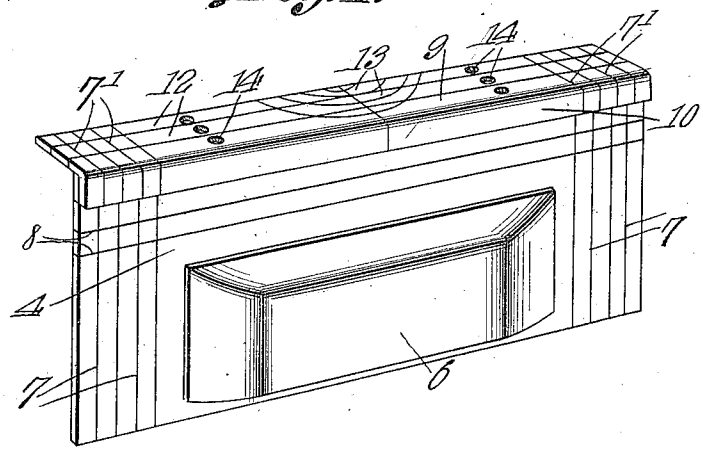
D. DEE.

FIREBACK.

APPLICATION FILED SEPT. 14, 1912.

1,068,418. Patented July 29, 1913.

Fig. 1.



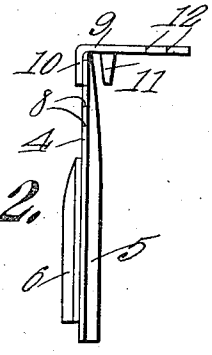


Fig. 2.

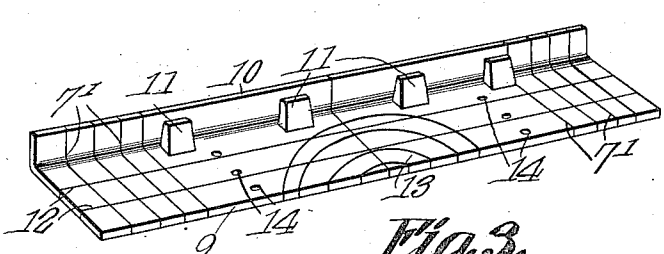


Fig. 3.

Witnesses

J. R. Tomlin

L. H. Wilson.

Daniel Dee,

Inventor

by C. A. Snow & Co.

Attorneys

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

DANIEL DEE, OF CHICAGO, ILLINOIS.

FIREBACK.

1,068,418. Specification of Letters Patent. Patented July 29, 1913.

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To all whom it may concern:

Be it known that I, DANIEL DEE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Fireback, of which the following is a specification.

The present invention appertains to adjustable fire backs or repair linings for stoves.

At present several forms of adjustable fire backs are in common use, one form consisting in a plurality of parts adjustably connected, as illustrated in Patent No. 372,577 and Patent No. 1022630. The other form in common use is constructed of a single piece having an upper flange and having breaking grooves at its ends and lower edge, the breaking grooves permitting the ends and lower edge to be broken away so as to accommodate the particular stove to which the fire back is to be applied. These forms of fire backs are objectionable, the former being readily burned out and distorted and not being subject to hard usage, and the latter being necessarily thin along its lower edge, where the greatest wear occurs, thereby causing the same to be readily burned out when in use.

It is the object of the present invention to provide a novel and improved fire back which shall eliminate the above and other objections, and which shall be susceptible of hard usage and wear, the fire back being adjustable to accommodate various sizes and styles of stoves.

To the foregoing and other ends, the present invention resides essentially in providing the lining with a series of breaking grooves along its upper edge, and providing a detachable flange engaging the upper edge of the lining, thus permitting the lower portion of the lining to be constructed of considerable thickness in order to withstand great wear. The ends of the lining and flange are both provided with series of breaking grooves so that the lengths of the same may be shortened properly to accommodate the stove, the breaking grooves along the upper edge of the lining permitting the upper edge of the lining to be broken away, so as to adjust the lining to the depth of the fire box.

The invention has been illustrated in its preferred embodiment in the accompanying drawings, wherein similar reference characters have been employed to denote corresponding parts, and wherein—

Figure 1 is a perspective view of the improved fire back. Fig. 2 is an end elevation thereof. Fig. 3 is a perspective view of the flange or cap.

Referring specifically to the drawings, the lining has been designated by the numeral 4, the same being constructed of cast iron or other fragile material, and being of a size and contour greater than that of the ordinary fire back. The upper edge and ends of the lining 4 are thin, and on its rear face, the lining is thickened toward its lower edge and toward its center from the ends and upper edge, as designated by the numeral 5 in Fig. 2. The lining is also provided on its forward face with a boss 6, the said boss being arranged adjacent the lower edge of the lining and terminating short of the ends and upper edge thereof. Thus, the boss and thickened portion of the lining will permit the lining to be subject to hard usage without burning out, it not being necessary to have the lower edge of the lining thin, as is the case in linings wherein the lower edge is to be broken away. The lining will therefore have a greater resistance against burning out than the forms of fire backs as above pointed out.

The lining 4 is provided at each end with a series of breaking grooves or incisions 7, the said grooves permitting the ends of the lining to be broken away for accommodating the particular stove to which the lining is to be applied and the lining is provided along and parallel with its upper edge with a series of similar grooves or incisions 8, which permit the upper edge of the lining to be broken away so as to decrease the height of the lining according to the requirements. As the upper edge of the lining is subjected to less wear, it may therefore be thin, so as to permit the upper edge to be broken away along the grooves 8. The ends of the lining are also subject to less wear, so that it will appear that the lining may merely be thickened between the series of grooves 7 at the ends and below the upper series of grooves 8.

The flange or cap of the fire back has been

designated by the numeral 9, the same being constructed of a separate piece of cast iron or other fragile material. This flange is seatable at its forward edge on the lining and has a depending lip 10 along its forward edge to overhang the front face of the lining and a series of depending lugs 11 adjacent to and in rear of the said lip to stand in rear of the lining, said lip and lugs being adapted to straddle the upper edge of the lining 4. The lugs 11 are sufficiently spaced from the lip 10 in order to provide a space between the lugs and the upper edge of the lining 4, which permits a suitable portion or part of the stove proper to be received between the upper edge of the lining 4 and the said lugs, and which will also permit the flange 9 to be swung relative to the lining 4 according to the conditions. The flange or cap is thus detachably mounted upon the upper edge of the lining, so that the flange may be engaged to the upper edge of the lining after the lining has been sufficiently broken away to accommodate the stove.

The flange 9 is provided at each end with a series of breaking grooves or incisions 7′ complementing the grooves 7 of the lining, so that the ends of the flange may be broken away to correspond with the lining. The flange 9 is also provided with a series of longitudinal breaking grooves or incisions 12, which permit the rear edge of the flange to be broken away so that the flange has the proper width necessary, and in addition, the flange is provided at its rear edge and centrally thereof, with a series of arcuate breaking grooves or incisions 13, which will permit the flange to be broken away centrally, to accommodate certain parts of various styles of stoves. The flange is also provided with two series of apertures or bolt holes 14 running transversely thereof and arranged between the various grooves 12, the said apertures being adapted for the reception of bolts or other securing members for securing the flange in place within the stove, as will be understood. Thus, it will appear that an adjustable or break-off repair lining has been provided consisting of but two parts, and so constructed that the lower edge of the lining may be thick, and eliminating any cumbersome and weakening adjustments such as are shown in the patents before referred to.

The present fire back is extremely simple in construction and may be inexpensively manufactured, the same being durable, convenient and efficient in use, and being adjustable to various styles and sizes of stoves.

Particular attention is directed to the fact that the upper portion of the front face of the single upright rectangular repair lining is flat and is provided with a series of breaking grooves parallel with and along the upper edge; that the lower portion of the front face of the lining is provided with a boss having its upper edge parallel with and arranged directly below the lower breaking groove; and that the rear face of the lining is lightly beveled from the upper edge to a point below the plane of the lower breaking groove, attention also being directed to the fact that the horizontal flange is seatable on the upper edge of the lining and has a depending lip along its forward edge adapted to fit snugly against the various portions of the front face of the lining adjoining the breaking grooves, and that the flange is provided with a plurality of depending lugs directly in the rear of the lining, the forward faces of the lugs being beveled corresponding with the bevel of the rear face of the lining. Thus, it will be noted that as the various upper portions of the lining are broken away, the flange may seat on the upper edge of the lining with the lip bearing flatly against the forward face thereof, so that the relative positions of the lining and the flange are the same notwithstanding the adjustment or breaking away of the lining. Also, when the upper portion of the lining is completely broken away above the lower breaking groove, it will be noted that the lower or free edge of the lip is adapted to seat or be disposed in close relation with the upper edge of the boss, this smaller size of the lining, or the next larger size, being the most common in use, so that the lip will coöperate with the boss to provide a practically continuous surface. It will also be noted that as the flange is moved downward to seat on the upper edge of the lining, the front faces of the lugs will be brought closer to the rear face of the lining, this permitting a portion of the stove or other suitable part to be clamped tightly between the rear face of the lining and the front faces of the lugs. In this manner, when the upper portion of the lining has been completely broken away to the lower breaking groove, the lip and the lugs being engaged over the upper edge of the lining, will bind against the faces of the lining and secure a rigid joint.

Having thus described the invention, what is claimed as new is:—

In a fire back for cook stoves, an upright rectangular repair lining, the upper portion of the front face of which is flat and provided with a series of breaking grooves parallel with and along the upper edge, the rear face of the lining being slightly beveled from the upper edge to a point below the plane of the lower breaking groove, in combination with a horizontal flange seatable on the upper edge of the lining and having a depending lip along its forward edge adapt-

ed to fit snugly against the various portions of the front face of the lining and adjoining the breaking grooves, the flange also having a plurality of depending lugs directly in rear of the lining, the forward faces of the lugs being beveled corresponding with the bevel of the rear face of the lining.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

DANIEL DEE.

Witnesses:

EDWARD C. COLSON,

GEO. W. PILKINGTON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."