

(No Model.)

J. C. HIGGINS.

FILTER.

No. 338,411.

Patented Mar. 23, 1886.

Fig. 1.

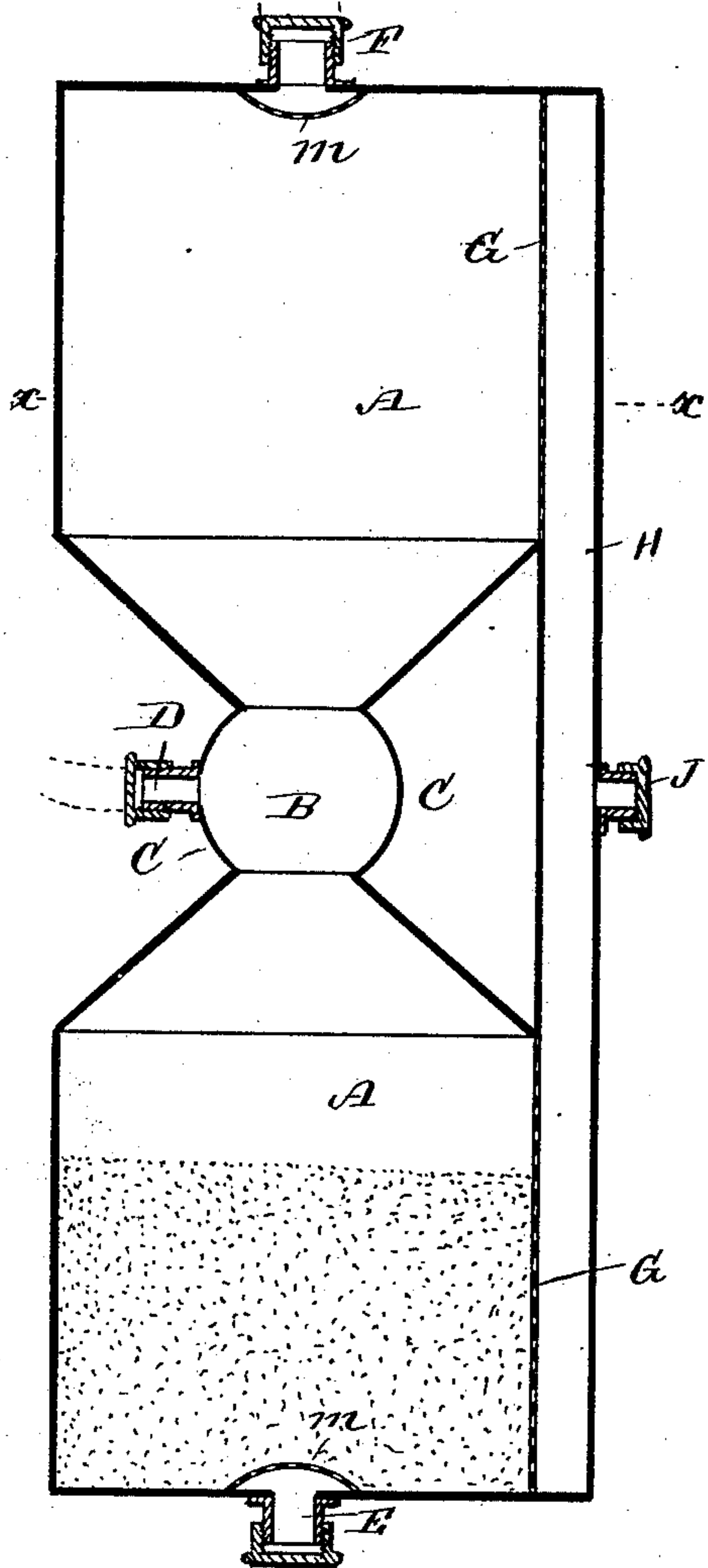


Fig. 2.

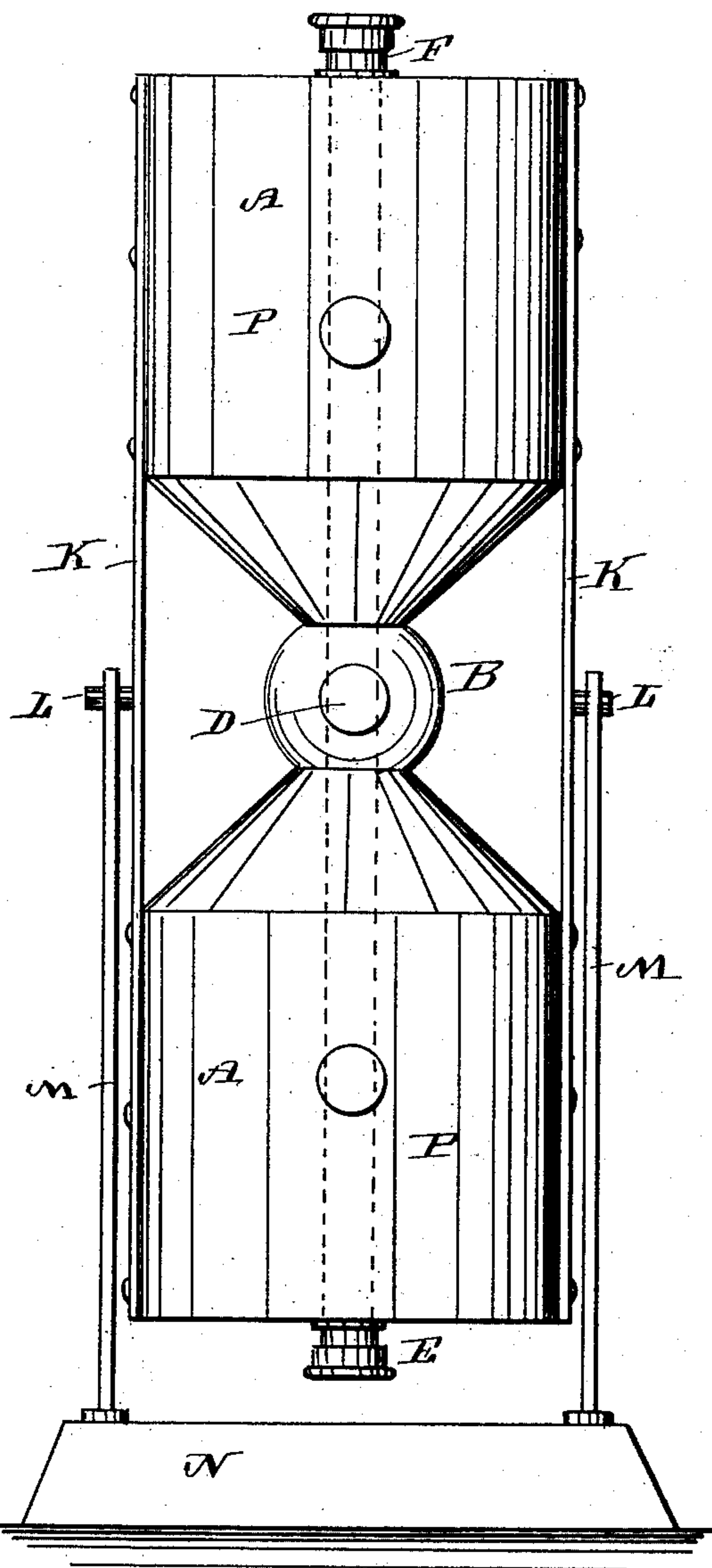
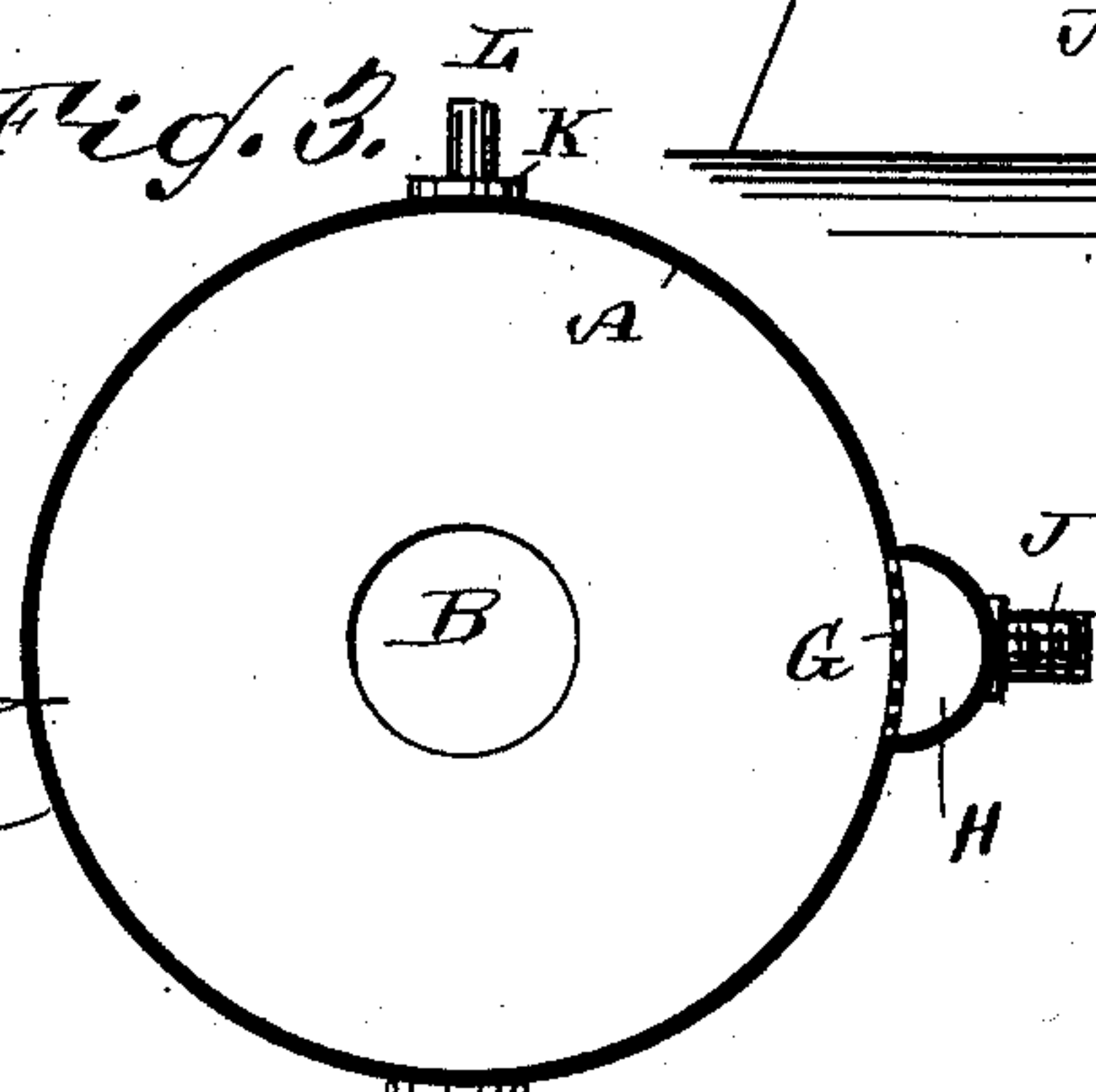


Fig. 3.



WITNESSES:

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JOSEPH C. HIGGINS, OF NEW BRUNSWICK, NEW JERSEY.

FILTER.

SPECIFICATION forming part of Letters Patent No. 338,411, dated March 23, 1886.

Application filed September 23, 1885. Serial No. 177,911. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH C. HIGGINS, of New Brunswick, in the county of Middlesex and State of New Jersey, have invented a new and useful Improvement in Filters, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved filter which is simple in construction, effective in use, and which can be cleaned very easily and thoroughly in a short time.

The invention consists in the construction and combination of parts and details, as will be fully described and set forth hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a longitudinal sectional view of my improved filter. Fig. 2 is a side view of the same. Fig. 3 is a cross-sectional view of the same on the line *x x*.

The cylinder A is contracted at its center to form the neck B, which neck has an outward bulge, C C, on which is formed a pipe or neck, D, projecting from the neck B, and provided with a screw-cap for closing it.

The cylinder A is provided on the ends with the screw-necks E and F, which can be closed by suitable screw-caps. A slot or opening, G, is made in each end part of the cylinder A, and said openings are closed by means of wire-netting or other perforated material. The slots G are connected by a tube, H, on the outside of the cylinder, which tube H is provided with a screw-neck, J, at or near its center.

Two rods, K, are secured to the sides of the cylinder A, and provided with pivots L, which are mounted to turn in standards M on a suitable base, N.

The cylinder is provided with one or two apertures, P, for putting the sand or other filtering medium into the cylinder.

Screens *m* are provided over the inner ends of the necks E and F.

The operation is as follows: The neck F is

connected by a hose or tube, *a*, with the hydrant, the neck E is also connected with a hose or pipe, and the necks D and J are closed. The sand is in the bottom part of the cylinder A, and the water must flow through it, and is thus cleaned. When the filtering medium—sand, for instance—is to be cleaned, the necks E and F are closed, and a water-supply tube is connected with the neck or pipe D, and the cylinder is inverted, causing the sand to flow through the neck B in a thin stream. The water issuing from the neck or pipe D strikes the said sand and forces it into the opposite bulge, C, in which the sand is thoroughly washed and then drops to the bottom of the cylinder, the water and impurities taken up by the same passing off through the openings covered by the wire-netting, and then through the tube H and the nozzle J.

When the sand first begins to flow into the lower part of the cylinder, the water and impurities pass off through the bottom slot of the cylinder, and as the sand has gradually passed from the upper to the lower part of the cylinder, the water and impurities also pass off through the upper slot of the cylinder.

The special advantage of my improved filter is that the sand or other filtering medium is not packed while being cleaned, but is loose and disintegrated during the cleaning operation.

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

1. In a filter, the combination, with the cylinder A, contracted at its middle to form the neck B, provided with the bulges C, of the necks E and F on the ends of the cylinder, the neck D on the neck B, the tube H, connecting the two ends of the cylinder, wire-netting in the end parts of said tube, and the neck J, projecting from said tube H, substantially as herein shown and described.

2. A filter consisting of two vessels for receiving a filtering medium, which vessels are connected at their adjacent ends by a neck, and are also united at their opposite ends by a tube secured permanently on the sides of said vessels, which tube is provided with a

screw-neck, substantially as herein shown and described.

3. A filter consisting of two vessels for receiving a filtering medium, connected at their
5 adjacent ends by a neck which is bulged out and provided with a screw neck or nipple for attaching the tube, which screw neck or nip-

ple is at right angles to the longitudinal axis of the neck, substantially as herein shown and described.

JOSEPH C. HIGGINS.

Witnesses:

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