G. Curtis.

Filter.

No. 109,592. Patented Nov. 29, 1870.

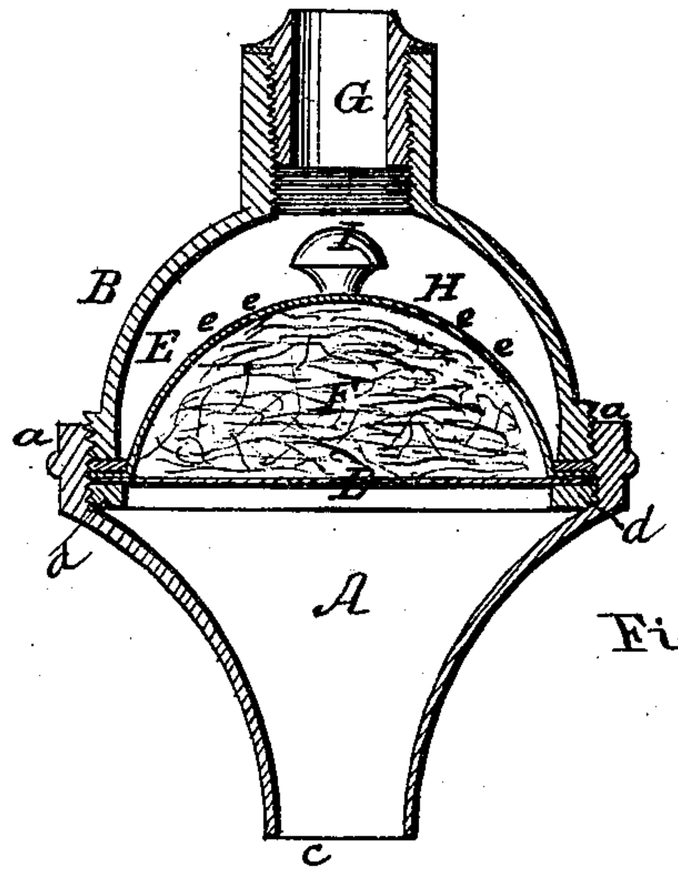

Fig 1.

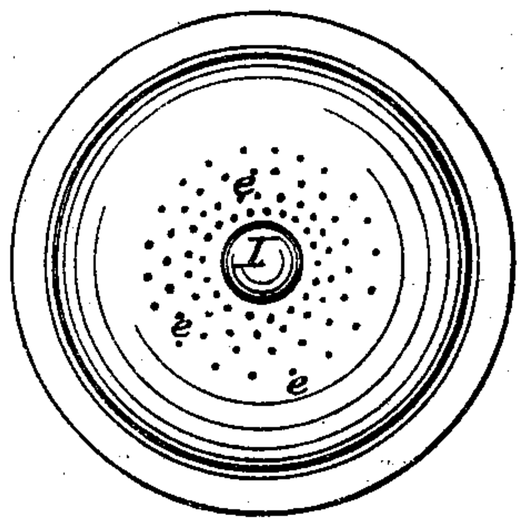

Fig. 2.

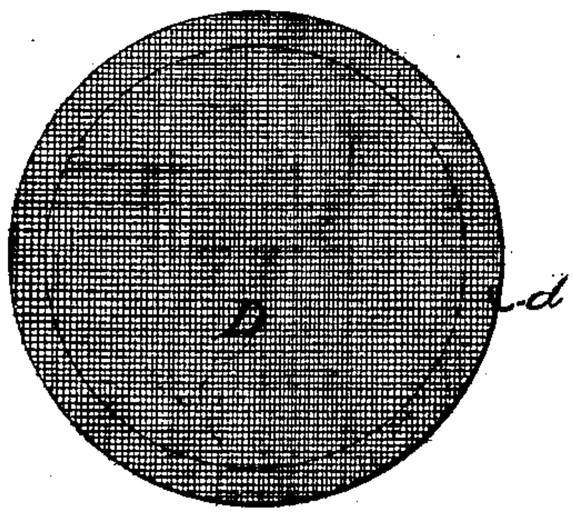

Fig. 3.

Witnesses
J. C. Smith
C. D. Gilmore.

Inventor.
George Curtis.
by his attorneys
Gardiner & Hyde.

United States Patent Office.

GEORGE CURTIS, OF SPRINGFIELD, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND E. BIGELOW, OF SAME PLACE.

Letters Patent No. 109,592, dated November 29, 1870.

IMPROVEMENT IN FILTERS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, GEORGE CURTIS, of Springfield, Massachusetts, have invented a new and useful Improvement in Filters; and I do hereby declare that the following is a clear and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

In the drawing—

Figure I is a side sectional view; and

Figures II and III, detail views of parts of my invention.

In construction, I form my filter of a metal cover, B, semi-globular in shape, and which is screwed into the metal base A at *a*.

The lower part of the filter A decreases in size from the bottom of the cover B to its mouth *c*, making a shoulder upon which rests a fine-wire sieve, D, having a metal rim, *d*.

Upon this rim fits the flange of the hollow semi-globular piece of metal E, containing the compressed sponge F.

This covering to the sponge has a number of minute apertures, *e e e* &c., for the passage of the fluid in process of filtration, and being made considerably smaller in perimeter than the outside piece B of the filter, leaves a fluid chamber, M.

Immediately upon the top of the case E, and beneath the neck G of the filter is placed a button or knob, I. The neck G is made like a coupling, so that it can be readily attached to various-sized nozzles of bibb faucet or hydrant.

To be put together, the case E holding the sponge is placed over the sieve, the flange of the case E fitting over the rim *d* of the sieve, (being the same width,) a rubber washer or other packing is then placed over the flange to prevent any leakage from the chamber M, and the outside cover B is screwed into place, pushing the sieve against its shoulder and compressing the packing and flange of the case E against the rim of the sieve, so as to completely prevent all leakage.

The operation of my device is as follows:

The liquid entering the filter through its neck G strikes upon the button I and flies off into the chamber M, from which it finds its way through the small holes *e e e*, &c., to the sponge, so that there can be no percussion to force fibers and particles of matter in the liquid, into the apertures to clog them, but finding its way by its own weight it passes through the compressd sponge and finally through the fine-wire sieve, coming out of the mouth thoroughly filtered.

The advantage I obtain in the use of a sponge in a filter is, that the elastic fibers run in all directions, and it may be compressed so as to filter more or less closely, whereas felt and other materials now in use permit the liquid to wear channels through them, being elastic in only one direction.

The advantages of my device are its cheapness and simplicity, as it can not get out of order, and can be taken apart easily to cleanse, and can at once be attached to hydrant bibb, &c.

Now having described my invention,

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

The perforated deflecting case, with button and sieve, inclosing a percolating medium, the parts being contained within the case formed of the two parts, as set forth and described.

GEO. CURTIS.

Witnesses:

J. E. MCINTIRE,

H. B. EACHES.