

C. A. HAMLIN.
Damper for Stoves.

No. 227,895.

Patented May 25, 1880.

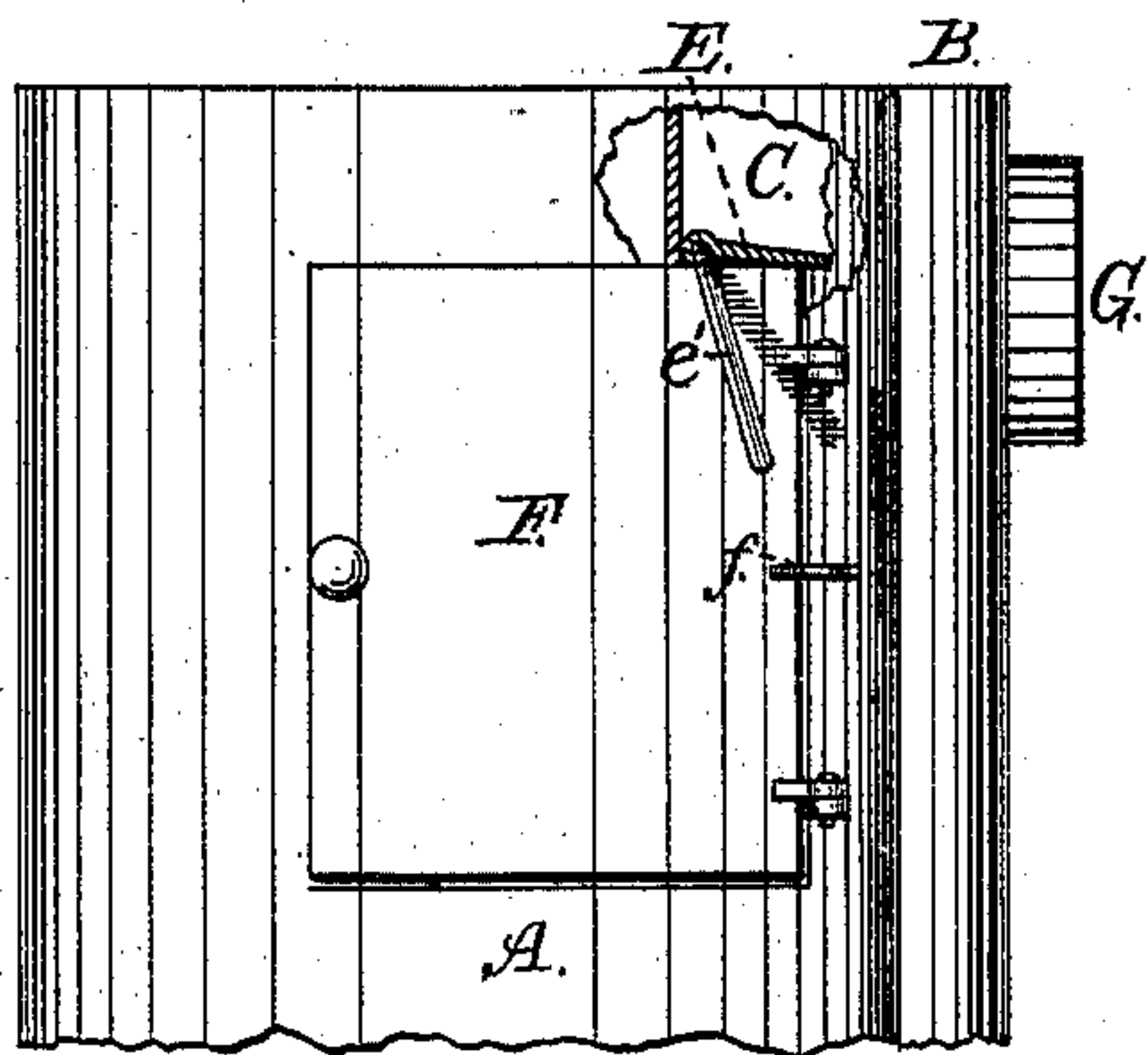


FIG. 1.

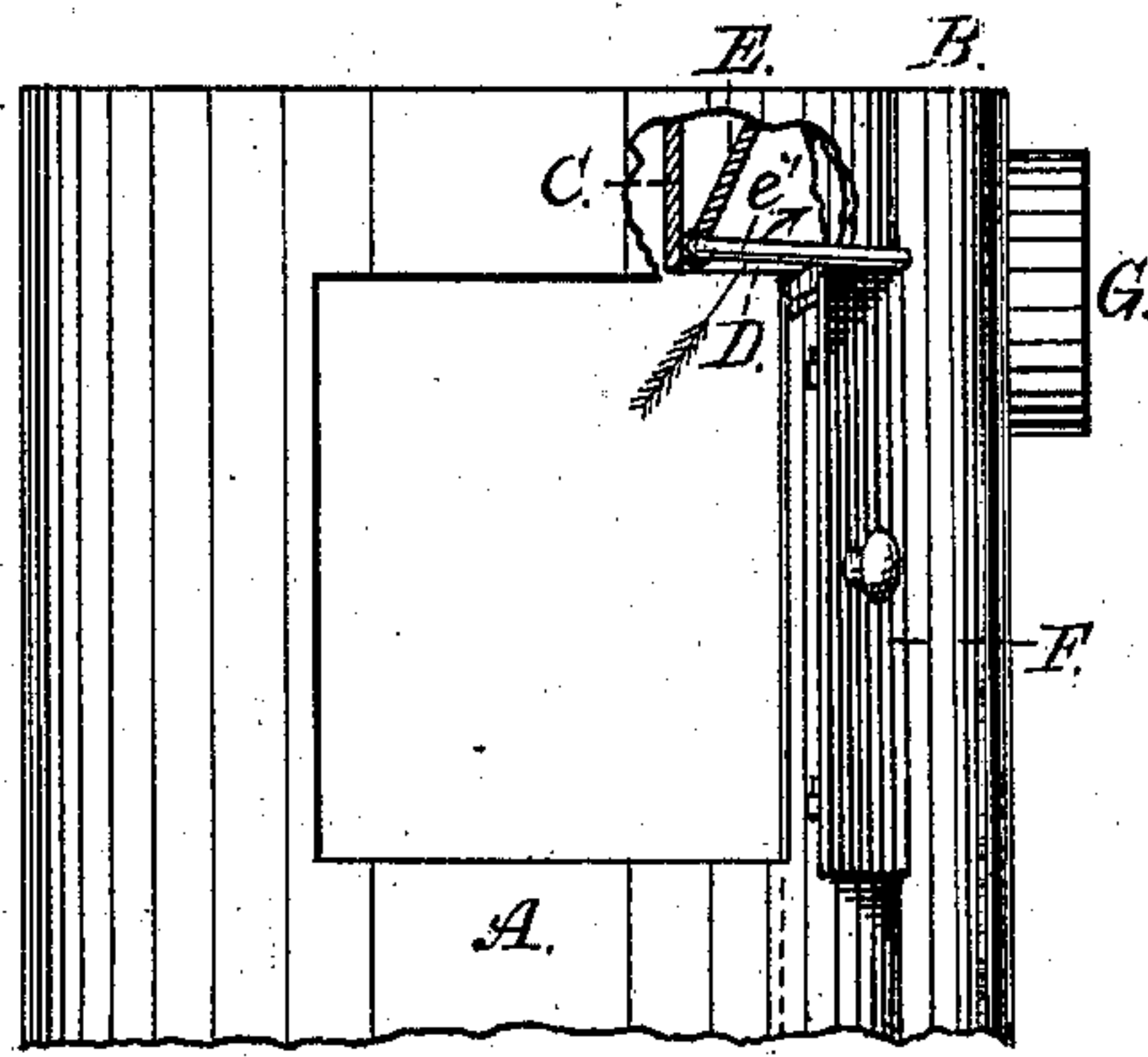


FIG. 2.

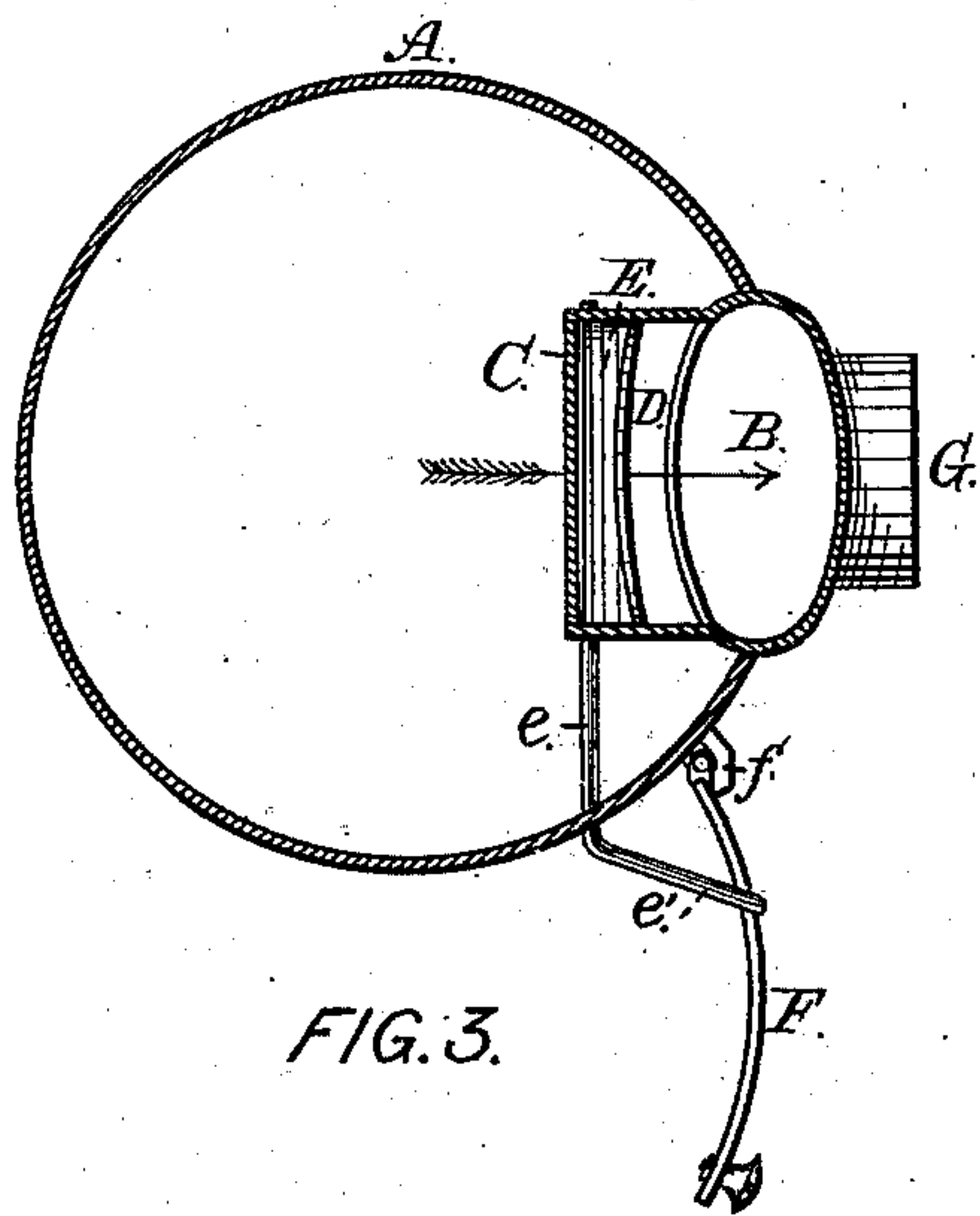


FIG. 3.

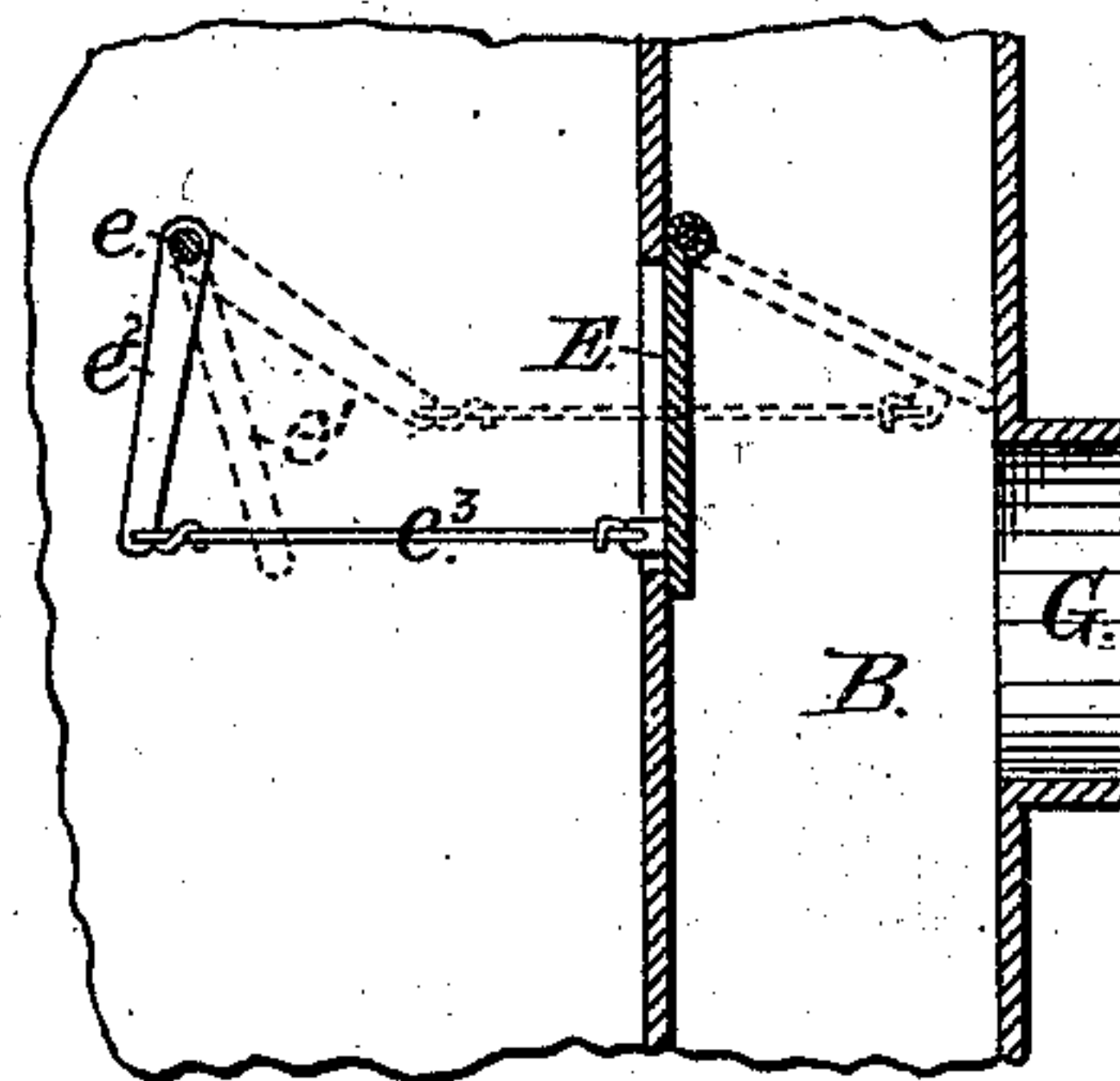


FIG. 4.

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UNITED STATES PATENT OFFICE.

CHARLES A. HAMLIN, OF GREENBUSH, ASSIGNOR TO RANSOM STOVE
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DAMPER FOR STOVES.

SPECIFICATION forming part of Letters Patent No. 227,895, dated May 25, 1880.

Application filed May 10, 1879.

To all whom it may concern:

Be it known that I, CHARLES A. HAMLIN, of Greenbush, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Automatic Dampers for Stoves, of which the following is a full and exact description.

My invention consists of the combination and arrangement of the parts, as herein shown and described, for an automatic damper.

In the accompanying drawings, which form a part of this specification, and to which reference is herein made, Figure 1 is a side elevation of the portion of a stove affected by my improvement, the door and damper being both in their closed positions; Fig. 2, the same, showing the door and damper opened; Fig. 3, a horizontal section of Fig. 2, and Fig. 4 a vertical section of a modification of my improvement.

As shown in the drawings, A represents the upper part of a stove of the class commonly made with descending flues running to the base and an ascending flue running from the base to the outlet-pipe.

B is the ascending flue, to which is attached a pocket, C, having an opening, D, which, as hereinafter described, forms a direct-draft communication from the fire-chamber to the outlet-pipe. Said opening is closed by a damper, E, attached to a shaft, *e*, running through the exterior casing of the stove, and emerging therefrom directly over the door F, as shown in Fig. 1, at a point between the center line of said door and its pivotal center. After passing through the casing of the stove the shaft *e* is bent to form the crank *e'*, which is arranged at such an angle to the plane of the damper that when opened by the door the center of gravity of the damper will fall inside of a vertical line, and the damper will be maintained in a position where its gravity will effect the closing of it while the door is being closed. Said crank must be made of sufficient length to retain its resting-place on the door when the door is opened, as shown in Fig. 3.

The door F is provided with a stop, *f*, to prevent it from being thrown too far back when opened.

G is the outlet-pipe for receiving the smoke-pipe commonly used.

A well-known defect in stoves using wood or other smoke-producing fuel consists in the tendency of the smoke to issue in great volumes from the fire-chamber on opening the feed-door of the stove. This defect mainly proceeds from a neglect at such times to open the direct-draft damper, thereby preventing the smoke from reaching its proper outlet unless it passes through the intervening circuitous flues. To remedy this defect is the object of my invention, the operation of which is as follows: The door F being closed and the damper E over the opening D, as shown in Fig. 1, (in which a portion of the casing of the stove and the side of the pocket is removed for the purpose of exhibiting the position of the damper,) the crank *e'* of the damper-shaft hangs in front of the door and near its hinged side. In opening the door the top edge of it engages with the crank *e* of the damper-shaft and forces the damper E open, as shown in Figs. 2 and 3, thereby leaving a direct communication through the opening D between the fire-chamber of the stove and the outlet-pipe. The crank *e'* continues to bear upon the top edge of the door while it (the door) remains open, thereby preventing the damper from turning down to close the opening D, and maintaining an open direct-draft communication while the door is open. On closing the door the damper, whose center of gravity from its inclined position falls in the rear of its journals, automatically closes over the opening D and shuts the direct draft.

When required, the damper E may be worked independently of the door and in the ordinary manner by means of the crank *e'*. When opened in this manner the damper must be thrown over into a position where it will be held up by its own gravity.

In the modification shown in Fig. 4 the damper E is swung within the ascending flue B on hinges, and is separate from the shaft *e*, which is arranged in relation to the door of the stove in the manner hereinbefore described.

An arm, *e*², is secured to the shaft *e*, and is connected to the damper by a rod, *e*³.

The crank e' (indicated by dotted lines) of the shaft e is operated by the door, as hereinbefore described, to move the damper through the arm e^2 and rod e^3 , the position of the damper, arm, and rod while the damper is open being indicated by the dotted lines.

I am aware that various devices have heretofore been used in stoves for obtaining a coincident operation of the feed-door and damper; but this end has only been attained by providing the door with some device whereby it was adapted to operate a specially-constructed damper-handle. Among this class will be found those wherein an arm is attached to the outside of the door and arranged to engage with a forked handle fixed to a rolling damper in such manner as to produce a simultaneous movement of the door and damper.

Another device consists in attaching to the hinge side of the door a toothed segment, which engages in a toothed rack attached to a sliding damper, so as to open and close the damper when opening and closing the door.

It is obvious that such constructions are essentially different from mine, wherein the operation is effected by a door of ordinary construction operating on the crank-handle of a damper fixed in the relative position herein described.

I claim as my invention—

1. The damper E , provided with a crank-handle, e' , arranged to bear upon the upper edge of the door F , as described, to produce, by the opening and closing movement of said door, a simultaneous opening and closing movement of the damper, as herein specified.

2. The combination, with the damper E , having a crank, e' , as described, of the door F , having its upper edge arranged to co-operate with the crank e' to open the damper E , in the manner and for the purpose herein specified.

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