

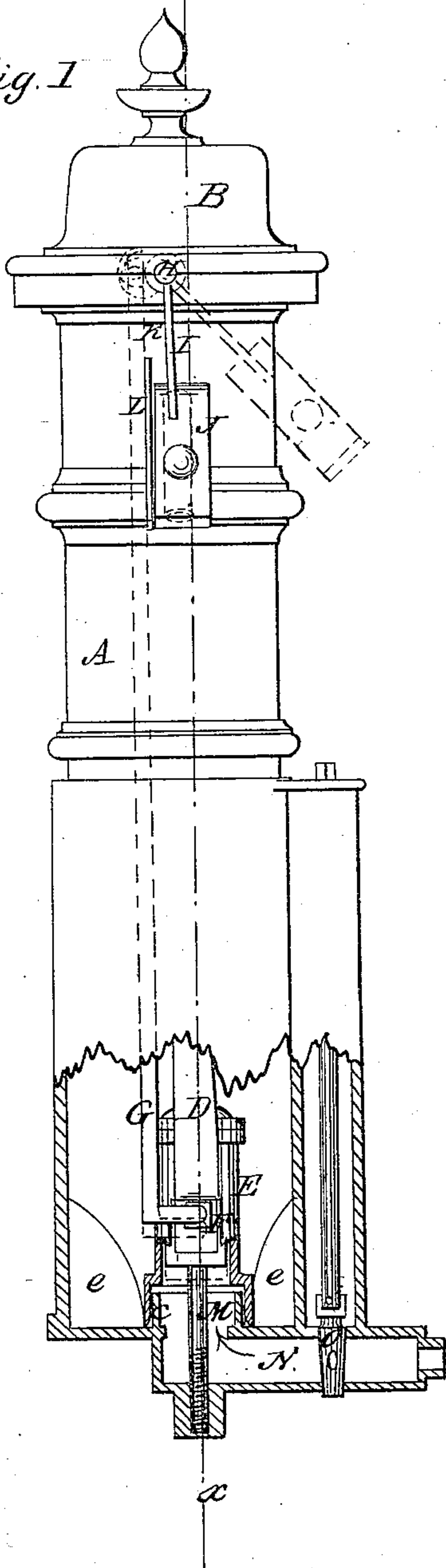
*C. J. Cowperthwaite,*

*Hydrant,*

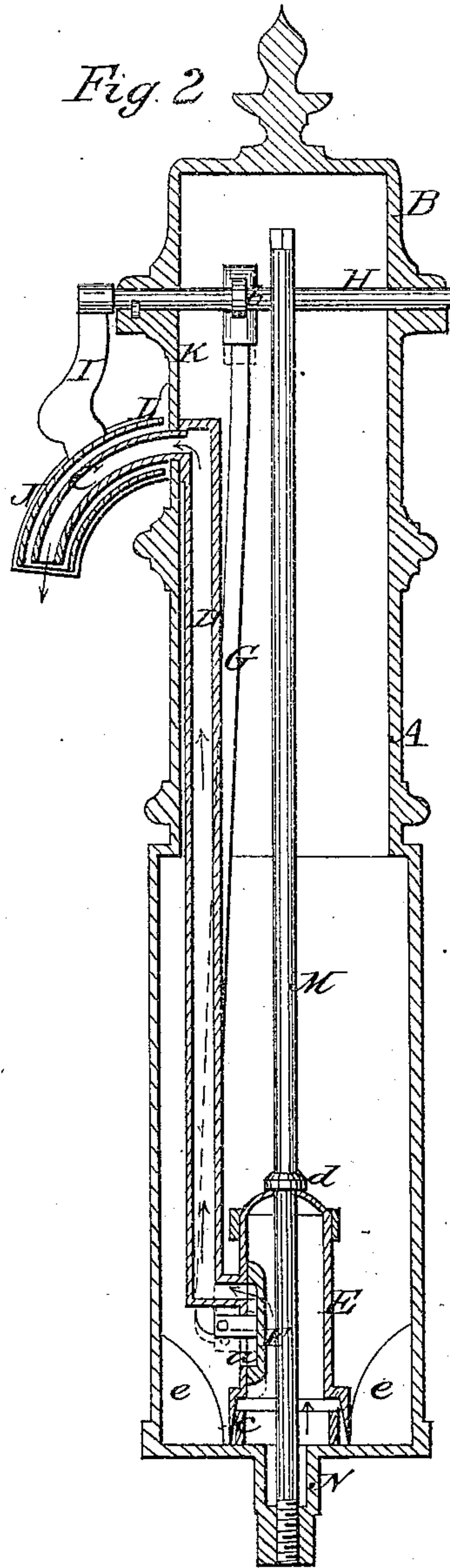
*N<sup>o</sup> 14,805.*

*Patented May 6, 1856.*

*Fig. 1*



*Fig. 2*





# UNITED STATES PATENT OFFICE.

C. J. COWPERTHWAIT, OF PHILADELPHIA, PENNSYLVANIA.

## HYDRANT.

Specification of Letters Patent No. 14,805, dated May 6, 1856.

*To all whom it may concern:*

Be it known that I, C. J. COWPERTHWAIT, of the city and county of Philadelphia and State of Pennsylvania, have invented certain  
5 new and useful Improvements in Hydrants; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed  
10 drawings, making a part of this specification, in which—

Figure 1, is an elevation of my improvement. Fig. 2, is a vertical section of ditto, *x, x*, Fig. 1, showing the plane of section.

Similar letters of reference indicate corresponding parts in both figures.

My invention consists in the employment of what I term a protector, which covers the nozzle of the hydrant, the protector being connected with the valve rod in such a  
20 manner, that when it is moved free from the nozzle, the valve will be operated and the water allowed to pass up through the pipe within the case of the hydrant and out through the nozzle.

25 My invention also consists in the peculiar arrangement of a slide or D valve as will be presently shown and described whereby a stuffing box is dispensed with.

My invention further consists in the peculiar manner of securing the several parts of the hydrant, within the case, whereby they may, when necessary be removed from the case, and also adjusted therein with the  
30 greatest facility.

35 To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A, represents the case of the hydrant which may be constructed of cast iron and of  
40 the usual form.

B, is the cap attached to the upper part of the case, by screws.

C, is the nozzle of the case the inner end of which is attached to a pipe D, which  
45 passes down within the case A and is attached to and communicates with a square cistern E.

Within the cistern E, there is placed a slide or D valve, F, which works over the  
50 orifice of the lower end of the pipe D, and against the inner surface of one of the sides of the cistern. This valve being of D-form, admits of an aperture (*a*) being made through the side of the cistern, the upper  
55 and lower ends of the valve being both in contact with the side of the cistern and pre-

venting the escape of water through the aperture (*a*) when the valve covers the orifice of the pipe D, as shown clearly in Fig. 2.

60 G, is a rod which is attached to the valve F. This rod extends upward within the case A, and is attached to a hooked arm (*b*) which is connected to a shaft H which extends across the upper part of the case A.  
65 The shaft H has a curved arm I, attached to its end and to the lower ends of this arm, a case or protector J, is attached, which corresponds in form to the nozzle C. A recess or cut is made in the upper part of the case  
70 A, in which a slide K, is fitted, and to the slide K, a curved plate L, is attached against which the case J bears, when the nozzle C, is incased.

The lower end of the cistern E, fits over a  
75 square ledge (*c*) on the bottom of the case A, and packing may be inserted between the cistern and ledge, and a vertical rod M having a screw thread cut upon its lower end passes vertically through the center of the  
80 cistern and through the bottom of the case; the rod has a shoulder (*d*) upon it, which shoulder bears upon the upper part of the cistern. By turning the rod M, the screw  
85 thread will draw the shoulder (*d*) firmly upon the upper end of the cistern and keep it in proper place. The rod M, extends upward nearly to the top of the case A as shown clearly in Fig. 2.

N, is a pipe which communicates with the  
90 main and with the lower part of the cistern E.

O, is a stop cock fitted in the pipe N.

The operation is as follows. When the case J, is fitted over the nozzle C, the nozzle  
95 will be completely inclosed, and the valve F will cover the lower end of the pipe D, but when the case J is moved from left to right, as shown in red, Fig. 1, the nozzle C, will be exposed and by moving the case  
100 J, the hooked arm (*b*) will lower the valve F and rod G, and the water will pass over the upper end of the valve up through the pipe D and out through the nozzle, C. When the case J, is closed over the nozzle  
105 C, the rod G, and valve F will be raised by the arm (*b*) and the waste water within the pipe D, will pass out of the lower end of the pipe D, and underneath the upper projecting end of the valve F and into the  
110 lower end of the case through the opening (*a*) in the cistern. Thus it will be seen that



when the case J, incloses the nozzle C, the water is cut off by the valve F from the pipe D, and by moving the case J, so as to expose the nozzle the valve is lowered and the  
5 water allowed to flow up through the pipe D, and nozzle C.

By unscrewing the rod M and withdrawing the slide K, the whole apparatus may be lifted from the case A, and repairs, if necessary made without difficulty, and the parts  
10 may be readily inserted again within the case. At the lower end of the case, flanches (e) are placed to guide the cistern over the ledge (c) when it is inserted within the case.  
15 By having the nozzle C, inclosed when the hydrant is not in use, it is protected from the external air and prevented from freezing up during severe weather. The slide valve arranged as shown precludes the necessity of a stuffing box and no springs are  
20 required to be applied to the valve, as the pressure of the water upon the back of the valve, within the cistern, causes it to work water tight against the side of the cistern.

25 Having thus described my invention, what

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

1. The employment or use of the case or protector J, so connected with the valve rod G, that the valve F will be opened when the  
30 case or protector J is moved aside to expose the nozzle C, and the valve closed when the case or protector is moved over the nozzle.

2. I claim the slide valve F arranged or applied to the cistern E, as shown, viz.: the  
35 valve being fitted within the cistern, and connected with the rod, G, through the waste water passage, (a), whereby the valve is made to work water tight, and the use of a  
40 stuffing box and packing avoided.

3. I claim securing the cistern E, with the pipe D, and valve F, attached, within the case A, by means of the rod M, as shown, whereby the above parts may be readily detached from the case, and secured within it. 45

C. J. COWPERTHWAITTE.

Witnesses:

C. BRAZER,  
COLLIN PULLINGER.