July 1, 1924. 1,499,398

S. B. MYERS

TILE ROOFING

Filed Oct. 25, 1922

Fig. 1.

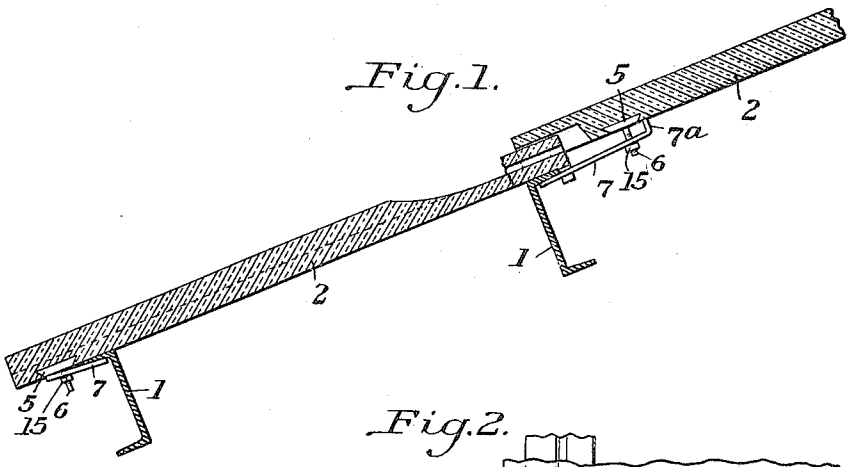



Fig. 2.

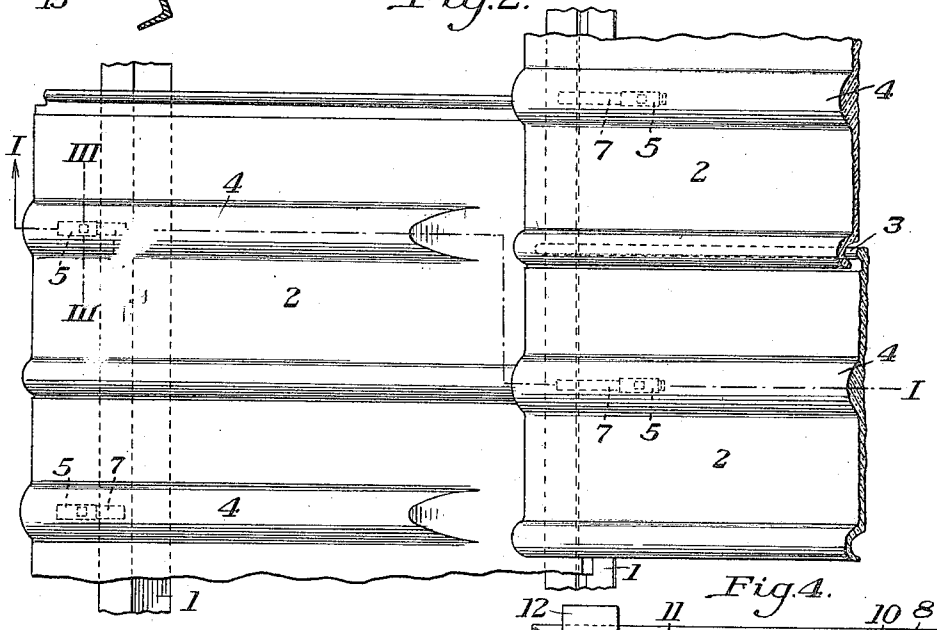



Fig. 3.

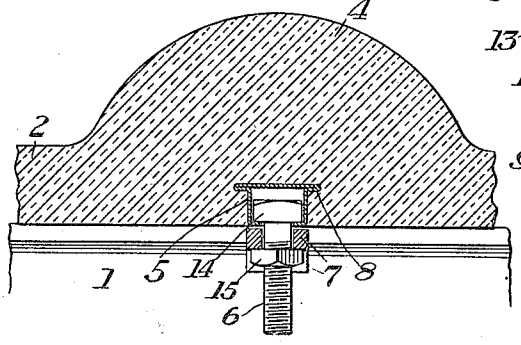



Fig. 4.

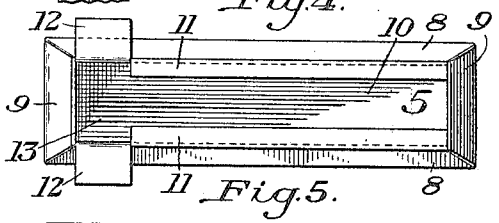
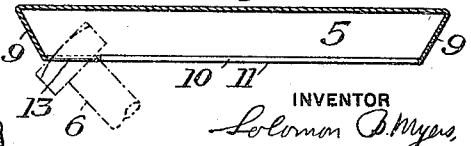



Fig. 5.




INVENTOR

Solomon B. Myers,

by Symes, Stubbs & Parmelee,

his attys.

Patented July 1, 1924. 1,499,398

# UNITED STATES PATENT OFFICE.

SOLOMON B. MYERS, OF PITTSBURGH, PENNSYLVANIA, ASSIGNOR TO AMERICAN CEMENT TILE MANUFACTURING COMPANY, OF PITTSBURGH, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

## TILE ROOFING.

Application filed October 25, 1922. Serial No. 596,792.

*To all whom it may concern:*

Be it known that I, SOLOMON B. MYERS, a citizen of the United States, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Tile Roofing, of which the following is a full, clear, and exact description.

The present invention relates to tile roofing, and more particularly to means for holding down the tiles so that they cannot be lifted by the wind.

In tile roofs as usually constructed, the tiles are laid in place and the weight of the tiles is relied upon to keep them from being lifted by the wind. Difficulty has, however, been experienced of tiles being lifted by the wind, particularly the tiles at the eaves.

I have provided a simple and inexpensive means for positively holding down the tiles so that they cannot be lifted by the wind. I preferably provide the tiles with sockets in their under faces which are engaged by hold-down devices which engage the roof framework.

In the drawings,—

Figure 1 is a vertical section along the line I—I of Figure 2, through a roof, showing the preferred embodiment of my invention;

Figure 2 is a plan view of a portion of such roof;

Figure 3 is a detail sectional view along the line III—III of Figure 2;

Figure 4 is a bottom plan view of one of the metal sockets removed; and

Figure 5 is a longitudinal section of such socket.

Referring to the embodiment of the invention illustrated in the drawings, the purlins of the roof framework are indicated at 1. The tiles 2 are laid on the purlins. In the illustrated embodiment of the invention, the tiles are shown as large cement tiles such as are used for the roofing of industrial plants and which are long enough to extend from purlin to purlin. It is obvious, however, that smaller tiles or other forms of roof framework may be employed. The tiles are shown as provided with the usual joints 3 between them and with the usual ribs 4 along the middle of the tiles.

In the illustrated embodiment of the invention, the means for holding down a tile comprises a metal socket 5 cast in the bottom of the tile, a bolt 6 received in the socket, and a clip 7 which engages a purlin 1.

The socket 5 is shown in detail in Figures 4 and 5. It is preferably formed of sheet metal. In making the socket, the metal is bent over on itself to form flanges 8 along the sides of the socket to serve as anchors to hold the socket in the cement body of the tile. The ends of the socket are formed of bent-over end portions 9. An elongated slot 10 of less width than the interior of the socket, is formed throughout the greater portion of its length by the bent-over edges 11 of the side portions. At the end of the socket the edges 11 are cut and are turned out, as indicated at 12, to form a bolt-head receiving opening 13.

When a tile is cast, the socket 5 is laid face down on the bottom plate of the mold and the cement is poured around it. The sockets are located at the lower edges of the tiles 2, and preferably in the thickened rib 4.

The tiles are held down by hold-down devices, which are illustrated as comprising the bolts 6 and clips 7. The bolt 6 has a square head 14 which is slipped through the enlarged opening 13 and is slid into the slot 10. A clip 7 is slipped over the shank of the bolt, and a nut 15 is screwed up. In the case of the tiles at the eaves, the clip 7 is preferably a straight plate or strip of metal which, when the nut 15 is screwed up, engages beneath the flange of the purlin 1. In the case of tiles which are above the eaves, the clip 7 is shown at the right-hand end of Figure 1, as being generally L-shaped, having a portion $7^a$ engaging the bottom of the tile and having its other end pressed against the flange of the purlin. While I prefer to use the arrangement of square headed bolts and clips shown as the hold-down devices for engaging the sockets, it is obvious that other hold-down devices may be employed. Also, the hold-down means may be applied to a part only of the tiles. For example, the greatest trouble with the wind lifting the tiles occurs at the eaves, and if desired, hold-down means may be applied only to the lower row of tiles. While the invention has been illustrated as applied to the large cement tiles employed for industrial plant roofing, it is obvious that it may be employed

with tiles of various sizes and materials as used for different kinds of tile roofs. The invention is therefore not limited to its illustrated embodiment, but may be otherwise embodied within the scope of the following claims.

I claim:

1. A roofing tile having a metal socket cast therein, said socket having an elongated slot for receiving a hold-down device, substantially as described.

2. A roofing tile having a metal socket cast therein, said socket being formed with an anchorage in the tile and having a slot for receiving a hold-down bolt which is adapted to be adjusted along the slot and socket, substantially as described.

3. A roofing tile having a metal socket cast therein, said socket having a slot and an enlargement at the end thereof for receiving and holding the head of a hold-down bolt, said socket and bolt being arranged to permit adjustment of the bolt, substantially as described.

4. A tile roof having tiles and a supporting framework therefor, some at least of the tiles having sockets formed therein, and hold-down means engaging the sockets and connected with the framework and arranged to be adjusted along said tiles, substantially as described.

5. A tile roof having tiles and a supporting framework therefor, some at least of said tiles having metal sockets cast therein, and hold-down bolts having their heads received in said sockets and connected with the framework the heads of the bolts being arranged to be adjusted along said sockets, substantially as described.

6. A tile roof having tiles and a supporting framework therefor, some at least of said tiles having sockets, hold-down bolts having their heads received in the sockets and adjustable along said sockets, and clips fitted over said bolts for engaging the framework, substantially as described.

7. A tile roof having tiles and a supporting framework therefor, some at least of the tiles having metal sockets cast therein, said sockets having slots and bolt-head receiving enlargements at the ends thereof, bolts adjustably mounted in said slots, and clips carried by the bolts for engaging the framework, substantially as described.

In testimony whereof I have hereunto set my hand.

SOLOMON B. MYERS.

## Certificate of Correction.

It is hereby certified that in Letters Patent No. 1,499,398, granted July 1, 1924, upon the application of Solomon B. Myers, of Pittsburgh, Pennsylvania, for an improvement in "Tile Roofing," an error appears in the printed specification requiring correction as follows: Page 2, line 22, claim 3, for the word "bolt", second occurrence, read *slot;* and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 19th day of August, A. D. 1924.

[SEAL.]

KARL FENNING,
*Acting Commissioner of Patents.*