

E. B. COLBY.
HEATING STOVE.
APPLICATION FILED NOV. 7, 1907.

912,077.

Patented Feb. 9, 1909.

3 SHEETS—SHEET 1.

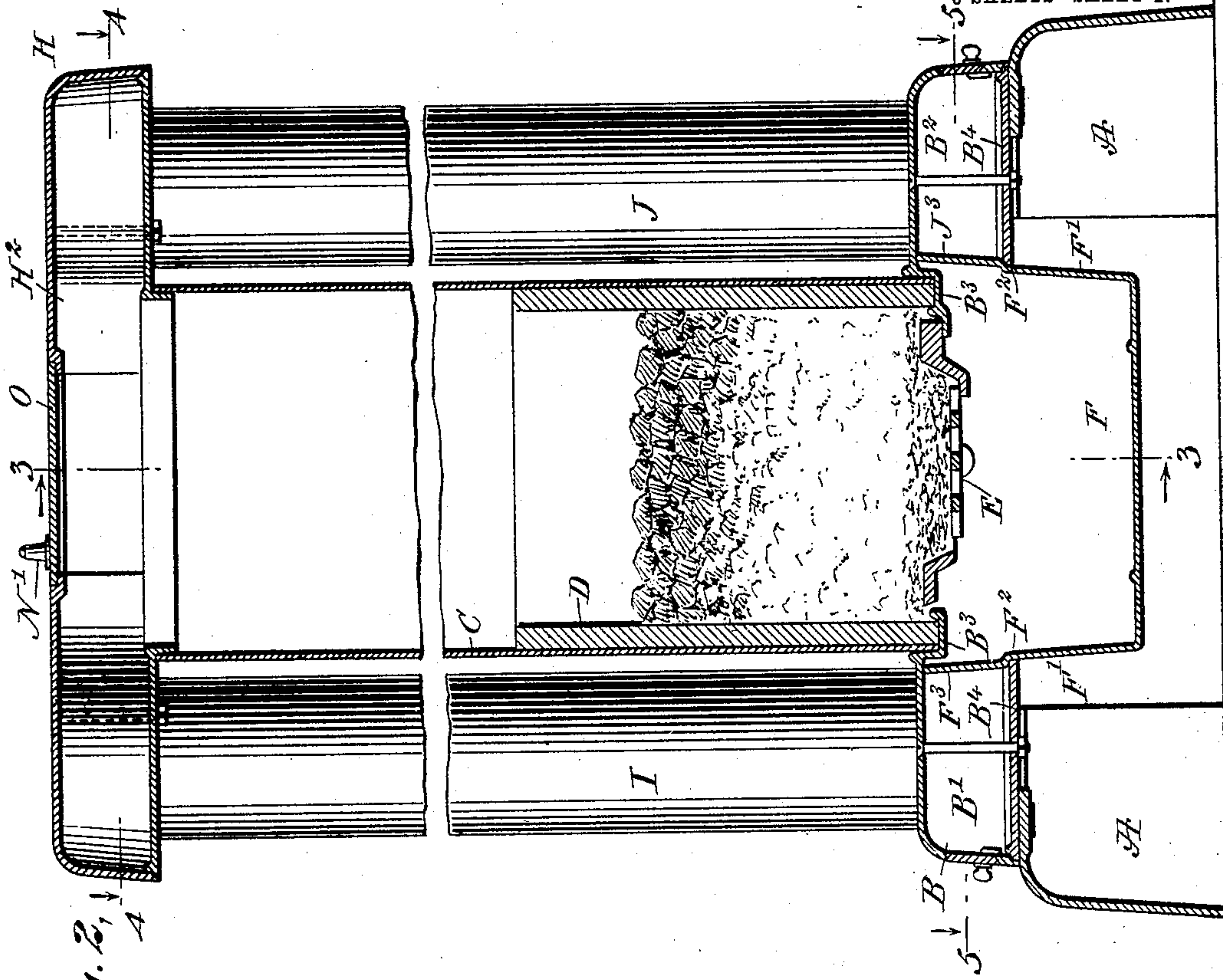


Fig. 2.

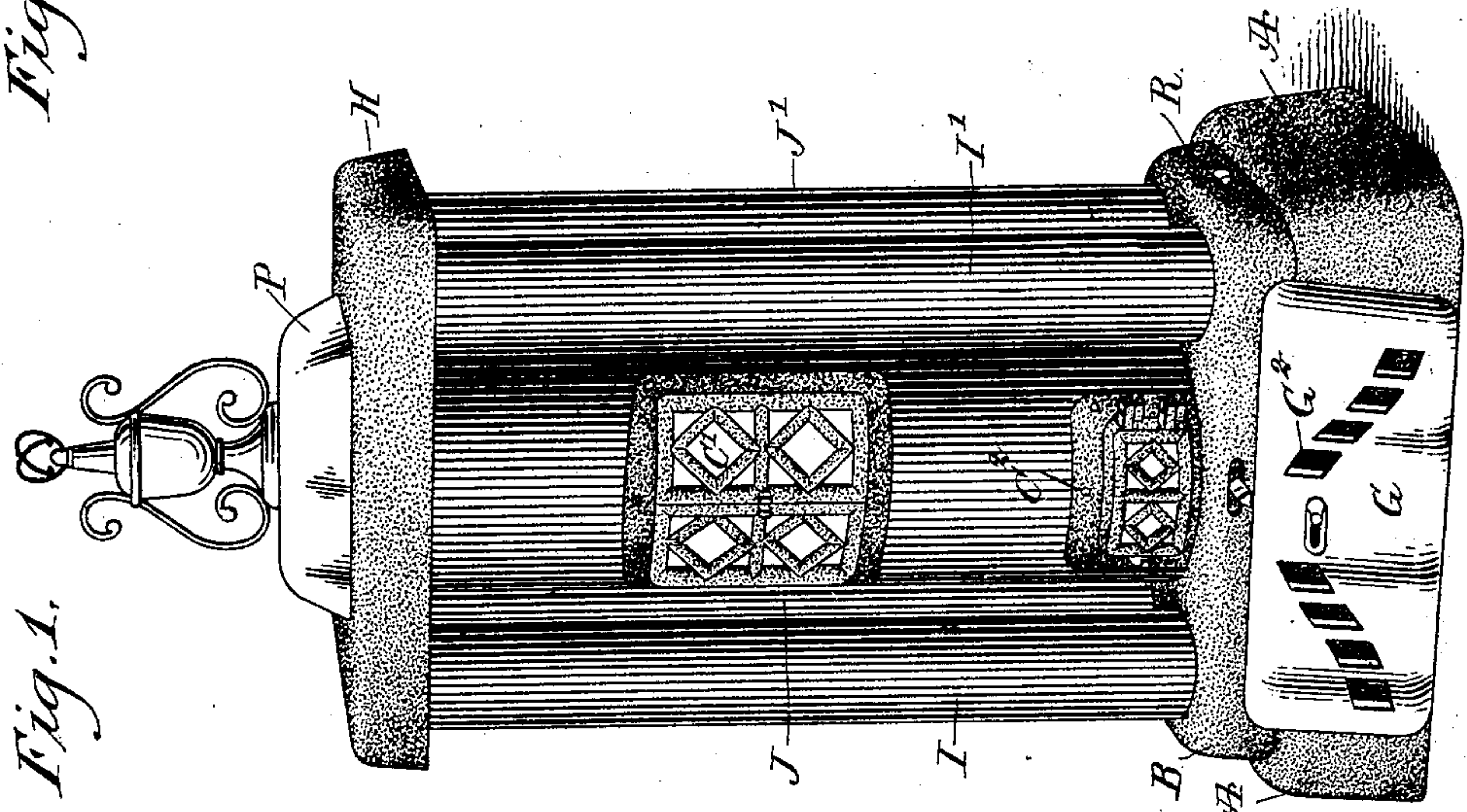


Fig. 1.

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2 SHEETS—SHEET 2.

Fig. 4.

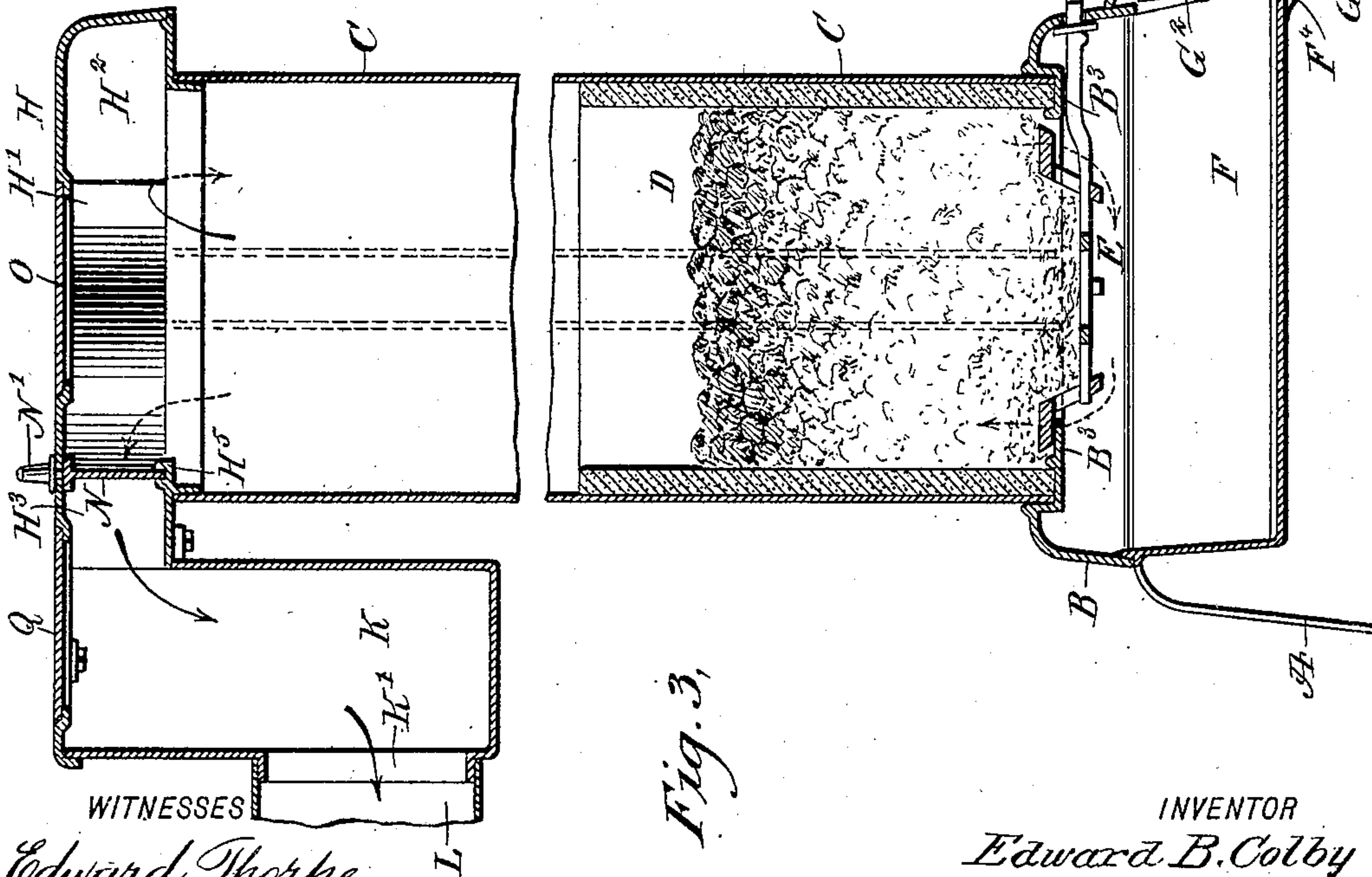
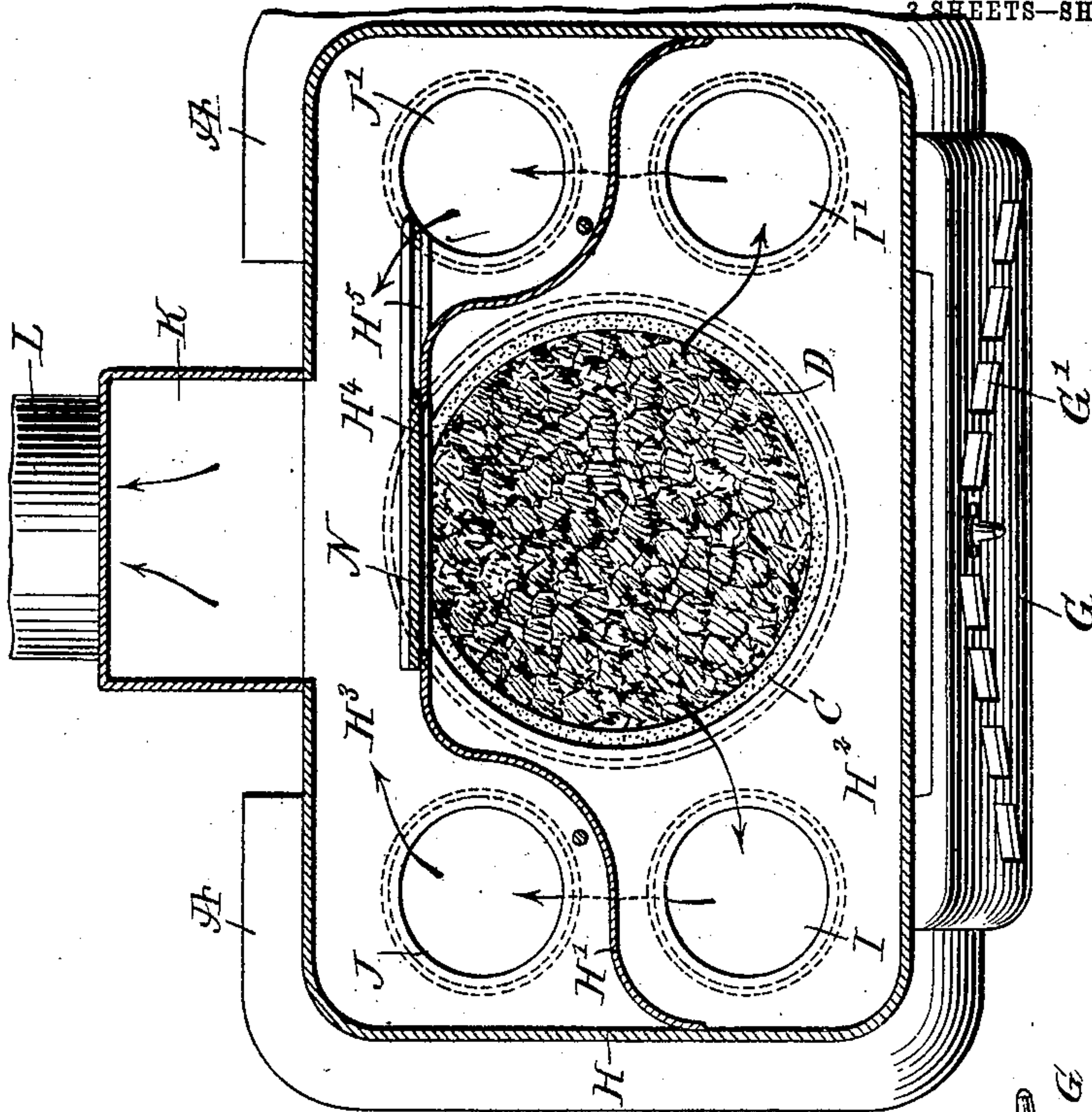


Fig. 3.

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3 SHEETS—SHEET 3.

Fig. 6.

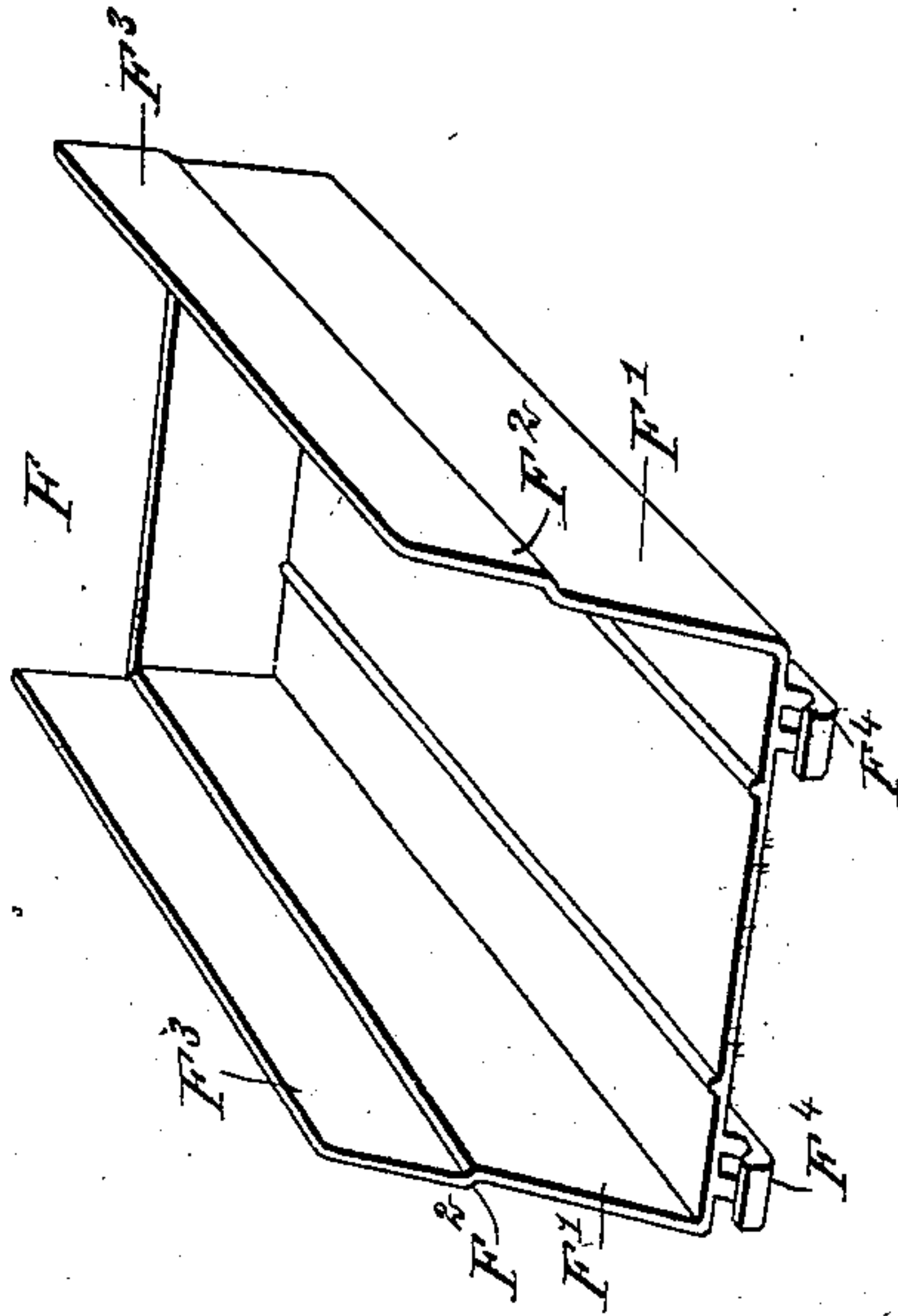
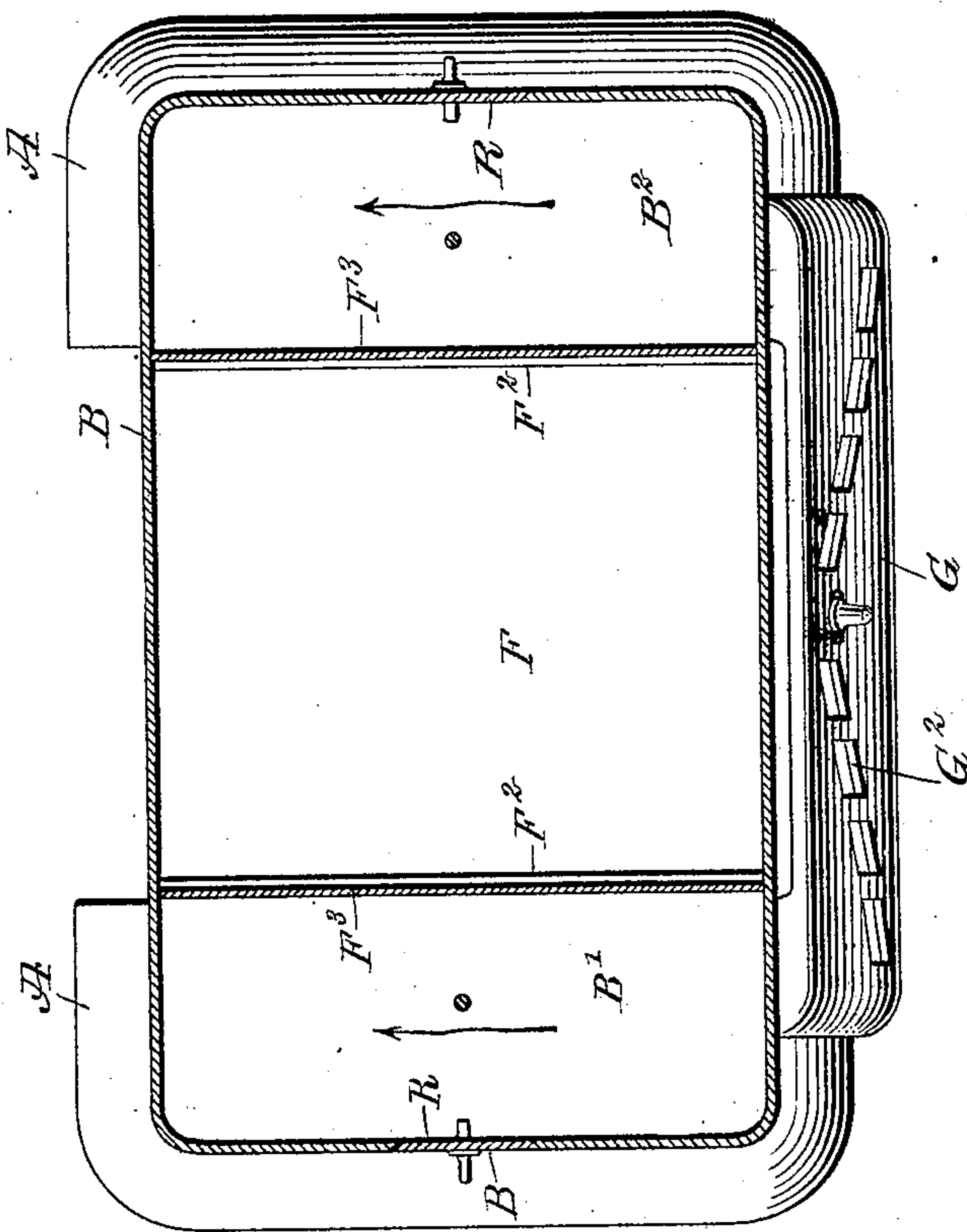


Fig. 5.



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EDWARD B. COLBY, OF MONTCLAIR, NEW JERSEY.

HEATING-STOVE.

No. 912,077.

Specification of Letters Patent.

Patented Feb. 9, 1909.

Application filed November 7, 1907. Serial No. 401,101.

To all whom it may concern:

Be it known that I, EDWARD B. COLBY, a citizen of the United States, and a resident of Montclair, in the county of Essex and State of New Jersey, have invented a new and Improved Heating-Stove, of which the following is a full, clear, and exact description.

The invention relates to stoves and furnaces, and its object is to provide a new and improved heating stove which is simple and durable in construction, cheap to manufacture, very economical in the consumption of coal and other fuel, and arranged to provide an exceedingly large amount of heating surface.

The invention consists of novel features and parts and combinations of the same, which will be more fully described herein-after and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the improvement; Fig. 2 is an enlarged sectional front elevation of the same; Fig. 3 is a transverse section of the same on the line 3—3 of Fig. 2; Fig. 4 is a sectional plan view of the same on the line 4—4 of Fig. 2; Fig. 5 is a similar view of the same on the line 5—5 of Fig. 2, and Fig. 6 is a perspective view of the one-piece ash pit.

The heating stove is mounted on a base, preferably formed by two side pieces or legs A, A, supporting a bottom flue section B, formed with two transversely-extending flues B' and B², as plainly shown in Figs. 2 and 5. The top of the bottom flue section B is provided with a centrally arranged annular lug B³ for supporting the main shell C, containing a fire pot D of a suitable refractory material, and provided in its bottom with the usual grate E. Centrally below the shell C and its fire pot D is arranged an ash pit F made of a single piece, open at the front, and having its sides F' formed with offsets F² extending transversely and resting on the inner edges of the bottom plates B⁴ of the flues B' and B², as plainly indicated in Fig. 2. The upper portions F³ of the sides F' of the ash pit F form the inner sides of the said transverse flues B' and B², as shown in Figs. 2 and 5. The bottom of the ash pit F is provided at its front with

recessed lugs F⁴, adapted to be engaged by the hinges G' of the ash pit door G, having the usual damper G², and adapted to close the front open end of the ash pit F. When the ash pit door G is swung into an open position, it forms a shelf practically flush with the bottom of the ash pit F, to permit of conveniently placing an ash pan into the ash pit F, or removing the said ash pan from the ash pit.

The main shell C is provided with the usual doors C', C², and the upper end of the said main shell C connects with the hollow top H, having a longitudinally-extending partition H' dividing the hollow top H into a front chamber H² and a rear chamber H³. The partition H' (see Fig. 4) is shaped in such a manner that the upper end of the main shell C opens into the front chamber H².

The front chamber H² connects near its sides, by down tubes I and I', with the transverse flues B' and B² of the bottom flue section B near the front end thereof, and the said bottom flues B' and B² connect at the rear with up tubes J and J', connecting at their upper ends with the rear chamber H³ near the sides thereof.

The rear chamber H³ is connected with a smoke box K, preferably extending downward, as plainly shown in Fig. 3, the said smoke box K having the usual collar K' for connection with the stove pipe L leading to the chimney, for carrying off the smoke and gases. Now when the stove is in use and the fuel is burning in the fire pot D, then the products of combustion rise in the main shell C and pass from the latter into the front chamber H², from which the products of combustion pass down the down tubes I, I' into the transverse flues B', B², to travel transversely therein and to finally rise in the up tubes J, J' and pass into the rear chamber H³, from which the products of combustion can pass into the smoke box K, and from the latter through the stove pipe L into the chimney.

The partition H' in the hollow top H is provided at its middle with an opening H⁴ (see Figs. 3 and 4), normally closed by a damper N, mounted to slide longitudinally in suitable guideways H⁵ formed on the bottom of the hollow top H. The top of the damper N is provided with a suitable handle N' (see Fig. 3), under the control of the operator, for moving the damper N into an

open or a closed position. Now when starting the stove, the damper N is moved into an open position, so as to allow the products of combustion, rising from the burning fuel up into the front chamber H², to pass directly from the latter by way of the opening H⁴ into the rear chamber H³ and to the smoke box K and the stove pipe L. Thus by the arrangement described a direct draft is had with the chimney, to properly start the stove, and when the fuel is burning briskly then the operator closes the damper N, to cause the products of combustion to circulate in the manner previously described.

The upper plate of the hollow top H is provided with a lid O, normally covered by a suitable ornament P, adapted to be swung to one side whenever it is desired to make use of the lid O for placing fuel into the stove. A man-hole Q is arranged on the top of the smoke box K for cleaning the latter, whenever desired, and similar man-holes R are provided in the outer sides of the transverse flues B', B², to permit of cleaning the latter whenever desired.

The upper corners of the bottom flue section B and the hollow top H are preferably rounded off, to facilitate the circulation of the products of combustion and to enhance the general appearance of the stove, as will be readily seen by reference to Fig. 1.

From the foregoing it will be seen that the stove is very simple and durable in construction, and provides an exceedingly large heating surface subjected to the heat from the products of combustion, so as to quickly heat a room, at the same time utilizing the fuel to the fullest advantage.

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

1. A heating stove comprising a bottom flue section having spaced transversely-extending bottom flues open at their inner sides, a fire pot centrally supported on the said bottom flue section, an ash pit having horizontal offsets for engaging the bottoms of the transverse flues, and closing the inner sides thereof, a main shell surrounding the said fire pot and extending above the top thereof, a hollow top having a longitudinal partition forming a front and a rear chamber, the said shell opening into the said front chamber, circulating tubes connecting the said bottom flues with the said front and

rear chambers, and a smoke box connected with the said rear chamber.

2. A heating stove comprising a bottom flue section having spaced transversely-extending bottom flues open at their inner sides, a fire pot centrally supported on the said bottom flue section, an ash pit having horizontal offsets for engaging the bottoms of the transverse flues, and closing the inner sides thereof, a main shell surrounding the said fire pot and extending above the top thereof, a hollow top having a longitudinal partition forming a front and a rear chamber, the said shell opening into the said front chamber, circulating tubes connecting the said bottom flues with the said front and rear chambers, a smoke box connected with the said rear chamber, and a slidable damper on the said partition for directly connecting the said front chamber with the said rear chamber.

3. A heating stove comprising a bottom flue section having spaced transversely-extending bottom flues open at their inner sides, a fire pot centrally supported on the said bottom flue section, an ash pit having horizontal off-sets for engaging the bottoms of the transverse flues and closing the inner sides thereof, a main shell surrounding the said fire pot and extending above the top thereof, a hollow top having a longitudinal partition forming a front and a rear chamber, the said shell opening into the said front chamber, circulating tubes connecting the said bottom flues with the said front and rear chambers, the said circulating tubes being arranged on opposite sides of the said main shell, and a smoke box connected with the said rear chamber.

4. A heating stove comprising a base composed of spaced side pieces, a bottom flue section supported on the base, and provided with transversely extending flues at opposite sides thereof, and open on their inner sides, bolts extending entirely through the said flue section and connecting it with the base, and a one piece ash pit having horizontal off-sets resting upon the bottom of the flues.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDWARD B. COLBY.

Witnesses:

GOULD T. HEDENBERG,
K. L. REILLY.