J. W. JETER.

CLAMPING DEVICE FOR BEAMS AND COLUMNS.

APPLICATION FILED OCT. 11, 1920.

1,408,301. **Patented Feb. 28, 1922.**

Fig. 1

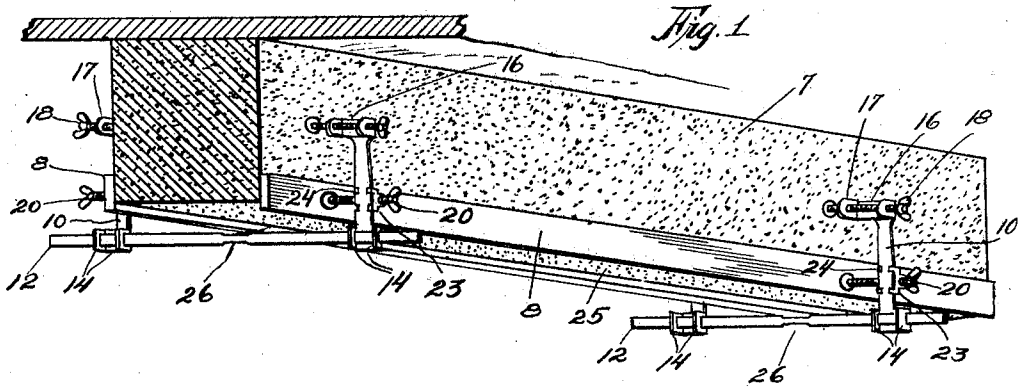


Fig. 2

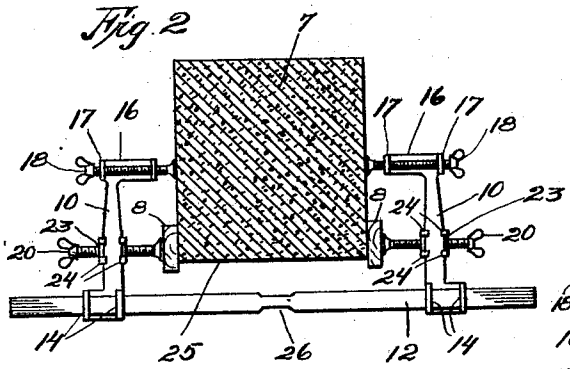
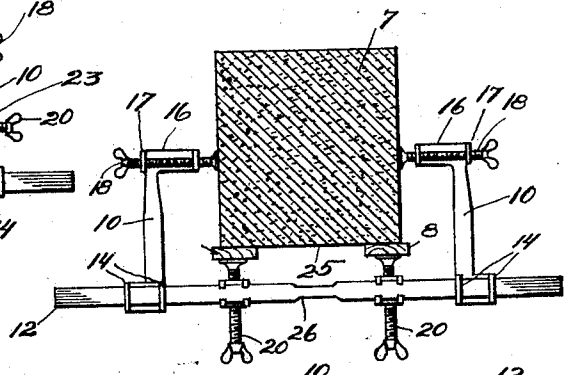


Fig. 3



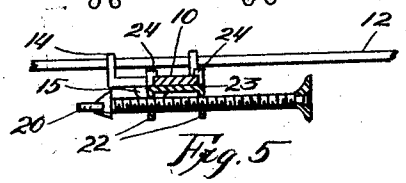


Fig. 5

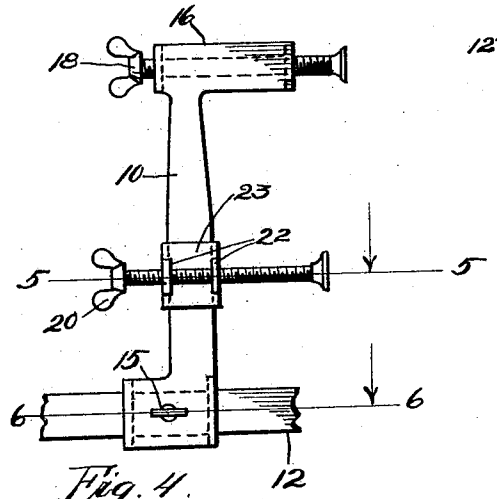


Fig. 4.

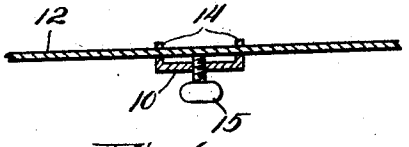


Fig. 6

Witness:

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UNITED STATES PATENT OFFICE.

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CLAMPING DEVICE FOR BEAMS AND COLUMNS.

1,408,301. Specification of Letters Patent. Patented Feb. 28, 1922.

Application filed October 11, 1920. Serial No. 416,034.

To all whom it may concern:

Be it known that I, JOHN W. JETER, citizen of the United States, and resident of Kansas City, county of Jackson, State of Missouri, have invented a certain new and useful Improvement in Clamping Devices for Beams and Columns, of which the following is a complete specification.

The present invention relates to devices designed for use by plasterers, and aims to provide a novel form of clamping means whereby the workmen may secure to a beam or column the usual straight edge members which are employed for properly gaging the depth or thickness of the layer of plaster, as well as securing the desired straight edges along the corners of the work.

Accordingly I have devised a novel form of clamping device adapted for clamping engagement with opposite sides of a beam or pilaster, and having means also for clamping the straight edge members in parallel relation at the opposite sides of the beams or pilasters and along the adjoining corners of the same.

It is also sought to devise a construction of this character in which the clamping devices for the straight edge members may be interchangeably mounted for clamping the straight edge members against opposite faces of the beam or column, or against opposite side edge portions of the same face of such beam or column.

It is also an object of the invention to provide an extremely simple and efficient device for operation in the manner described, and one which will be easy to manipulate and have practically no parts which are likely to get out of order.

With the foregoing general objects in view, the invention will now be described by reference to the accompanying drawing illustrating one form of construction which I have devised for embodying the proposed improvement, after which the novel features will be particularly set forth and claimed.

In the drawing—

Figure 1 is a perspective view illustrating a concrete beam having the straight edge members used in the application of the plaster secured to said beam by devices constructed in accordance with the present invention;

Figure 2 is a transverse sectional view showing the beam with the straight edge members held by the clamping devices in the same manner as illustrated in Figure 1;

Figure 3 is a similar sectional view with the straight edge members and the clamping devices therefor located in a different position;

Figure 4 is an enlarged detail view, illustrating one of the clamping arms, with the connecting cross bar broken away; and

Figures 5 and 6 are sectional detail views taken on the lines 5—5 and 6—6, respectively, of Figure 4.

As already indicated, the invention is especially adapted for use in the work of plastering, and more particularly for such work in connection with concrete beams, concrete pilasters or columns, where it is desired to finish the outer faces of such portions of the concrete construction. For this purpose it is necessary to apply straight edge members for both gaging the thickness of the plaster layer, as well as for truing up the edges at the corners of the pillars or beams. Referring now to the drawing in detail, this illustrates in Figure 1, a concrete overhead beam 7, with the straight edge members 8 clamped to the lower corners of said beam ready for the application of the plastering to the under face of the beam between said members 8. As illustrated, the lower edges of the members 8 project beneath the corners of the beam to a distance corresponding to the thickness of plastering to be applied. For securing the said members 8 in the desired parallel relation shown, I provide a sufficient number of clamping devices, each one of which is made up of a pair of arms or brackets 10 adapted to be adjustably connected by means of a cross bar 12 slidably engaged with a pair of eyes 14 provided on one end of each of the arms or brackets 10, to which the bar 12 is adapted to be securely clamped by means of set screws 15, one of which is mounted intermediate each pair of eyes 14. The opposite end of each of the arms or brackets 10 is of laterally elongated form, to provide the extension 16 carrying a pair of ears 17 for threadedly mounting a screw 18, the inner end of which is adapted for clamping engagement with one of the faces of the beam 7. The length of the arms or brackets 10, is, of course, such as to permit clamping engagement of the screws 18 with the opposite faces of the beam 7, while the other ends of the arms or brackets 10 pro-

ject past the corners of the beam to permit these outer ends of the arms 10 to be connected by means of the cross bar 12, thereby leaving the intermediate portions of the arms or brackets 10 free for the application of the clamping members whereby the members 8 are clamped in engagement with the corner portions of the beam, as shown.

For clamping the straight edge members 8 in this position, I provide clamping screws 20 for each one of said members 8, each of the screws 20 being threaded through ears 22 projecting from a suitable clip element 23 having its opposite face provided with spaced lugs 24 (see Figures 2 and 5), for slidingly mounting said clip element 23 upon the intermediate portion of one of the arms 10. One of the end portions of the arm or bracket 10, preferably that end adjacent to its extension 16, is slightly tapered or reduced for permitting the convenient application or removal of the corresponding clip element 23, in a manner readily understood.

The operation of the device will be clear from an inspection of Figures 1 to 3 of the drawing, Figures 1 and 2 illustrating the finishing of the lower face 25 of the beam 7. The workmen simply apply the arms or brackets 10 to its cross bar 12, adjusting them the required distance apart according to the diameter of the beam 7, and clamping both the screws 15 and the screws 18 for holding the parts fixed in this relation. After adjustment of the straight edge members 8 to the required position with relation to the corners of the beam, with the edges of said members projecting slightly beyond the sides of the beam, the members 8 are then clamped in this adjusted position by means of the screws 20. The removable feature of the clip elements 23, with their screws 20, is for the purpose of enabling these parts to be mounted in position upon the cross bar 12, for clamping the straight edge members 8 in position for plastering these side faces of the beam or column which have heretofore been engaged by the screws 18. This position of the straight members 8 is illustrated in Figure 3, where the clip elements 23 with their screws 22 have been shifted to the cross bar 12, the latter having a reduced portion 26 for facilitating the mounting of said clip elements thereon.

It is of course apparent that the construction is equally as well adapted for use in work upon columns, pillars or pilasters, as upon beams in the manner shown in Figures 1 and 2, and that in case of work upon the opposite sides of a column (as, for example, for work upon all four faces of a pillar or column of rectangular cross section), it is only required to use sets of the clamping devices upon both of the opposite faces of the pillar or column in question. In finishing up the plastering work, after the clamping devices have been removed, the workmen simply go over the surface for the purpose of pointing up any of the spots which have been engaged by the inner ends of the screws 18.

While the foregoing represents what I now regard as the preferred form of construction, I desire to reserve the right to make such changes or modifications as may fairly fall within the scope of the following claims.

What I claim is:

1. A clamping structure for beams or columns, comprising a pair of arms provided with means for clamping engagement with opposite faces of the beam or column, a cross bar adjustably connecting said arms, straight edge members adapted to be positioned in parallel relation along the corners of said beam or column, and adjustable clamping devices carried by said arms for clamping engagement with said straight edge members.

2. A clamping structure for beams or columns, comprising a pair of arms provided with means for clamping engagement with opposite faces of the beam or column, a cross bar adjustably connecting said arms, straight edge members adapted to be positioned in parallel relation along the corners of said beam or column, and adjustable clamping devices carried by said cross bar for clamping engagement with said straight edge members.

3. A clamping structure for beams or columns, comprising a pair of arms provided with means for clamping engagement with opposite faces of the beam or column, a cross bar adjustably connecting said arms, straight edge members adapted to be positioned in parallel relation along the corners of said beam or column, and adjustable clamping devices adapted for inter-changeable mounting on said cross bar or arms and operative in either position for clamping engagement with said straight edge members.

4. A clamping structure for beams or columns, comprising a pair of arms provided with means for clamping engagement with opposite faces of the beam or column, a cross bar adjustably connecting said arms, straight edge members adapted to be positioned in parallel relation along the corners of said beam or column, and clamping screws operative for clamping engagement with said straight edge members and provided with supporting clips adapted for adjustable clamping engagement with said arms and cross bar, said arms and cross bar having reduced portions for permitting the application and removal of said clips therefrom.

In witness whereof I hereto affix my signature.

JOHN W. JETER.