

B. EDGAR.
Filters for Pumps.

No. 148,288.

Patented March 10, 1874.

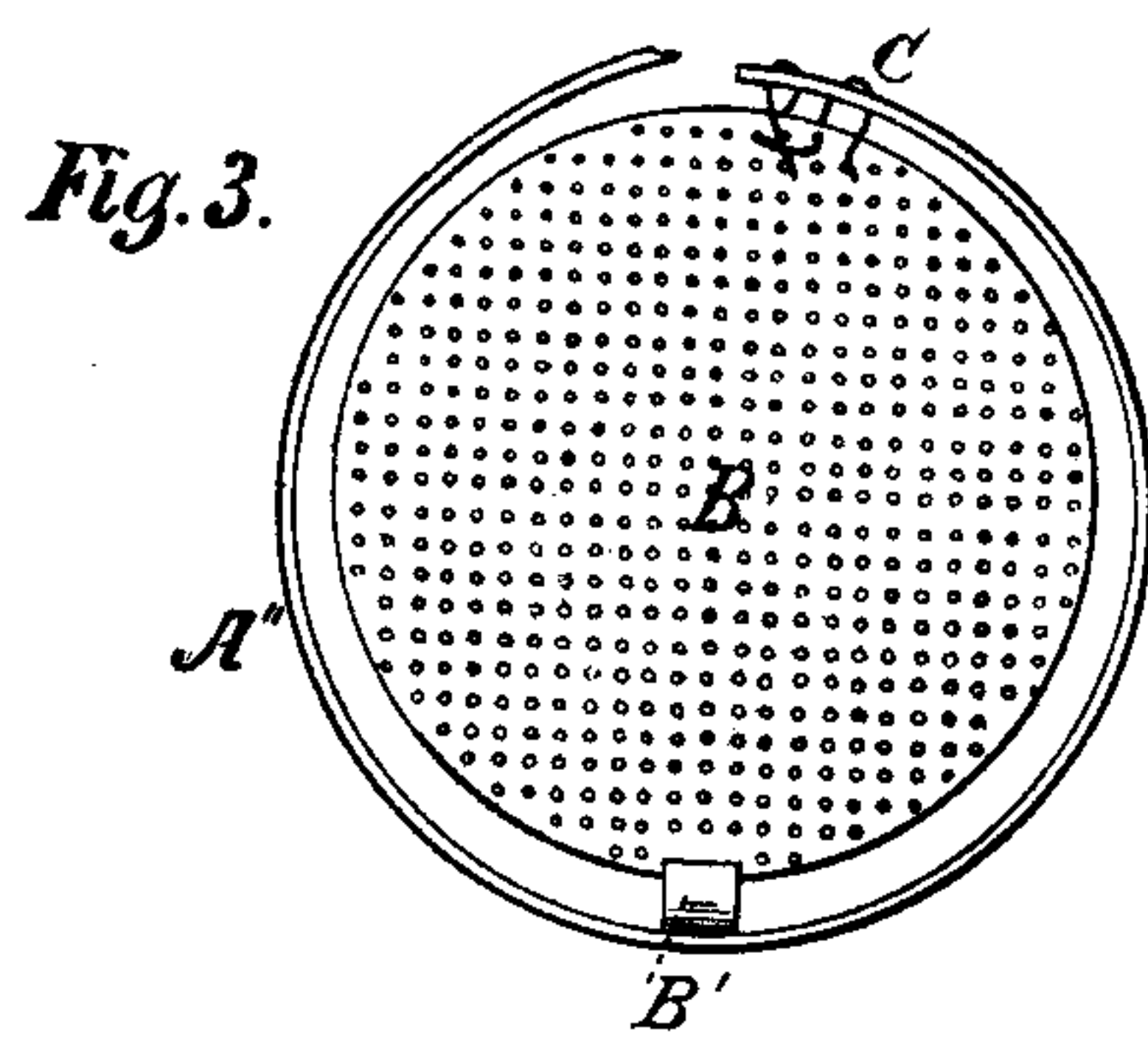


Fig. 1.

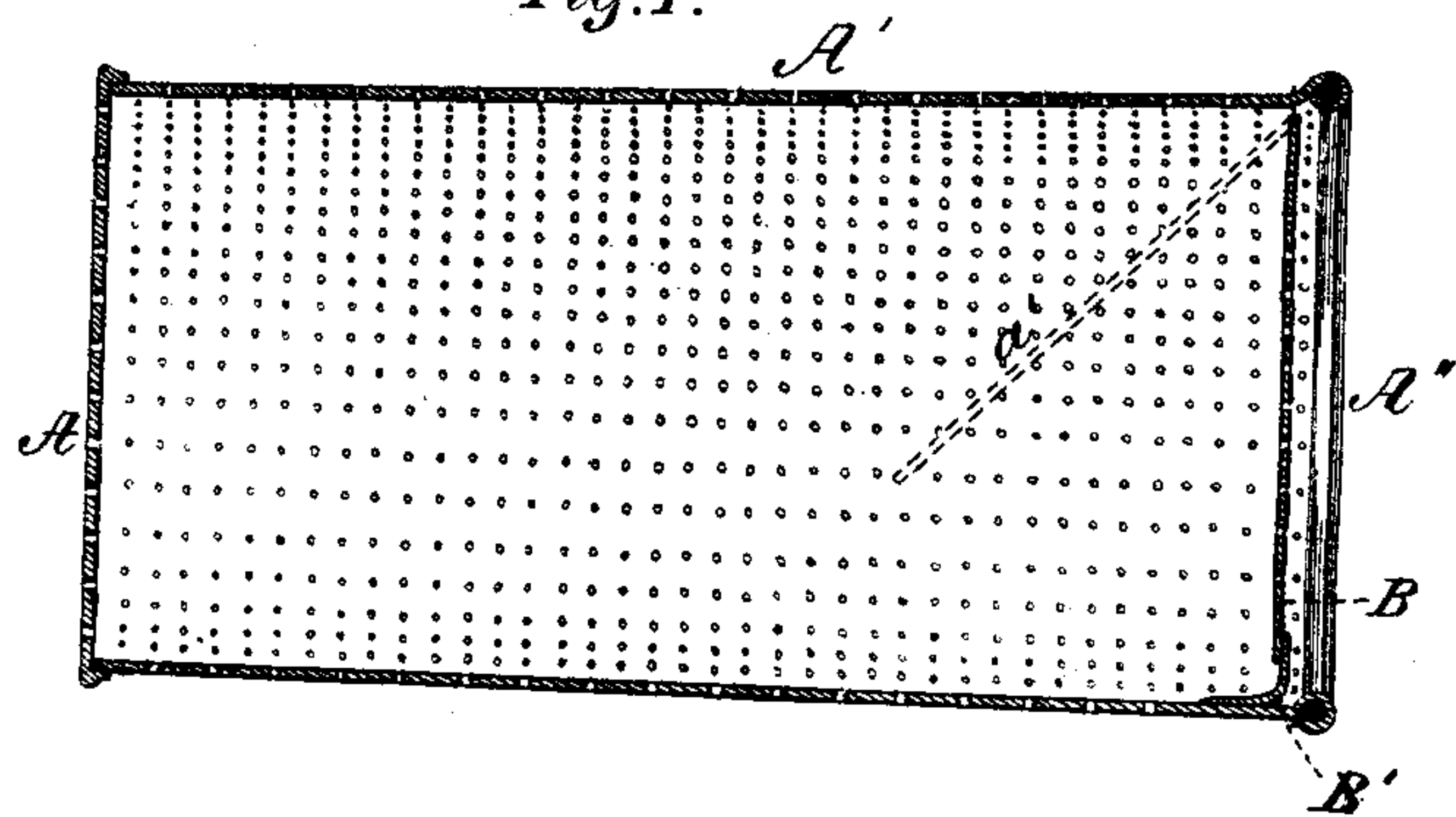


Fig. 4.

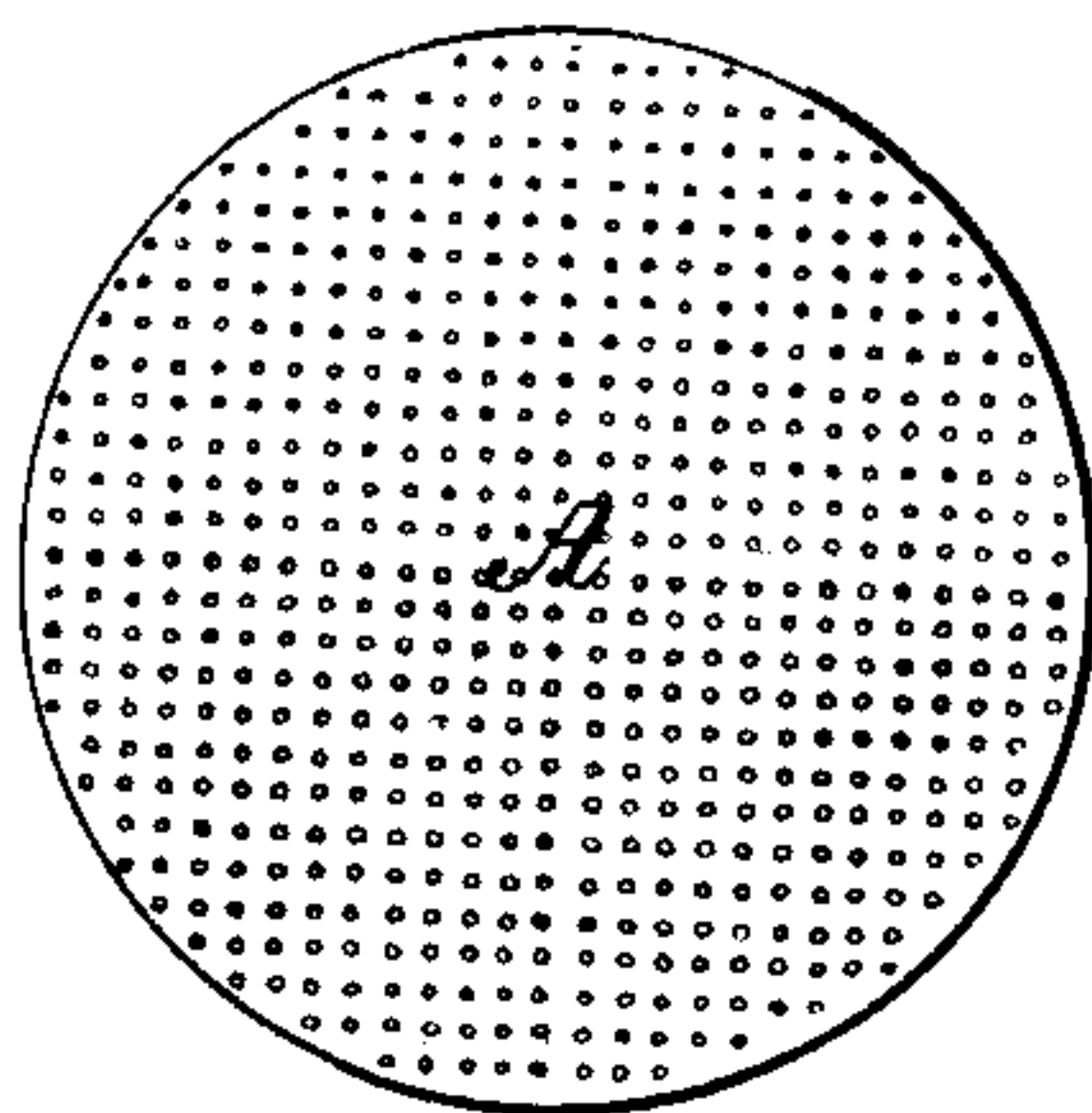


Fig. 2.

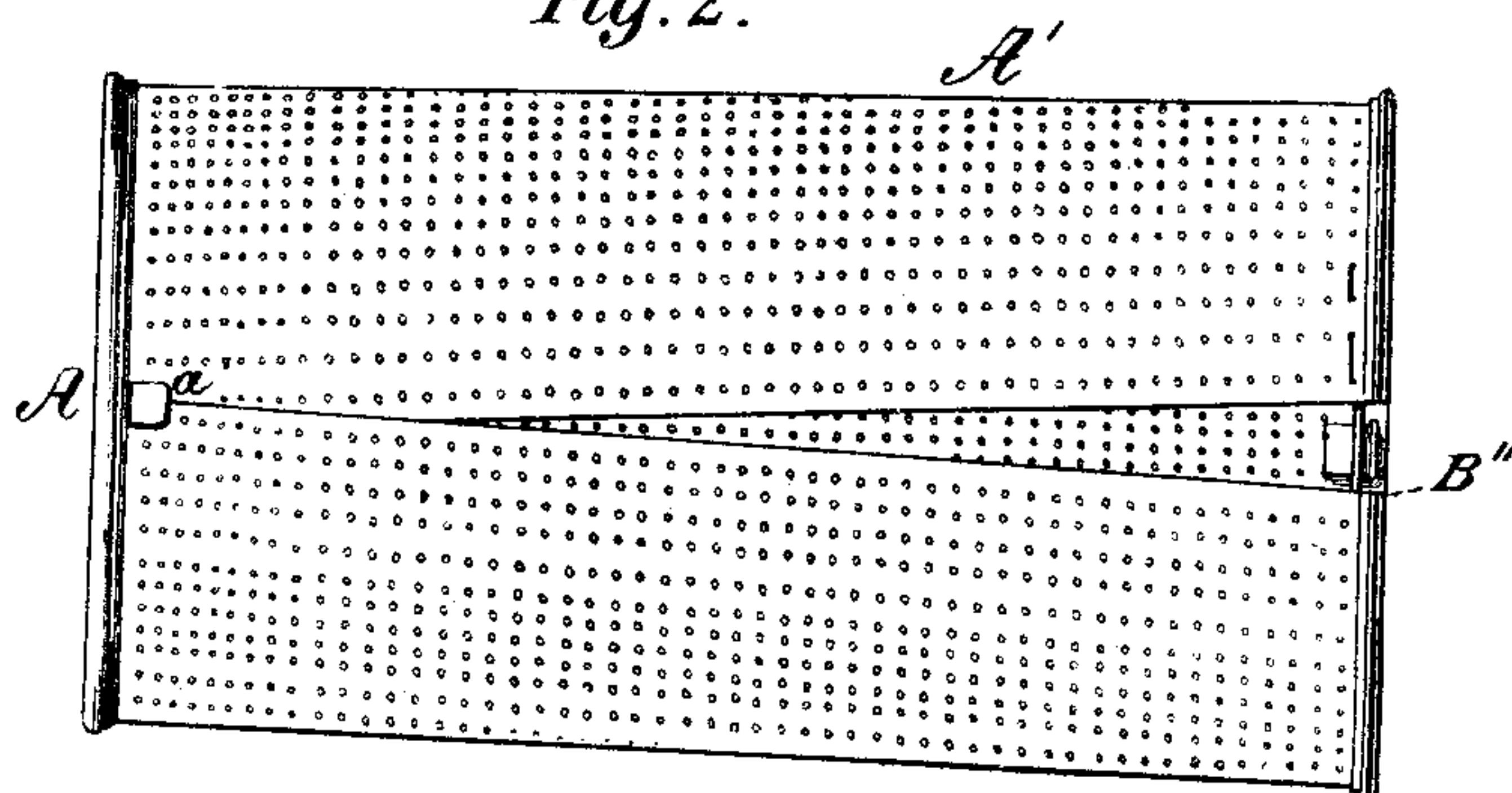
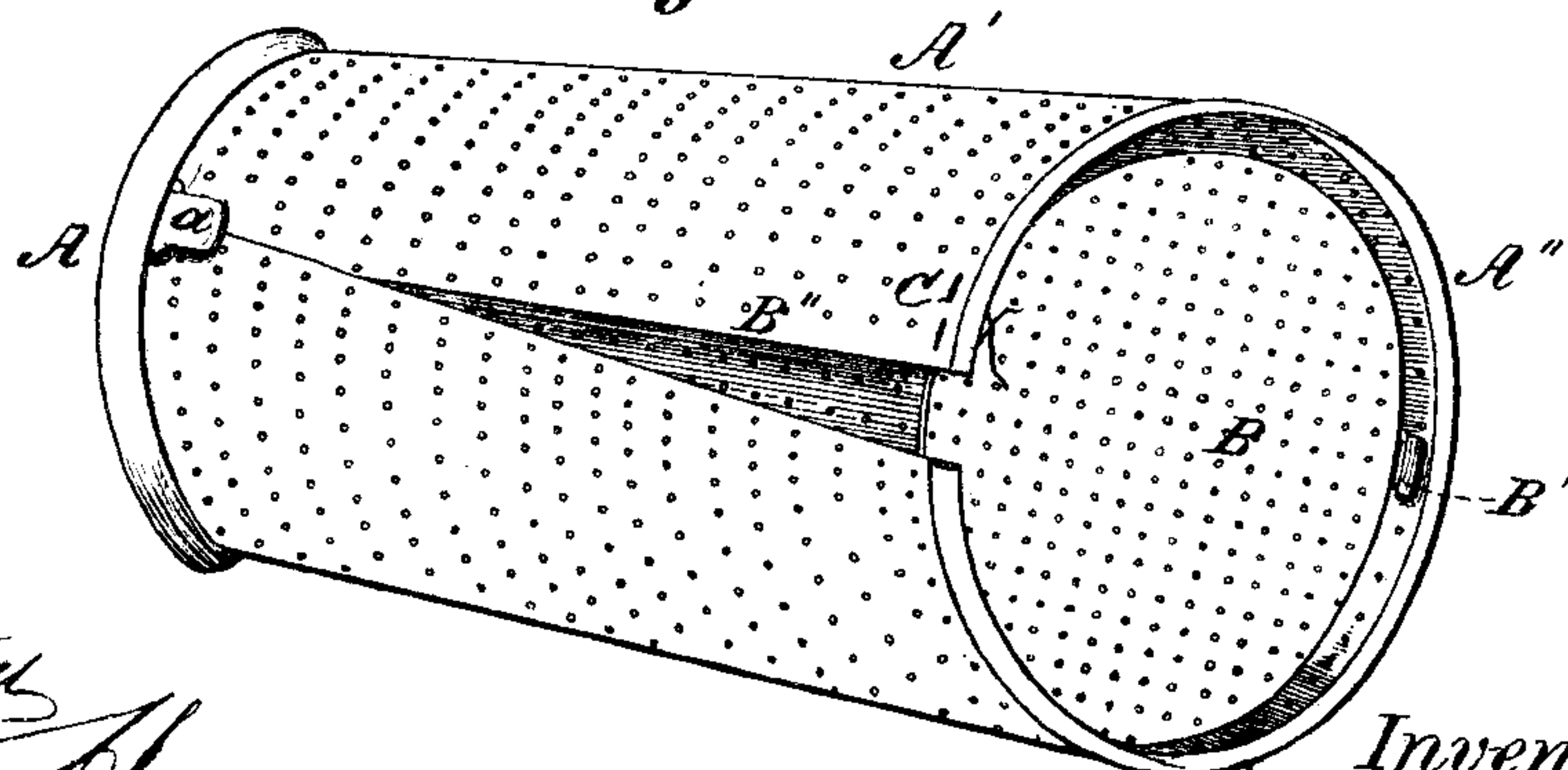


Fig. 5.



Witnesses:

R. P. Toth
B. D. Evans

Inventor:

B. Edgar
by his Attorney, *C. Davis*

B. EDGAR.
Filters for Pumps.

No. 148,288.

Patented March 10, 1874.

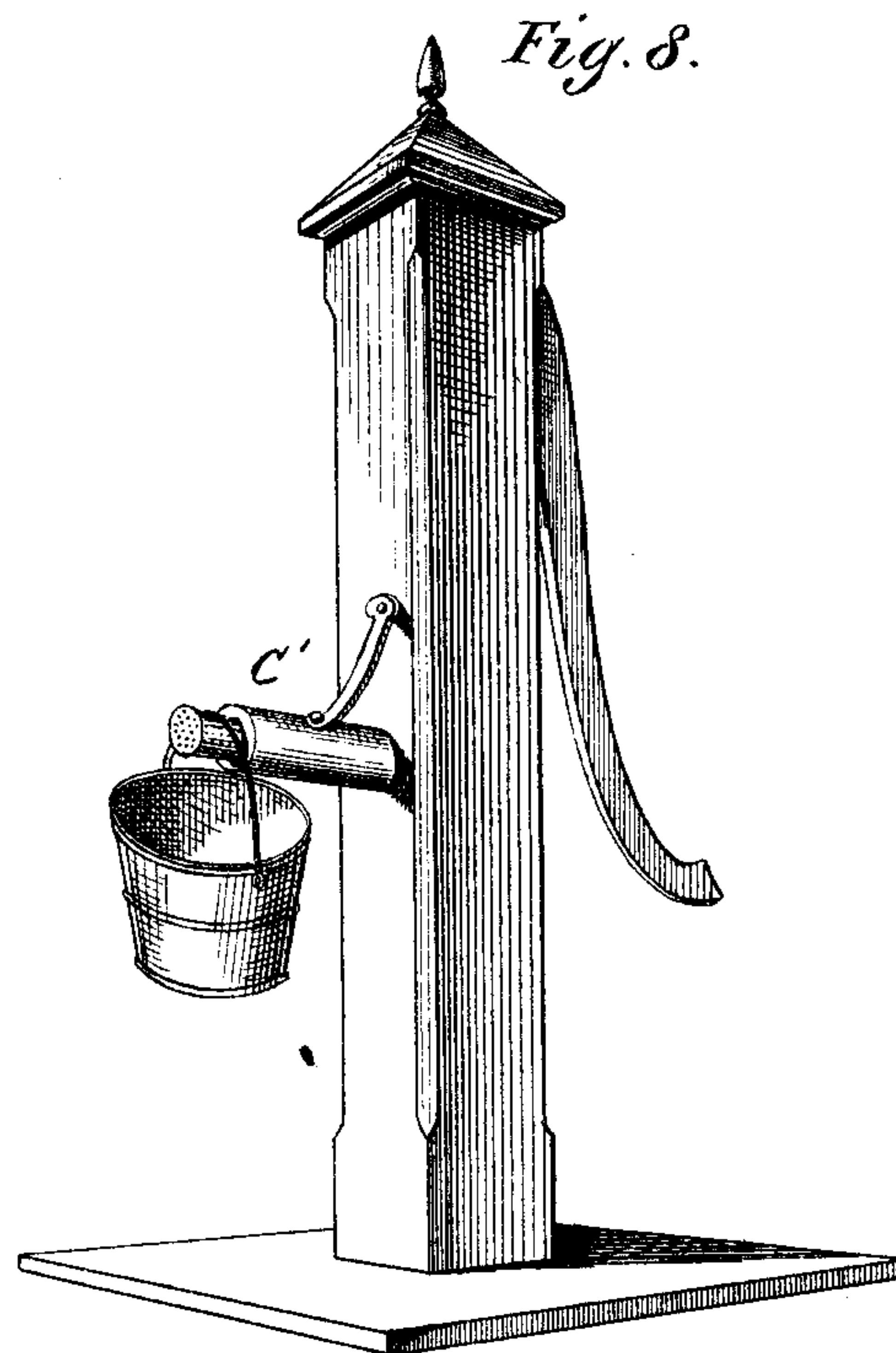
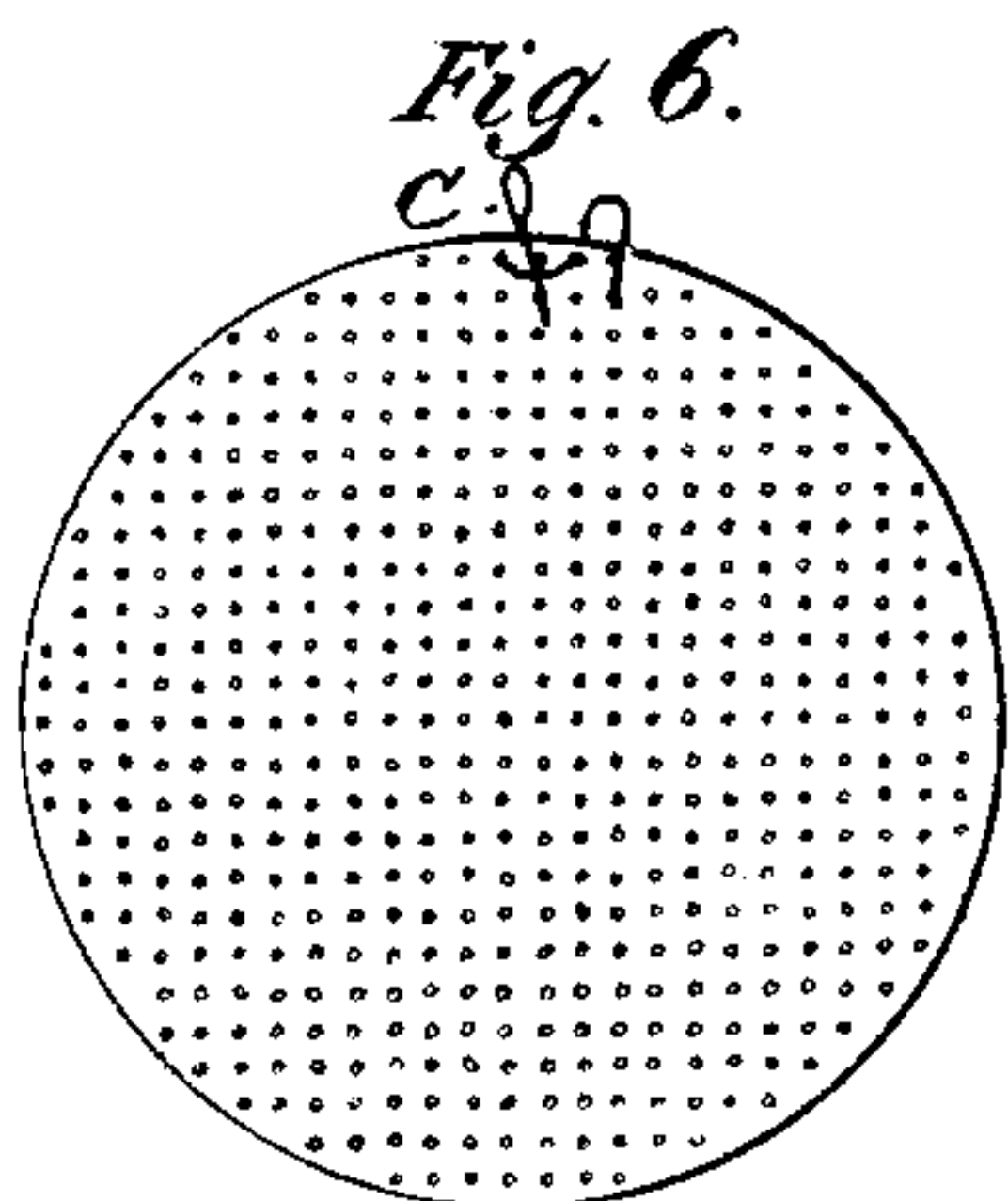
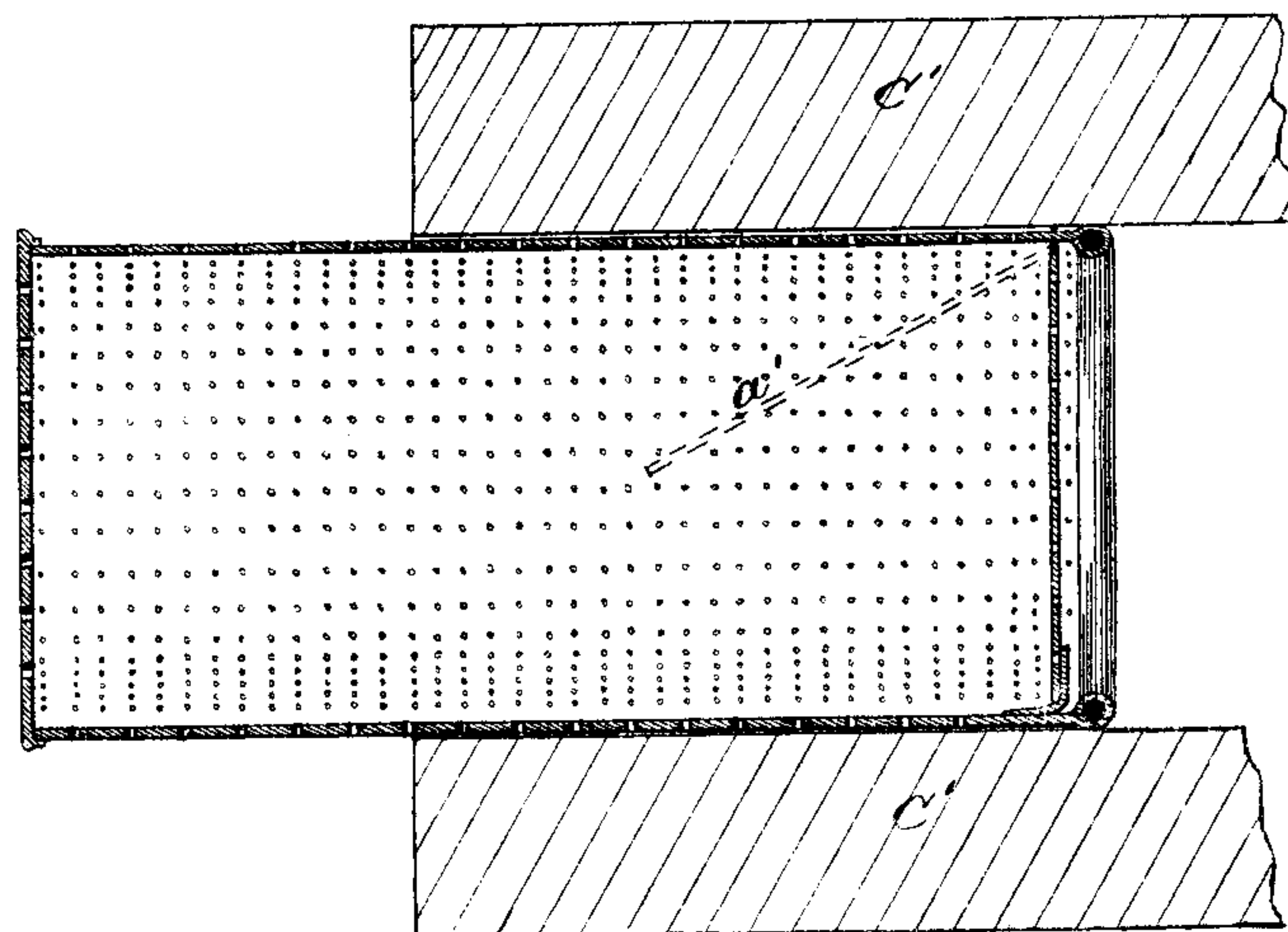


Fig. 7.



Witnesses:

R. P. Tod
B. D. Hyman

Inventor:

B. Edgar
by his Attorney, C. H. H. H.

UNITED STATES PATENT OFFICE.

BUTLER EDGAR, OF ESPY, PENNSYLVANIA.

IMPROVEMENT IN FILTERS FOR PUMPS.

Specification forming part of Letters Patent No. 148,288, dated March 10, 1874; application filed September 10, 1873.

To all whom it may concern:

Be it known that I, BUTLER EDGAR, of Espy, Columbia county, State of Pennsylvania, have invented certain Improvements in Filters for Pumps, of which the following is a specification:

The object of my invention is to produce a cheap, simple, portable filter, to be inserted into pump-spouts or other similar hydraulic machines for drawing water, of such construction as to catch toads, frogs, and like animals that infest wells, or dirt not in a state of solution, which may be brought up by the flow of the water, so that they may not be returned by the reflow, and thereby perpetuate the nuisance.

My invention consists of a metallic portable tube, conformed to the shape of the spout wherein it is to be used, made of perforated tin or similar metal, or fine wire, the outer end closed, except as to the perforations, the inner end open, the latter furnished with a trap-valve of the same material perforated, swinging inward, hung to the upper inside surface of the tube, the lower edge kept from swinging outward beyond the mouth of tube by a metallic catch, securely fastened to its lower inner surface, as will more fully appear from the accompanying drawings.

Figure 1 is a side view of the filter, showing an edge or side view of the trap-valve B and catch B'. Fig. 2 is the same view of the filter, showing the lateral opening or spring B''. Figs. 3 and 4 are end views, the former showing the open end A'', the trap-valve B hung on the wire hinge C and resting against the stationary catch B'. Fig. 5 is a perspective side and end view of the filter, showing the joining *a* of the edges, the lateral wedge-shaped opening of the edges constituting the spring B'', the hinge C, and catch B'. Fig. 6 is an outside view of the trap-valve B as when closing the open end A'' and hinge C. Fig. 7 is a longitudinal sectional view of the filter when in position for use and the same view of the contiguous parts of the pump-spout C'. Fig. 8 is the perfected machine in its relation to the pump-spout C' in working order.

A A' A'', Figs. 1, 2, and 5, are the contour or

external surface of a portable metallic tube, manufactured of perforated tin or like metal, or fine wire, from five to six inches in length, and from one and one-half to two and one-half inches in diameter, to fit the size as it is made to suit the shape of the spout into which it is to be inserted when in use. The perforations or meshes are sufficiently large to allow the free flow of the water, but too fine to allow the passage of anything solid not in a state of solution.

For convenience and distinctness in this description, A, A', and A'' designate, respectively, the closed end, the sides, and open end of the tube.

B, Figs. 3 and 5, is a perforated metallic trap-valve, made of the same material as the main tube just described, of the same shape as the open end A'' which it is designed to close, as occasion requires, hung by the wire hinge C to the upper inside surface of the tube A A' A''. By the inflow of the water, the valve is carried diagonally inward in the direction of *a*', Figs. 1 and 7. By the outward or cessation of flow, the valve instantly drops against the catch B', hereafter described, and catches and detains whatever is within.

B', Figs. 1, 3, 5, and 7, is a small metallic catch, of such shape and dimensions as requisite to answer its purpose, firmly fastened to the lower inside surface of the tube A A' A'' near the open end A'', or at any point wherever it is required to arrest and hold the trap-valve B.

B'', Figs. 2 and 5, is a longitudinal wedge-shaped opening of the edges of the tube A A' A'' throughout its length, except at the point *a*, where the edges are brought together and firmly soldered at and in connection with the outer perforated end A. This opening constitutes and is designed to constitute a self-adjusting metallic spring, which, by its own elasticity, will keep the filter in uniform and firm position when in use, as seen in Fig. 7. When not in a state of compression the spring has the greatest recoil the farthest distance from the point *a*, Figs. 2 and 5.

C, Figs. 3 and 6, is a hinge, whereby the trap-valve B is swung from the upper inside surface of the tube A A' A'', located on the side opposite the catch B', and made of wire

or flexible material, such as to give the valve the freest motion.

This filter is cheap of construction, easily repaired and cleaned, readily affords the means of detecting any nuisance raised from the well, and can be readily adapted to pump-spouts or similar water-drawing machines at small cost.

I claim—

The perforated metallic structure or tube A

A' A'', as constructed, in combination with the trap-valve B, including the hinge C with the spring B'', as constructed, with the catch B', so as to form a complete filter, as and for the purpose specified.

BUTLER EDGAR.

Witnesses:

DANIEL SNYDER,
W. A. BARTON.