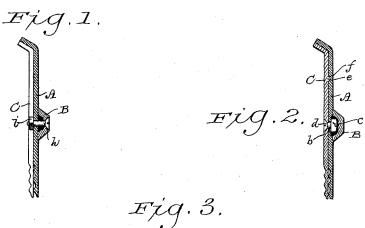
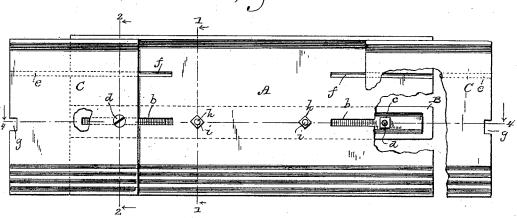
L. WOOD. ADJUSTABLE FIRE BACK.

No. 418,482.

Patented Dec. 31, 1889.





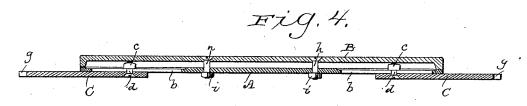


Fig.5.

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UNITED STATES PATENT OFFICE.

LYMAN WOOD, OF RACINE, WISCONSIN.

ADJUSTABLE FIRE-BACK.

SPECIFICATION forming part of Letters Patent No. 418,482, dated December 31, 1889.

Application filed May 7, 1889. Serial No. 309,900. (No model.)

To all whom it may concern:

Be it known that I, LYMAN WOOD, of Racine, in the county of Racine, and in the State of Wisconsin, have invented certain new and useful Improvements in Adjustable Fire-Backs; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to adjustable fire-10 backs; and it consists in certain peculiarities of construction and combination of parts, to be hereinafter described with reference to the accompanying drawings and subse-

quently claimed.

In the drawings, Figures 1 and 2 represent vertical transverse sections respectively taken on lines 1 1 and 2 2 of Fig. 3; Fig. 3, a rear elevation of a fire-back constructed according to my invention, certain of the parts being broken away for the purpose of better illustration; Fig. 4, a horizontal section on line 4 4, Fig. 3; and Fig. 5, an enlarged detail sectional view illustrating graduated corrugations that are made in the lower por-25 tion of the main plate and its adjustable

Referring by letter to the drawings, A represents the main plate of my fire-back, provided at or about its vertical center, near 30 the ends, with longitudinal slots b, the latter being preferably countersunk upon the front side of said plate, as best illustrated in

Fig. 4.

 $\bar{\mathbf{S}}\text{ec}\mathbf{u}\mathbf{r}\mathbf{e}\bar{\mathbf{d}}$ to the front side of the plate \mathbf{A} is a channel-rib B for the reception of nuts c on bolts d, the latter being passed through lateral extension-leaves C and the slots b in said plate to adjustably secure the leaves in position, the nuts being held against rota-40 tion by the countersinks in said plate. In order to prevent pivotal movement of the leaves C, they are provided with longitudinal ribs e, that engage corresponding depressions f in plate A, as is best illustrated in 45 Figs. 2 and 3.

In my device I countersink the bolt-openings in the leaves C, and thus bring the heads of the bolts d flush with said leaves,

B on the plate A, whereby there is nothing 50 projecting from the rear of the device other than the usual flanges at the top of said plate and leaves, while at the same time said bolts and nuts are protected from direct contact with the fire by means of said channel- 55 rib.

While I have shown the channel-rib B as closed at its ends and detachably secured to the front of the plate A by means of bolts h and nuts i, it is obvious that were said rib 60 and plate cast in one piece the ends of the rib would be left open in order to facilitate the removal of the necessary core.

In that class of devices to which my invention relates it is usual to corrugate the 65 lower portion of the plate A and its leaves C, in order that sections of the same may be readily broken off to adjust such a device to the depth of a stove or fire-place in which it is to

be placed.

In fire-backs as usually constructed the corrugations in the main plate and its laterally-adjustable leaves are uniform as regards the thickness of metal between the convex portions of said corrugations. This being 75 the case, extreme care has to be exercised in order to prevent breaking off more than is desirable when fitting the device to a stove or fire-place. I prefer to graduate the corrugations, as is illustrated in the detail sec- 80 tional view, Fig. 5, the thickness of metal between the convex portions of said corrugations being gradually increased as the noncorrugated portion of a main plate or adjustable leaf is approached. By means of 85 the construction just described the lower one of convex corrugations on a main plate or adjustable leaf will be the easiest to break off, the next one will require more effort, and so on throughout the series.

Having thus fully described my invention, what I claim as new, and desire to secure by

Letters Patent, is-

In a fire-back, the combination of the main plate A, provided with the longitudi- 95 nal slots b, countersunk upon the front side thereof, the channel-rib B, secured to said and the nuts c come within the channel-rib front side of the main plate, leaves C, arranged on the rear side of said main plate, the nuts c, arranged within said channel-rib to engage the countersinks in said main plate, and the bolts d, passed through said leaves and slots to engage said nuts, substantially as set forth.

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In testimony that I claim the foregoing I

have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses. LYMAN WOOD.

Witnesses:

N. E. OLIPHANT, WILLIAM KLUG.