Jan. 18, 1944. P. ZALKIND 2,339,312

COLLAPSIBLE DRAWER BOTTOM REINFORCEMENT

Original Filed Oct. 19, 1935

Fig. 1

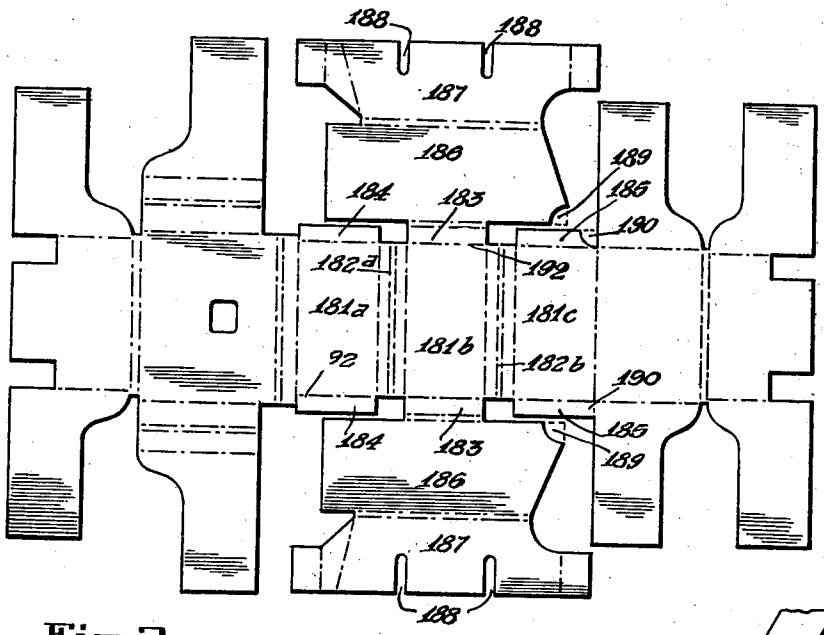


Fig. 2

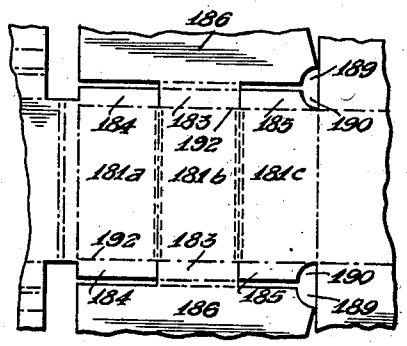


Fig. 5

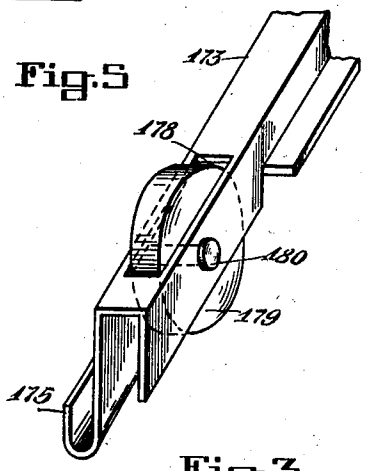
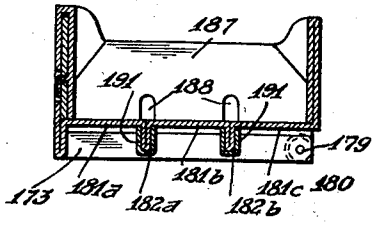
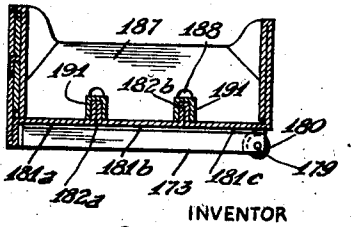


Fig. 3

Fig. 4.





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COLLAPSIBLE DRAWER-BOTTOM REINFORCEMENT

Philip Zalkind, New York, N. Y.

Original application October 19, 1935, Serial No. 45,715. Divided and this application May 7, 1940, Serial No. 333,743

3 Claims. (Cl. 229—49)

My invention is a true division of my application Patent No. 2,200,319, issued May 14, 1940, and relates to collapsible and/or folding containers; and more particularly to novel construction of the parts with which said drawers and the like coact to facilitate movement of said drawer relative to said coacting parts.

In the movement of the drawers in and out of the container in which the drawer is adapted to operate, it is desirable that as much freedom of movement as possible shall be obtained. The patent application of which this is a division was a continuation in part of my copending application Patent No. 2,233,906, issued March 4, 1941, in which I have shown novel construction for facilitating the movement of a drawer in a collapsible casing, and of my Patent No. 2,159,069, issued May 23, 1939, in which I have shown novel construction for facilitating the movement of a drawer in a folding or collapsible cabinet.

In the aforesaid applications, I have shown a substantially flat bottom drawer of fibrous sheet material with novel wheel and track construction. This construction is generally very efficacious in reducing the friction between the drawer and the container, but I have found that with certain drawer loadings, the drawer bottom will sag or bow an amount to permit the drawer bottom to make contact with the bottom of the casing unless the wheels and tracks or rails are so mounted as to hold the drawer some distance above the bottom of the subjacent part. If the drawer bottom should sag under loading a sufficient amount to come into contact with the subjacent part, the full benefit of my anti-friction mounting cannot be obtained.

I have found that where it is expected to load the drawer in such a manner that, without a special construction, the drawer would rub on the subjacent part when loaded, I may provide means in the construction to eliminate such action.

Moreover, I have found that I may combine various parts of the anti-friction member with reinforcing or connecting members and thus obtain an economy of construction through such combination of parts. I have also found that other economies of construction may be attained through certain novel rearrangement of parts which expedite the manufacture of my novel construction.

Accordingly, objects of my invention are to provide novel apparatus for and method of moving drawers into and from its container on wheels or rollers; novel apparatus for and methods of mounting collapsible drawers to be moved on wheels or rollers from and into a collapsible container; tracks secured to the container and/or to the drawer and rollers or wheels cooperating with said tracks for providing a maximum freedom of movement of the drawer with respect to its container; novel drawer construction to reduce sagging of the drawer bottom upon the subjacent part; tracks combined with reinforcing and/or connecting members; improved construction as effecting manufacture.

More specifically this invention relates to the formation of auxiliary transverse bottom reinforcements of a drawer, said drawer being generally of the type described in my Patent No. 2,200,319, issued May 14, 1940; Patent No. 2,233,906, issued March 4, 1941, and in my Patent No. 1,946,516.

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 blank for a drawer having a raised bottom and auxiliary transverse bottom reinforcements.

Figure 2 shows the bottom panel of the blank of Figure 1 after bending the transverse reinforcements into position.

Figure 3 shows a transverse section of a drawer formed from the blank of Figure 1 with the reinforcements turned upwardly.

Figure 4 shows a transverse section of a drawer formed from the blank of Figure 1 with the reinforcements turned downwardly.

Figure 5 is an enlarged perspective view showing a detail of a wheel mounted on the end of a track member of Figures 3 and 4.

Referring now to Figures 1 to 4, I have here shown a form of drawer of the type described in my patent and applications above mentioned, having transverse reinforcements on the bottom panel, in addition to longitudinal reinforcements along each of the sides. In this manner the bottom of the drawer is not only raised above the bottom of the casing, but is also provided with means for reducing sagging under load.

Figure 1 shows a developed blank for a drawer with transverse bottom reinforcements made from a single sheet of material. The blank as shown provides for two such reinforcements between the front and rear walls of the drawer,

but it may readily be understood that the construction is not limited to this particular number. The bottom panel in this case comprises the sub-panel 181*a*, 181*b* and 181*c*, separated from each other by the panels 182*a* and 182*b* which form the bottom reinforcements.

The blank is provided with suitable score lines as shown in the figure. The panel 181*b* is provided with the extensions 183 which form portions of the side longitudinal flanges and which unite the bottom panel with the side walls 186. The panel 181*a* has the extended flaps 184, and the panel 181*c* has the extended flaps 185. The flaps 184 and 185 together with the extensions 183 comprise the bottom longitudinal flanges.

The flaps 185 and the side walls 186 may be cut out as at 189 and 190 to provide for a space wherein the longitudinal reinforcements will fit; and the side wall extensions 187 may be cut out as at 188 in order that the side wall extension will fit over the transverse reinforcements, when these reinforcements are folded so as to be on the interior of the drawer.

The blank is first folded so that the panels 181*b* comes in edge to edge contact with panels 181*a* and 181*b* forming a complete bottom for the drawer as shown in Figure 2. This operation will at the same time form the panels 182*a* and 182b into bottom flanges as shown in Figure 3 or Figure 4. Each flange comprises two layers of material in face to face relationship and the two layers may be united with each other in any suitable manner, as by adhesive or by other fastening means, as for instance the metallic channels 191, which may be clinched, riveted or otherwise fastened to the flanges 181*a* and 182*b*.

The side flanges are then formed by bending the blank on the score lines 192 so that the flaps 183, 184 and 185 come into face to face relation with the side walls 186. This relationship is maintained by uniting the flap with the side wall in any suitable manner, and I have shown a channel 173, having the wheel 179 mounted thereon by axle 180. This member may be the same as that shown in Figure 5 and which has been described in detail in my Patent Nos. 2,200,319, issued May 14, 1940, and 2,273,918, issued February 24, 1942.

The longitudinal flanges may be turned in the same direction as the transverse flanges in which event the transverse flanges will appear on the outside of the drawer when set up as shown in Figure 4; or the transverse and longitudinal flanges may be turned in opposite direction from each other, in which event, the transverse flanges will be on the inside of the drawer when erected as shown in Figure 3.

Where the transverse flanges are on the outside of the drawer as in Figure 4, I prefer that the longitudinal flanges be of greater depth or height than the transverse flanges. Where the transverse flanges are on the inside of the drawer, these flanges may be made deeper than the longitudinal flanges and may be extended to act act as partitions for the drawer.

It will also be noted that the bottom extensions 183 may be cut off from the sides in the same manner as the flaps 184 and 185 with the side walls 186 and the side wall extensions 187 being separated from the bottom. In this case, the side walls and the bottom panel are united with each other through the longitudinal flanges and the flange securing means such as the metallic channel 173.

Whether the open blank is a single piece as shown, or whether the side walls are a separate piece from the bottom in the open blank, after the flanges have been bent on their score lines and have been secured in face to face relationship as has just been described, the semi-assembled blank will have the same general form as the developed blank shown and described in my Patent No. 2,233,906 previously referred to.

In these figures, as well as in my Patent Nos. 2,200,319, issued May 14, 1940, 2,289,281 issued July 7, 1942, and 2,273,918, issued February 24, 1942, I have shown various forms of raised bottoms for preventing the drawer from dragging on the casing under load. In these figures the drawer shown had a single bottom with means for raising this bottom by providing bottom flanges on the drawer, in the present specific application, the specific means for reinforcing the bottom being a series of transverse reinforcements which may be supplied either separately or together with longitudinal reinforcements.

Various other means for providing similar transverse and longitudinal members of different types in various kinds of containers, and the utility of this type of reinforcement for forming integral rails, reinforcements, guides and partitions within the boundaries of a wall will now be clear.

I prefer, therefore, to be bound not by the specific disclosures herein, but only by the appended claims.

I claim:

1. A blank for a collapsible drawer, said blank having fold lines defining a bottom wall section, side wall sections and an end wall section, wing projections from the lateral edges of the end wall section, and additional fold-over longitudinal flaps on the side wall sections, additional transverse fold lines in said bottom wall section defining additional panels foldable about said fold lines to form a transverse flange member for said bottom wall.

2. A blank for a collapsible drawer, said blank having fold lines defining a bottom wall section, side wall sections and an end wall section, wing projections from the lateral edges of the end wall section, and additional fold-over longitudinal flaps on the side wall sections, additional transverse fold lines in said bottom wall section, sets of additional panels foldable about said fold lines to form transverse flange members for said bottom wall, said side wall sections being foldably secured to said bottom wall along a section thereof between two adjacent flange members.

3. A blank for a collapsible drawer, said blank having fold lines defining a bottom wall section, side wall sections and an end wall section, wing projections from the lateral edges of the end wall section, and additional fold-over longitudinal flaps on the side wall sections, additional transverse fold lines in said bottom wall section defining additional panels foldable about said fold lines to form a transverse flange member for said bottom wall and means for securing said panels in flanged relationship to said bottom wall.

PHILIP ZALKIND.