

(No Model.)

2 Sheets—Sheet 1.

E. OEHLMANN.

ATOMIZER FOR VENTILATING APPARATUS.

No. 330,919

Patented Nov. 24, 1885.

Fig. 1.

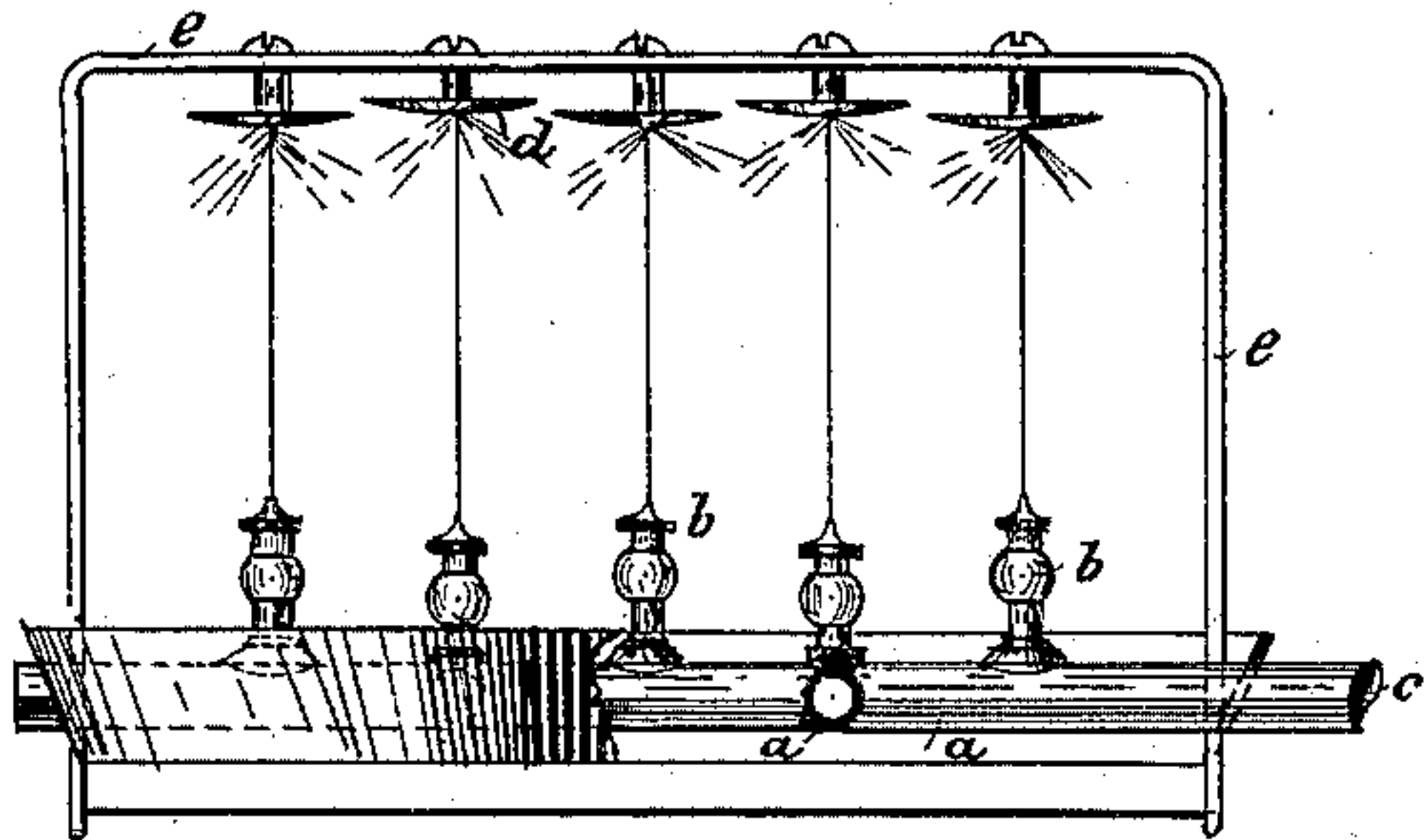


Fig. 2.

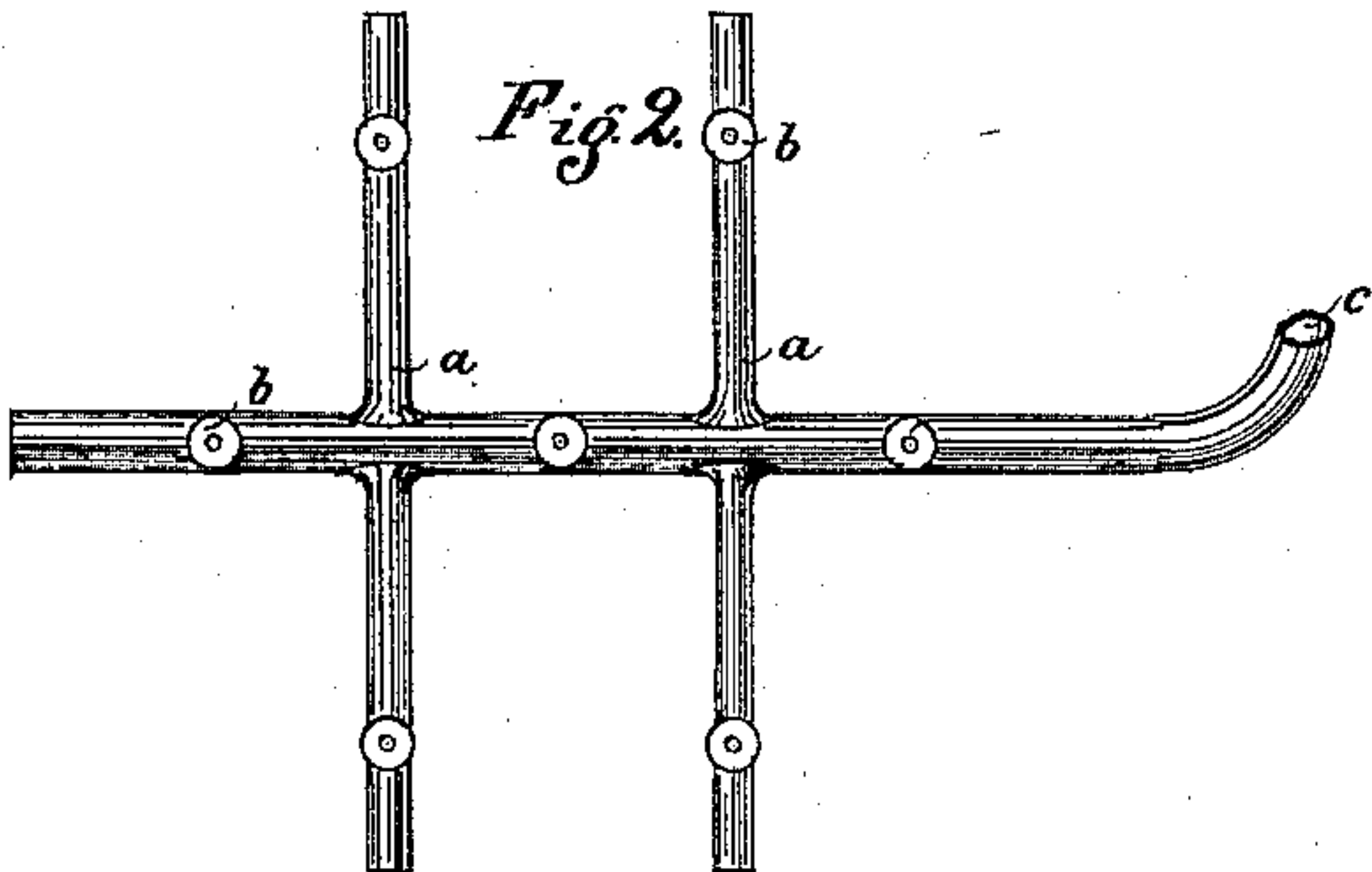


Fig. 3.

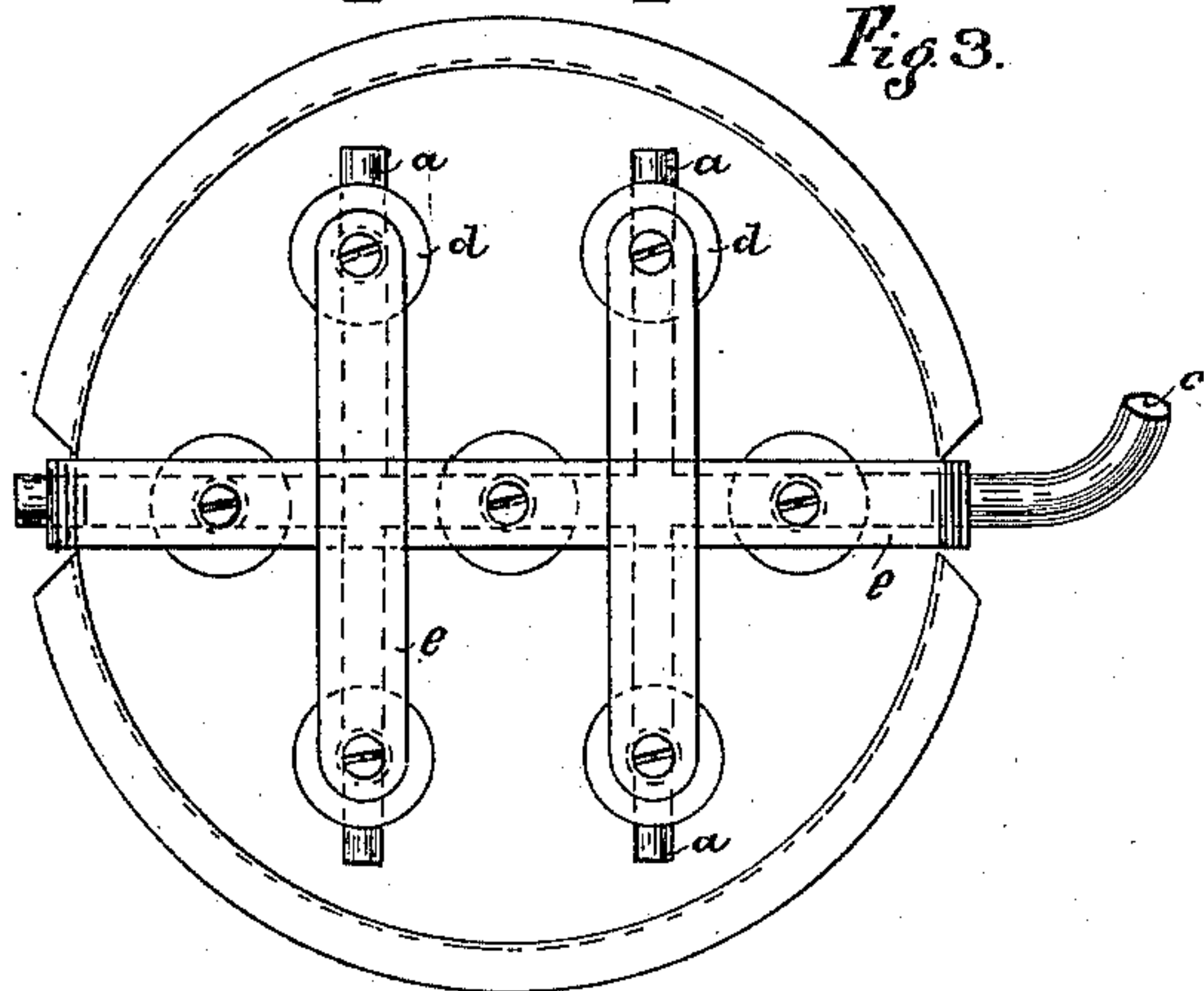
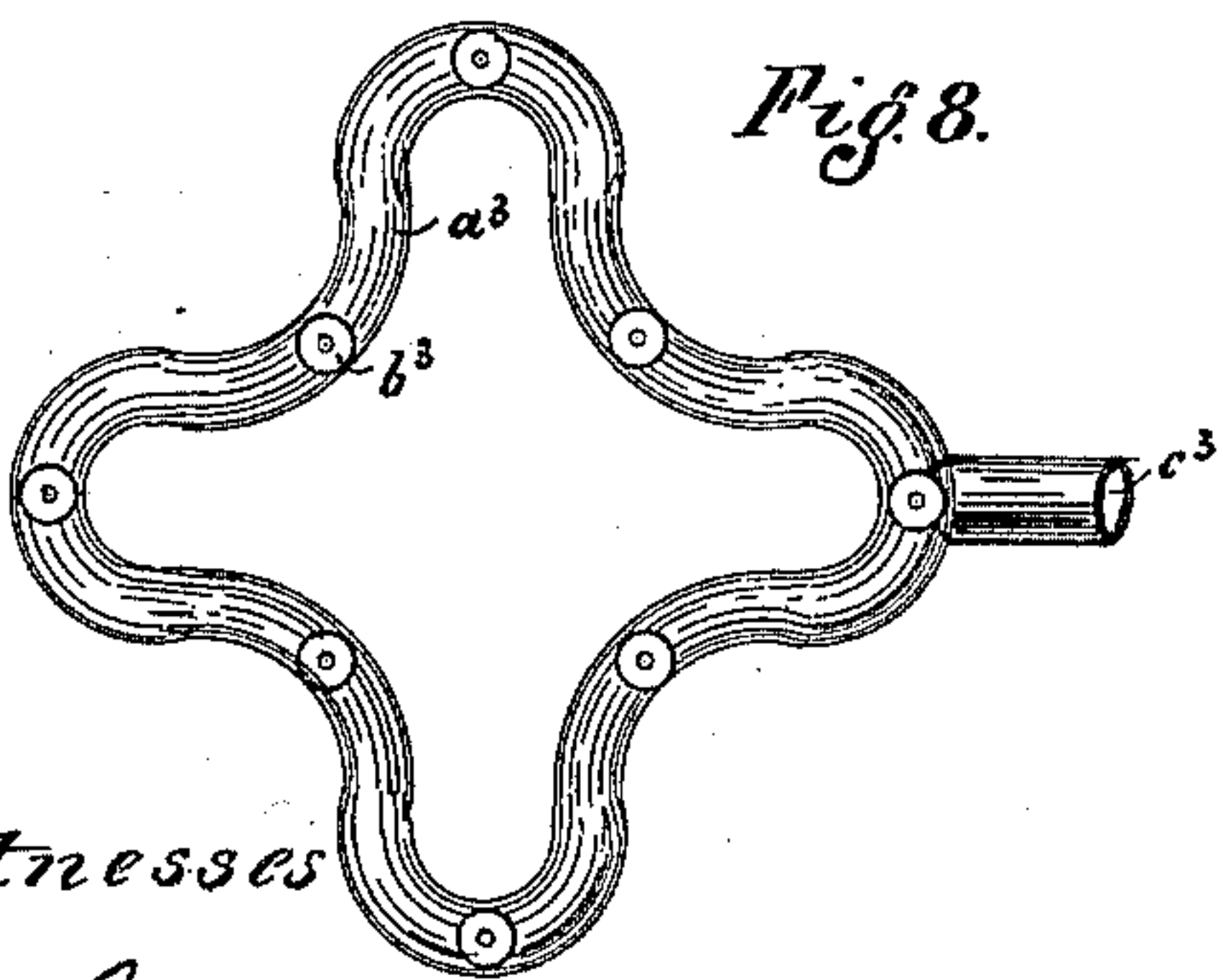


Fig. 8.



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Fig. 4.

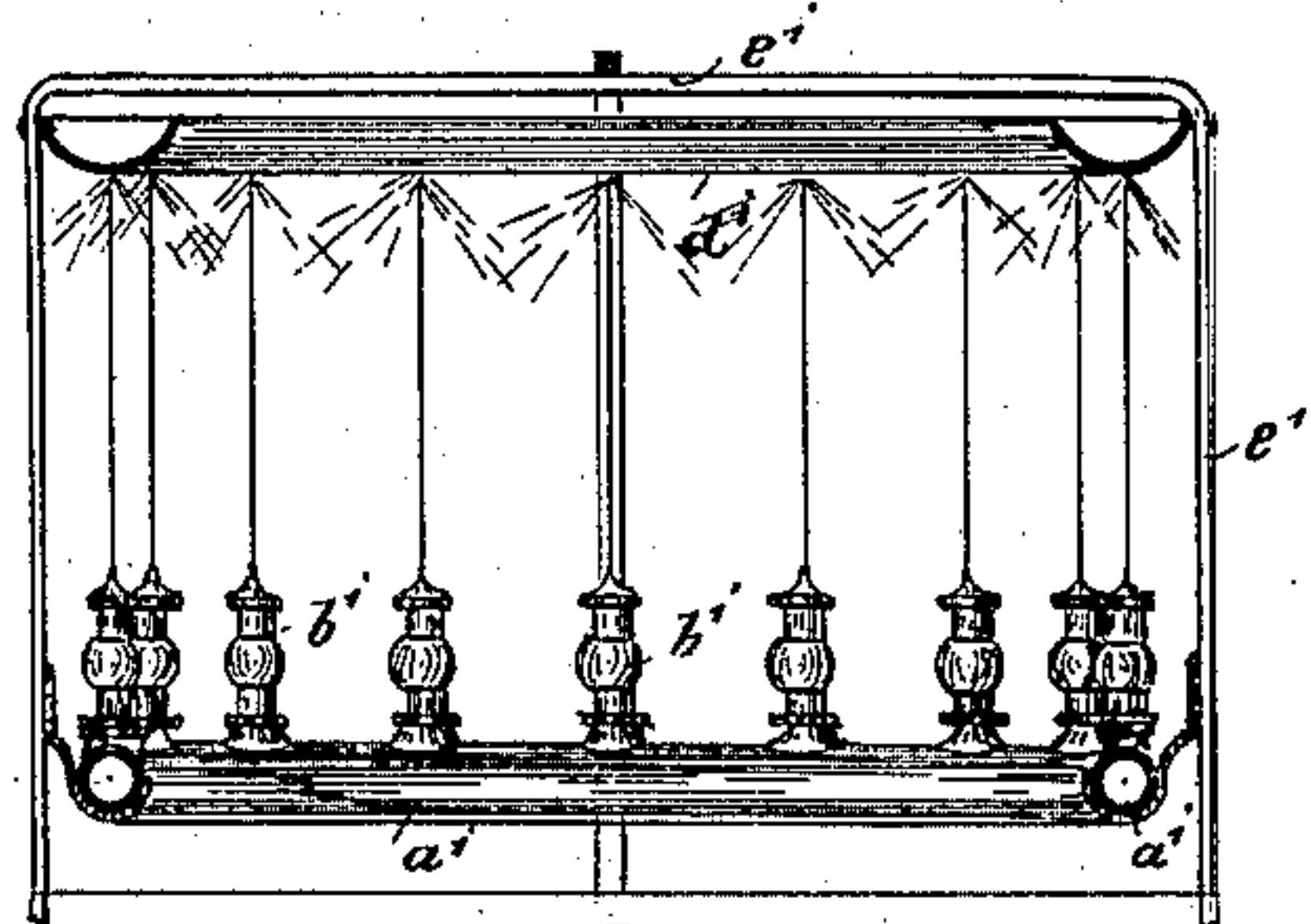


Fig. 5.

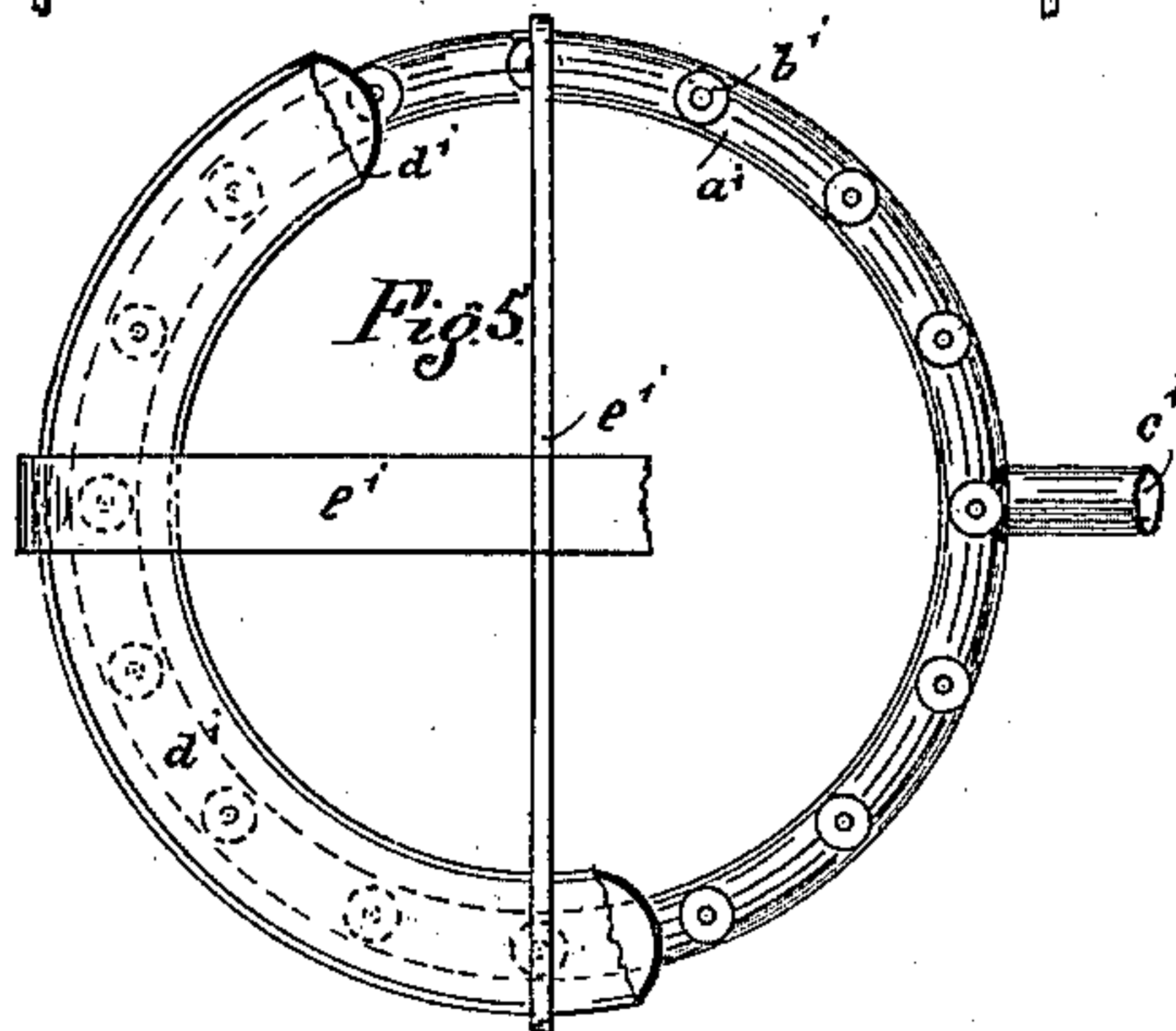


Fig. 6.

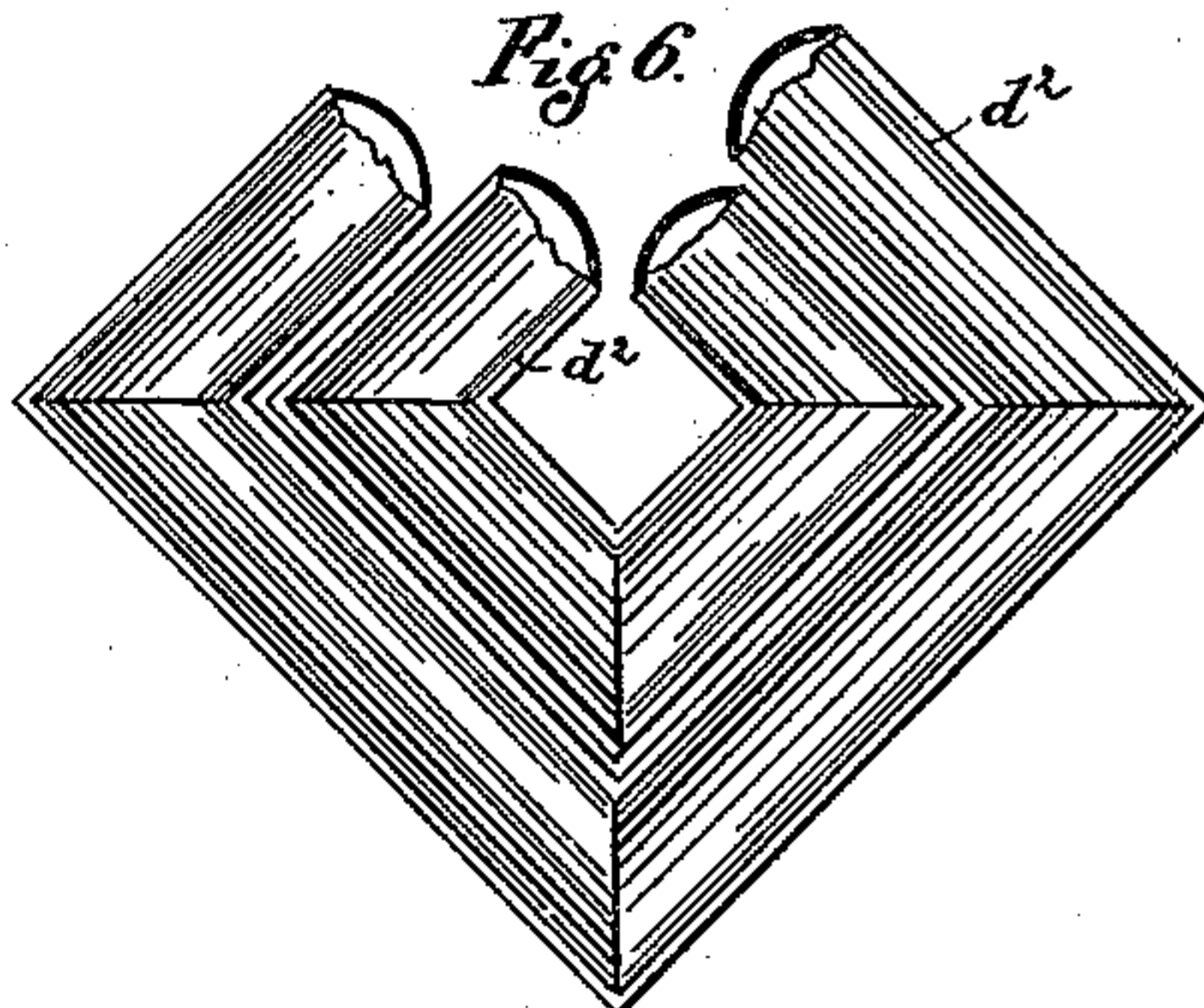
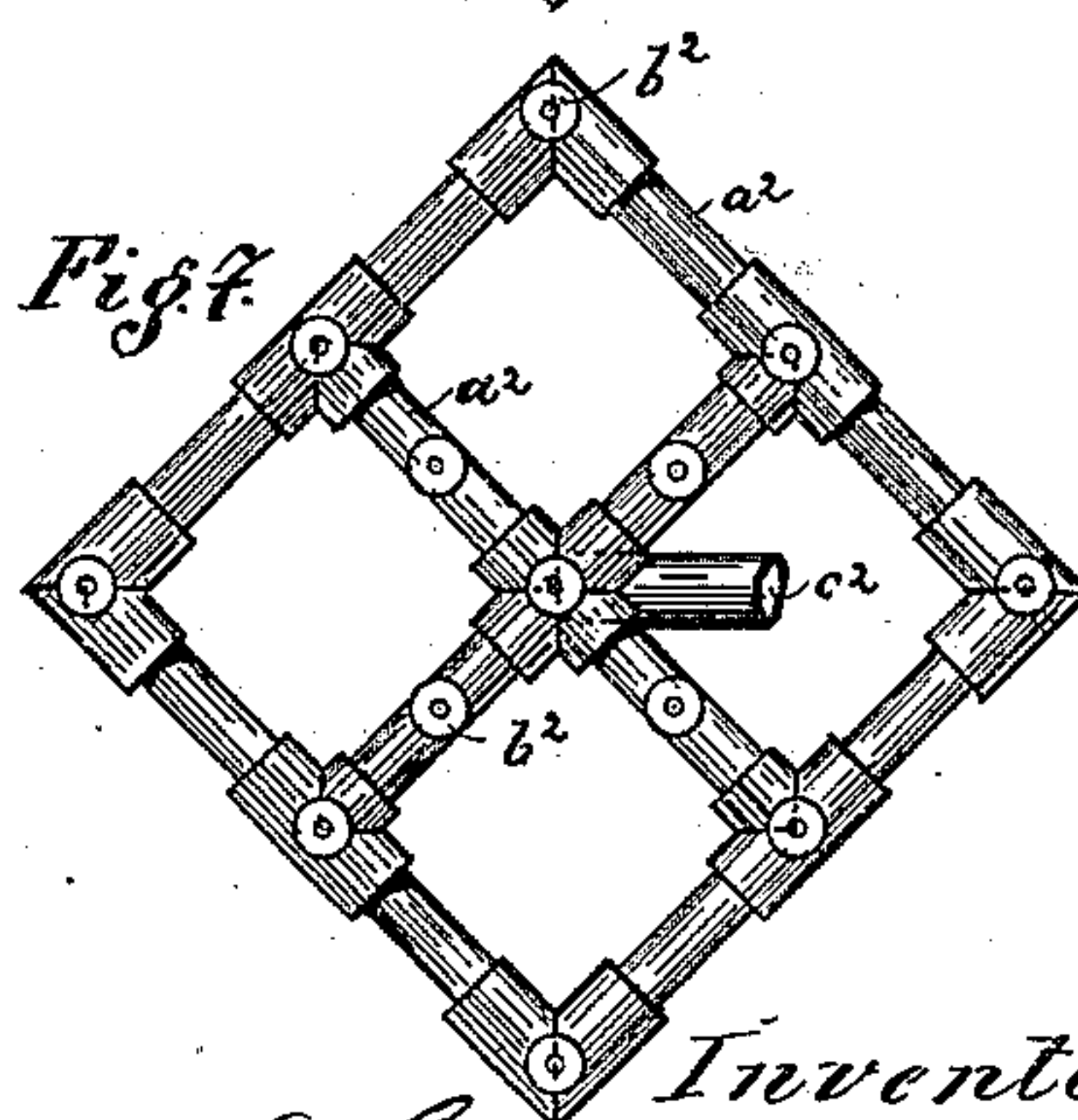


Fig. 7.



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(No Model.)

2 Sheets—Sheet 2.

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Fig. 9.

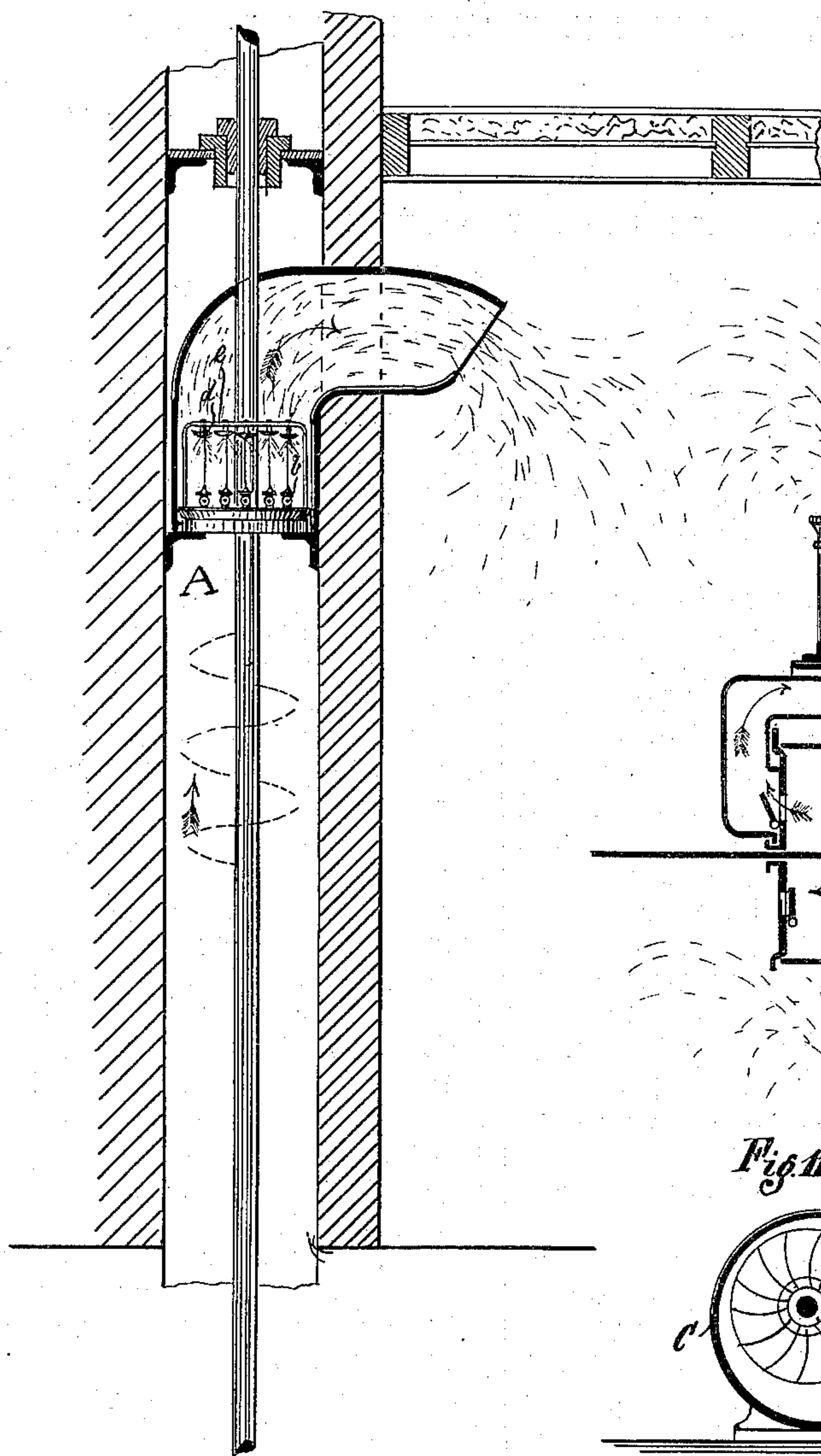


Fig. 10.

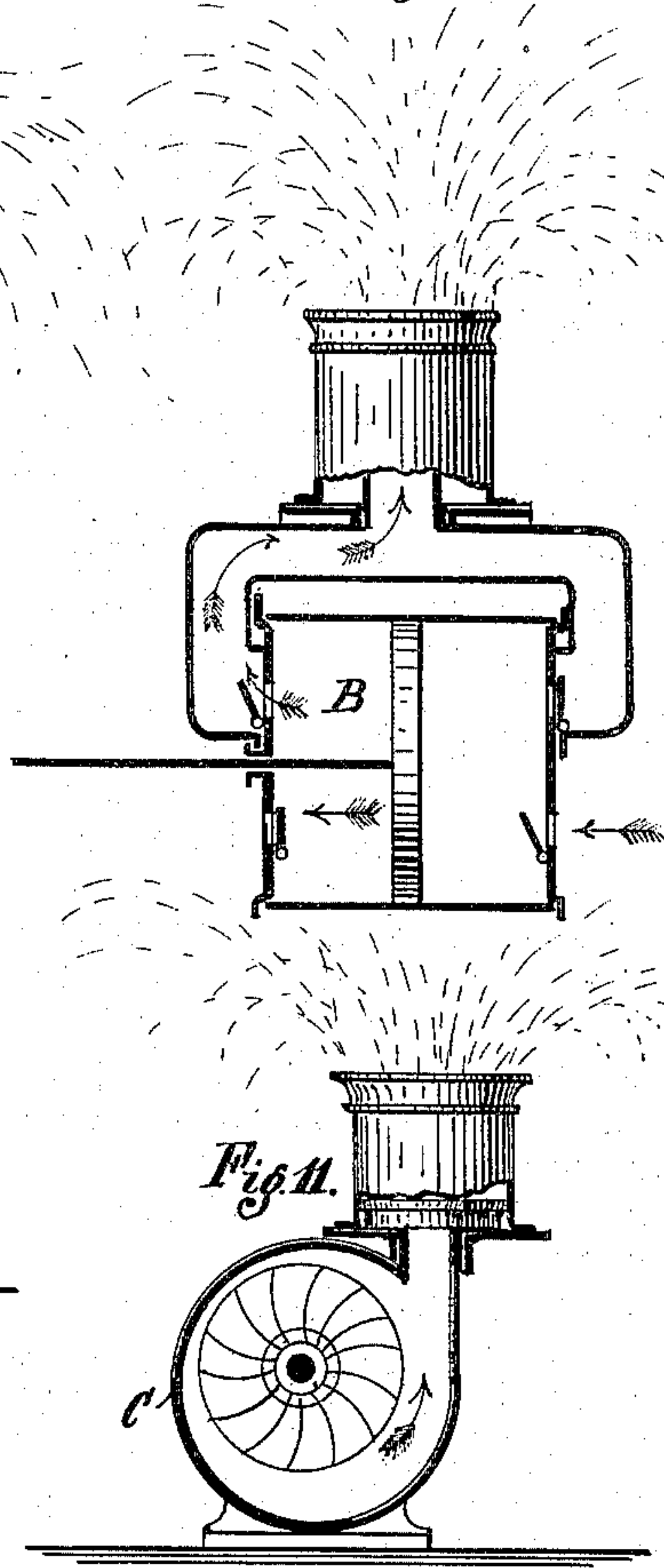
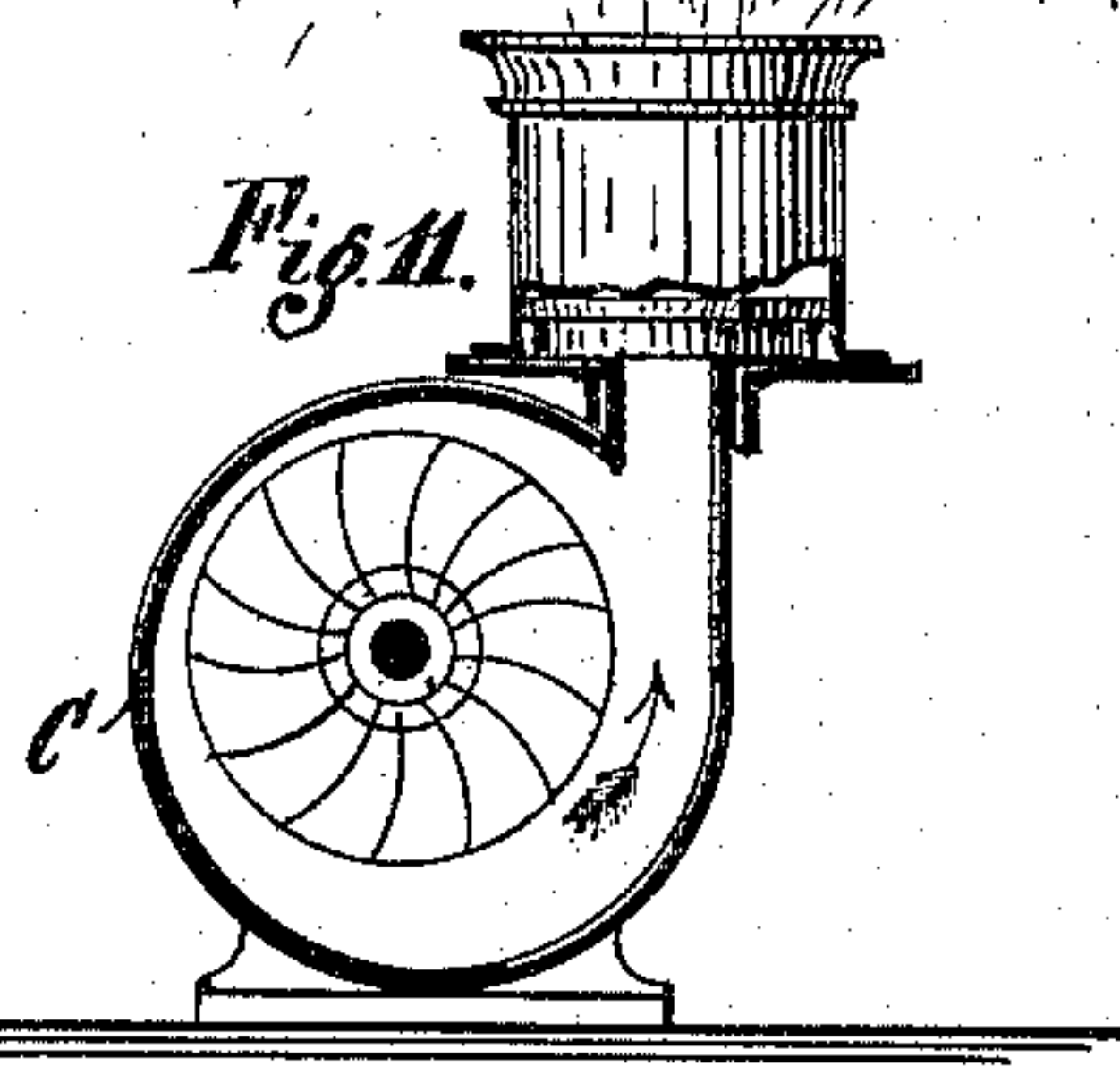


Fig. 11.



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UNITED STATES PATENT OFFICE.

EMIL OEHLMANN, OF BERLIN, GERMANY.

ATOMIZER FOR VENTILATING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 330,919, dated November 24, 1885.

Application filed July 8, 1884. Serial No. 137,092. (No model.)

To all whom it may concern:

Be it known that I, EMIL OEHLMANN, of the city of Berlin, Kingdom of Prussia, German Empire, have invented certain new and useful Improvements in Atomizers for Ventilating Apparatus, of which the following is a specification.

My invention relates to certain improvements in atomizers for ventilating apparatus, whereby the air introduced into closed or partly-closed spaces is moistened by finely-diffused vapors of water or other liquids.

In the accompanying drawings, Figure 1 represents a side elevation of my improved atomizer with a part broken away. Fig. 2 is a plan of the jet-nozzles; Fig. 3, a top view of the atomizer. Figs. 4 and 5 are a side elevation and a plan of a modification of the atomizer. Figs. 6, 7, and 8 represent other modifications. Fig. 9 shows the atomizer located in the air-duct of a ventilating-shaft; and Figs. 10 and 11 show the arrangement of the atomizer in connection with a cylinder, blowing-engine, and ordinary fan.

Similar letters of reference indicate corresponding parts.

The atomizer, Figs. 1, 2, and 3, consists of a branched water-supply pipe, *a*, which is connected at *c* with the source of supply. *b b* are jet-nozzles, which are connected to the pipes *a*, and which may be provided with valves or stop-cocks. *d d* are convex deflecting-plates, which are arranged vertically above the jet-nozzles *b b*, and supported on a frame, *e*, of suitable construction. The face of the convex deflecting-plates *d* is preferably made parabolic, so as to effect the most perfect breaking up of the jets thrown against the deflectors into spray or vapors. When water or other liquid under pressure is admitted into the pipe *a*, it is discharged through the nozzles *b* in thin jets, which impinge against the plates *d*, whereby the liquid is broken and diffused. When the atomizing apparatus is placed into the air-duct of a ventilating apparatus, through which duct a

strong current is forced by a screw-fan, as indicated in Fig. 9, or by a blowing-engine, as in Fig. 10, or by an ordinary fan, as in Fig. 11, or by any other air-forcing device, the current carries off the fine spray or vapors along, so as to diffuse them in the spaces which are to be ventilated. Owing to the breaking up of the jets into vapors, the depositing of the moisture in drops is prevented. The air is thereby uniformly moistened, which is of great importance for many purposes—as, for instance, in the manufacture of cotton thread, to prevent the breaking of the fine threads. In ventilating hospitals the vapors may hold in solution disinfecting or medical substances to be inhaled by the patients, and for this purpose sea-water, salt-brine, or mineral waters may be used.

In place of a number of convex plates, *d*, Fig. 1, a convex plate, *d'*, of ring shape, may be used, as shown in Figs. 4 and 5, in which case the pipe *a* is also made in the shape of a ring; or the pipe *d* may be made square, as in Fig. 7, or curved, as in Fig. 8, the deflecting-plates being made to correspond therewith.

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

1. An atomizer for ventilating apparatus, consisting of a supply-pipe having one or more jet-nozzles, and of a convex deflecting plate or plates arranged in line with the axis of the nozzle or nozzles, substantially as set forth.

2. The combination of the tubular frame, a water-supply pipe connected thereto, a series of jet-nozzles attached to said tubular frame, and a convex deflecting plate or plates in line with the nozzles of the tubular frame, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

EMIL OEHLMANN.

Witnesses:

ALEX. SCHOLZE,
B. ROI.