

(No Model.)

C. TRUESDALE.
STOVE LINING.

No. 410,128.

Patented Aug. 27 1889.

FIG. 1.

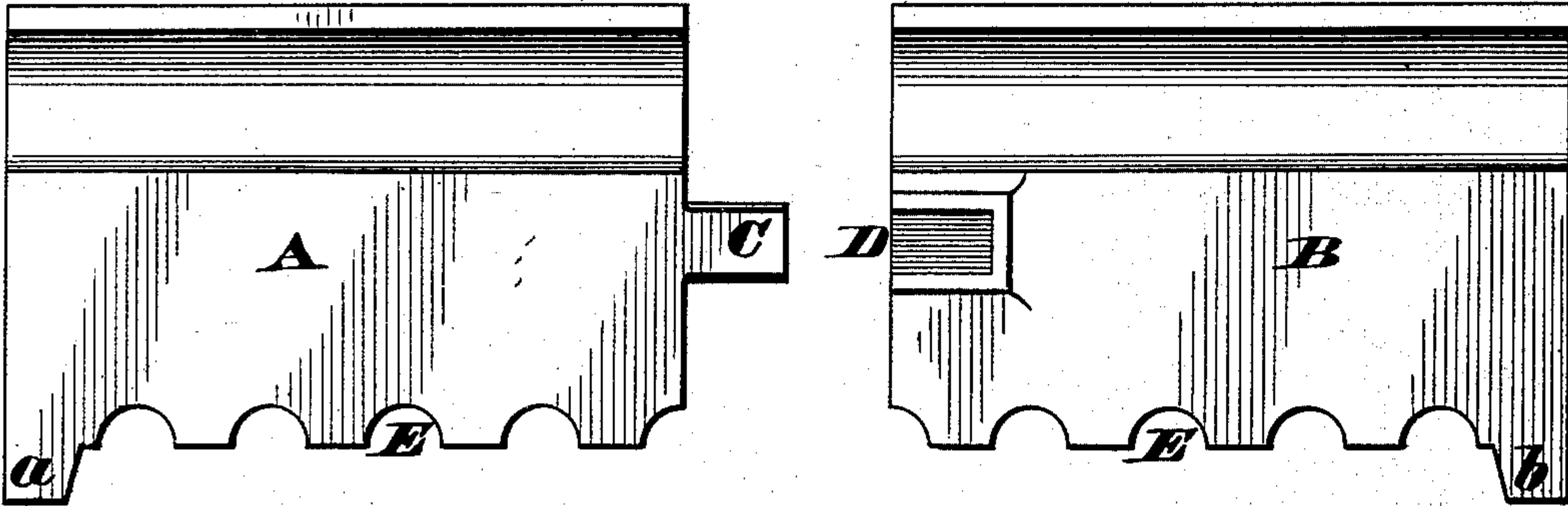


FIG. 2.

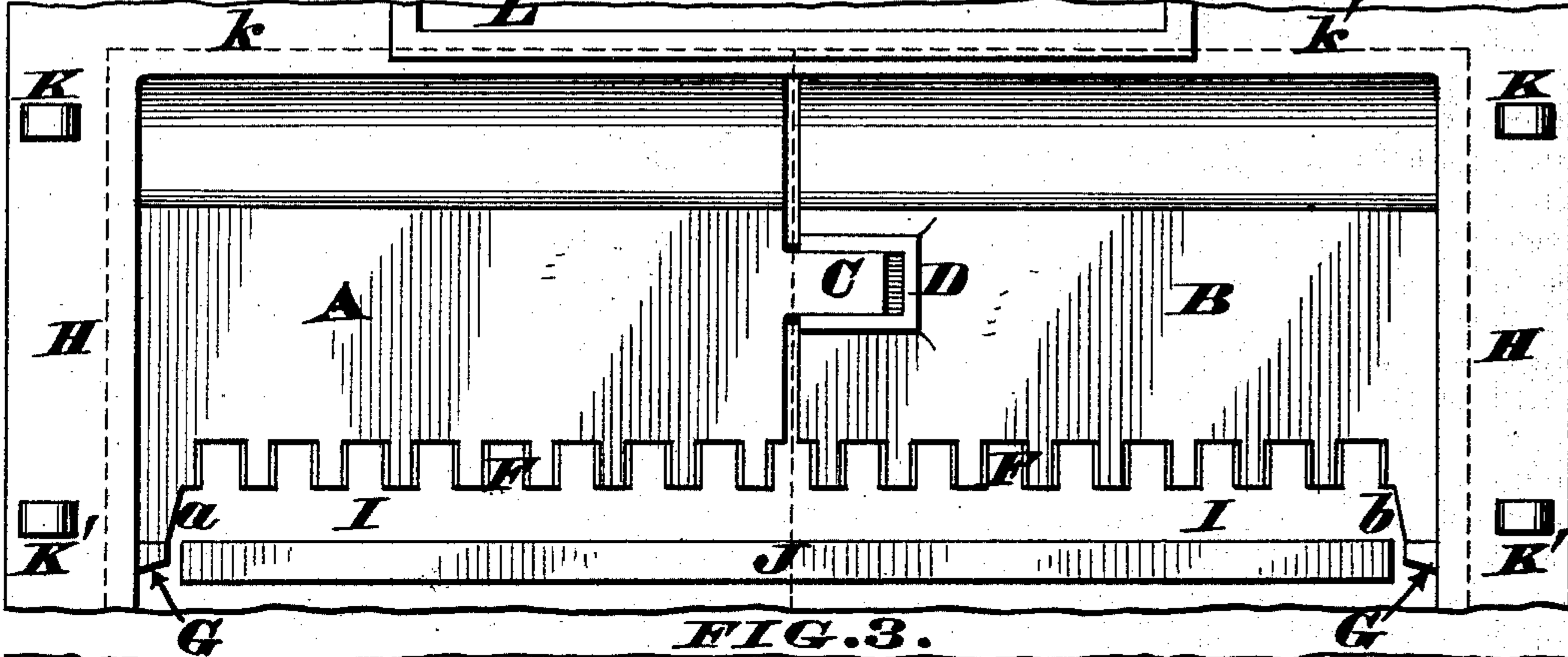


FIG. 3.

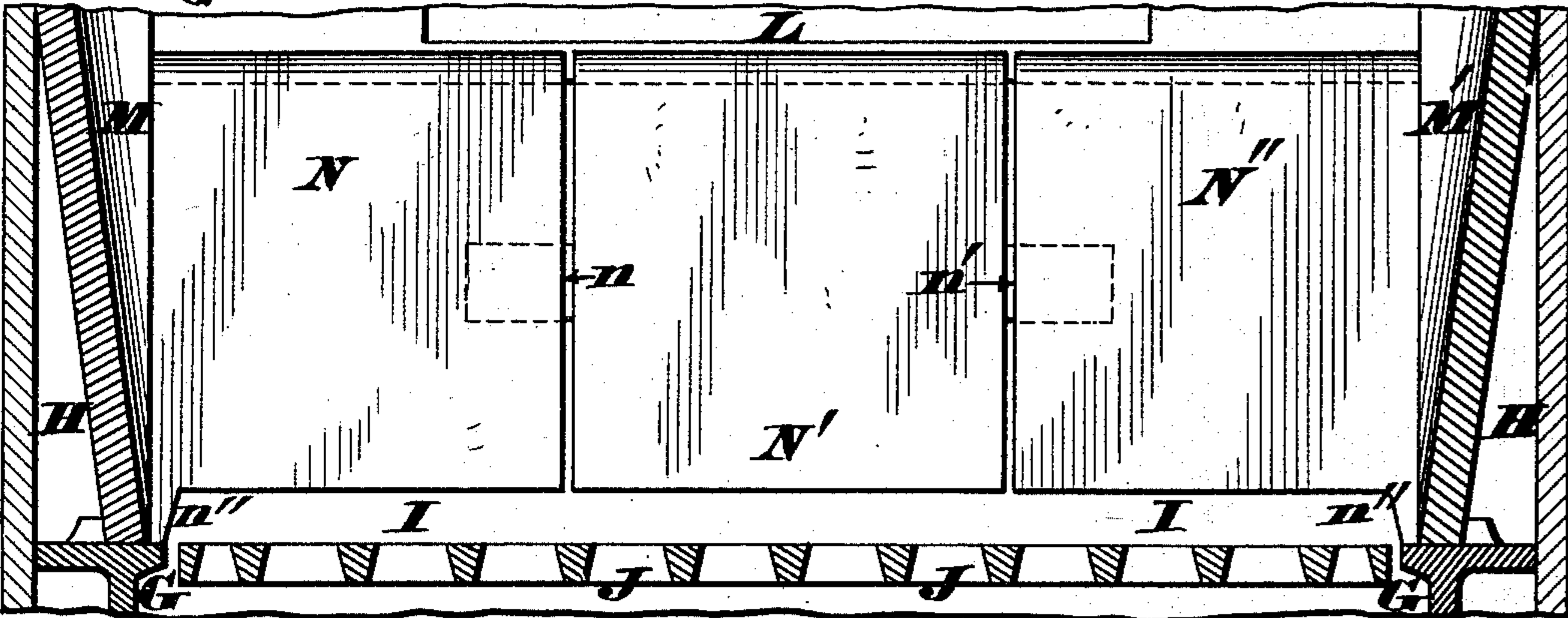


FIG. 4.

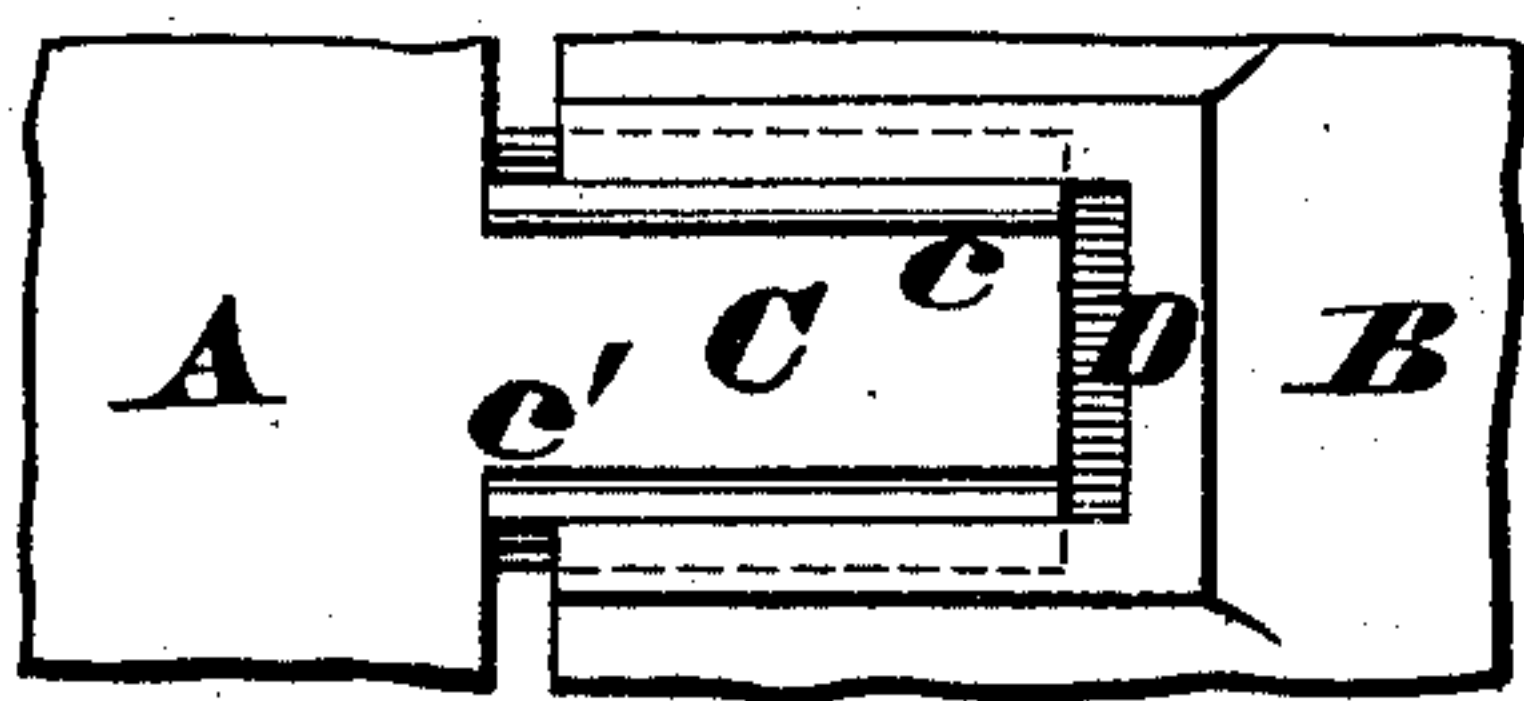


FIG. 5.

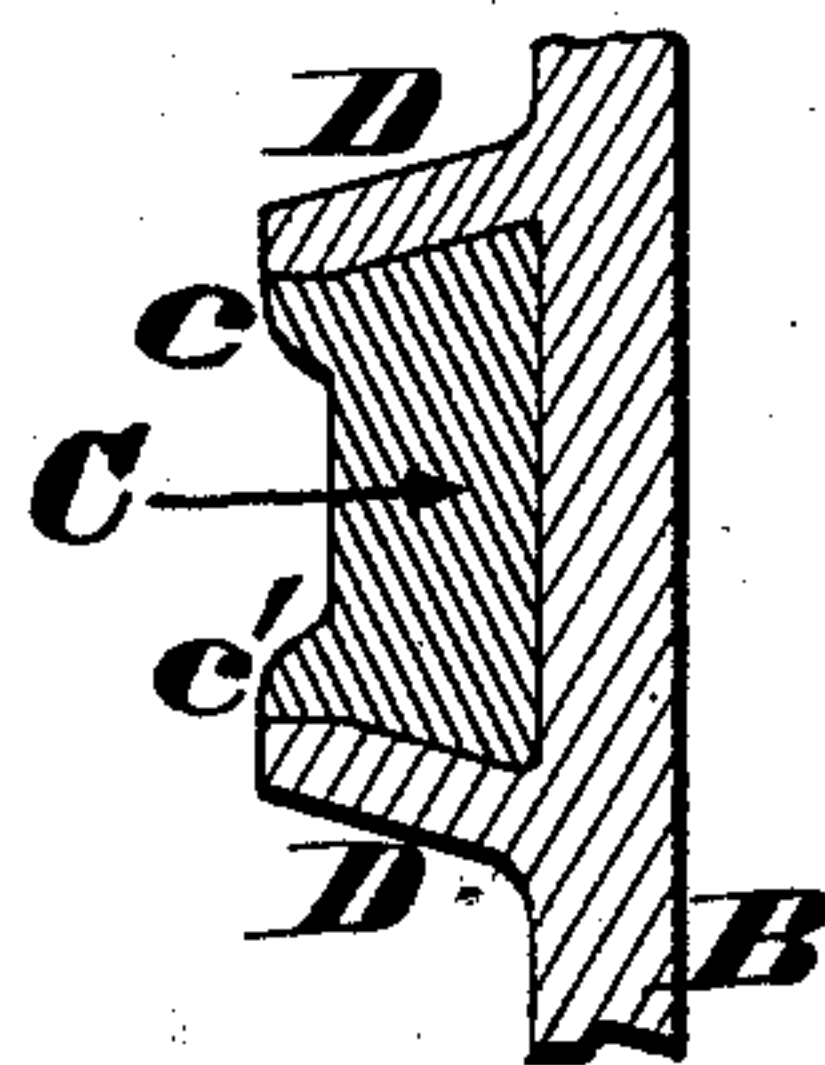
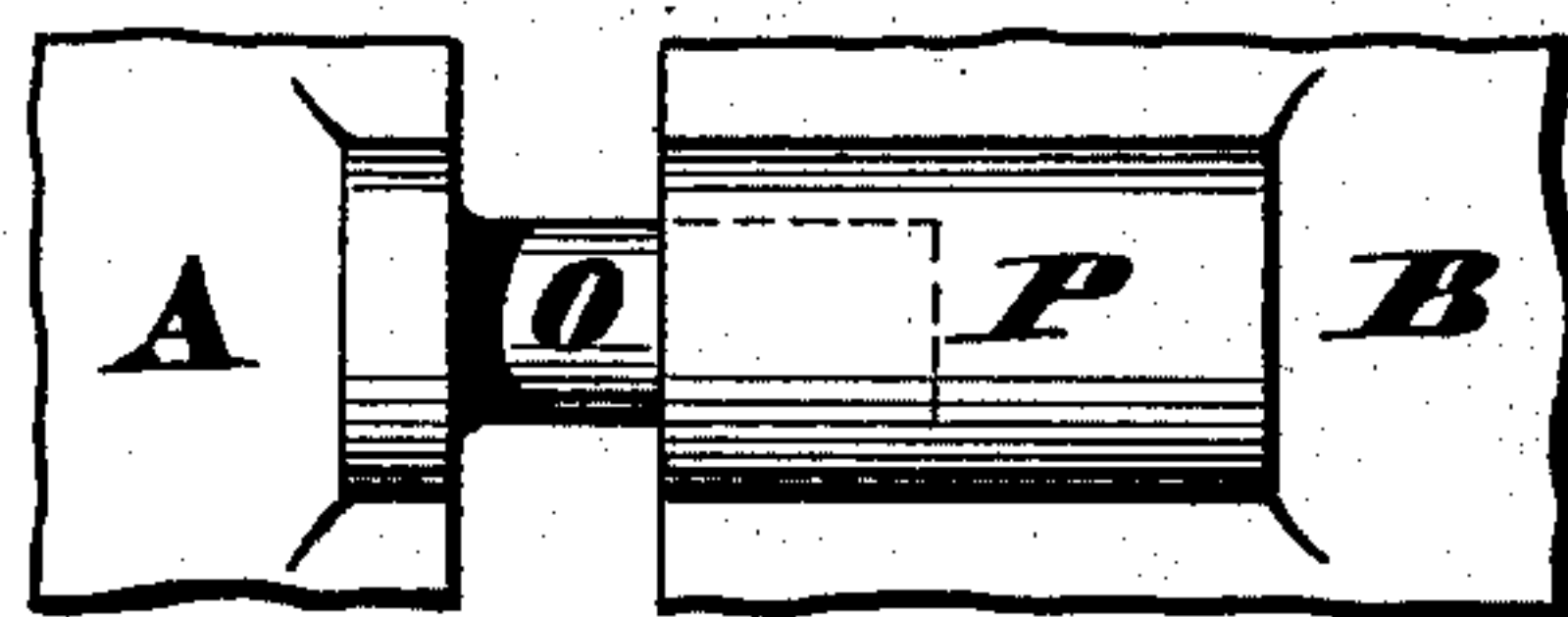


FIG. 6.



Attest.
S.S. Carpenter,
Paul Carpenter

Inventor.
Charles Truesdale.
By James H. Layman.
Atty.

UNITED STATES PATENT OFFICE.

CHARLES TRUESDALE, OF CINCINNATI, OHIO, ASSIGNOR TO WILLIAM
RESOR & CO., OF SAME PLACE.

STOVE-LINING.

SPECIFICATION forming part of Letters Patent No. 410,128, dated August 27, 1889.

Application filed April 13, 1889. Serial No. 307,110. (No model.)

To all whom it may concern:

Be it known that I, CHARLES TRUESDALE, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Stove-Linings; and I do declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, which form a part of this specification.

In constructing front linings for the fire-boxes of a certain class of coal-stoves it is necessary to leave an unobstructed opening or slot at the bottom of such linings, so as to enable the insertion of a poker for the purpose of raking out the fire-box from end to end, and owing to this continuous slot the lining cannot be secured at its center to any fixed member of the stove. Consequently these linings soon bow or warp inwardly and sag down in the center, thereby encroaching on the capacity of the fire-box and preventing the complete raking out of the clinkers, ashes, &c. To overcome these objections, I make such linings of two or more distinct sections and couple their meeting edges together by a tongue-and-socket joint, which joint must be of such a character as to permit the necessary expansion and contraction of the metal, and at the same time prevent said sections sagging down in the center. This free expansion and contraction of the metal prevents the inward bowing or warping of the linings, as herein-after more fully described.

In the annexed drawings, Figure 1 is a front elevation showing a two-part lining detached from a stove and separated from each other. Fig. 2 is a front elevation of a portion of a coal-stove having said lining fitted within it. Fig. 3 is a vertical section of a coal-stove fire-box provided with a three-part lining, said section being taken in the rear of said lining and looking toward the front of the stove. Figs. 4, 5, and 6 show modifications of the coupling-joints.

As seen in Figs. 1 and 2, A and B represent the sections of a two-part lining, which sections are of any suitable size and shape, and each part has projecting from its under edge a short foot *a b*, that rests upon a suitable sup-

port within the fire-box. The inner or meeting edges of these sections are furnished with coupling devices that usually consist of a tongue or tenon C, projecting horizontally from the part A, and adapted to fit snugly within a groove or socket D of the other part B. Furthermore, this coupling must be so constructed as to permit longitudinal expansion and contraction of the sections, without allowing any material vertical or lateral play of the same, which result is readily accomplished by making the tongue C of the dovetail shape seen in Fig. 5 and undercutting the sides of the socket D. In Fig. 1 these sections are notched at E to permit air entering the fire-box; but in Fig. 2 the same result is obtained by making the lower portion of the lining in the shape of a grating F, said lining being supported on a bearer G, such as usually fitted within the fire-box H of an ordinary coal-stove, a longitudinal and uninterrupted slot or opening I being left between said sections and the bottom grate J.

K K' are lugs to which the doors of the stove are hung, the position of said doors being indicated by the dotted lines *k k'*.

L is the fuel-door of the fire-box, and M M' in Fig. 3 the end linings of said box.

By referring to Fig. 2 it will be noticed that the sections A B are supported wholly by their feet *a b* resting upon the bearer G and by the tongue C entering the socket D. Consequently said sections are free to expand and contract independently in every direction, and therefore they will never bow inwardly toward the back of the fire-box. Neither will they sag down and obstruct the slot I, but the latter is at all times open to admit a poker when the ashes or clinkers require raking out of said box. It is evident this independent expansion and contraction of the lining-sections could not take place if they were bolted together, and for this reason the tongue should not be secured within the slot, but must be free to play therein every time said sections are heated and cooled.

In Fig. 3 the lining is composed of three plain or unnotched sections N N' N'', the central section N' being provided with a pair

of tongues $n n'$, adapted to enter sockets in the meeting edges of the adjacent sections $N N''$.

$n'' n''$ are the feet that support the outer sections N and N'' .

In Figs. 4 and 5 the tongue C has flanges or ribs $c c'$, that bear against the upper and lower edges of the socket D , and thus assist in preventing any downward sag at the center or mid-length of the sections.

In Fig. 6 the section A has a cylindrical plug O , adapted to enter the open end of a correspondingly-shaped socket P of section B , which sections $A B$ may be constructed as seen either in Figs. 1, 2, or 3.

It will be noticed that these modifications all include the leading feature of my invention—that is to say, they show a lining composed of two or more sections to be applied to the front of a coal-stove fire-box, which sections are supported wholly at their ends and are coupled together by slip or expansion joints, so as to give in every direction without bowing inwardly or sagging down at the center.

I am aware that it is not new to construct fire-backs of a number of sections which are supported upon bearers and are capable of being adjusted both laterally and vertically, so

as to render such backs applicable to different-sized stoves; but I know of no instance where a front lining has been made of a series of detachable sections having expansion-joints at their meeting edges and supported wholly at their outer ends, for the purpose of leaving an uninterrupted slot or opening between the lower edge of said lining and the grate proper of the fire-box, and therefore my claim is expressly limited to this specific arrangement of front linings.

I claim as my invention—

In combination with the fire-box of a stove having a grate, as J , a front lining composed of a series of detachable sections, as $A B$, supported wholly at their outer ends, as at $a b$, and having an expansion-joint, as $C D$, at their meeting edges, whereby said sections are prevented bowing inwardly or sagging down in the center, and thus closing the uninterrupted opening I between said grate and lining, all as herein described.

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

CHARLES TRUESDALE.

Witnesses:

JAMES H. LAYMAN,
SAML. S. CARPENTER.