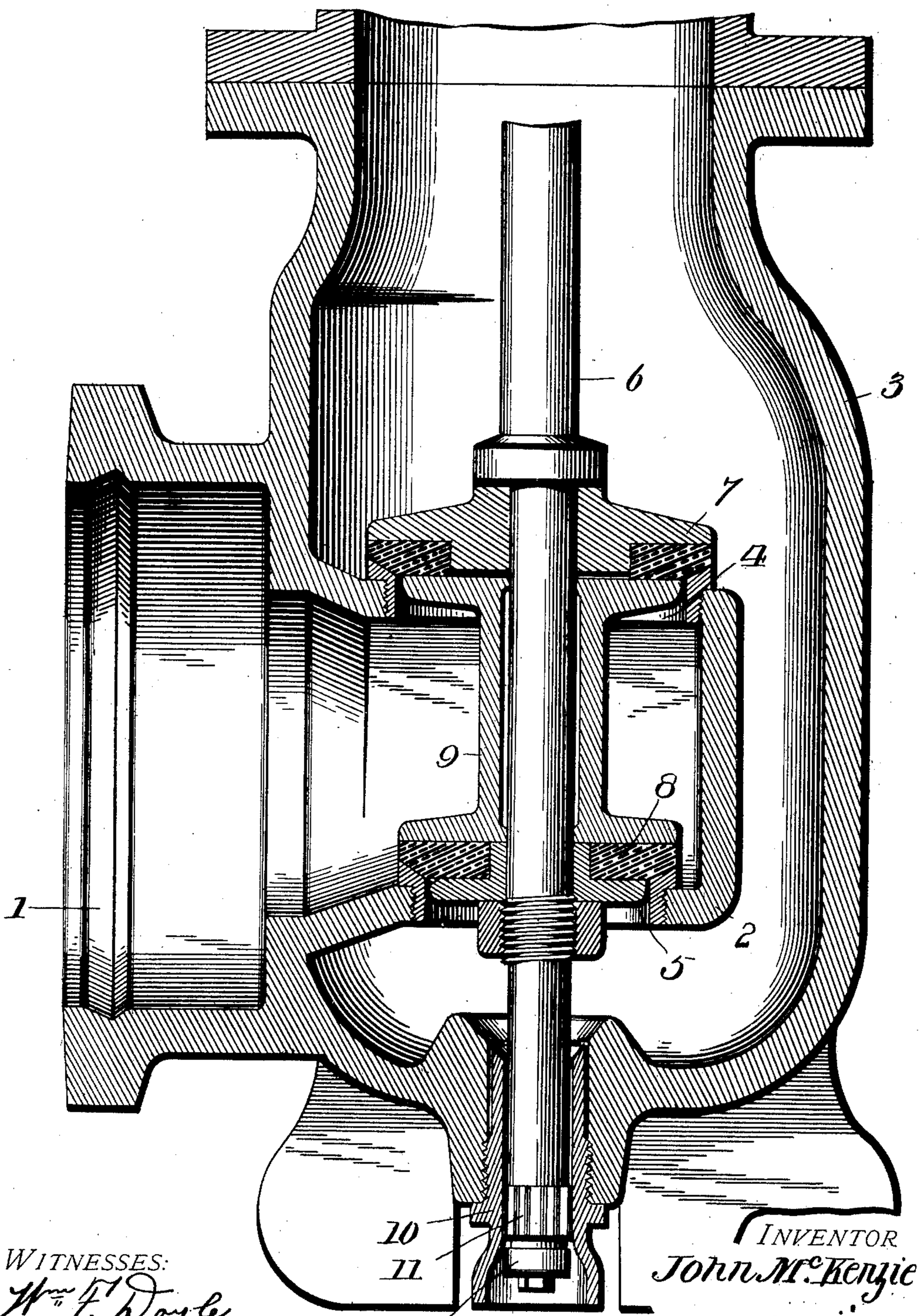
No. 679,466. Patented July 30, 1901.

J. McKENZIE.

HYDRANT.

(Application filed Mar. 6, 1901.)

(No Model.)



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JOHN McKENZIE, OF TROY, NEW YORK.

HYDRANT.

SPECIFICATION forming part of Letters Patent No. 679,466, dated July 30, 1901.

Application filed March 6, 1901. Serial No. 50,004. (No model.)

To all whom it may concern:

Be it known that I, JOHN McKENZIE, a citizen of the United States, residing at Troy, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Hydrants; 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 appertains to make and use the same.

My invention has relation to hydrants; and it consists in the novel construction and arrangement of its parts, as hereinafter described.

My invention has relation to hydrants provided with a valve which is almost balanced, making the operation of the latter easy. Working in connection and attached to the balance-valve is a positive automatic drip or waste valve, located in the extreme bottom of the hydrant stand-pipe, so that the latter may be entirely drained.

In the accompanying drawing the figure is a sectional view of a stand-pipe, showing the location of the balance-valve therein in a closed position and of the drip-valve in an open position.

At the inner end of the water-inlet port 1 is located a box 2, which extends into the lower portion of the stand-pipe 3. The box 2 is provided in its upper and lower sides with the ports 4 and 5, respectively, said ports being provided with suitable valve-seats. The valve-stem 6 extends down through the stand-pipe 3 and is provided with a rubber-faced valve 7, which is adapted to close the port 4, and at a lower point the said stem is provided with a rubber-faced valve 8, which is adapted to close the port 5. The valve 8 is of such a diameter as to permit its passage through the port 4 when the parts are assembled or separated. Interposed between the valves 7 and 8 is the spool-shaped collar 9, said collar being carried by the valve-stem 6. In the bottom of the stand-pipe casing is located a bronze cylinder 10, which is bell-shaped at its lower end. The lower end of the valve-stem 6 passes through said cylinder and is provided with a bronze corrugated guide 11, the lower end of the valve-stem 6 being provided with a valve 12.

In operation the device works as follows: The parts being in position, as shown in the drawing, when the valve-stem 6 is elevated the pressure of the water will be against the under side of the upper valve 7 and on the upper side of the lower valve 8. The lower valve being the smaller, the pressure is about equally divided and the valve can be easily opened. At the same time the valve 12 is drawn up into the interior of the cylinder 10, closing the same. The water then passes through the ports 4 and 5 into the stand-pipe 3. When the valve is to be closed, the stem 6 is caused to descend, the pressure of the water from the inlet-port being against the under side of the valve 7 and the upper side of the valve 8. At the same time the valve 12 is passed out of the cylindrical portion of the bronze cylinder 10 and is housed within the bell-shaped portion, as shown. Thus when the valves 7 and 8 are closed the water remaining in the stand-pipe passes down through the bronze cylinder 10, through the spaces between the corrugations of the guide 11, and out through the bell-shaped portion. Thus the stand-pipe 3 is emptied and there is no danger of the parts becoming inoperative by reason of freezing.

Having described my invention, what I claim is new, and desire to secure by Letters Patent, is—

A hydrant consisting of a stand-pipe, said stand-pipe having in its interior a box provided in its top and bottom with inlet-ports, said hydrant having in its bottom a cylinder, said cylinder being flared at its lower end, a valve-stem passing through the inlet-ports of the box and cylinder, valves located on said stem and adapted to close the inlet-ports of the box, a valve located at the lower end of said stem and adapted to pass perpendicularly within the cylinder and close the same, a corrugated annular guide located on the lower end of the stem and being housed within the cylinder, the lower valve adapted to close the cylinder when the valves of the box-ports are opened and adapted to pass into the flared lower end of the cylinder and open the same when the valves of the box-ports are closed.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN McKENZIE.

Witnesses:
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