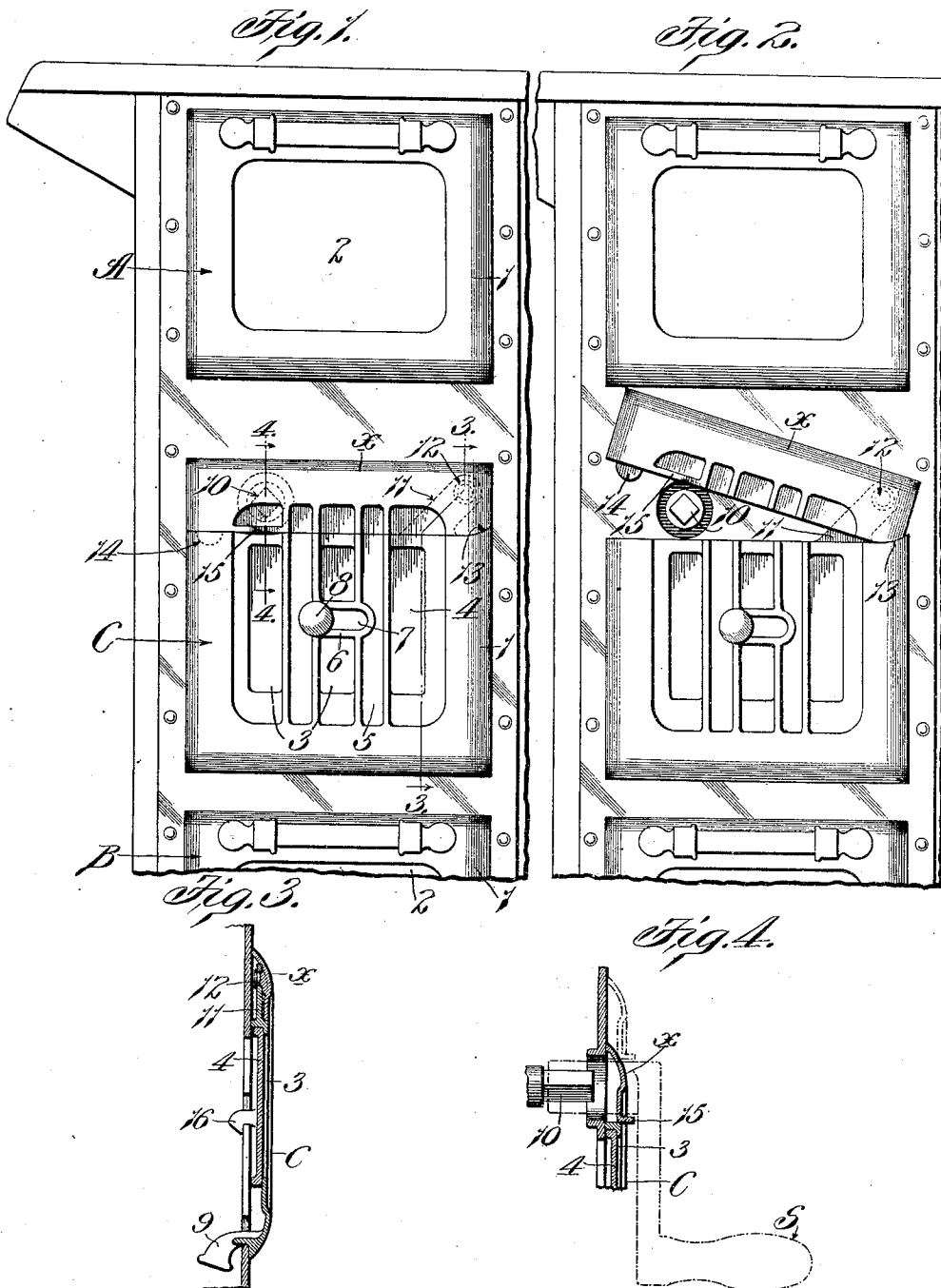


L. SCRUGGS.
 COMBINED DRAFT DOOR AND GRATE BAR COVER.
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UNITED STATES PATENT OFFICE.

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COMBINED DRAFT-DOOR AND GRATE-BAR COVER.

1,062,739.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, LOYD SCRUGGS, a citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Combined Draft-Doors and Grate-Bar Covers, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to stoves, and particularly to the draft doors of coal ranges.

Most of the coal ranges that are now in general use are provided with a small door or cover arranged above the draft door so as to hide the shank of the grate-bar on which the shaker is arranged when the user desires to shake the grate. This small door or grate-bar cover is separate and distinct from the draft door and it therefore detracts from the appearance of the stove because there is no other door on the front of the stove with which it conforms in size or design.

The main object of my invention is to provide a combined draft door and grate-bar cover which conforms in size to the fire-door and ash-door between which it is arranged, thus producing an artistic stove of ornamental appearance in which three doors that harmonize with each other are arranged in vertical alinement at one side of the oven door.

Another object is to provide a combined draft door and grate-bar cover which is so designed that the portion which covers the grate-bar extension can be opened and closed independently of the portion of the door in which the draft openings are formed, thus permitting the shaker to be used when the draft door is closed. And still another object is to provide a stove door consisting of a plurality of portions connected together in such a manner that one portion can be moved independently of the other and so designed that they cooperate with each other to form a complete door which can be opened and closed as a single unit.

Other objects and desirable features of my invention will be hereinafter pointed out.

Figure 1 is a front elevational view of a coal range provided with a combined draft door and grate-bar cover constructed in accordance with my invention; Fig. 2 is a

similar view showing the grate-bar cover raised; and Figs. 3 and 4 are vertical sectional views taken on the lines 3—3 and 4—4, respectively, of Fig. 1.

Referring to the drawings which illustrate the preferred form of my invention, A and B designate the fire-door and ash-door, respectively, of a coal range, and C designates a combined draft-door and grate-bar cover arranged between the doors A and B in vertical alinement with same. The three doors A, B and C are of approximately the same size, and each door has a smooth-faced frame 1 which preferably consists of a casting whose outer face is substantially oval-shaped. The fire-door A and ash-door B are provided with smooth center panels 2 but the intermediate door C is provided with vertically disposed oblong-shaped draft openings 3 and a sliding damper 4 for closing said draft openings. The portions 5 of the door C which lie between the draft openings 3, merge into the smooth-faced frame 1 of the door, and at approximately the center of the door is a horizontally disposed cross-piece 6 in which a slot 7 is formed to receive the handle 8 on the damper.

The door C is preferably hinged at its lower edge by means of curved arms 9 which project inwardly from the rear side of the frame 1 through openings in the front wall of the stove, as shown in Fig. 3, and the upper portion α of the door which lies above the portion in which the draft openings 3 are formed, is constructed in such a manner that it can be moved relatively to the lower portion of the door so as to permit the operator to arrange the grate shaker S on the shank 10 of the grate-bar, as shown in broken lines in Fig. 4. The upper portion α of the door C thus acts as a cover for the grate-bar shank, and when said cover is closed the complete door has the appearance of a single door. The upper and lower portions of the door C can be connected together in various ways but I prefer to provide the lower portion of the door with an upwardly projecting arm 11 to which the right hand end of the grate-bar cover α is pivotally connected by means of a pin 12 on the rear side of said cover that passes through an opening in the arm 11, as shown in Fig. 3, the pin 12 being preferably cast integral with the cover α and upset or riveted over after it has been inserted in the

arm 11. The grate-bar cover α has a curved lower corner 13 which is concentric with the pin 12, and the coöperating edge of the lower portion of the door is also curved on the same arc so as to form a tight joint between the cover and the lower portion of the door when the grate-bar cover is closed. To eliminate any possibility of the cover α moving out of the plane of the lower portion of the door when the door is open I have provided the cover α with a depending lug 14, as shown in Fig. 2, that fits in a notch or recess in the upper edge of the lower portion of the door when the grate-bar cover is closed, as shown in broken lines in Fig. 1. If desired, the cover α can be provided with a forwardly projecting lip 15 arranged adjacent the left hand end of same so as to form a projection against which the operator can place the shaker and thus swing the cover upwardly when he arranges the shaker on the shank 10 of the grate-bar. Any suitable means can be used for locking the door C in its closed position but I prefer to provide said door with hooks 16 that pass through slots in the front wall of the stove and thus catch upon said wall, as shown in Fig. 3, the hinges at the lower edge of the door being so designed that the door can be lifted slightly to disengage the hooks from the front wall of the stove.

A door C of the construction above-described serves as a draft door and as a cover for the grate-bar shank and it is so designed that it conforms to the size of the fire-door and the ash-door, thus producing an artistic stove which has three symmetrical doors arranged in vertical alinement with each other at one side of the oven door. The grate-bar covering portion α of the door can be moved independently of the lower portion of the door so that it is not necessary to have the draft door proper open when the shaker is being used; and another desirable feature of such a door is that the coöperating parts of same are combined in such a manner that they always lie in the same plane and the joint between said parts is hardly noticeable.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A combined draft door and grate-bar cover for coal ranges comprising a lower hinged portion in which draft openings are formed, an upper portion that forms a continuation of said lower portion and corresponds in width with same, and an upwardly projecting arm on said lower portion that lies behind said upper portion and to which the upper portion is pivotally connected at a point above the upper edge of said lower portion.

2. A stove door comprising two coöperating portions which are so designed that when combined they give the appearance of

a single door, the front faces of said portions being flush and both portions being of the same width, and an arm on one of said portions that lies behind the other portion and to which said other portion is pivotally connected.

3. A stove door comprising two horizontally divided portions which are so designed that when combined they give the appearance of a single door, both of said portions extending the entire width of the door, an arm on one of said portions that lies behind the other portion and to which said other portion is pivotally connected, and means independent of said arm for preventing one portion from moving out of the plane in which the other portion lies when the door is arranged in a horizontal position.

4. A stove door provided with a smooth-faced frame and with vertically disposed portions which merge at their upper and lower ends into said smooth-faced frame, oblong-shaped draft openings between said portions, the door being divided horizontally so as to form two independent sections, one of which can be moved relatively to the other, and means for connecting said sections together so that they will move as one when the door is operated.

5. A stove door provided with a smooth-faced frame and with vertically disposed portions which merge at their upper and lower ends into said smooth-faced frame, draft openings between said vertical portions, the door being divided horizontally so as to form two independent sections, one of which can be moved relatively to the other, a sliding damper that closes said draft openings, a handle on said damper, a horizontally disposed cross-piece at approximately the center of the door provided with an elongated slot which receives the handle on said damper, and an upwardly projecting arm on the lower section of the door to which the upper section is pivotally connected.

6. A stove door comprising an upper portion and a lower portion which are so designed that they give the appearance of a single door, said portions being divided by a horizontal joint and both portions extending the entire width of the door, an arm projecting upwardly from the lower portion of the door and arranged behind the upper portion of the door, and means for pivotally connecting the upper portion of the door to said arm.

7. A stove door comprising an upper portion and a lower portion which are so designed that they give the appearance of a single door, said portions being divided by a horizontal joint and both portions extending the entire width of the door, an integral upwardly projecting arm on the lower portion of the door, and an integral pin on the rear side of the upper portion of the door that

passes through said arm so as to pivotally connect the upper and lower portions of the door together.

8. A stove having a grate-bar provided
5 with a shank that is adapted to receive a shaker, a door comprising a cover for said shaker, an arm on the door lying behind said cover and to which the cover is pivotally connected, and a lip on the front side of said
10 cover under which the operator can place the shaker and thus swing the cover upwardly

during the act of arranging the shaker in operative position on the shank of the grate-bar of the stove.

In testimony whereof I hereunto affix my 15 signature in the presence of two witnesses, this twenty-second day of December, 1911.

LOYD SCRUGGS.

Witnesses:

WELLS L. CHURCH,
GEORGE BAKEWELL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."