J. A. BUCKWALTER.

MAGAZINE-STOVE.

No. 169,410. Patented Nov. 2, 1875.

Fig. 1.

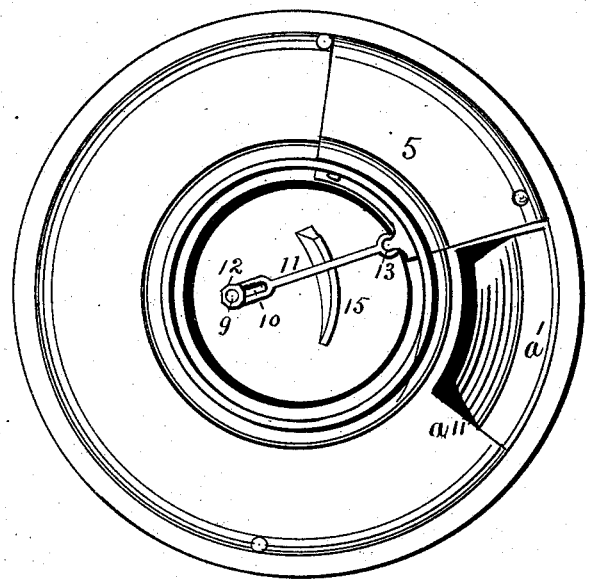
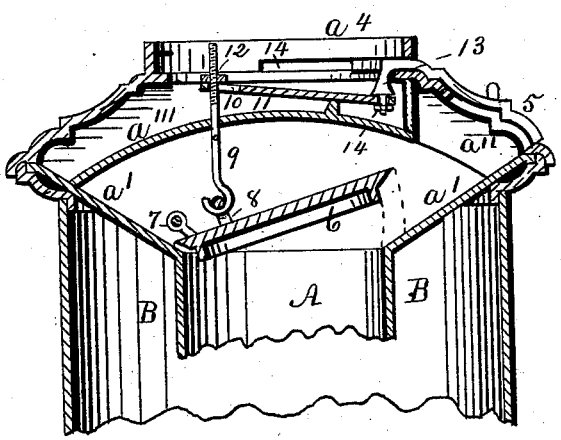


Fig. 2.



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JOSEPH A. BUCKWALTER, OF ROYER'S FORD, PENNSYLVANIA.

IMPROVEMENT IN MAGAZINE-STOVES.

Specification forming part of Letters Patent No. **169,410**, dated November 2, 1875; application filed October 4, 1875.

To all whom it may concern:

Be it known that I, JOSEPH A. BUCKWALTER, of Royer's Ford, in the county of Montgomery, in the State of Pennsylvania, have invented an Improvement in Magazine-Stoves, of which the following is a specification:

The object of my invention is to cause the opening and closing movements of the cover of the fuel feed opening or throat to open and close the cover of the magazine, into which the fuel is to enter, without exposing the opened upper end of said magazine to the open air above the stove; and these simultaneous movements of the two covers I produce by connecting the latter together by means of an inclined plane, fixed upon the upper side of a concavo-convex plate, (which forms the top of a roomy chamber that incloses the top of the magazine and its cover proper,) and said plane supports a transverse rod, which connects the circumferentially-sliding door of the fuel opening or chute by an eye-hole with a round vertical rod, which extends down, loosely, through a corresponding hole in the concavo-convex plate into a looped connection with the magazine-cover at a point near the hinge of the latter, so as to operate substantially in the manner which will hereinafter be fully and clearly described, with reference to the accompanying drawing, in which—

Figure 1 is plan view of the upper end of a cylindrical magazine-stove, having the usual smoke-pipe removed, embodying my invention, fully opened; Fig. 2, a vertical central section of the same, partially opened.

The open upper end of the magazine A, in this instance, connects with a corresponding opening in an inclined annular partition, a', a portion of which serves as the bottom of the fuel-chute a'', and the outer edge as a support for a concavo-convex plate a''', allowing slight spaces or small openings at its edge for the escape of any gas which may get into the space immediately below it to the smoke-flue a^4 above. The gaseous products of combustion are intended to pass to the smoke-flue a^4, through the ordinary pipe, (not shown) which usually passes from the upper part of B outside, and opens into the chimney-flue a^4; or, if the flue a^4 be used to carry warmed air to rooms above from an air-heating chamber, which may be placed between A and B, then the outside smoke-flue may be carried up separately to the chimney of the building; but these suggestions have nothing specially relating to the subject-matter of my present invention—viz., the simultaneous movements of the cover 5 of the fuel feed opening or chute a'', and the cover 6 of the magazine A without exposing the opened mouth of the magazine to the open air above the stove, by means of the coupling devices and the concavo-convex plate a''', which I will now proceed to describe and explain.

The magazine-cover 6 has one side of its edge hinged, as at 7, to a', and at a short distance from the hinge a staple, 8, is fixed to the upper side of 6, whereby a hooked rod, 9, connects with it and extends vertically upward loosely through the concavo-convex plate a''', and also through an oblong hole, 10, in the end of a nearly horizontal connecting-rod, 11, in which hole it is retained by an adjusting-screw nut, 12, while the other end of the said connecting-rod 11 is attached to a downward-projecting extension, 13, of the inner edge of the sliding cover 5, and is kept in place thereat by a screw-nut. The remaining portion of the inner edge of the sliding cover 5 projects horizontally through a corresponding opening, 14, of about twice the length of the width of this projecting portion of said sliding lid 5, so that as the latter is moved horizontally and alternately to the right and left, the said projecting portion will traverse the long opening 14, as the sliding lid 5 is moved to fully open and close the feed opening or chute a''. About midway of the length of the connecting-rod 11, and directly beneath the same an inclined plane 15, is fixed permanently to the upper side of plate a''', so as to be concentric to the vertical rod 9, and the inclination thereof rising toward the direction in which the cover 5 slides in opening the chute a''. When the covers 5 and 6 are closed the connecting-rod 11 rests upon the lowest end of the plane 15, and as the sliding cover is being moved to open it, and also the cover 6, the connecting-rod 11 slides up the inclined plane 15, until the operating-slide 5 is stopped by the end of the long opening 14, and thus both of the covers 5 and 6 become removed,

so as to fully open the spaces they respectively covered, when the rod 11 rested upon the lowest end of the plain 15.

In Fig. 1 the chute and magazine covers are both fully open. In Fig. 2 they are shown only about half-way open.

It will be clearly understood, without any further description or explanation, that by operating the cover 5, as set forth, both the latter and the cover 6 of the magazine will be simultaneously opened and closed, and thus increased facility afforded in feeding fuel into the magazine without exposing the opened top or mouth of the magazine A to the open air above the stove. The cover 6 of the magazine A opens into the comparatively close chamber, covered by the concavo-convex plate a''', and any gas which may arise, when the cover 6 is raised, will enter said chamber, and escape through the small openings made for the purpose in the lower edge of the said plate a''' to the chimney-flue a^4.

I claim as my invention—

The combination of the coupling devices, whereby the opening and closing motions of the cover 5 of the fuel feed-opening in a magazine-stove, are caused to open and close the cover 6 of the magazine without exposing the opened mouth of the magazine to the open air above the stove, as described, the said coupling devices consisting of the vertical rod 9, the rod 11, the inclined plane 15, and the concavo-convex plate a''', constructed and arranged to operate together substantially as as set forth.

JOSEPH A. BUCKWALTER.

Witnesses:
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