

(No Model.)

J. SCHILL.
DOOR FOR STOVES.

No. 544,772.

Patented Aug. 20, 1895.

Fig. 1.

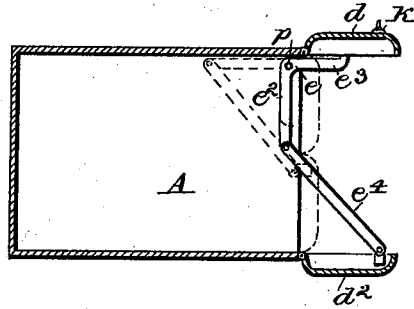


Fig. 2.

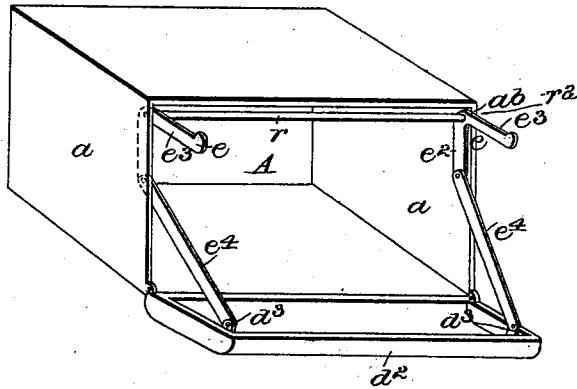


Fig. 3.

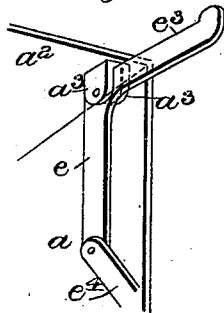
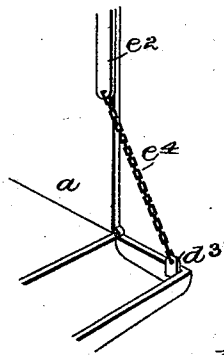


Fig. 4.



Witnesses:

C. P. Bull.

W. O. Dodge.

Inventor

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by

[Signature]

UNITED STATES PATENT OFFICE.

JOSEPH SCHILL, OF CRESTLINE, OHIO.

DOOR FOR STOVES.

SPECIFICATION forming part of Letters Patent No. 544,772, dated August 20, 1895.

Application filed June 19, 1895. Serial No. 553,264. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH SCHILL, a citizen of the United States, and a resident of the city of Crestline, in the county of Crawford, in the State of Ohio, have invented certain new and useful Improvements in Doors for Stoves, of which the following is a correct description.

The object of the invention is to provide, in that class of double doors or "twin doors" for stove or range ovens which are hinged in a horizontal plane one above the other, and which in opening or in closing move in opposite directions, a simple and inexpensive means whereby the two doors and their connections operate to balance and mutually support each other when adjusted, whether in their open or in their closed position in relation to the oven to which they are applied.

The invention consists in the application of an elbow-lever, or of two coincident connected elbow-levers, within an oven or other chamber of a stove or range, and the connection of the two arms of such lever or levers with the upper half-door and with the lower half-door, in such manner that the half-doors or twin-doors shall balance or counterweight each other in whichever position they may be adjusted.

The invention consists also in various novel combinations of elements in or in connection with a stove or other oven, which will first be described with particular reference to the details of construction, and then specifically and distinctly summarized in the concluding paragraphs of this specification.

In the accompanying drawings, which constitute a part of this specific description, Figure 1 represents a sectional view, partly in elevation, of the oven of a stove or range in which my improved twin-doors or half-doors and door and oven attachments are provided. Fig. 2 is a perspective elevation showing a duplication of the lever and a means by which simultaneous movement of the two is insured. Fig. 3 is a detail showing bearings of the connecting shaft or rod. Fig. 4 is a detail representing a modification of that portion of the connecting attachments which supports the lower half-door.

It will be apparent that the oven A may be

of the class adapted to bakers' use or any oven in an ordinary cooking stove or range.

The two door-sections d and d^2 may appropriately be termed "half-doors," because in configuration they are like a single door divided, in a horizontal plane, at a point preferably a little above the mid-height of the door. The upper section or half-door d is hinged by its upper extremity to the body of the apparatus of which it constitutes a part, while the lower half-door d^2 is hinged at its lower extremity, and is provided upon its inner surface with a lug or eye d^3 . Each of these door-sections may have a knob or handle k .

The elbow-levers e may be rigidly secured upon a shaft or rod r , one at each end thereof, just within the projecting journals r^2 , (not shown,) which are received in the coincident bearings $a b$ in the side walls a of the oven, Fig. 2; or a single lever may be secured by a pivot-pin p in the upper front portion of such walls, as shown in Fig. 1; or, if desired, the elbow may be pivoted between two parallel lugs $a^3 a^3$, which project downwardly from the upper wall or top plate a^2 of the oven.

The lower or inner arm e^2 of the elbow lever or levers e is connected by an arm e^4 to the lug or eye d^3 upon the half-door d^2 ; or it may, as in Fig. 4, be connected thereto by a flexible connection e^4 . The upper arm e^3 of the lever e is arranged at such an angle with the arm e^2 of the lever that when the lower half-door d^2 is moved downwardly the inner portion of the arm e^3 will bear by its upper face or edge against the upper margin of the door-opening, while the outer extremity of the arm will bear against the under and inner face of the upper half-door and cause it to be gradually elevated to its horizontal and open position, in which position the weight of the lower half-door and its connections will serve to maintain it. The described operation being reversed, the upward movement of the lower half-door will permit the upper half-door to move in an arc in a vertical plane until it reaches its perpendicular and closed position, and the weight of the upper half-door and of the arms e^3 with which it is in contact will then maintain the lower half-door in its vertical and closed position.

It will be understood that the two dupli-

cate connected levers will be employed in ovens of considerable dimensions, and that in small ovens a single lever may be found sufficient.

5 The invention having been thus described, what is claimed is—

1. The combination with an oven, of an upper half-door and a lower half-door which are adapted in opening or in closing, to move in a vertical plane; and elbow-levers,—one, or two connected together,—which are pivotally-secured upon an inner portion of the oven, one arm of each lever being operatively-connected to the lower half-door, and the other arm of the lever or levers being adapted to support the upper half-door without positive mechanical connection therewith.

2. The combination with an oven, of an upper half-door which by its upper edge is hinged at the upper extremity of the oven-opening; a lower half-door which is provided with an inner lug or eye, and which by its lower edge is hinged at the lower extremity of the oven-opening; an elbow-lever which at its angle is pivoted upon an upper, front, interior portion of the oven, and which by one arm rests in contact with the upper half-door of the oven; and a supporting-connection between the other arm of the lever, and the lower half-door.

3. In an oven, an upper half-door and a lower half-door which are adapted to be moved oppositely, to close or to unclose the oven; an elbow-lever which is pivotally-secured to an upper portion of the oven, which by one arm bears against the inner face of the upper half-door, to open the same or to permit it to close, and which by its other arm is supportingly-connected to the lower half-door;—in combination.

4. An oven which is provided with upper and lower oppositely-moving half-doors which meet at their free edges to close the doorway,

and with an elbow-lever which is pivotally-mounted in the inner upper portion of the oven;—which by one arm loosely supports the upper half-door, and by its opposite arm and an intermediate connection, supports the lower half-door;—whereby when the half-doors are closed the upper half-door serves to maintain the lower half-door in its closed position,—and whereby when the half-doors are open, the lower half-door serves to maintain the upper half-door in its open position.

5. In an oven, the combination of two oppositely-moving half-doors which meet in a horizontal plane to close the oven; elbow-levers,—one, or two,—rigidly connected for operation as one,—which at their angle are pivoted to an upper, front, interior portion of the oven, one arm of which is in supporting contact with the upper half-door, and the opposite arm of which is provided with a supporting-connection with the lower half-door.

6. The combination with an oven, of an elbow-lever which is mounted within the oven; and upper and lower half-doors which move oppositely, and which are connected to the lever, substantially as described, so that one of the half-doors shall counterweight the other, in whichever position they may be adjusted.

7. An oven which is provided with oppositely-moving half-doors which unite to close the opening of the oven; and which is provided also with a lever which is pivotally-mounted within the oven, and which when either of the half-doors is moved to close the oven, operates to cause or to permit the closure of the other half-door also.

In testimony whereof I have hereunto affixed my signature this 8th day of June, 1895.

JOSEPH SCHILL.

Witnesses:

JOHN SCHILL,
PETER SCHILL.