(No Model.)

D. B. ADAMS.

GLOBE NOZZLE.

No. 582,251. Patented May 11, 1897.

Fig. 1.

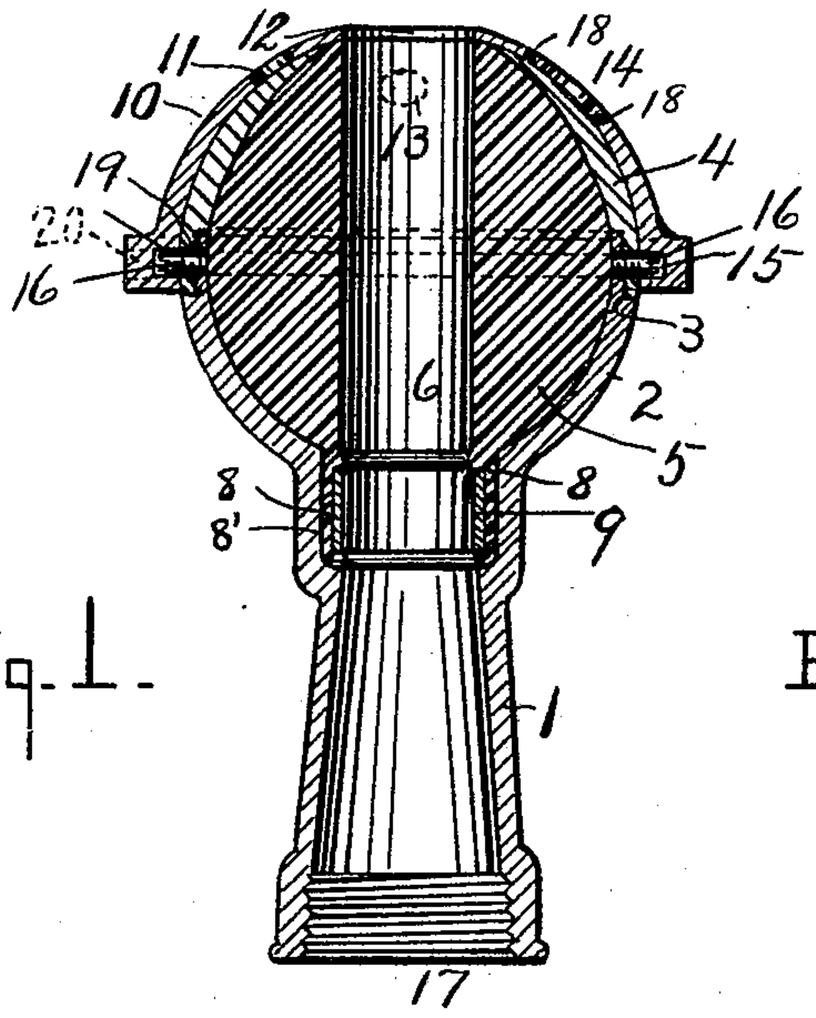

Fig. 2.

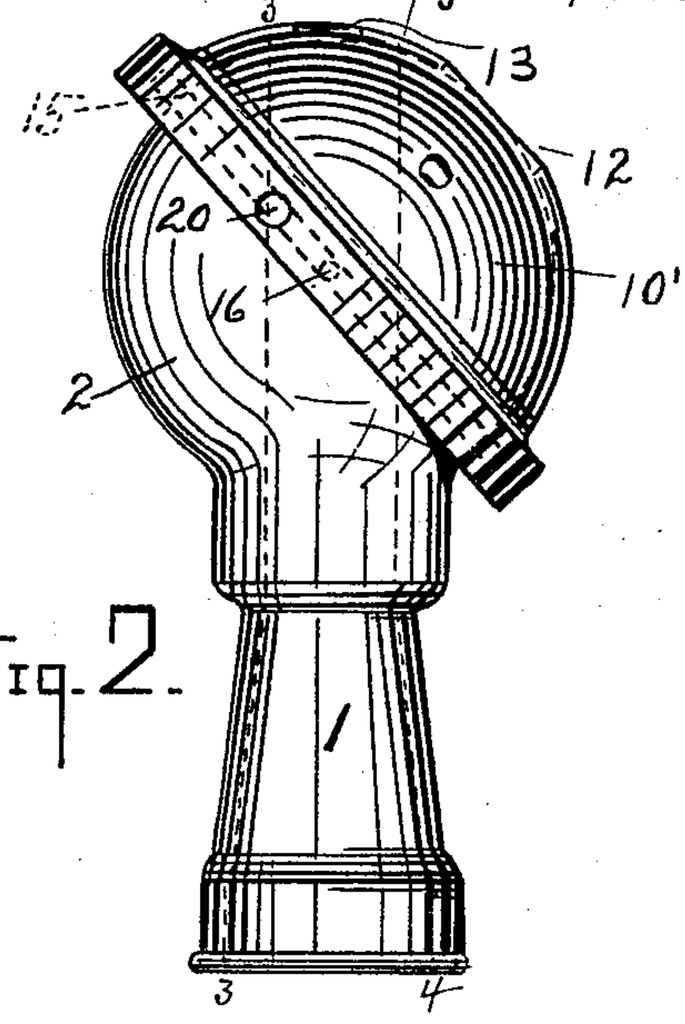

Fig. 3.

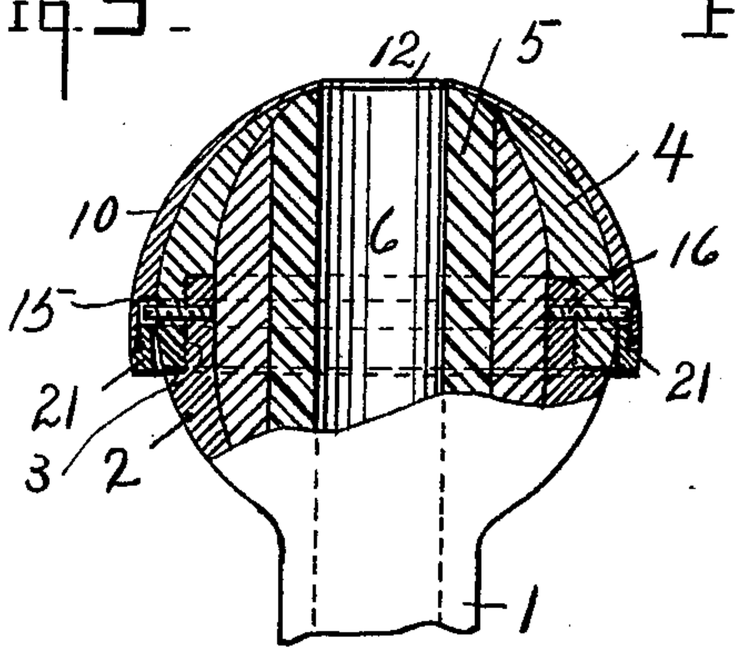

Fig. 4.

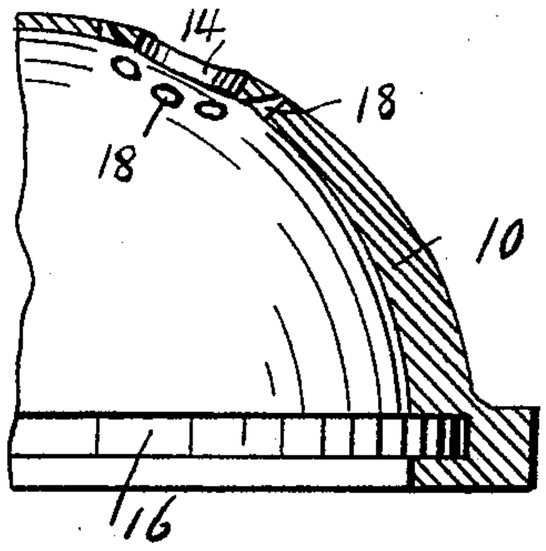

Fig. 5.

Witnesses
Charles M. Catlin.
Albert Popkins

Inventor.
Don B. Adams,
by Benj. R. Catlin
Attorney

UNITED STATES PATENT OFFICE.

DON B. ADAMS, OF CHICAGO, ILLINOIS, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO THE GLOBE NOZZLE COMPANY, OF CHARLESTON, WEST VIRGINIA.

GLOBE-NOZZLE.

SPECIFICATION forming part of Letters Patent No. 582,251, dated May 11, 1897.

Application filed May 19, 1896. Serial No. 592,213. (No model.)

To all whom it may concern:

Be it known that I, DON B. ADAMS, a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Nozzles; and I 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 pertains to make and use the same.

The invention relates to variable nozzles, and has for its object to provide a simple and efficient means of discharging through either of several outlets at will; and the invention consists in the construction hereinafter described and particularly pointed out.

In the accompanying drawings, Figure 1 is a longitudinal section. Fig. 2 is a front elevation. Figs. 3 and 4 are partial sections on lines 3 3 and 4 4, respectively. Fig. 5 is a plan view of the cap.

Numeral 1 denotes a detachable discharge-pipe terminal or section made of hard brass or other suitable metal having a hollow approximately semiglobular end 2, provided with screw-threads at 3, whereby it may be connected with a similarly-shaped part 4, having suitable threads whereby to make the connection. Within the hollow globe thus formed is situated an elastic tubular sphere 5, of rubber or the like, having a passage 6 continuous with that of the discharge-pipe.

8 indicates an integral tubular extension of the rubber fitting a seat 8′ in the pipe and held therein by a retaining-ring 9, which may be split and expansible, if desired.

10 indicates a hollow hemisphere fitting the approximately hemispherical ring 4 and provided with differently-sized openings 11, 12, 13, and 14, the number of which may be varied.

15 denotes pins having their outer ends situated in a groove or way 16, formed near the base of the hollow hemisphere 10. This part 10 can be freely rotated about part 4 in a transverse plane passing through the pins 15. The said part 10 can also be freely rotated or tilted about part 4 in either direction, the pins 15 acting as pivots and the whole forming a universal joint.

By suitable manipulation of the perforated hollow hemispherical cap 10 any one of its openings can be placed in alinement with the tubular passage through the rubber and with the bore of the discharge-pipe. To cause such alinement, it is only necessary to rotate the cap 10 transversely until the particular opening which it is desired to use is situated in a plane midway the pins, whereupon it can be tilted, if necessary, to bring the opening immediately over the discharge-passage. At such time all the openings are closed by the interior part 4. The pressure of the issuing stream of water will crowd the packing-ring 5 against the joint between parts 4 and 10 on their interior near the discharge-orifice and will effectually prevent all leakage at that point. The joint between parts 2 and 4 is also to be made water-tight by the same means. An imperforate part 10′ of the cap 10 is provided for the purpose of entirely closing the several discharge-openings. The packing is adapted to make all joints tight when the discharge is thus entirely cut off.

The device thus described has a screw-threaded socket 17 or other like means for coupling it with a hose or pipe and can be used for throwing streams of various sizes.

18 denotes fine oblique orifices adapted to spray a part of the discharge. The shape and character of these various outlets or discharge-orifices can be changed without departing from the improvement.

The parts 2 and 4 if made integral would operate as described and be within the scope of the improvement.

The main extension parts of the device can be assembled by first entering part 4, having one pin 15 fixed therein in the cap 10, the said pin being at such time entered in the groove 16 in the cap. The latter is then moved to bring an opening 20, formed in the cap, immediately over a screw-socket 19 of the part 4, and a second pin 15 can then be passed into said opening 20 and screwed into socket 19.

It is not essential that the cap 10 be made integral and its base may consist of a detachable ring 21. Other mere mechanical changes

will not depart from the invention, provided substantially the same mechanical and operative principles are employed.

It is not essential that the parts 2 and 4 have an approximately spherical interior opening, and their interior form, as well as that of the packing, may be changed, as indicated, for example, in Fig. 3.

Having described my invention, what I claim is—

1. The combination of a pipe-terminal having an approximately spherical end made in sections and provided with a discharge-exit, a cap 10 provided with openings and fitting said pipe end with a universal-joint connection, and a perforated packing 5 having a passage closing the joint between the pipe end and the cap in every situation of the latter and also closing the joint between the end sections and coextensive with the diameter of the spherical end, substantially as described.

2. The combination of a pipe-terminal having an approximately spherical end made in sections and provided with a discharge-exit, a cap 10 provided with openings and fitting said pipe end with a universal-joint connection, and a perforated packing 5 having a passage closing the joint between the pipe end and the cap in every situation of the latter and also closing the joint between the end sections and coextensive with the diameter of the spherical end, said packing having an extension 8, substantially as described.

3. The combination of the pipe-terminal having spherical end 2, a hollow hemispherical part 4 secured to said end, a cap 10 having several openings and movable about said parts 4 and 2 to cause any desired opening to register with the pipe-passage, and the tubular packing, substantially as described.

4. In combination with a pipe-terminal having an approximately spherical end, an approximately hemispherical cap provided with several perforations and having a groove 16, and pins 15 fixed in the spherical end and situated in said grooves, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

DON B. ADAMS.

Witnesses:
LOUIS GRUNDEIS,
JAS. A. CLINTON.