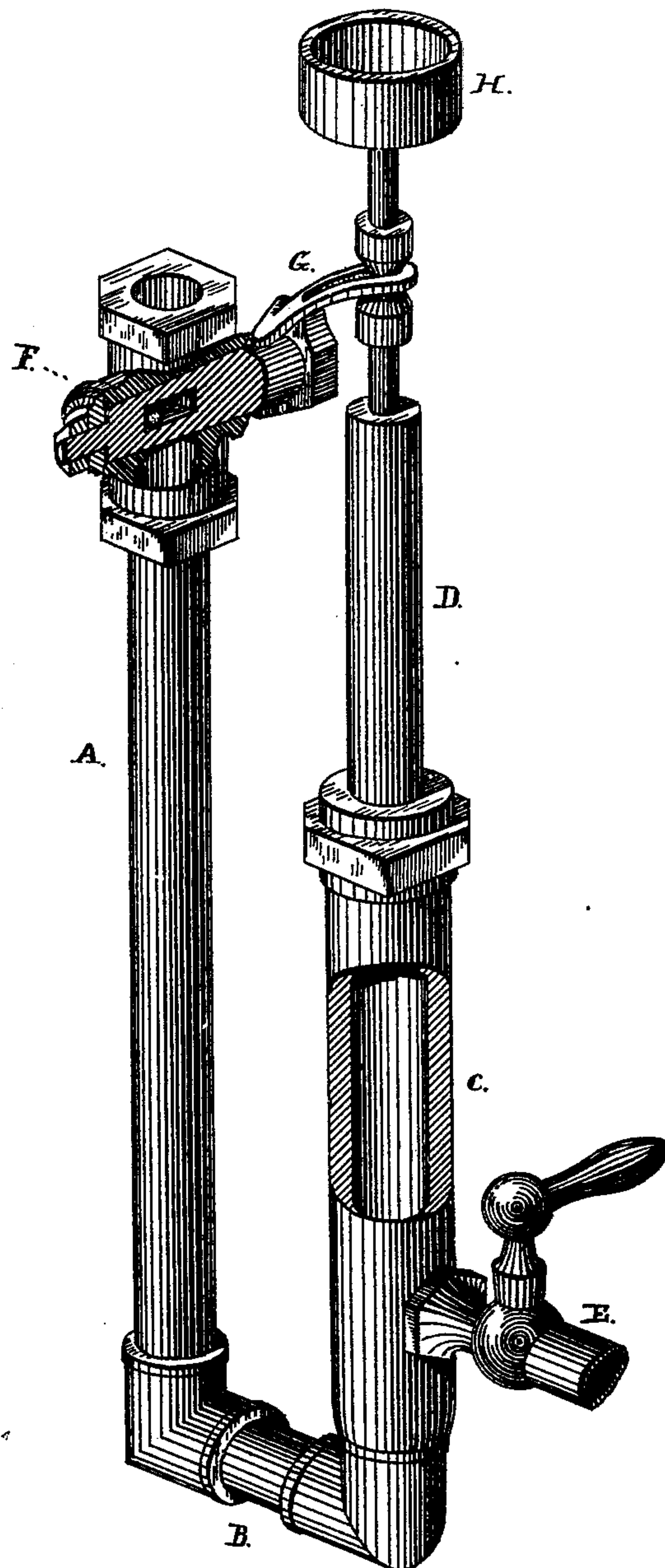


C. H. SHELLEY.  
WATER PRESSURE REGULATOR.

No. 176,489.

Patented April 25, 1876.



WITNESSES.

INVENTOR.

FIG. 1.

*Walter B. Vincent*  
*J. T. Rich*

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# UNITED STATES PATENT OFFICE.

CHARLES H. SHELLY, OF PROVIDENCE, RHODE ISLAND.

## IMPROVEMENT IN WATER-PRESSURE REGULATORS.

Specification forming part of Letters Patent No. **176,489**, dated April 25, 1876; application filed April 7, 1876.

*To all whom it may concern:*

Be it known that I, CHARLES H. SHELLY, of Providence, in the State of Rhode Island, have invented a new and useful Water-Pressure Regulator; and I do hereby declare that the following specification, taken in connection with the drawing making a part of the same, is a full, clear, and exact description thereof.

Figure 1 is a view of my device.

The object of my invention is to produce a means for regulating the pressure of the water upon the pipes in houses and other buildings, and consists in the device for that purpose hereinafter described.

It is well understood that in cities into which water has been introduced a large quantity is constantly kept on hand in the reservoirs, sufficient for the wants of the people for many days should the supply through accident become cut off, and at the same time meet any sudden demand that may be made in case of fire or of damage to the main pipes. This head of water, being greater than is requisite to raise it to the desired height, produces a corresponding strain upon the pipes, which not unfrequently bursts them and floods the building. Such a result may be avoided by placing a tank in the upper part of the building, into which the water flows through a very strong pipe, and from which it is distributed through the ordinary pipes.

My invention does away with the necessity of a tank; it is easily adjusted and relieves the pipes from unnecessary pressure.

In my invention, A is a perpendicular section of pipe, to an arm, B, of which is attached a perpendicular cylinder, C, into which works a piston, D. The supply-pipe is attached to

the upper end of the pipe A, and the water is discharged from the regulator through the pipe E, which connects the lower end of the cylinder C with the pipes going through the building.

Near the upper end of the pipe A is a valve, F, which is operated by the piston D through the sleeved lever G.

Upon the upper end of the piston D is a cup, H, in which rests a suitable weight, the size of which is determined by the amount of pressure desired.

Commencing with the several parts in the position shown in the drawing, upon the opening of a faucet in the building the weight in the cup H forces down the piston D, and drives the water in the cylinder C into the pipe E. As the piston D descends it operates and opens the valve F, and establishes a flow of water from the street to the open faucet, the pressure in the pipes between the regulator and the faucet being reduced in proportion to the size of the weight upon the piston D.

Upon the closing of the faucet the pressure of the water upon the piston D raises it to its former position and closes the valve F, thus relieving the pipes from any strain until a faucet is again opened.

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

The automatic water-pressure regulator herein described, consisting of the pipe A, valve F, cylinder C, and weighted piston D, the whole constructed and operating together in the manner substantially as described.

CHARLES H. SHELLY.

Witnesses:

WALTER B. VINCENT,  
J. T. RICH.