Nov. 1, 1932. E. L. HERBOLSHEIMER 1,885,441

SHEET METAL CASE

Filed Sept. 24, 1930

Fig. 1

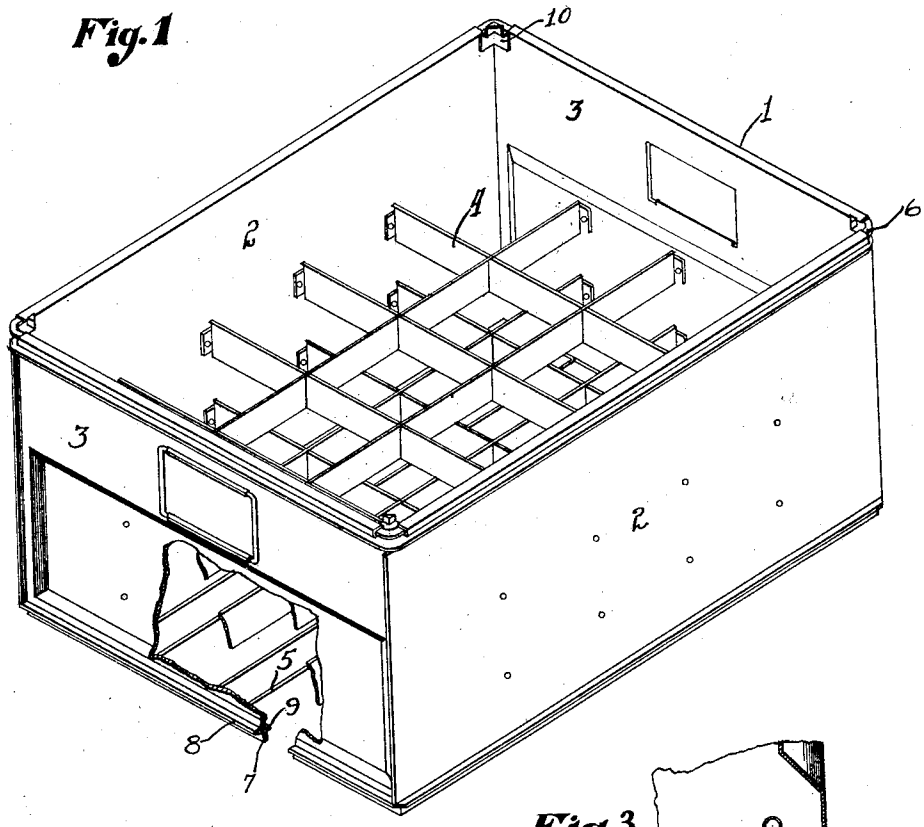


Fig. 2

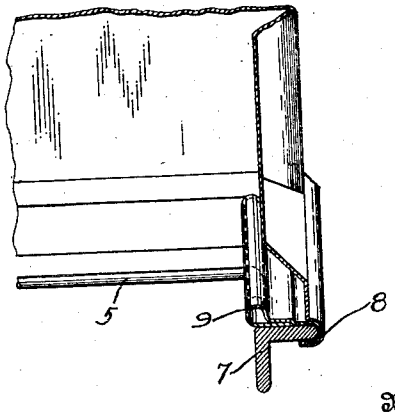
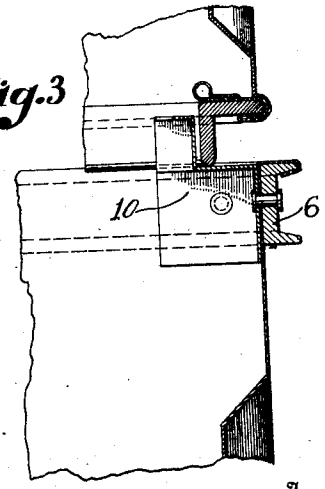


Fig. 3



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UNITED STATES PATENT OFFICE

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SHEET METAL CASE

Application filed September 24, 1930. Serial No. 484,027.

This invention relates to metallic storage and shipping cases for bottles or similar articles.

Cases of this character which are made of sheet metal are subjected to hard usage and, unless reinforced at the bottom edge thereof, soon become so badly distorted at such edge as to lessen the efficiency thereof and also prevent the piling of one case on another to facilitate compact storage of the same.

The object of the present invention is to provide a bottom edge construction for cases of this character which is strong and durable and effectually resists the severe knocks to which the bottom edges of the cases are subjected when thrown around by careless handlers.

The invention is fully described in the following specification, and while in its broader aspect it is capable of embodiment in different forms, a preferred embodiment thereof is illustrated in the accompanying drawing, in which—

Figure 1 is a perspective view of a case embodying the invention, with a portion broken away; Fig. 2 is an enlarged fragmentary sectional view in perspective of a lower corner portion of the case; and Fig. 3 is an enlarged fragmentary sectional view of the upper and lower corner portions of two cases resting one on the other.

Referring to the drawing, 1 designates a case or box having the side walls 2, 2 and end walls 3, 3 of sheet metal. The interior of the case, by the provision of crossing strips 4, is made of cellular form to provide a plurality of spaces for receiving bottles or the like, and the top and bottom of the case are open except that the bottom has a plurality of rods 5 extending in parallel spaced relation from one end to the other thereof, as well understood in the art.

The top edge of the case is provided with a reinforcing frame 6 preferably of channel iron in cross-section which extends entirely around the upper edge portion of the case and has its channel opening outwardly. The metal forming the side and end walls of the case extends up at the inner side of such frame in flat contact therewith and its upper edge is bent outwardly over the top of the frame and clinched around and under the top flange thereof, as best shown in Fig. 3.

The lower edge of the case is reinforced by a bottom frame 7 of L or angle iron form in cross-section and one flange is disposed horizontally with its free edge projecting outwardly while the other flange projects downwardly in inwardly spaced relation to the lower marginal edge of the case and forms a supporting foot therefor.

The frame 7 is retained to the bottom of the case by doubling a portion of each case side and end upon itself above the lower edge portion of such side or end to form a flange 8 which extends outwardly, downwardly and inwardly in embracing relation around the free edge of the horizontal flange of the frame. The portion of the side or end metal which extends beyond the flanges 8 extends over the top side of the frame 7 and it is looped or doubled back at the inner edge of the frame, as shown at 9, to form an anchorage for the respective ends of the bottom rods 5.

The free edge of the horizontal flange of the frame extends outwardly beyond the vertical plane of the respective end of side wall of the case so that the frame not only reinforces and strengthens the side and end walls and assists in tying them together, but an upward thrust thereof is opposed by the case wall.

It is found in practice that the provision of the angle iron frame 7 makes an exceedingly rigid and durable bottom rest for the case and prevents the upward dishing or bending and otherwise distorting of the lower edge portions of sheet metal cases to which they are customarily subjected by hard usage in handling.

Within each upper corner of the case is rigidly secured a corner-iron 10 which is riveted to the sides and ends of the case through the top frame 6 and serve to hold the cases in centered relation when being stacked one on another. The inner downwardly projecting flange of the bottom frame 7 is intended to rest on the horizontal body portion of the corner-irons of the subjacent

case and to have the upwardly projecting stud portions of the irons loosely inserted within the respective corners of the frame to prevent any material lateral displacement of one case relative to another when in stacked relation.

One of the advantages of the present form of bottom frame over those heretofore used, so far as I am aware, is that the frame is sufficiently strong to resist distortion and is therefore ordinarily in a condition for stacking with the corner-irons of another case. The provision of this form of bottom frame also makes it possible to indiscriminately stack metallic and wooden cases together one on top of another, which is not ordinarily possible with metallic frames of the construction commonly used.

I wish it understood that my invention is not limited to any specific construction, arrangement or form of the parts, as it is capable of different modifications without departing from the spirit of the claims.

Having thus described my invention, what I claim as new and desire to secure by United States Letters Patent is:

1. A metal case of the class described, having sheet metal side and end walls, and a frame of L-form in cross-section disposed at the lower edge of said walls and forming a foot rest therefor, said walls having portions near their lower edges doubled upon themselves and forming flanges which extend outwardly, downwardly and inwardly around the free edge of the horizontal flange of the frame.

2. A metal case of the class described, having sheet metal side and end walls, and an angle-iron frame disposed at the lower edge of the case entirely around the same with its horizontal flange projecting outwardly with respect to the case and extending beyond the respective side and end walls thereof, said walls, near their lower edges, being doubled upon themselves to form outwardly, downwardly and inwardly extending flanges in embracing relation to the free edge of the horizontal flange of the frame and then having a portion extending inwardly over the top of the frame and forming a bottom-rod anchorage loop at the inner edge of the frame.

3. A metal case of the class described, having sheet metal side and end walls, each of said walls having its lower edge extending outwardly, downwardly and inwardly to form an inwardly opening recess at such edge, and an angle-iron frame disposed at the lower edge of said walls entirely around the case with its horizontal flange projecting into said recess at the respective side and end walls of the case and firmly clamped by the metal forming the recess with the upward thrust of the frame directly against the edges of said walls in the planes thereof, the vertical flange of the frame being spaced inwardly from the respective walls.

4. A metal case of the class described, having sheet metal side and end walls, each of said walls having its lower edge extending outwardly, downwardly and inwardly to form an inwardly opening recess at such edge, and an angle-iron frame disposed at the lower edge of said walls entirely around the case with its horizontal flange projecting into said recess at the respective side and end walls of the case and firmly clamped by the metal forming the recess with the upward thrust of the frame directly against the edges of said walls in the planes thereof, the vertical flange of the frame being spaced inwardly from the respective walls, and a bottom-rod anchorage means looped around the outer edge of the frame within said recess of a respective wall and extending inwardly over the top of the frame to bottom-rod anchorage position.

In testimony whereof I have hereunto signed my name to this specification.

EMIL L. HERBOLSHEIMER.