

No. 675,802.

Patented June 4, 1901.

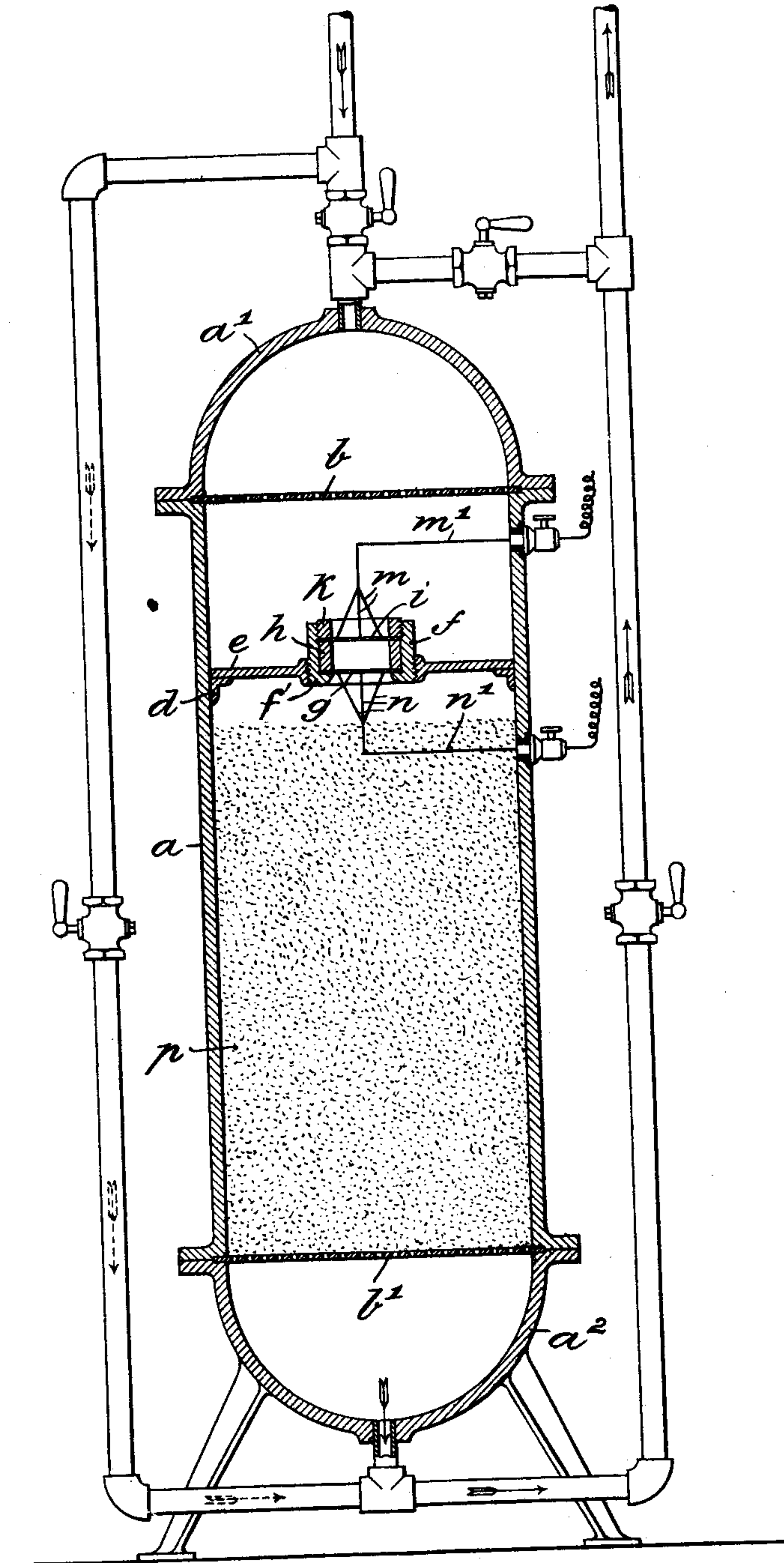
W. L. TETER & J. A. HEANY.  
ELECTRIC WATER FILTER.

(Application filed Sept. 1, 1900.)

2 Sheets—Sheet 1.

(No Model.)

Fig. 1.



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2 Sheets—Sheet 2.

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Fig. 2.

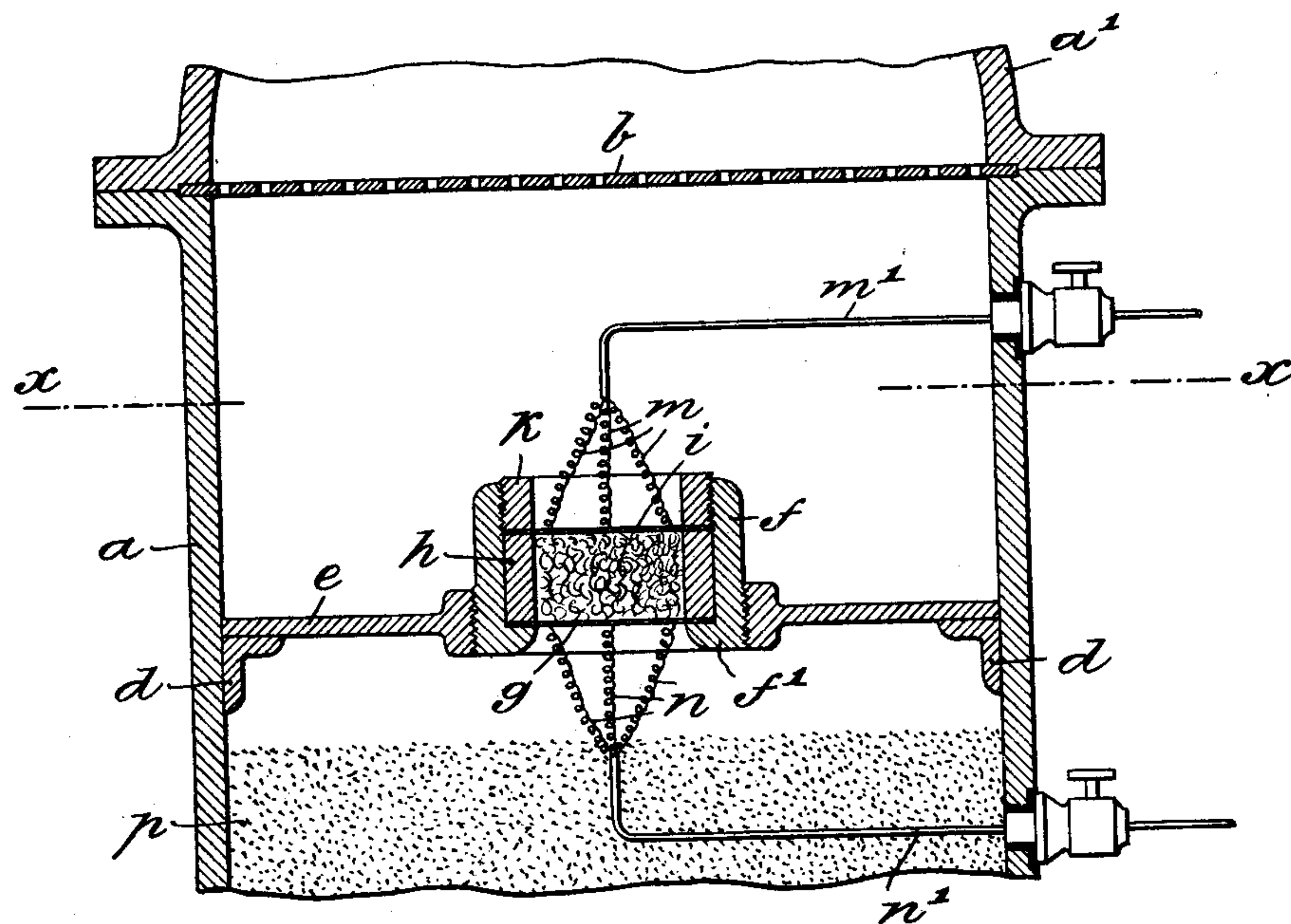
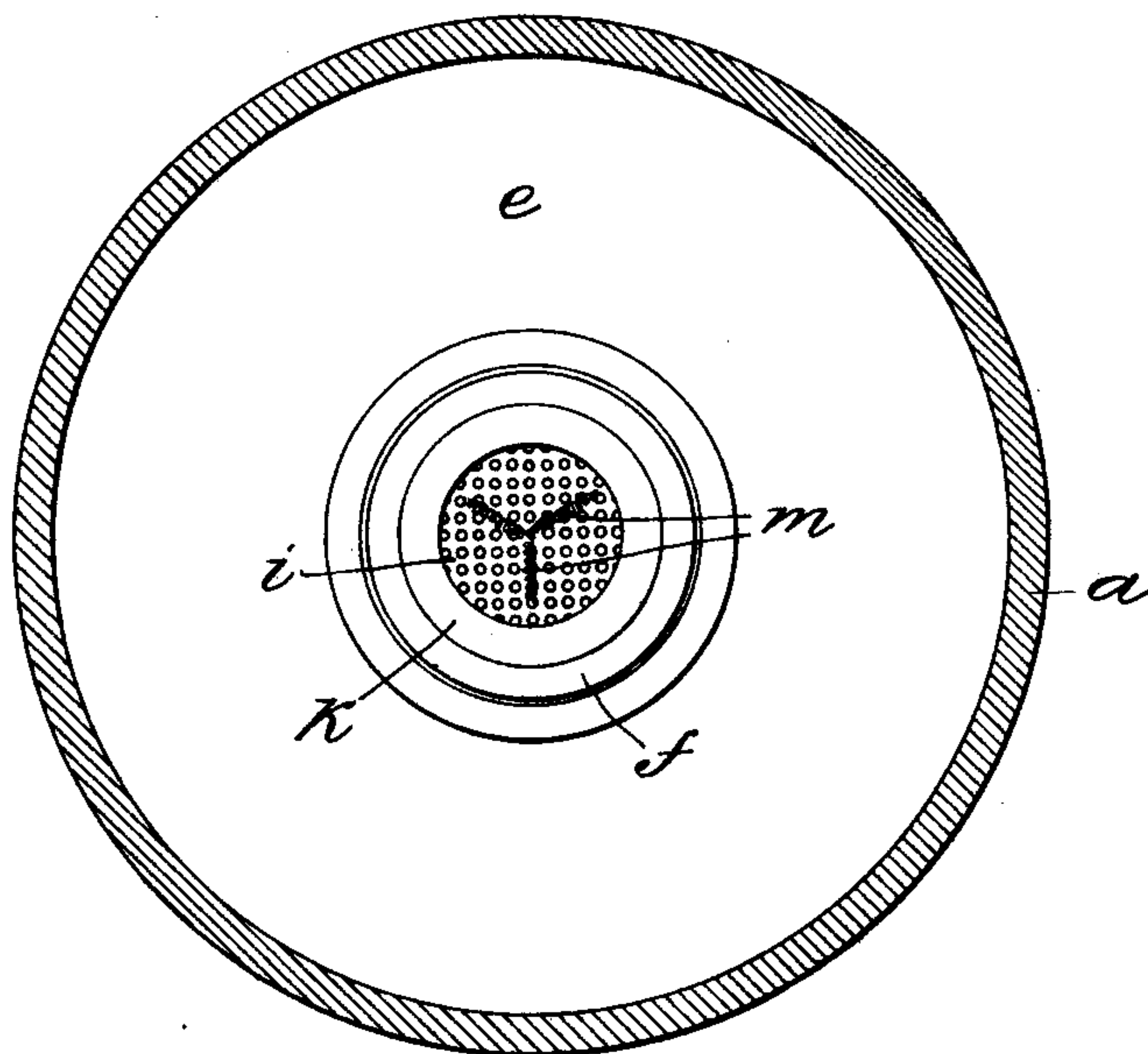


Fig. 3.



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# UNITED STATES PATENT OFFICE.

WILLIAM L. TETER AND JOHN A. HEANY, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNORS TO THE TETER-HEANY DEVELOPING COMPANY, OF SAME PLACE AND CHARLESTON, WEST VIRGINIA.

## ELECTRIC WATER-FILTER.

SPECIFICATION forming part of Letters Patent No. 675,802, dated June 4, 1901.

Application filed September 1, 1900. Serial No. 28,751. (No model.)

*To all whom it may concern:*

Be it known that we, WILLIAM L. TETER and JOHN A. HEANY, citizens of the United States, residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Electric Water-Filters, of which the following is a specification.

Our invention has relation to an electric water-filter.

The principal object of our invention is to provide a filter of comparatively inexpensive construction in which germs are adapted to be destroyed and the liquid to be sterilized by application of a current of electricity to the liquid in its passage to and through the filter.

Our invention, stated in general terms, consists of an electric water-filter constructed and arranged in substantially the manner hereinafter described and claimed.

The nature and scope of our invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, in which—

Figure 1 is a vertical central section and elevation of a filter embodying the main features of our invention. Fig. 2 is an enlarged sectional view of the device for applying the electrical current to the liquid to be filtered, and Fig. 3 is a cross-sectional view on the line  $x x$  of Fig. 2.

Referring to the drawings,  $a$  represents a substantially cylindrical casing of the filter, having a dome-shaped inlet end  $a'$  and a similar outlet end  $a''$ . The main body of the filter is separated from the dome-shaped ends  $a'$  and  $a''$  by screen-plates  $b$  and  $b'$ . Below the upper plate  $b$  and in the interior of the casing  $a$  is formed an annular ledge or flange  $d$ , on which is supported a disk  $e$ , of porcelain or similar non-conducting material. The disk  $e$  is provided with a central threaded aperture adapted to receive a sleeve  $f$ , of material similar to the plate  $e$ . The base of the sleeve  $f$  is provided with an internally-projecting flange or rim  $f'$ , upon which a perforated metallic plate  $g$  is adapted to be supported. On the

flange  $f$ , above the plate  $g$ , is also supported a collar  $h$ , of dielectric material, and on the collar  $h$  a perforated metallic plate  $i$  is supported and held thereon by means of a threaded ring  $k$ . The upper metallic plate  $i$  is connected by a series of wires  $m$  with a conductor  $m'$ , passing through the casing  $a$  and leading to the positive pole of a battery or other suitable source of electricity, and the lower plate  $g$  is similarly connected by wires  $n$  with a conductor  $n'$ , passing through the casing  $a$  and leading to the negative pole of a source of electric energy.

The foregoing arrangement is such that the liquid entering the inlet of the filter and passing through the plate  $b$  is prevented from escaping into the main body of the filter except through the two plates  $g$  and  $i$ , made, preferably, of aluminium. During the passage through these plates it forms a conductor between the plates for the current, and the passage of electricity through the liquid is adapted to speedily sterilize and rid it of germ life. Below the plate  $b$  is arranged the main filter-bed  $p$ , through which the electrified or sterilized liquid passes to rid the same of foreign matter or impurities.

In the drawings the electrodes are illustrated as inclosed in the main casing of the filter and as being opposed to the passage of the fluid to the main filtering media. If desired, however, these electrodes may be placed entirely outside the casing, provided they electrify and sterilize the liquid during its passage to and through the filter.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In an electric water-filter, in combination with a casing containing filtering media, a disk of non-conducting material separating the inlet from the outlet and having an opening, two perforated metal plates situated in said opening, and a positive and a negative conductor connecting the respective poles of a source of electric energy with said plates, substantially as and for the purposes described.

2. In an electric water-filter, a casing, a

disk of non-conducting material separating  
the inlet from the outlet end of said casing  
and having an opening, two superposed per-  
forated metallic screen-plates supported in  
5 the opening of said disk and insulated from  
each other, a positive conductor and a nega-  
tive conductor traversing said casing and con-  
nected with the respective poles of a source  
of electric energy, said conductors being re-  
10 spectively connected with the said perforated

metallic plates, substantially as and for the  
purposes described.

In testimony whereof we have hereunto set  
our signatures in the presence of two subscrib-  
ing witnesses.

WILLIAM L. TETER.  
JOHN A. HEANY.

Witnesses:

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THOMAS M. SMITH.