June 7, 1932. G. W. HARTLAND 1,862,084

DAMPER

Filed June 9, 1930 2 Sheets-Sheet 1

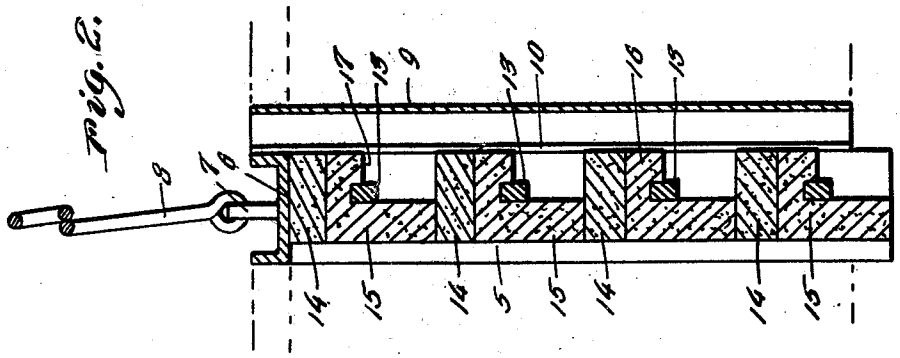


Fig. 2.

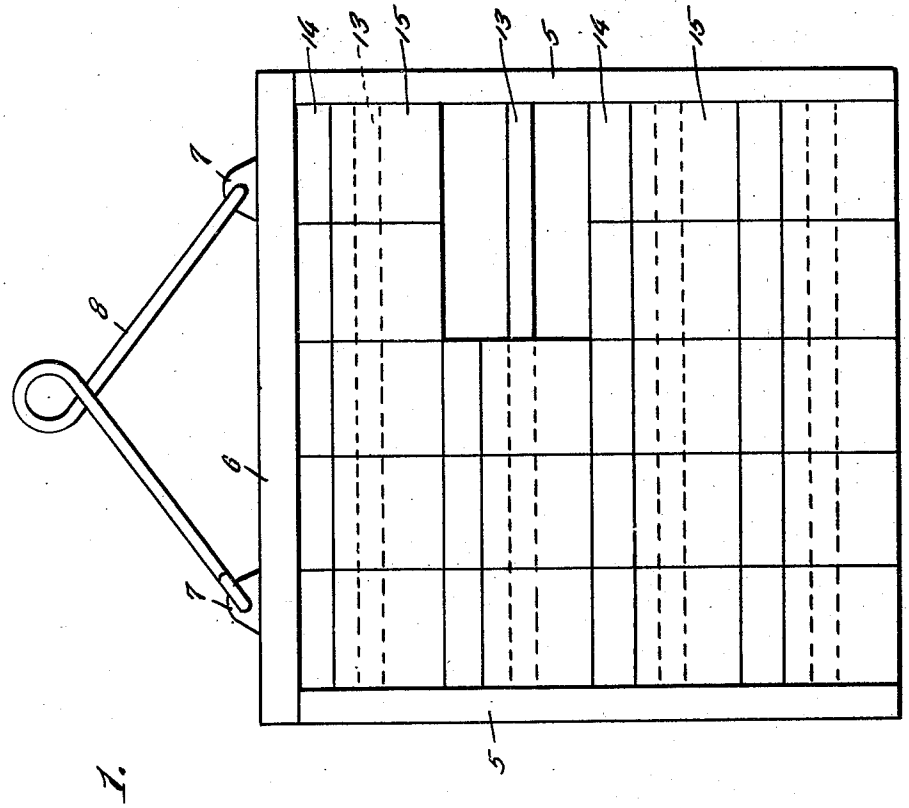


Fig. 1.

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June 7, 1932. G. W. HARTLAND 1,862,084

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Filed June 9, 1930 2 Sheets-Sheet 2

Fig. 5.

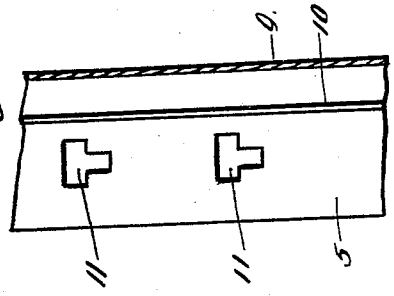


Fig. 6.

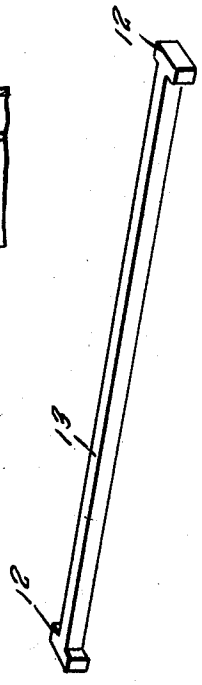


Fig. 7.

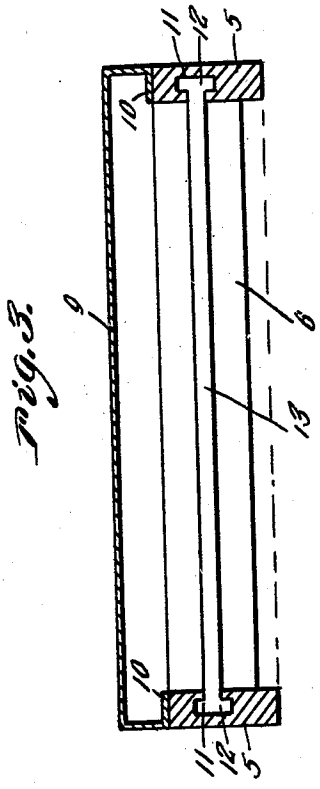
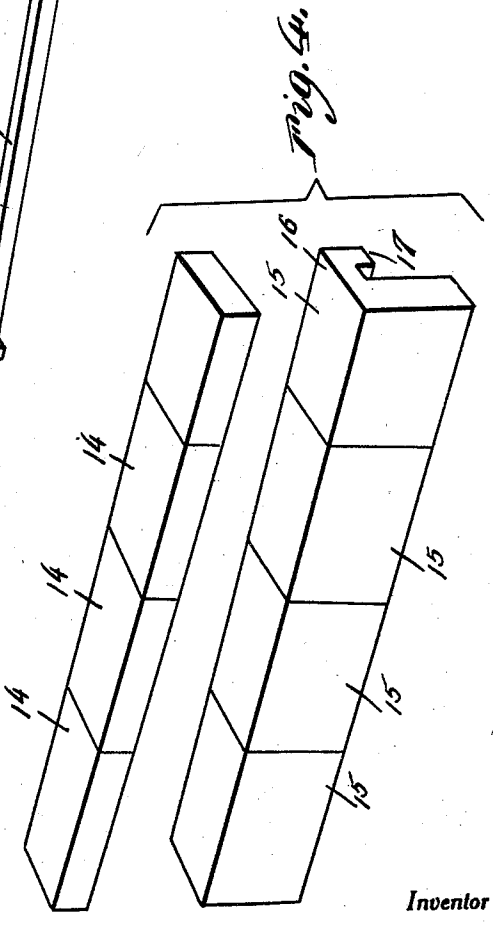


Fig. 8.



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UNITED STATES PATENT OFFICE

GEORGE WILLIAM HARTLAND, OF BUFFALO, NEW YORK

DAMPER

Application filed June 9, 1930. Serial No. 460,065.

This invention appertains to new and useful improvements in dampers, and more particularly to a novel damper especially adapted for use in incinerator furnaces.

The principal object of this invention is to provide a damper structure wherein the parts thereof are capable of being readily disassembled for the purpose of repair or replacement of parts.

It will be noted in the following description and claims, that the invention is possessed of numerous other highly important objects and advantages.

In the drawings:—

Figure 1 represents a side elevational view of the novel damper with several elements thereof removed to disclose one of the hanger bars.

Fig. 2 represents a vertical sectional view through the novel damper structure.

Fig. 3 is a horizontal sectional view through the damper.

Fig. 4 represents a perspective view disclosing the rows of the refractory blocks as they are positioned when assembled in the damper.

Fig. 5 is a fragmentary vertical sectional view through the damper with the detachable elements removed.

Fig. 6 represents a perspective view of one of the hanger bars.

Referring to the drawings wherein like numerals designate like parts, it can be seen that the novel damper comprises a frame made up of a pair of side members 5—5, and an upper connecting member 6 in the form of a U-bar. This U-bar 6 has its flanges upturned and is equipped with ears 7—7 to which the ends of the bail 8 are secured. A shield of sheet metal is denoted by numeral 9 and is disposed across one side of the frame and flanged as at 10 for attachment to the side members 5—5.

The side members 5 have key slots 11 therein at predetermined spaced intervals to receive the T heads 12 at the ends of the hanger bars 13. It is preferable that these bars 13 and any other part of the structure desired, be made of some suitable special alloy, whereas the blocks 14 and 15 are made up of some suitable refractory material.

It will be observed that the blocks 15 have laterally disposed portions 16 and downwardly disposed flanges 17, and between the flanges 17 and the block proper, a space exists sufficient to receive one of the bars 13. These blocks are arranged end to end on each of the bars 13 as in the manner clearly shown in Figs. 1 and 2.

With the blocks 15 in this position on the bars 13, spaces will exist between the upper U-bar 6 and each succeeding row of the block 15. In order to lock these blocks 15 in place to prevent displacement thereof, the rectangular-shaped blocks 14 are inserted between the rows of blocks 15 so that there will be no possibility of vertical movement of the blocks 15, such as would permit accidental displacement of the same from the bars 13.

It can now be seen that first by removing the blocks 14, the blocks 15 can be detached from the bars 13, after which the bars 13 can have their heads 12 detached from the side members 5—5, thus leaving the frame in condition to be re-supplied with new elements.

Obviously, this damper is to be mounted in some suitable guideway in the passageway of an incinerator, especially the type of incinerator employing pre-heaters.

It is to be understood that in the manufacture of this novel damper structure, numerous variations may be adopted without departing from the spirit and scope of the invention as claimed hereinafter.

Having thus described my invention what I claim as new is:—

1. A device of the class described comprising a frame having T-shaped slots in its side members, cross bars having their ends of T-shape for fitting in the said slots, a plurality of blocks having hooks at their upper ends for fitting over the cross bars, other blocks to rest upon the ends of the first mentioned blocks and filling the spaces between the rows of blocks first mentioned and the top row on the top of the frame.

2. A damper including a damper frame provided with cross bars, a plurality of rows

of blocks, each block having a hook shaped extension extending at right angles from its upper face with the upper face of the block and the upper face of the extension being flat and the hook shaped extension fitting over a cross bar, other blocks seated upon the upper faces of the first mentioned blocks and closing the spaces between the rows of blocks first mentioned, said other blocks extending from the front faces of the first-mentioned blocks to the rear edge of the hook shaped extensions and having flat faces.

In testimony whereof I affix my signature.

GEORGE WILLIAM HARTLAND.