

(No Model.)

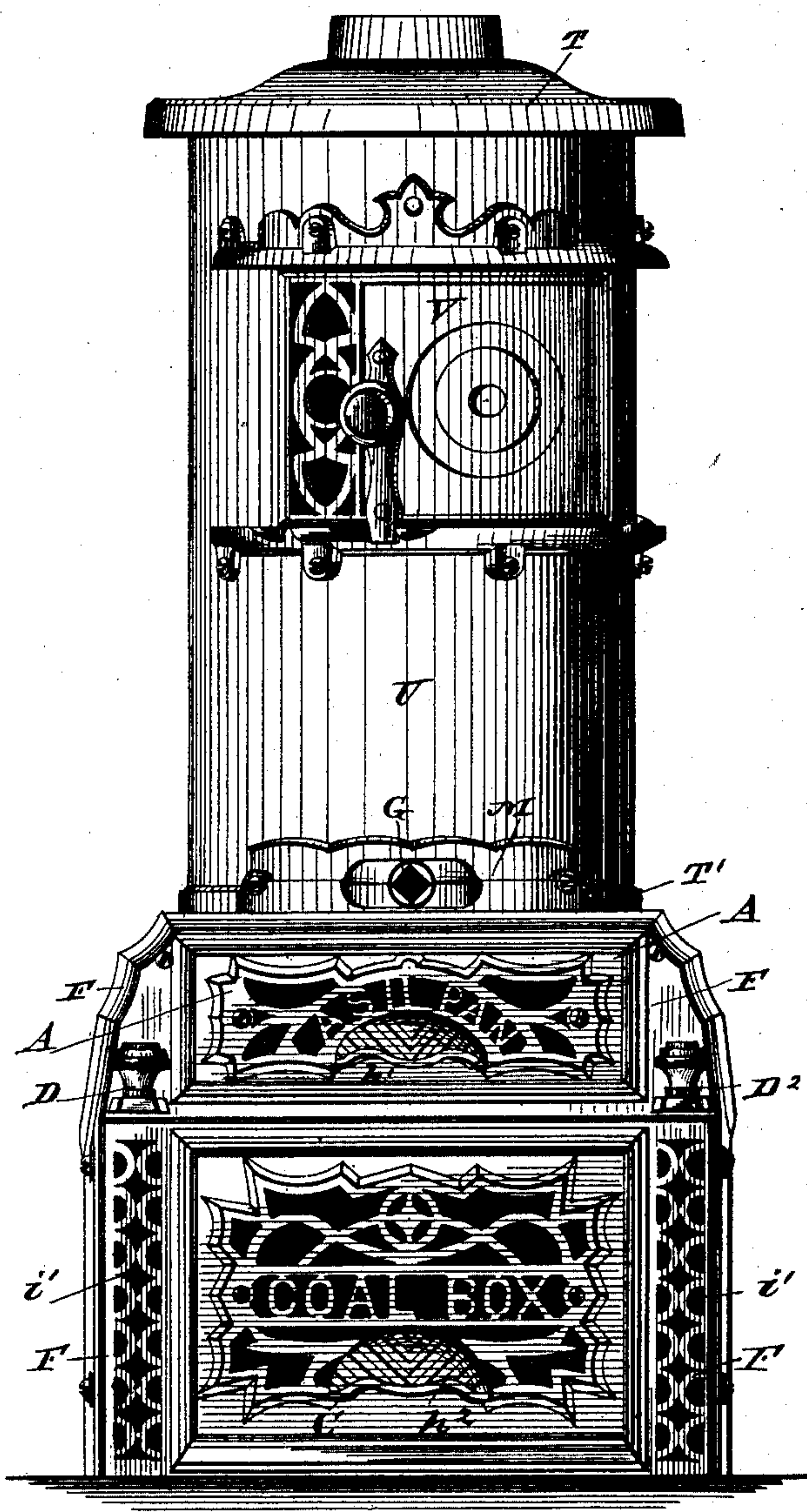
4 Sheets—Sheet 1.

J. W. FOWLER.
HEATING STOVE.

No. 371,134.

Patented Oct. 4, 1887.

Fig. 1.



Witnesses:

Phil C. Distenck.

Joseph Barker

Inventor:

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W. L. Ewin,
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(No Model.)

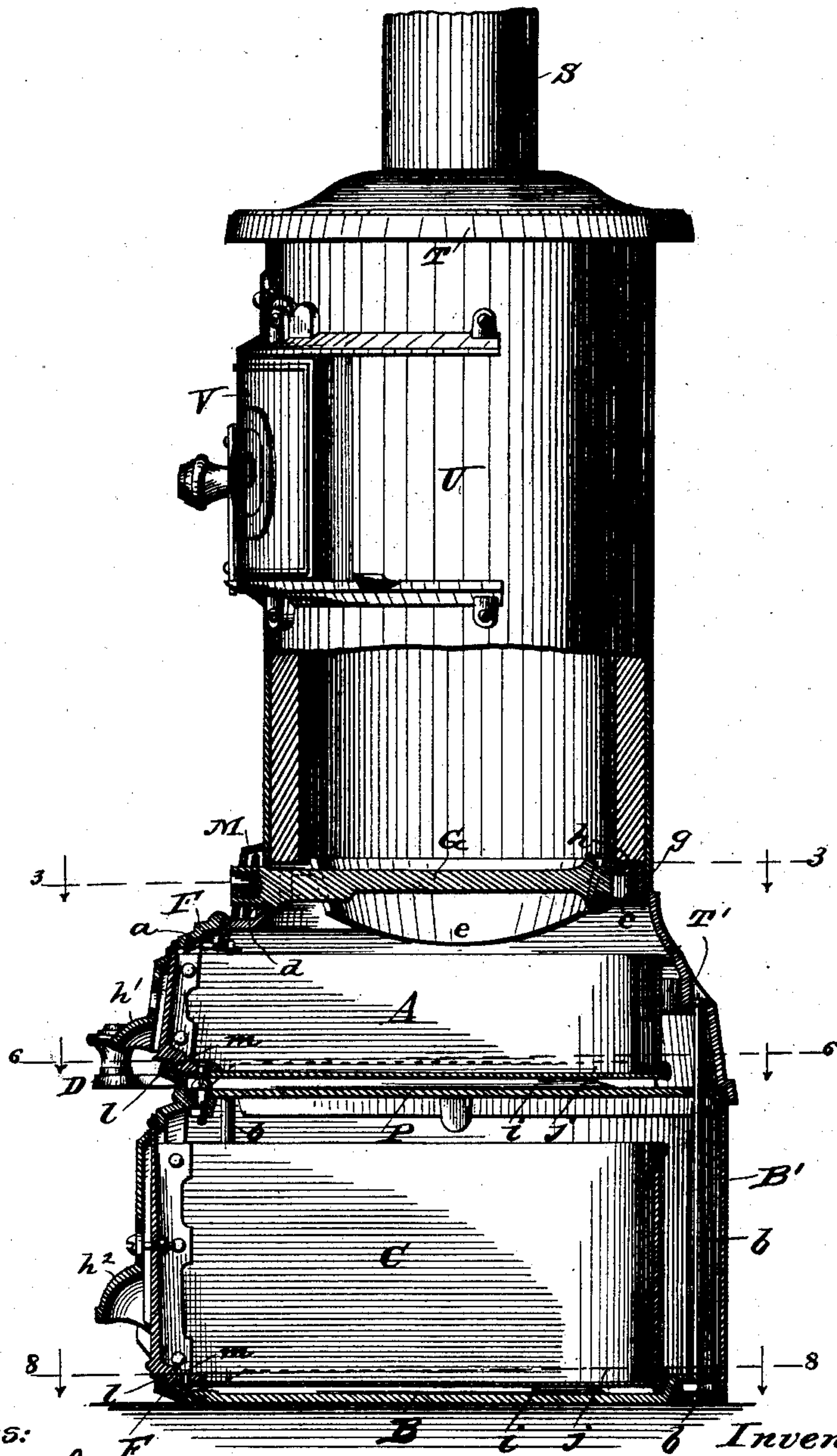
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Patented Oct. 4, 1887.

Fig. 2.



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Fig. 3.

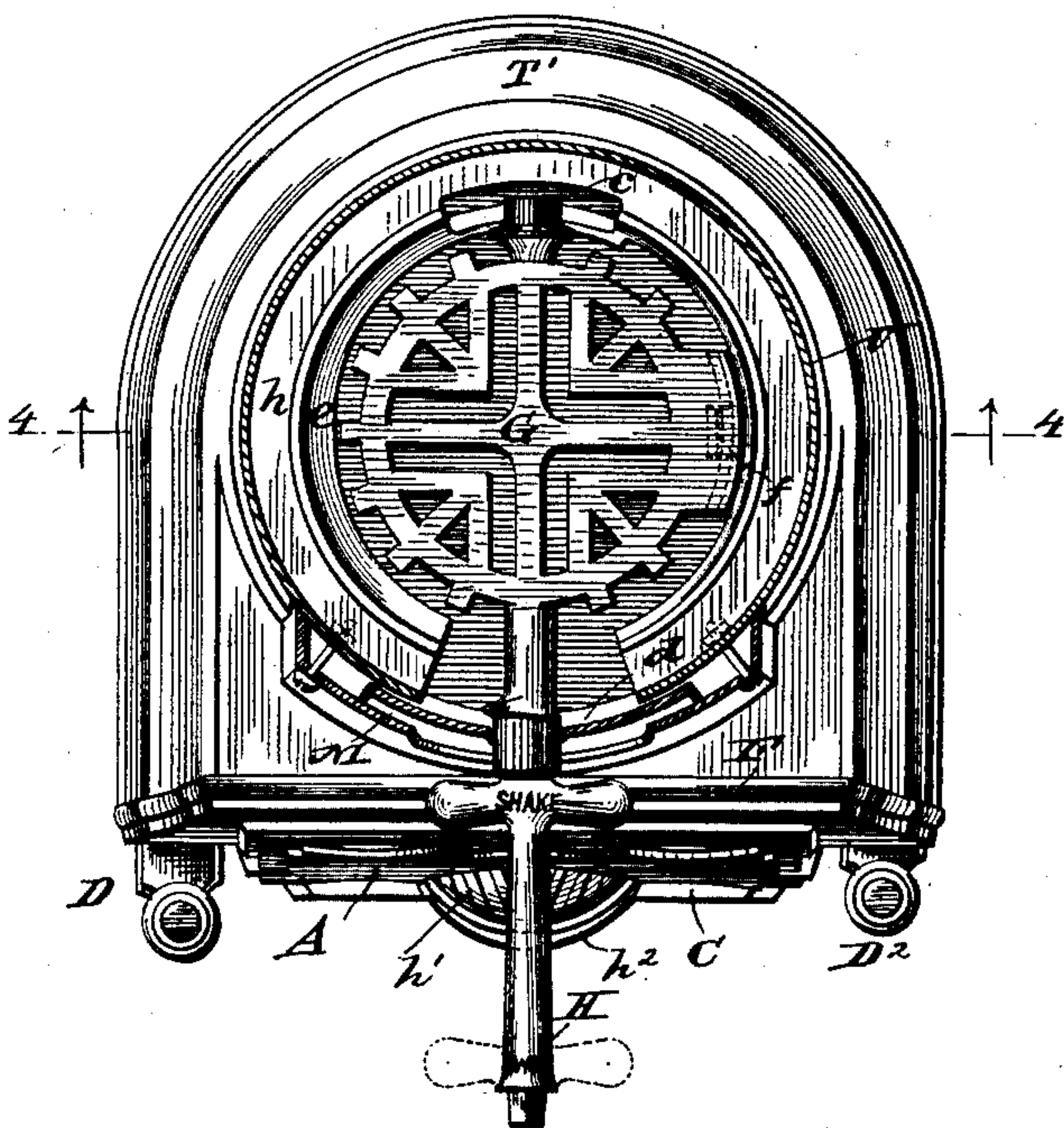


Fig. 5.

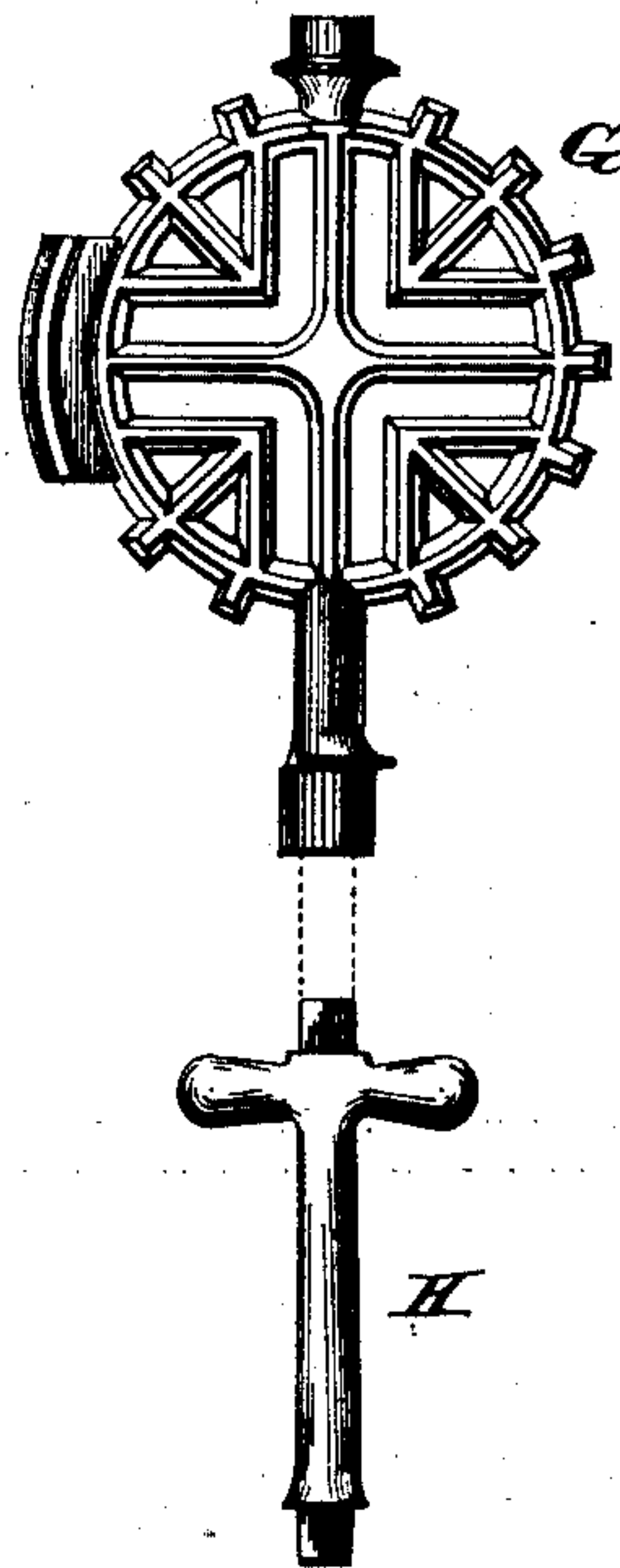
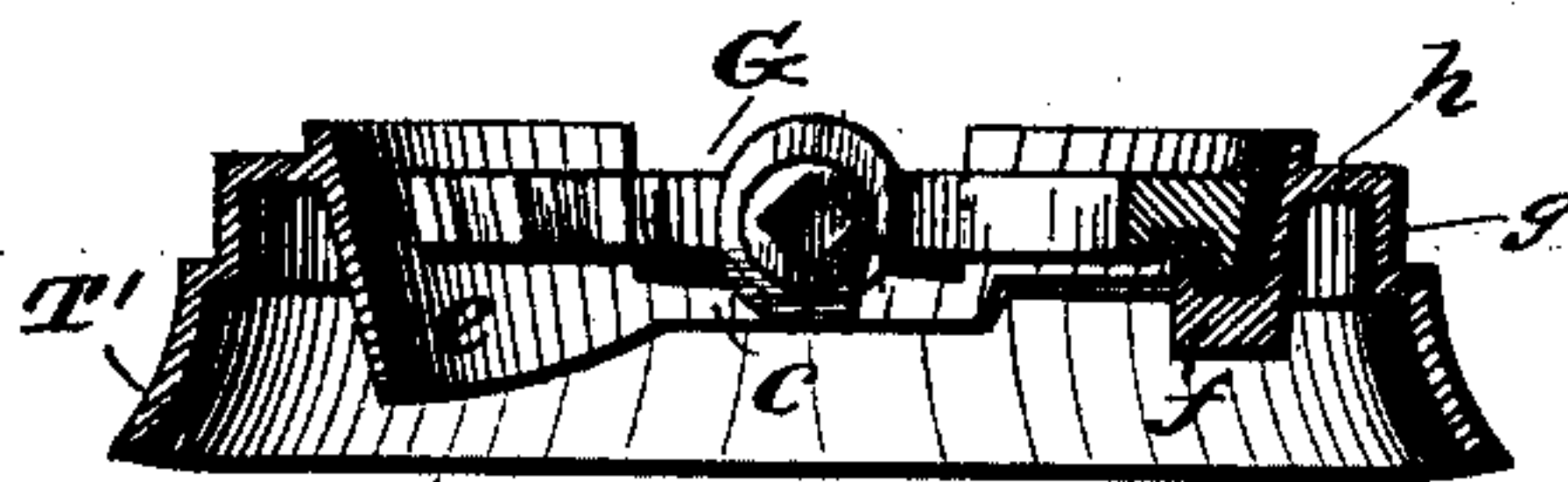


Fig. 4.



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(No Model.)

4 Sheets—Sheet 4.

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Fig. 6.

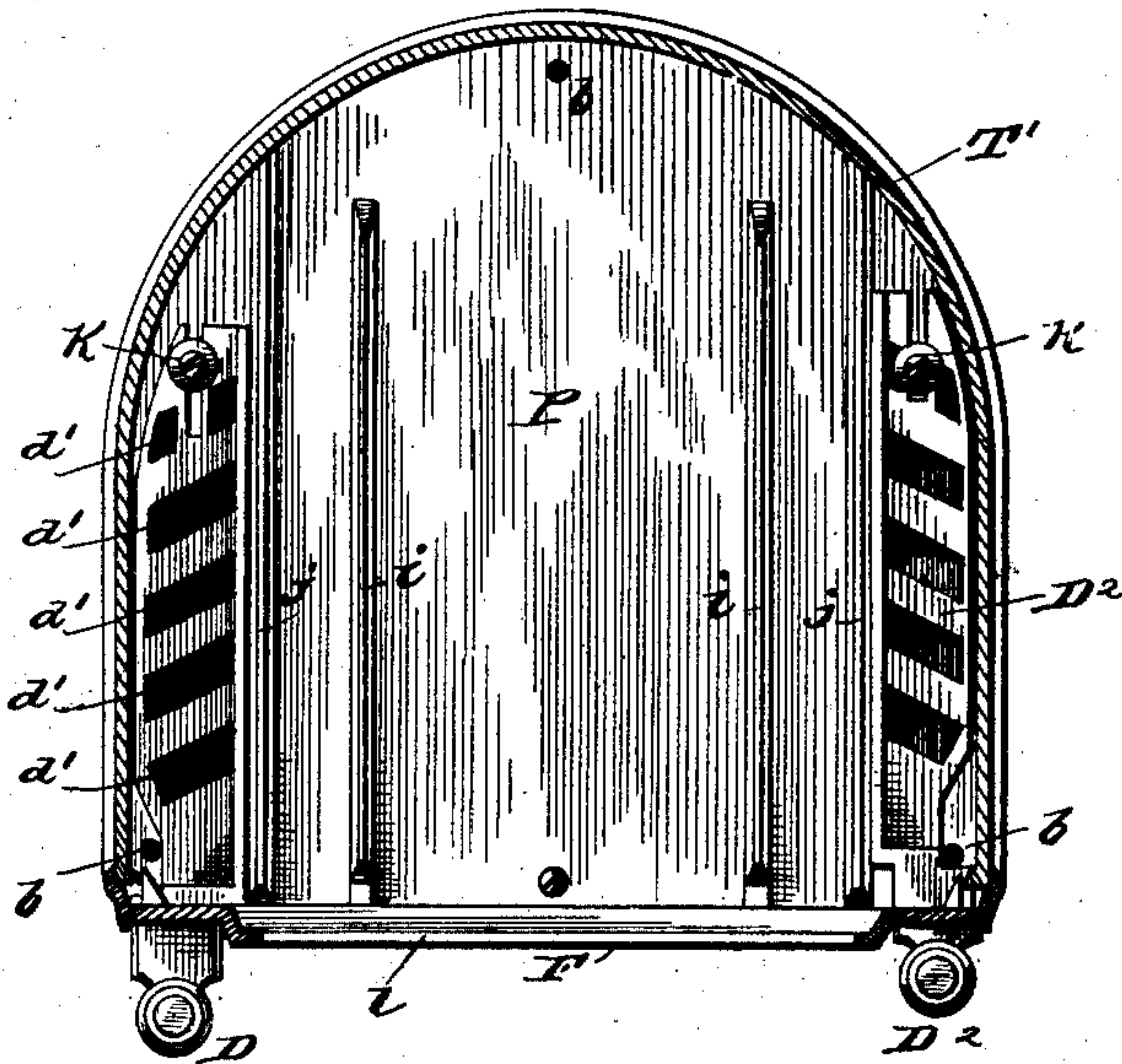
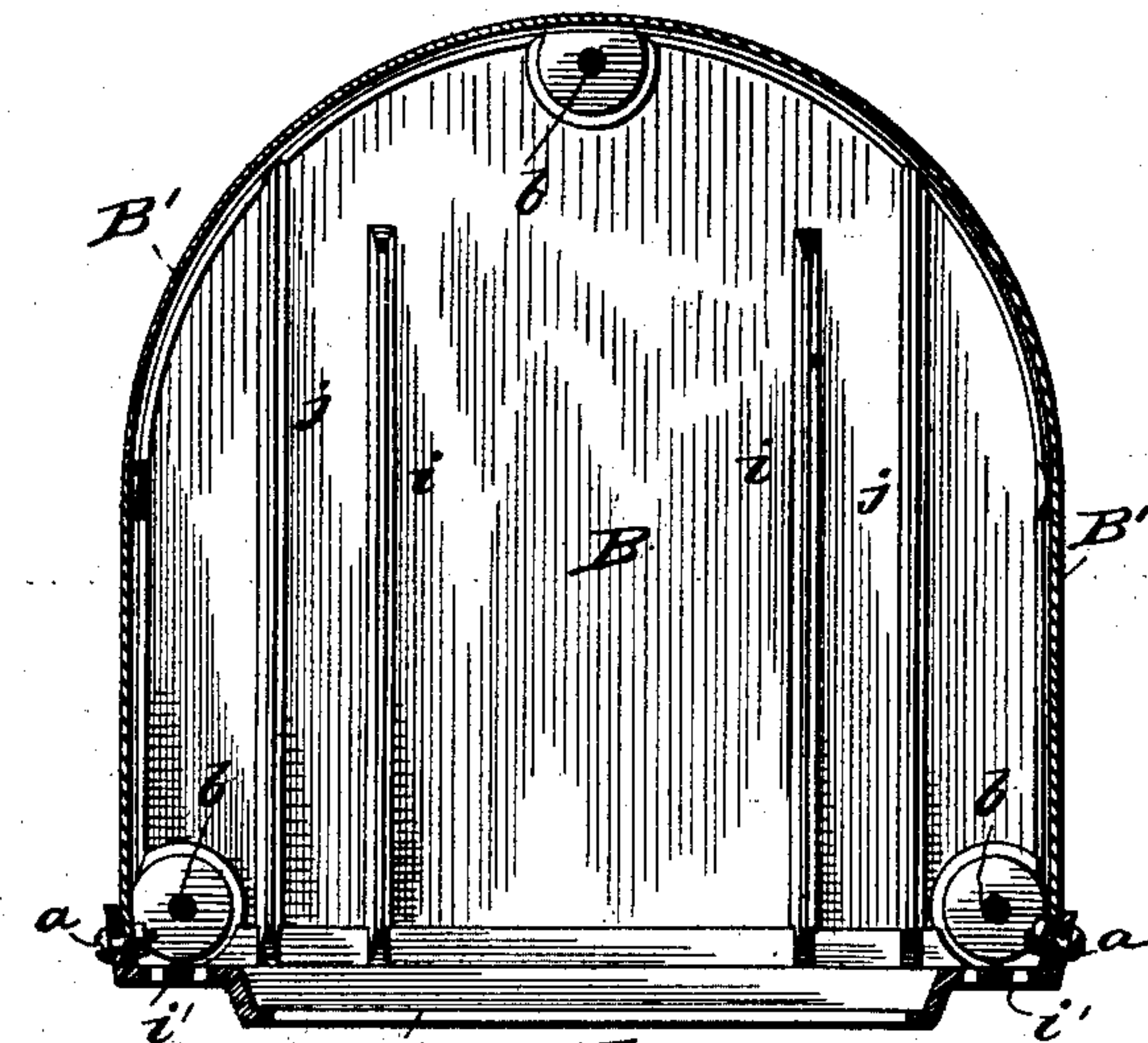


Fig. 7.



Fig. 8.

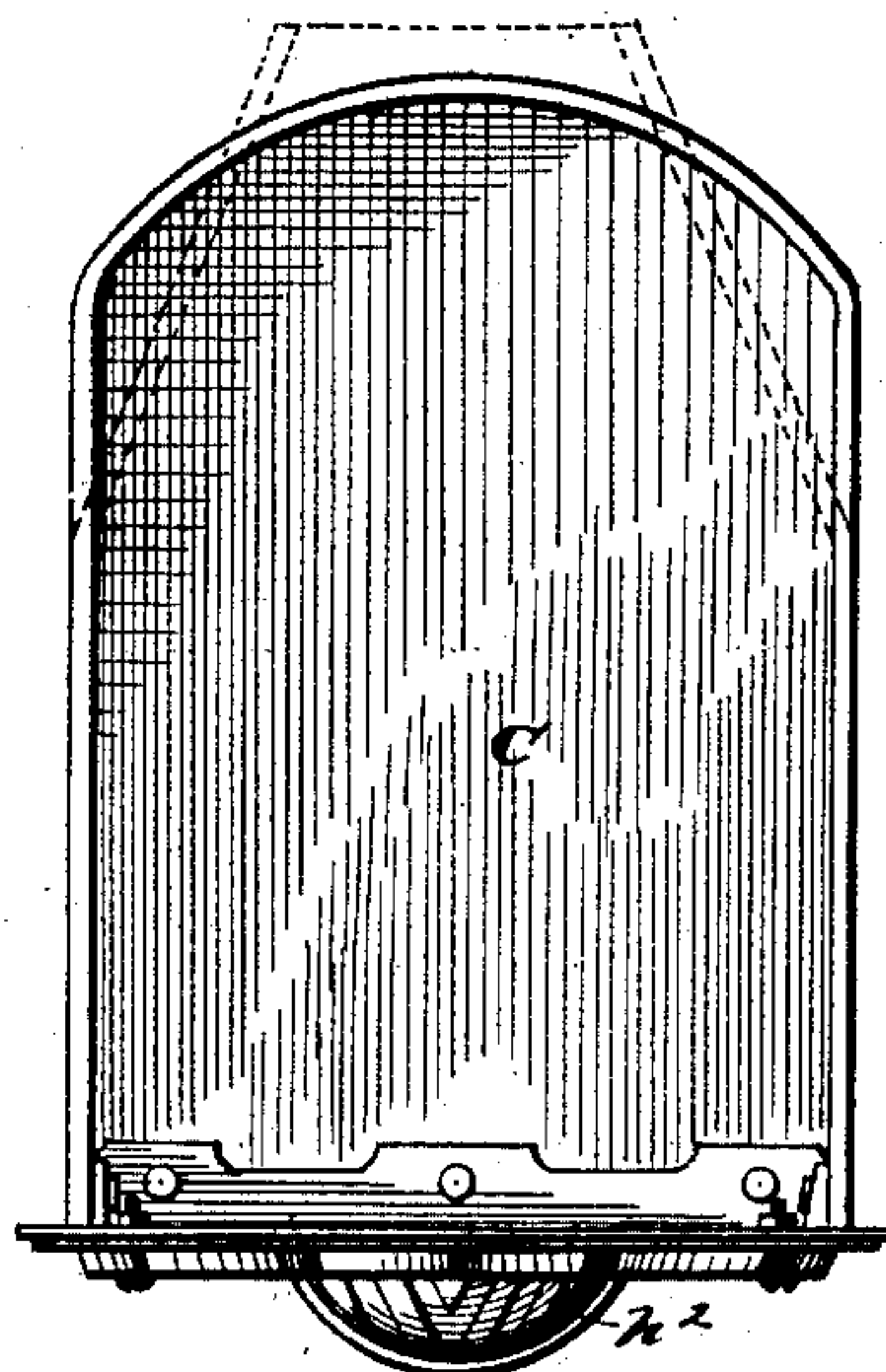


Witnesses:

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Fig. 9.



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UNITED STATES PATENT OFFICE.

JOHN W. FOWLER, OF BROOKLYN, NEW YORK.

HEATING-STOVE.

SPECIFICATION forming part of Letters Patent No. 371,134, dated October 4, 1887.

Application filed April 11, 1887. Serial No. 234,386. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. FOWLER, a citizen of the United States, and a resident of Brooklyn, in the State of New York, have invented a new and useful Improvement in Heating-Stoves, of which the following is a specification.

My present invention relates primarily to compact upright heating-stoves for street-cars, but may be embodied in other upright heating-stoves which burn coal.

This invention consists in certain novel combinations of parts, hereinafter set forth and claimed, constituting as a whole a peculiarly constructed stove-base, which has within it an ash-pan and a coal-box in the form of drawers, both securely self-fastened against opening by the jolting of cars, and a pair of draft-regulating slides at the respective sides of the stove, the air to support combustion being admitted by ornamental open-work in the front plate of the base, and so as to aid in keeping cool the fresh coal in the coal-box, while any gases which may escape from the latter are drawn in with the air-supply and consumed with the burning fuel.

Four sheets of drawings, bearing nine figures, accompany this specification as part thereof. Figure 1 of these drawings is a front view of a street-car stove illustrating this invention. Fig. 2 is a side view of the same, with its lower portion in section in a central plane. Fig. 3 represents a plan view of the parts below the plane of section indicated by the line 3 3, Fig. 2. Fig. 4 represents a vertical section through the top of the base on the line 4 4, Fig. 3, showing a front view of the grate, partly in section. Fig. 5 is a bottom view of the grate and its detached handle. Fig. 6 represents a horizontal section in a broken plane at 6 6, Fig. 2, showing the ash-pan floor and draft-slides. Fig. 7 is an edge view of one of the draft-slides detached. Fig. 8 represents a horizontal section on the line 8 8, Fig. 2, showing the coal-box floor or bottom floor; and Fig. 9 is a top view of the coal-box detached, with an added dotted outline representing a modification as to its shape.

Like letters of reference indicate corresponding parts in the several figures.

The upright cylindrical body of this stove

(marked U in Figs. 1 and 2) extends upward from its grate G, as shown in the latter figure, and is provided with an annular top plate, T, from which a straight uptake-pipe, S, Fig. 2, extends through the top of the car. Said upright body U is further provided with my ventilating stove-door V, which is the subject-matter of a previous application for patent filed September 27, 1886, Serial No. 214,609.

The above-mentioned parts, together with a reversible detached handle, H, Figs. 3 and 5, for the grate G, and a two-part grate-slot mask, M, at the front of the stove, are preferred features of the said street-car stove; but they otherwise form no part of the present invention, and further description thereof will consequently be omitted from this specification.

The base of the stove comprises a cast-iron front frame, F, bottom plate, B, and partition-plate P, a top casting, T', which forms its back and sides above said partition-plate, and a sheet-iron back and sides, B', below the latter. These parts are united by short and long bolts *a b*, Figs. 2, 6, and 8, and the base so formed is intended and adapted to be used without legs, as shown. Said top casting, T', is provided at top with bearings *c d* for the trunnions of the grate G, the customary chute-flange *e* at its dumping side, and a stop-lug, *f*, opposite the latter, to coact with a matching lug on the grate, and with a neck, *g*, embraced by the lower end of the sheet-iron shell of said upright body U, and a terminal shoulder, *h*, upon which the lining-bricks rest. Expanding below this grate-ring portion, said top casting, T', in connection with said front frame, F, and partition-plate P, forms an air chamber, which contains a commodious ash-pan, A, and a pair of draft-slides, D D², on the respective sides thereof, as best seen in Figs. 2 and 6. Said ash-pan A is supported beneath by rail-flanges *i* and laterally by guide-flanges *j*, Fig. 6, formed on the floor-surface of said partition-plate P. Said draft-slides D D², as shown in Fig. 6, are guided at their inner ends by screws *k*, which are tapped into the partition-plate P, and are provided with washers and coact with "slots" in the slides. The slides are perforated, as shown, and coact with draft-holes *d'* in the partition-plate when the slides

are drawn out, as shown at D. A second air-chamber is formed by said back and sides B' and bottom plate, B, in connection with said partition-plate P and front frame, F, as seen in Figs. 2 and 8, and this accommodates a coal-box, C, which may be made of ample capacity to contain a supply of coal for a day's fire or a given length of trip. It is preferably of the same width and form as the ash pan, but may have a spout end, so that the coal may be poured therefrom into the stove, as represented by dotted lines in Fig. 9. This figure shows the coal-box detached. It is supported vertically and laterally by rail-flanges *i* and guide-flanges *j* on said bottom plate, like those on said partition-plate P. Said front frame, F, has suitable openings to admit the ash-pan A and coal-box C, with a lip, *l*, at the bottom of each, projecting above the level of said rail-flanges *i*. These lips coact with catch-shoulders *m*, with which said ash-pan and coal-box are provided at the lower edges of their outer ends, as shown in Fig. 2, so as to lock the ash-pan and coal box in place. They are unlocked by lifting them so that their bottoms clear said lips.

The outer ends of the ash-pan and coal-box are preferably iron castings, and are provided with open-work cast-iron handle-plates *h'* *h''*. These are utilized as designation-plates, as shown in Fig. 1, while hollow backs and openings at their lower edges, as shown in Fig. 2, preclude the accumulation of dust in the openings, and in the case of the ash-pan serve to keep its handle cool. Said front frame, F, is further provided with openings, through which said draft-slides D D² work, and beneath these with open-work panels *i'*, which form air-inlets at the respective sides of the coal-box C. Air entering at these inlets *i'* passes to the fire through the draft-holes *d'* and draft-slides D D, under the control of the latter, and through the grate G, and thus to the burning fuel supported by the latter within the upright body U. In transit the air so admitted aids to keep the coal box and its contents cool, as aforesaid, while any gases which may escape from the contents of the coal-box are drawn through said draft-holes into the fire and consumed.

Having thus described my said improvement in heating-stoves, I claim as my invention and desire to patent under this specification—

1. In a heating-stove, a base provided with air-chambers, one above the other, to receive an ash-pan and a coal-box, said chambers be-

ing separated by a horizontal partition-plate provided with draft-holes, substantially as herein specified.

2. A stove-base provided with air-chambers, one above the other, to receive an ash-pan and a coal-box, and with draft holes in the partition-plate which separates said chambers, and having its primary air-inlets in communication with the coal-box chamber, substantially as herein specified.

3. A stove-base having air-chambers, one above the other, to receive an ash-pan and a coal-box, and having a partition-plate which separates said chambers and is provided with draft-holes and with draft slides for regulating the draft, substantially as herein specified.

4. In a stove-base, the combination, substantially as herein specified, of a cast-iron front frame, bottom plate and partition-plate, a sheet-iron back and sides, and a top casting, whereby two air-chambers are formed within the base to receive an ash-pan and a coal-box, in the manner set forth.

5. In a stove-base, a front frame provided with openings one above the other to admit an ash-pan and a coal-box, and with open-work panels at the sides of the latter to form air-inlets, in combination with a partition-plate above the level of said panels, having draft-holes near its lateral edges, substantially as herein specified.

6. In a stove-base, a front frame provided with openings one above the other to admit an ash-pan and a coal-box, and with air-inlets and draft-slide openings near the lateral edges of the base, in combination with a partition-plate above the level of said air-inlets, having draft-holes near its lateral edges, and draft-slides coacting with the latter, substantially as herein specified.

7. In a stove-base, the combination, with an ash-pan and a coal-box in the form of sliding drawers, of a bottom plate and a partition-plate, each provided with rail-flanges and parallel guide-flanges of a greater height, said partition-plate being also provided with draft-holes between said guide-flanges and its lateral edges, substantially as herein specified.

8. In a stove-base, a drawer having its outer end provided with an open-work handle-plate recessed at back and open at its lower edge, substantially as herein specified.

J. W. FOWLER.

Witnesses:

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