Feb. 8, 1927. 1,616,915

J. MEIKLE

JOINT FOR KNOCKDOWN STRUCTURES

Filed April 24, 1926

FIG 1

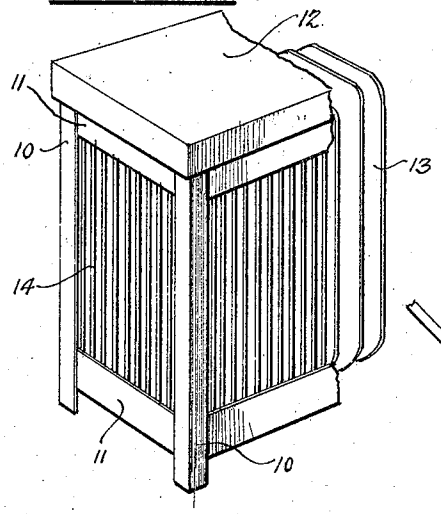


FIG 3

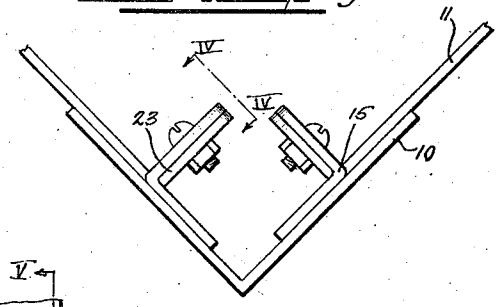


FIG 4

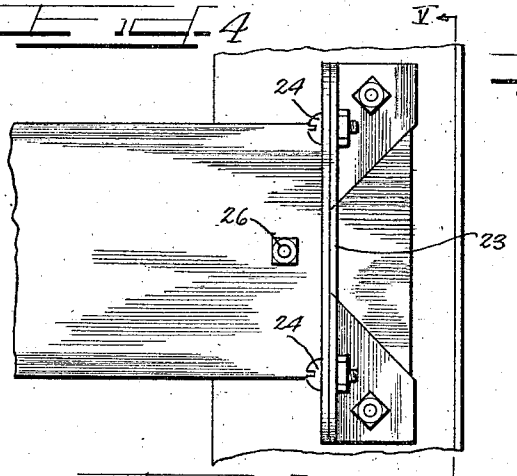
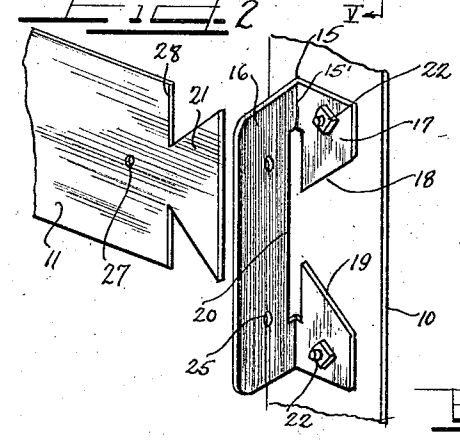


FIG 5



FIG 2



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UNITED STATES PATENT OFFICE.

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JOINT FOR KNOCKDOWN STRUCTURES.

Application filed April 24, 1926. Serial No. 104,259.

This invention relates to a joint for knockdown structures and more particularly to concealed joints therefor.

It contemplates more especially the provision of a novel means for effecting with ease a rigid concealed joinder of two or more adjacent members so as to render a structure pleasing and harmonious in design.

The requisite features of a joint for members constituting a structure of serviceable and pleasing design are concealment, rigidity, and ease in facilitating an assembly of the constituent elements thereof.

In devices heretofore proposed, considerable difficulty has been encountered in maintaining the desired relation and rigidity between cooperating elements, and to effectively conceal them from view in devices wherein a pleasing and aesthetic appearance is essential or at least highly desirable.

Further, the joints of known construction have not proved entirely satisfactory for structures of the knock-down type, for these must necessarily be assembled and dismantled with ease and without entailing much labor and time.

One object of the present invention is to simplify and improve the construction of devices of the character mentioned.

Another object is to provide improved concealed connecting means for members constituting a rigid structure.

A further object is to provide an improved construction of devices of the character mentioned whereby the parts thereof may be easily assembled and dismantled.

A still further object is to provide a joint which is simple, inexpensive, durable, and of pleasing appearance.

In the drawings:

Figure 1 is a perspective view of a knockdown structure wherein concealed connecting means for the constituent elements, are highly desirable.

Figure 2 is a perspective view of a joint embodying features of the present invention.

Figure 3 is a plan view showing the manner in which the joint illustrated in Figure 2 may be employed in connecting adjacent members constituting the corner of a structure.

Figure 4 is a view in elevation taken substantially from line IV—IV of Figure 3.

Figure 5 is a view taken substantially along line V—V of Figure 4.

The joint selected for illustration is shown associated with a radiator cover comprising the usual corner standards 10, to which are secured in a manner to be hereafter described, spaced horizontal members 11 positioned near the top and bottom of the standards 10 in the customary manner. The radiator cover in this instance, has a top 12 which rests upon the standards 10 in an obvious manner so as to cover a radiator 13 or the like for the purpose of shielding it from view.

Sheeting 14 of any pleasing or desirable design is, in this instance, secured to the members 10 and 11 in any appropriate manner so as to occupy the space intermediate the frame defined by the members 10 and 11. As shown, the standards 10 are angular in cross section so as to present right angularly related faces to which are secured on the inner sides thereof securing means to make possible a simple concealed connection between the members 10 and 11 constituting the frame of the structure above described.

The securing means, in this instance, comprises a member or bracket 15 which is bent along a median line thereof to present a corner edge 15′ which constitutes the intersection of the angularly related faces 16 and 17 thereof. One of the sides, in this instance 17, is provided with a mortise having inclined sides 18 and 19 which communicate with a slot 20 formed in the edge 15′ so as to receive therethrough the member 11 which is provided with a correspondingly shaped projecting tenon 21 which is adapted to project through the slot 20 to interengage the mortise defined by the inclined sides 18 and 19, when positioned therein. As shown the face 17 is anchored to a face of the standard 10 in any appropriate manner as by the threaded studs 22. It is to be noted that the bracket 15 may be welded or otherwise secured to the standard 10.

A plate 23 which approximates in size the face 16 of the bracket, is adapted to be detachably secured thereto in any suitable manner so as to maintain the tenon 21 in the mortise thereby rendering the members rigid. The plate 23 is in this instance secured to the face 16 of the bracket by means

of the screws 24 which are adapted to extend through the spaced apertures 25 provided in the face 16 for that purpose.

A stud 26 may be provided in the face of the standard 10 to engage an aperture 27 in the member 11 at a point removed from the bracket to further reinforce the structure. Obviously, the studs 22 and 26 may be welded or otherwise secured to the interior of the standard 10 or they may project therethrough and be provided with a medallion to obscure the studs from vision.

With the arrangement of parts above described, it will be apparent that a simple and effective concealed joint has been provided which is capable of being assembled and dismantled with ease by merely securing or removing, as the case may be, the plate 23. To assemble the structure, the tenon 21 may be projected through the slot 20 and positioned in the mortise. It is to be noted that the shoulder 28 is caused to engage a portion of the slot 20 to restrict it from movement in any direction.

Various changes may be made in the embodiment of the invention here and above specifically described, without departing from and sacrificing any of the advantages of the invention as defined in the appended claims.

I claim:

1. In a device of the character described, a pair of members, means on one of said members to slidably receive the other of said members, and cooperating means associated with said means and slidable member to effect engagement therebetween in a predetermined position.

2. The combination with a pair of members, of a bracket anchored on one of said members, said bracket having a slot to slidably receive the other of said members, and interfitting means associated with said slidable member and said bracket to effect engagement therebetween subsequent to the reception of said member by said bracket.

3. The combination with a pair of members, of a bracket anchored on one of said members, said bracket having a slot to slidably receive the other of said members, interfitting means associated with said slidable member and said bracket to effect engagement therebetween subsequent to the reception of said member by said bracket, and means secured to said bracket to maintain said slidable member and bracket in interfitting rigid relation.

4. The combination with a pair of members, of a bracket associated with one of said members, the other of said members projecting into said bracket, a mortise formed in said bracket, and a tenon corresponding to said mortise on the projected portion of said member to engage said mortise.

5. The combination with a pair of members, of an angular member constituting a bracket associated with one of said members, said bracket having a slot formed in the bent edge thereof, the other of said members projecting into said slot through said bracket, a mortise having inclined sides communicating with said slot, and a corresponding tenon on the projected portion of said member to engage said mortise.

6. The combination with a pair of members, of an angular member constituting a bracket associated with one of said members, said bracket having a slot formed in the bent edge thereof, the other of said members projecting into said slot through said bracket, a mortise having inclined sides communicating with said slot, a corresponding tenon on the projected portion of said member to engage said mortise, and a member secured adjacent one face of said bracket to retain said mortise and tenon in engagement.

In testimony whereof I have hereunto subscribed my name.

JOHN MEIKLE.