G. W. DENISON.

WALL TYING DEVICE.

APPLICATION FILED APR. 11, 1913.

1,079,115. Patented Nov. 18, 1913.

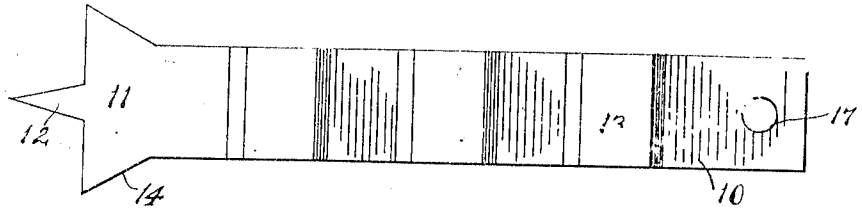


FIG. 1.

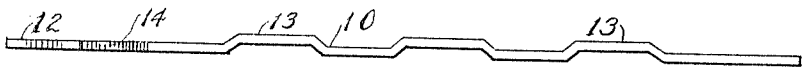


FIG. 2.

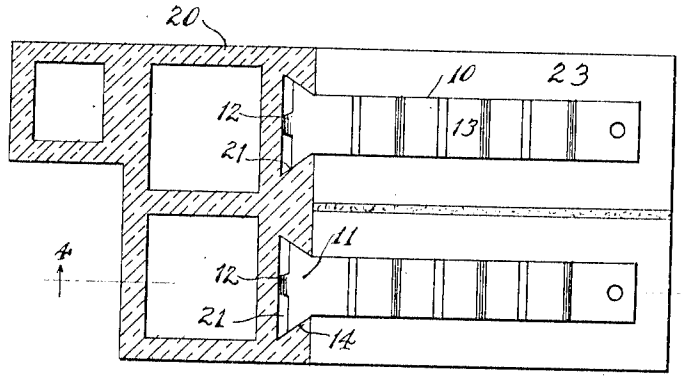


FIG. 3.

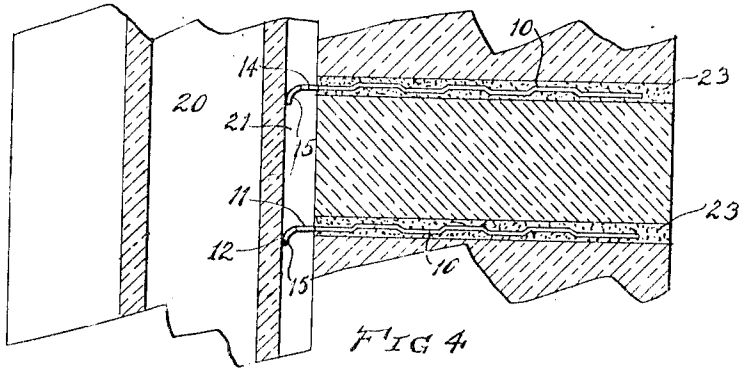


FIG 4.

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WALL-TYING DEVICE.

1,079,115. Specification of Letters Patent. Patented Nov. 18, 1913.

Application filed April 11, 1913. Serial No. 760,386.

To all whom it may concern:

Be it known that I, GEORGE W. DENISON, a citizen of the United States, residing at Cleveland Heights, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Wall-Tying Devices, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

The object of this invention is to provide a simple, cheap and effective device for securing the walls of buildings, facing brick, tiers adjacent to the windows, and other portions of a wall which it is inconvenient to bond into the wall.

My invention is well adapted for use with walls made of hollow tiles, and may be employed efficiently in securing to such walls a facing of a special form of tile, a tier of recessed tile, as a window jamb, or around a door opening, or any other special course of tile or brick which it is desired to lock to the wall.

To this end my invention comprises a tie bar which is adapted to be embedded in the mortar bed of the main portion of the wall and has a head occupying a groove in the course, or brick or facing which it is desired to tie to the wall.

The invention includes also the particular feature of the tongue on the end of the tie bar which acts on the course or articles to be tied, and causes the bar to snugly engage the same, so that, when its body is embedded in the mortar bed, the facing course shall be tightly held thereto.

The invention includes also features whereby the body of the bar is locked in the main course of the wall.

The particular characteristics of my tie bar are hereinafter more fully explained and are summarized in the claims.

In the drawings, Figure 1 is a plan of one of my tie bars and Fig. 2 is an edge view or side elevation thereof; Fig. 3 is a plan of a wall having a jamb or window tier or tile locked by two of my tie bars; Fig. 4 is a vertical section through a portion of such wall, as indicated by the line 4—4 on Fig. 3.

My tie bar, in its preferred form, consists of a single metal strap, having a shank 10, a head 11 and a tongue 12. The shank 10 is preferably given a wavy, offset, or corrugated form, as shown by the portion 13, which enables it to tightly interlock with the mortar in the mortar bed and prevent its shifting therein. The head 11 has outwardly flaring sides 14, and the tongue 12 comes substantially to a point and is adapted to be bent from the general plane of the tie bar.

My tie is designed for use in holding tile or bricks, or similar articles, having dovetailed grooves on their inner faces. Such a tile is shown at 20 in Figs. 3 and 4. In these figures, 21 indicates dove-tailed grooves which are adapted to receive the head and prongs of the tie. The grooves, however, are not deep enough to receive the head and prong without bending the prong. Accordingly, when the ties are inserted in the grooves, the prongs are bent, near their end, as shown at 15 in Fig. 4. This forces the incline 14 of the head back snugly against the incline of the groove in the tile. Accordingly, by first placing the head of the tie in the tile having the groove and then embedding the shank in the mortar bed of the adjacent course, it is possible to hold the facing course snugly to the main course. Thus, I avoid one of the disadvantages of prior methods of compiling facing or special courses to the wall, namely; loosening between such course and the wall.

In applying my ties, the facing course, or jamb course, or special course of grooved tiles is laid up and the ties are inserted bodily into the dove-tailed groove. Then, as each course of the main wall is made up, the shank of the tie is swung outwardly from the groove 21 onto the mortar bed 23, as shown in Figs. 3 and 4. This movement bends the prongs 12 of the tie, necessarily forcing the incline 14 thereof back tight against the incline of the groove 21, so that it is only necessary to see that the shank is embedded in the mortar bed 23 with the tile snugly abutting thereagainst to insure a tight connection.

My tying device is extremely cheap in construction and is very efficient in service, accomplishing the desired result with the minimum of expense. My tie bars may be stamped from sheet metal very cheaply. I have shown a hole 17 through the end portion of the shank for the purpose of securing a number of the tie bars together in shipping.

Having thus described my invention, what I claim is:

1. The combination, with a member having a dovetailed groove with inclined sides,

of a tie bar having a head with inclined sides and a shank adapted to occupy an adjacent mortar bed, and a projection carried by the head and adapted to engage the back of the groove to press the inclines of the bar snugly against the inclines of the groove.

2. The combination, with a facing course having a dove-tailed groove with inclined sides, of a tie bar having a head with inclined sides, a shank adapted to occupy an adjacent mortar bed, and a tongue projecting from the head and adapted to engage the wall at the bottom of the groove and be bent against it to force the incline of the tie bar against the incline of the groove.

3. The combination, with a facing block having a dove-tailed groove with inclined sides, of a tie bar having a shank and a head adapted to occupy said groove, said head having inclined sides and having projecting from the face a tongue adapted to be bent and have a spring action against the base of the recess of the block to force the incline into snug engagement

4. The combination, with a facing block having a dove-tailed groove with inclined sides, of a tie bar having a shank and a head adapted to occupy said groove, said head having inclined sides and having projecting from the face a tongue adapted to be bent and have a spring action against the base of the recess of the block to force the incline into snug engagement, and the shank of the tie bar being made irregular or perforated or offset to bind it to the mortar bed.

5. A tie bar made of a single integral piece of sheet metal consisting of a shank bent intermediately to provide plane portions offset from the plane of the shank, a head at one end of the shank having outwardly flaring inclined edges, and a projection extending from that edge of the head which is opposite the shank.

6. A tie bar made of a single integral piece of sheet metal consisting of a shank bent intermediately to provide plane portions offset from the plane of the shank, and a head at one end of the shank having outwardly flaring inclined edges, there being a prong projecting centrally from the end of the head and coming approximately to a point.

In testimony whereof, I hereunto affix my signature in the presence of two witnesses.

GEO. W. DENISON.

Witnesses:
J. B. HULL,
JUSTIN W. MACKLIN.