

(No Model.)

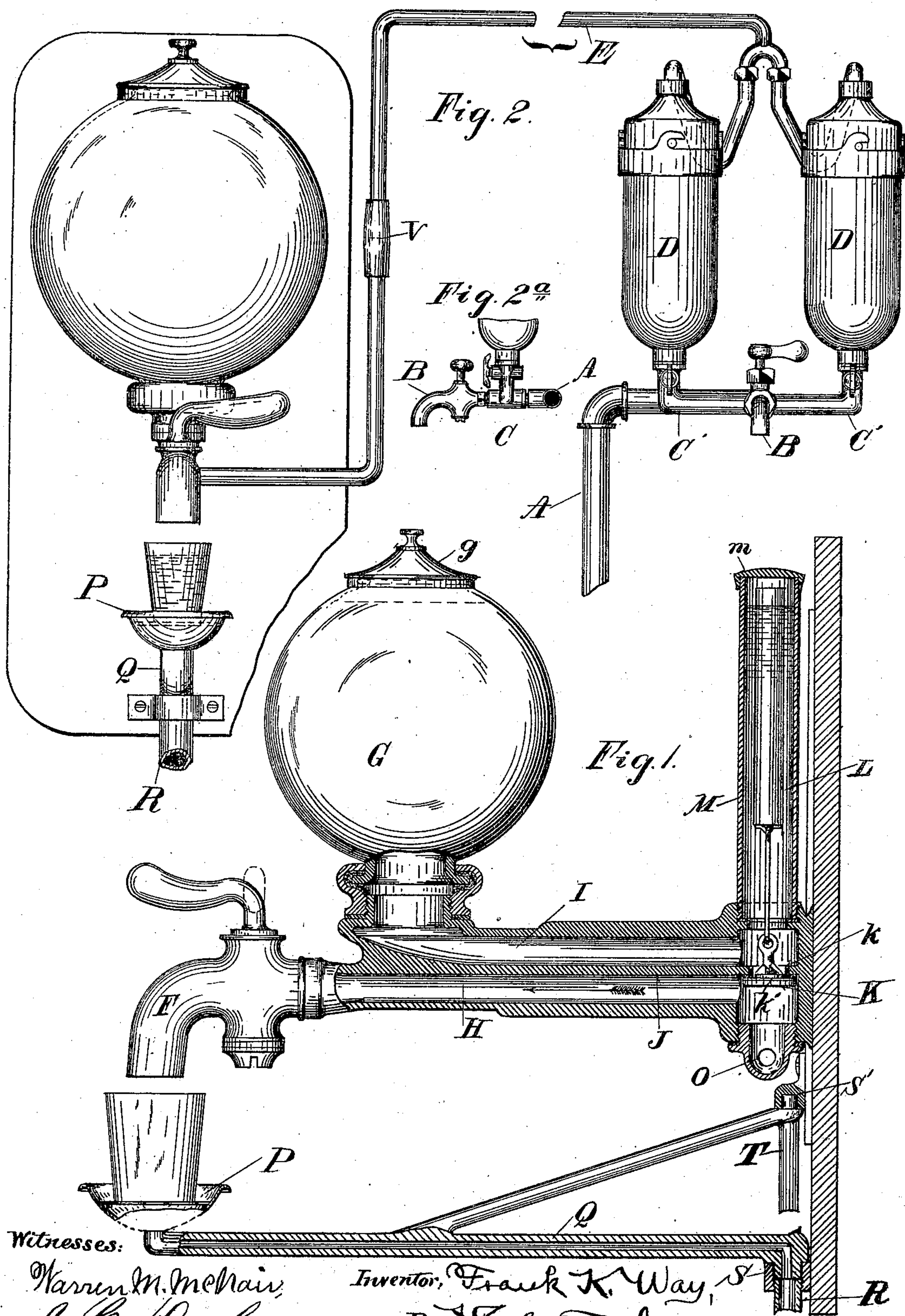
2 Sheets—Sheet 1.

F. K. WAY.

DEVICE FOR STORING AND DELIVERING FILTERED WATER.

No. 504,007.

Patented Aug. 29, 1893.



Witnesses:

Warren M. McHear,
J. P. Hawley

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att'y

(No Model.)

2 Sheets—Sheet 2.

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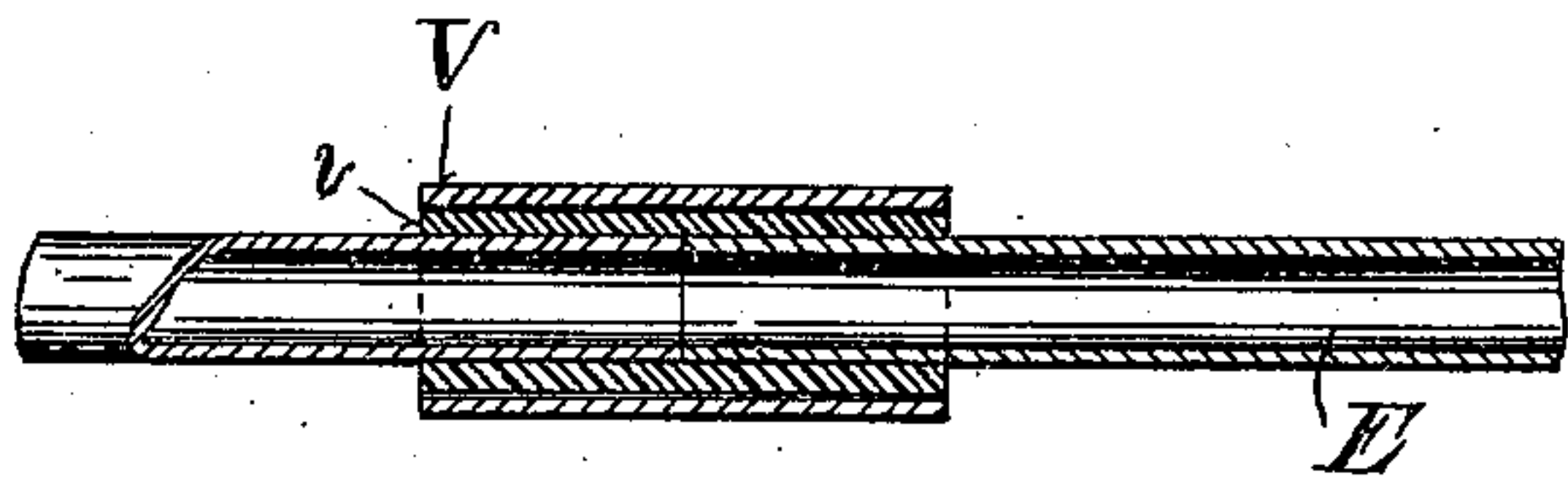


Fig. 5.

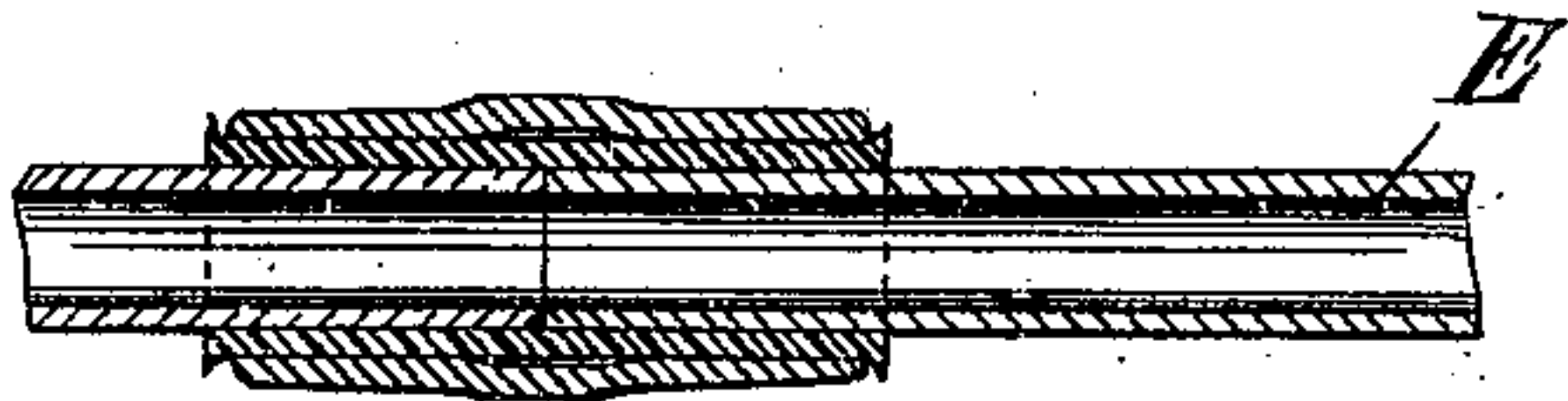


Fig. 6.

Fig. 3.

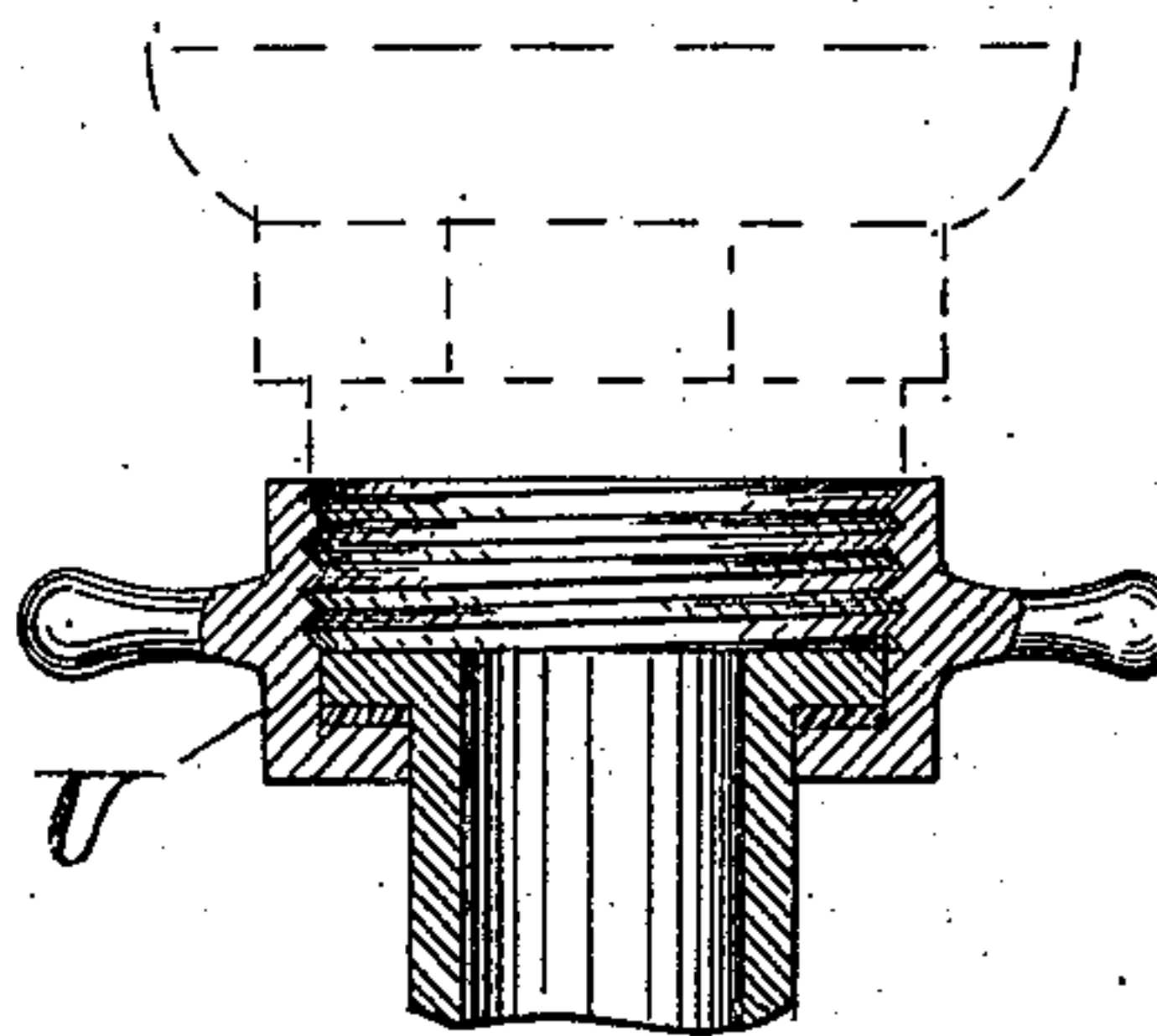
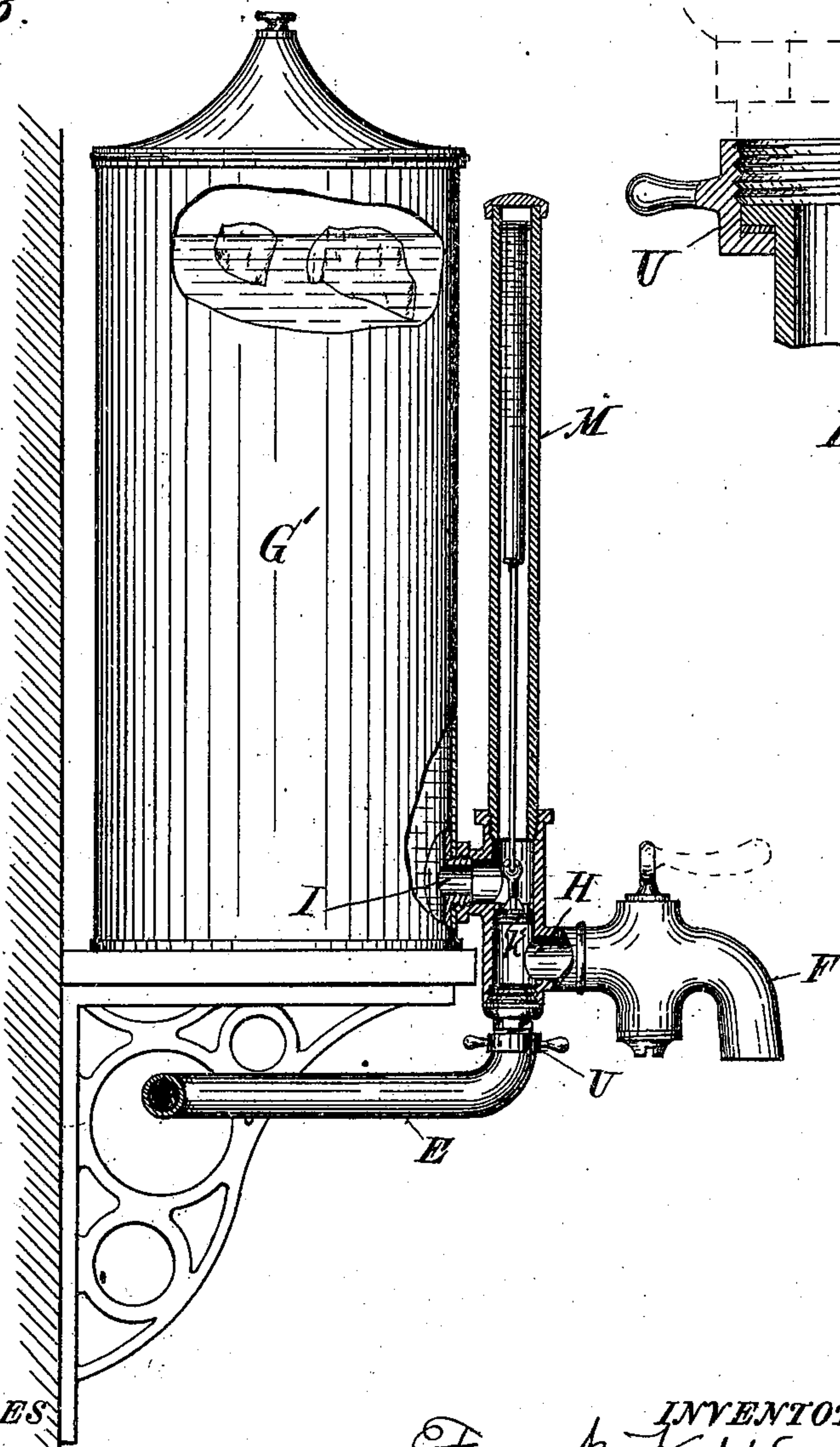


Fig. 4.

WITNESSES

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INVENTOR

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UNITED STATES PATENT OFFICE.

FRANK. K. WAY, OF DAYTON, OHIO.

DEVICE FOR STORING AND DELIVERING FILTERED WATER.

SPECIFICATION forming part of Letters Patent No. 504,007, dated August 29, 1893.

Application filed January 28, 1892. Renewed July 19, 1893. Serial No. 480,954. (No model.)

To all whom it may concern:

Be it known that I, FRANK. K. WAY, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Devices for Storing and Delivering Filtered Water, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to certain new and useful improvements in devices for storing and delivering filtered water, the peculiarities of which will be hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings on which like reference letters indicate corresponding parts: Figure 1 represents a partial sectional view of the tubular connection between the receptacle and discharge valve, and the swinging arm discharge or waste pipe; Fig. 2, a front view of the same and a filtering device operating therewith; Fig. 2^a, a side view of the filter support; Fig. 3, another form of tubular connection adapted for use with an ordinary water cooler or storage vessel; Fig. 4, a sectional view of a simple form of coupling; Fig. 5, a sectional view of the meeting ends of two pipes, a compressible sleeve and an interposed packing slipped thereon; and Fig. 6, a similar view showing the joint completed.

One of the especial advantages of my device and purpose for which it is designed, is the location of the storage receptacle for the filtered water at a point remote from the filtering apparatus, which latter may be applied to the water pipes in the kitchen or other out of the way place, as shown by Fig. 2, while the filtered water is carried to a hygienic receptacle of neat and attractive appearance located near the side board, in the hall, or elsewhere as desired, from which the water may be readily drawn for use. The filtering apparatus may thus be readily removed for cleaning, &c., without disturbing the storage receptacle, which is also thus adapted to be placed in more accessible positions. Also one filtering apparatus may supply a number of storage vessels thus separately located.

Other advantages will appear farther on.

The letter A designates the inlet water pipe,

having the discharge cock B for ordinary use and an interposed coupling piece C provided with branches C' to support filtering devices D of any convenient construction, adapted to deliver the filtered water through conducting pipes E to a tubular, or other connection, between a discharge cock F and a storage vessel G. This connection as shown in Fig. 1, consists of a double tubular device, the passage H delivering the water to the discharge cock F, and the passage I to the storage vessel G coupled thereto. The partition wall J between the two passages is provided with a seat for a valve K opening downward, and closed by the action of a float L inclosed in a tube extension M, in which the water rises as it enters through the conducting pipe attached at O. The valve seat consists of a collar of hard rubber, *k*, set into the wall J, and the valve K is faced with a softer disk *k'* of rubber, whereby the sticking of the valve to its seat is avoided. This is the preferred material for the contact surfaces of the valve.

The storage receptacle G is made of glass, preferably in the form of a globe and topped by a cap *g*. The filtered water, as it passes through the filter under pressure, gradually fills the globe G, and as it reaches the water line, the valve K is closed by the float L, the water in the case M rising to the same height as in the storage vessel, as shown in Fig. 1. The operation of the filter then ceases, or is directed to filling other storage vessels at a higher level than the one last filled. This sphere of filtered water, clear as crystal, and the inclosing globe therefor, presents an attractive appearance, and is an ornament, as well as a hygienic aseptic receptacle for preserving the water pure and uncontaminated. The first action of drawing the water from the cock F, will be to relieve the pressure on the under side of the valve K by withdrawing the water from the pipe, whereupon the valve will open and allow the water stored in the receptacle G, to flow out reversely through the passage I, and along the passage H to the discharge cock. The filter is not designed to supply the water in large quantities in a very short time, and the storage vessel will therefore supplement the supply, and gradually refill when the discharge cock is closed again.

A perforated saucer P is supported by a tubular arm Q, which discharges into a waste pipe R supported in a socket S, which also serves as a bearing for the inner end of the arm as it swings about an axis T, the other end of which is provided with a similar socket S'. The drip and waste from the cock F, will thus be caught and carried away, and the arm may be readily swung to one side to admit a large vessel, such as a pitcher, beneath the cock F. This arm conveniently supports a tumbler as shown in Figs. 1 and 2.

The case M is provided with a loose cap *m*, and may be of glass, if so desired. It would thus serve as a water gage to show the height of water in the storage receptacle, in case the latter were of other material than glass as just described. In fact, it is one of the features of my invention, that the valvular connection may be applied to an ordinary water cooler, or other form of storage vessel for filtered water, in connection with the filtering apparatus, and I have so illustrated it in Fig. 3. The connection between the storage vessel and discharge cock in this figure, is different in form but not in principle, from that shown in Fig. 1. The valve in Fig. 3, as in Fig. 1, is mounted between the passage I, leading to the receptacle and the passage H leading to the cock. The conducting pipe E is coupled to the connection by a screw-threaded shouldered collar U, Fig. 4, and fills the water cooler G' to a height determined by the length of the case M and the float mounted therein. When the water reaches a predetermined height, the valve is closed as shown in the figures.

If desired the cooler may be supplied with ice, as indicated.

Another special feature of my invention, is the readiness with which the device may be applied and set up without the aid of a plumber. To facilitate this I provide a joint or union, consisting of a compressible sleeve V of block tin, or other suitable material, which may be slipped over the meeting ends of the conducting pipe E, and compressed by ordinary pliers, upon an interposed packing *v*, to effect a tight joint without the aid of solder, as indicated in Fig. 6.

As previously observed, the support for the filter apparatus may be connected to the inlet pipe by simply unscrewing the cock B, and inserting a coupling C, provided with screw-threads respectively matching the said cock and inlet pipe to which it was secured.

The brackets for the support of the globe storage vessel and its adjunctive devices may be readily attached by screws to any suitable support, and by means of this simple and effective union for the conducting pipe, the whole device may be set up by a person of ordinary intelligence without the aid of a plumber. This is found to be a great saving in the expense of the apparatus, in points where a plumber is not readily accessible, or where it is not desired to incur the expense of

one. In practice, it is found to add largely to the convenience of the purchaser, and admit of using the same in many places where it is really necessary to purify the water for the health of the user, but where the expense of a plumber would deter the intending purchaser from putting in the same.

I do not wish to confine myself to the exact form or construction herein shown and described.

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

1. In a storing and delivering device for filtered water, the combination with a supply pipe and a transparent, aseptic storage vessel of globular form, of a chambered connection between said supply pipe and storage vessel, consisting of a supporting arm having passages therein, one connected with the storage vessel, and the other leading to the outlet, and an inlet opening to said chambers, for the supply pipe, a draw-off cock at the outlet end, and a float valve mounted between said inlet and storage vessel and adapted to be closed when the water reaches a predetermined height in said vessel to shut off the water from said supply pipe.

2. In a storing and delivering device for filtered water, the combination with a supply pipe and a storage vessel, of a chambered connection consisting of a supporting arm having parallel passages, a draw-off cock mounted at the end of one passage, the storage vessel being mounted at the end of the other passage, the said connection being provided with an inlet opening for the supply pipe and an extension from said passages corresponding to the predetermined height of water in the storage vessel, a float mounted in the said extension and a valve connected to said float and seated in said passage between the supply pipe and the storage vessel to shut off the admission of water thereto.

3. In a storing and delivering device for filtered water the combination with a storage vessel and a filtering apparatus located at distant points, of interconnecting pipes between said apparatus and said vessel, a cock-controlled chambered vessel mounted in the path of said pipes, and consisting of an inlet passage to the storage vessel an outlet passage to the discharge cock, and a valve seated between said inlet and outlet passages and adapted, by the influx of water, to close at a predetermined water level in said vessel, and to open to allow the afflux of water, when the pressure beneath the valve is relieved by opening said discharge cock.

4. In a storing and delivering device for filtered water, the combination with a supply pipe and a storage vessel, of a chambered connection having an inlet for said supply pipe, a regulated outlet opening, and a passage leading therefrom in one direction toward the supply pipe, and a similar passage in the other direction toward the storage vessel, a

storage vessel communicating therewith and
a valve seat between said passages, a valve
therefor, one member being provided with a
hard rubber surface, and the other with a
5 matching, yielding, soft rubber surface, a float
connected to said valve and mounted in the
extension from said connection, whereby the
water is maintained at a predetermined height
in said vessel by said float valve and readily
10 admits a supply thereto when a portion is
drawn off.

5. The combination with a storage vessel,
a filtering apparatus, and a conducting pipe
to deliver the water to said storage vessel, a
15 chambered cock-controlled connection mount-
ed in the path of said pipe and provided with
an extension corresponding to the water level

desired in said storage vessel, a float mounted
in said extension, a valve operated by said
float and seated in said connection in the 20
path of the water, between said storage ves-
sel and the discharge cock of said connection,
whereby the water will flow into said storage
vessel till the predetermined water level is
reached, when the valve will be closed and 25
maintain such level until the discharge cock
is opened to draw the water therefrom.

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

FRANK. K. WAY.

Witnesses:

OLIVER H. MILLER,
WARREN M. MCNAIR.