

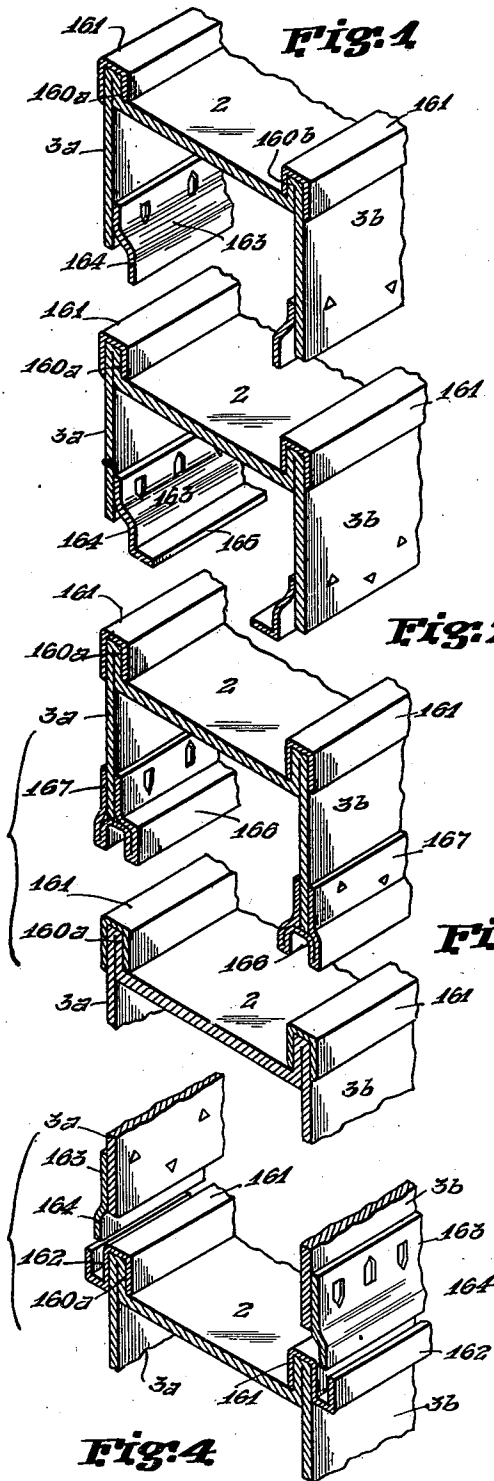
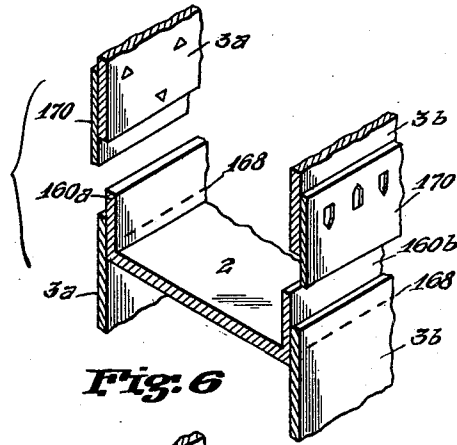
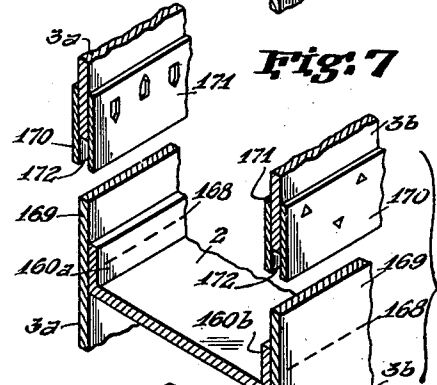
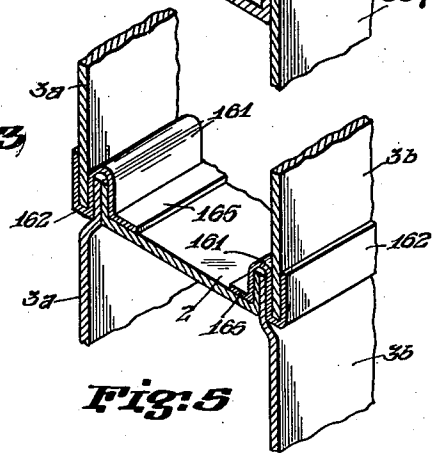
July 13, 1943.

P. ZALKIND

2,323,957

CONTAINER-WALL CONNECTION AND TRACK

Original Filed Oct. 19, 1935 2 Sheets-Sheet 1



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2,323,957

CONTAINER-WALL CONNECTION AND TRACK

Original Filed Oct. 19, 1935 2 Sheets-Sheet 2

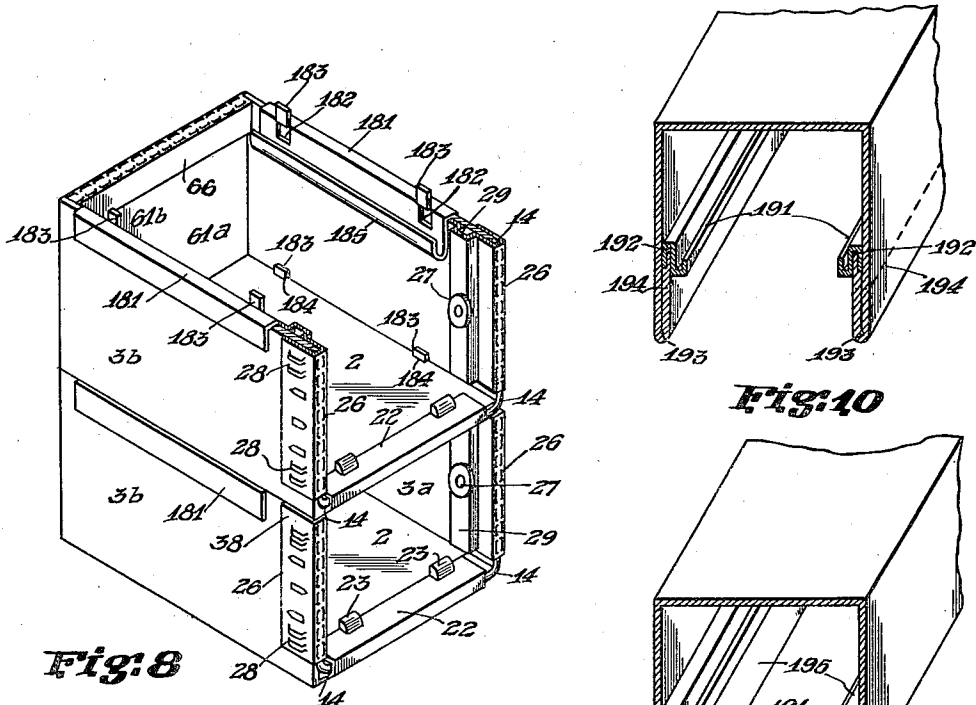


Fig. 8

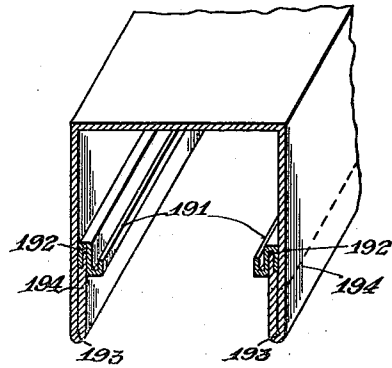
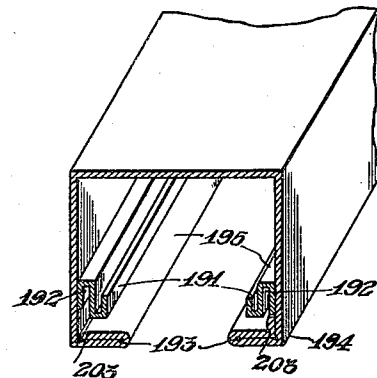


Fig. 10



UNITED STATES PATENT OFFICE

2,323,957

CONTAINER-WALL CONNECTION AND TRACK

Philip Zalkind, New York, N. Y.

Original application October 19, 1935, Serial No. 45,714, now Patent No. 2,210,019, dated August 6, 1940. Divided and this application August 3, 1940, Serial No. 350,630

2 Claims. (Cl. 312-107)

My invention is a division of my application Ser. No. 45,714, filed October 19, 1935, which has resulted in Patent No. 2,210,019, dated August 6, 1940, and relates to containers, and more particularly relates to collapsible casings for filing drawers and the like.

In my Patent No. 2,118,011, which issued on May 17, 1938, a division of Patent No. 1,946,516, issued February 13, 1934, and my application S. N. 693,841 filed October 16, 1933, of which this application is a continuation in part, reinforcing members, preferably made of metal are applied to open front end of a container comprising a bottom member, a top member, and two side walls, the reinforcing members being so applied to the container that it may readily be collapsed for shipment with the reinforcing members applied to the casing. In these applications, I also showed means of interlocking superposed and adjacent casings.

I have found that by a novel construction, I can produce a casing comprising two sides and either a top member or a bottom member and thus secure a considerable economy in the construction and at the same time the casing will have great structural strength and rigidity.

In this construction, I use sheet material having score or bend lines on which said material may be manually folded so that the container may be folded or collapsed for shipment, and this collapsibility is secured with the reinforcing members applied to the casing and preferably with interlocking means between superposed casings.

I have found that when superposed casings of a stack are suitably interlocked, such interlocking may be arranged in a manner that each of the casings of the stack impart additional strength to each other. Thus where in my novel construction I use a casing comprising a top wall and two side walls, and with such novel construction, I place the casing over a similar casing and suitably interlock the two casings together, the top of the subjacent casing acts as a bottom member for the upper casing and the interlocking means may be utilized to assist in maintaining the bottom width of the upper casing to an amount substantially equal to that of the top width of the casings.

While in the construction of my novel casing, I may use any suitable material such as corrugated board, paperboard or other sheet material of fibrous nature, I prefer to use a laminated material comprising a metallic layer combined with a dominant non-metallic layer having a score or bending line on which the laminated structure is

manually foldable. Such a sheet is described and claimed in my copending application Ser. No. 21,411, filed May 14, 1935.

In addition to the advantage accruing to my novel construction through economy of material, certain other advantageous features may be secured as will later be described in further detail. Thus, with a casing comprising a top member and two side members, track members may be applied either directly to the side members or to the flaps attached to the side members. In this manner, the tracks are at or near the edges of the casing blank and thus may be more easily applied to the blank than in the form of casing wherein the track must be positioned at some distances from the edge of the casing blank. This is of particular advantage in handling blanks of large size such as are needed to produce casings suitable for use with filing drawers for letter size or legal size sheets.

Accordingly, objects of my invention are to provide a folding or collapsible casing comprising side walls with either a top or bottom wall and provided with reinforcing members which serve to maintain the casing in proper position when the casing has been folded into set up position. Other objects of my invention are to provide interlocking means for adjacent and/or superposed sections which cooperate in maintaining the casing in proper position in its set up position and which contribute to the strength and rigidity of the casings of a stack. Further objects are to provide drawer suspension means, drawer stops, and other novel features in a collapsible casing having three principal sides.

In the construction of my novel casing, I may utilize many of the novel features disclosed in my copending applications filed coincidentally with the parent application of this application and entitled

Clips, S. N. 45,712, now Patent No. 2,142,166, dated April 1, 1941. Predetermined bend line, S. N. 45,710

Rollers, S. N. 45,715, now Patent No. 2,236,557, dated April 1, 1941. Reentrant clips, S. N. 45,709, now Patent No. 2,184,829, dated December 26, 1939

Panels, S. N. 45,708. Container fastening means, S. N. 46,316, now Patent No. 2,236,557, dated April 1, 1941

These and other objects of my invention, which together with the foregoing, will appear in the detailed description following in connection with the drawings, in which:

Figures 1 to 7 inclusive are isometric views showing my casing with the top panel inset between the side walls and with various modifications of interlocking means for superposed casings.

Figure 8 is an isometric view of two casings stacked one on the other and formed with two side walls and a bottom wall.

Figure 9 is an isometric view of a top panel which may be used with a casing such as is shown in Figure 8.

Figures 10 and 12 are isometric views showing portions of casings with various forms of track members which may be used with my casing.

Figures 13 to 16 are isometric views showing sections of other modified forms of track members.

In each of my casings or containers herein described, the front and rear may have the constructions shown in my parent application Ser. No. 45,714, filed October 19, 1935, or in my application Ser. No. 693,841, filed October 16, 1933, or in my Patent No. 2,118,011, issued May 17, 1938, and my Patent No. 2,088,315, issued July 27, 1937.

In Figures 1 to 5 inclusive, I have shown a number of sections in which the top of my casings described in said applications and patents has been modified in such a manner that the top is inset between the side walls. Thus referring to Figure 1, the top panel 2 has the side flanges 160a and 160b which are folded so as to lie flat against the side walls 3a and 3b respectively. In this position, the flange and the top of the side wall are secured to each other by any suitable means such as the metallic channel 161. This construction is shown in all of the Figures 1 to 5 inclusive. In Figures 4 and 5 channel 161 has the trough-shaped extension 162. The side walls may be formed from the same sheet of material as the top panel and the flanges as shown in Figure 1 or the top panel and flanges may be made of a separate sheet from the side walls as shown in Figure 3. This joint is of a folding or collapsible type as is shown in my copending application entitled Clips and filed coincidentally with the parent application of this application.

As is indicated in Figures 1 to 5 inclusive, the flanges formed on the top of the casing may be used for interlocking superposed casings. Thus in Figure 1 there is shown the members 163 attached to the bottom of each of the side walls of the casing. These members 164 have a section shaped in an ogee curve so that when the upper casing is placed over the lower casing, the side walls 3a and 3b of the upper casing rest upon the members 161 of the lower casing and the outstanding portions 164 of the members 163 of the upper casing fit snugly between the members 161 of the lower casing. In Figure 2 substantially the same coaction between casings is obtained. However, the member 163 is provided with a flange 165 extending at right angles from the extremity of the outstanding portion 164. This flange 165 rests upon the top panel 2 of the subjacent casing and may serve as a track for a wheel or roller for supporting the drawer to be inserted into the casing. In Figure 3, the bottom of the side walls 3a and 3b have attached thereto the member 166 having the shape of an inverted U and provided with the extension 167 for attachment to the side walls. Each of the U portions fit snugly over its corresponding mating member 161. In Figure 4, the members 163

are attached at the bottom of the side walls on the outside of the walls instead of on the inside of the walls as shown in Figure 1. The extensions 164 of the members 163 thus cooperate with the troughs 162 provided for that purpose on the channels 161. In the construction shown in Figure 5, the upper portions of the side walls 3a and 3b are bent inwardly a sufficient distance that the troughs 162 are in vertical alignment with the side walls. Thus the members 163 shown attached to the outside of the side walls in Figure 4 may be omitted in the modified form shown in Figure 5, as in this latter figure the bottom edges of the side walls 3a and 3b of the upper casing may be inserted directly into the troughs 162 on the members 161 of the lower casing. In Figure 5, there is also shown flange portions 165 attached to the inner edge of the members 161. These flanges are similar to those described in connection with Figure 2.

It will be understood that except where the member attached to the bottom of the side walls is to function also as a track member, it may be composed of a plurality of short sections attached to each wall of the casing rather than a single piece on each wall, substantially continuous with the wall to which it is attached. That is either a single piece or a plurality of pieces may be used on each wall according to the particular application.

It will further be noted that the flange arrangement on the top of the side walls is not a disadvantage in contributing useless height to a stack of casings as it would be if each casing had both a top and bottom panel. It will readily be seen that when the casings are stacked vertically, the space between the flanges of the lower casing is added to the space provided between the top and side walls of the upper casing; and a drawer constructed to operate in the casing may be of a size to utilize the combined space so provided.

In Figures 1 to 5 inclusive, the flange portions 160a and 160b were shown as coterminous with the top of the side walls 3a and 3b. The top panel 2 with its flanges 160a and 160b could thus be integral with the side walls or could be a separate piece therefrom according to the particular application. Where the top panel 2 with the flanges 160a and 160b is a separate sheet from the side walls, the top of the flanges may be placed either above the top of the side walls as is shown in Figure 6 or below the top of the side walls as is shown in Figure 7. In these two figures, the top panel 2 with its integral flanges 160a and 160b is shown as being attached to the side walls 3a and 3b by the stitching 168.

In Figure 6, the flat plates 170 are attached to the lower extremity of the side walls 3a and 3b and protrude beyond the walls. When one casing is superimposed upon a similar casing the lower edges of the side walls 3a and 3b of the upper casing rest upon the upper edges of the side walls 3a and 3b of the lower casing. In this position, the upper portion of the side wall of the lower casing and the lower portion of the side wall of the upper casing are positioned between the upturned flange on the top panel 2 of the lower casing and the downwardly extending plate 170 on the bottom of the upper casing. The two casings are thus rigidly positioned with respect to each other.

In Figure 7, the lower edges of the side walls have affixed thereto an additional plate 171, placed on the inside of the casing. The two

plates 170 and 171 on each wall of the casing with their depending portions form the slots 172 in which the extended portions 169 on the top of the side walls of the lower casing may be disposed. In this way the bottom edge of the side wall of the top casing will rest upon the top edge of the side wall of the lower casing and the extremities of the two walls will be restricted in movement by the plates 170 and 171. It will, of course, be understood that a track member may be formed on the inner plate 171 as desired.

In the modifications so far discussed, I have shown a casing having a top panel and two side wall panels but with no bottom panel. Any of these constructions may be inverted with slight modifications so as to form a casing having a bottom panel and two side walls but with no top panel. An example of such a modification is shown in Figure 8.

The casing shown in this figure is shown with a suitable rear end panel and a reinforced front end similar to that described in my patent and applications above mentioned.

Along the exposed upper edge of the side walls of the casing is disposed the reinforcing member 181 which may be provided with the rail 185. As shown, at two points 182 on each of these reinforcing members 181 the metal is slit and turned back to form the upwardly protruding prongs 183. When one casing is superimposed upon another similar casing, these prongs 183 in the lower casing enter similarly disposed slots 184 provided in the bottom panel of the upper casing. While two prongs 183 and slots 184 are shown on each side of the casing, any suitable member may be used. As shown, the front end of the casing is interlocked with the interlock bar 38 and the slots 28.

A suitable top panel may be used with the inverted type of casing. Such a top section is illustrated in Figure 9, which shows a top panel to match the particular form of casing shown in Figure 8. This top panel comprises a simple rectangular sheet of material 186 having U shaped metallic reinforcements 187 attached around its perimeter. Slots 184 are provided to coact with the prongs 183 on the top of the casing and at the locations 189, the side reinforcements 187 are slit and the metal between the slits is turned back to form the prongs 188 which are adapted to enter the upper slots 28 on the vertical front edge reinforcing members 26 of the casing. When the top panel is thus placed over the casing, the prongs 183 of the casing enter the slots 184 of the cover, and the prongs 188 of the cover enter the slots 28 of the casing, which secures the cover to the casing.

The various interlock constructions of Figures 1-7 may also be utilized in connection as friction reducing guides where one casing is to slide with respect to each other or a drawer is to slide within a casing. Thus in Figure 3, members 161 provide suitable track members which position members 166 and upon which members 166 may slide. Members 161 may, if desired be placed in the bottom wall of a casing and members 166 may be placed on the bottom edges of the side walls of a drawer to provide slide members for the drawer in the casing.

The casing, in modified form, may be constructed to provide suitable track members for other types of drawers as seen in Figures 10 to 16 where I have shown track members attached to the free edges of the side walls of a casing.

In Figure 10, the free edge 192 of the casing is provided with the Z shaped track 191. As shown, the casing sheet is then folded back on the score line 193 and stitched as shown at 194. With this arrangement the track may be applied at the free edge of the sheet, but will be positioned at any height desired on the side wall. This same method of applying a track to the free edge of the sheet may be used even when the casing is provided with a flange at the bottom as has been shown, for instance, in Figures 2 and 16. Thus, in Figure 11 the flange 195 may be formed from the construction of Figure 10 by incorporating a bending line 203 and folding the sheet along this line.

In Figures 12 and 13, I have shown a box like structure at the free edge of the sheet. This box structure is maintained in position by a channel shaped metallic reinforcing member. In Figure 12, this member 196 is shaped in a manner to provide a flat track on the top of the box member 195; and in Figure 13, the reinforcing member 197 is shaped to provide a grooved track on top of the box member 195.

In Figures 14 and 15, the edge of the side wall is provided with an L-shaped flange 199 carrying a track. In Figure 13, this track 200 is a simple channel member having a groove 204 for carrying a wheel on the drawer. In Figure 14, the track 201 is an L-shaped member surrounding the flange 199.

In Figure 16, the track member is a double channel formed as an integral structure. One channel 205 conforms to the sheet material of the casing and is placed over the free edge 192 of the side wall. The other channel 206 may be used for supporting a drawer.

In my construction, I may use corrugated board as the sheet material forming the body of the casing. Such corrugated board may have a considerable curvature in the blank sheet, which has heretofore been a source of annoyance as it has interfered with the construction of the casing. I have found that I may utilize the curvature of the board in a manner to aid in the construction. Thus if I arrange the blank of the casing and the fittings thereon in such a manner that when viewed from the inside, the top wall would be convex from side to side and the side walls would be convex from top to bottom before the various parts are locked together by my various reinforcing and combining means, then after the casing has been fully set up and the parts locked together and reinforced, the curvature of the sheet will be removed due to the stress imposed upon the sheet by the various reinforcing members. This strain so set up in the sheet will act to force the sheet material into closer contact with the reinforcing members and locking members than would be the case if no such strain were present. In this manner, the original curvature of the sheet is removed from the final structure and a strain is set up which instead of being detrimental to the structure, acts to more firmly hold it in position.

It will be understood, of course, that I do not depend upon this strain set up from curvature of the sheet as my structure is well united into a rigid entity when made from flat corrugated board or other material.

It will be understood that the examples described have been shown by way of illustration only and that many changes may be made in my invention without departing from the scope and intent thereof.

Now having described my invention, so that it may be readily understood by one skilled in the art, I claim:

1. In casings to form a stack, a lower casing and a superposed casing, each casing having a top wall and side walls, the top wall of the lower casing forming the bottom wall of the superposed casing, means for interconnecting said casings, said means comprising a rail at the top of each side wall of the lower casing engaged with rails on the bottoms of the side walls of the superposed casing, the rail at the top of each side wall comprising a channel member embracing the top longitudinal edge of the side wall and a margin of the top wall, the said margin of the top wall being in surface to surface contact with the side wall and being folded to a position normal to the remainder of the top wall; and an integral longitudinal extension from said channel, said extension cooperating with a portion of said channel to form a member of U shaped cross-section to receive the rail of the superposed vertical wall.

2. In casings to form a stack, a lower casing

and a superposed casing, each casing having a top wall and side walls, the top wall of the lower casing forming the bottom wall of the superposed casing, means for interconnecting said casings, said means comprising a rail at the top of each side wall of the lower casing engaged with rails on the bottoms of the side walls of the superposed casing, the rail at the top of each side wall comprising a channel member embracing the top longitudinal edge of the side wall and a margin of the top wall, the said margin of the top wall being in surface to surface contact with the side wall and being folded to a position normal to the remainder of the top wall; and an integral longitudinal extension from said channel, said extension cooperating with a portion of said channel to form a member of U shaped cross-section to receive the rail of the superposed vertical wall, said rail of the superposed vertical wall comprising a metallic extension secured to the bottom longitudinal edge thereof.

PHILIP ZALKIND.