(No Model.)

B. F. CLEMENT.

Heating Stove.

No. 232,457. Patented Sept. 21, 1880.

Fig. 1.

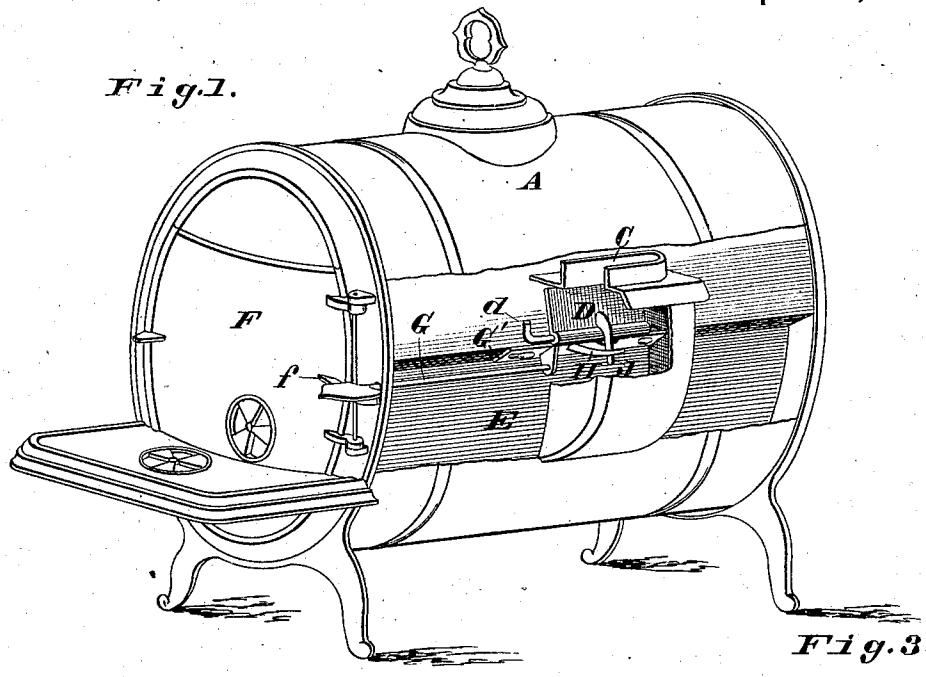


Fig. 2.

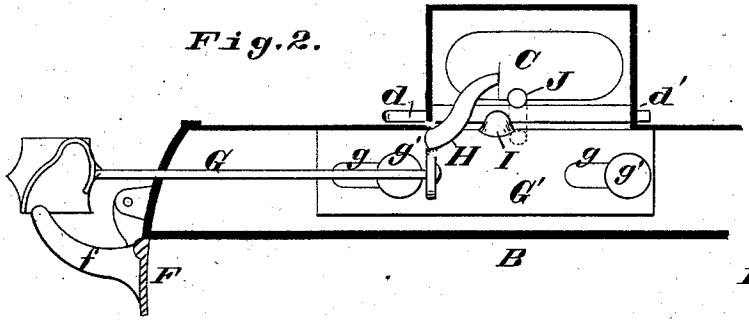


Fig. 3.

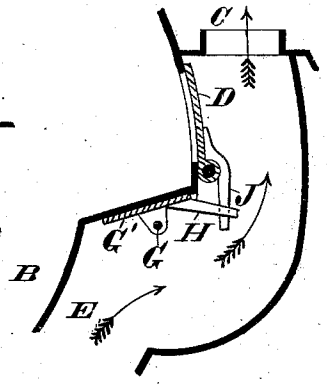


Fig. 4.

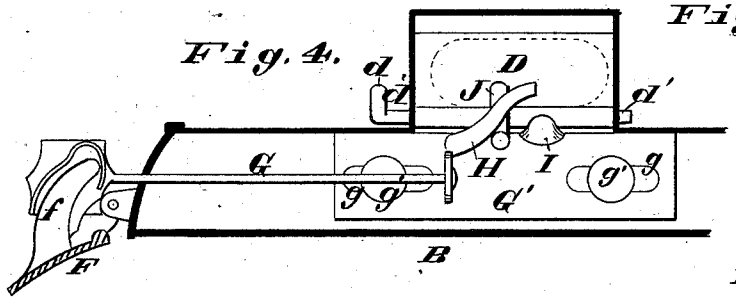
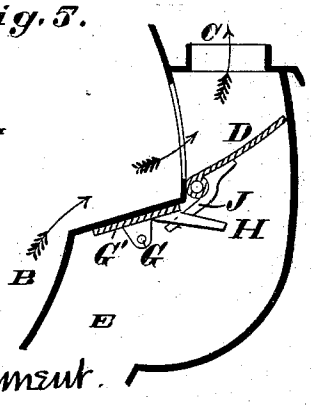


Fig. 5.



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UNITED STATES PATENT OFFICE.

BENJAMIN F. CLEMENT, OF ST. LOUIS, MISSOURI, ASSIGNOR TO BUCK'S STOVE COMPANY, OF SAME PLACE.

HEATING-STOVE.

SPECIFICATION forming part of Letters Patent No. 232,457, dated September 21, 1880.

Application filed August 3, 1880. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. CLEMENT, of St. Louis, Missouri, have made a new and and useful Improvement in Heating-Stoves, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a view, in perspective, of a stove having the improvement, a portion of the outer casing and of the exit-flue plate being broken away to exhibit the interior; Fig. 2, a horizontal section, looking upward, taken just beneath the door-rod, and extending through that portion of the stove immediately connected with the improvement, the parts being as when the stove-door is closed; Fig. 3, a cross vertical section taken through the exit-flue, the parts being as when the damper is closed; Fig. 4, a horizontal section similar to that of Fig. 2, the parts being arranged as when the stove-door is opened; and Fig. 5, a vertical section similar to that of Fig. 3, the damper being opened.

The same letters denote the same parts.

This invention is more especially adapted to heating-stoves of the Todd pattern—a form of stove oval in vertical cross-section, and having a flue extending beneath the combustion-chamber, through which, by means of a suitable damper, the heat-currents can be directed before passing into the exit-flue. Direct draft into the exit can be had by opening the damper referred to and allowing the smoke to pass immediately to the exit; but to obtain the full benefit of the stove it is desirable to have the heat-currents directed around the stove before escaping. When the currents are thus directed the smoke accumulates in the combusion-chamber, and when the stove-door is opened it is apt to escape through the doorway. To obviate this difficulty devices have been used for connecting the stove-door and damper, so that when the door is opened the damper also opens, establishing direct draft to the exit and drawing the smoke back from the doorway.

The present invention is an improvement in the devices referred to, consisting mainly in the mechanism employed in connecting the damper with the rod or slide that moves with the door and extends from the door backward to the immediate vicinity of the damper.

Referring to the drawings, A represents a stove having the improvement, B being the combustion-chamber; C, the exit; D, the damper; *d*, the damper-rod; E, the flue extending along the bottom and sides of the stove, and F the stove-door.

When the damper is closed the currents pass through the flue E to the exit, as in Fig. 3; and when the damper is opened the course is as indicated in Fig. 5.

The door is provided with a finger, *f*, that engages with a rod or slide, G, and so that as the door is swung to and fro the finger presses and draws the rod inward and outward accordingly—that is, as the door closes the rod is drawn out, and as the door opens the rod is pressed inward into the stove. The rod G, at its inner end, is furnished with an arm, H, and a rounded boss, I. The damper D turns on the bearings *d' d'*, and is provided with an arm, J, that projects below the bearings. As the rod G is moved inward its arm H encounters the damper-arm J, and, bearing upon it, causes the damper to open, as in Figs. 4 and 5. In this position, as seen, the arm J falls between the arm H and the boss I. As the door closes and the rod G is drawn out the boss acts to force the damper-arm J back again and to close the damper, as in Figs. 2 and 3. In this last-named position of the door the damper, by means of the rod *d*, can be operated independently of the door and door-rod. The damper-arm J, when the damper is thus opened, comes upon the other side of the boss I, as indicated by the dotted lines in Fig. 2; but, owing to the rounded shape of the boss I, the arm J, as the door is opened, is enabled to ride up over the boss and to fall, as before, between the arm H and boss. Thus, whatever position the damper may chance to be in, the action of the door and rod is not interfered with, and the damper is always automatically and properly set by the movement of the door.

For convenience, and to properly guide the movement of the rod G, the arm H and boss I are not attached directly to the rod, but the latter, at its inner end, is extended in the form of or attached to a slide, G', to which the

arm H and boss I are attached, and the slide is slotted at *g g* to receive the studs *g' g'*.

I claim—

1. The combination, in a stove, of the door F, finger *f*, rod G, slide G', arm H, boss I, damper D, rod *d*, and arm J, substantially as described.

2. The combination of the slide G', arm H, boss I, damper D, and arm J, substantially as described.

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Witnesses:
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