

H. MENTEN.
HANGER BOLT.
APPLICATION FILED AUG. 7, 1911.

1,108,922.

Patented Sept. 1, 1914.

Fig. 1

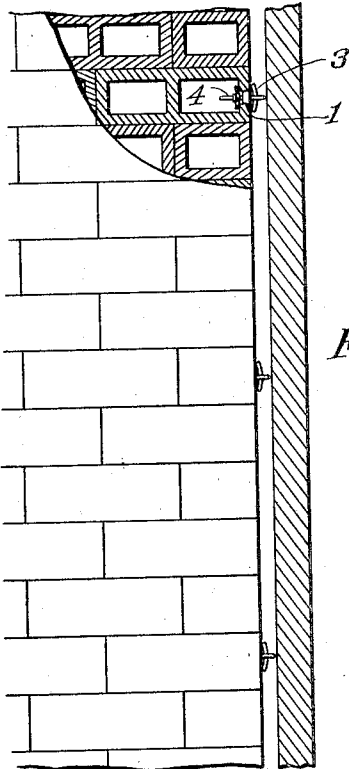


Fig. 2

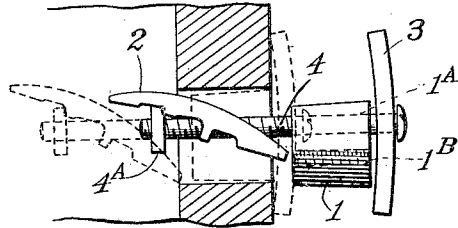


Fig. 3

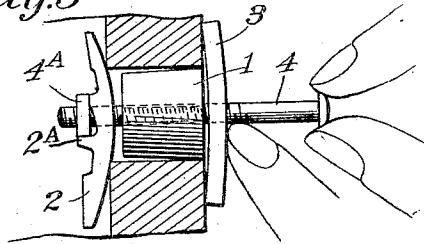


Fig. 8

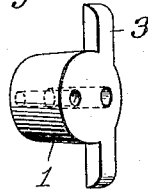


Fig. 4

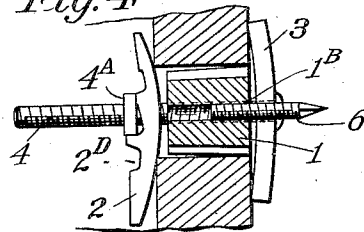


Fig. 6

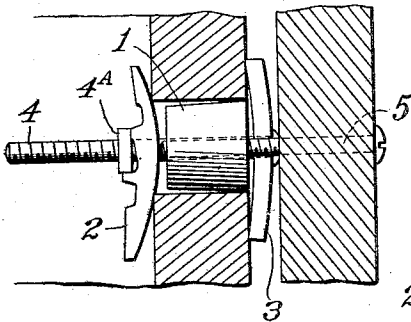
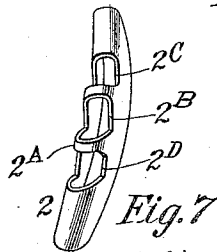
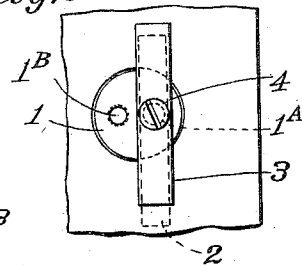


Fig. 5



Witnesses:
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UNITED STATES PATENT OFFICE.

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HANGER-BOLT.

1,108,922.

Specification of Letters Patent.

Patented Sept. 1, 1914.

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To all whom it may concern:

Be it known that I, HERMAN MENTEN, a citizen of the United States, residing in New York, county of Queens, and State of New York, with post-office address at 430 Sherman street, Astoria, New York, N. Y., have invented certain new and useful Improvements in Hanger-Bolts, of which the following is a specification.

This invention relates to hanger bolts and particularly to bolts designed for securing various articles to walls constructed of hollow tiles or the like.

This invention has for its object the provision of a novel hanger bolt of inexpensive construction which can easily be secured in place upon walls of different thicknesses and which will securely hold the members of door frames, window frames, moldings, etc., upon the wall.

A special object of the invention is to provide a hanger bolt of such construction that the bolt itself may be conveniently used to mark the door facings or the like at the proper points for drilling them to make openings for the passage of the securing screws or bolts.

In the accompanying drawings, of which corresponding parts are designated by similar characters of reference: Figure 1 is a view partly in elevation and partly in vertical section showing a wall with a number of the improved hanger bolts secured thereon and showing the manner of marking the door facings for drilling preparatory to securing it on the wall. Fig. 2 is a sectional view showing the mode of introducing the hanger bolt into the opening formed therefor in the wall. Fig. 3 is a sectional view showing the method of securing the hanger bolt in the wall. Fig. 4 is a sectional view showing the hanger bolt in position and provided with a marker for the article to be held by the hanger bolt. Fig. 5 is a view in elevation showing the outer end of the hanger bolt in position and ready to receive the screw for securing the door facing or other article in position. Fig. 6 is a view in longitudinal section showing the hanger bolt in position with a piece of door facing secured against the wall by means of the hanger bolt. Fig. 7 is a detail view in perspective of the inside anchor. Fig. 8 is a perspective view of a modified form of body of the hanger bolt showing the outside

anchor rigidly secured thereto. This form I consider the preferable form of my invention.

As shown in the drawings, the improved hanger bolt comprises a body 1, an inside anchor 2, an outside anchor 3, a locking bolt 4 by which the two anchors are secured in position, and a screw 5 for fastening the door facing or other article against the wall.

Holes of suitable diameter are formed in the wall of hollow tiles as shown in the several figures, the holes being of such diameter that the body of the bolt will pass easily into them. The parts of the anchor bolt having been arranged as shown in Fig. 2, the bolt is pushed forward through the hole until the parts reach the position shown in dotted lines in that figure. The inside anchor 2 will then drop down into vertical position, so that by pulling upon the head of the securing bolt 4 the inside anchor may be brought into the position shown in Fig. 3, thereby locking against the inner surface of the hollow tile. The outward pull upon the securing bolt 4 will also bring the nut 4^A into the position shown in Fig. 3, in which one side of the nut is shown seated against a shoulder 2^A formed on the anchor 2. It will be noted that the anchor 2 is provided with three openings 2^B, 2^C, and 2^D, the opening 2^B being arranged between the other openings and just above the shoulder 2^A. The securing bolt 4 passes through this opening which is somewhat nearer one end of the anchor than the other. This location of the opening 2^B makes it impossible for the anchor to balance horizontally on the bolt 4 and causes one end always to drop down into the position shown in Fig. 3, thus bringing the shoulder 2^A immediately below the nut 4^A. It will also be noted that the anchor 2 is a stamping, preferably of sheet steel, and has edges which bite into the material of the hollow tile when the anchor is drawn up against the tile as shown in Fig. 3.

To secure the hanger bolt firmly after drawing the anchor 2 into position shown in Fig. 3, the outside anchor 3 is pressed against the outer surface of the wall thus forcing the body 1 which slides freely on the bolt 4 into the opening in the wall. The anchor 3 is then held in position with the fingers of one hand while the bolt 4 is screwed up into securing position with the fingers of the other. The final turns on the

bolt are, of course, made with a screw driver and the two anchors are brought finally into the position shown in Fig. 4.

The body 1 of the hanger bolt has two parallel openings, 1^A and 1^B, extending through it. The larger of these 1^A is not threaded and is provided for the passage of securing bolt 4, the other opening 1^B is threaded to receive a screw. In securing the hanger bolt in position in the wall, care must be taken to prevent the outside anchor 3 from extending across the outer end of the opening 1^B, and it is desirable to secure the body of the hanger bolt in the position shown in Fig. 5 with the two longitudinal openings arranged in the same horizontal plane. When the parts of the hanger bolt are secured in the position shown in Fig. 4, the marker 6 in the form of pointed screw is secured in the opening 1^B leaving the point exposed as shown in Fig. 4. When a long piece of material is to be secured to the wall by means of several hanger bolts, all the hanger bolts required should be placed in position before the material to be secured is applied to the wall. Each hanger bolt should be provided with a marker, as shown in Fig. 1, and the material to be secured placed in position and pressed against the several markers. In this way the relative positions of the holes for the securing screw will be plainly marked and these holes can be drilled with certainty. After the necessary holes have been drilled in the article to be secured upon the wall, securing screws 5 will be passed through the openings in the article to be secured and screwed into the openings 1^B in the bodies of the hanger bolts as shown in Fig. 6, thus securing the article firmly against the wall.

While it is desirable that the body 1 of the hanger bolt should be of a length approximating the thickness of the wall to which it is to be secured, it will be clear that this is not necessary, the length of the bolt 4 being such that the hanger bolt can be secured in a wall whose thickness is considerably greater than the length of the body of the hanger bolt. In such cases the body of the bolt lies in the opening formed in the wall to receive it and lies in close proximity to the outer anchor 3 where it is adapted to receive the securing screw 5.

It will be noted that the body of the hanger bolt is made with a slight taper. This will be found convenient in introducing the body into the opening provided for it in the wall, and it is desirable that the opening be of such size that the body portion of the hanger bolt will fit solidly in

the opening when the outer end of the body is substantially flush with the outer surface of the wall.

Should it be desired to remove the hanger bolt for any purpose after use, it can be easily done by first removing the article secured by the anchor bolt, then loosening the bolt 4 until the parts can be drawn into the position shown in Fig. 2, which can be facilitated by passing some narrow body, such as a piece of wire, through the open portion of the opening for the bolt and tilting the inner anchor 2 into the position shown in Fig. 2 of the drawings. The bolt can then be withdrawn without difficulty.

The form of the body for the hanger bolt shown in Fig. 8 is especially adapted for use in comparatively thick walls. Here the outer anchor 3 is rigidly secured to the body 1 of the hanger bolt, thus making it impossible for the body to be forced too far into the opening in the wall.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is;

1. A device of the character described comprising a body of substantially circular cross section adapted to fill and fit a drilled hole in a wall, a bolt extending through the body for securing it in place, an inside anchor loose on said bolt and adapted to be brought approximately into alinement with said bolt without removing it from the bolt, an outside anchor carried by said bolt for clamping said wall and maintaining said body in said hole, and means co-acting with said body for securing door facings or the like in place.

2. A device of the character described comprising a body member adapted to fit a drilled hole in a wall and having a hole therethrough, a bolt mounted in said hole, inside and outside anchors on said bolt adapted to be drawn together by rotation of said bolt to hold said body in position, and means for attaching a door facing or the like to said body member.

3. An anchor bolt for walls comprising a body member having a marking point detachably mounted therein, a bolt passing through said body member, and anchors carried by said bolt for engaging the inner and outer surfaces of the wall.

In testimony whereof, I have signed my name hereto in the presence of witnesses.

HERMAN MENTEN.

Witnesses:

BAXTER MORTON,
A. J. LANG.