

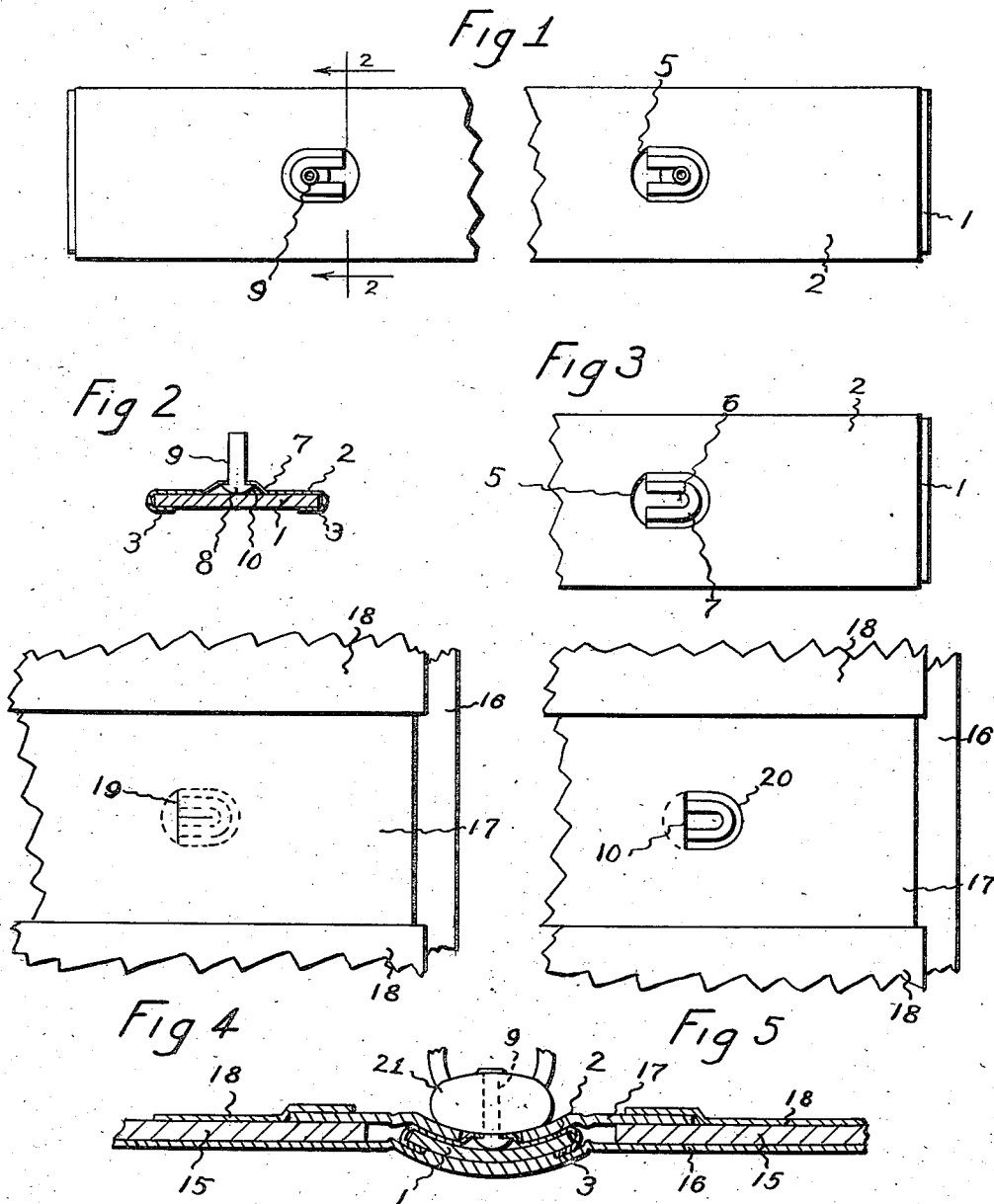
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LOOSE LEAF BINDER CONSTRUCTION

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LOOSE LEAF BINDER CONSTRUCTION

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3 Claims. (Cl. 129—24)

This invention relates to the manufacture of casings for loose leaf binders and the like, and has particular reference to the construction of back panel members for the casings of such binders.

A customary way of forming these casings is to assemble in flat form a narrow strip of suitable back forming material such as cardboard, which is to form the back of the binder, flanked by wider panels of cardboard which are to form the sides of the binder. These panels are then covered and connected by the usual cover hinge and lining sheets and a loose leaf mechanism is then riveted to the inside of the back panel. The use of metal to reenforce the back panel has complicated the riveting operation and in my Patent No. 1,983,883, dated December 11, 1934, I have disclosed and claimed an arrangement of parts and manner of construction which overcomes the difficulties in the riveting operation.

In my prior arrangement and method the heads of the rivets appear on the outside unless a relatively expensive outside back member is used.

One object of my present invention is to provide means for attaching rivets to a back panel of the general type shown in the above mentioned patent in a manner such that the rivet heads are concealed from the outside of the binder, and to accomplish this without hindrance to the automatic machine operation by which the cover, hinge, and lining strips are usually applied.

The invention has a further application to outside back panels of the type shown in my co-pending application Serial No. 758,756, filed December 22, 1934.

Other and further objects will be apparent from the following specification and claims.

In the accompanying drawing,

Fig. 1 is a plan view showing the end portions of a back panel embodying one form of the invention;

Fig. 2 is a section substantially on line 2—2 of Fig. 1;

Fig. 3 is a plan view of one end of a back panel as shown in Fig. 1 but before the rivet is put in place;

Figs. 4 and 5 are fragmentary plan views showing two ways of inserting the rivets after the casing has been formed; and

Fig. 6 is a transverse sectional view of the central portion of a casing with a loose leaf mechanism in place.

In the drawing the thickness of parts has been exaggerated where desirable to better show the structure.

Referring to the drawing, the back panel is shown as formed of a strip 1 of cardboard, leather, or other backing material reenforced and stiffened by the addition of a sheet of thin metal 2 extending across one face of the cardboard strip 1 and having its longitudinal edges bent around the longitudinal edges of the strip 1 and onto its opposite face, as indicated at 3, to firmly hold the cardboard and metal members together. The metal and cardboard members may be secured together in any other suitable manner, as the specific way in which the metal and cardboard portions of the back panel are assembled does not form a part of the present invention.

According to my present invention, prior to the application of the metal sheet to the cardboard strip, I form in the metal at the points where it is desired that the rivets be located, a generally T shaped opening 5 and press the metal adjacent the stem portion 6 of the T opening 5 outwardly, as shown at 7, a distance from the plane of the body of the metal substantially equal to the thickness of the head 8 of the rivet 9. As best shown in Fig. 2, when the metal sheet and strip 1 are assembled, the struck-up portion 7 forms a recess or pocket 10, the inner wall of which is formed by the cardboard strip. The width of the pocket 10 is made substantially equal to the diameter of the rivet head, the length being somewhat greater and the stem portion 6 of the T shaped opening 5 is of a width to just freely receive the shank 11 of the rivet. As previously stated, the portion 7 is struck up a distance to approximately equal the thickness of the head of the rivet and preferably this approximation is very slightly less than the head thickness, so that the rivet head makes a tight, crowded fit between the up-struck metal portion and the relatively yielding cardboard of the strip. It will be understood that the exact form of the pocket may be varied from that shown.

The back member, as shown in Fig. 3, may be assembled in that form with suitable side panels 15, see Fig. 6, and the usual cover, hinge and lining sheets indicated at 16, 17, and 18, respectively, and the casing completed in a conventional automatic case forming machine. When the casing comes from the machine the rivet receiving pockets are covered by the hinge sheet 17, as shown in Fig. 4, and the pockets may be opened to receive the rivets by cutting T shaped slits over the T shaped opening 5, as shown in Fig. 4 at 19, or by completely removing the portion of the hinge sheet which overlies the struck-up portion 7, as shown at 20 in Fig. 5, or in any other suitable way.

At any suitable stage in the manufacture of the casing the back panel may be curved to rounded book back shape, as shown in Fig. 6, where the curved instead of the flat back form is desired. As shown in the latter figure, after the casing is completed and the rivets inserted in the retaining pockets 10, any suitable form of leaf retaining mechanism, such as 21 indicating a ring mechanism, is secured in the casing by means of the rivets 9, thus completing the binder.

While I have illustrated a form of back panel in which the metal sheet in which the pockets 10 are formed is substantially coextensive with the cardboard strip 1, it will be understood that my invention is applicable to other forms in which a less area of the strip is embraced or covered by the metal, the minimum essential being a sufficient area of metal to form the pocket and provide for its attachment to the cardboard strip.

It will also be appreciated that the invention may be advantageously used for securing rivets to decorative back panels, such as are shown in my copending application Serial Nos. 758,756, and 758,757, filed December 22, 1934 and December 22, 1934, respectively.

I claim:

1. A back panel member for use in the manufacture of loose leaf binders and the like which comprises a strip of backing material having a piece of thin metal secured thereto, portions of said metal being bent outwardly to form an open-ended pocket-like recess between the metal and said strip at each end portion of the back panel member, said bent-out portions of the metal

member being each provided with a slot in which the shank of a rivet for permanently securing loose leaf mechanism to the back panel member engages when the head of such rivet is inserted in the recess, the open ends of said recesses confronting each other across the center of the panel.

2. A loose leaf binder having a back panel provided with a plurality of pockets each having an opening onto the inside only of the back panel to permit the passage of the shank of a rivet, and a lateral opening also on the inside of the back panel to permit the entrance of the head of the rivet, rivets received in said pockets, and a loose leaf structure secured to the shanks of the rivets, the lateral openings of the pockets being arranged at such an angle relative to each other that the engagement of the rivets with the loose leaf structure prevents their disengagement from the pockets.

3. A loose leaf binder having a back panel provided with a plurality of pockets each having an opening onto the inside only of the back panel to permit the entrance of the shank of a rivet, and a lateral opening also on the inside of the back panel to permit the entrance of the head of the rivet, rivets received in said pockets, and a loose leaf structure secured to the shanks of the rivets, the lateral openings of the pockets being arranged in oppositely facing relation longitudinally of the back panel whereby the engagement of the rivets with the loose leaf structure prevents their disengagement from the pockets.

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