

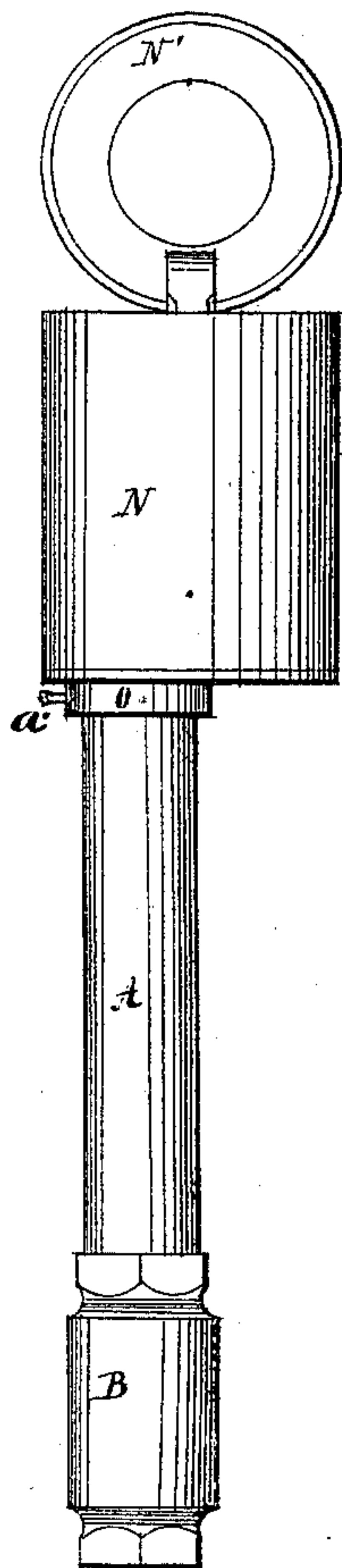
J. FARNAN.

Improvement in Hydrants and Street-Washers.

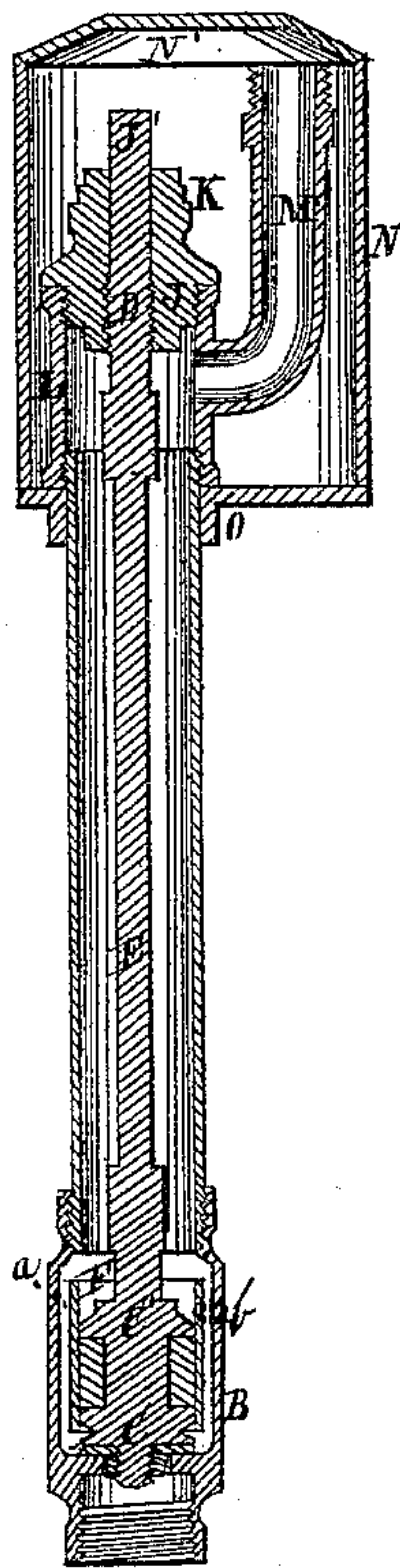
No. 131,512.

Patented Sep. 24, 1872.

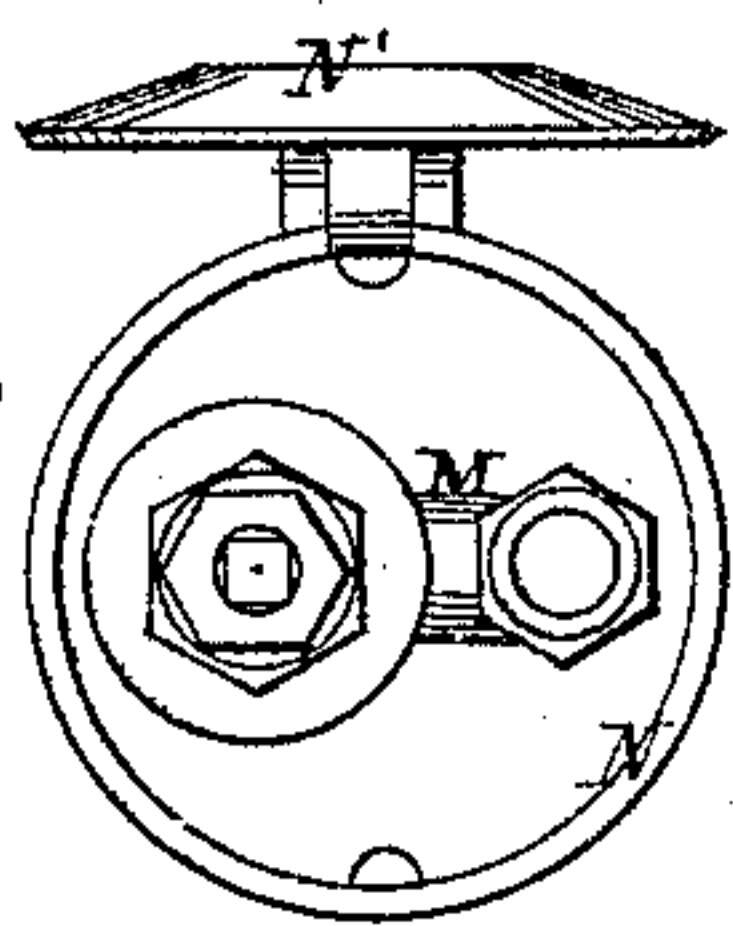
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Witnesses.*

*J. H. Burridge.*  
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*Inventor*

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# UNITED STATES PATENT OFFICE.

JAMES FARNAN, OF CLEVELAND, OHIO.

## IMPROVEMENT IN HYDRANTS AND STREET-WASHERS.

Specification forming part of Letters Patent No. 131,512, dated September 24, 1872.

*To all whom it may concern:*

Be it known that I, JAMES FARNAN, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and Improved Hydrant; and I do hereby declare that the following is a full, clear, and complete description thereof, reference being had to the accompanying drawing making part of the same.

Figure 1 is an outside view of the hydrant. Fig. 2 is a transverse vertical section. Fig. 3 is a view of the inside from the top.

Like letters refer to like parts in the several views.

The nature of this invention relates to a hydrant; and the object of which is to so construct an upper chamber and draft-pipe of said hydrant that it shall be in one piece instead of in two pieces. It also relates to the manner of attaching the shaft or box to the connecting-pipe of the hydrant, the same being an improvement of a hydrant for which a patent was granted to me on the 11th day of April, 1871.

Of the above said invention the following is a more full and complete description:

In the drawing, Fig. 1, A represents a pipe connecting the upper and lower parts of the hydrant to each other. Said lower part consists of a shell, B, screwed to the lower end of the pipe A, as seen in Fig. 2. The bottom of the shell forms a seat for the valve C, and down upon which it is represented as being forced by the screw D, seen at the upper end of the rod E. Within the shell B is an annular chamber, F, Fig. 2, in which is fitted a plug, C', to the end of which the valve is secured; the purpose of said plug will presently be shown. It will be observed on examination of Fig. 2 that said annular chamber F does not fill the entire capacity of the shell; but between which and the wall of the shell is a space, *a*. From the annular chamber referred to proceeds a short tube, *b*, through to the outside of the shell B, the object of which is to allow the water to escape from the hydrant, as and for a purpose hereinafter shown. E is a rod connecting the valve C to the screw D. Said screw is fitted in a nut, J, and the shank J' passes through a stuffing-box, K, whereby it is made tight. The nut J referred to is screwed into a cylinder, L, whereas the lower end of

the shell is secured to the pipe A by being screwed thereon, as shown in Fig. 2. M is a pipe, from which the water flows out of the hydrant, and to which may be attached a water-cock, hose, &c. N is a case or box inclosing all the upper parts of the apparatus.

The practical operation of the above-described hydrant is as follows: The lower part thereof is buried in the ground at a depth below the reach of frost, and which depth may be made more or less by using a corresponding length of pipe, A, and rod E, whereas the upper part is near to or at the surface, so as to be of easy access, and which being inclosed by the shell or chamber N, can be at all times reached on lifting the cover N'. The lower end of the apparatus is connected to the water-main by a pipe in the ordinary way. Fig. 2 represents the valve C as closed, thereby shutting off the water, but which may be opened on applying a key to the end or stem J'. On turning it in the proper direction the valve is raised and the water flows in and up around the annular chamber F, thence through the pipe A, and is discharged from the nozzle of the pipe N to the outside. On shutting off the water, all that may be in the hydrant above the valve would remain therein, unless some avenue for its escape were provided. This provision for such escape consists of the short tube *b*, referred to, and which, as above said, opens the annular chamber F to the outside, from which all the water above the valve can run out when the valve is closed, but which cannot escape therefrom when the valve is open, as the plug C' rises up and covers the aperture on the inside on lifting the valve. By thus allowing the water to escape from the hydrant through the waste-pipe *b* is avoided the danger of freezing; hence the hydrant remains in working order at all times.

It will be observed that the diameter of the valve and plug is about that of the pipe A; hence, in the event that a new valve, &c., may be required, it can be easily supplied by withdrawing the valve and plug up through the pipe to the outside for necessary repairs, &c.

In my former hydrant the cylinder L and the discharge-pipe M consisted of two pieces; the pipe being connected to the cylinder by a screw-joint, the labor and expense of which added much to the cost of the hydrant.

In this hydrant the cylinder and pipe are made in one piece with much less labor and expense of construction; it is also much stronger, simpler, and not liable to leak. In this hydrant the case or box N is attached to the pipe A by a collar, O, forming a part of the box, and in which is a set-screw, whereby the collar is made fast to the pipe instead of being screwed thereto by a thread in the collar fitting on the pipe in the character of a screw-nut.

*Claim.*

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

The hydrant or street-washer with a cylinder, L, and pipe M, as described, in combination with the pipe A, stem E, and shell N, substantially as and for the purpose set forth.

Witnesses: JAMES FARNAN.

W. H. BURRIDGE,  
J. H. BURRIDGE.