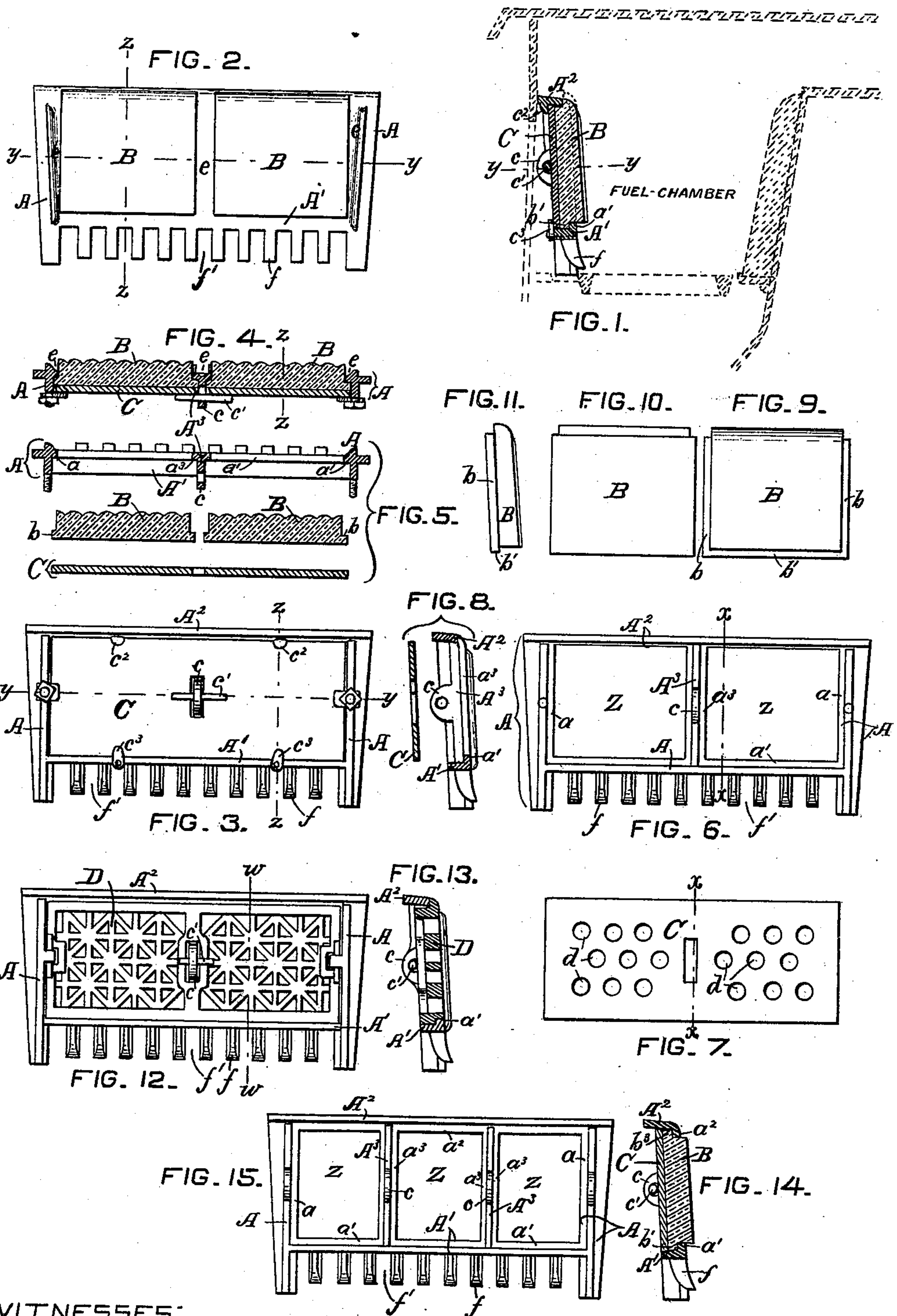


(No Model.)

J. H. GOODFELLOW.
Fire Plate for Stoves.

No. 235,081.

Patented Dec. 7, 1880.



WITNESSES:

A. E. Prentiss.
James T. Goodfellow.

INVENTOR:

John H. Goodfellow

UNITED STATES PATENT OFFICE.

JOHN H. GOODFELLOW, OF TROY, NEW YORK.

FIRE-PLATE FOR STOVES.

SPECIFICATION forming part of Letters Patent No. 235,081, dated December 7, 1880.

Application filed July 23, 1880. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. GOODFELLOW, of the city of Troy, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Fire-Plates for Stoves, described and set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical section of my invention, taken in the line $z z$ in Figs. 2, 3, and 4, and shown in connection with the fire-chamber part of a cook-stove, represented in section by broken lines. Fig. 2 is an elevation of that side of my invention facing the inside of the fire-chamber in Fig. 1, and hereinafter mentioned as the inner or fire side of my invention. Fig. 3 is an elevation of the side reverse of that shown in Fig. 2, and hereinafter mentioned as the outer side of my improved fire-plate. Fig. 4 is a horizontal section as taken at the line $y y$ in Figs. 1, 2, and 3. Fig. 5 is a like section as in Fig. 4, but showing the parts thereof detached and separated from each other. Fig. 6 is an elevation of the outer side of the frame part of my invention. Fig. 7 is an elevation of one side of a plate which forms a part of my invention. Fig. 8 is a vertical section as taken at the line $x x$, of the parts shown in Figs. 6 and 7. Figs. 9, 10, and 11 are, respectively, an inner side, an outer side, and an edge elevation of a fire-brick as it would appear on being removed from one of the open spaces Z within the frame shown in Fig. 6. Fig. 12 is an outer-side elevation of a modified form of my invention, and Fig. 13 is a vertical section of the same as taken in the line $w w$, Fig. 12. Fig. 14 is a similar section of my invention, showing other modifications therein, and Fig. 15 is an outer-side elevation of the modified frame part of the same, as sectionally shown in Fig. 14.

My invention is designed to be used in connection with the fuel-chamber of cooking stoves and ranges, and to form the fire-wall of such chamber next to the front or outside side-casing of the stove or range, and is adaptable to be used in connection with what is known as the "anti-clinker grate" principle in stoves, and it affords facility for readily and conveniently inserting and removing the fire-brick or lining in such fire-plate from its outer side;

also, for firmly holding such fire-brick or lining, both inwardly and outwardly, in its place, and also lessening the liability of its being warped, broken, or otherwise disarranged while in use.

In the drawings, in which like characters refer to corresponding parts in the various figures illustrating my invention, is shown a frame composed of the vertically-arranged bar-like end parts, A , connected at or near their lower ends and at their top ends by the bar-like rails A' and A^2 , the parts A and A' being provided with shoulders or flanges a and a' , formed on a greater or less extent of their inner or fire side, and projecting, in the same plane, into the space Z in such a manner as to form a bearing for corresponding shoulders or flanges b and b' on the outer-side edges of the fire-brick or lining B when inserted in its place in the space Z from the outer side of the frame. When this fire-plate frame is necessarily of such length as to require it, I form or provide this frame with one or more vertically-arranged intermediate bars, A^3 , having flanges a^3 formed upon both sides of the inner edge thereof in a manner similar to the flanges a on the parts A of the frame, thus giving the frame additional strength and resistance to the parts A' and A^2 being warped by the heat of the fire, and at the same time affording a greater flange-bearing surface for the fire-brick or lining B than would be the case were the bar or bars A^3 omitted.

In Figs. 14 and 15 the upper bar or guard, A^2 , of the frame is shown provided with a flange, a^2 , arranged in a manner similar to and for the same purpose as the flanges a , a' , and a^3 on the other parts of the frame, and the upper outer-side edge of the brick B with a corresponding flange, b^3 , to rest against the outer side of the flange a^3 ; but I generally prefer to form the upper bar, A^3 , without the flange a^3 , and to make the brick or lining B in such a manner and of such shape as to permit its upper inner-side edge to project even with or above the top of the upper bar, A^3 , so as to protect this part of the frame from the excessive heat of the fire. (See Figs. 1, 2, 6, 8, 9, 10, and 11.)

In order to lock or hold the fire-brick or lining B securely in its place in the space Z as

formed by the frame, I provide the outer side of the frame with lugs *c*, adapted to receive pins or wedges *c'* or nibs *c''* and turn-buttons *c'''*, or other known equivalent therefor.

5 With a view to affording a more uniform and even bearing against the outer side of the brick or lining B than would be the case were the above-mentioned locking device to bear against the said brick or lining only, I provide
10 the frame with a removable plate, C, of such size and shape as to cover and fit against the outer side of the brick or lining B, and to be held in such position by the said locking device.

15 In Fig. 7 the removable plate C is shown provided with perforations *d*, which may be of any suitable and desirable shape and size, so that when the brick or lining B is removed from the frame, and the plate C reinserted in
20 its place in said frame and locked therein, my invention will be adapted for use in burning wood or other fuel requiring a freer and more copious draft into the fuel-chamber than is afforded when the solid brick or lining B is
25 used; or, should it be desired, the brick B (and plate C if employed) may be removed, and an open-work lining, D, of any suitable and desirable pattern, may be substituted therefor, as shown in Figs. 12 and 13.

30 The space *e*, in front of the bars A and the bar or bars A³, and at the vertically inner side edges of the fire-brick B, when these parts of my invention are constructed and arranged together substantially as shown in Figs. 1, 2,
35 4, and 14, affords a place for the ashes therein as a protection of the vertical bars of the frame at such places from the excessive heat of the fire.

In adapting my improved fire-plate to be
40 used in connection with what is known as the "anti-clinker grate" principle in cooking-stoves and ranges, I provide the lower bar or rail, A', with downwardly-extending fingers *f*, with intermediate open spaces, *f'*.

45 What I claim as my invention is—

1. The frame composed of the parts A A' A², and provided with flanges *a a'*, adapted to receive from its outer side the removable fire-brick or lining B, and provided with means,
50 substantially as described, for locking such

brick or lining in place, all being constructed and arranged substantially as shown and described.

2. The frame composed of the parts A A' A², and provided with flanges *a a' a''*, adapted
55 to receive from its outer side the removable fire-brick or lining B, and provided with means, substantially as described, for locking such brick or lining in place, all constructed and arranged substantially as shown and set forth. 60

3. The frame composed of the parts A A' A² A³, and provided with flanges *a a' a''*, adapted to receive fire-brick or lining B from its
65 outer side, and having device for locking such brick or lining in place, all being constructed and arranged substantially as shown and described.

4. The frame composed of the parts A A' A², and provided with bearing-flanges on the inner side of such frame, adapted to receive
70 fire-brick or lining B from its outer side, in combination with removable plate C, and having the described means for locking the said plate in place, all being constructed and arranged substantially as shown and described. 75

5. The combination of the open frame A A' A², having inner-side bearing-flanges *a a'*, the fire-brick or lining B, having outer-side corresponding bearing-flanges *b b'*, and device for
80 locking such brick or lining in place, all being constructed and arranged substantially as shown and set forth.

6. The combination of the open frame A A' A², having inner-side bearing-flanges *a a'*, the fire-brick or lining B, having outer-side bearing-flanges *b b'*, the back plate, C, and device
85 for locking such lining B and plate C in place, substantially as shown and described.

7. The frame A A' A², having apertures Z, adapted to receive fire-brick or lining B, sub-
90 stantially as described, and provided with downwardly-projecting fingers *f* along the bar A', as shown and set forth.

The above specification signed by me this 12th day of June, 1880.

JOHN H. GOODFELLOW.

In presence of—

A. E. PRENTISS,

JAMES T. GOODFELLOW.