

(No Model.)

C. F. WALTHER.
STOVE DAMPER OPERATING DEVICE.

No. 446,700.

Patented Feb. 17, 1891.

Fig. 1.

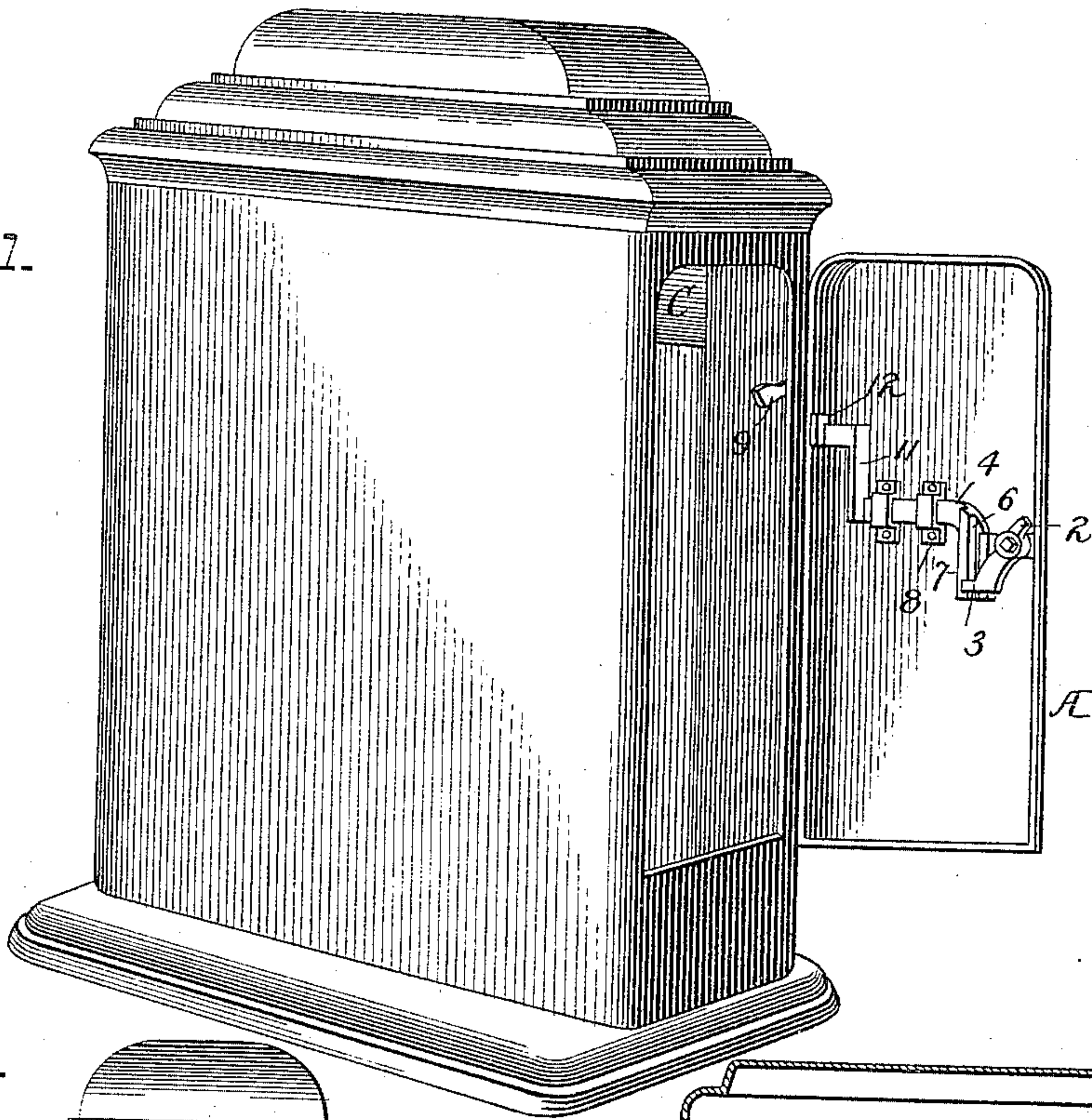


Fig. 2.

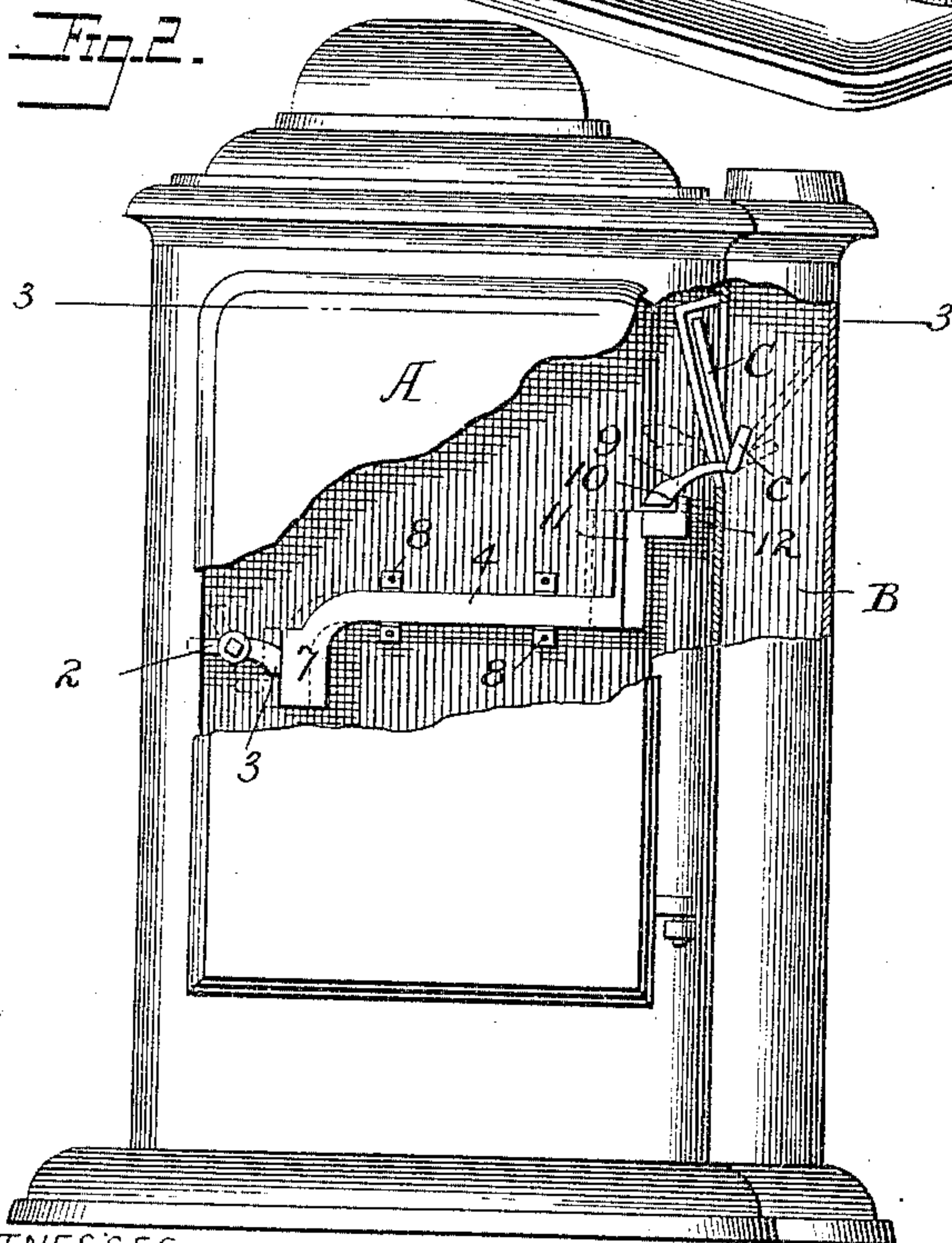
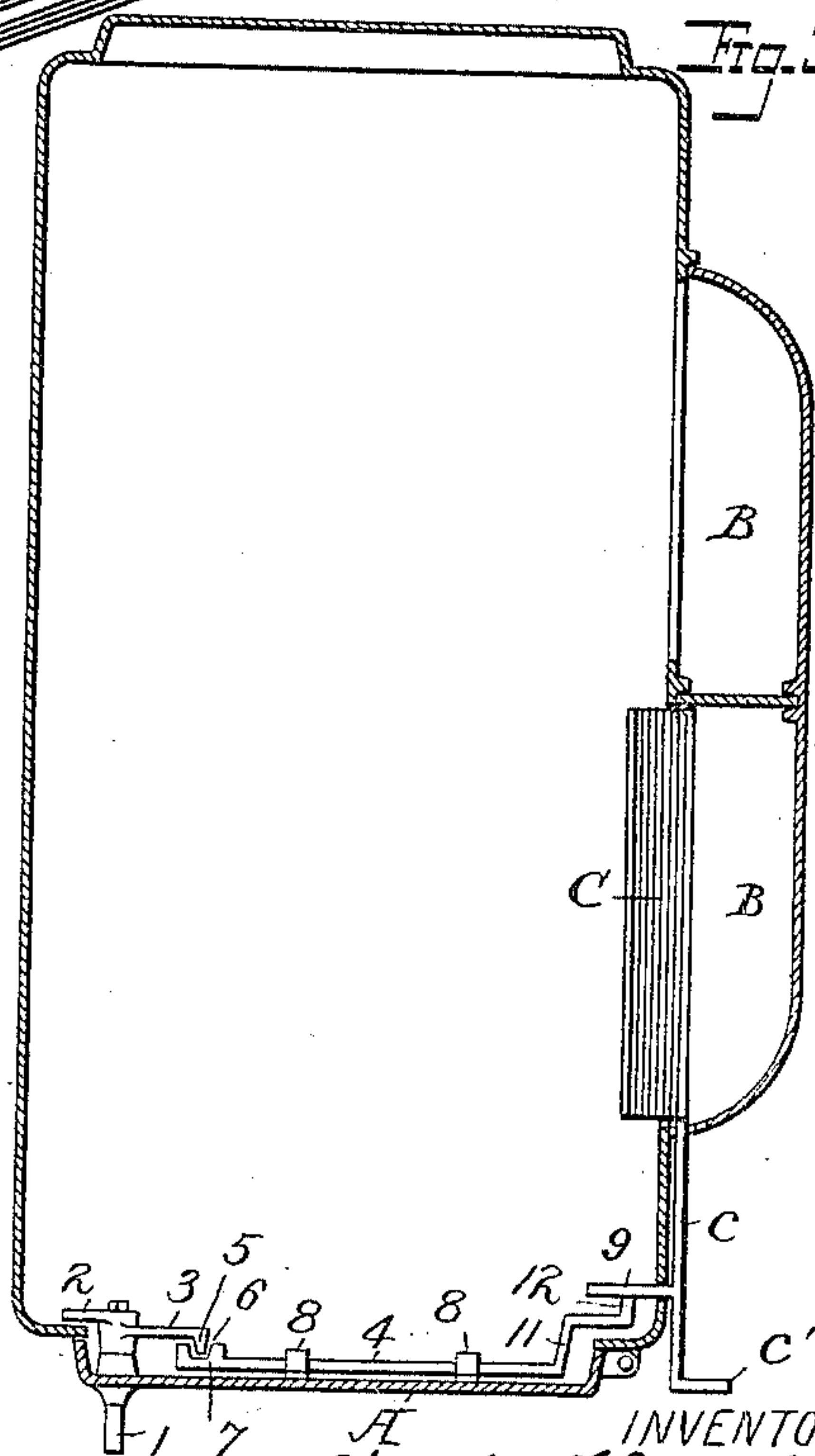


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

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STOVE-DAMPER-OPERATING DEVICE.

SPECIFICATION forming part of Letters Patent No. 446,700, dated February 17, 1891.

Application filed November 21, 1890. Serial No. 372,204. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. WALTHER, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Stove-Damper-Operating Devices, of which the following is a specification.

In heating-stoves burning wood or soft coal and provided with diving-flues at the rear the fire-chamber is usually filled with smoke and unconsumed gases when the direct-draft damper is closed, and more or less of the smoke and gases are drawn out into the room whenever the feed-door is opened. It has been proposed to prevent this by making a connection between the door and the direct-draft damper, so that the latter is opened during the opening of the former; but as with such constructions the feed-door is always opened to a greater or less extent before the damper is moved it happens that while some relief is afforded a certain amount of smoke and gas is drawn into the room before the direct draft becomes established.

It is the object of my invention to more perfectly prevent the drawing of smoke and gas from such stoves into the apartment when the stove-door is opened; and it consists in a connection of suitable kind between the direct-draft damper and the lock or latch of the door, so that the damper is completely opened by the act of unlocking the door, which latter cannot under any ordinary circumstances be opened even to the least extent until the damper has been fully opened and the direct draft established.

I have illustrated one embodiment of my invention in the accompanying drawings, wherein—

Figure 1 is a perspective view of a stove having my invention applied thereto, the door being open. Fig. 2 is a front view of the same, parts of the door and the outer casing being broken away to show the invention. Fig. 3 is a section on the line 3 3 of Fig. 2, looking downward.

In the drawings, A represents the feeding-door of the stove, B B the diving-flues at the rear of the stove, and C the direct-draft damper mounted upon a rod c, which has on

the outside of the stove an operating-handle c', all of these parts being of the usual or a preferred construction.

The catch or lock 2 for the door is operated by a turn-buckle 1, as usual. 3 is an arm connected with the latch and arranged to have engagement with and move a sliding bar 4, mounted upon the inner face of the door, which bar operates to open the damper as it is moved in one direction. The connection between the arm 3 and the sliding bar 4 which I employ is shown as consisting of a finger 5, projecting from the arm 3 and resting in a groove or elongated recess 6, formed between two ribs on the sliding bar, the bar at this place being expanded and vertically elongated, as at 7, in order that the recess 6 may be of sufficient length to permit the finger 5 to slide therein as it is moved with the lock or latch of the door. The bar 4 is secured to the door and guided in its movements by the clips 8. The end of the bar opposite that with which the arm 3 has engagement is shaped and extended so as to engage with an arm 9, projecting from the damper C or the rod c thereof. The arm 9 is bent to form a sort of shoulder 10, and the extended portion or arm 11 of the bar 3 has a finger 12, which when the door is closed and locked and the damper is closed lies behind or in engagement with this shoulder 10.

The full lines in Fig. 2 indicate the positions of these parts under these circumstances, while the dotted lines show their position after the turn-buckle has been moved and the door B unlocked. From this view it will be seen that the very act of unlocking the door, so that it may be opened, insures that the direct draft shall be established. The damper is by preference so balanced that after being swung about midway between its extreme positions or a little beyond it will fall to its extreme open position. This carries the arm 9 entirely out of the path of the end 11 of the bar 3, so that the door may be freely swung open without interference with these parts, as indicated in Fig. 1.

After the door is closed and locked the direct damper may be closed by the handle c', and it will be understood that the damper may be manipulated in the usual way, irre-

spective of the application of my invention thereto.

It is evident that my invention is not limited to the specific connection which I have shown between the door lock or latch and the damper, as that may be modified in many ways to suit the shape and mounting of the door, its latch, and the damper.

What I claim is—

10 1. In a stove, the combination, with the door having a lock or latch and the direct-draft damper, of the connecting mechanism between the lock or latch and the damper, whereby the latter is opened by the moving
15 of the lock or latch prior to the opening of the door, substantially as shown and described.

2. In a stove, the combination, with the door having a lock or latch and the direct-draft damper, of a sliding bar having connection with the door lock or latch and with the
20 damper, whereby when the former is moved to unlock the door the damper is opened, substantially as shown and described.

3. In a stove, the combination, with the

door having a lock and a direct damper, of the connection mechanism between the lock and the damper, the connection with the damper being detachable, whereby when the lock is moved to unlock the door the damper is opened and when the door is opened the connection with the damper is broken, substantially as shown and described.

4. In a stove, the combination of the door having a turn-buckle and lock, the latter being provided with an arm 3, the direct-draft damper having an arm 9, and the sliding bar 4, secured to the door and having a recess in which the arm 3 moves to reciprocate the bar as the lock is moved and having an extended portion which engages with the arm 9 of the
40 draft-damper, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES F. WALTHER.

Witnesses:

H. C. OLVER,

JAY C. DOWNER.