(No Model.)

E. O. BURROWS.

FIRE PLACE DAMPER.

No. 413,386. Patented Oct. 22, 1889.

Fig 1

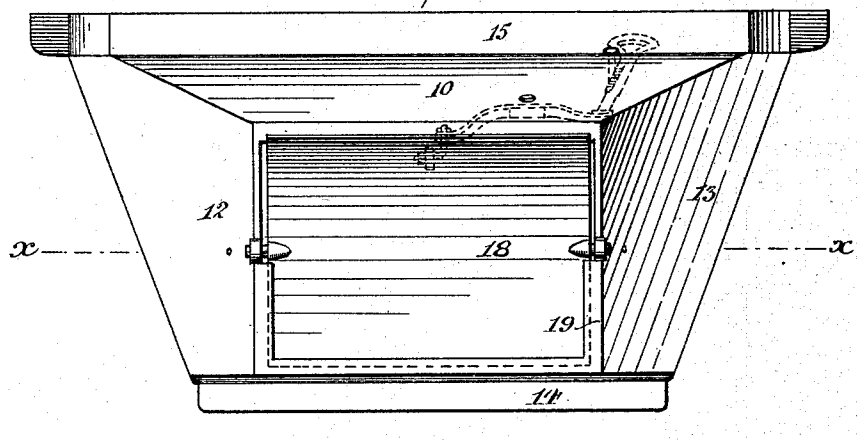


Fig 2

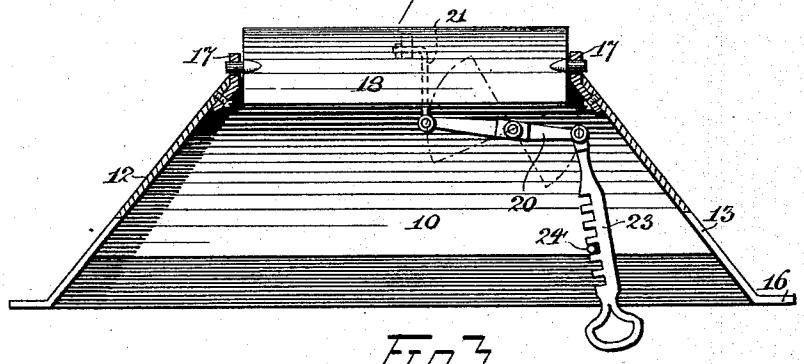
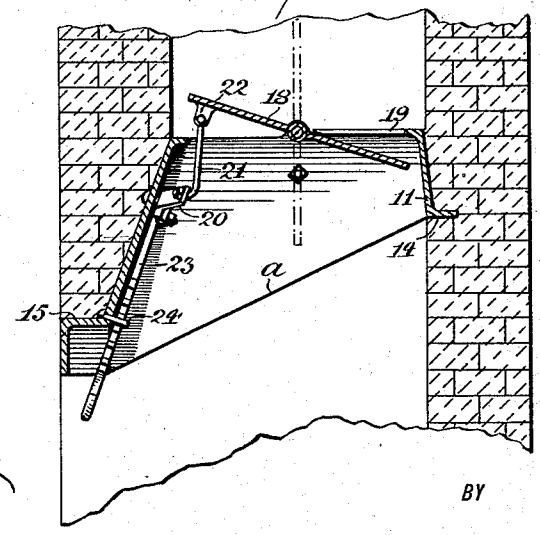


Fig 3



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UNITED STATES PATENT OFFICE.

EDWARD O. BURROWS, OF ORANGE, NEW JERSEY, ASSIGNOR TO HATTIE LEAH BURROWS, OF SAME PLACE.

FIRE-PLACE DAMPER.

SPECIFICATION forming part of Letters Patent No. 413,386, dated October 22, 1889.

Application filed June 15, 1889. Serial No. 314,328. (No model.)

To all whom it may concern:

Be it known that I, EDWARD O. BURROWS, of Orange, in the county of Essex and State of New Jersey, have invented a new and useful Improvement in Fire-Place Dampers, of which the following is a full, clear, and exact description.

My invention relates to an improvement in fire-place dampers, and has for its object to provide a device readily inserted in a fire-place, and especially adapted for use in connection with open grates, whereby the draft may be conveniently regulated by a person in the room; and a further object of the invention is to provide a means whereby an accumulation of soot upon the damper or frame adjacent thereto will be avoided, and also to so construct the frame of the damper that when the said frame is inserted in a flue the necessity of springing an arch over the fire-place may be avoided.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters and figures of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of the device. Fig. 2 is a transverse section on line *x x* of Fig. 1; and Fig. 3 is a section taken at a right angle to the line *x x* of Fig. 1, the device being illustrated as applied to a flue.

The frame of the damper comprises a front piece 10, a back piece or section 11, and side pieces or sections 12 and 13, the said sections being bolted together in such manner that an open space will be obtained at the top of the frame. The back section 11 is preferably straight and provided at the lower end with a longitudinal flange 14, adapted to be inserted in the rear wall of the flue, as shown in Fig. 3. The front and side sections are made to extend downward at an inclination, as illustrated in Fig. 1, and the under edge of the side sections is beveled from the back to the front, as shown at *a* in Fig. 3. The front section, near the lower end, is carried horizontally outward to form, essentially, a shelf 15 and vertically downward, as is best illustrated in Figs. 1 and 3. The extremities of the said front section are carried horizontally outward to form ears 16, adapted to be introduced into the side walls of the flue as the flue is built. The object of the shelf 15, formed upon the front section, is to provide a support for the breast of the chimney or flue, as illustrated in Fig. 3, thereby dispensing with the necessity of springing an arch over the fire-place.

An angled bracket 17 is secured to the inner face of each side piece or section of the frame at or near the center, one member of each of which brackets projects beyond the upper edge of the frame to receive the trunnions of the damper 18, which damper is of sufficient size to cover the upper opening in the frame when brought to a horizontal position.

The front longitudinal edge of the damper, when in the closed position, rests upon the upper edge of the front frame-section, and the rear longitudinal edge and that portion of the side edges at the rear of the trunnions are made to bear against a stop-plate or flange 19, formed upon the upper edges of the side and back sections of the frame, as illustrated in Fig. 1, whereby the upward movement of the rear portion of the damper is limited.

The brackets 17 are so attached to the side sections of the frame that they may be readily removed when necessary to detach the damper or to replace it, should said damper become damaged, and to that end the bolts securing the brackets are screwed into a threaded aperture produced in the frame.

The damper is manipulated, preferably, through the medium of a lever 20, pivoted at its center upon the inner face of the front frame-section. One end of this lever is connected by a link 21 with a lug 22, integral with the under surface of the damper at or near the center and close to the front edge, as best shown in Fig. 3. The other end of the lever 20 has pivotally secured thereto a toothed bar or rod 23, which toothed bar is made to terminate in a handle and extends downward in contact with the inner face of

the front frame-section. In the path of the toothed bar 23 a pin 24 is secured to or cast integral with the said inner face of the front frame-section, which pin is adapted to enter the spaces between the teeth of the bar 23.

In operation, by drawing the toothed bar 23 downward, after disengaging it from the pin 24, the damper may be elevated to stand at a right angle to the horizontal axis of the frame, as shown in dotted lines in Fig. 3, and when in this position the opening in the frame is entirely uncovered; or it may be made to assume a lesser angle, as desired, and as shown in positive lines in Fig. 3. When the damper has been opened as far as desired, the toothed bar is carried in the direction of the pin until said pin enters a space between two contiguous teeth to hold the damper in an open or partially-open position.

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

1. The combination, with a frame, of the vertically-swinging damper pivoted thereto, a transverse lever 20, pivoted between its ends to the inner side of the front wall of the frame, a link connecting one end of said lever with the damper, the notched bar pivoted at its upper end to the opposite end of said lever and extending downward therefrom along the inner side of the front wall of the frame, below the lower edge thereof, and the stud or pin 24 for the teeth of said bar to engage, substantially as set forth.

2. The combination, with the frame having an inwardly-extending flange 19 projecting from its inner wall and from the inner portions of the upper edges of its side walls, of the damper 18, pivoted between its ends on the upper edges of the sides of the frame in front of said flange, with its inner half extending thereunder when the damper is in its horizontal position, the lever 20, pivoted to the front wall of the frame, a link 21, pivotally connected with the upwardly-swinging edge of the damper, the lever 20, pivotally connected to said link, the toothed bar depending from the opposite end of said lever, and a stud or pin for said bar to engage, substantially as set forth.

EDWARD O. BURROWS.

Witnesses:
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C. SEDGWICK.