

(No Model.)

A. P. ANDERSEN.
SOOT DOOR FOR CHIMNEYS.

No. 574,871.

Patented Jan. 12, 1897.

Fig. 1.

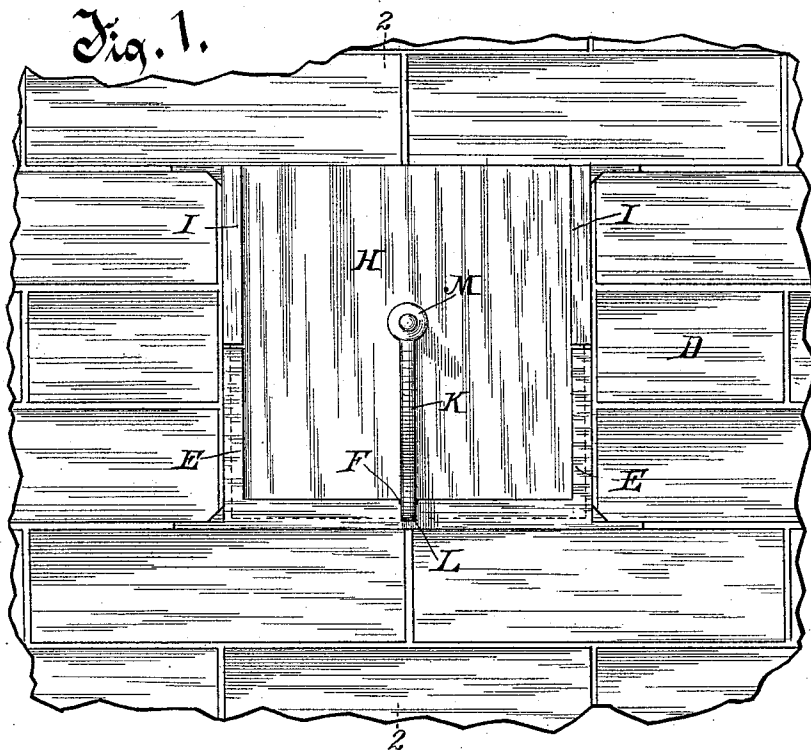


Fig. 2.

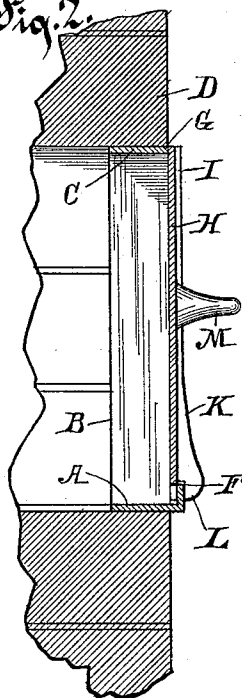


Fig. 3.

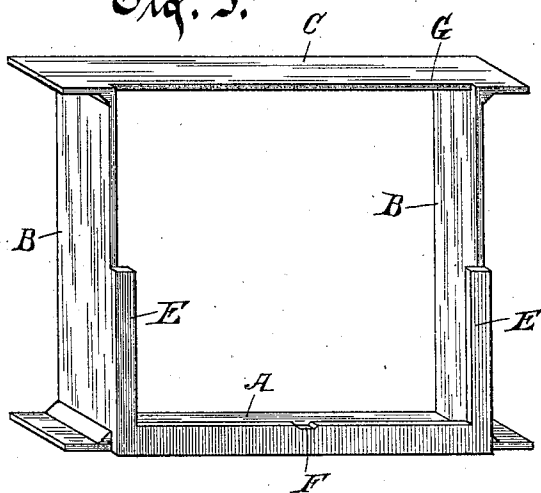
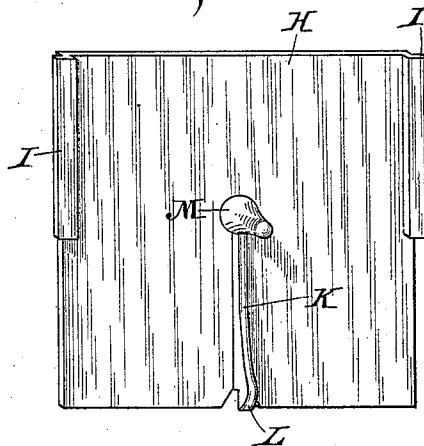


Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

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SOOT-DOOR FOR CHIMNEYS.

SPECIFICATION forming part of Letters Patent No. 574,871, dated January 12, 1897.

Application filed September 19, 1896. Serial No. 606,339. (No model.)

To all whom it may concern:

Be it known that I, ANDERS P. ANDERSEN, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented a new and useful Improvement in Soot-Doors for Chimneys, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

My invention relates to a door especially adapted for use to close a chimney-aperture near the bottom thereof, and where there is considerable pressure from the inside against the door, which tends to force it open if insecurely fastened, which door it is also frequently desirable to remove for the purpose of cleaning out the chimney or otherwise. The door is also well adapted for use with ash-pits or in similar situations.

The object of the invention is to provide a door that is simple in construction, strong and enduring in quality, that is readily removable and replaced in position, and that cannot be forced open or so far displaced as to permit of the escape of any portion of the soot, ashes, or other material pressing against it from within.

The invention consists of the complete device and the combinations of its parts herein-after described and claimed, or their equivalents.

In the drawings, Figure 1 exhibits the fragment of a wall of a chimney with my improved door therein. Fig. 2 is a vertical section of the improved device on line 2 2 of Fig. 1. Fig. 3 is an elevation in perspective of the frame of my improved door. Fig. 4 is an elevation of the door itself removed from its frame.

My improved door is especially adapted for closing an aperture in a chimney, at the bottom thereof, provided for removing the deposit of soot and ashes that form therein. The door may, however, be set in the chimney-wall at a little distance from the bottom, if preferred, and such construction is indicated in the drawings. The frame is advantageously constructed of metal, and consists of the flat sill A, the stiles B B, and the lintel C. The sill and the lintel are preferably extended laterally beyond the stiles to fit into

the masonry D, in which the frame is set, the frame being by this means more securely held in place than it would be by the mere abutting of the masonry against it. The sill A and the stiles B B along their lower portions, and preferably extending from the sill upwardly practically one-half their height, are provided with a rigid and preferably integral flange E, projecting inwardly, (of the door-frame aperture,) the inner surface of which flange is adapted to serve as a seat against which the lower portion of the door fits detachably, the flange being a bearing therefor holding the door against escape outwardly. This flange is also preferably provided with a notch or depression F, adapted to receive a rib on the door. The lintel C is provided with a recess G, extending the entire length of its front edge between the stiles B B, which recess is of a depth equal to the thickness of the door at the top, the recess being adapted to receive the door therein.

The door H, a substantially flat piece of metal of such size and thickness as to fit into the frame between the stiles B B and to bear outwardly against the flange E, is provided with guards I I on and along the lateral edges of the door and on such portion of the upper part of the door as is above the flange E when the door is in position in the frame. These guards I I are adapted, when the door is in position in the frame, to bear against the front edges of the stiles B, above the flange E, and the top edge of the door at its inner surface bears against the lintel C along the inner wall of the recess G. The door is also preferably provided with a rib K, the lower end of which fits, when the door is in position in the frame, in the recess F, the rib being advantageously furnished with a lip L, adapted to fit down on the outer surface of the flange E and prevent the lower end of the door from moving inwardly in the frame. A pin or knob M, secured to the door, serves as a handle for conveniently removing and replacing it.

It will be understood that when the door is in place in the position shown in Figs. 1 and 2 as the chimney fills up with soot and ashes the thrust or push of the material against the door will be first and chiefly against its lower portion, and that the door,

being thus pushed against, cannot escape from its place, being held securely in position by the flange E, against which it bears along the entire edge of the lower half of the door, 5 and that as the material accumulates, so as to push against the upper portion of the door, the door will still be held in place by the push and bearing of the mass against the lower part of the door, preventing it from tilting outwardly at the top, while the bottom 10 cannot escape, being held in position by the flange E. The bearing of the door at its top inwardly against the wall of the recess G, or the bearing of the guards I against the edges 15 of the stiles B, or either of such bearings, prevents the door from tilting inwardly at its top. The removal of the door, for the purpose of cleaning the chimney or otherwise, is readily accomplished by lifting it above the 20 flange E.

What I claim as my invention is—

1. The combination with a door-frame provided with an inwardly-projecting flange on its front edge along the lower portion thereof, 25 of a door adapted to fit into the frame and bear outwardly against the flange on the

frame, and to bear inwardly against the frame on the upper portion thereof.

2. The combination with a door-frame provided with an inwardly-projecting flange on the front edge of the sill and of the stiles along the lower portions thereof, of a door comprising a sheet of metal provided with guards on its lateral edges along the upper portions thereof, adapted when the door is in position 35 to bear against the front edges of the stiles of the frame.

3. The combination with a door-frame having a flange along the front edge of the sill and along the lower portions of the front edges 40 of the stiles, and having a recess in the lintel between the stiles, of a door adapted to fit into the frame and provided with guards along the lateral edges at the upper portions thereof, and with a lip adapted to take over the flange 45 on the frame.

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

ANDERS P. ANDERSEN.

Witnesses:

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