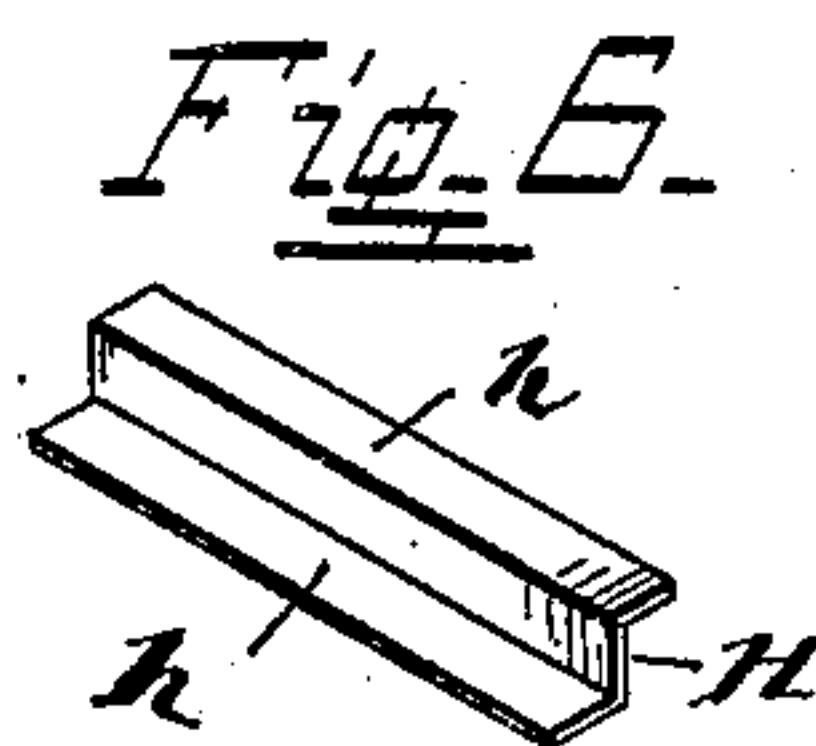
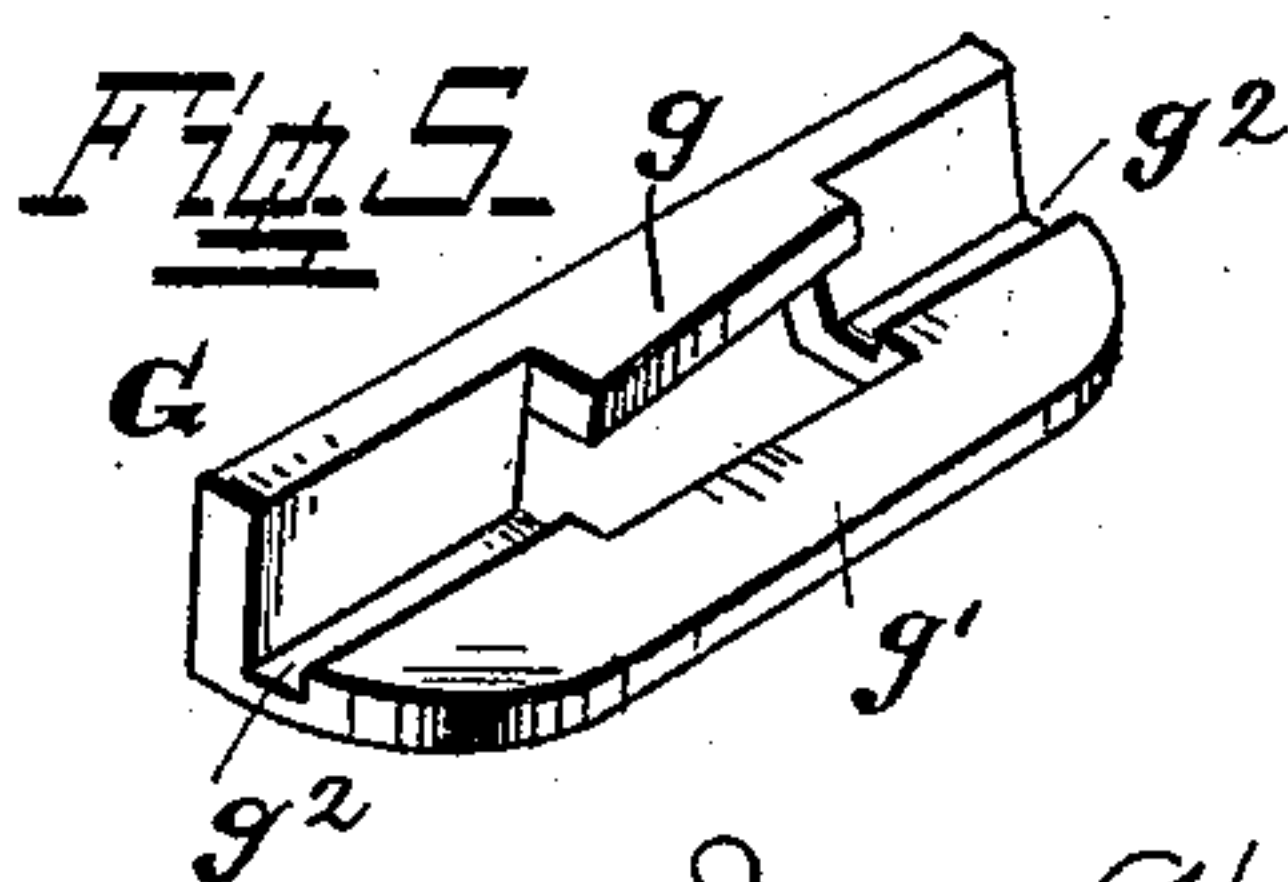
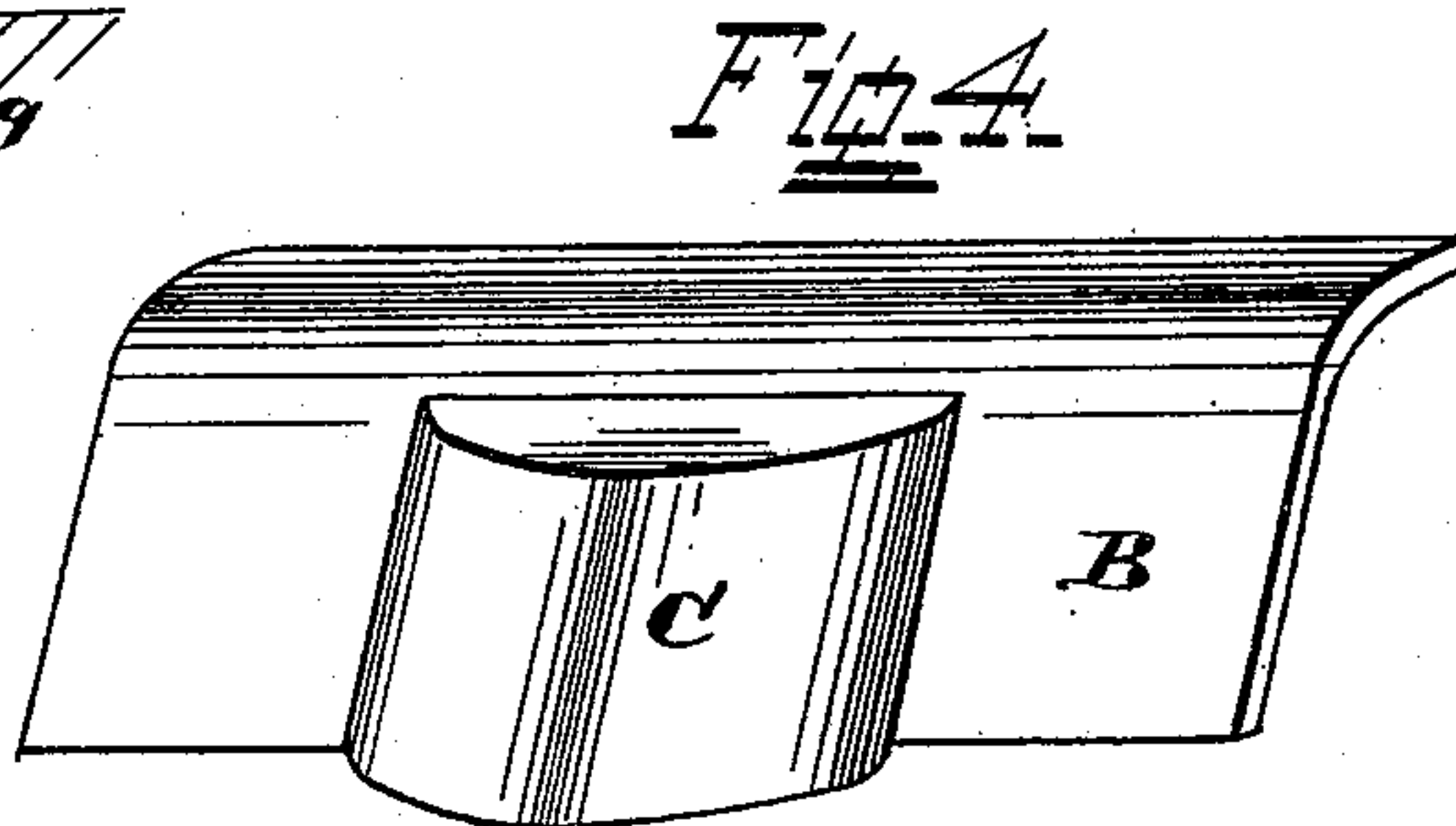
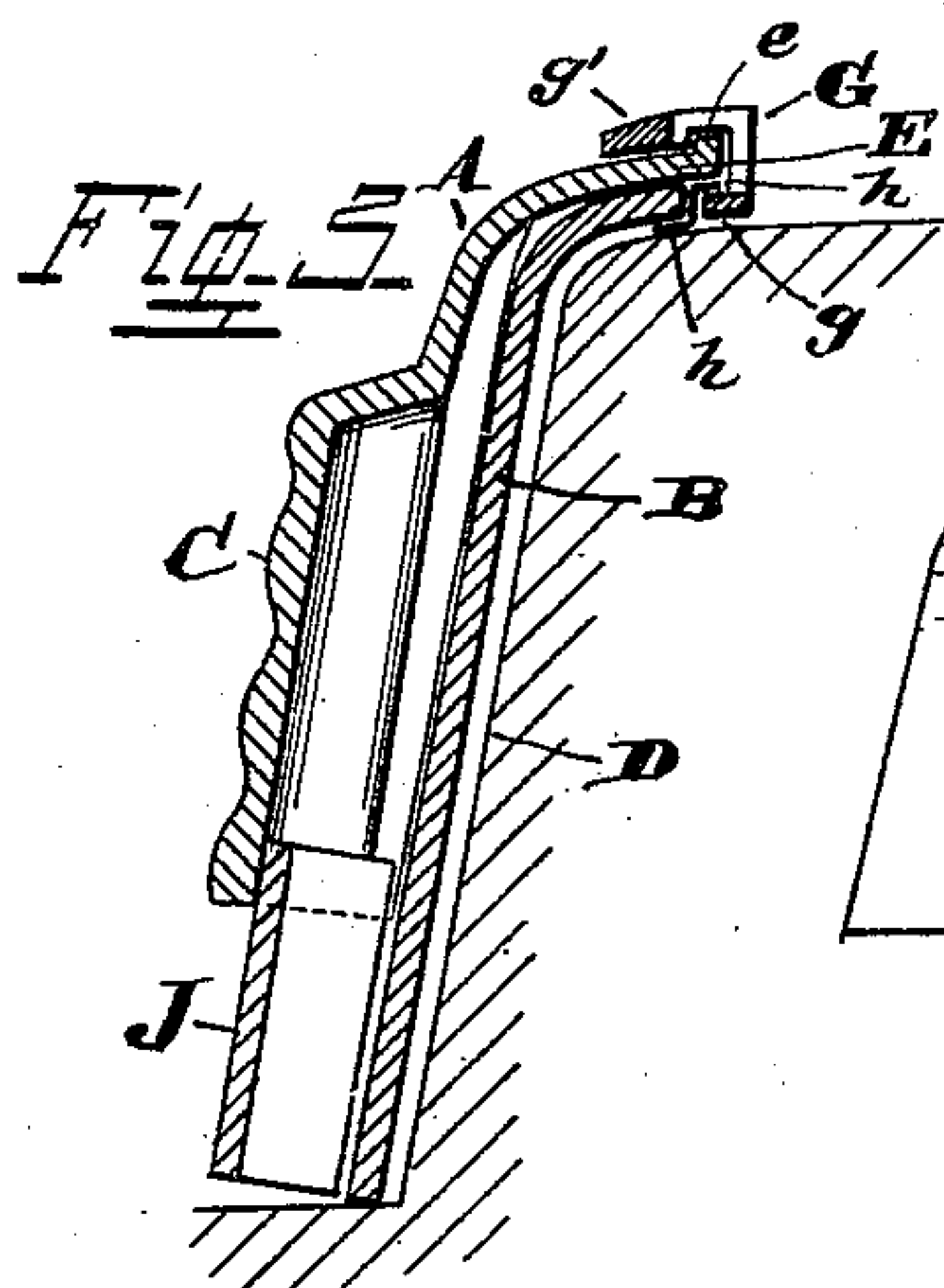
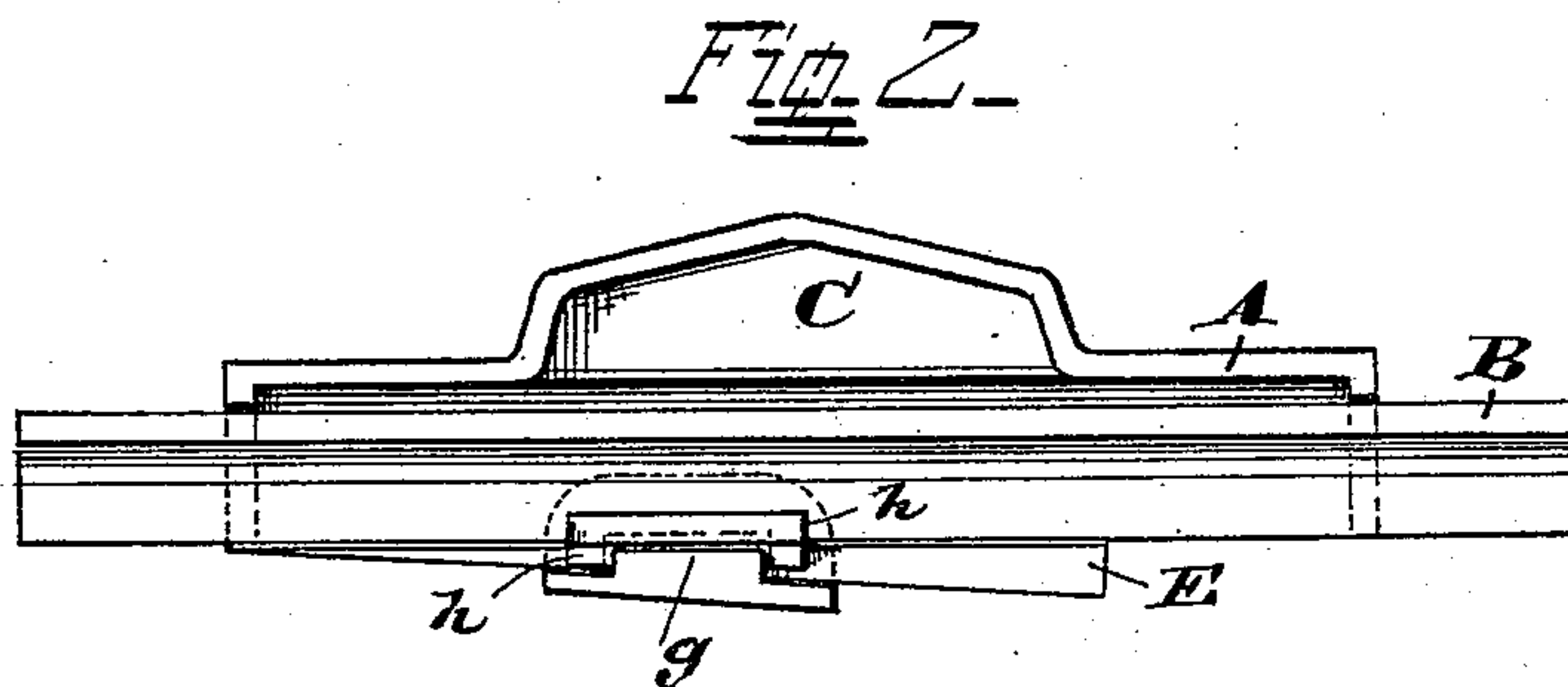
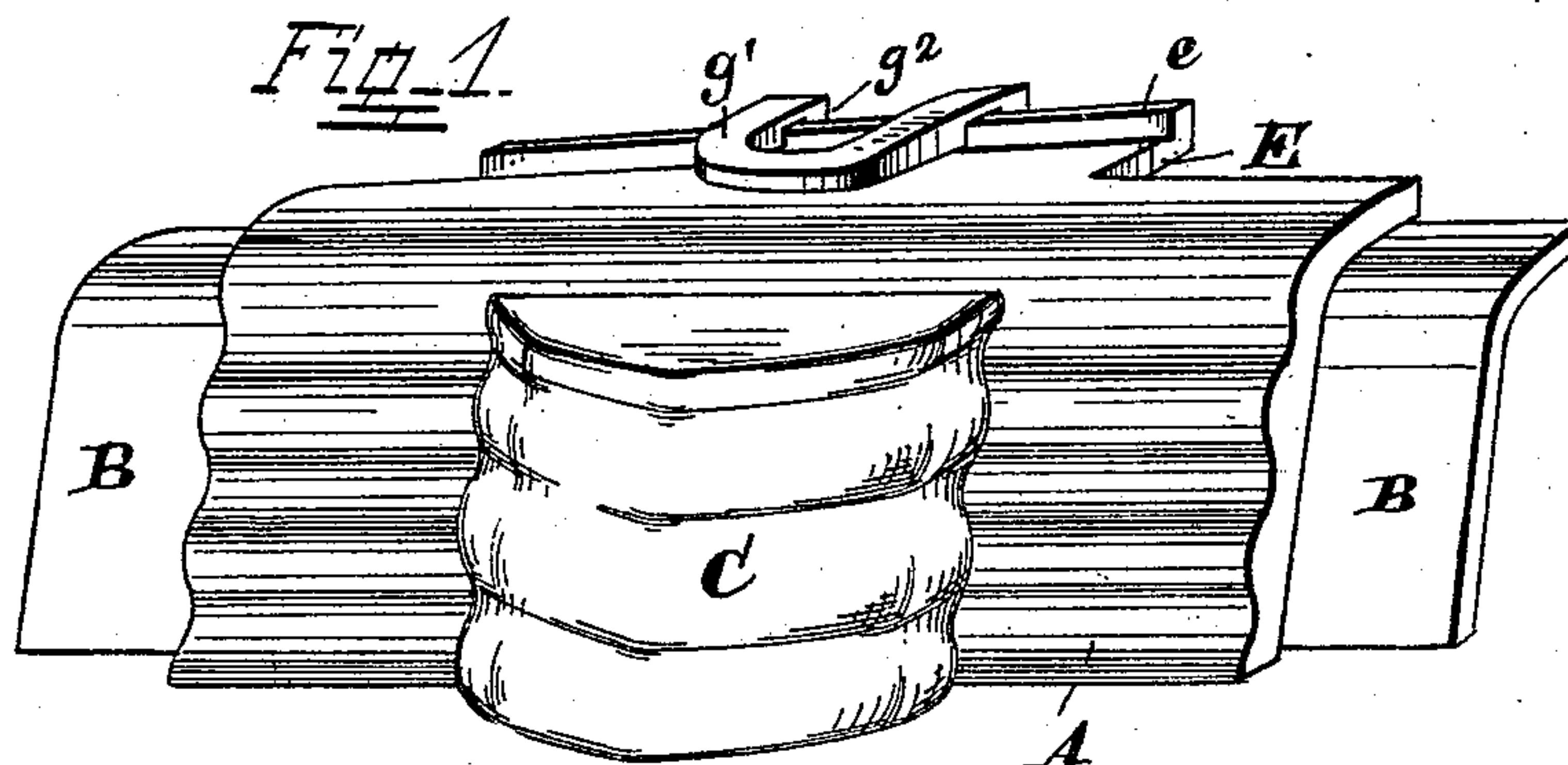


(No Model.)

J. HATFIELD & J. M. BENNETT.
FIREBACK FOR STOVES.

No. 471,547.

Patented Mar. 29, 1892.



Attest
Harry J. Koking.
George Bascom

INVENTORS.
James Hatfield and J. M. Bennett
per O. M. Hill Atty.

UNITED STATES PATENT OFFICE.

JAMES HATFIELD AND JOHN M. BENNETT, OF CINCINNATI, OHIO; SAID
BENNETT ASSIGNOR TO SAID HATFIELD.

FIRE-BACK FOR STOVES.

SPECIFICATION forming part of Letters Patent No. 471,547, dated March 29, 1892.

Application filed March 23, 1891. Serial No. 385,980. (No model.)

To all whom it may concern:

Be it known that we, JAMES HATFIELD and JOHN M. BENNETT, both citizens of the United States, and residents of the city of Cincinnati, Hamilton county, State of Ohio, have invented certain new and useful Improvements in Fire-Backs for Stoves, of which the following is a specification, reference being had to the accompanying drawings.

10 The objects sought to be obtained by the use of our invention are, first, to construct a fire-back in such a manner as to provide an air-chamber centrally at the rear thereof in order to prolong the life of same and at the
15 same time afford a construction of such a configuration as will lessen the amount of coal needed to be used; secondly, to provide an auxiliary fire-back which may be detachably connected to the original fire-back when
20 burned out without having to remove the latter from the stove, all of which will be more fully hereinafter set forth.

In the accompanying drawings, Figure 1 is a perspective view of what we shall denominate the "original fire-back" removed from
25 the stove with our improved auxiliary or detachable fire-back connected thereto, showing the application of the latter thereto to cover and protect the burned-away portion of the
30 original fire-back. Fig. 2 is a bottom plan view of our invention, showing the preferred means of connecting the detachable to the original fire-back. Fig. 3 is a vertical section
35 as they appear when in position in a stove and also showing an additional detachable fire-back in position to be used only in case the original fire-back is of extraordinary depth. Fig. 4 is a perspective view of a modified
40 form of original fire-back from that shown in preceding figures. Fig. 5 is a perspective view of one form of locking device for connecting the top portions of the original and detachable fire-backs, as shown in Figs. 1, 2,
45 and 3. Fig. 6 is a detached view of the Z-shaped locking-plate shown in Fig. 3, on an enlarged scale, to assist in locking the two fire-plates in position.

50 Our invention consists, first, in forming or casting with a fire-back an outwardly-enlarged portion or pocket centrally connected thereto

in order to economize fuel and afford an air-space at the rear thereof, and, secondly, to provide an auxiliary or detachable fire-back
55 which may be attached to the original fire-back when burned away centrally, and suitable means for connecting said fire-backs together without having to remove the original fire-back from the stove.

As is well known, the fire-back is the first
60 portion of a stove to become burned out, and quite often great inconvenience is experienced in securing a fire-back of the proper size and make, especially if the stove be of old pattern or out of date. It is also well known
65 that a fire-back is always burned out centrally, where the heat is greatest. To overcome this inconvenience of having to secure a fire-back of certain size and pattern so soon as the original fire-back is burned out, we have provided an auxiliary or detachable fire-back A,
70 adapted to fit over and cover the burned-out portion of the original fire-back B. This fire-back A may be either plain or corrugated; but it is preferred to have formed or cast
75 therewith the central pocket C in order to form an air-chamber between the two fire-backs. This air-chamber serves to prolong the life of the detachable fire-back, and the outward extension thereof forming said air-
80 chamber serves to divide the fuel, placing it under the two pot-holes, where most needed, and by this means a sufficient heat is attained with a less amount of fuel. This feature of forming a pocket with the fire-back for the
85 purposes just mentioned may be advantageously applied to the original fire-back, as shown in Fig. 4, in which case an air-space is formed between said back and the lining D
90 of the oven.

The detachable fire-back A may be locked and connected to the original fire-back B in any desired manner, one mode being shown, which is as follows: The detachable fire-back A has a lateral projection E at its top portion,
95 said lateral projection having a top flange along its outer edge, as shown in Figs. 1 and 3. This lateral extension E is cast with the fire-back A and is inclined on its outer edge, as shown in Fig. 2, said outer edge of
100 this extension being at an obtuse angle to the rear edge of the original fire-back B when

placed in position, as shown in said Fig. 2. Having placed the detachable fire-back A over the original fire-back B, we have provided a sliding lock G, adapted to engage with the flange *e* on the extension E of fire-back A and slide down its inclined surface until the longitudinal lug *g* on said lock comes in contact with and is wedged against the rear edge of the original fire-back B. When in position, this lock G has a top lateral extension *g'*, with a groove *g²* in its under surface, (see Figs. 1, 3, and 5,) said extension overlapping and engaging the flange *e* on the detachable fire-back, on which said lock slides and is held in position.

To add security to said locking device and to prevent the fire-backs becoming disengaged after being locked, it is preferred to employ a thin strip of metal H, bent, as shown in Fig. 6, with its outer edge portions *h* bent in opposite directions to the plane of the body portion thereof. One edge of this strip is inserted between the original fire-back and the oven-lining, as shown in Fig. 3, beneath the rear under surface of the former, the opposite edge *h* of this strip resting beneath the outer edge of extension E on the detachable fire-back, as shown in Figs. 2 and 3, in which position the lug *g* on the lock securely locks and wedges said strip against the original fire-back B, the lateral extensions *h* of said strip serving to prevent any displacement of the two fire-backs. In case the detachable fire-back A should not be of sufficient depth to cover the original fire-back B we have provided a narrow back piece J, which rests loosely against said original fire-back at its end portions and is held in place by means of the detachable fire-back A overlapping said piece J, as shown in Fig. 3.

The advantages of our invention are apparent and have been partially set forth hereinbefore in the objects sought to be attained. The detachable fire-back A will conform to and cover the burned-out portion of any or-

dinary fire-back now in use without having to remove the latter from the stove, and by this means the stove may be readily and quickly repaired. The formation of the outwardly-projecting pocket C is another valuable feature of our invention to save fuel and prolong the life of the fire-back.

The detachable fire-back and locking device are cheap of manufacture, ready of shipment, and can be kept in stock ready to meet the demands of the trade.

We are aware that it is not new, broadly, to provide a detachable fire-back or covering for an original fire-back; also, that it is not new to provide a fire-back with an air-chamber; but

What we claim as new, and desire to secure by Letters Patent, is—

1. In combination with an original fire-back B, the detachable fire-back A, the latter having a central exterior projection C for the purpose of dividing the fuel in the fire-chamber of a stove, and suitable means for connecting said fire-backs together, as set forth.

2. The combination of original fire-back B, detachable fire-back A, the latter having a wedge-shaped extension E, with a top flange *e*, lock G, having a lateral extension *g'*, with a groove *g²* therein, in which flange *e* engages, said lock also having a wedge-shaped lug *g* and plate H, the extension *h* of said plate at one side engaging beneath the original fire-back, the extension *h* on the opposite side engaging the top face of lug *g*, substantially as set forth.

3. In combination with the original fire-back B and detachable fire-back A, the auxiliary back J, the latter engaging between said original and detachable fire-backs, as and for the purposes set forth.

JAMES HATFIELD.
JOHN M. BENNETT.

Witnesses:

WILSON B. BRICE,
O. M. HILL.