint.

13. A flushing-nozzle comprising a casing, a delivery-section having an adjustable delivery-orifice, a longitudinally-adjustable connection between said casing and delivery-section, said delivery-section being adjustable without changing the adjustment of said orifice, and means for fixing said delivery-section in any position of adjustment.

14. A flushing-nozzle comprising a casing for connection with a supply-pipe, a connecting-section depending below said casing and connected thereto by a joint permitting relative adjustment of said sections, and a delivery-section depending below said connecting-section and connected thereto by a joint permitting relative adjustment of said connecting and delivery sections, one of said joints being a universal joint.

15. A flushing-nozzle comprising a casing, a connecting-section adjustably connected with said casing and a delivery-section connected with said connecting-section and having an adjustable delivery-orifice.

16. A flushing-nozzle comprising a casing, a connecting-section connected therewith, means for relatively longitudinally adjusting said casing and section, a delivery-section an-

gularly adjustably connected with said connecting-section and provided with an adjustable delivery-orifice.

5 17. A flushing-nozzle comprising a casing, a connecting-section connected therewith, means for relatively longitudinally adjusting said casing and section, a delivery-section having spreading lips bounding the delivery-orifice and means for varying the distance between said lips, a universal joint connecting said connecting-section and delivery-section, and means for fixing the said delivery-section in any position of adjustment.

10 18. A flushing-nozzle comprising a casing, a delivery-section provided with a delivery-

orifice in a plane at an angle to the longitudinal axis of the nozzle, and means adjustably connecting the said casing and delivery-section, said parts being relatively longitudinally adjustable without modifying the width of said delivery-orifice and the axis of the nozzle being vertical.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 24th day of July, 25 1903.

JAS. C. WILSON.

Witnesses:

JAMES A. CARR,
J. B. MEGOWN.