(No Model.) 2 Sheets—Sheet 1

D. E. PARIS.

OVEN DOOR.

No. 345,531. Patented July 13, 1886.

Fig. 1.

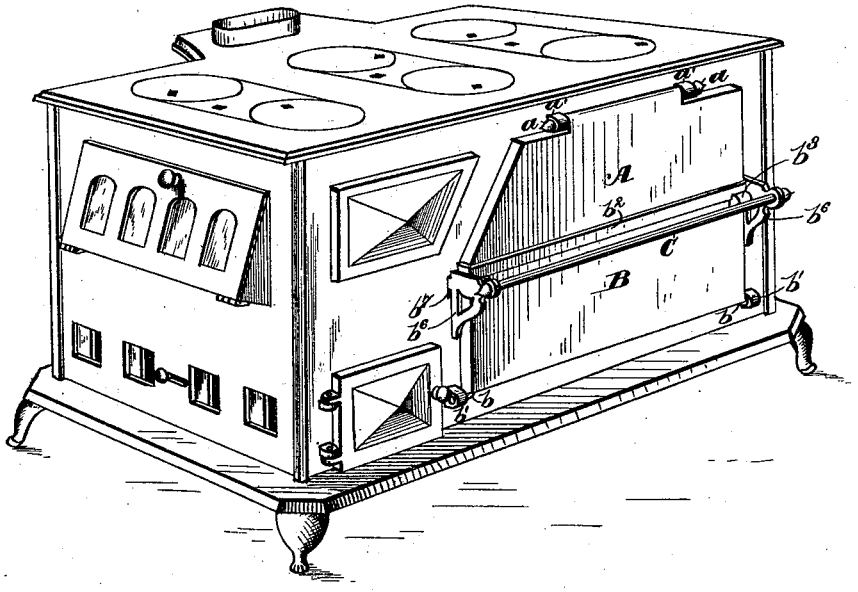


Fig. 2.

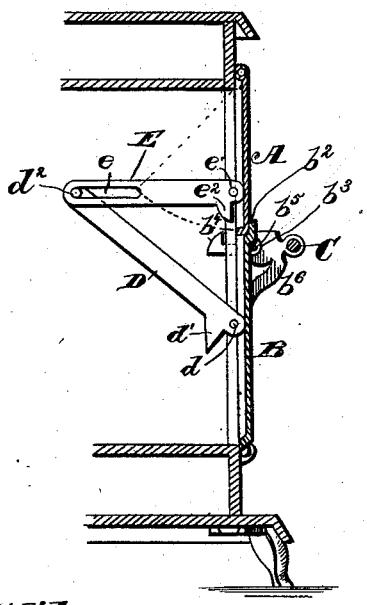
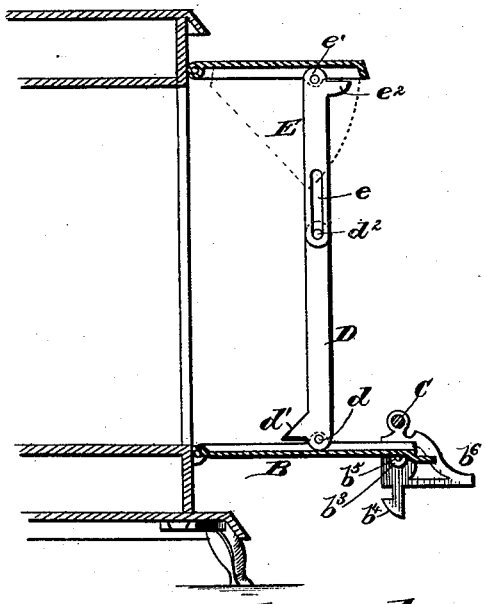


Fig. 3.



Witnesses.
Robert Everett.
J. A. Rutherford.

Inventor.
Daniel E. Paris.
By James L. Norris.
Atty.

(No Model.)

2 Sheets—Sheet 2.

D. E. PARIS.

OVEN DOOR.

No. 345,531. Patented July 13, 1886.

Fig. 4.

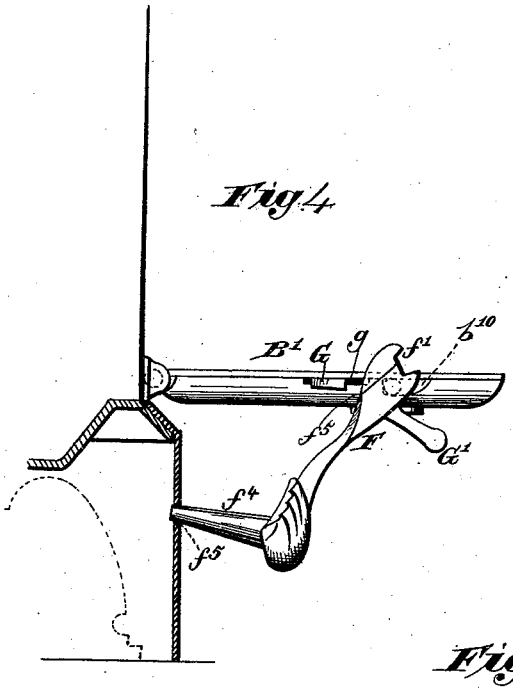


Fig. 5.

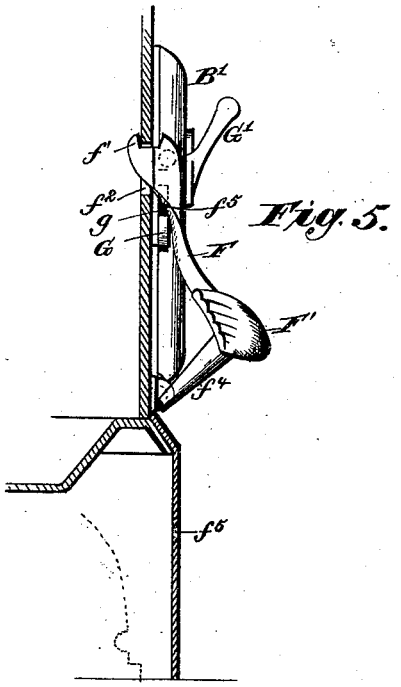
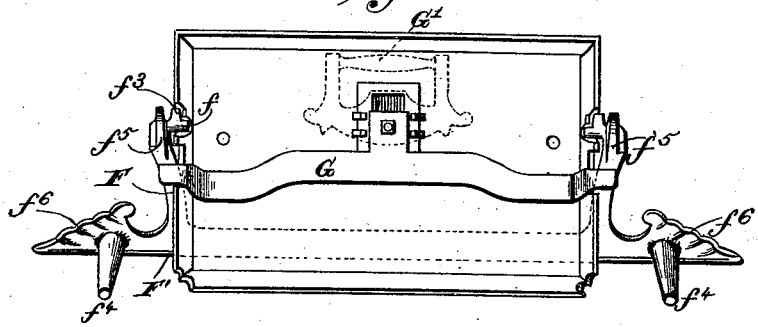


Fig. 6.



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UNITED STATES PATENT OFFICE.

DANIEL E. PARIS, OF TROY, NEW YORK.

OVEN-DOOR.

SPECIFICATION forming part of Letters Patent No. 345,531, dated July 13, 1886.

Application filed December 31, 1884. Serial No. 151,628. (No model.)

To all whom it may concern:

Be it known that I, DANIEL E. PARIS, a citizen of the United States, residing at Troy, Rensselaer county, New York, have invented new and useful Improvements in Oven-Doors, of which the following is a specification.

This invention relates to oven-doors for stoves; and it consists, essentially, in the combination, with a stove having one side provided with slots or recesses, of a hinged door swinging downward to open, two arms pivoted, respectively, to the ends of the door, and having locking-catches to engage the said slots or recesses, and a rail connecting the side arms.

Referring to the drawings forming part of this application, Figure 1 is perspective view of a stove or range provided with my invention. Fig. 2 is a vertical section of the front portion of Fig. 1, taken from front to rear. Fig. 3 is a similar section of the same parts, showing the doors opened. Fig. 4 is an end elevation showing a modification of the door and its fastening devices. Fig. 5 is a similar view showing the door closed. Fig. 6 is a rear elevation of the door, showing the auxiliary devices for releasing the fastenings.

My invention may be applied to a stove having a door composed of two sections, as in Figs. 1, 2, and 3, where A is the upper door-section hinged at its upper edge by pintles a, passing into eyes a'. The lower section, B, is provided with the usual hinge-lugs, b b, fitted in eyes or hinge-brackets b' b', as shown, and extends upwardly to and is provided with a joint-flange, b^2, to cover the lower edge of the upper section, A. At each upper corner of the lower section is provided a bearing, b^3, for a latch, b^4, having a pivot, b^5, adapted to fit the bearing b^3, said latch being extended or merged into a bracket, b^6, adapted to receive a handle, C, which is extended from the opposite end of said lower section, to operate a similar latch thereat. The handle may be provided with ornamental heads or end pieces. A slot, b^7, is formed in the side plate for the reception of the latch. To the inner surface of the lower section is pivotally secured, at d, a lever, D, having a lug or shoulder, d', projecting therefrom at such an angle to its length that when the lower section is open, as in Fig. 3, the lug d' will bear against the inner surface of said section and hold it substantially level. The upper end of the lever D is provided with a pin, d^2, adapted to ride in a slot, e, formed in a second lever, E, pivotally secured to an end wall of the oven at e', said lever E being provided with a lug or shoulder, e^2, formed at substantially a right angle and in a direction opposite to that of the lug or shoulder d', whereby it will strike against the inner surface of the upper section, A, when the doors are opened, and hold it in substantially a level position.

This being the construction, the operation is as follows: Assuming the oven to be closed, as in Fig. 2, the handle C is grasped and lifted. This oscillates the latch on the pivots b^5, and disengages them from the slots b^7, and the lower section is released, and during the first portion of its movement the upper section remains closed by reason of the travel of the upper end of lever D in slot e of the lever E, and hence a partial opening of the lower section may be had for purposes of inspection without allowing any material portion of the heat to escape from the oven; and a further advantage is secured, in that the upper section acts as a hood to protect the face, as, if that section also were necessarily opened by the operation thus far described, the hotter air at the top of the oven would immediately escape. When the upper end of lever D reaches the end of the slot e, the lever E is drawn outwardly, and its lug or shoulder e^2 raises the upper section and retains it in a raised position. The relative length of the levers and their pivotal point of attachment are such that the weight of the upper section, though somewhat less than that of the lower section, substantially balances the latter, so that the operator is partly relieved from the task of lifting the latter in the act of closing the oven. Another convenient feature is the pivotal attachment of the handle and latch-bracket b^6 to the lower section.

The door, instead of being divided, as in Figs. 1 to 3, inclusive, may be made in a single integral plate, B', as illustrated in Figs. 5 and 6. This door may conveniently be pivoted in the same manner as the door B in Fig. 1, and it is fastened and operated as follows: Arranged in suitable bearings, b^{10}, formed about midway in

the ends of said door, are journals f, formed upon arms F, which carry a foot-rail, F′, upon which the arms F are cast or attached, the length of said arms being such that when the door B′ is swung into a vertical position the foot-rail F′ will lie about opposite the lower edge of the door. Upon the pivoted end of each arm F is formed a catch or latch, f', which projects beyond the bearing and is adapted to enter an aperture, f^2, in the stove-wall, near the edge of the oven-opening. When in engagement with these apertures, the foot-rail F′ is held by these latches in front of and at a little distance from the lower edge of the door, and its weight securely preserves the connection between the fastening devices. Moreover, any additional weight imposed upon said rail serves to draw the oven-door by the leverage of the arms F more closely against the stove-wall, and causes it to more perfectly close the oven-opening. Shoulders f^3 are formed upon the arms F in such a manner as to lie within or partly within the bearings b^{10}. These shoulders, as the door is turned down into a horizontal position, permit the arms F to swing by gravity through a portion only of their normal arc, thereby giving to the foot-rail F′ a movement downward and rearward, or toward the stove. Upon the rear or inner side of the foot-rail are formed projections or fingers f^4, which are brought by the movement described into contact with some portion of the stove, by which they are supported. This engagement takes place at the moment when the door has reached a horizontal position, and its further downward movement is thereby prevented. One convenient method of supporting the fingers f^4 is to form apertures or seats f^5 in the stove-wall or any attachment thereto which the extremities of said fingers may enter. These seats or apertures may form part of the ornamentation of the stove and need never deface it. I have shown them as being arranged in the wing-plates which are mounted upon the legs; but it is evident they may be formed in any other suitable part, and any device adapted for the purpose may be substituted for the construction here shown.

If desired, an auxiliary detaching-handle may be provided to aid in lifting and swinging the foot-rail F′ when the door B′ is to be opened. This consists of a bar or plate, G, arranged below the bearings of the arms F, the ends of said plate projecting and being adapted to engage with the inner curved edges, f^5, of said arms. The plate G extends from end to end of the door, and at about the middle point it is connected to a handle, G′, mounted on the outside of the door, slots $g\ g$ being formed in the latter to permit its being operated. By drawing upward upon said handle the ends of the plate G will impinge upon the inner curved edges of the arms F, and the leverage thus produced will raise the foot-rail and disengage the latches f' when the door is to be opened, or bring said latches into position to engage the openings f^2 when the door is closed.

The foot and rail and other parts may be suitably ornamented in any manner. I have shown ornamental extremities f^6 formed thereon, which also serve to conceal the fingers f^4.

I do not herein claim a stove-door connected by jointed and slotted levers, as in Figs. 1, 2, and 3, nor do I here claim the auxiliary handle connected to a bar or plate extending across the door, as in Figs. 4, 5, and 6, for disengaging the catches or latches on the arms which are pivoted to the ends of the door.

What I claim is—

1. The combination, with a stove having one side provided with slots or recesses, of a hinged door swinging downward to open, two arms pivoted, respectively, to the ends of the door, and having locking-catches to engage the said slots or recesses, and a rail connecting the said arms, substantially as described.

2. The combination, with a stove having one side provided with slots or recesses, and a base having apertures or seats f^5, of a hinged door swinging downward to open, two arms pivoted, respectively, to the ends of the door, and having locking-catches to engage the said slots or recesses, and a rail connecting the said arms and provided with fingers f^4, substantially as described.

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

DANL. E. PARIS.

Witnesses:

JAS. H. CARPENTER,

ARTHUR W. BRADLEY.