

(No Model.)

2 Sheets—Sheet 1.

T. R. KENNEDY.
STOVE.

No. 574,334.

Patented Dec. 29, 1896.

Fig. 1.

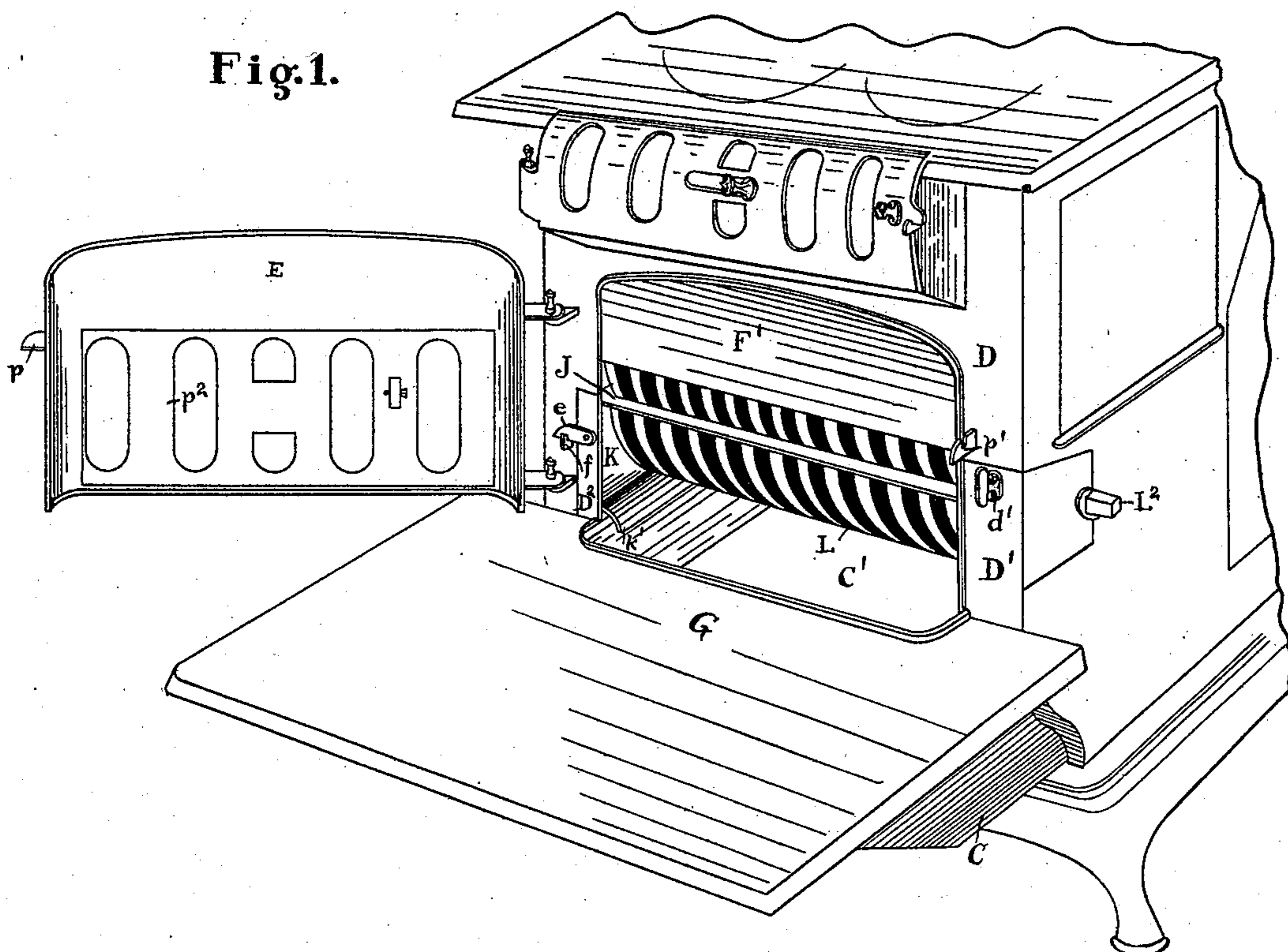
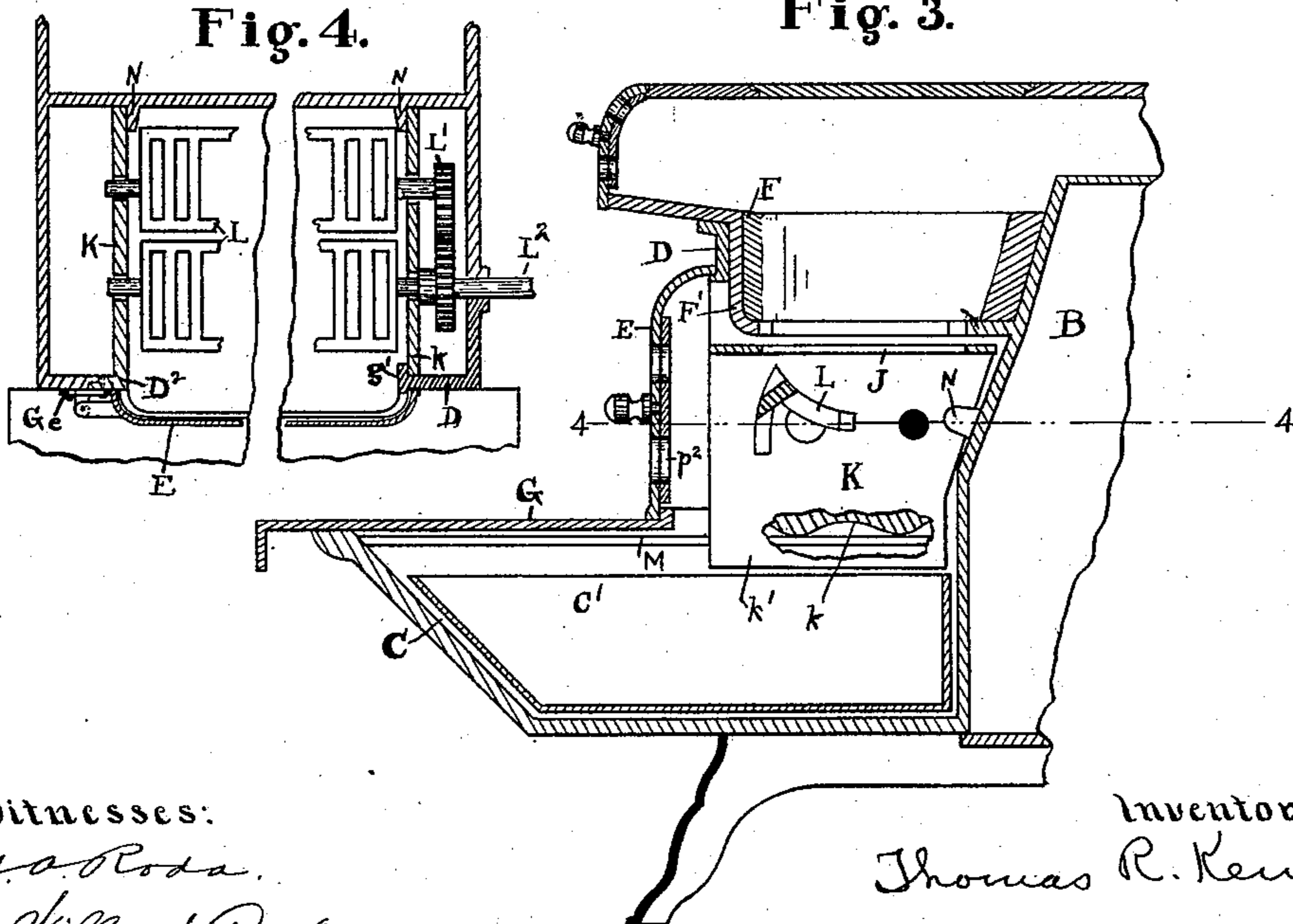


Fig. 3.

Fig. 4.



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(No Model.)

2 Sheets—Sheet 2.

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Fig. 2.

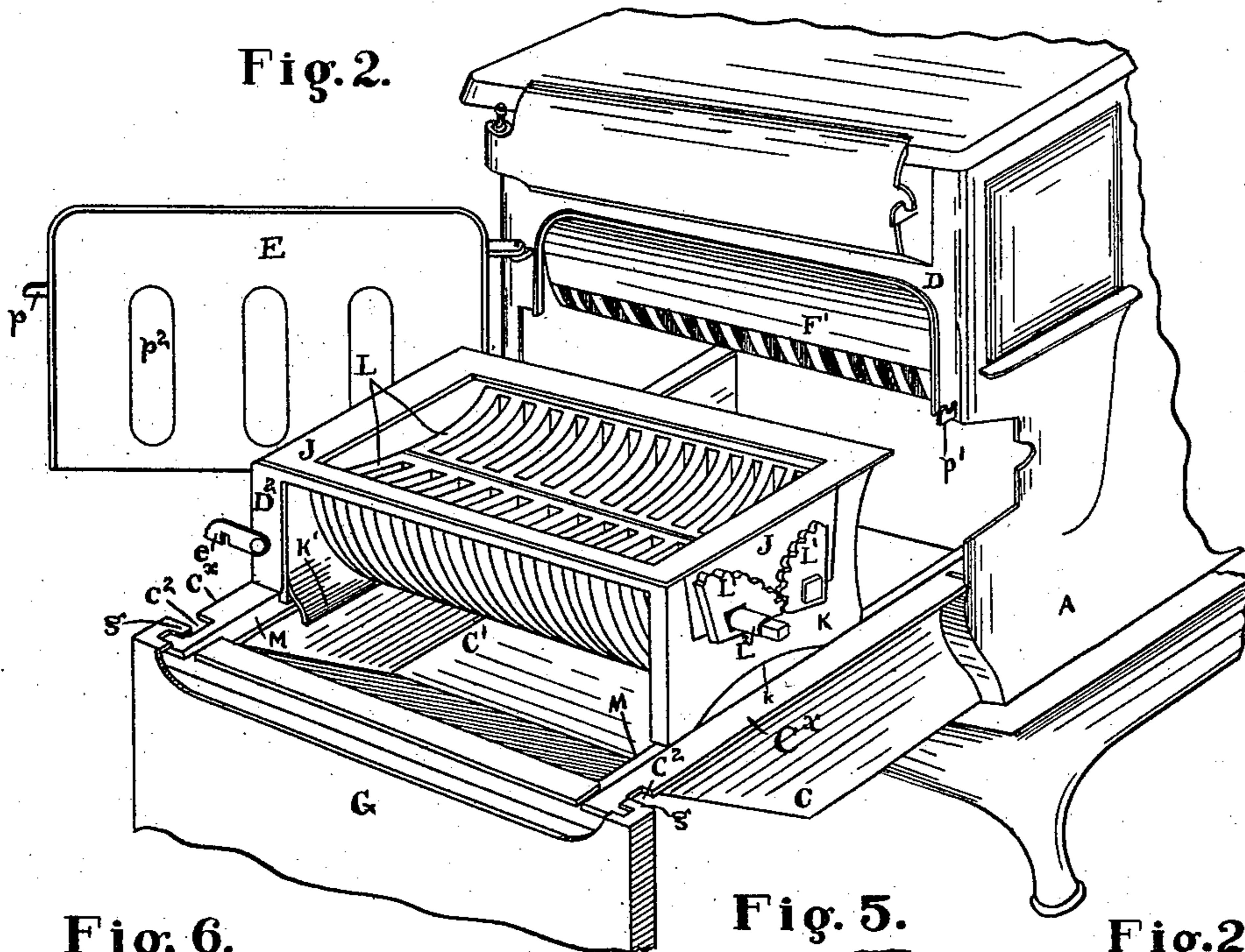


Fig. 6.

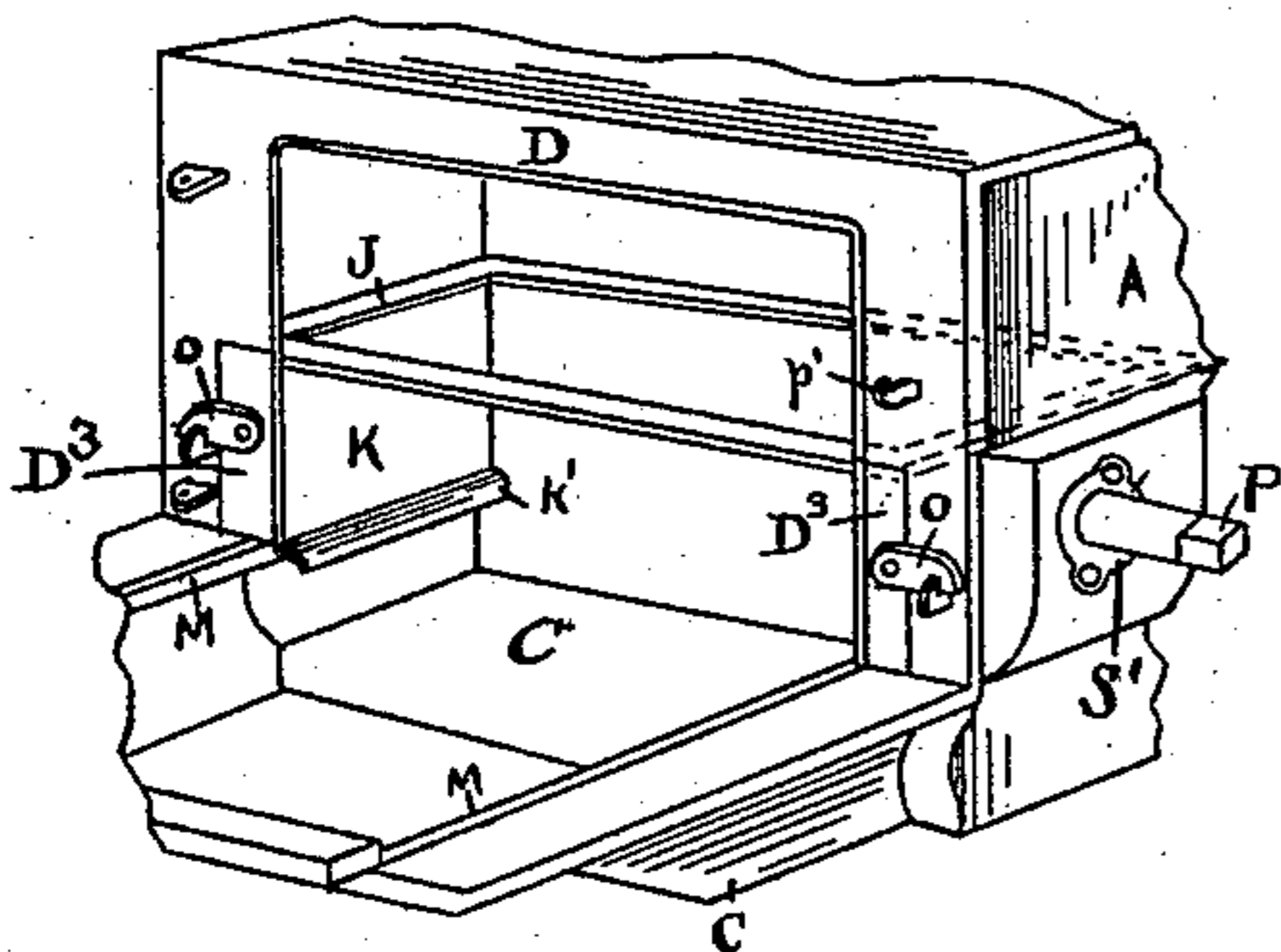


Fig. 5.

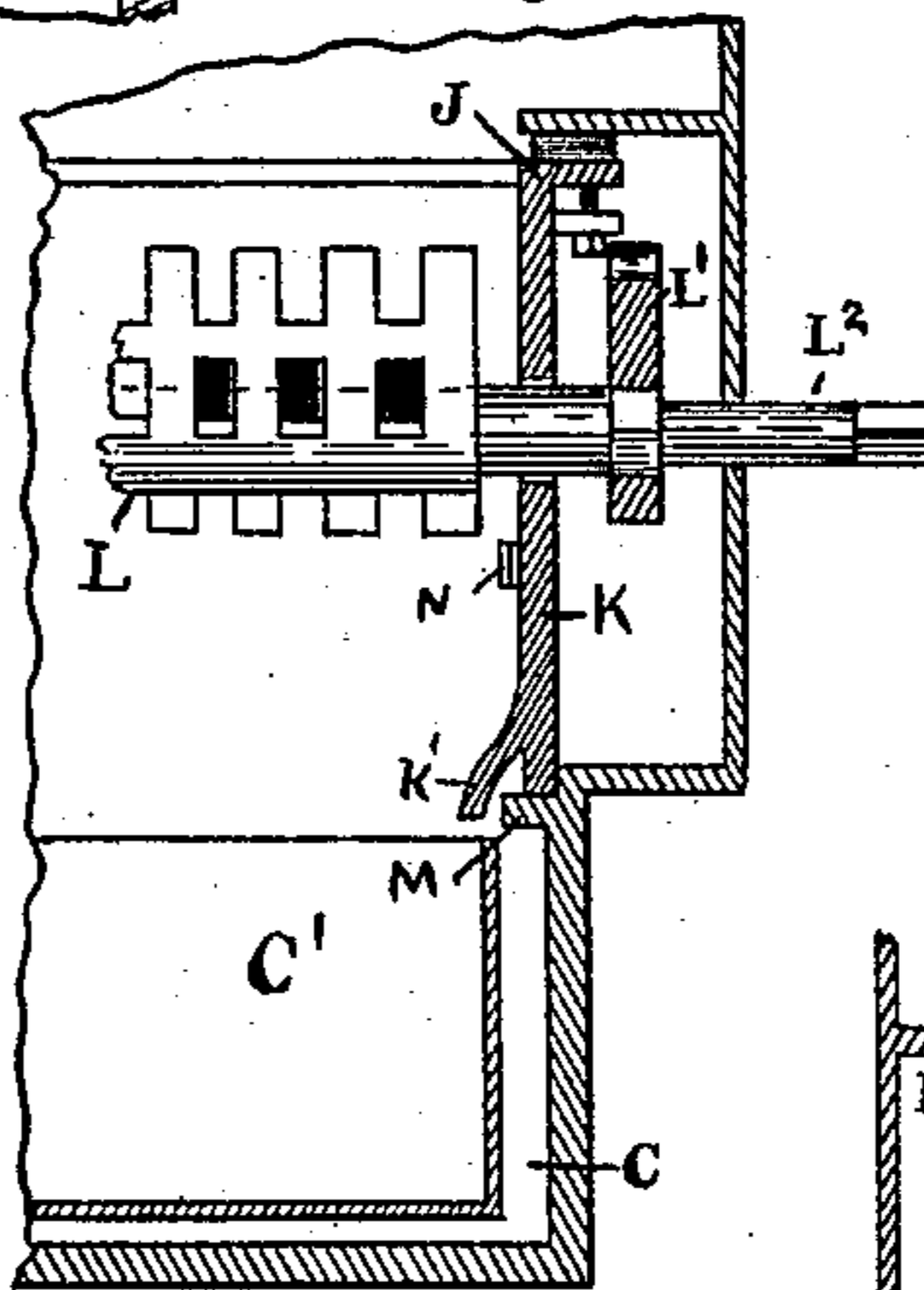


Fig. 2^a.

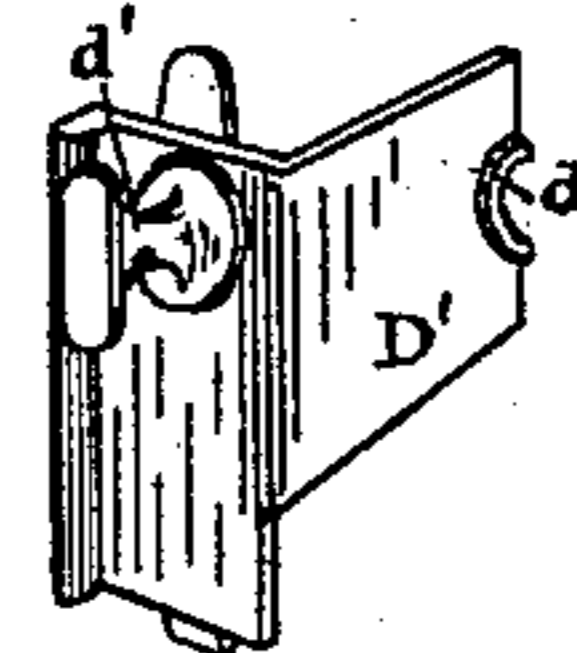
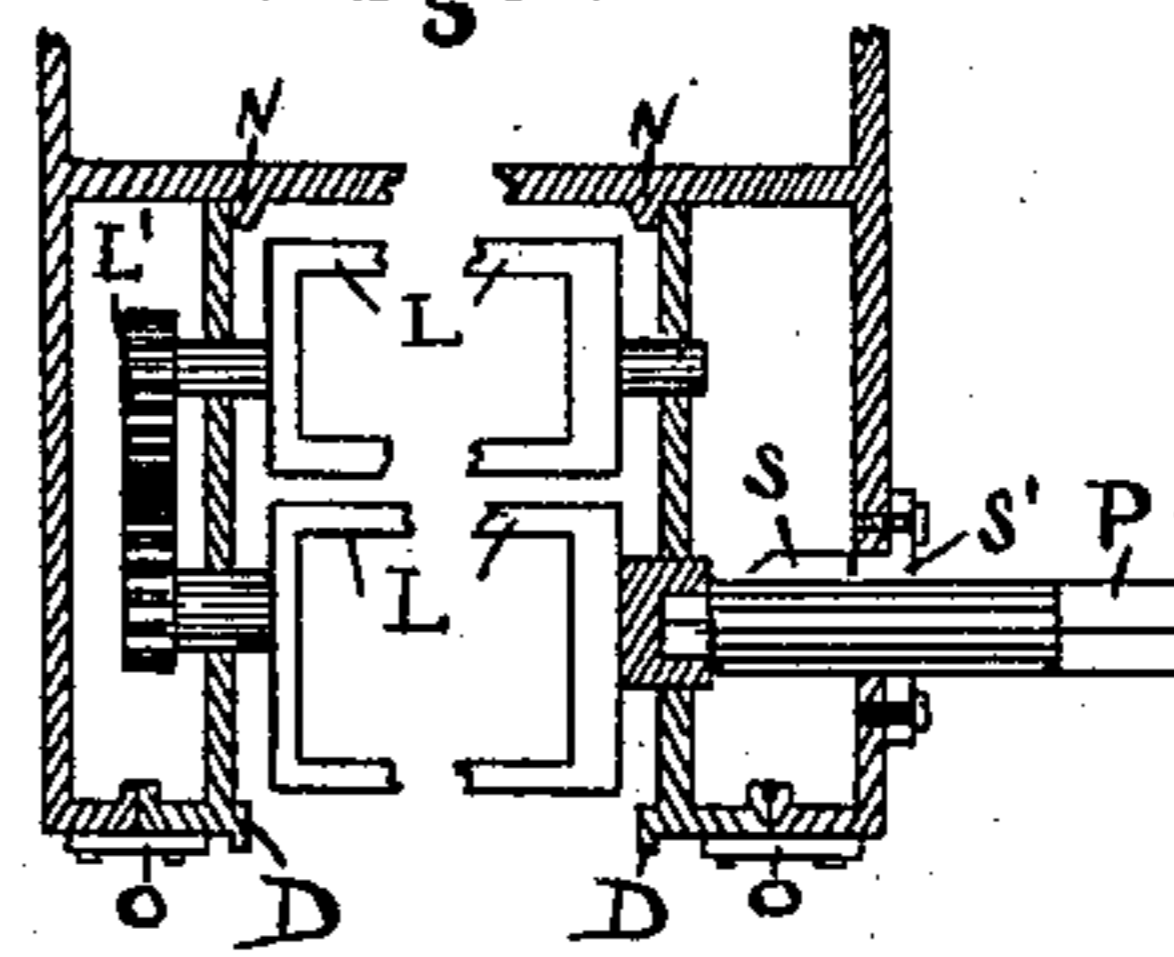


Fig. 7.



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UNITED STATES PATENT OFFICE.

THOMAS R. KENNEDY, OF ROCHESTER, NEW YORK.

STOVE.

SPECIFICATION forming part of Letters Patent No. 574,334, dated December 29, 1896.

Application filed January 20, 1896. Serial No. 576,176. (No model.)

To all whom it may concern:

Be it known that I, THOMAS R. KENNEDY, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Stoves; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the letters of reference marked thereon.

My present invention relates to improvements in stoves, and has for its object to improve the construction and operation of the grate-frame, whereby it may be readily removed for the purposes of repairs or inspection; and it consists in certain improvements, all as will be hereinafter fully described, and the novel features pointed out in the claims at the end of this specification.

In the drawings, Figure 1 is a perspective view of the front of a stove provided with my improvements; Fig. 2, a similar view showing the grate-frame removed; Fig. 2^a, a similar view of the detachable front section; Fig. 3, a longitudinal section of the front; Fig. 4, a horizontal sectional view on the line 4 4 of Fig. 3; Fig. 5, a vertical sectional view of one end of the grate-frame, showing it in position in the stove-body; Fig. 6, a perspective view showing in outline a modification of the invention shown in Figs. 1 to 4; Fig. 7, a horizontal section of the same.

Similar reference-letters in the several figures indicate similar parts.

The body or casing A of the stove is of the usual or any preferred construction, being provided with an oven B, an ash-pit C, preferably extending forward of the front line of the stove-casing, and a front casing portion D, which is provided with the ash-pit door E, closing against the front and secured by the usual projection *p* and catch *p'*. The door E is also provided with the usual draft damper or slide *p*².

F indicates a fire-brick lining for the fire-pot, said lining being supported in a frame F' in the usual or any preferred manner.

G indicates a hearth-plate extending over the ash-pit C and in the preferred embodiment of my invention arranged to slide on the upper edge of the ends of the ash-pit and to hang down at the front when desired to permit access to the ash-pan C', as shown in Fig. 2, suitable lugs *g* thereon passing be-

neath the side flanges C^x, the slot C² being provided for the purpose.

The grate-frame, the construction and operation of which forms the principal subject of my present invention, is constructed with a top frame J, preferably rectangular, and end plates K, attached to the under side of said frame J in any suitable manner and provided with suitable journals for the rotating grate-sections L, provided with intermeshing gear-segments L' or other devices for causing their simultaneous operation, and one of them is provided with an extended journal L², to the end of which a movable operating-handle may be applied for the purpose of operating the grate in the usual manner. The ends K of the grate-frame, instead of being rigidly attached to the frame of the stove, rest upon suitable ways M, formed on the stove-body, and in the present instance in the form of flanges, which extend the whole length of the side walls of the ash-pit, and the lower parts of the plates K, which ride upon these ways, are cut away, as shown at *k*, for the purpose of diminishing friction on the ways when the frame is moved out to the front, as shown in Fig. 2, and on their inner lower sides said plates K are provided with flanges *k'*, as shown particularly in Fig. 5, operating to prevent ashes falling from the grate-frame lodging on the ways M, and serving to direct them into the ash-pan C'.

In normal position the grate-frame is arranged within the casing and beneath the fire-pot, and the parts of the stove-front D which are cut away to permit the passage of the grate-frame are closed by plates D' D², the former being constructed, as shown in Fig. 2^a, with the aperture *d* for the accommodation of the journal L² of the operating grate-section and at the front upper portion with a suitable securing device, in the present instance in the form of a turn-button *d'*, which when turned to the position in full lines in said figure will engage the overhanging edge of the front plate D. The plate D² is preferably attached to or formed integral with the grate-frame and is provided with a pivoted catch *e*, adapted to coöperate with a lug *f*, formed on the front plate D, for the purpose of holding the grate-frame securely within the stove-casing. As the door E closes against the removable section D' and is secured by the catch *p p'*, the grate-frame will

be held securely even if the catch *e* should become unfastened, the grate may be operated and dumped without danger of dust, and the draft may be regulated entirely by the damper in the door, so that said door need not be operated excepting for the purpose of removing the grate or ashes. While this double fastening for the frame might not be necessary for a grate-frame in which there is no movable shaking or dumping section, it is particularly desirable in the form of grate shown.

From this construction it will be seen that if the invention is applied to a stove having a sliding hearth *G*, when it is necessary to remove the grate for the purpose of repairs or otherwise it is only necessary to slide the hearth out and drop it to the position shown in Fig. 2, disengage the turn-button *d* and the catch *e*, and then slide the grate out at the front, it being supported above the extended ash-pit, so that any ashes adhering to it may drop into the latter and prevent soiling the floor, and any of the parts of the grate-frame, or the whole, may be removed as desired. This feature of moving the grate out upon ways formed upon the stove-body is very desirable, and it insures the proper positioning of the parts and enables repairs to be made without the necessity of the operator's lifting and handling large and heavy parts.

In order that the sides *K* of the grate-frame may be prevented from warping inward, I provide upon the rear of the ash-pit, which constitutes the front wall of the oven, suitable lugs *N*, adapted to engage the inner sides of the plates *K*, as shown particularly in Fig. 4, and also provide upon the removable front section *D'* a projecting lug *g'* for the same purpose.

In the construction shown in Figs. 6 and 7, instead of employing a loose removable front section *D'*, which in the other arrangement was for permitting the removal of the grate-operating shaft, I secure the removable plate-sections *D³* to the grate-frame and fasten them in position by catches *o*, similar to catches *e*, the grate-section in this instance being provided with a removable operating-shaft *P*, longitudinally movable, and provided with a lug *s*, engaged by a removable plate *s'*, as shown in Fig. 7, in which arrangement it is only necessary to remove the plate *s'*, slide the shaft *P* outward until its end is disengaged from the grate-section, then disengage the catches *D³* and slide the grate-frame to the front, as before.

It will be understood that the invention can be well applied to stoves which have a stationary hearth or other outwardly-extending ways, the grate-frame then sliding out upon the hearth, which of course affords a substantial support, but it is preferable in such a construction as shown, though I do not desire to be confined to this arrangement.

The advantage of a construction in which the grate-frame is made independent of the

fire-brick support is obvious, as the parts liable to become warped or burned out may be readily replaced by very simple operations and without dismantling the whole stove.

I claim as my invention—

1. The combination with the stove-casing, the fire-pot therein, the ash-pit and ways at the sides thereof extending out beyond the stove-casing, of the grate-frame independent of the fire-pot, having one or more movable grate-sections therein, said grate-frame being movable on the ways and beneath the fire-pot, and detachable locking devices for fastening the grate-frame in position beneath the fire-pot, to prevent movement when the grate-section is operated, substantially as described.

2. The combination with a stove-casing, the fire-pot therein, the ash-pit and ways at the sides thereof extending out beyond the stove-casing, of the frame having the shaking and dumping grate-section therein and movable on the ways and beneath the fire-pot, the ash-pit door hinged to the casing, securing devices therefor, and the stove-casing section engaging the grate-frame and engaged and held by the ash-pit door, substantially as described.

3. The combination with the stove-casing, the fire-pot therein, the ash-pit and ways at the sides thereof extending out beyond the stove-casing, of the frame movable on the ways and having the movable grate therein provided with the extended operating-shaft *L²*, a catch between the grate-frame and casing, the removable casing-section *D'*, and a fastening device therefor, substantially as described.

4. The combination with the stove having the ways extending out beyond the casing and at the sides of the ash-pit, of the grate-frame movable on the ways, the movable grate thereon having the operating-shaft extension, the removable casing-section, and securing devices for attaching it to the stove-casing, substantially as described.

5. The combination with the stove, having the fire-pot, the ash-pit and supports at the sides thereof, of the removable grate-frame, having the end plates resting and movable upon the supports, and the lugs in the stove-casing engaging the end plates of the grate-frame when the frame is in the casing to prevent warping, substantially as described.

6. The combination with the stove having the fire-pot, the ash-pit extended as shown, the ways at the side of the ash-pit, and the movable hearth-plate, of the grate-frame sliding on the ways, and having the movable grate-sections and the operating-shaft, the removable casing-section *D'*, the catch *d'*, the catch *e*, and the ash-pit door, substantially as described.

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Witnesses:

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