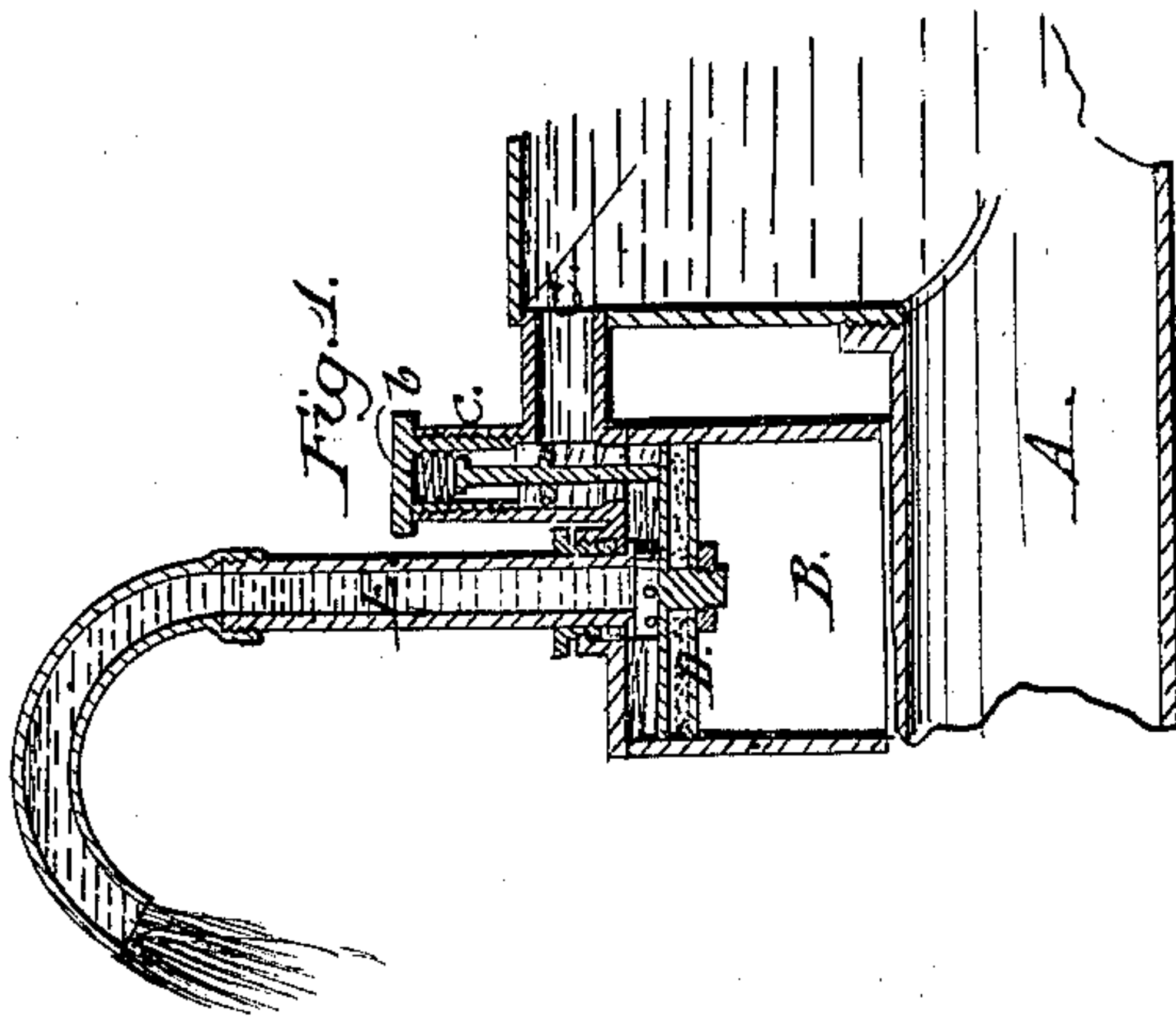
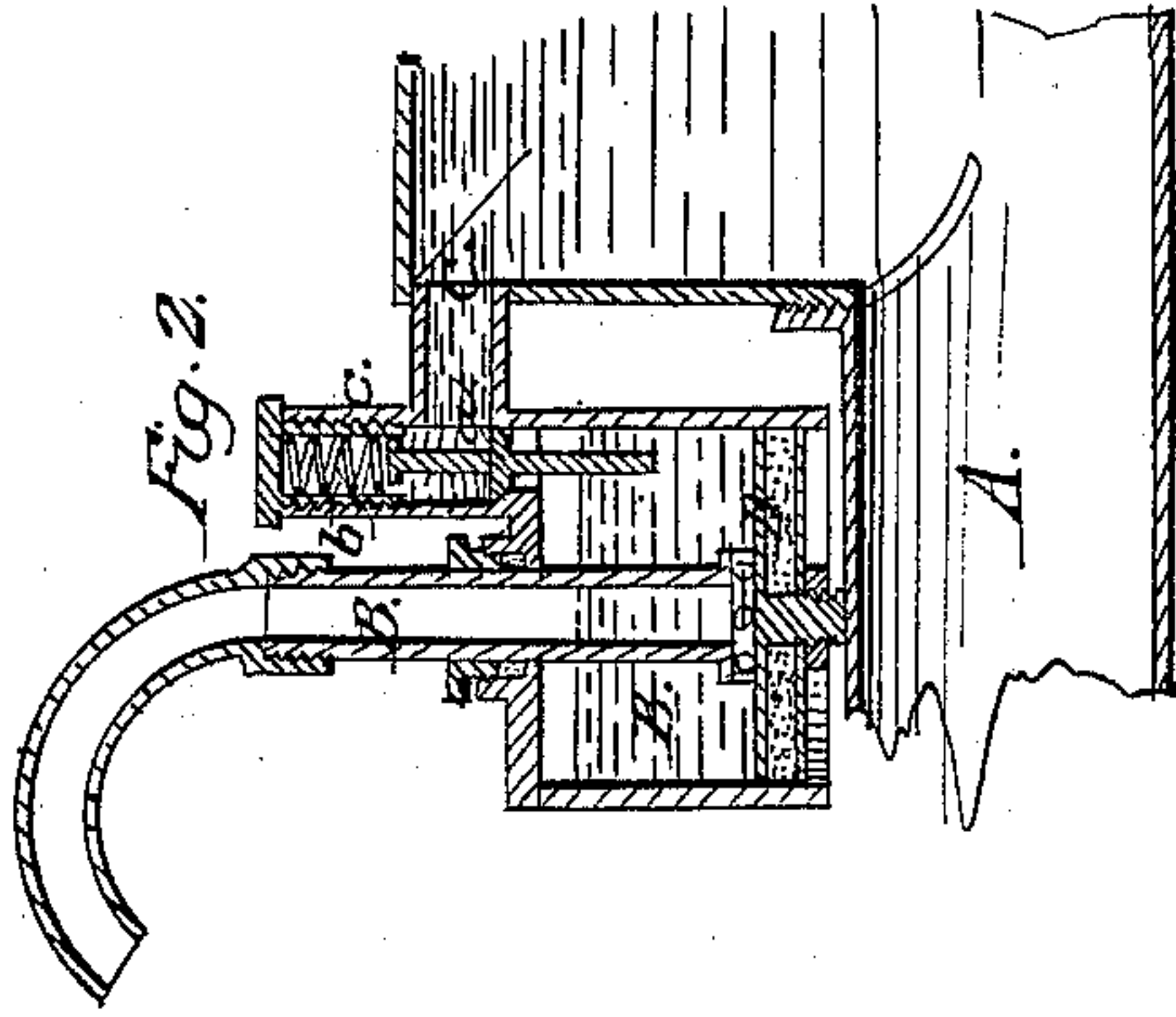


S. G. Cabell.

Hydrant.

N^o 88,542.

Patented Apr. 6, 1869.



Witnesses:
Geo. C. Sullivan
Ela C. Sullivan

Inventor:
Samuel G. Cabell
per M. Gill Grant & Co.
Attorneys



SAMUEL G. CABELL, OF QUINCY, ILLINOIS, ASSIGNOR TO HIMSELF
AND ABBOTT Q. ROSS.

Letters Patent No. 88,542, dated April 6, 1869.

IMPROVEMENT IN HYDRANTS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, SAMUEL G. CABELL, of Quincy, in the county of Adams, and State of Illinois, have invented a new and useful Improvement in Hydrants; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The object of my invention is to prevent water from freezing in the discharge or exhaust-pipes of hydrants, and consists in attaching to a hydrant, beneath its water-way, a drain-chamber, provided with a water-tight sliding bottom, or piston-head and rod, and so arranged, that as soon as the piston-rod is released from above, the weight of water on the sliding bottom, or piston-head, causes it to sink, thereby closing the supply-valve, and draining the water remaining in the discharge-pipe down into the drain-chamber, where it remains until the piston-rod is again raised. By this arrangement, water never stands in the hydrant above that in the water-way, which being placed in the ground below freezing-point, prevents it from freezing therein.

The accompanying drawings represent vertical sectional views of a hydrant embodying my improvement.

Figure 1 represents a vertical sectional view of my improved hydrant, showing the sliding bottom, or piston-head of the drain-chamber up, the drain-chamber empty, the supply-valve open, and the water passing through it and the delivery-pipe.

Figure 2 represents a similar view of the hydrant, with the sliding bottom, or piston-head down, the supply-valve closed, the delivery-pipe empty of water, and the drain-chamber full.

Similar letters of reference indicate corresponding parts.

In figs. 1 and 2, A represents the supply-pipe, which is connected with the bottomless drain-chamber B, by the water-way C.

a is the inlet, or supply-valve.

This valve is a wing-valve, and is held in its seat by the spiral spring b, in the chamber c, operating against its head, as shown, and is guided by its wings, and by its head, the diameter of which is exactly the same as that of the chamber c, in which it operates.

D is the sliding bottom, or piston-head, which is packed so as to be water-tight.

E is the piston-rod, and also the discharge, or exhaust-pipe. On this pipe being drawn up by any suitable mechanical arrangement, the top of the sliding bottom, or piston-head D, strikes the tail of the supply-valve a, and raises it up out of its seat, letting the water rush in through it from the supply-pipe A into the upper portion of the drain-chamber B, and from thence up through the discharge-pipe E. On the piston, or discharge-pipe E being released, the weight of the water on top of the sliding bottom, or piston-head D, causes it to sink, thereby closing the supply-valve a, and drawing the water from the discharge-pipe E into the drain-chamber B, where it remains until the discharge-pipe, or piston E is again raised.

Wings may be cast upon the chamber B, to enable it to be fixed in position without the use of screws, &c., by sliding it into suitable grooves in its frame, or support.

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

1. In a hydrant, the drain-chamber B, placed below the water-way C, as shown, and for the purposes herein set forth.

2. In combination with a hydrant, as described, the water-tight sliding bottom D, of the chamber B, arranged as shown, and operating in the manner and for the purposes herein set forth.

3. The arrangement of the drain-chamber B and extension-chamber c, so as to form, in combination with the sliding bottom, or piston-head D, a continuation of the water-way, as herein set forth.

4. The wing-valve a, when constructed, arranged, and operating in connection with the chamber B and sliding bottom, or piston-head D, in the manner and for the purposes herein set forth and described.

In testimony that I claim the foregoing invention, I have hereunto set my hand, this day of January, 1869.

S. G. CABELL.

Witnesses :

GEO. W. MCGILL,
HUGH CAMERON.