

P. E. SHEAR.

Stove Door.

No. 77,112.

Patented April 21, 1868.

Fig. 2.

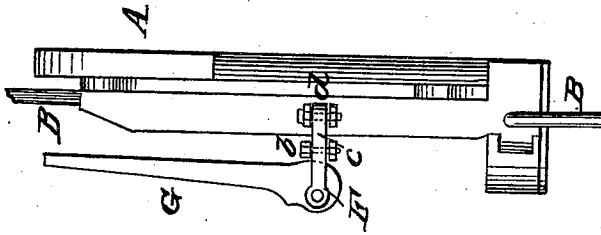


Fig. 1.

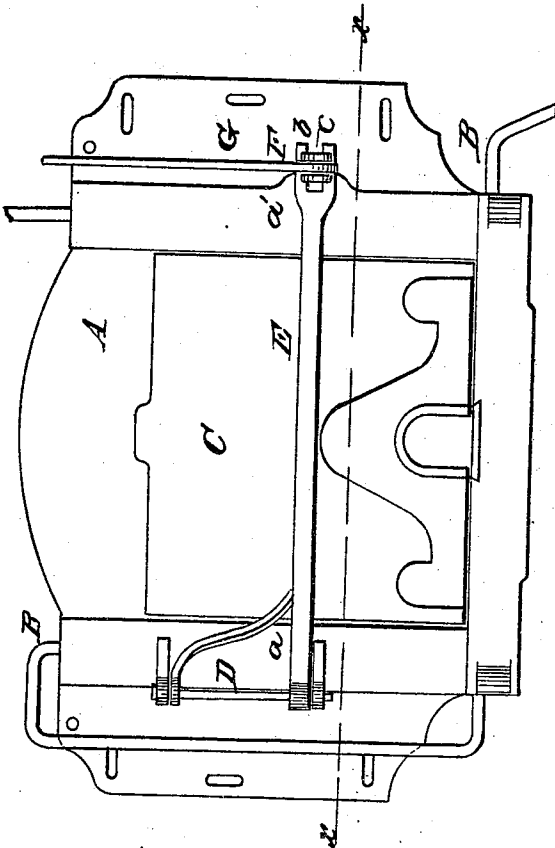


Fig. 3.



Witnesses:
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P. E. SHEAR, OF SAUGERTIES, NEW YORK.

Letters Patent No. 77,112, dated April 21, 1868.

IMPROVEMENT IN FURNACE-DOOR FASTENING.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, P. E. SHEAR, of Saugerties, in the county of Ulster, and State of New York, have invented a new and improved Fastening for Furnace-Doors; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings forming part of this specification.

This invention relates to a new and improved fastening for furnace-doors, whereby doors for this purpose may be tightly secured in a closed state, and very readily opened as well as readily secured in a closed state. The invention in the present instance is shown applied to a door fitted in a mouth-piece provided with water-passages, to admit of a current of water passing through, to obviate the rapid burning out of the door and mouth-piece, but the invention is applicable to doors fitted in the ordinary frame or mouth-piece.

In the accompanying sheet of drawings—

Figure 1 is a front view of a furnace-door and frame, or mouth-piece, having my invention applied to it.

Figure 2, an edge view of the same.

Figure 3, a horizontal section of the same, taken in the line *x x*, fig. 1.

Similar letters of reference indicate corresponding parts.

A represents a cast-iron frame or mouth, which is inserted in the masonry of the furnace, and is provided with water-passages or pipes, B, through which a current of water passes, to keep the frame or mouth-piece, and also the door C, in a cool state, or to resist the heat of the furnace and prevent said door and door-frame from rapidly burning out.

The door C is fitted between guides, *a a'*, which are cast on the front of the frame or mouth-piece A, the door being allowed to slide freely up and down between them. To one of these guides, *a*, there is connected, by a hinge or joint, D, one end of a bar, E, which is of sufficient length to extend entirely across the bar and the other guide *a'*. The opposite end of this bar E is forked, as shown at *b*, to receive a link, *c*, which is connected by a hinge or joint, *d*, to the guide *a'*, the link *c* being of sufficient length to admit of an eccentric, F, being fitted in it.

This eccentric is provided with a handle, G, and when the bar E is adjusted against the door C, and the link *c* fitted in the fork *b* of said bar, by turning the eccentric in the proper direction, the eccentric will press the bar E firmly against the door C, and hold the same in a tightly closed state.

The rear sides of the guides *a a'* are bevelled, as shown clearly in fig. 3, and admit of the masonry of the furnace entirely covering it, which greatly protects it from injury by heat. In order to release the door, so that it can be opened, all that is required is to turn the eccentric, F, so as to relieve the bar E of its pressure, then move the link *c* out of the fork *b* of the bar, and move or turn the latter out from the door.

I claim as new, and desire to secure by Letters Patent—

The hinged or jointed bar E, in combination with the hinged link *c* and the eccentric, F, all constructed, arranged, and applied to the frame or mouth-piece of a furnace, substantially as and for the purpose set forth.

P. E. SHEAR.

Witnesses:

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