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FIRE WALL CONSTRUCTION

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FIRE-WALL CONSTRUCTION.

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This invention relates generally to improvements in fire walls, and is particularly directed to a header element for use in such walls, the main object of the invention being to provide means loosely connectible with the element to prevent separation of its parts in case of breakage.

The header element is of the type and for the purpose set forth in my copending application Serial Number 140,888, filed October 11th, 1926, for fire walls, but the present invention relates to a header of the above-mentioned type having a shallow recess in one face to loosely receive a metallic reinforcing element, adapted to engage the recess to prevent separation of the parts of the block in case the block is broken. Features of the invention include the use of the block in a wall structure as well as the block in combination with the reinforcing element.

In the accompanying drawings forming a part of this specification:

Figure 1 is a perspective view of a wall construction using the improved blocks of this invention;

Figure 2 is a plan view of the block showing the reinforcing element therein;

Figure 3 is a transverse section of Figure 2; and

Figure 4 is a detail perspective view of the metallic reinforcing element.

The wall illustrated herein is substantially of the type shown in my copending application above referred to. The metallic superstructure comprises an end post 1 and buckstay elements 2 extending longitudinally of the wall at the outer side. As in the application referred to, the header elements 3 are laid crosswise of the buckstays as shelf-forming headers, the shelf being formed at the inner side of the wall to receive the replaceable portion of the wall which is constructed of fire brick, generally of common form and size. The wall is laid in a manner similar to that set forth in the application above mentioned.

Each header element has a longitudinally arranged depression 5 therein, in this instance having the form of an elongated letter I, the transverse portions of the depression being indicated at 6. The reinforcing element is indicated at 7 and also has the form of an elongated letter I, the transverse portions 8 of which engage the sockets 6 of the depression as stops, in a way to prevent separation of the parts in a longitudinal direction in case the block is fractured, but also in a manner to permit free expansion of the block in a longitudinal direction.

In building the wall, the reinforcing elements are simply dropped within the cavities or depressions formed in the upper face of the block. A loose fit is provided so that the block may freely expand and contract. The upper surface of the bars, are below the level of the upper surface of the headers, see Figure 3.

The block may be used in any form of wall, the main part of invention residing in the provision of a block of the nature described, having a depression and having a reinforcing element loosely arranged within the depression for the purpose set forth.

In order to cheapen the wall, I insert an intermediate course of header elements between those which are held on the metallic buckstays. These headers are of less length than those supported by the buckstays, and extend only part way through the wall, their ends being exposed only at the outer side of the wall. Between the buckstay-supported headers are arranged courses 10 of fire bricks laid as headers and additional courses of bricks laid as stretchers are indicated at 11. These latter courses protect the front ends of the intermediate header elements. The illustration shows the upper part of the fire wall, but at the lower part the buckstay-supported headers generally extend only part way through the wall and are protected at the lower portion of the wall in the same way that the intermediate headers are protected at the upper portion.

I claim as my invention:

1. A wall having a permanent portion comprising a plurality of superposed channel irons, extending lengthwise of the wall, rows of fire brick laid upon the irons as headers and projecting at the inner side of the wall to form shelves, each header element having an I-shaped depression extending lengthwise and each header having an I-shaped bar loosely engaged in a corresponding I-shaped depression, and bricks filling the space between the headers and overlying the depressions.

2. A wall having a permanent portion comprising rows of fire bricks laid as headers and supported by a masonry wall, with the headers projecting at the inner side of the wall to form shelves each header having a longitudinally disposed depression in its up-
per face, and each having a bar loosely engaged in the socket, the socket and bar being constructed for engagement to prevent separation of the sections of the block when the same is broken, and bricks filling the space between the headers and covering the depressions, some of said bricks forming a replaceable wall portion.

3. A header having a longitudinally disposed depression, and a bar engaged in the depression, the depression and bar being cooperative to prevent separation of the sections of the header when the header is broken transversely.

4. A header having a longitudinally disposed depression, and a bar loosely engaged in the depression, the depression and bar being cooperative to prevent separation of the sections of the header when the header is broken transversely.

5. A header element having a groove in one face side, which occupies a horizontal position when the element is laid, said groove comprising a longitudinally extending portion and transversely arranged portions, and a bar disposed within said groove and having transversely arranged portions engaging with the corresponding portions of the groove to prevent longitudinal separation of the sections of the block when broken transversely, one of the transverse portions lying at that margin, which corresponds to the outer end of the header when laid.

6. A header element having a groove in one face side, which occupies a horizontal position when the element is laid, said groove comprising a longitudinally extending portion and transversely arranged portions, and a bar disposed within said groove and having transversely arranged portions engaging with the corresponding portions of the groove to prevent separation of the sections of the block when broken transversely, one of the transverse portions lying at one margin of the block and the opposite transverse portion lying adjacent the opposite end of the header.

In witness whereof, I have hereunto set my hand this 22nd day of November, 1926.

MICHAEL LIPTAK