

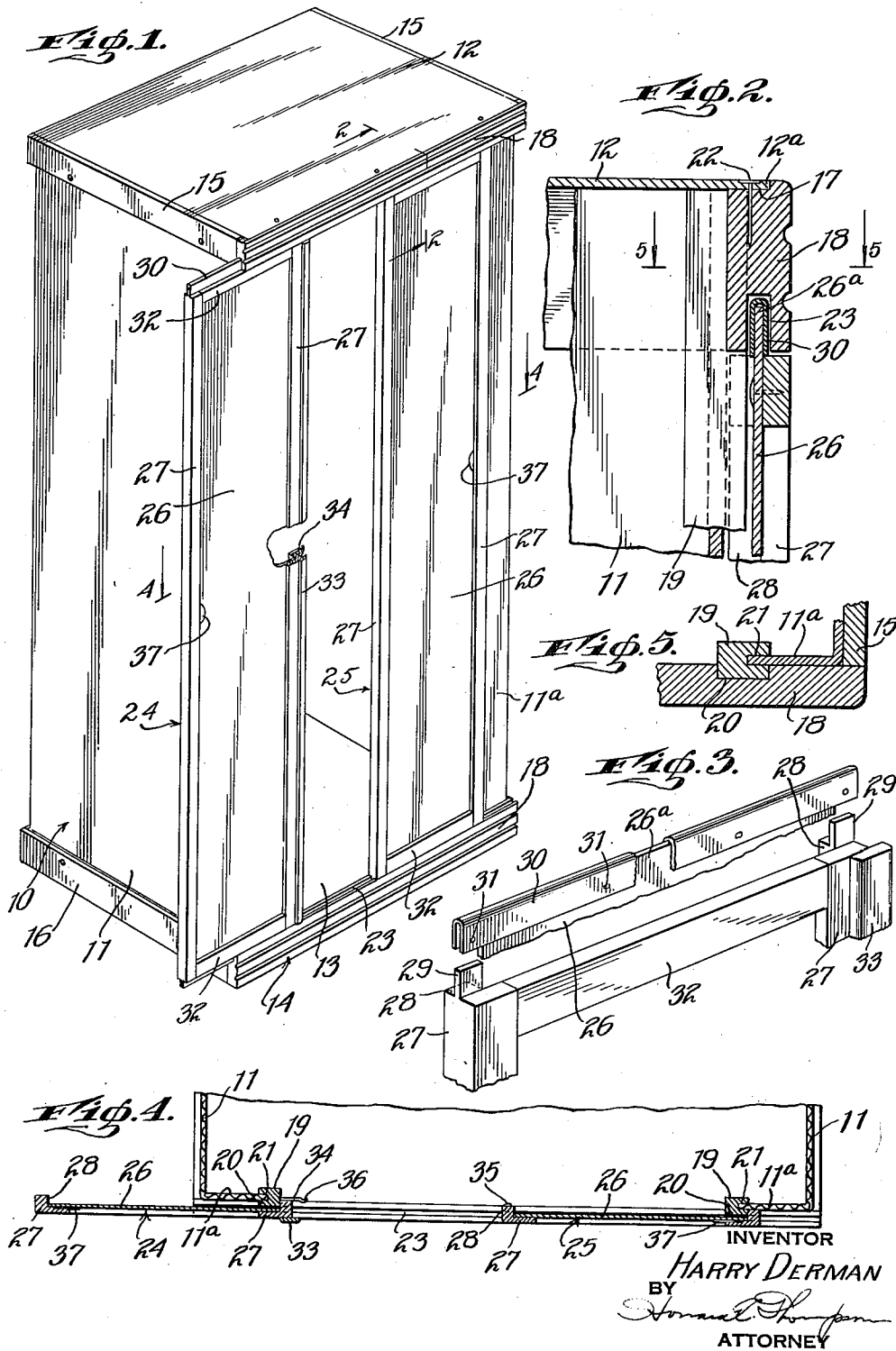
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COLLAPSIBLE CABINET

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COLLAPSIBLE CABINET

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9 Claims. (Cl. 312-144)

This invention relates to collapsible cabinets of the type and kind constructed from corrugated or fiber board walls with wood strip reinforcements; and the object of the invention is to provide a cabinet of the character described employing a door frame unit comprising a wood strip frame having sliding doors permanently mounted therein; a further object being to provide a cabinet of the character described wherein top, bottom and side walls thereof have protruding flange means interfitting with said wood strip frame and adapted to be secured thereto in assembling the cabinet; a further object being to provide means in said door frame unit for insuring smooth sliding movement of the doors; and with these and other objects in view, the invention consists of a cabinet of the class and for the purpose specified, which is simple in construction, efficient in use and which is constructed as hereinafter described and claimed.

The invention is fully disclosed in the following specification of which the accompanying drawing forms a part, in which the several parts of my invention are designated by suitable reference characters in each of the views, and in which:

Fig. 1 is a perspective view of the improved cabinet assembled.

Fig. 2 is a partial section on the line 2-2 of Fig. 1 on an enlarged scale.

Fig. 3 is an exploded perspective view of a part of the door construction as shown in Fig. 1.

Fig. 4 is a partial section on the line 4-4 of Fig. 1 on an enlarged scale, and,

Fig. 5 is a section on the line 5-5 of Fig. 2.

This invention constitutes a continuation in part of my prior application Number 310,125, filed December 20, 1939. It is the object of the present invention to provide a construction which will be more simple and economical to produce and which at the same time facilitates greater ease in assemblage and provides for smoother operation in the intended use of the cabinet.

For purposes of illustration I have shown in the drawing a cabinet 10 comprising a unitary side and rear wall member 11, detachably related top and bottom wall parts 12 and 13 and a front door frame unit 14. The top and bottom wall parts telescopically engage side and rear wall member 11 as will be apparent from consideration of Fig. 2 of the drawing, and the side edges of the parts 12 and 13 are preferably reinforced by suitable wood strips 15 and 16 respectively. Forward edges of the top and bottom wall parts include protruding flanges as seen at 12a in Fig.

2 for engaging grooves 17 in the top and bottom cross strips 18 of the door frame unit 14. These cross strips 18 are joined by vertical strips 19 spaced inwardly of the ends of said cross strips and secured thereto in interlocking engagement with grooves 20 on inner surfaces of the cross strips. This interlocking engagement serves to provide reinforcement of the door frame unit 14 against twisting movement, thereby forming a very rigid construction. It will be understood in this connection, that any suitable means such as glue or fastening devices may be employed to permanently secure the members 18 and 19 together.

The vertical strips 19 are channeled as seen at 21 to receive edge portions of front panel extensions or flanges 11a of the side and rear wall member 11. In other words it will be noted that a complete wooden frame unit is formed by the members 18 and 19 having means as indicated by the grooves 17 and channels 21, for readily engaging flange portions formed on the detachable wall parts of the cabinet. In assembling the cabinet the flange portions are retained in engagement with the grooves or channels by suitable tacks or nails as seen for example at 22 in Fig. 2 of the drawing. Such attaching devices have been omitted in Fig. 4 merely to simplify the drawing.

The cross strips 18 of the door frame unit 14 have channels 23 in inner opposed surfaces thereof, in which are arranged transversely slidable doors 24, 25. Each of the doors comprises a panel 26 of corrugated board or the like having vertical reinforcing strips 27 of similar construction secured along opposed edges thereof. The strips 27 are of substantially L-shaped contour forming rearwardly extending flanges 28 which cooperate with the vertical frame strips 19 to limit sliding movement of the doors in both the open and closed positions thereof. It will be noted in this connection, that these flanges 28 prevent complete removal of the doors from the frame unit 14 or in other words, the door frame unit as produced comprises the complete wood frame formed by the members 18, 19 with the sliding doors 24, 25 permanently arranged therein.

Upper and lower ends of the door reinforcing strips 27 are cut out as will be seen from a consideration of Fig. 3 of the drawing, to form central projecting tongues 29 integral with the strips 27 and registering with corresponding edge portions 26a of the panels 26 which protrude beyond the main portion of the strips 27. A metal reinforcing strip 30 of U-shaped contour, is arranged

transversely of the upper and lower edge of each door as seen for example in Fig. 3 of the drawing, to envelope the edge portions 26a and the tongues 29. The strip 30 may be secured in position in any suitable manner, but is preferably attached by clamping or pressing the metal around the edges of the door and forming spaced detents 31 to positively anchor the strip in position. The strips 30 interfit with the grooves 23 in the transverse rails of the door frame and provide for free and unobstructed movement of the doors in the channels, at the same time the use of the strip 30 entirely prevents objectionable wear on the edge of the panel 26 which would otherwise be experienced. The strip 30 serves further to reinforce the door against flexure when in the extended or open position. An additional reinforcing and finishing strip 32 is preferably employed at the upper and lower end of each door and extending between the main portions of the side reinforcing strips 27. The strips 32 are important in lending reinforcement to the doors against twisting movement with respect to the grooves 23 in the door frame, especially when the doors are in the open position.

The inner strip 27 on one of the doors is preferably provided with a front flange 33 which is adapted to extend onto the corresponding strip 27 of the opposed door when the doors are in the closed position, thereby covering and substantially sealing the abutting edges of the doors. The inner surface of the flange 23 of this door is also provided with a spring member 34 secured in position by suitable fastening means. The inner surface of the flange 28 on the corresponding edge of the other door is provided with a bearing projection or pin 35 which is adapted to be engaged by the cam end 36 of the spring 34, thereby forming means for locking the doors in the closed position. This locking means supports the doors gently but firmly in closed position and either door may readily be opened by pulling transversely on the outer edge thereof. Suitable markings 37 are preferably employed in alignment with the spring 34 to indicate the proper position for grasping the doors in the operation of opening the same. These markings may be in the form of reinforcing strips or plates to prevent or obscure objectionable wear on the panels 26 through handling.

It will be understood that the present invention is not limited in its application to the particular style of cabinet shown in the drawing; this showing being merely for purposes of illustration. An important feature of the construction is that the door frame unit is completely bounded by wood strips shaped to engage flanges formed on the collapsible wall parts of the cabinet. The transversely sliding doors are mounted in the frame in a manner to form a complete assembled door frame unit, and the reinforcement of the doors provided by the metal strips 30 and the wood strips 32, serves to insure smooth operation of the doors and at the same time to prevent injury to the doors if they are strained while in the open or partially opened position.

It will be noted that the interlock between the strips 18 and 19 disposes the channels 21 of the strips 19 in alignment with inner surfaces of the strips 18 so that the flanges 11a interfitting with the channels 21 are in close engagement with the strips 18, thereby insuring a neat and sturdy construction.

It will also be noted that the construction as disclosed in the drawing wherein the door open-

ing formed by the rails or strips 19 is materially narrower than the width of the cabinet as a whole, serves to adapt the cabinet for use even in limited quarters. Thus, if space will not permit the full opening of both doors in gaining access to the interior of the cabinet or even if it is impossible to fully open one door as seen in Figs. 1 and 4 of the drawing, a door opening of sufficient width may be provided by partially opening both doors. In other words, when the two doors are extended to the limits defined by the sides of the cabinet, the adjacent edges of the doors will be separated sufficiently to permit free insertion and removal of garments and other articles from the cabinet.

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

1. A collapsible cabinet of the character described comprising four detachably coupled parts, one part comprising back and side walls of the cabinet, another part the top wall, another part the bottom wall, and the last of said parts comprising a door frame unit, said door frame unit comprising pairs of transverse and vertical wood strips secured together in interlocking relation to form a rectangular door opening, outer surfaces of said strips being grooved to engage flange means on said top, bottom and side wall members, inner opposed surfaces of said transverse strips having grooves extending longitudinally thereof, a pair of elongated door members slidably arranged in said grooves, said transverse strips extending laterally beyond the vertical strips of said frame to substantially the full width of said cabinet, and means on opposed vertical edges of said door members cooperating with said vertical frame strips to limit transverse movement of the doors in opening and closing the same.

2. A collapsible cabinet of the character described comprising four detachably coupled parts, one part comprising back and side walls of the cabinet, another part the top wall, another part the bottom wall, and the last of said parts comprising a door frame unit, said door frame unit comprising pairs of transverse and vertical wood strips secured together in interlocking relation to form a rectangular door opening, outer surfaces of said strips being grooved to engage flange means on said top, bottom and side wall members, inner opposed surfaces of said transverse strips having grooves extending longitudinally thereof, a pair of elongated door members slidably arranged in said grooves, said transverse strips extending laterally beyond the vertical strips of said frame to substantially the full width of said cabinet, means on opposed vertical edges of said door members cooperating with said vertical frame strips to limit transverse movement of the doors in opening and closing the same, said last named means comprising reinforcing wood strips, and cooperating means on the wood strips of adjacent door edges for resiliently coupling said doors in closed abutting position.

3. A door frame unit for cabinets of the class described, said unit comprising a frame of spaced vertical and transverse strips, groove means in outer peripheral surfaces of said strips for receiving flanges formed on top, bottom, and side walls of said cabinet, said vertical strips being joined to said transverse strips in grooved portions spaced inwardly of the ends of said transverse strips, inner opposed surfaces of said transverse strips having channels extending through-

out the length thereof, a pair of door members slidably mounted in said channels, said doors comprising light weight panels having reinforcing strips along vertical edges thereof cooperating with the vertical strips of said door frame for limiting transverse movement of the doors, and other reinforcing means along upper and lower edges of said doors cooperating with the transverse strips of said door frame and the channels therein to provide free sliding movement of said doors.

4. A door frame unit for cabinets of the class described, said unit comprising a frame of spaced vertical and transverse wood strips, groove means in outer peripheral surfaces of said strips for receiving flanges formed on top, bottom, and side walls of said cabinet, said vertical strips being joined to said transverse strips in grooved portions spaced inwardly of the ends of said transverse strips, inner opposed surfaces of said transverse strips having channels extending throughout the length thereof, a pair of door members slidably mounted in said channels, said doors comprising light weight panels having reinforcing strips along vertical edges thereof cooperating with the vertical strips of said door frame for limiting transverse movement of the doors, and other reinforcing means along upper and lower edges of said doors cooperating with the transverse strips of said door frame and the channels therein to provide free sliding movement of said doors, said last named means including a metal strip of U-shaped cross sectional form extending throughout the length of each of said edges and enveloping edge portions of said panels as well as thin protruding tongues at the ends of said vertical reinforcing strips.

5. A door frame unit for cabinets of the class described, said unit comprising a frame of spaced vertical and transverse wood strips, groove means in outer peripheral surfaces of said strips for receiving flanges formed on top, bottom, and side walls of said cabinet, said vertical strips being joined to said transverse strips in grooved portions spaced inwardly of the ends of said transverse strips, inner opposed surfaces of said transverse strips having channels extending throughout the length thereof, a pair of door members slidably mounted in said channels, said doors comprising light weight panels having reinforcing strips along vertical edges thereof, cooperating with the vertical strips of said door frame for limiting transverse movement of the doors, and other reinforcing means along upper and lower edges of said doors cooperating with the transverse strips of said door frame and the channels therein to provide free sliding movement of said doors, said last named means including a metal strip of U-shaped cross sectional form extending throughout the length of each of said edges and enveloping edge portions of said panels as well as thin protruding tongues at the ends of said vertical reinforcing strips, and said means further including transverse wood strips extending between said vertical strips inwardly of said protruding tongues.

6. A door frame unit for cabinets of the class described, said unit comprising a frame of spaced vertical and transverse wood strips, groove means in outer peripheral surfaces of said strips for receiving flanges formed on top, bottom, and side walls of said cabinet, said vertical strips being joined to said transverse strips in grooved portions spaced inwardly of the ends of said transverse strips, inner opposed surfaces of said

transverse strips having channels extending throughout the length thereof, a pair of door members slidably mounted in said channels, said doors comprising light weight panels having reinforcing strips along vertical edges thereof cooperating with the vertical strips of said door frame for limiting transverse movement of the doors, and other reinforcing means along upper and lower edges of said doors cooperating with the transverse strips of said door frame and the channels therein to provide free sliding movement of said doors, the vertical reinforcing strips of adjacent door edges having on inner surfaces and substantially centrally thereof cooperating means for yieldably clamping said door edges in abutting relation, and said panels having adjacent the other remote door edges insert members in alinement with said last named means for indicating the proper points at which to grasp the doors and for preventing damage to the panels in the operation of opening and closing the doors.

7. In a collapsible cabinet having a door opening bounded by vertical strips and transverse strips joined inwardly of the ends thereof with end portions of said vertical strips, a pair of transversely slidable door members arranged in channels in inner opposed surfaces of said transverse strips, each of said doors comprising a panel of light weight material having reinforcing wood members along vertical edges thereof cooperating with said vertical frame strips for limiting transverse movement of said doors, the ends of said reinforcing members being cut out to leave central tongues in alinement with and extending to corresponding upper and lower edges of said panel, and a metal member of U-shaped cross sectional form enveloping each of said edges and the corresponding tongues to the depth of said tongues thereby forming continuous reinforced flanges for sliding movement in the channels of said transverse frame strips.

8. In a collapsible cabinet having a door opening bounded by vertical strips and transverse strips joined inwardly of the ends thereof with end portions of said vertical strips, a pair of transversely slidable door members arranged in channels in inner opposed surfaces of said transverse strips, each of said doors comprising a panel of light weight material having reinforcing wood members along vertical edges thereof, cooperating with said vertical frame strips for limiting transverse movement of said doors, the ends of said reinforcing members being cut out to leave central tongues in alinement with and extending to corresponding upper and lower edges of said panel, a metal member of U-shaped cross sectional form enveloping each of said edges and the corresponding tongues to the depth of said tongues thereby forming continuous reinforced flanges for sliding movement in the channels of said transverse frame strips and transverse wood members at upper and lower portions of each door extending between said vertical members and having remote edges thereof in alinement with the base of said tongues thereby forming substantially continuous bearing means cooperating with inner opposed surfaces of said transverse frame strips for preventing strain on said doors in the open or partially open position thereof.

9. In a collapsible cabinet comprising top, bottom and back and side wall parts, the latter having front wall portions along forward edges of the side walls thereof, a door frame unit de-

tachable with respect to said parts, said unit comprising top and bottom transverse strips joined by transversely spaced vertical strips, said vertical strips joining the transverse strips inwardly of the ends thereof forming projecting ends on said transverse strips overlying said front wall portions, said vertical rails extending the full height of the door frame unit of the cabinet as defined by said transverse strips, a

5 pair of doors arranged between said transverse strips and movably coupled therewith for controlling a door opening in said unit formed between said spaced vertical strips, and said transverse strips and the movable coupling of the doors in connection with said transverse strips extending onto the projecting ends of said transverse strips.

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