Jan. 3, 1939. P. ZALKIND 2,142,167

PRONG

Original Filed Oct. 16, 1933

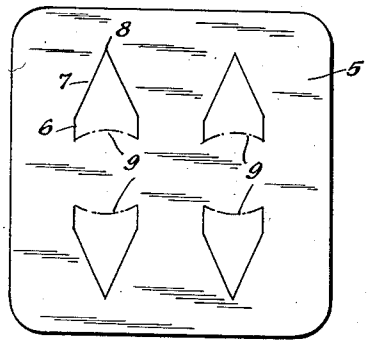


Fig. 2

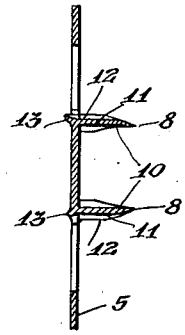


Fig. 3

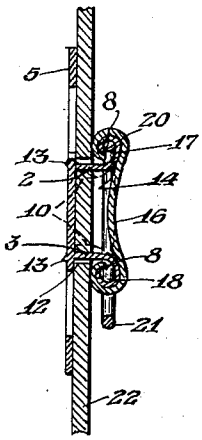


Fig. 6

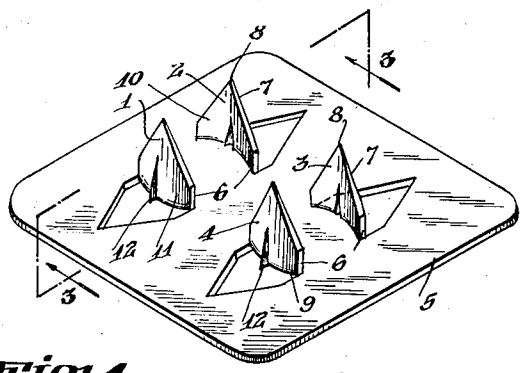


Fig. 1

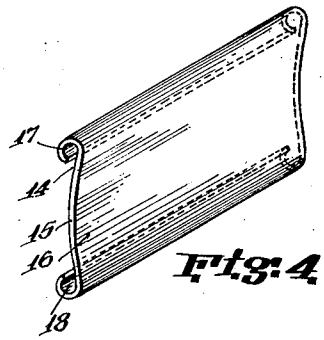


Fig. 4

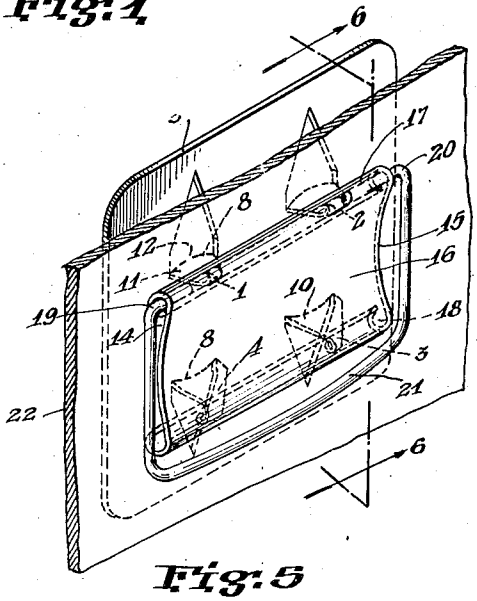


Fig. 5

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2,142,167

PRONG

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Original application October 16, 1933, Serial No. 693,841. Divided and this application December 3, 1935, Serial No. 52,732

6 Claims. (Cl. 85—38)

My invention relates to novel structural members, and more particularly relates to novel securing metallic members which may be used in connection with collapsible containers of sheet material. My invention is particularly adapted as a drawer handle securing means, and while I illustrate my invention in connection with the securing of a drawer handle, I do not limit it to such particular adaptation.

My invention is a division of my copending application Serial No. 693,841 covering "Containers and parts therefor" filed Oct. 16, 1933, in which is claimed certain structural features relating to collapsible containers and which application is a continuation in part of my application Serial No. 631,682 filed Sept. 3, 1932.

In the drawers of the type disclosed and described in my copending application Serial No. 693,841 referred to hereinbefore, metallic handles are secured to the front wall. These metallic members are preferably secured through the front wall of the casing to a metallic plate in face to face relation with the rear face of the front wall. To this end, provision must be made for securing the metal plate to the front metallic member which carries the handle. I have discovered a novel construction of metal which permits to a simple and easy interlocking and securing of two metallic members to each other.

Accordingly, objects of my invention are to provide novel apparatus for and methods of securing metal to metal; novel securing means; novel apparatus for and methods of securing a handle; to provide novel fabrication of metal; to provide an arcuate metallic member protruding from and integral with a member and to provide a novel prong construction.

There are other objects of my invention which together with the foregoing will appear in the detailed description following in connection with the drawing in which:

Figure 1 is a perspective view showing my novel metallic securing member for securing two metallic sections such as a handle support to a handle carrier.

Figure 2 is a back plan view of the reinforcing member shown in Figure 1.

Figure 3 is a cross section through plane 3—3 of Figure 2.

Figure 4 is a perspective view showing a metallic member adapted to cooperate with the member shown in Figures 1 to 3.

Figure 5 is a perspective view showing one application of my interlocking member.

Figure 6 is a cross section through line 6—6 of Figure 5.

Now referring to the figures, in which I show my novel construction of metal securing means with a handle construction. As shown, a plurality of prongs 1, 2, 3, and 4 are punched from a metal base 5 and pushed into a vertical position as illustrated in Figure 1. As there shown, the portions protruding upwardly from the base 5 first extend vertically in a straight line 6 and then curve inwardly as at 7 to meet at the apex 8. The base of this punched metal is arcuate as shown at 9 so that the entire prong forms in effect a vertical arc-shaped member of substantially triangular shape as illustrated in Figure 1, with an inner cancave side 10 and outer convex side 11, curved base 9, and longitudinal corrugations 12 extending from the base upwardly for providing increased rigidity.

In punching the metal into shape, provision is made for first projecting a small portion of the metal downwardly from the surface on the opposite side from that on which the main portion of the metal protrudes as illustrated at 13 in Figure 3 to form a head substantially equivalent to a nail head for receiving the hammer blows. As shown, this head is in line with the extreme convex tip of the prong to transfer the power therealong. This head may also be formed by first slitting the metal at its base so that in the punching operation, the metal at the slit will protrude to form the head.

Such a construction when subjected to a sudden hammer blow at the apex of the formed triangle results in the metal giving way at its weakest spot which is the apex and bending toward the convex side into a spiral curve as shown in Figures 5 and 6. Such a device when applied against a tool accordingly forms a secure grip therewith.

Thus, I have discovered that when the apex 8 of the metal is brought into engagement with the metallic surface 14, and hammer blows are applied to the projecting lug portion 13, the metal will curve outwardly, that is, toward the convex side, and either form a securing head or curve itself around a metal member and be secured thereto. This I have illustrated in Figures 5 and 6 using the application of the principle to a handle carrying frame 15 such as is shown in Figure 4 having an outer surface 16, an inner surface 14, and the end ring formations 17 and 18, one of which carries the spring ends 19 and 20 of a handle 21.

In Figure 4, I have shown the frame 15 apart

from the prong plate 5 and the handle 21; and in Figure 5, I have shown how the prongs 1, 2, 3, and 4 curve toward the convex side of the member when the apex 8 is brought into engagement with the undersurface 14 of the frame 15 and a hammer blow is applied to the protruding end 13. In this figure, I have also shown the handle 21 sprung into place in the end ring formation 17: as well as the wall of the drawer 22, interposed between prong plate 5 and frame 15.

In Figure 6, I have shown a cross section of a front wall of a drawer with the handle secured by my novel prongs to a plate in face to face relation with the rear side and protruding through a slit in the front wall.

Although in illustrating my invention, I have shown application thereof to a handle support it will be obvious that there are other uses, that parts may be modified without departing from the spirit of my invention.

Thus, this invention may be used to fasten strips of metal or metallic sheets to a wall of a container or other surface. A metallic track for a wall of a container may have prongs punched therefrom which are to curl when struck and effect the gripping action here described thus forming a durable and rigid support for the track member.

Many additional uses of my invention will now be obvious. Accordingly, I do not wish to be limited by this description, but only by the appended claims.

What I claim is:

1. A securing prong comprising a prong integral with a metallic plate, said prong extending at right angles to said plate and having a convex and concave side and an arcuate section transverse of said prong, edges terminating in a pointed apex the said prong being adapted to bend toward the convex side thereof, and a raised bead longitudinal of said prong.

2. A securing prong comprising a prong integral with a metallic plate, said prong extending at right angles to said plate and having a convex and concave side and an arcuate section transverse of said prong, edges terminating in a pointed apex the said prong being adapted to bend toward the convex side thereof, a raised bead longitudinal on said prong, and a head substantially in line with said apex for receiving an impact.

3. A securing means comprising a first sheet of metal and a second sheet of metal; said first sheet having integral prongs formed therein by striking up portions of the interior of the sheet, said prongs being substantially perpendicular to said sheet; said second sheet having two substantially parallel edges rolled back upon the sheet to form an open loop along each of said two edges; said loops and said prongs being positioned on their respective sheets in a manner that the prongs will register with the loops and will curl into the loops when the two sheets are forced toward each other.

4. A securing prong for two metallic members comprising a prong integral with one of said members, said member being a substantially flat plate, said prong extending at right angles to said one of said members and having a convex and concave side and being of arcuate section on planes parallel to said one of said members, the said prong being adapted to bend toward the convex side thereof; an open loop extending along one edge of the other of said members and adapted to receive said prong, the said loop being also adapted to receive the ends of a bent wire and to pivot such ends to form a handle member.

5. In a container, a wall; a substantially flat metallic member mounted on one face of said wall; integral prongs extending from said member through said wall; a second metallic member having an integral open loop to receive the prongs and to receive the ends of a bent wire and to pivot such ends to form a handle member.

6. A securing means comprising a first sheet of metal and a second sheet of metal; said first sheet having integral prongs formed therein by striking up portions of the interior of the sheet, said prongs being substantially perpendicular to said sheet; said second sheet having two substantially parallel edges rolled back upon the sheet to form an open loop along each of said two edges; said loops and said prongs being positioned on their respective sheets in a manner that the prongs will register with the loops and will curl into the loops when the two sheets are forced toward each other; the said loops being also adapted to receive the ends of a bent wire and to pivot such ends to form a handle member.

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