United States Patent [19]

Allen

[11] **3,729,882**

[45] **May 1, 1973**

[54] **DEVICE FOR TYING WOODEN MEMBERS TO COMPOSITE BRICK AND MASONRY WALLS**

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[22] Filed: **Dec. 28, 1970**

[21] Appl. No.: **101,596**

[52] **U.S. Cl.** **52/300,** 52/425, 52/713

[51] **Int. Cl.**.....**E04b 1/38,** E04h 12/00

[58] **Field of Search**.....52/300, 369, 370, 52/712, 713, 425, 426, 714, 295

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[57] **ABSTRACT**

A device for anchoring and tying a wooden member to masonry wall constructions including a tying member embodying a base plate which is adapted to underlie the wooden member between the latter and the upper surface of a masonry wall construction and having portions which extend upwardly along the sides of the wooden member and are fastened thereto by suitable fastening means, such as nails or the like. The device includes an anchoring member which includes an upper and main body portion which in use is mounted in a transversely extending groove or recess formed in the base plate of the tying member. The anchoring member also includes a vertically extending depending arm portion which in use is anchored in a vertical position in a mortar joint between a tier of bricks and a tier of concrete blocks and the anchoring member also includes a lower end portion which extends angularly from the vertically extending depending arm portion of the anchoring member and in use is anchored in a horizontal position in a mortar joint between two tiers of the concrete blocks.

1 Claim, 4 Drawing Figures

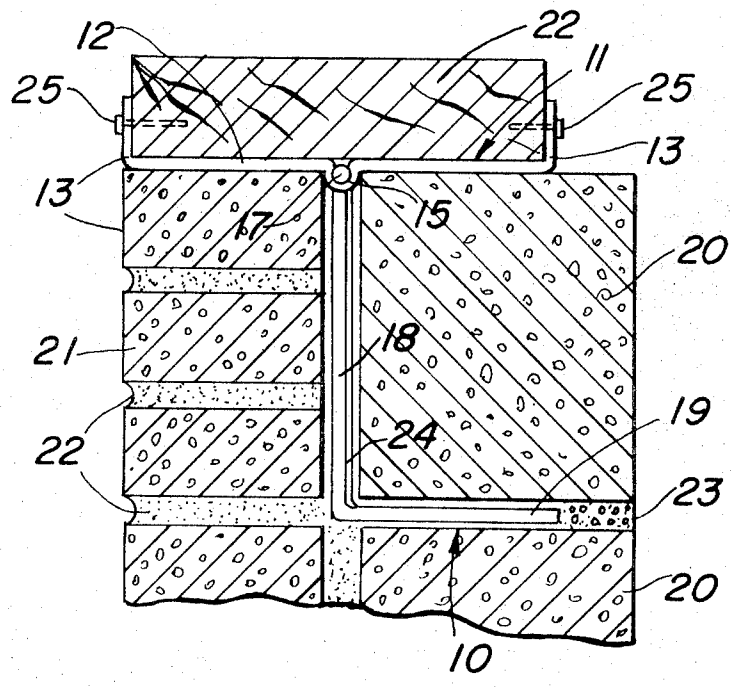


FIG - 1

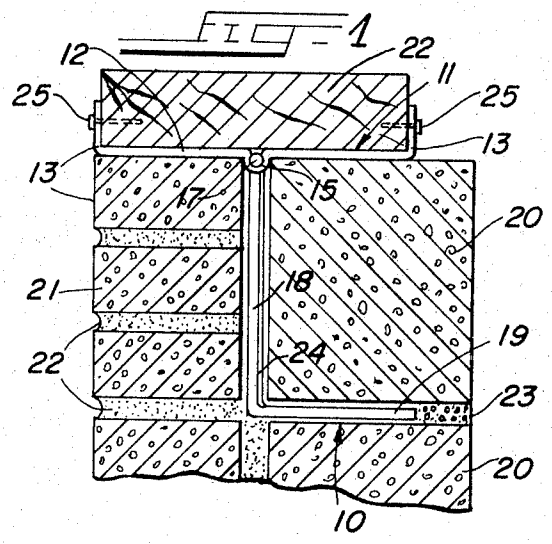


FIG - 2

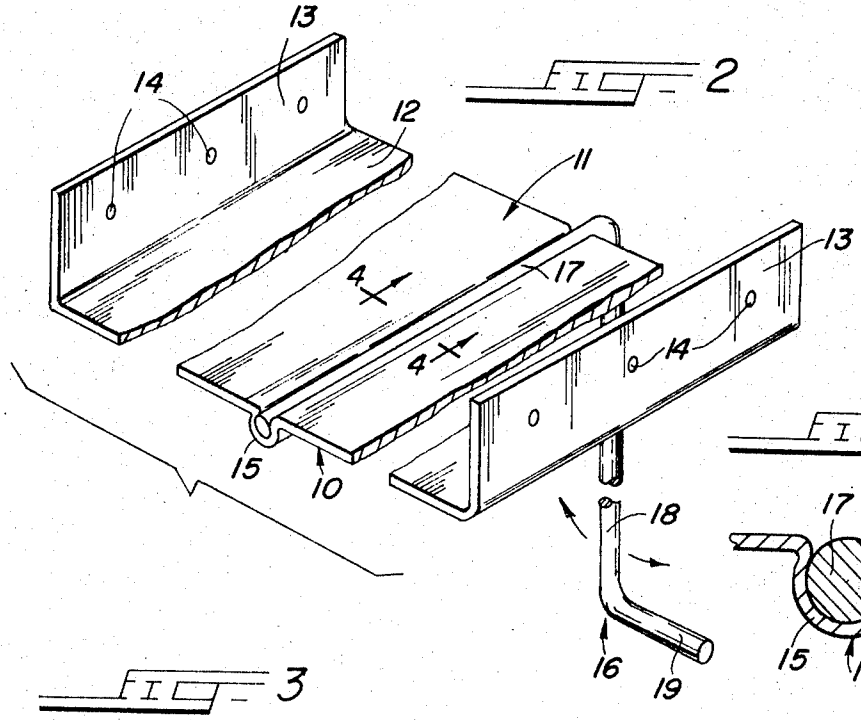


FIG - 4

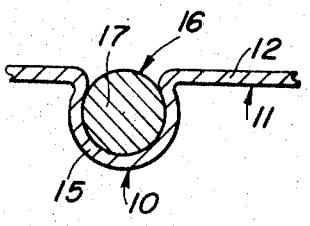
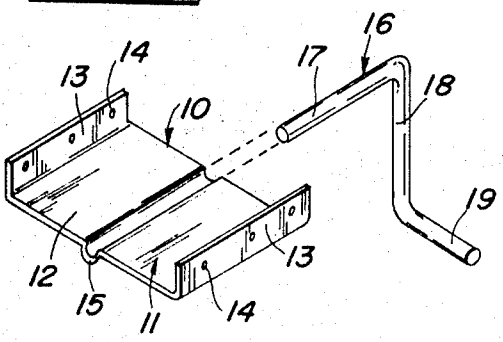


FIG - 3



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DEVICE FOR TYING WOODEN MEMBERS TO COMPOSITE BRICK AND MASONRY WALLS

OBJECTS

An object of the present invention is to provide a new and improved anchoring and tying device for tying a wooden board, such as a plank, or the like, to a brick or concrete masonry wall.

Another object of the invention is to provide a new and improved anchoring and typing device which will comply with the Building Code requirements of various areas and governmental agencies in that it possesses the necessary strength to resist high stresses encountered by buildings during abnormal conditions such as storms, flods, earth shocks and the like.

A further object of the invention is to provide a new and improved anchoring and tying device which may be used with most masonry wall constructions and in which the anchoring member embodies a vertically extending portion which is adapted to be arranged between the tiers of the masonry wall construction or in a cavity therein with the body of the tying member extending perpendicularly to the anchoring member and extending generally parallel to the upper surface of the masonry wall so that when the parts are properly positioned the upper portion or body of the anchoring member will lie between the masonry units and thus allow the body of the tying member to be installed in close relationship to and parallel with the top or upper surface of the masonry wall.

A further object of the invention is to provide a new and improved anchoring and tying device which does not require the use of a diagonal brace member or like strengthening member and which does not require the use of welded joints, threaded parts, or the use of accessory parts such as nuts or clips.

A further object of the invention is to provide a new and improved anchoring and tying device which embodies a novel and simple construction and arrangement for holding the tying member and the anchoring member together in use.

DESCRIPTION OF FIGURES

FIG. 1 is a fragmentary vertical sectional view of a typical composite brick or concrete wall construction having a wooden member mounted thereon showing one of the new anchoring and tying devices in position of use tying the wooden member to the masonry wall construction;

FIG. 2 is a perspective view of the new anchoring and tying device showing a part of the base plate of the tying member and part of the anchoring member broken away;

FIG. 3 is a perspective view similar to FIG. 2 but showing part of the main body portion of the anchoring member broken away; and

FIG. 4 is an enlarged fragmentary sectional detail view, on line 4—4 in FIG. 2, showing the main body portion of the anchoring member mounted in position of use in the transversely extending groove formed in the base plate of the tying member.

DETAILED DESCRIPTION

A typical and preferred embodiment of the new device for tying wooden members to masonry walls,

such as composite brick and masonry walls, is shown in the drawing, wherein it is generally indicated at **10**, and comprises a tying member generally indicated at **11** and which includes a main body portion or base plate **12** having the end portions thereof bent upwardly to provide flange portions **13**; each of the flange portions **13** being provided with holes **14** for the reception of fastening elements, such as nails **25**, or the like, as will be described hereinafter.

The main body portion or base plate **12** of the tying member **11** includes a transversely extending anchoring recess or groove **15** which is formed in the main body portion or base plate **12** substantially midway between the end walls or flanges **13** thereof, for a purpose which will be described presently.

The new device also includes an anchoring member, generally indicated at **16**, and which includes an upper and main body portion **17** which in use is adapted to lie in and to be anchored in the groove **15** substantially flush with the upper surface of the main body portion of the base plate **12**. The anchoring device **16** also includes a vertically extending depending arm portion **18**, which may be of any desired length, and has at its lower end a right angularly extending anchoring arm portion **19**.

In the use of the new anchoring and tying device the main body portion or base plate **12** of the tying member **11** is arranged upon the upper surface of the masonry wall construction **20-21** with the transversely extending anchoring member **15** extending vertically downwardly into the mortar joint **24** between the tiers of bricks **21** and the tiers of concrete blocks **20** and with the depending arm portion **18** of the anchoring member **16** extending vertically downwardly through the mortar joint **24** and with the rightangularly extending lower end portion **19** thereof extending into the mortar joint **23** between the tiers of concrete blocks **20**, as shown in FIG. 1.

The end walls or upwardly extending flange portions **13** of the tying member **11** are then fastened to the wooden member or plank **22** by means of fastening means, such as nails **25** inserted through the openings **14** in the flanges **13** into the wooden member or plank **22**.

It has been found in the use of the new anchoring and tying device that when the new tying member **11** and the anchoring member **16** are arranged in use, as shown in FIG. 1, and with the transversely extending groove **16** disposed in the upper portion of the mortar joint **24** between the tiers of bricks **21** and concrete blocks **20** and with the depending arm portion **18** anchored in the mortar joint **24** and with the right angularly extending lower portion **19** of the anchoring member **11** disposed in the mortar joint **23** between two layers of concrete blocks **20**, and with the tying member **11** fastened to the wooden member or plank **22** as shown, the wooden member or plank **22** is firmly and securely mounted on and fastened to the masonry wall construction and against dislodgment therefrom while at the same time the construction of the tying member **11** and the anchoring member **16** is simple and inexpensive to manufacture and lend themselves to ready packaging and handling in use.

The new anchoring and tying member has adequate structural strength such that when it is installed as

shown in the drawing it will comply with the building code requirements of various areas and governmental agencies and will resist the stresses to which buildings are subjected in use including storms, floods, earth shocks and the like.

It will be noted that when the new anchoring and tying device is in position of use, as shown in FIG. 1 of the drawing, the lower wall surface of the transversely extending anchoring groove **15** in the base plate **12** of the tying member **11** and the transversely extending main body portion **17** of the anchoring member **16** are disposed in the mortar joint **24** below the upper surface of the masonry wall construction **20–21**, thereby enabling the base plate **12** of the tying member **11** to be installed in close contact with the upper surface of the masonry wall **20-21** while, at the same time, firmly anchoring the parts to the masonry wall.

It will further be noted that the construction of the new anchoring and tying device **10** is such that it does not require the use of diagonal brace members, or threaded fastening parts, or accessory fastening parts such as nuts, clips, or the like, and that the tying member **11** and the anchoring member **16** are fastened together in use by the relatively simple attachment of the main body portion **17** of the tying member **11** in the transversely extending groove or recess **15** in the base plate **12** of the tying member **16**.

It will thus be seen from the foregoing description, considered in conjunction with the accompanying drawing, that the present invention provides a new and improved anchoring and tying device for tying wooden members to masonry walls, or to concrete block walls, or the like, and that the invention thus has the desirable advantage and characteristics and accomplishes its intended objects including those hereinbefore pointed out and others which are inherent in the invention.

I claim:

1. A masonry wall construction having a tier of vertically stacked bricks and an adjacent tier of vertically stacked concrete blocks, said wall construction having an upper surface and inner and outer surfaces, a vertically extending mortar joint between and bonding together the adjacent tiers of bricks and concrete blocks, horizontally extending mortar joints between and bonding together adjacent bricks and between and bonding together adjacent concrete blocks, a tying and anchoring device on the wall upper surface, including a substantially flat, rectangularly shaped base plate having an upper surface, and a lower surface lying in flat engagement on the wall upper surface and extending transversely thereacross, an integral, vertical, upstanding flange on each of the opposite edges of the base plate, said flanges extending parallel to the wall inner and outer surfaces and extending upwardly a relatively short distance in relation to the width of the base plate, a transverse, central depression in said base plate extending completely thereacross parallel to the flanges, said depression received in the vertical mortar joint between the adjacent tiers of bricks and concrete blocks, a one-piece rod-like anchoring member secured to the base plate and to the masonry wall, including a first horizontal portion pivotally received in said central depression and substantially co-extensive in length therewith, said depression and said first horizontal portion disposed below the upper surface of the base plate, an integral, vertical portion joined at one end to one end of said first horizontal portion and extending downwardly in said vertical mortar joint between the adjacent tiers of bricks and concrete blocks, a second horizontal portion integral with the other end of said vertical portion and extending at right angles to said vertical portion and to said first horizontal portion and extending into one of said horizontal mortar joints between a pair of vertically stacked concrete blocks in said tier of concrete blocks, securely anchoring said base plate to said masonry wall, an elongate wooden member having a bottom surface in flat engagement with the upper surface of the base plate and opposite side edges in engagement with the upstanding flanges, and means projecting from said flanges into the opposite side edges of the wooden member to secure the wooden member to the tying and anchoring device and thus to the top surface of the masonry wall.

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