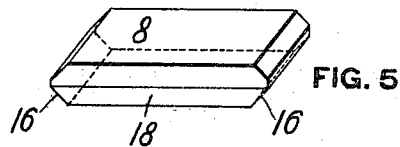
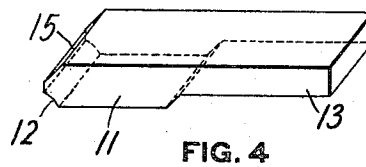
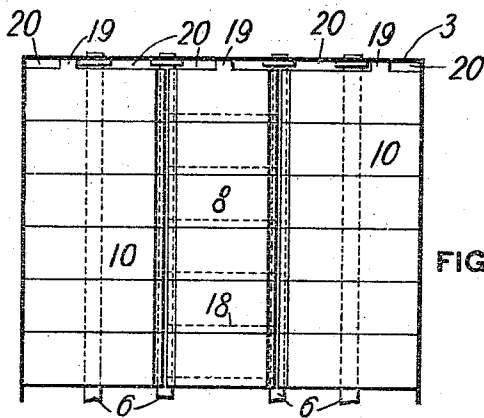
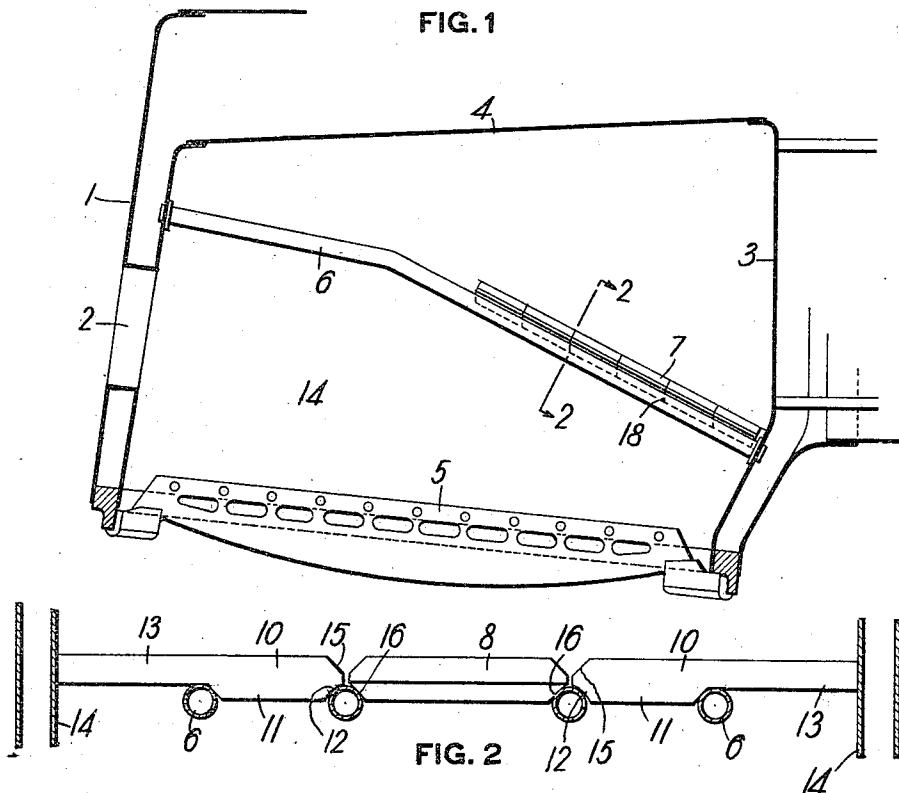


H. D. SAVAGE.
 BAFFLE WALL FOR LOCOMOTIVE FIRE BOXES.
 APPLICATION FILED JUNE 1, 1911.

1,033,953.

Patented July 30, 1912.



WITNESSES

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HARLOW DOW SAVAGE, OF ASHLAND, KENTUCKY.

BAFFLE-WALL FOR LOCOMOTIVE FIRE-BOXES.

1,033,953.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HARLOW D. SAVAGE, a resident of Ashland, in the county of Boyd and State of Kentucky, have invented a new and useful Improvement in Baffle-Walls for Locomotive Fire-Boxes, of which the following is a specification.

This invention relates to baffle walls for locomotive fire boxes.

The object of the invention is to improve the arrangement of fire brick forming such baffle walls in order to facilitate repair of tubes, reduce the cost of fire brick, and for convenience of handling.

In the accompanying drawing Figure 1 is a longitudinal section through a fire box provided with my improved baffle wall; Fig. 2 is a transverse section on the line 2-2, Fig. 1; Fig. 3 is a plan view of the baffle; and Figs. 4 and 5 are perspective views of the brick.

In the drawings 1 represents the front wall of the locomotive fire box provided with a firing opening 2; 3 represents the rear wall of said fire box; 4 the top thereof, and 5 the grate. Extending between the front and rear side walls are the usual longitudinal tubes 6 for supporting the baffle wall. The fire box is provided with four longitudinal tubes 6, which, as shown, are connected in the circulation of the boiler and extend substantially parallel to the central longitudinal vertical plane of the fire box, at least for those portions of their length which support the baffle wall, and are longitudinally inclined, as shown in Fig. 1.

The baffle wall 7 is formed by three rows of brick, to wit, a central row 8 and two side rows 10. The brick of the side rows are of special shape, having their inner portions quite thick to provide portions 11 extending downwardly between the tubes 6 and having the ends of said depending portion cut away in any desired manner, either on a bevel or concave or other shaped rabbet or groove, as shown at 12, to rest upon the tubes and bear thereagainst and prevent lateral movement of the brick. The outer ends 13 of these brick extend out to the side walls 14 of the fire box, and are thinner than their inner ends so that the superior weight of the inner ends holds the brick in horizontal position without means for holding up or supporting their outer ends. The inner ends of these brick are also beveled

away from the top as shown at 15. The brick 8 of the intermediate row have their ends beveled off both from the top and bottom, so as to form bevel faces 16 resting upon the two intermediate tubes 6 and have a part of the brick projecting downwardly between said tubes to prevent lateral movement, but nevertheless so shaped that the bevel faces can slide more or less up on the tube 6 under contraction and expansion. The beveling away of the adjacent ends of the brick at the upper side permits the brick to slide past each other under extreme expansion and contraction. The ends of adjacent brick are quite acute and slightly spaced apart so that they can not readily fuse together.

The side faces of the brick are preferably beveled or undercut slightly, as shown at 18, so that adjacent brick longitudinally of the bevel overlap somewhat so as to mutually support one another and prevent the same from readily tipping or tilting and at the same time forming a broken joint which offers more obstruction than would a straight joint to the passage of flame there-through. Preferably the lowermost brick of each row is provided with a projection or projections 19 for contacting with the rear side plate 3 of the fire box and provide spaces 20 through which flame can pass.

The brick described are of such simple construction that they can be readily manufactured, handled and transported, and can be placed upon the circulating tubes in any standard locomotive fire box without requiring alteration therein or the application of attaching means thereto. The baffle walls constructed from these brick have the same advantages, facilities and economy of replacement or repair, in the case of replacement of a circulating tube or for other causes as any other sectional baffle wall. At the same time the brick are of such simple shape that there is considerable economy in their manufacture, handling and transportation, as well as from breakage, over some prior forms of sectional brick for the same purpose.

What I claim is:

1. A locomotive fire box comprising in combination, side walls, longitudinally inclined circulation tubes between said side walls, and a baffle wall on said tubes comprising two opposite side rows of like brick having their inner portions supported on

the outer pairs of adjacent circulation tubes and their outer portions extending in opposite directions out to the side walls, the inner portions of said side brick being of greater thickness and weight than the outer portions and projecting downwardly between the supporting tubes, and intermediate brick placed end to end with said side brick and resting upon and supported by the intermediate circulation tubes, said intermediate brick having their lower end edges beveled and adapted to move laterally and ride upon the side brick during expansion and contraction and having portions extending down between said intermediate circulation tubes.

2. A locomotive fire box comprising in combination, side walls, longitudinally inclined circulation tubes between said side walls, and a baffle wall on said tubes comprising two opposite rows of like side brick supported at their inner ends and intermediate their ends upon two adjacent outer tubes and having their outer portions extending out to the side walls, said side brick having their inner portions of greater thickness and weight than the outer portions and

having a shoulder on their lower faces intermediate their ends and having the lower inner end corners cut away, whereby portions of said brick extend downwardly between the supporting tubes with the shoulders and cut-away portions abutting against said tubes to prevent lateral displacement of said side brick, and a row of intermediate brick having their lower end edges cut away and resting upon and fitting between the intermediate circulation tubes with portions of said brick extending down between said tubes, said side and intermediate brick being located end to end and being cut away at the upper edges of their facing ends to provide acute facing end edges, and said intermediate brick being adapted to be used either face up and to move laterally and ride upon said side brick during expansion and contraction.

In testimony whereof, I have hereunto set my hand.

HARLOW DOW SAVAGE.

Witnesses:

E. H. GARTRELL,
M. L. MALZBERGER.