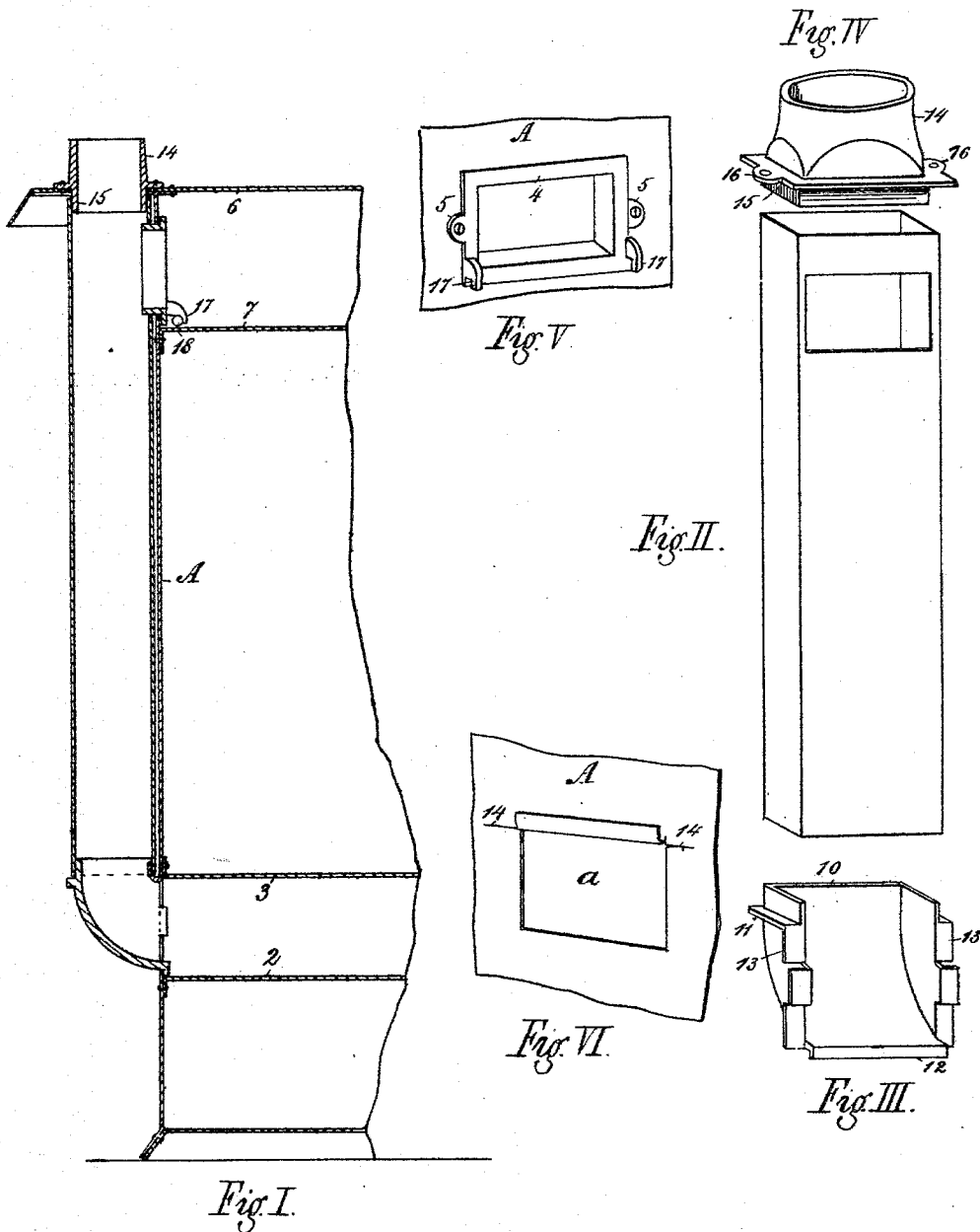


(No Model.)

C. V. FLEETWOOD.
SMOKE BOX.

No. 546,137.

Patented Sept. 10, 1895.



Witnesses,
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UNITED STATES PATENT OFFICE.

CALEB VINES FLEETWOOD, OF CINCINNATI, OHIO.

SMOKE-BOX.

SPECIFICATION forming part of Letters Patent No. 546,137, dated September 10, 1895.

Application filed May 13, 1895. Serial No. 549,179. (No model.)

To all whom it may concern:

Be it known that I, CALEB VINES FLEETWOOD, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and useful Improvement in Smoke-Boxes, which improvement is fully set forth in the following specification and accompanying drawings, in which—

10 Figure 1 is a central sectional view of the rear side of a cooking-range provided with my removable smoke-box; Fig. 2, a detail view of the smoke-box when detached; Fig. 3, a detail view of the elbow-joint which supports the
15 lower end of the smoke-box and connects the same with the flue; Fig. 4, a detail of the pipe-collar, having an extension which enters and retains the upper end of the smoke-box; Fig. 5, a detail of the damper-frame and its
20 adjuncts, and Fig. 6 a detail showing the opening in the rear wall of the range.

My invention relates to certain improvements in the construction of smoke-boxes and their adaptation to sheet-metal cooking-
25 ranges.

It is well known that as hitherto constructed the smoke-box is attached in such a manner that it is practically a part of the body of the range, and when, as is frequently the case,
30 it becomes corroded or otherwise damaged it cannot be detached and replaced without removing the top and rear plates of the range. This operation involves delay and expense and in many instances permanent injury to
35 the said plates.

The object of my invention is to provide a simple, practical, and inexpensive form of smoke-box which may be easily and quickly removed and replaced at a trifling expense
40 without impairing or defacing any portion of the main body of the range.

The various advantages of the device will be apparent by referring to the accompanying drawings, in which—

45 A represents the rear wall of a range having an oblong rectangular opening α , communicating with the lower flue of the range. The rear end of the lower plate 2 of the flue has a downwardly-turned flange, which is secured
50 by rivets to the rear wall a short space below the edge of the opening A. The upper plate

3 has an upwardly-turned flange, which is similarly attached to the upper border of the opening. Another opening communicating with the upper or direct draft-flue is formed
55 in the rear wall and receives the damper-frame 4, having a flanged front and lugs 5 to receive screws by which it is attached to the wall. The upper end of the rear wall is flanged and riveted to the top plate 6. The
60 lower flue-plate 7 is also flanged and similarly fastened to the rear wall below the damper-frame.

The trunk of the smoke-box is made of suitable sheet metal, and has an opening, near
65 the top, on its inner side to admit the extension of the damper-frame 4, which provides egress for the smoke while the fire is being kindled. The lower end of the box is connected with the range and supported on three
70 sides by a cast-metal elbow-joint 10, having a fillet or ledge 11, while the inner side engages a recess formed by the upturned edge of the rear wall of the range, as shown in Figs. 1 and 5. The elbow is provided with a de-
75 pending flange 12, which takes hold of the rear wall of the range at the lower edge of the flue-opening therein, and with side flanges 13, which extend to the right and left of the opening A. These flanges are each composed
80 of three sections, forming offsets, as shown in Fig. 3, to engage the inner sides of the rear wall. In order to admit these offset-flanges the rear-wall plate has lateral slits 14 extending to the right and left of the upper corners
85 of the opening A. The slits permit the sides of the plate to be sprung outwardly to admit the offset-flanges. The elbow is then pressed downwardly. When the offset-flanges pass the slits, the sides of the plate being released,
90 spring back and draw the upper and lower flange-sections close to the rear plate, forming a tight joint and covering the slits. If desired, the flanges 13 may be made entire with straight faces and fastened to the plate by
95 screws.

In order to guard against the escape of heat, all the joints between the elbow and the range may be made absolutely tight by luting or suitable cement.

The pipe-collar 14 has a downward extension 15, which fits the upper end of the smoke-
100

box and side lugs 16 to receive screws by which it is securely fastened to the top plate of the range.

It will be observed that while the smoke-box is thus firmly fixed in its position it may be readily detached by simply withdrawing the two screws which retain the pipe-collar and lifting it out of engagement with the smoke-box, which may then be easily released by drawing it back and disengaging it from the damper-frame.

The front of the damper-frame is provided with depending hooks 17, which retain the damper-rod 18. If the damper should require adjustment or repairs it may be easily removed by withdrawing the screws which fasten it to the rear plate of the range.

What I claim as new is—

The herein described removable smoke box comprising a main body or trunk, an elbow

joint adapted (conjointly with the upturned edge of the rear plate of the range) to support the trunk and form a communication with the outlet flue, the depending flange and sectional side flanges connecting the elbow joint with the body of the range, the damper frame extending through the rear wall of the range and into the smoke box and the pipe collar provided with a downward extension to engage the upper end of the smoke box, all constructed and arranged substantially as and for the purpose herein specified.

In testimony that I claim the foregoing I have hereunto set my hand, this 7th day of May, 1895, in the presence of witnesses.

CALEB VINES FLEETWOOD.

Witnesses:

J. B. LITTON,

JAS. R. JORDAN.