

No. 7,716.

PATENTED OCT. 15, 1850.

D. BARTLETT, JR.
FILTERING COCK, &co.

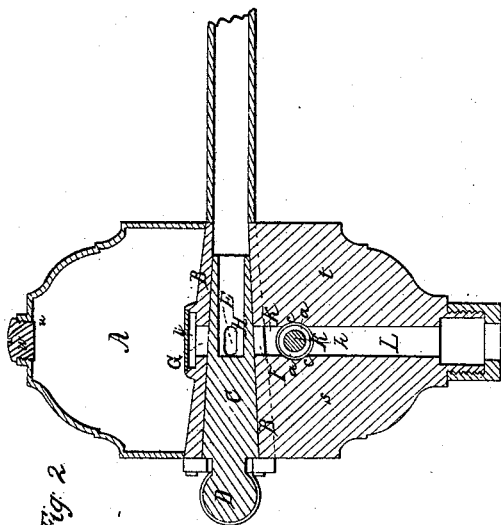


Fig. 2

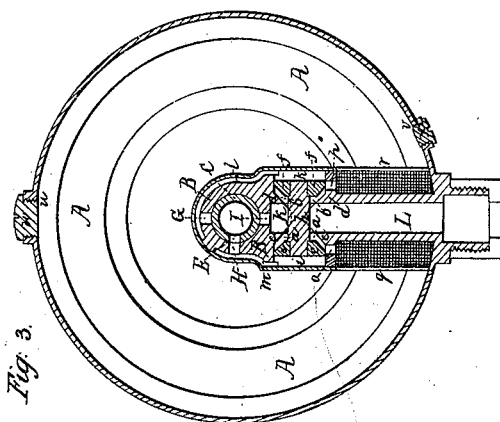


Fig. 3

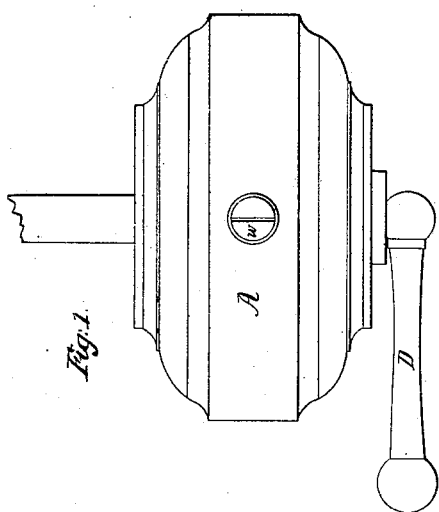


Fig. 1

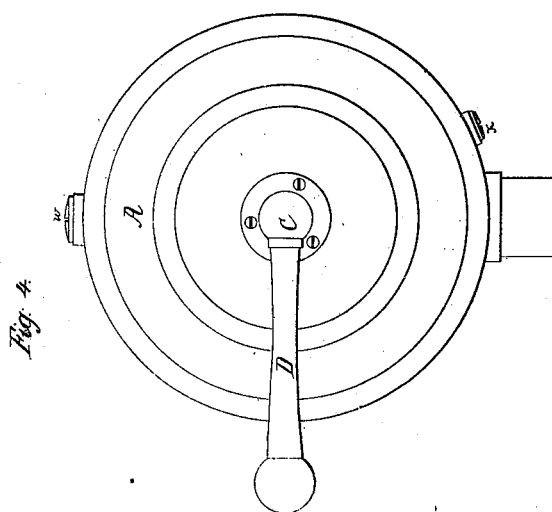


Fig. 4

UNITED STATES PATENT OFFICE.

DANL. BARTLETT, JR., OF BOSTON, MASSACHUSETTS.

FILTERING-COCK.

Specification of Letters Patent No. 7,716, dated October 15, 1850.

To all whom it may concern:

Be it known that I, DANIEL BARTLETT, Jr., of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Filtering-Cocks; and I do hereby declare that the same is fully described and represented in the following specification and accompanying drawings, letters, figures, and references thereof.

Of the said drawings, Figure 1 denotes a top view of my improved filtering cock. Fig. 2 is a central, vertical and transverse section of it. Fig. 3 is a central, vertical and longitudinal section of it. Fig. 4 is a front elevation of it.

In the said drawings A represents a hollow box or case having a tubular passage-way or pipe B extending transversely through its center. Within this passage, which I usually make conical or tapering, a turning plug C is inserted and so applied as to be capable of being revolved by the hand of a person when applied to a handle or lever, D, extending at right angles from the said plug as seen in the drawings. Through the side of the said plug there is a water way or passage E, which is placed near the central part of the filtering cock. There are also three such passages G, H, I, made through the sides of the tubular passage, each of which is situated at or about at 90 degrees distant from the one next to it, as seen in Fig. 3, they being arranged in the tube as therein represented. Directly under the lowermost passage I is a horizontal chamber K into which said passage opens; and leading out of the bottom of the said chamber is the discharge pipe L. At each end of the said chamber there is a valve opening *a* or *b*. To each opening a valve seat *c* or *d* is applied, each of said seats having a circular disk or valve *e* or *f* disposed so as to operate in connection with it. The said two disks or valves are fastened respectively to the two ends of a short rod *h* whose diameter is about equal to one half of that of each valve opening. The distance at which the two valves are placed is somewhat greater than that between their two seats, the object being to have either one of the valves open or raised from its seat when the other is closed, or down upon its seat.

Each valve moves or slides within two small chambers *i*, *k*, disposed with respect to the center chamber K as seen in Fig. 3.

From the opening G a pipe or passage way *l* is made to extend around the tube which incases the faucet plug, and to enter into one of the small outer chambers *i*, *k*. A similar tube or passage *m* is made to extend from the opening or passage H and to enter into the other of the two small chambers *i*, *k*, and within the range of motion of the valve thereof, there is a hole, opening or passage *o* or *p*, which hole or passage communicates with one of two chambers, *q*, *r*, arranged as seen in the drawings. The side of the said chamber being perforated with numerous holes or composed of wire gauze. Extending between the discharge tube L, the lower part of the pipe B and the two sides of the case are the partitions *s*, *t*, arranged as seen in the transverse section. The whole interior space of the box or case that surrounds the parts above explained as situated within said box, or case, is to be filled with some suitable filtering substance or composition, which may be introduced therein through one or more holes or orifices *u*, *v*, made through the case and provided with screw plugs *w*, *x*, as seen in the drawings. In operating this filtering cock water may be drawn or caused to pass through it, filtered or unfiltered, as occasion may require. The water may also be caused to pass through the filtering medium, first in one direction, and next in the opposite as occasion may require, and for the purpose of cleansing the filtering medium of any impurities that may have collected therein.

In order to draw water unfiltered or without causing to pass through the filtering medium, it is only necessary to turn the faucet or plug handle down into a vertical position so as to bring the passage or opening E into direct communication with the passage or opening I. The water will then flow through the openings E, I, and will pass between the valves and out of the discharge pipe.

Now in order to draw filtered water suppose we turn the plug around 90 degrees so as to bring its opening E, into direct communication with the opening or passage H. The water will then flow through the said two openings E, H, and will pass into the passage *m*, thence into the chamber *i*, and in so doing presses on the valve therein, closes it down upon its seat, and in consequence opens the valve in the chamber *k*, or moves it off its seat. The water unable to

escape between the valve of the chamber *i*, and the seat of the said valve will pass down through the opening leading out of the bottom of the said chamber *i*, and flow
5 into the wire gauze chamber before described, as being directly underneath the chamber *i*, thence the water will pass out of the sides, or through the perforations thereof, and into the filtering medium, and
10 will pass in a circular course entirely through said medium and into the other wire gauze chamber, passing from the same up through the orifice or opening in its top, which connects it with the chamber *k*, thence
15 between the valve *f* and its seat, and down through the discharge pipe.

Now in order to cause the water to pass in an opposite direction through the filtering medium, we turn the plug so as to bring
20 the passage E thereof into communication with the passage G. The valve which was before opened will next be closed down upon its seat by the pressure of the water, and will open the other valve, and the water will
25 pass through the filtering medium in the opposite direction from what it did before.

What I claim as my invention or improvement, is—

The combination of parts arranged, constructed, and made to operate together substantially in the manner hereinbefore set forth; the said combination consisting of the box or case A, the tubular passage way B, having three discharging orifices G, H, I, the turning or hollow plug C, made with a
35 discharging orifice E, the central and two lateral chambers K, *i*, *k*, the passages connecting the openings G, H, with the chamber *k*, *i*, the self operating valves and their stem, and seats, and valve openings, the
40 passages leading out of the bottom of the two lateral chambers, the central discharge pipe leading out of the chamber K, the partitions *s*, *t*, and the filtering medium, having
45 wire gauze chambers as above specified or being used without them as occasion may require.

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Witnesses:

R. H. EDDY,

BENJAMIN EDDY.