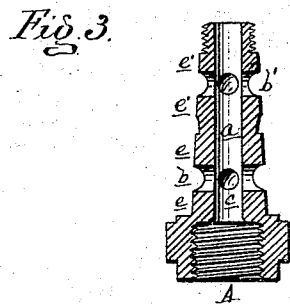
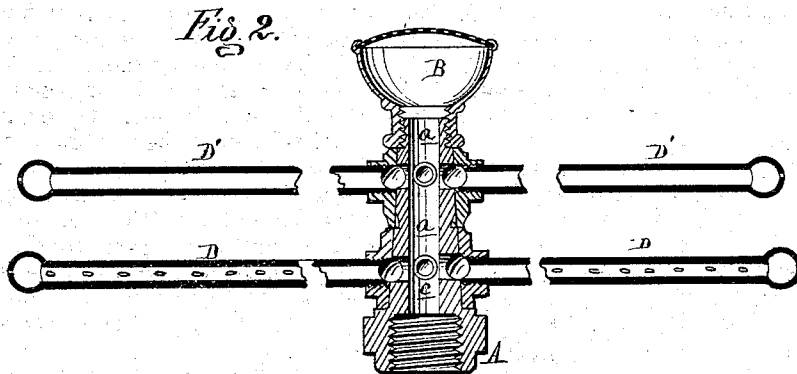
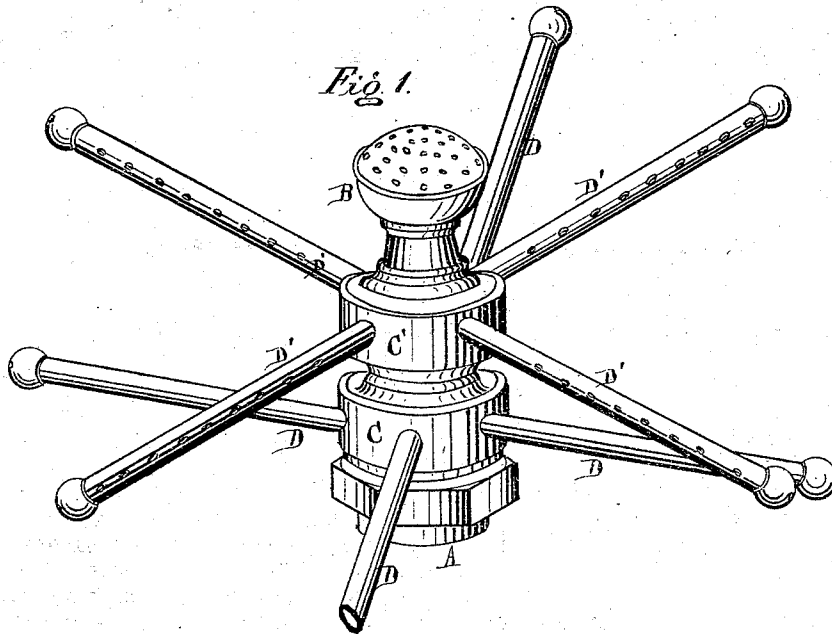


W. A. PUNGS.
Portable Fountains.

No. 153,844.

Patented Aug. 4, 1874.



Attest:
C. E. H. Green
J. W. Davis

Inventor:
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Thos. S. Sprague

UNITED STATES PATENT OFFICE.

WILLIAM A. PUNGS, OF DETROIT, MICHIGAN.

IMPROVEMENT IN PORTABLE FOUNTAINS.

Specification forming part of Letters Patent No. 153,844, dated August 4, 1874; application filed June 17, 1874.

To all whom it may concern:

Be it known that I, WILLIAM A. PUNGS, of Detroit, in the county of Wayne and State of Michigan, have invented an Improved Portable Fountain, of which the following is a specification:

The nature of my invention relates to an improvement in that class of portable fountains used for irrigating lawns which are supplied with water through a flexible hose, and are provided with hollow perforated arms for distributing the water as spray, in the revolution of the arms caused by the reaction of the water. The object of my invention is to double the delivery capacity of the fountain, and at the same time to produce a very beautiful effect by the addition of a second rotary collar having a set of arms which rotate in the opposite direction of the first set.

Figure 1 is a perspective view of the upper part of the head. Fig. 2 is a vertical section of the same. Fig. 3 is a detached perspective view of the stem.

In the drawing, A represents a hollow stem adapted to screw on the top of a portable fountain-pipe, and having an internal bore, *a*, closed at the top by a cup, B, having a perforated rose-top, for discharging an upward spray of water. The exterior of the stem is tapered at *e*, on which is sleeved a collar, C, in which are tapped the inner ends of four or more hollow radial arms, D. In the surface *e* is turned an annular groove, *b*, from the bottom of which several openings, *c*, are tapped through into the bore *a*. The outer ends of

the hollow arms are closed, and they are perforated on one side with apertures *d*. The reaction of the water issuing from said apertures causes the collar and its arms to rotate and spray the jets over an area greater than the diameter of the arms in pairs. The water issues from the bore *a*, through the openings *c*, into the annular groove *b*. Above the tapered surface *e* there is another, similar but smaller, one in diameter, *e'*, on which is sleeved a collar, C', carrying hollow radial arms D', but which are perforated on the opposite side from the perforations in the arms D, so that the issuing jets will rotate their collar in the opposite direction from that imparted to the lower set of arms. There is an annular groove, *b'*, in the surface *e'*, from the bottom of which several openings are tapped into the bore *a*.

I do not claim the invention of a single collar rotating with its hollow arms upon a bearing at the top of a portable fountain-pipe, as such is not new; but

What I do claim as new, and desire to secure by Letters Patent, is—

The hollow stem A having two tapered surfaces, *e e'*, annular grooves *b b'*, openings *c c'* into its bore *a*, and the collars C C' carrying the hollow arms D D', perforated in opposite directions, in the manner and for the purpose set forth.

WILLIAM A. PUNGS.

Witnesses:

H. F. EBERTS,
H. S. SPRAGUE.