

R. H. BROWN.
Heating Stoves.

No. 142,079.

Patented August 26, 1873.

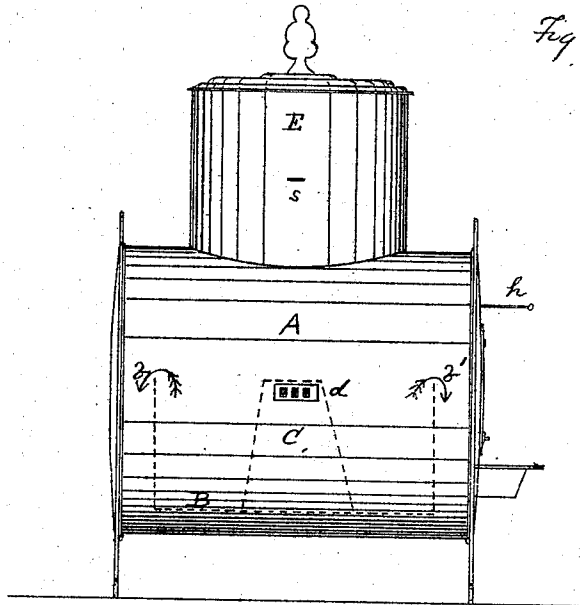


Fig. 1.

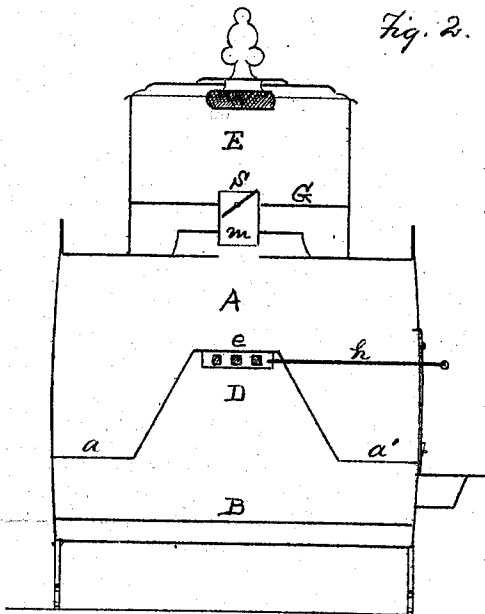


Fig. 2.

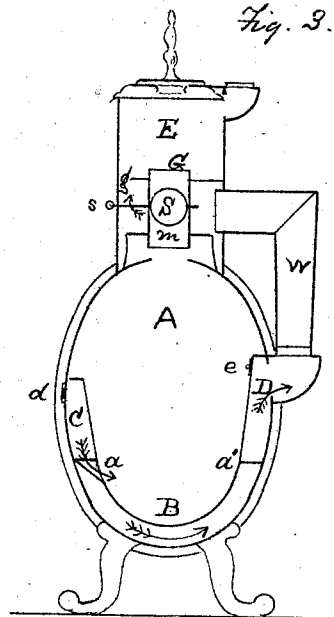


Fig. 3.

WITNESSES

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RICHARD H. BROWN, OF LINNEUS, MISSOURI.

IMPROVEMENT IN HEATING-STOVES.

Specification forming part of Letters Patent No. **142,079**, dated August 26, 1873; application filed March 8, 1873.

To all whom it may concern:

Be it known that I, RICHARD H. BROWN, of Linneus, Linn county, State of Missouri, have invented a new and useful Improved Heating-Stove, of which the following is a full, clear, and exact description, reference being had to the annexed drawing, making a part of this specification, in which—

Figure 1 represents a side elevation; and Figs. 2 and 3 represent, respectively, longitudinal and transverse sectional elevations through the central lines of Fig. 1.

Similar letters indicate like parts.

My invention relates to certain improvements in the construction of that class of sheet-iron heating-stoves known to the trade as the "Todd pattern," which have in the bottom a cast-iron plate forming a flue between the bottom of the stove and a portion of the sides of same, for the passage of the heated products of combustion on their way to the outlet into the chimney. These stoves being designed for burning wood usually of considerable length, it is found in practice that the portion of the wood farthest from the door, through which alone the air is admitted, is but slightly acted upon by the flame, it being merely charred, thus rendering it necessary, in order to burn it and thereby gain the benefit of the flame, to draw it nearer the door as that part nearest the door gradually is reduced to ashes. To obviate this defect by supplying a current of air near the center—longitudinal center—of the stove in such a manner that, by a peculiar arrangement of diving-flues at either end of the stove, such current shall be made to divide and pass down such flues, thus causing the perfect combustion of the wood throughout its whole length, is one of the principal objects of my improvement.

A, Figs. 1, 2, 3, is an ordinary stove of the pattern above described. B is a cast-iron plate, having flanges *a a'*, Fig. 3, resting on the sides of the stove. These flanges give support to and are connected with, by pins, bolts, or other suitable means, the diving-flues *b b'*, Fig. 1, the central cold-air flue C, Figs. 1, 3, and the exit-flue D, Figs. 2, 3, these latter flues having flanges by which they may be secured to the sides of the stove, and thus keep themselves and the plate B in position.

The cold-air flue C has a damper, *d*, Figs. 1, 3, and the flue D likewise is provided with a damper, *e*, Figs. 2, 3, the latter being controlled by the rod *h*, passing through the front plate of the stove, as seen. When the damper *d* is opened, the air passes down the flue C, beneath the wood resting on the plate B, then, by the action of the diving-flues *b b'*, is made to divide and pass to either end of the stove, and thence down these flues through the flue formed by the bottom of the stove and the plate B, and thence out the exit-flue D into the chimney. Of course, by means of the dampers *d* and *e*, the draft of the stove, and consequently the heat given off, may be regulated with great exactness. In connection with these improvements I have also further bettered this kind of stove by the addition of a drum, E, Figs. 1, 2, 3, by means of which a great saving of heat is attained. This drum is made of any desired shape, preferably, however, of an oval form on account of its more seemly appearance, and fits snugly on the top of the stove surrounding the usual opening therein, as seen clearly in Figs. 2, 3. In this drum is placed a diaphragm, G, Figs. 2, 3, in the center of which is placed a pipe, *m*, made of a size to fit closely in the opening in the top of the stove, as shown in Figs. 2, 3. This pipe is provided with a damper, S, controlled by a rod, *s*, passing through the side of the drum. In the diaphragm is an opening, *g*, Fig. 3. The drum is connected with the exit-flue flue D by an elbow, W, Fig. 3, and is provided at the top with an exit-pipe, as seen. The top of the drum may be made of cast-iron, so as to be more ornamental.

Now, to kindle the fire the damper *e* is closed and the damper S opened, thus causing a direct draft up the pipe *m*; but when the fire is well lighted the damper *e* is opened and the damper S closed, causing the heated products of combustion to pass down the diving-flues and out the exit-flue D, as before described; but then, instead of passing off through the chimney, they enter the elbow W, and pass into the drum beneath the diaphragm. Striking the pipe *m*, the current is divided and made to spread laterally before passing through the opening *g* into the upper part of the drum, and thence through the exit-

pipe into the chimney. Of course, this drum may be used with other stoves than those of the construction hereinbefore described.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of the stove-body A, plate B, flues C *b b'* D, and dampers *d* and *e*, all constructed and arranged substantially as shown and specified.

2. The combination of the stove-body A, elbow W, drum E, diaphragm G, opening *g*,

pipe *m*, and dampers S and *e*, substantially as shown and specified.

3. A heating-stove combining in its construction the body A, plate B, flues C *b b'* D, elbow W, drum E, diaphragm G, opening *g*, pipe *m*, and dampers *d*, *e*, and S, the various parts being constructed and arranged substantially as shown and specified.

Witnesses: RICHARD H. BROWN.

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