

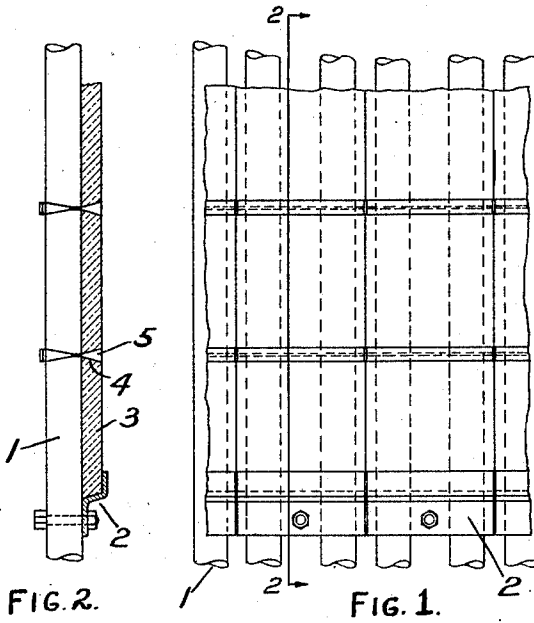
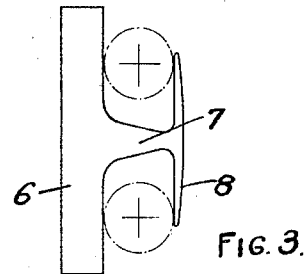
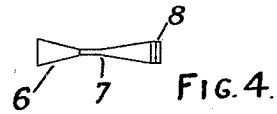
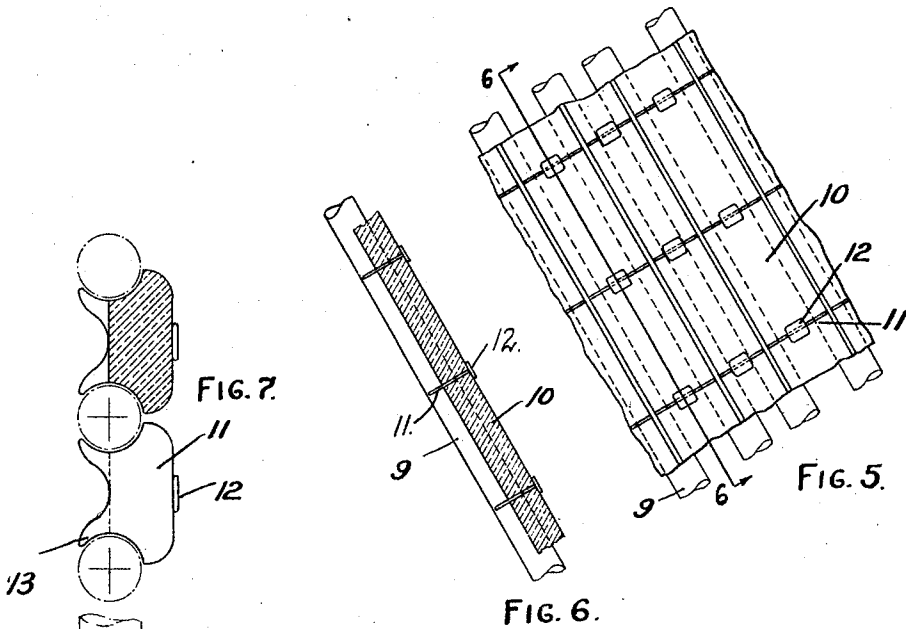
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C. T. CARLSON

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TILE LOCK

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## UNITED STATES PATENT OFFICE

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## TILE LOCK

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It is desirable, particularly in boiler furnace construction and similar situations to tile the tubes forming the walls or baffles to support the tubes. The tile usually has to be formed after the tubes are in place. The present invention relates to a key member for securing the tile to such tubes or similar support. Features and details of the invention will appear from the specification and claims.

The invention is illustrated in the accompanying drawings as follows:—

Fig. 1 shows a front elevation of a wall in place.

Fig. 2 a section on the line 2—2 in Fig. 1.

Fig. 3 a plan view of one of the key members.

Fig. 4 a side elevation of the same.

Fig. 5 a front elevation of an alternative construction.

Fig. 6 a section on the line 6—6 in Fig. 5.

Fig. 7 an end view, partly in section, of the key members.

Fig. 8 a side elevation of a portion of the wall shown in Fig. 5.

In the construction shown in Fig. 1, 1 marks the tubes, 2 a bracket secured along the face of the tubes and forming a base for the wall or baffle, and 3 the tile, these tile being preferably formed with bevelled edges 4. A key member 5 has a head 6 of dove-tail shape to conform, when in place, to the bevelled edges of the tile, a shank 7 which extends between the tubes and the cross extensions 8 which are adapted to engage the rear walls of the tubes. The extensions and shank are sufficiently thin to be passed between the tubes with the extensions brought into alignment with the tubes. In this way the key members may be assembled on the tubes slightly above the off-set from the last line of tile and brought to a position in engagement with the bevelled edges. The heads are elongated so that in the finished wall the heads abut and form a continuous bar.

The shanks and cross members as well as the head being directly in contact with the tubes are cooled thereby so as to preserve the heads.

In the alternative construction the tubes 9 similar to the tubes 1 and the tile 10 have edges at right angles to the faces of the tile. The locking members are in the form of plates having small overlapping heads and the extensions 13 for engaging the rear wall of the tubes. The plates are assembled in the manner of the locking key member of the preferred construction.

What I claim as new is:—

1. In a wall structure, the combination of a series of tubes; tile on the tubes; and a key member comprising a head engaging the tile, said head spanning the space between adjacent tubes and engaging the faces of adjacent tubes, a shank extending between the rear of the tubes, the extension and shank being thinner than the space between the tubes whereby the key member may be assembled by bringing the extension parallel with the tubes, passing it between the tubes and turning it to the rear of the tubes.

2. A key member for a wall structure comprising an elongated head having an undercut portion, a shank, and a cross extension at the rear of the head, the head and shank being in the same plane and the projections formed by the undercut portion extending at right angles to said plane.

3. In a wall structure, the combination of a series of tubes; tile on the face of the tubes; and a key member comprising a head engaging the tile, a shank extending between the rear of the tubes, the head being undercut on the sides facing the lengthwise direction of the tubes and projecting from the shank in the direction of the axis of the tubes, the extension and shank being thinner than the space between the tubes whereby the key member may be assembled by bringing the extension parallel with the tubes, passing it between the tubes and turning it to the rear of the tubes.

4. In a wall structure, the combination of a series of tubes; tile; and a key member comprising a head elongated to form in connection with adjacent key members a continuous bar, said head being undercut and the line

of juncture between the tile and key member being transverse to the direction of the tubes and engaging the edge of the tile.

5 5. In a wall structure, the combination of a series of tubes; tile on the face of the tubes; and a key member comprising a shank, a head  
10 extending from and crosswise of the shank engaging the edge of the tile, said head having an undercut portion overlapping and engaging the tile, and a cross member at the  
15 opposite end of the shank from the head arranged in the same plane as the head.

6. In a wall structure, the combination of a series of tubes; tile on the face of the tubes,  
15 said tile having beveled edges; and a key member comprising a head engaging the tile, said head having undercut sides facing the  
20 lengthwise direction of the tubes and projecting in a direction lengthwise of the tubes and being of dove-tail shape and engaging  
25 the beveled edges of the tile, a shank extending between the tubes; and a cross extension engaging the rear of the tubes, the extension  
and shank being thinner than the space between the tubes whereby the key member may  
30 be assembled by bringing the extension parallel with the tubes passing it between the tubes and turning it to the rear of the tubes.

In testimony whereof I have hereunto set  
my hand.

CARL T. CARLSON.

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