

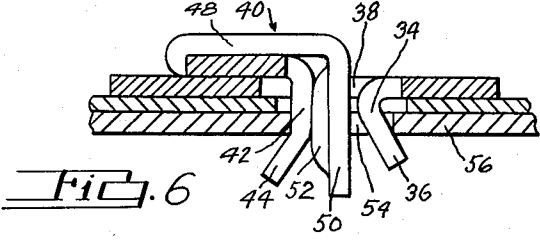
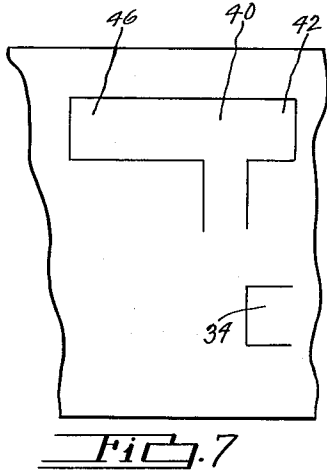
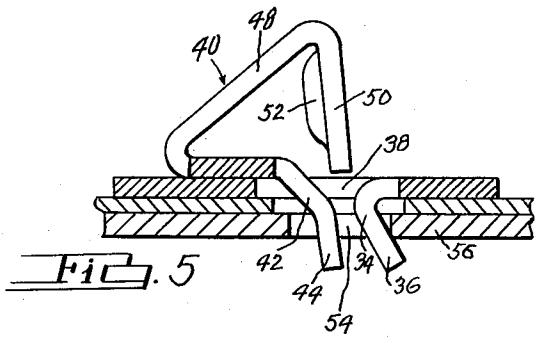
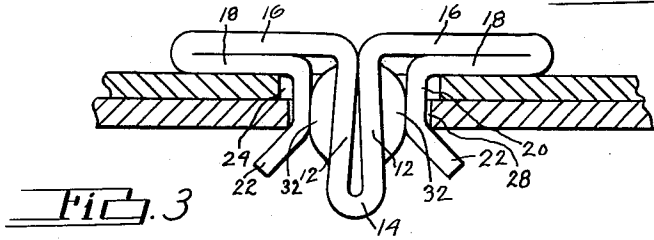
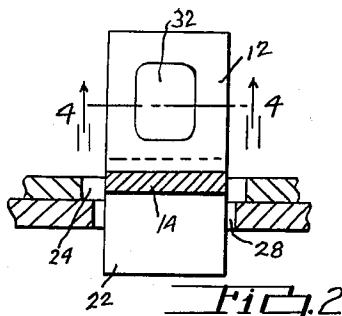
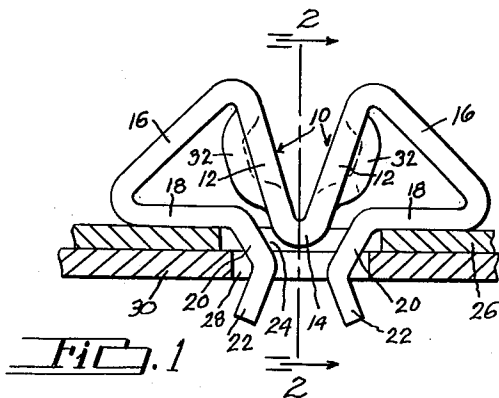
June 5, 1956

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2,748,645

BENDABLE SHEET METAL WEDGING FASTENER

Filed Jan. 4, 1955



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2,748,645

BENDABLE SHEET METAL WEDGING FASTENER

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Application January 4, 1955, Serial No. 479,773

1 Claim. (Cl. 85—6)

This invention relates to a fastener and more particularly to improvements in a fastener disclosed in United States Patent 2,618,193 issued November 18, 1952, to Roy E. Peckham, for securing panel members together or a molding to a panel.

In that patent the fastener has a central bandable section with oppositely disposed engaging portions at opposite sides of the bendable section whereby the engaging portions are brought into holding engagement with the panel by bending the central bendable sections toward each other causing the central portion to be forced into the panel opening.

It is an object of the present invention to provide depressed portions on the central bendable section which act as wedges to spread the engaging portions into holding engagement with the underside of the panel as the central bendable section enters the opening in the panel.

Other objects and advantages of the invention will more fully appear from the following description taken in connection with the accompanying drawings, in which:

Fig. 1 is a cross sectional view through a pair of apertured panels, showing the fastener in cross section and before it is deformed to its retaining position;

Fig. 2 is a cross sectional view taken on line 2—2 of Fig. 1;

Fig. 3 is a view corresponding to Fig. 1, but showing the fastener bent to its retaining position;

Fig. 4 is a cross sectional view taken on line 4—4 of Fig. 2;

Fig. 5 is a cross sectional view of a modified form of the invention, showing the fastener before it is deformed to its retaining position;

Fig. 6 is a view corresponding to Fig. 5, but showing the fastener bent to its retaining position; and

Fig. 7 is a view illustrating the blank from which the form of fastener shown in Figs. 5 and 6 is formed.

Referring to the drawings, the fastener comprises a sheet metal stamping formed from malleable metal which may be permanently deformed, as distinguished from a spring steel metal which, when bent, will return to its normal position.

The fastener is formed from flat sheet material, cut to the desired shape, and bent in suitable dies to its finished shape and form. When finish formed there is provided a central portion 10 of V shape form, the legs 12 of the V diverging from a central integral connecting portion 14 at the base of the V. The outer ends of the legs 12 have outwardly and downwardly bent integral portions 16 which are joined to inwardly extending base portions 18 substantially in the same flat plane. The adjacent free ends of the portions 18 are bent downwardly and convergently toward each other, as at 20, and then bent outwardly in divergent relation, as at 22. The portions 20 and 22 form hook-like projections co-operating with the base portions 18. Normally the inner ends of the portions 20 are spaced apart a distance substantially equal to the width of the connecting portion 14 and are adapted to freely enter an opening 24 in a part 26 to be supported and an aligned opening 28 in a supporting panel 30. The junctures of the portions 18 and 20 are bent at an angle so that the portions 22 are freely insert-

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able in the openings 24 and 28. The portions 16 are connected to the base portions 18 at an angle such that the connecting portion 14 of the V is directed between the portions 20 and substantially in the plane of the base portions 18.

The portions 12 are each provided with depressed portions 32 directed toward the portions 16 so that when the V section is forced into the space between portions 20, the latter are bent into contact with the side edges of the opening 28, the bend taking place at the juncture of portions 18 and 20, forcing the outer free end portions 22 underneath the supporting panel 30. The depressions 32 act as wedges and serve to increase the thickness of the legs 12 of the V section.

If desired, the fastener may be formed as shown in Figs. 5, 6 and 7 wherein a tab 34 is stamped downwardly out of the sheet metal forming the hook 36 and leaving an opening 38 in the metal. At one side of the tab 34 is another tab 40 which is stamped upwardly out of the body of the sheet metal. This tab 40 is of T formation, integrally united to the body of the sheet metal at the base of the T, and is folded over the body of the sheet metal so that the cross of the T is aligned with the opening 38. One end portion 42 of the tab 40 is bent downwardly into the opening 38 and is provided with a portion 42 extending in a slanting direction, with respect to the body, and a downwardly extending portion 44 which is normally vertical with respect to the body of the fastener. The opposite end portion 46 of the tab is bent upwardly and inwardly, as at 48, and the outer end portion 50 is bent downwardly toward the opening 38 and provided with a depressed portion 52 directed toward the slanting portion 48. When the portion 50 is forced into the opening 38 the outer side of the portion 50 presses against the folded edge of the hook 36 forcing it into hooked engagement with the under edge of an opening 54 in a panel 56 and the depressed portion 52 presses the portion 42 urging it toward the opposite edge of the opening 54 with the downwardly extending portion 44 bending back under the panel 56, as shown in Fig. 6.

The invention has been illustrated and described in connection with preferred forms of the device, but it will be understood that various changes, including the size, shape and arrangement of parts, may be made without departing from the spirit of the invention and it is intended to cover such changes as may be reasonably included within the terms of the appended claim.

We claim:

A malleable sheet metal fastener for insertion into a hole through a panel, said fastener being a single strip of sheet metal bent along a transverse line at its mid-portion forming a V section, the outer ends of the legs of the V being bent outwardly and downwardly, inwardly extending base portions integrally with said outwardly and downwardly extending portions and substantially in a common plane with the base of said V section, the adjacent free ends of said base portions being bent downwardly and convergently toward each other and then outwardly in divergent relation, the convergent and divergent portions being freely insertable in the hole of the panel, and depressed portions in the legs of the V portion extending outwardly toward the outwardly and downwardly extending portions.

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