

J. KELLY.
Water Supply Regulators.

No. 153,000.

Patented July 14, 1874.

Fig: 1

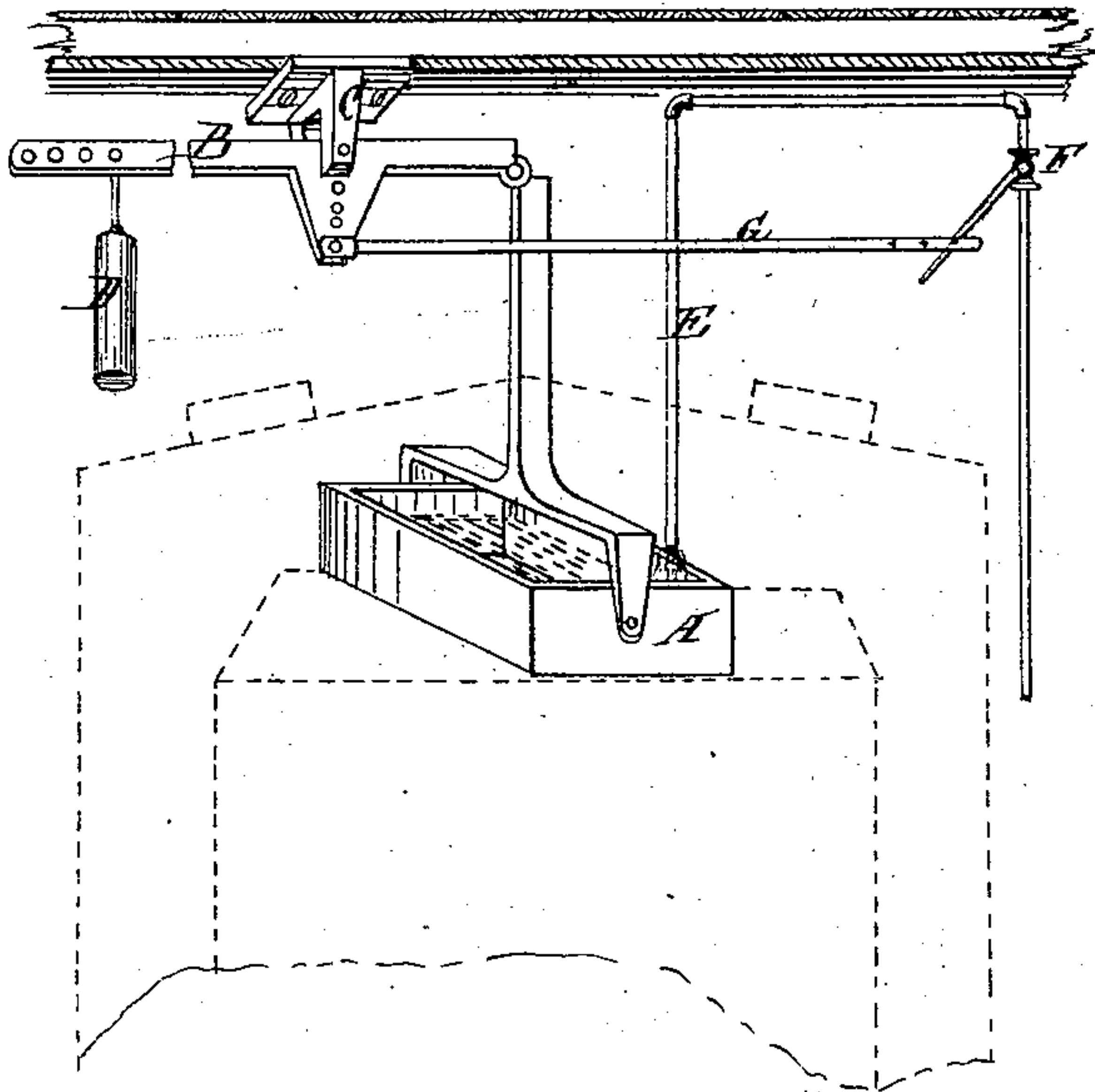


Fig: 2.

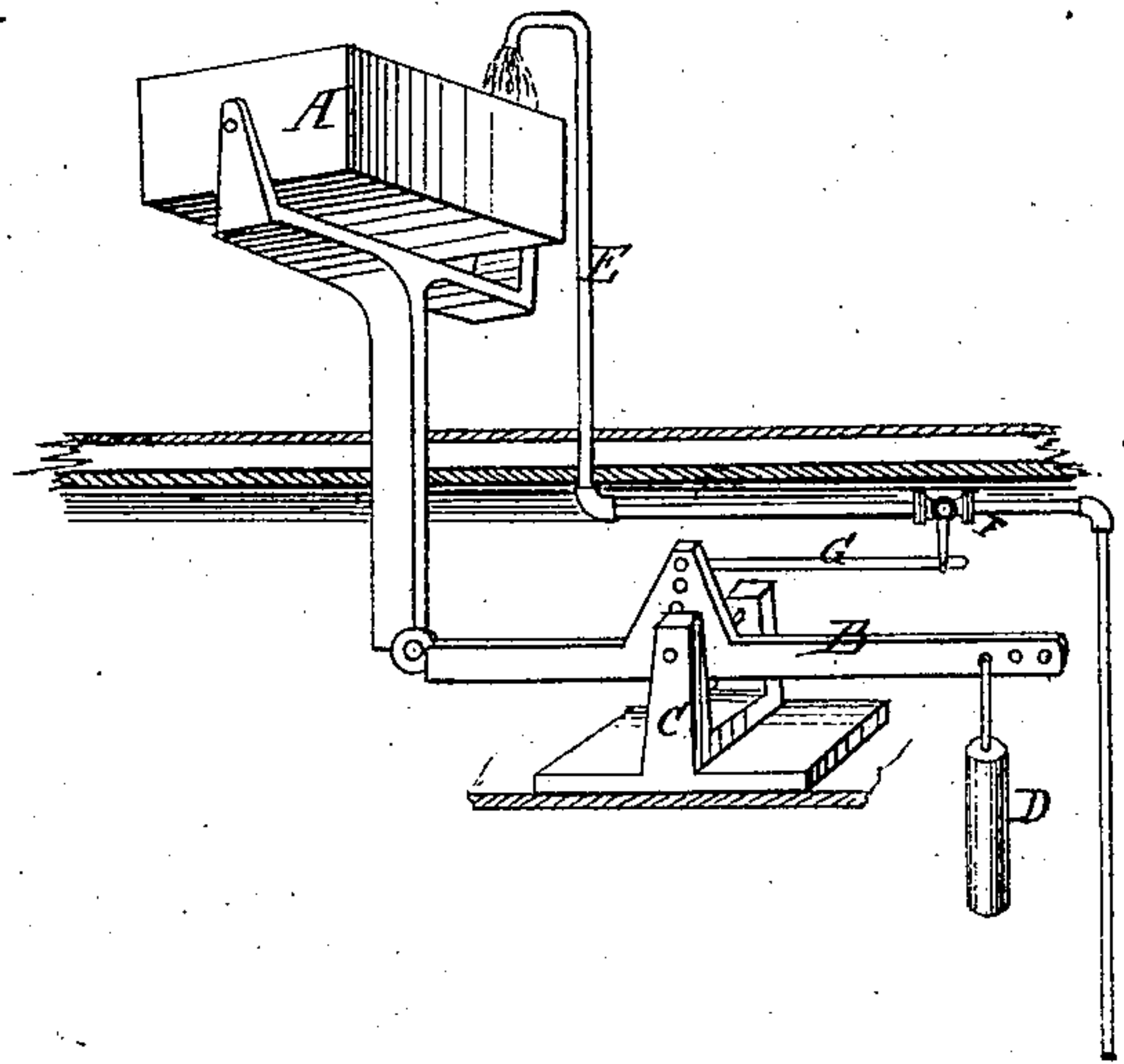
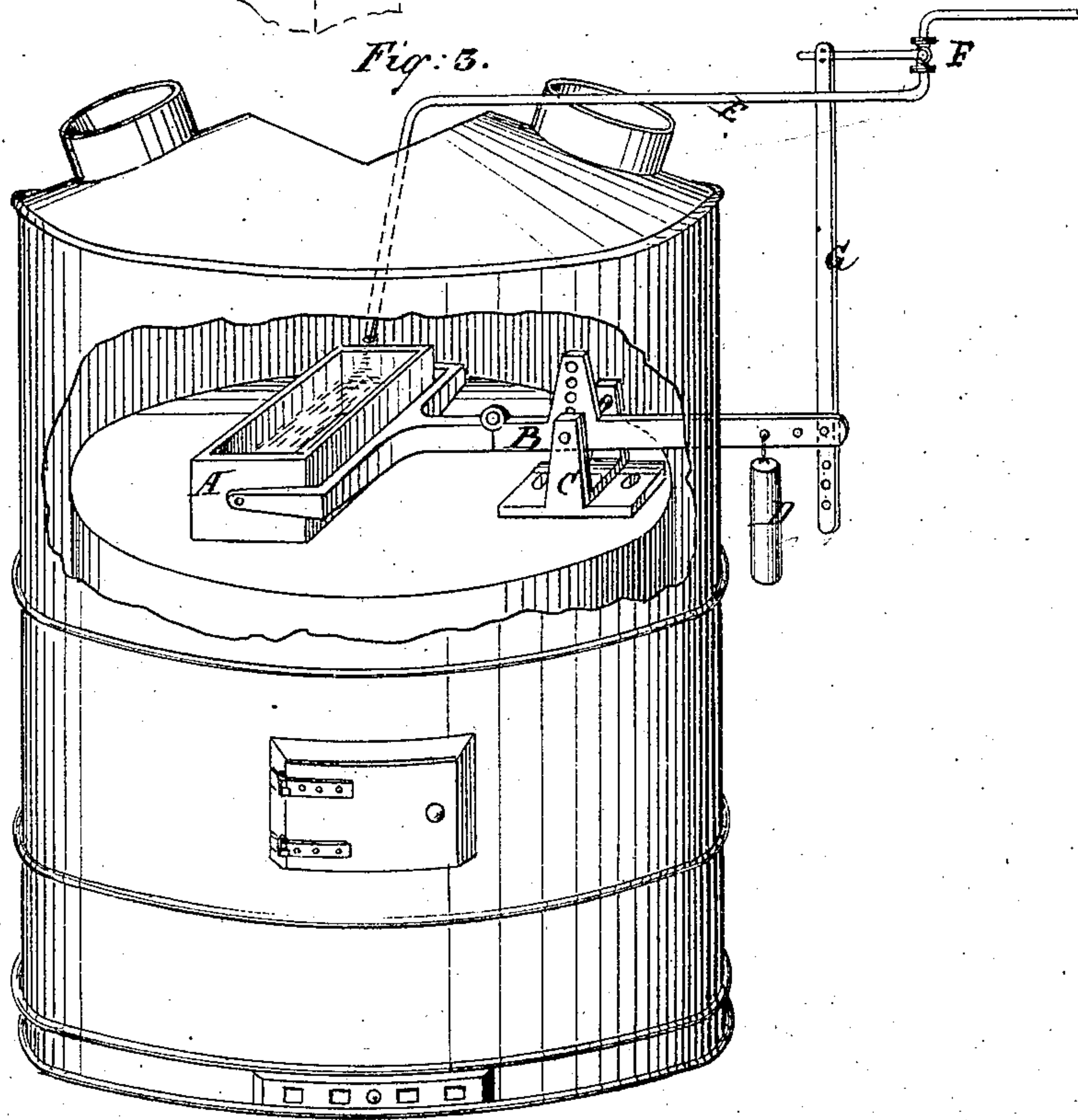


Fig: 3.



Witnesses:

Henry Clark
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JOSEPH KELLY, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN WATER-SUPPLY REGULATORS.

Specification forming part of Letters Patent No. **153,000**, dated July 14, 1874; application filed February 5, 1874.

To all whom it may concern:

Be it known that I, JOSEPH KELLY, of Brooklyn, Kings county, New York, have invented an Improved Water-Supply Regulator, of which the following is a specification:

Figure 1 is a perspective view of my improved apparatus. Fig. 2 is a perspective view of a modified form of the same. Fig. 3 represents my improved apparatus applied to a furnace.

The object of this invention is to furnish an improved apparatus for regulating the supply of water automatically to the vapor or evaporating-pan of furnaces, heaters, &c., directly from the street-mains, so that it will require no supervision and no tank.

The invention consists in the combination of the pivoted lever provided at one end with an evaporating-pan, at the other end with an adjustable weight, and at its pivoting-point with a graduated arm, and a connecting-rod for operating the stop-cock of a water-pipe, with a furnace or heater, and with a water-pipe and its stop-cock, as hereinafter fully described.

A is the evaporating-pan, which is placed in the heater or furnace, and which may be of any desired size, according to the amount of evaporation required. The pan A is supported by a lever, B, the end of which is forked to receive said pan, which is pivoted to said forks, so that the said pan may be kept level while the lever B works upon its pivot C. The end part of the lever B, with which the pan A is connected, is jointed to the body of said lever, and may hang downward, as shown in Fig. 1, project upward, as shown in Fig. 2, or be extended in line with the body of the lever, as shown in Fig. 3. When projecting upward the hinged part of the lever B should be provided with a guide to keep it nearly perpendicular. The pivot C of the lever B is attached to a bracket, which is secured to the ceiling or to some other support, in such a position that the pan A may be in the hot-air chamber of the furnace or heater. From the outer end of the lever B is suspended a weight, D, which may be moved nearer to or farther from the pivot C, according as less or more water is

required in the pan A. E represents the water-pipe, which is brought into such a position that it may discharge the water directly into the pan A. The flow of water from the pipe is regulated and controlled by a stop-cock, F, in the usual way. With the handle of the stop-cock F is connected the end of a rod, G, the other end of which is connected with an arm formed upon the middle part of the lever B, or with the outer end of said lever, according as the relative position of the various parts of the apparatus may render most convenient, and at the same time allow the valve F to be placed at such a distance from the furnace or heater as to be unaffected by the heat. The arm formed upon the lever B at its pivoting-point should be provided with a number of holes for the attachment of the rod G, to enable the said rod to be so adjusted that the movement of the lever B will open and close the stop-cock F.

To adjust the apparatus for use, open the stop-cock F and allow the water to flow until the pan A is as full as desired; the weight D is then adjusted to exactly balance the water and pan; the rod G is then connected with the handle of the stop-cock F, and the adjustment is completed.

With this arrangement, as the water evaporates, the pan A becomes lighter than the weight D, and gradually rises, until the movement of the lever B opens the stop-cock F, and admits another supply of water, until the pan A again sinks to its former position, which shuts the stop-cock F, stopping the inflow of the water, and so on and continuously, as long as vaporation continues.

It will be observed that, with this construction, as the water evaporates, and the pan A rises, it and the weight approach the pivot C, so that the vertical line through the center of gravity tends toward a parallelism with the length of the lever B. The result of this is, that more water is required to flow into the pan, before it begins to descend, than enough to bring the lever B to a level, the friction of the stop-cock and the various bearings have the same tendency, so that when the pan A begins to descend, it goes down with a prompt and positive movement.

Having thus described my invention, what

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

The combination of the pivoted lever B, provided at one end with an evaporating-pan, A, at the other end with an adjustable weight, D, and at its pivoting-point with a graduated arm, and the connecting-rod G with a furnace,

or heater, and with a water-pipe and its stop-cock, substantially as herein shown and described.

JOSEPH KELLY.

Witnesses:

J. HENRY CLARK,
JOSEPH ABBOTT.