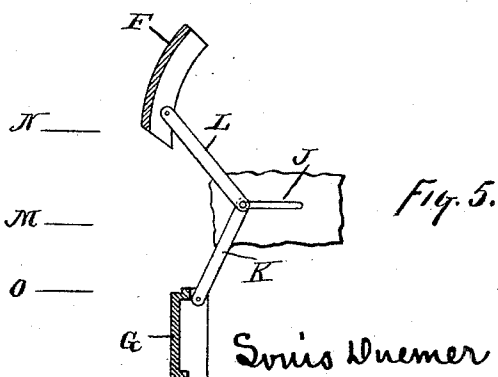
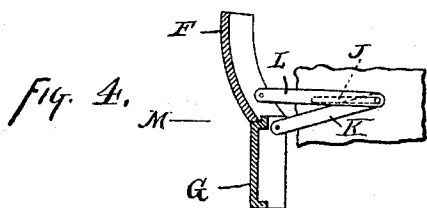
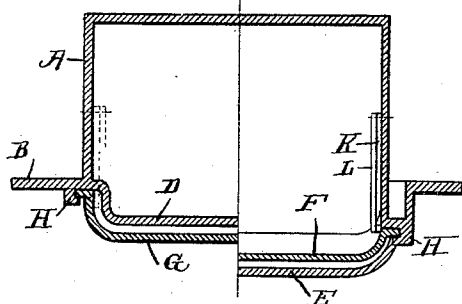
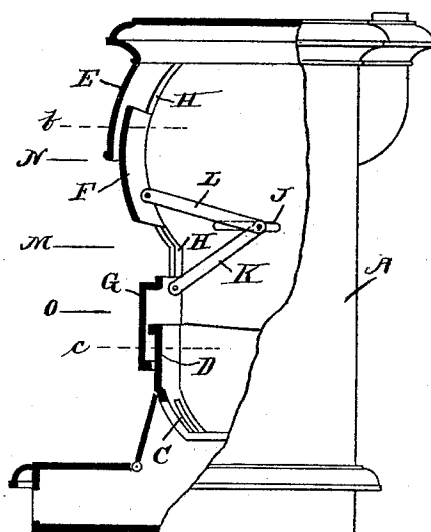
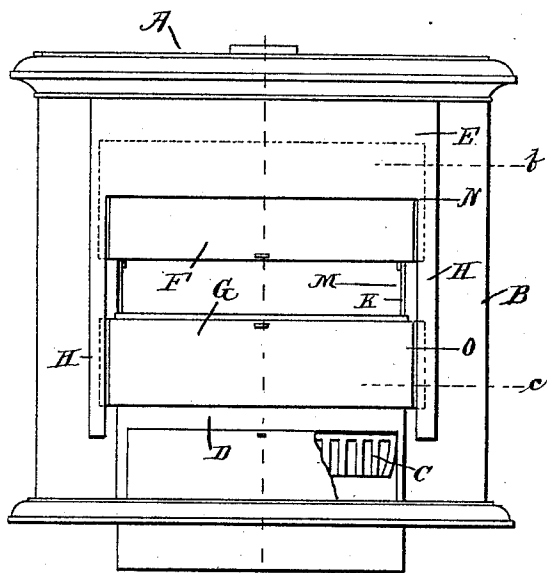


(No Model.)

L. DUEMER.
OPEN FRONT STOVE.

No. 460,119.

Patented Sept. 29, 1891.



Witnesses:
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UNITED STATES PATENT OFFICE.

LOUIS DUEMER, OF HAMILTON, OHIO.

OPEN-FRONT STOVE.

SPECIFICATION forming part of Letters Patent No. 460,119, dated September 29, 1891.

Application filed February 13, 1891. Serial No. 381,303. (No model.)

To all whom it may concern:

Be it known that I, LOUIS DUEMER, of Hamilton, Butler county, Ohio, have invented certain new and useful Improvements in Open-Front Stoves, of which the following is a specification.

This invention pertains to improvements in that class of open-front stoves embodying a blower arranged for sliding motion in the front of the stove; and my improvements will be readily understood from the following description, taken in connection with the accompanying drawings, in which—

Figure 1 is a front elevation of an open-front stove exemplifying my improvements, the blower being shown partly open; Fig. 2, a vertical section thereof in the plane of line *a*; Fig. 3, a horizontal section of the same, that portion at the left being in the plane of line *c*, while that portion at the right is in the plane of line *b*; Fig. 4, a vertical section of the blower parts in the plane of line *a*, showing the blower closed; and Fig. 5, a similar view showing the blower wide open.

In the drawings, A indicates the usual stove-body; B, the jambs thereof at each side of the fire-place; C, the grate; D, the usual fender-band extending across the fire-place from jamb to jamb at the top of the grate-front; E, the usual curtain at the top of the fire-place, this curtain in the present case being illustrated as flaring downwardly and outwardly in an arc of a circle; F, the upper blower part arranged to rise behind the curtain when not in use and adapted when lowered for use to reach with its lower edge about midway from the base of the curtain to the top of the fender-band; G, the lower blower part arranged to rise and meet the upper blower part when in use and to descend to about even with the fender-band when not in use; H, guides at the jambs for guiding the blower parts as they rise and fall, the lower portion of these guides, the portions in which the lower blower part slides, being vertical, while the upper portions, in which the upper blower part slides, are segmental, so that the lower blower part will move vertically and the upper one in an arc of a circle, the vertical tangent of the upper portion being considerably forward of the plane of the vertical lower portion; J, horizontal guide-slots at the sides of

the fire-place and at about midway of the height of the blower-opening; K, a link, one at each side of the fire-place, with its forward end pivoted to the lower blower part; L, similar links with their forward ends pivoted to the upper blower part, their rear ends being pivoted to the rear ends of the lower links, the pivots which unite these links at their rear ends engaging also the guide-slots J, so as to slide horizontally in and be guided by those slots; M, a line indicating the level at which the two blower parts meet when the blower is closed; N, a line indicating the level of the lower edge of the upper blower part when the blower is open, and O a line indicating the level of the upper edge of the lower blower part when the blower is open.

When the blower is closed, the two parts meet at level M. If the upper part be lifted, it will rise in its segmental guide and pass up behind curtain E, and the lower edge of this blower part will, by reason of the disposition of the curve of the guide, move forward and occupy when elevated a position much forward of that occupied when it was down, the new forward position of this upper blower part thus being well forward from the fire, so as to adapt it to serve in a superior degree as a smoke-preventing hood. As the upper blower part is raised it necessarily drags the rear pivots of its links forwardly in the guide-slots J, and this forward motion of these pivots necessarily depresses the forward ends of the lower links, and thus moves the lower blower part downward in its guide. Therefore the opening movement of the two blower parts is simultaneous. If when the blower is open we raise the lower blower part to close it, the rear pivots of the links move rearwardly in the guide-slots J, and as a consequence the upper blower part descends to meet the rising lower part. Therefore the closing movement of the two blower parts is simultaneous. It will be observed that the gravity of the upper blower part tends to bring that part down and push the rear link-pivots rearwardly, but that the gravity of the lower blower part tends to pull these pivots forwardly. The two parts thus counterbalance each other. Furthermore, while the two blower parts exert opposite horizontal strains upon the rear link-pivots they unite in pressing those piv-

s downwardly into frictional engagement with the lower walls of their guiding-slots. This friction forms a resistance to the movement of the blower parts and permits of one part being heavier than the other without nullifying the counterbalancing. The two parts need not therefore be of the same weight. Again, by so disposing the forward pivots that the upper and lower links are at different angles to the guide-slots the relationship between the opposing side strains exerted by the two blower parts may be considerably modified, thus still further permitting variations in the relative weight of the two blower parts.

Links may be disposed inside the fire-place or outside, as desired. When the guides for the upper blower part are circular arcs, as illustrated, such guides may be formed by guide-grooves, as illustrated, or, obviously, by pivots at the center from which the arc is struck.

The object sought in having the upper blower part moved in an arc, as in the exemplification, is to cause its lower edge to move outwardly when the blower is opened. Where this merit is not desired, then of course the upper blower part may move in vertical lines like the lower blower part. Both parts

may be arranged to move in arcs of circles, or both parts may be arranged to move vertically, or either part may be arranged to move vertically while the other moves in an arc, according to desire in construction, and the link system lends itself with peculiar satisfaction to any of these arrangements. In the exemplification I have shown the upper blower part as rising behind the curtain E, and this construction is preferable; but it is obvious that the curtain E may be disposed behind the upper blower part instead of in front of it.

I claim as my invention—

In an open-front stove, the combination, substantially as set forth, of a stove-body having an outwardly and downwardly flaring curtain at the top of the fire-place, a segmental blower part arranged to rise and fall in an arc at the top of the fire-place, a blower part arranged to rise and fall vertically in front of the grate, and links having their forward ends connected with said blower parts and having their rear ends united by pivots guided in horizontal guides in the stove-body.

LOUIS DUEMER.

Witnesses:

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JAS. FITTON.