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2,833,575

SLEEVE FOR JOINING T BARS IN INSTALLING TILE

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FIG. 1

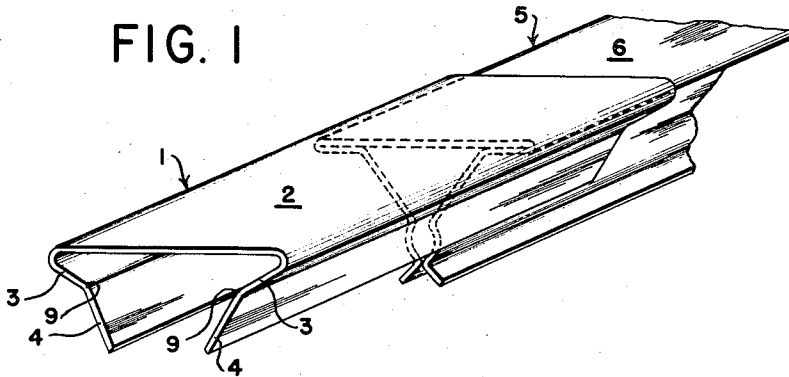


FIG. 2

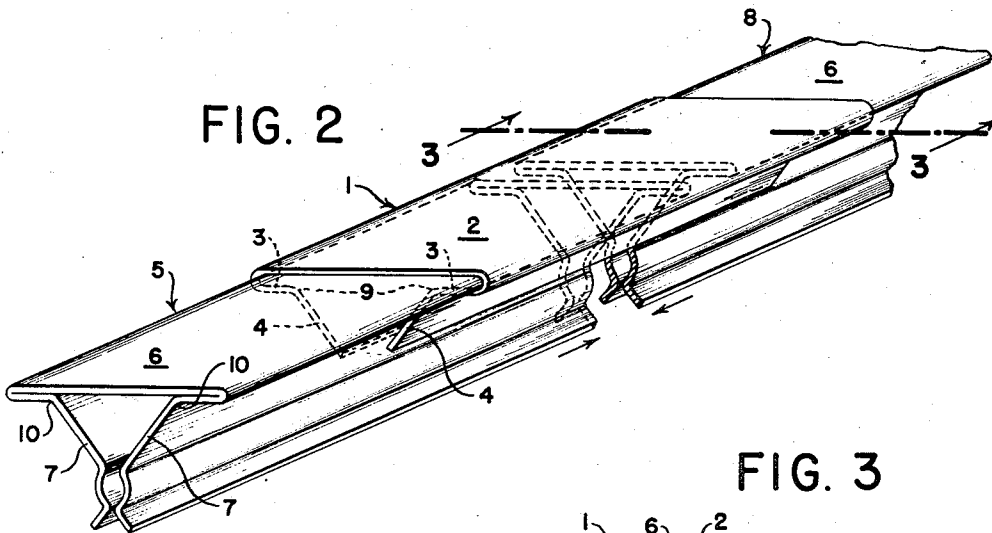
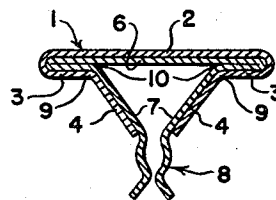


FIG. 3



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SLEEVE FOR JOINING T BARS IN INSTALLING TILE

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1 Claim. (Cl. 287—108)

This invention relates to a sleeve adapted to connect abutting T bars used in the installation of acoustical tile or similar construction materials on walls or ceilings.

The installation of tile, acoustical panels, or similar materials on ceilings or walls is usually accomplished by rigidly attaching T bars to the spaced beams or carriers of the ceiling or wall. The T bars bridge the gaps between the beams or carriers and the tile or panels are attached to the T bars by means of bracket clips or similar means. In attaching the T bars to the carriers, it is frequently necessary to interconnect one or more T bars by some suitable means in order to span the entire length or width of the ceiling or wall. Heretofore, it has been necessary to interconnect the T bars closely adjacent the carriers to prevent sagging and bending at the joints. This necessitates cutting the T bars adjacent the carriers which results in waste of material, labor and time.

The present invention provides a connecting sleeve for T bars which obviates the disadvantages of prior connecting elements. The connecting sleeves of the present invention form a rigid joint between abutting T bars and permits the connection thereof at any desired point between the carriers or beams to which the T bars are attached, without sagging or bending at the joints. The connecting sleeves of the present invention further provide a connecting element for T bars which is inexpensive and easy to apply.

According to the present invention, the connecting sleeve structure comprises a base member having two depending side members forming a channel-like shaped metal structure, and flanges attached to each of the side members. The width of the base member is slightly larger than the width of the cross bar member of the T bar, so that when the sleeve is fitted over the T bar the cross bar member fits snugly within the confines of the base and side members of the connecting sleeve. The length of the side members of the channel strip is such that when the side members are squeezed toward each other onto the T bars the junctures of the side members and the flanges of the sleeve fit snugly within the juncture formed by the cross bar member and the vertical bar member of the T bar. The side members rigidly contact the under sides of the cross bar member. The flanges extending from the side members are so constructed that they rigidly contact the sides of the vertical bar member of the T bar.

For a more detailed description of the invention reference may be had to the drawings in which:

Figure 1 is a schematic view showing the sleeve in open position before it is squeezed onto the T bar;

Figure 2 is a schematic view showing the sleeve in closed position connecting abutting T bars;

Figure 3 is a cross section of Figure 2 taken along the lines 3—3.

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In Figure 1 the connecting sleeve 1 is shown in open position and fitted over a T bar 5. The sleeve as shown comprises a base member 2 having depending side members 3 forming a channel shaped structure. Depending from the side members 3 are flanges 4. The sleeve is fitted over the T bar by sliding the T bar into the channel formed by the base and side members of the sleeve. The width of the base member is slightly wider than the width of the cross bar member 6 of the T bar 5 so that the cross bar snugly fits within the channel of the sleeve. The sleeve is squeezed on the T bar by pressing the flanges 4 toward each other by any suitable means.

The sleeve is shown in closed position in Figures 2 and 3 and interconnecting two T bars 5 and 8. The length of the side members 3, as more clearly shown in Figure 3, is such that when the side members are squeezed toward each other to the closed position onto the T bars, the juncture 9 of the side members 3 and the flanges 4 of the sleeve fit snugly within the juncture 10 of the cross bar member 6 and the leg member 7 of the T bar. The flanges 4 close upon the sides of the vertical bar member 7.

The present connecting sleeve structure prevents movement of the T bars in both a vertical and lateral direction by means of simultaneous contact with both the under side of the cross bar and the lateral sides of the vertical bar of the T bar. The flanges are sufficiently long so as to engage a substantial portion of the vertical bar member giving more surface contact area in the joint and further preventing any undesirable movement at the joint.

We claim:

A sleeve for joining T-bars having cross bar members and leg members which consists of a base member, side members extending from the base and with said base member forming a channel structure adapted to receive the cross bar members of the T-bars to be joined, said side members converging towards one another from said base member, and each forming an acute angle with the base member, and flanges extending from the edges of the side members remote from the base member, said flanges converging towards each other, and each forming an acute angle with the base member larger than the acute angle formed by its side member with the base member, the edges of said flanges remote from the side members being free and spaced from one another, the length of the side members being substantially equal to the distance between the outer edge of the cross bars of the T-bars to be joined and the juncture of the cross bars of such T-bars and the legs thereof, said sleeve being adapted to be slipped over adjacent ends of the T-bars to be joined and to have the sides and flanges, respectively, pressed against the underside of the cross bars and against the legs of the T-bars with the junctures between the side members and flanges of the sleeve fitting snugly in the junctures between the cross bars and legs of the T-bars.

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