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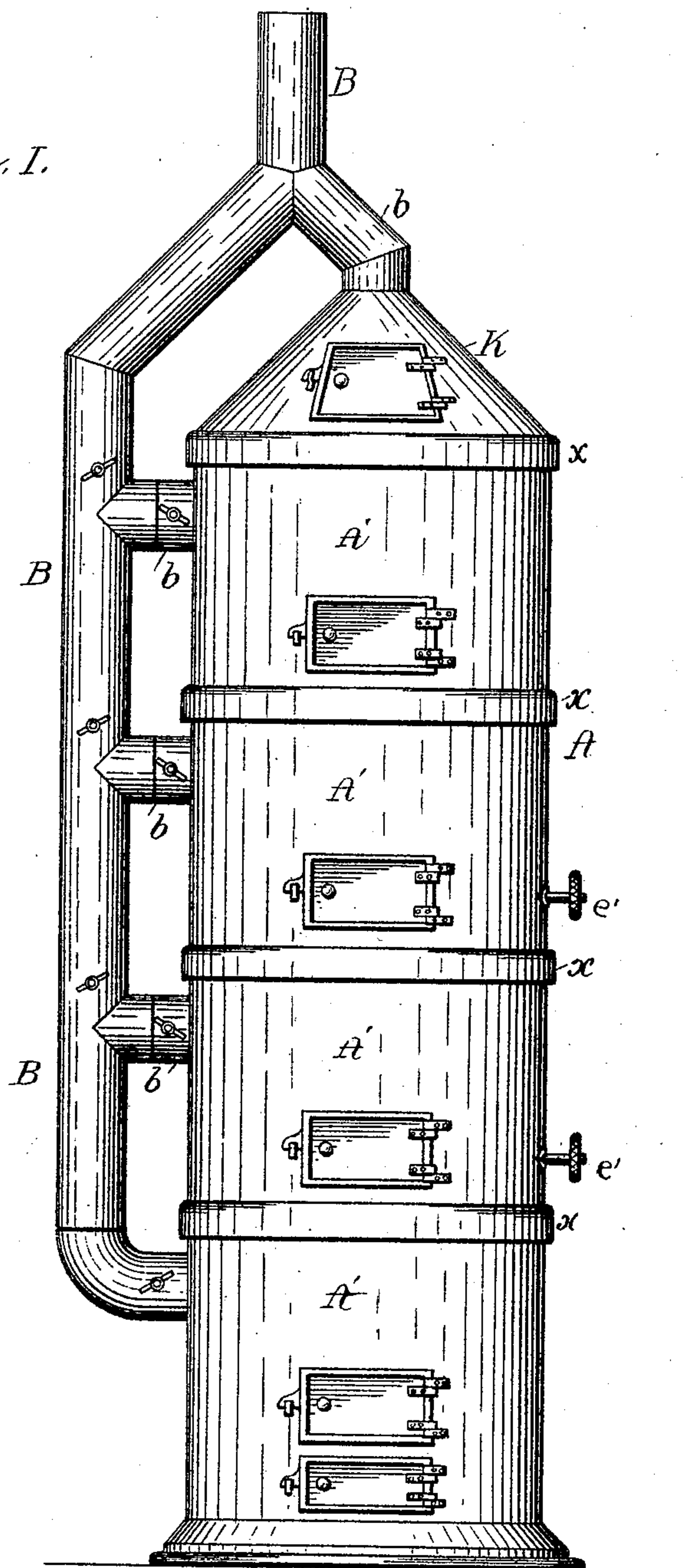
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D. H. TALBOT.  
CUPOLA COOKER.

No. 437,635.

Patented Sept. 30, 1890.

*Fig. I.*



Witnesses:  
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*W. E. Knight*

Inventor:  
*Daniel H. Talbot*  
By his Attorneys:  
*Knight Bros.*

(No Model.)

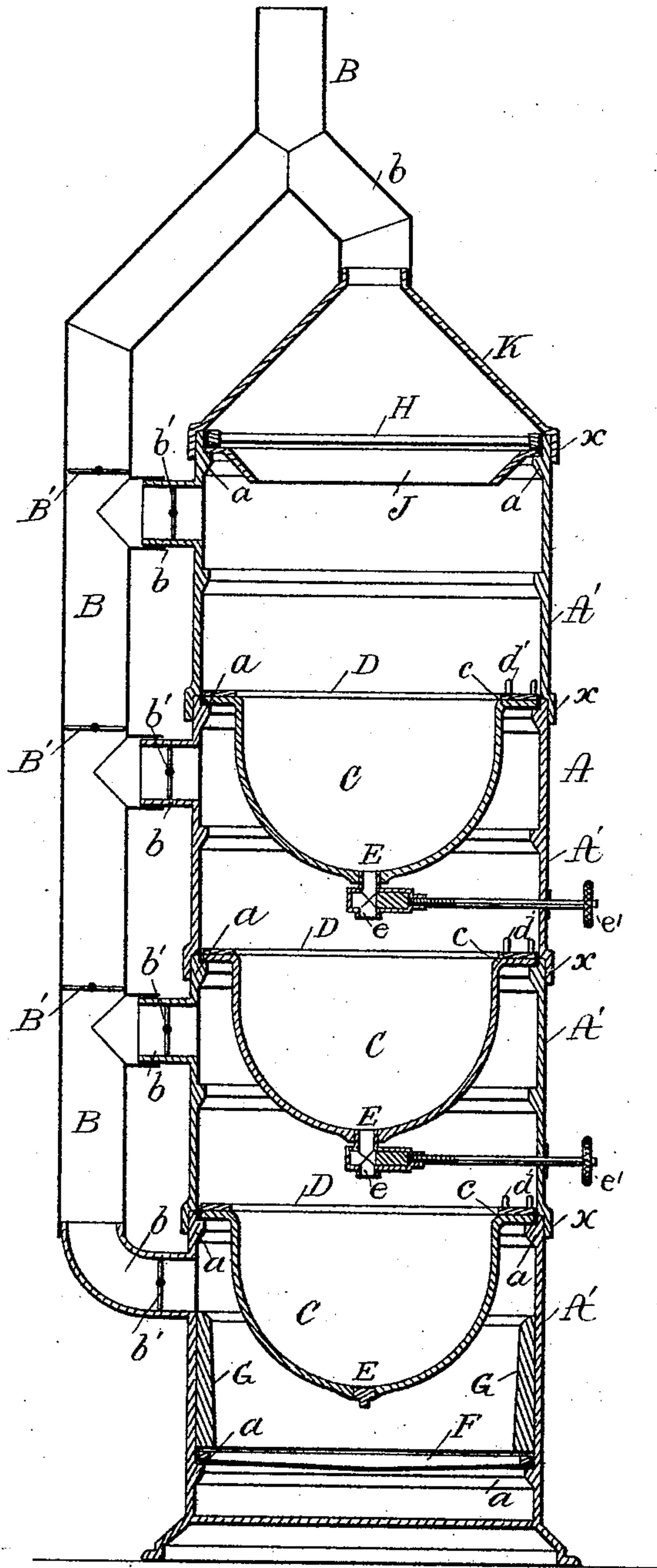
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*Fig. II.*



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(No Model.)

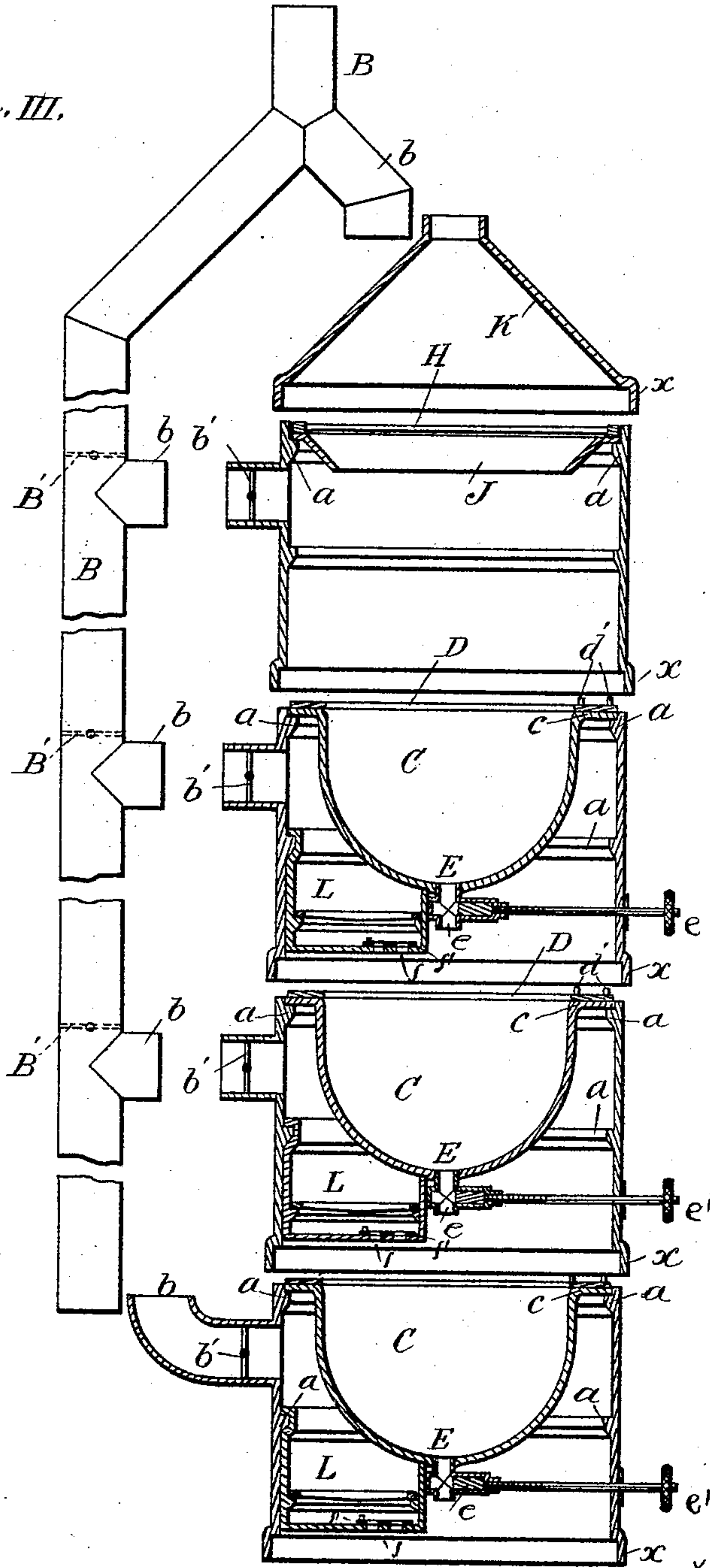
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*Fig. III.*



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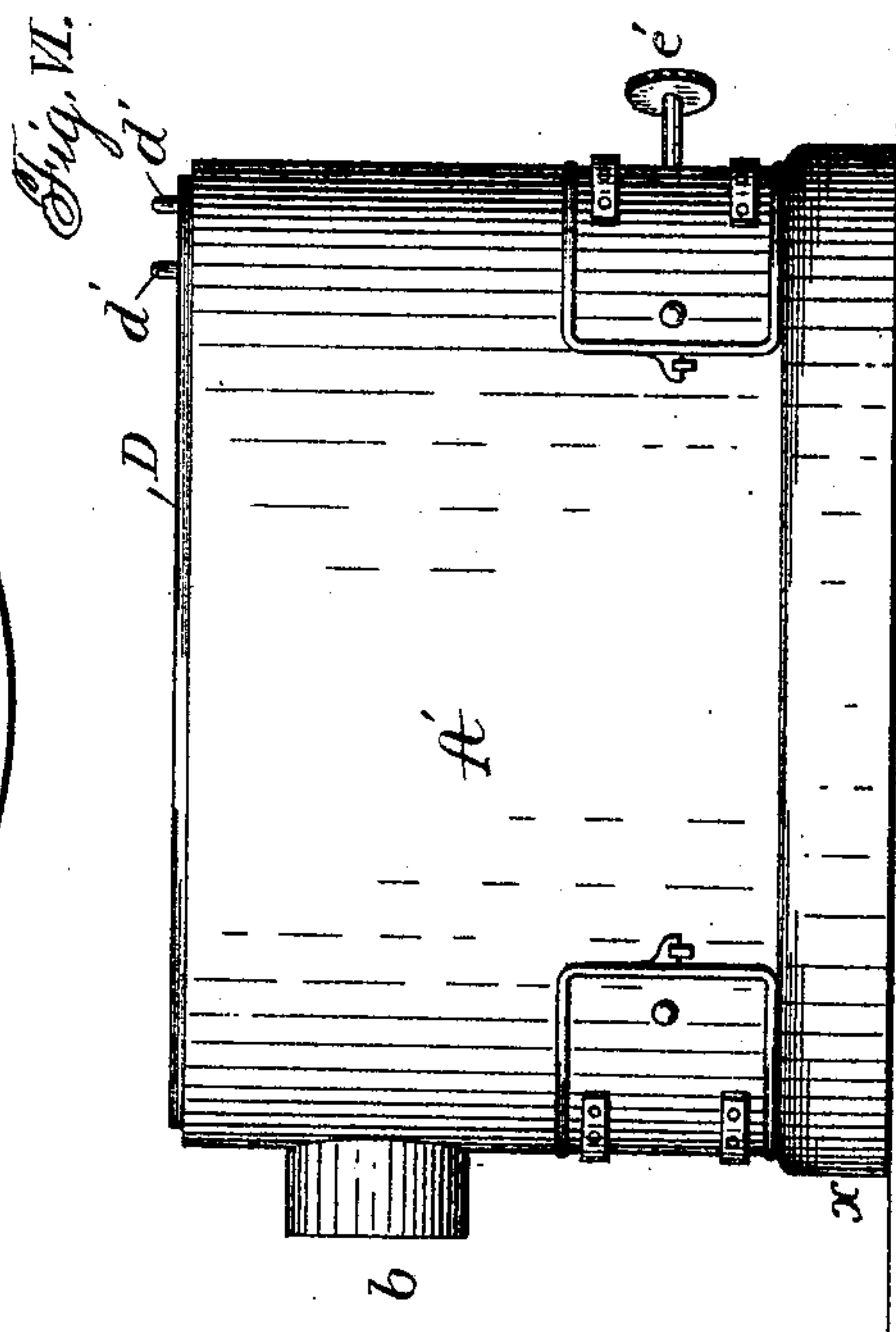
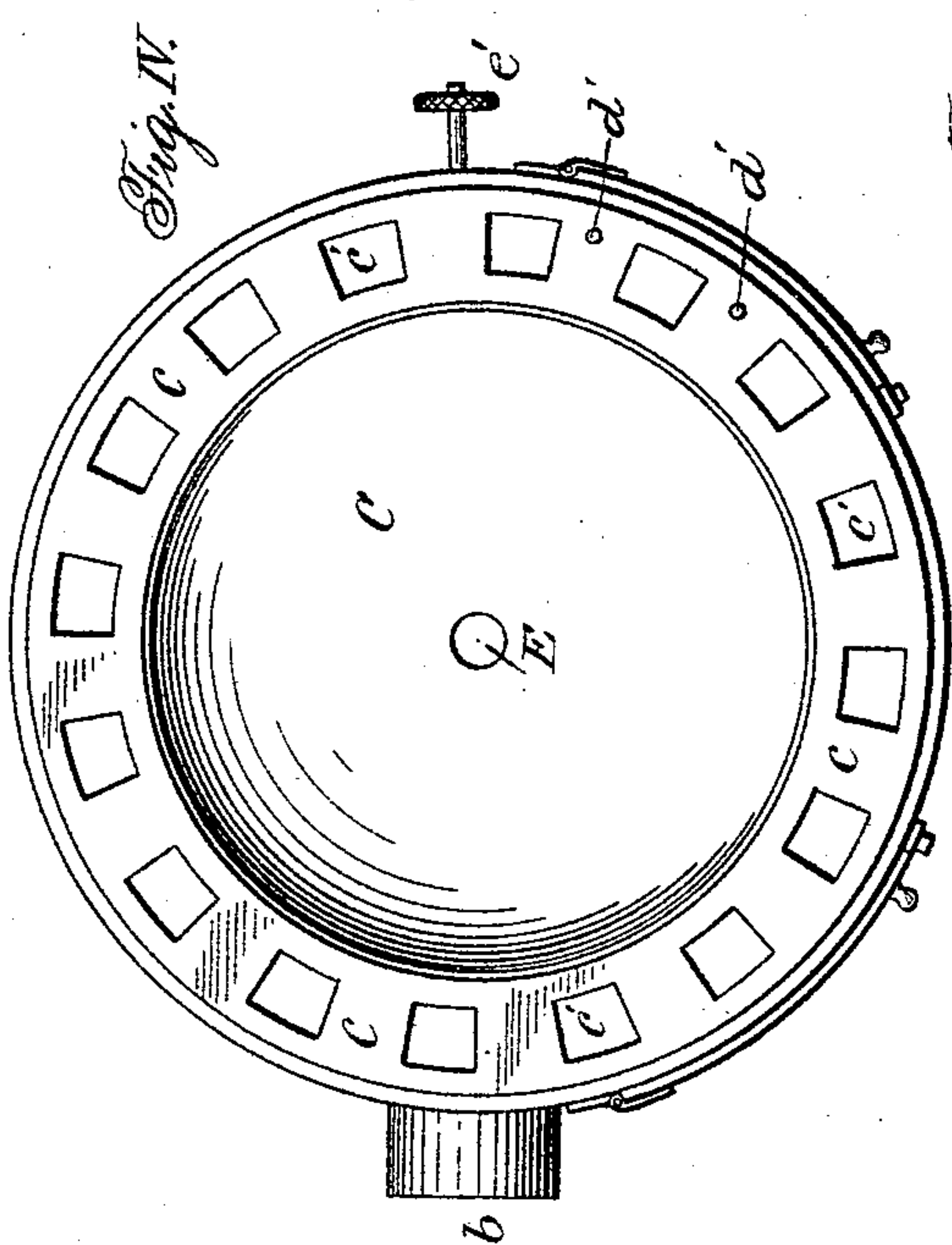
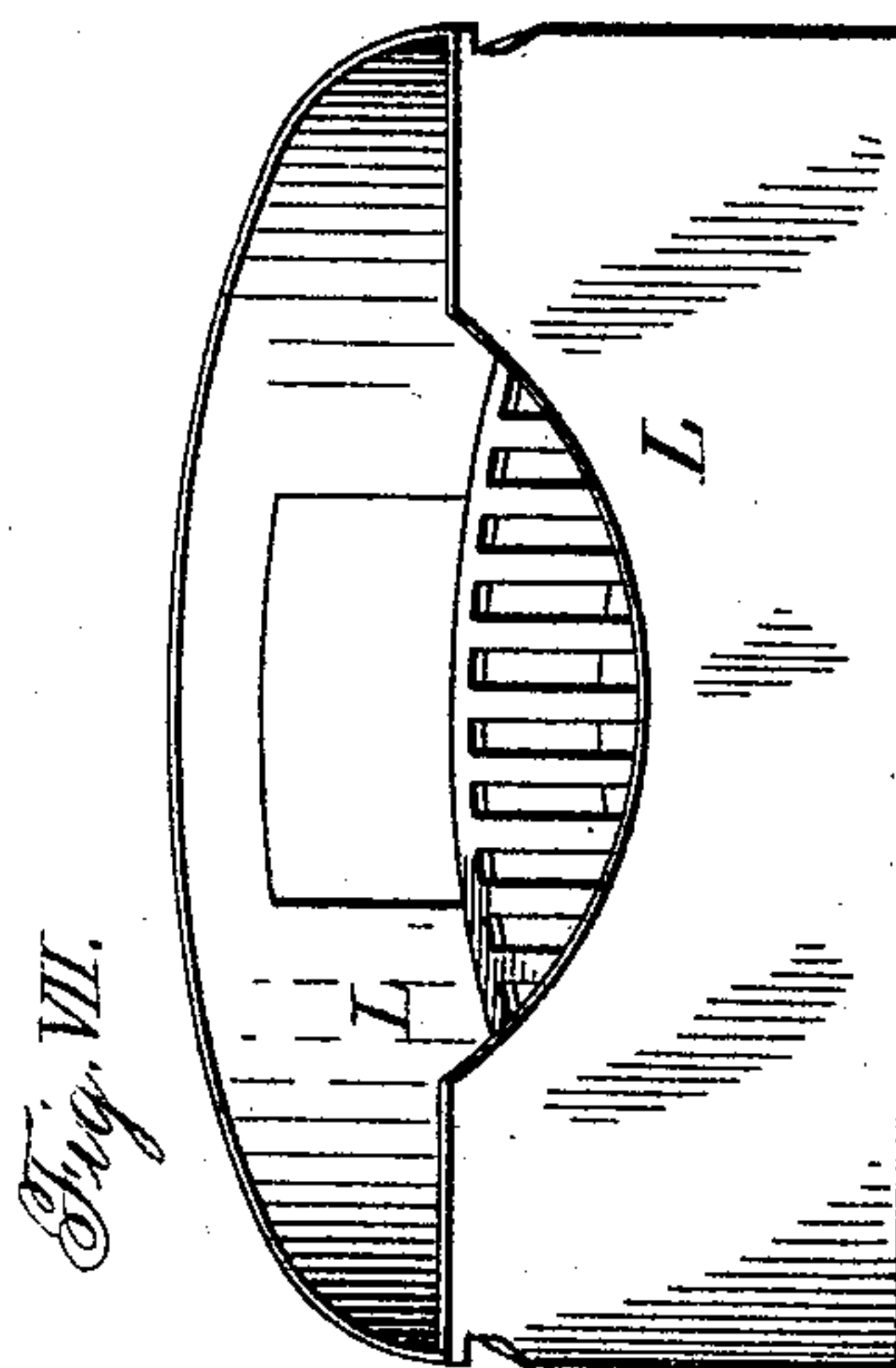
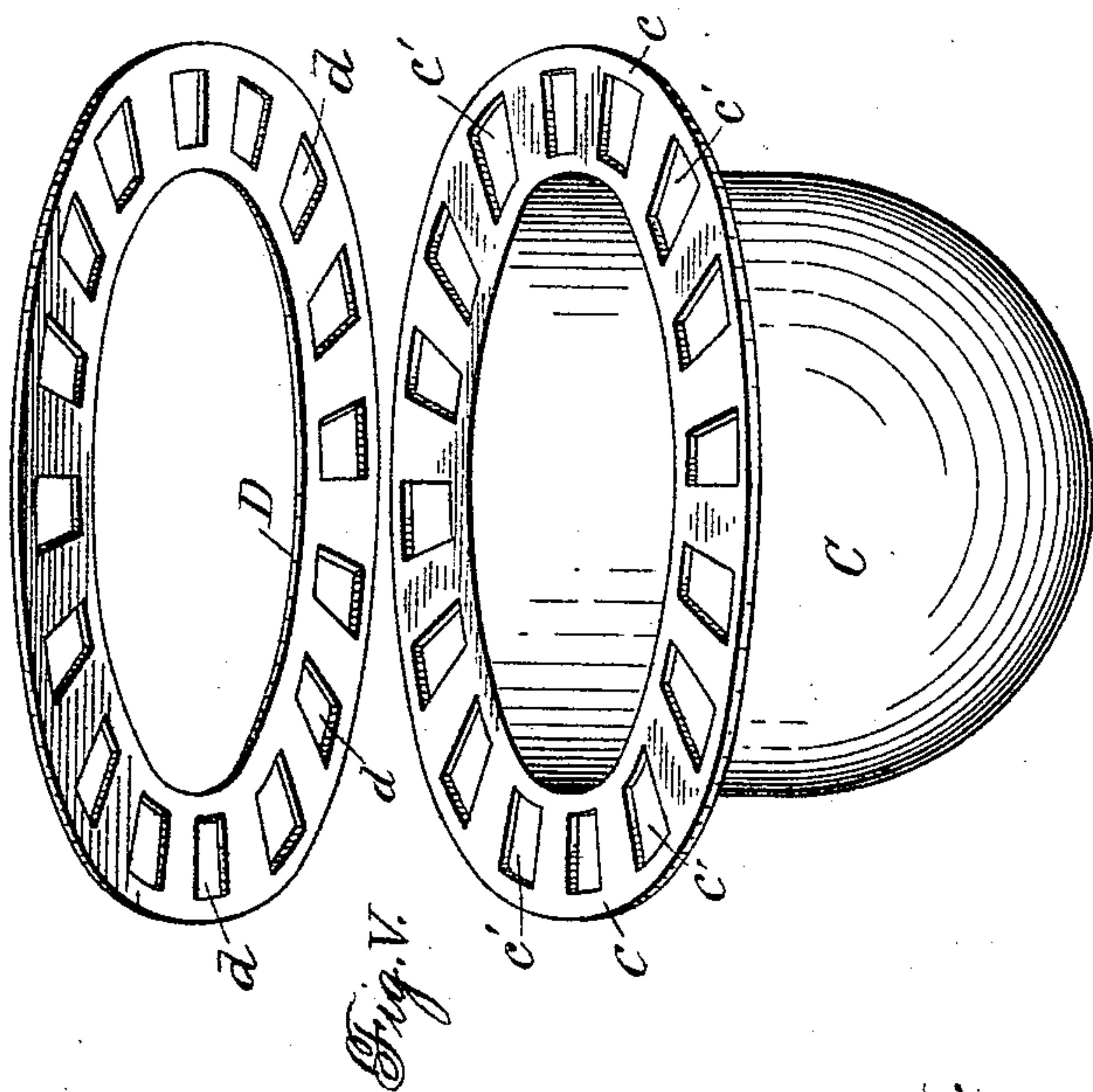
(No Model.)

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D. H. TALBOT.  
CUPOLA COOKER.

No. 437,635.

Patented Sept. 30, 1890.



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# UNITED STATES PATENT OFFICE.

DANIEL H. TALBOT, OF SIOUX CITY, IOWA.

## CUPOLA COOKER.

SPECIFICATION forming part of Letters Patent No. 437,635, dated September 30, 1890.

Application filed March 29, 1890. Serial No. 345,831. (No model.)

*To all whom it may concern:*

Be it known that I, DANIEL H. TALBOT, a citizen of the United States, residing at Sioux City, Woodbury county, Iowa, have invented  
5 a new and useful Cupola Cooker; and I do hereby declare that the following specification, taken in connection with the accompanying drawings, is a full, clear, and exact description of my improvements, such as will enable  
10 those skilled in the art to which it appertains to make and use the same.

My invention has relation to an apparatus for cooking food for stock of all kinds, and is more particularly adapted to preparing food  
15 for hogs, as will be hereinafter explained.

It is well known that creosote, which is obtained from wood-ashes, is an excellent tonic for hogs; and it is the object of my present invention to provide an apparatus which will  
20 effectually mix the ashes and smoke containing the creosote and other substances of value to the hog with the food while it is being cooked.

To this and other ends, which will be hereinafter more particularly pointed out, my invention consists, essentially, of an upright furnace supporting a series of kettles, and having a flue extending its whole length, with branches connecting it with the furnace at  
30 several points.

There are numerous other details of construction assisting in the successful operation of my apparatus, which I will now proceed to describe with reference to the accompanying  
35 drawings.

In said drawings, Figure I is a front elevation of my improved apparatus. Fig. II is a sectional view of Fig. I. Fig. III is a similar view of a slightly-modified form having the  
40 sections of the furnace separated. Fig. IV is a top view of one of the sections. Fig. V is a detail view of one of the kettles and damper-rings. Fig. VI is a side elevation of a section of the modified form, and Fig. VII  
45 is a detail view of the fire box and grate employed in the modified form.

Like letters of reference indicate the same parts throughout the several views.

A is the furnace, composed of sections A'.  
50 B is the main flue having branches *b*, and C are the kettles supported in the furnace-

sections. In each of the branches *b* is a damper *b'*, and above the intersection of each branch in the main flue is a damper B', which dampers regulate the course of the hot air  
55 from the fire-box. Each kettle C has an annular flange *c* for supporting it in the furnace on the annular flange *a* formed on the inner side of each furnace-section. Through the flange *c* is formed a series of perforations  
60 *c'* to allow the hot air and smoke from the fire to pass up through the furnace around the kettles.

D is a circular damper having its seat on the flange *c*, and provided with perforations  
65 *d* of same size and corresponding with the perforations *c'*.

*d'* are projections on the damper D to facilitate revolving it. By means of this circular damper the current of heated air up  
70 through the furnace around the kettles can be regulated or shut off entirely at any point, and in combination with the dampers in the branches and main flue, the current of heated air can be made to follow any course, either  
75 directly up through the main flue out of the chimney, up through the furnace around all the kettles, or around any number of the kettles.

E is the discharge-opening at the bottom of  
80 each kettle, controlled by any ordinary stop-cock *e*. I have shown as the form of stop-cock or cut-off which I prefer to use, a valve-piston sliding in a suitable casing and operated by a screw-threaded stem extending to  
85 the outside of the furnace-section, and having a handle or milled wheel *e'* of non-conducting material for revolving it.

F is a grate supported in the bottom section upon a flange *a*, which section is lined  
90 with fire-brick G above the grate for forming the fire-box. H is also a grate supported on a flange *a* in the top section. The object of this grate H is to support vegetables, meat, bones, &c., which can be steamed and dis-  
95 tegrated so as to fall in the kettle below. The mesh of grate H is so small as not to allow any particle of meat, bone, &c., to pass through which would be large enough to stop the passage through the discharge E. Supported be-  
100 tween the flange *a* and the grate H is a deflector J, of conical shape, for deflecting the



rising smoke and light particles of wood-ashes down into the kettle, and also any particles falling through the grate H.

K is the top of the furnace, of conical form, fitting over the uppermost section A' and having a branch-pipe connection b with the main flue B. Each of the sections A' of the furnace is provided with two internal annular flanges a and a bottom external flange x, the objects of which are obvious. The cupola top is also provided with an external flange x and a door for supplying articles to the grate H. It will be readily seen from the drawings that the sections fit one on another in building up the furnace.

Each one of the sections A' is provided with a hinged door below its lower flange for removing the food through the discharge-openings E, and the bottom section is provided with two doors, as in the ordinary furnace, for supplying fuel and removing ashes. It is obvious that the food may be placed in each kettle for cooking through the door of the section next above.

There is but a slight change in the modified form of my invention shown in Figs. III and VI. Each section is provided with an independent fire-box L, shown in Figs. III and VII. This fire-box is supported on the lower flange a to one side of the kettle, as shown in Fig. III. It is provided with a grate and ash-pit, and the ash-pit is provided with a grated opening I in its bottom guarded by a sliding cover I', whereby the small particles of ashes may be sifted into the kettle below. In this modified form it is necessary to provide each section with two doors, one for supplying fuel and the other for removing and supplying food.

The operation of the apparatus is as follows: While the fire is being started on the grate the dampers are so arranged as to have direct draft up the main flue out the chimney. After the fire is started the vegetables, meat, or other articles are placed on the upper grate, the liquid food being placed in the kettles and the dampers arranged to have a direct draft up through the furnace around all the kettles. Small particles of ashes are carried up with the hot air and smoke and coming in contact with the steam of the cooking food are caused to fall into the kettles, whereby they are intimately mixed and cooked with the food. In the form employing a small fire-box for each furnace-section it is possible to impregnate the food more thoroughly with the creosote. When the food is properly cooked and the articles on the upper grate sufficiently disintegrated to pass through into the kettles, the food from all the kettles can be allowed to pass through the discharge-openings into the bottom kettle, where it is thoroughly mixed and removed and fed to the stock, or, if desired, different mixtures may be cooked in each kettle, when they will be removed separately. In case any one of the kettles is out of order, or for any other reason it is not de-

sired to have the heated air come in contact therewith, it is clear that by properly arranging the dampers the heated air and smoke can be so directed as to carry on the cooking in the other kettles without coming in contact with the idle kettle.

In practice, especially for commercial use, I construct my furnace of cast or wrought iron sections fitting together, as hereinbefore described, so that any number of sections can be formed into a furnace, according to the capacity desired; but I do not desire to limit myself to this precise manner of carrying my invention into effect, as it is obvious that other forms could be used without departing from the spirit of the invention.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent—

1. In a cupola cooker, the combination of the upright furnace supporting a series of kettles one above the other, and a damper surrounding each of the kettles, whereby the heat and vapors can pass up around all the kettles, said kettles being provided with discharge-openings in the bottoms, whereby the contents of the several kettles can be mixed by passing from one to another, all substantially as herein set forth.

2. In a cupola cooker, the combination of the upright furnace with a series of kettles supported therein one above the other, said kettles having perforations through their supporting-flanges for the passage of heated air and smoke, as herein set forth.

3. In a cupola cooker, the combination of the upright furnace supporting a series of kettles one above the other, said kettles having perforations through their supporting-flanges for the passage of heated air and smoke, with a grate at top for supporting articles to be cooked, as herein set forth.

4. In a cupola cooker, the combination of the upright furnace provided with a suitable fire-box and supporting a series of kettles, with a grate H, for supporting articles to be cooked, and deflector J, secured to the outer wall at top for guiding the juices and deflecting the rising vapors, as herein set forth.

5. In a cupola cooker, the combination of the upright furnace, a series of kettles supported therein, and a circular damper surrounding each kettle, with a main flue extending parallel with said furnace and having a series of branch pipes connecting it with the furnace, as herein set forth.

6. In a cupola cooker, the combination of the furnace A with the main flue B, and branches b, each of said branches and the main flue above each branch being provided with independent dampers, as herein set forth.

7. In a cupola cooker, the combination of the upright furnace with a series of kettles supported therein one above the other, and an independent fire-box for each kettle, substantially as herein set forth.

8. In a cupola cooker, the combination of



the upright furnace having internal flanges, with the series of kettles and independent fire-boxes supported on said flanges, substantially as herein set forth.

5 9. In combination with a cupola cooker, a furnace-section consisting of a metal ring having two internal flanges *a* and an external flange *x*, whereby several sections may be built up into a furnace and support a series  
10 of kettles and grates, as herein set forth.

10. In a cupola cooker, the combination of a vertical series of sections, each having an

external and an internal supporting-flange, with a series of kettles having flanges *c*, supported one above the other within said sections, and said flanges *c* being provided with perforations for the upward passage of the products of combustion from one section to the other, substantially as set forth.

DANIEL H. TALBOT.

Witnesses:

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R. M. RICKETTS.