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CONNECTING DEVICE

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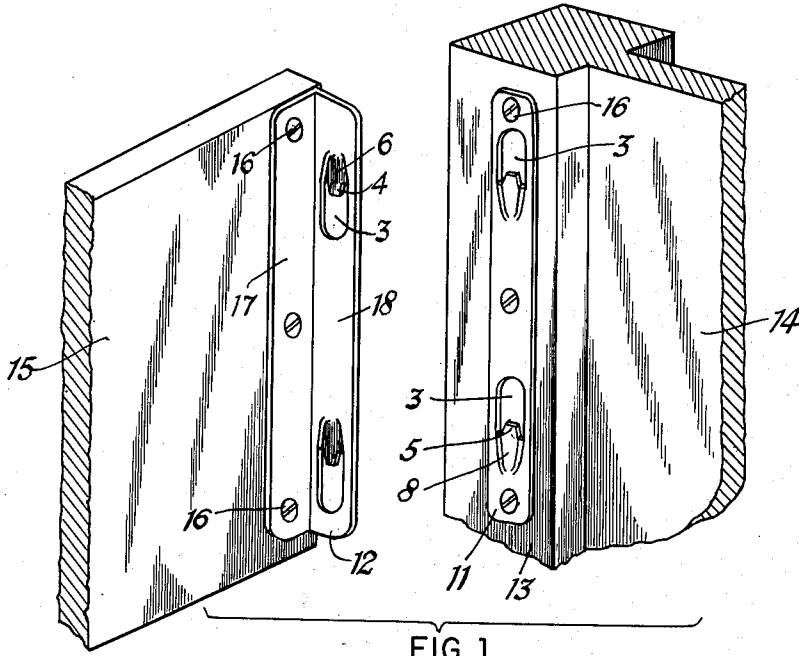


FIG. 1

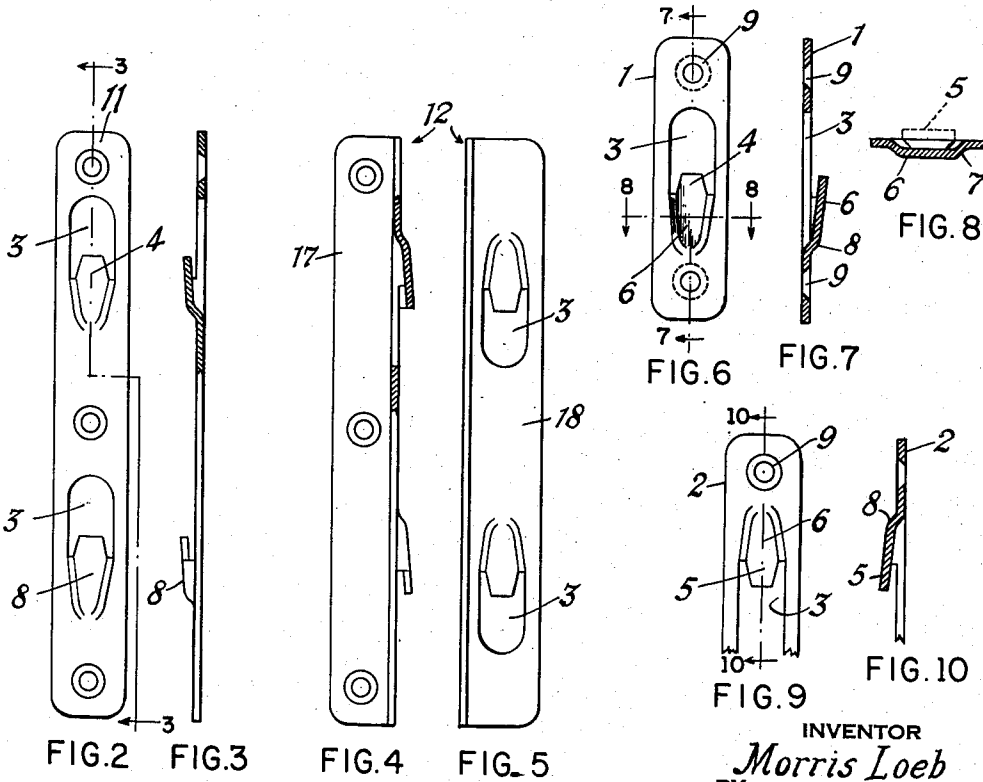


FIG. 2 FIG. 3

FIG. 4 FIG. 5

FIG. 6 FIG. 7

FIG. 8

FIG. 9

FIG. 10

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CONNECTING DEVICE

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1 Claim. (Cl. 5—295)

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My invention is an improvement in connecting or coupling devices; particularly coupling devices for uniting the side boards or beams of a bed or couch to the head and foot posts thereof.

An important object of this invention is to provide coupling devices in the form of complementary metal parts which engage each other securely, so that the bed can be set up in a short time, and which can readily be detached when the side beams need to be dismounted. The shape of the connecting devices is such that each part can be easily fixed in place upon the outer surfaces of the members to be joined thereby; the parts can be more quickly attached with fewer operations and tools and less labor, and especially recessing, grooving or countersinking in said surfaces is unnecessary; and while the coupling devices are mainly intended for beds, they can of course be utilized to join any members which require to be assembled in the same way.

The invention is clearly set forth in the ensuing description and illustrated on the accompanying drawings. The novel features are pointed out in the appended claims. But this disclosure is by way of example only; and I may adopt variations in structure and shape of the parts without departure from the main design that characterizes the invention.

On the drawings:

Figure 1 is a perspective view showing one form of the connecting members in mounted positions, ready for use.

Figure 2 is a front view of one of said members.

Figure 3 is a longitudinal section thereof, on line 3—3 of Figure 2.

Figure 4 is a side or edge view of complementary connecting member.

Figure 5 is a front elevation thereof.

Figure 6 is a front elevation and Figure 7 a longitudinal section of a smaller connecting member, on line 7—7 of Figure 6.

Figure 8 is a section on line 8—8 of Figure 6.

Figures 9 and 10 respectively, are a front elevation and a longitudinal section on line 10—10 of Figure 9 of part of a member to match the member of Figures 6, 7 and 8.

The connecting devices comprise two cooperating members, one to be affixed to each of a pair of parts in any construction to be joined together. These members, as shown in Figures 6 to 10 inclusive, are made of flat pieces of metal and are indicated by the numerals 1 and 2. Each has a central aperture 3. The member 1 has a lug 4 projecting from one end of the aperture 3

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therein; and the member 2 has a slightly longer lug 5 projecting from one end of its aperture 3; both lugs being bent out of the plane of the respective members 1 and 2. When the members 1 and 2 are brought face to face with the lugs 4 and 5 in opposition, then by longitudinal movement of either member each lug can be slipped into hooked engagement with the other and the two members will be securely united; and drawn together by a wedge or taper fit hereafter fully explained.

The openings 3 and the lugs 4 and 5 can be made by stamping and punching, for instance, and in such an operation a depressed seat 6 is formed in each member at the end of the opening 3 from which the lug thereof projects. The sides 7 of the seat 6 are inclined at an angle to the plane of the member, converging towards the bottom of the seat; and these sides further are diagonally inclined to the long axis of the member and converge slightly from the end of the lug towards the opposite end of the seat. The openings 3 are of course longer than the lugs, and the portions 3 forming the seats or recesses 6 of each member bulge out from the plane of the face to the same extent as the lug integral with said portion.

The side edges of the lugs are not bevelled, but normal or perpendicular to the faces of the lugs; and the sides of the lug of each member are inclined to the long axis of said member at the same angle as the sides 7 of the seat 6 of the other member. Hence as the lugs move into engagement with the members 1 and 2 in proper alinement, the sides of each lug will be parallel to the sides 7 of the seat 6 receiving the lug. When the lugs are fully engaged they will fill the respective seats, and will really be wedged in along the sides 7 of the seats 6; and the inclination of the sides 7 of the seats to the bottoms thereof will have a wedging or camming effect perpendicular to the faces of the lugs, tending to push the lugs flatwise a little away from each other and thus binding the members 1 and 2 to each other more tightly. Each lug may even be a little wider than the seat receiving it, say by only a few thousandths of an inch, to make this binding and tightening action stronger.

The members 1 and 2 have holes 9 for nails or screws to affix them to the parts to be connected. Countersinking or recessing of the surfaces to which they are attached is not required.

The connecting devices shown in Figures 1 to 6 include members 11 and 12, each with two openings 3, one at each end. The member 11

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is intended for the side of a post 13 at the head 14 (or foot) of a bed, and the member 12 is for attachment to the adjacent end of the beam or side board 15 between the head post and foot post. The member 12 is held by screws 16, and the member 11 has a flange 17 at right angles to enable it to be affixed to the side of the board 15 with the other portion 18 bearing the lugs flush with said end.

The connecting devices of Figures 1 to 6 inclusive unite the members 13 and 15 securely and hold each other in alinement and registry because they have the lugs at each end. The seats 6 and lugs 4 and 5 have the same shape and relative dimensions as described above with reference to Figures 6 to 10 inclusive and have the same engaging action.

The connecting devices of this invention are therefore well adapted to serve their intended purpose; can be readily attached to the parts on which they are to be mounted; and when the parts to which they are affixed are joined, such parts can be quickly and easily disconnected by movement of the members 1 and 2 in the reverse direction to release the lugs 4 and 5.

The lugs 4 and 5 are preferably not parallel to the faces of the members 1 and 2, 11 and 12, but project outward at a slight angle. The lugs can be more easily engaged at the start and the interfitting and wedging action above described thus becomes more effective.

The members can be mounted in various positions so long as they appose for the interlocking of the lugs 4 and 5. Also the flange 17 can be omitted and the member 12 fixed to the end of the side board 15, if desired.

Recessing, grooving or countersinking can of course be done in mounting the connecting devices if desired.

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Having described my invention, what I believe to be new is:

A connecting device comprising a pair of flat members each having an opening and a lug joined onto each member at one end of said opening therein, said lugs extending along one face of said members and disposed out of the planes thereof, each lug having its side edges inclined to the long axis of the member bearing it and converging towards the other end of said opening therein, each member having a depressed seat adjacent the inner end of the lug thereof, said seats having sides which are inclined to the bottoms of the seats and side edges inclined at the same angle as the sides of the lugs to the long axis of the members, and converging in a direction away from said lugs, so that when said members are superposed face to face with the lugs on adjacent faces, and the lug on one member registering with the opening in the other, longitudinal movement of said members brings the lugs of each member into wedging engagement with the sides of said seat of the other member.

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