Oct. 26, 1937. E. J. REEFER 2,097,043

COLLAPSIBLE CLOSET

Filed Dec. 15, 1933

Fig. 1

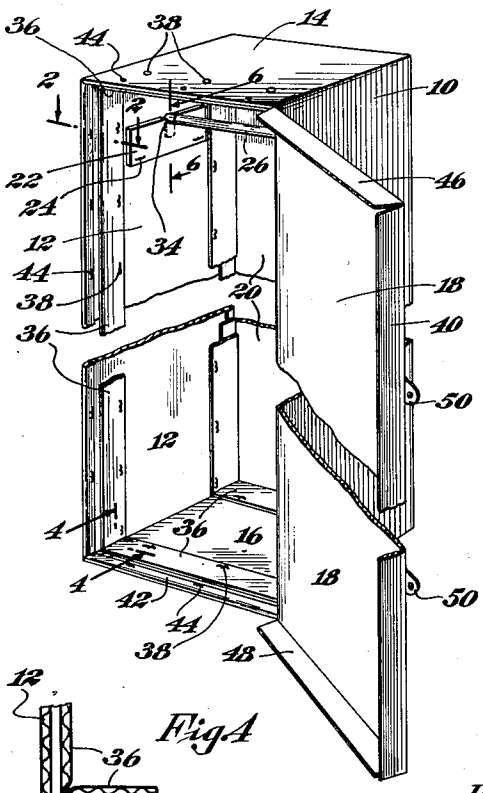


Fig. 2

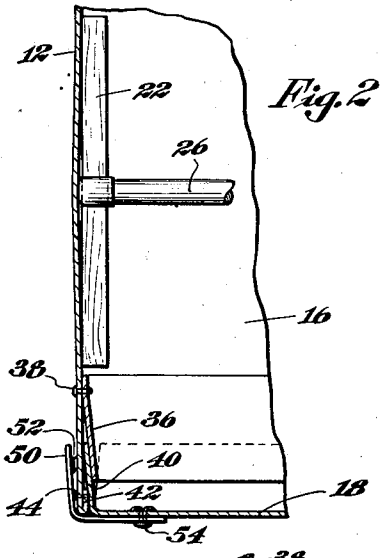


Fig. 3

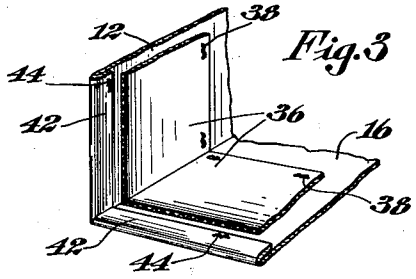


Fig. 4

Fig. 5

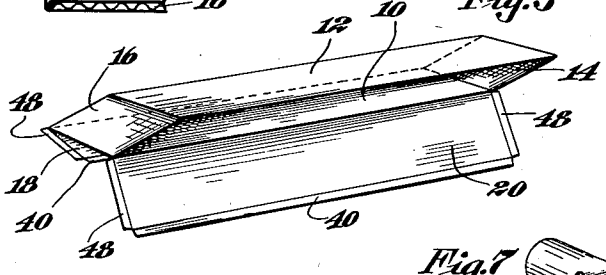


Fig. 6

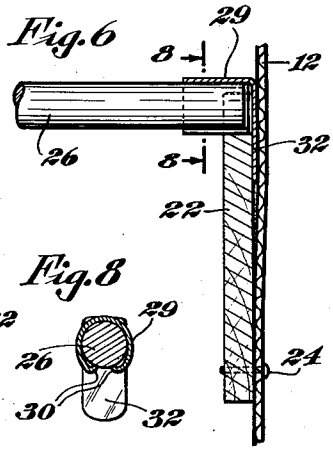


Fig. 7

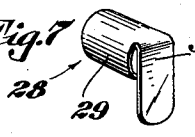
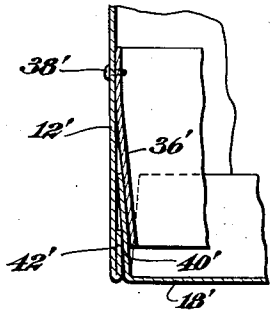


Fig. 8

Fig. 9



INVENTOR
Eugene J. Reefer
BY
William F. Blunt
ATTORNEY

Patented Oct. 26, 1937

2,097,043

UNITED STATES PATENT OFFICE

2,097,043

COLLAPSIBLE CLOSET

Eugene J. Reefer, New York, N. Y., assignor to Reefer Galler Inc., New York, N. Y., a corporation of New York

Application December 15, 1933, Serial No. 702,489

3 Claims. (Cl. 229—43)

This invention relates in general to collapsible cabinets and in particular to cabinets adapted for the storage of clothing.

In one of the phases thereof it further relates to containers in which clothing may be stored for the purpose of protecting it from dust and from the ravages of vermin, such as moths. While particular mention has been made of the utility of my invention for the purpose of storing clothing, it will be obvious that as to certain aspects thereof, it may have other applications.

It is the general object of my invention to provide a cabinet which may be readily collapsed for purposes of storage, when not in use, and may be conveniently set up for purposes of use.

It is a further object of my invention to provide such a cabinet with closure members giving access to the interior, which will interengage with portions of the body of the container to make it substantially dust and insect proof.

It is a further object of my invention to provide a container of the type described with convenient and efficient means for supporting garments therein.

It is also an object of my invention to provide a collapsible cabinet that, when set up, will be rigid to a high degree, and to provide for this purpose a plurality of rigidifying structures which will cooperate to mutually strengthen each other.

For the attainment of the above objects and such other objects as will hereinafter appear or be pointed out, I have disclosed one embodiment of my invention in the drawing, wherein:

Figure 1 is a perspective view of my invention, with portions broken away and showing one of the closure members in open position;

Figure 2 is a cross section thereof, on an enlarged scale, on the line 2 of Figure 1, looking in the direction of the arrow;

Figure 3 is a detail view of one of the corners of the body of the cabinet with portions broken away, showing the details of the corner construction whereby a substantially dust and vermin proof closure is effected;

Figure 4 is a sectional view on the line 4 of Figure 1 looking in the direction of the arrows;

Figure 5 is a diagrammatic view in perspective indicating how the cabinet may be collapsed;

Figure 6 is a detail view on an enlarged scale showing removable garment-supporting means;

Figure 7 is a perspective view of a detail of the construction shown in Figure 6;

Figure 8 is a section on the line 8—8 of Figure 6; and

Figure 9 is a sectional view corresponding to a portion of Figure 2, and showing a modification of the construction shown therein.

My invention as herein illustratively disclosed, relates to what is popularly known as a "knock-down closet" adapted for the storage of clothing so that it will be protected against dust and vermin such as moths in the various forms thereof, such as insects or larvae. Its aim is to provide such a cabinet or closet that may be readily collapsed when not in use and will permit of a setting up and of the storage of clothing therein with the least effort and the greatest convenience, and in the embodiment shown herein the cabinet is of such size that it will accommodate clothing without the necessity of folding it, and to effect this purpose, means are associated with the interior of the cabinet from which the clothing may be hung, thereby giving the additional advantage of ready removability. The last named means also acts as a reinforcement and prevents collapse of the cabinet, and in order to make collapse possible when it is desired to store the cabinet, it is made removable.

Having in view all of these aims, and purposes, I have illustrated in the drawing a form of the invention which may be conveniently and cheaply made out of paste board and particularly out of corrugated paste board, which material combines rigidity, lightness and low cost. It will be obvious, however, that I do not restrict myself to the use of this material, but that for certain purposes other materials may be found better suited.

The invention in its practical embodiment involves the idea of a cabinet or closet, the parts of which are in such relation that when the cabinet is collapsed, they may be superimposed one on the other and when the cabinet is erected, they will interfit in such a way as to provide a dust and vermin-proof clothing cabinet having a garment-supporting rod adapted to support garments mounted on clothes hangers or similar devices to give added rigidity to the erected structure, and to prevent its collapse.

Referring now to the drawing in detail, I have there shown a cabinet comprising an outer or body portion having side walls 10 and 12, a top wall 14, and a bottom wall 16. Carried in hinged relation by the side wall 10 are closure members 18 and 20 which constitute the front and the back of the cabinet. The top and bottom members 14 and 16 are hinged to the side members

10 and 12 so that as indicated diagrammatically in Figure 5, the cabinet may be collapsed. Figure 5 shows a cabinet in partially collapsed condition, that is, in an intermediate stage in the process of collapsing for storage purposes, which process will result in a positioning of the parts in superposed relation, whereby they will take up a minimum of space. The hinged relation mentioned, when corrugated board is used, may be attained in the manner customary for such material by scoring or creasing a continuous sheet of material, thereby separating it into sections hingedly united at the points of scoring or creasing. Obviously it may also be attained in other ways well-known to those skilled in the art.

In order to attain the purpose of making the cabinet dust and vermin proof, I have provided the walls and the closure members of the cabinet with complementary interengaging portions whereby this purpose will be effected. The details of the closure construction will be found in Figures 1, 2, 3, and 4 and reference is made thereto in connection with the following description which applies to the closure member 18. It will, however, be understood that a similar construction is used in connection with closure member 20.

Running parallel to the opening designed to be closed by the member 18, is a strip 36, which is shown as fastened to the side wall 12 at its inner edge, and is spaced from the free edge of the wall, as clearly appears from Figures 2 and 3. Strip 36 is held to the wall 12 adjacent the inner edge thereof by any preferred or suitable fastening means, as indicated at 38, but its outer edge is left free, and by this construction a pocket is formed which is adapted to receive a flap 40 formed on the closure member 18. Figure 2 shows these parts in interengagement. It will be seen that this construction results in a closure that is substantially dust-proof and in order to further increase its effectiveness, I have shown the outer portion of side wall 12 as doubled over so that a doubled over edge is formed. If desired, the doubled-over portion 42 may be fastened to the wall 12, as shown at 44, in any suitable manner. The effect of this construction is to restrict the mouth of the opening to the pocket formed between the wall 12 and strip 36, and to increase the tightness of the closure, due to the increased friction between flap 40, strip 36, and portion 42. It may also be mentioned that the inherent resiliency of corrugated pasteboard, where this is used, contributes to the effectiveness of the closure.

Besides cooperating with flap 40 to effect a closure, the portions 36 and 42 also act as reinforcements contributing greatly to the rigidity of the walls they engage, and when the flap 40 is positioned within the closure pocket, it also contributes to the rigidity of the wall 12 and of the entire cabinet.

While I have described the strip 36 as applied to the wall 12, it will be observed from the showing of Figure 1 that the strip is extended to include the bottom 16 and the top 14. By using a continuous strip 36 a highly efficient construction is assured. However, I also contemplate the use of separate strips for each of the walls, where other considerations make this desirable, but it is obvious that they should preferably be closely contiguous at the corner portions so as to avoid gaps in the closure at those portions.

Besides the flap 40 the cover or closure 18 carries flaps or extensions 46 and 48, cooperating respectively with top 14 and bottom 16.

Flaps 40, 46, and 48 may be joined at their corner portions, if desired, although this would prevent their collapse against the cover 18. Or, on the other hand, their corner portions may be cut on the bias, so as to facilitate entry of the flaps into the pockets.

Fastening members comprising straps or bands 50, are fastened to the cover 18 at 54, and adapted to be disengageably fastened to wall 12 by means of fasteners, such as clasp fasteners 52, illustratively shown, one element of which is carried by wall 12, and the other element by strap 50.

In Figure 9, I have shown a modification of the closure construction. It will be observed, that wall 12' carries the strip 36' fastened thereto by elements 38', and that the wall 12' also has a doubled-over portion 42', while cover 18' carries the flap 40' adapted to enter the pocket formed between wall 12' and strip 36'. The distinguishing feature of this construction is the fact that the free portion of strip 36' overlaps the doubled-over portion 42', and the latter, instead of being fastened down, is free to press against flap 40' due to the inherent resiliency of the material such as may be found, for instance, in corrugated paste-board.

Referring to Figure 1, it will be observed that the side wall 12 is shown as carrying a member 22, which is shown illustratively as a wooden block of substantial transverse extent, and having its lower portions attached to the side wall 12 in any suitable or preferred manner, as indicated at 24, so that the block 22 may stand away from the wall 12 at its upper portion for a purpose to be explained. It will be understood that a similar block 22 is attached to the opposite wall 10. Supported by the blocks 22 is a member 26 intended for the support of garments and shown as a rod provided with ferrules 28 at its ends. The construction of the ferrules is shown in detail in Figures 6, 7, and 8, and it will be observed that they comprise a slitted sleeve portion 29 as shown in Figure 8, provided with prongs 30. The material of which the ferrule is made is preferably sufficiently resilient so that the prongs will engage the rod 26 with a resilient gripping action. Carried from the sleeve portion 29 is an overhanging extension 32 positioned at right angles to the sleeve and adapted to enter the space between the block 22 and the wall 12 or 10, as the case may be. This action is indicated in Figure 6. In order to position the rod 26 to prevent lateral motion thereof, each block 22 is provided with a notch 34 within which the ferrule 28 may seat.

It will be observed that the garment supporting rod 26 is by this construction made readily removable and readily insertable, and when in position, it resists collapse of the cabinet, and for all practical purposes effectively prevents such collapse. It will further be observed that the blocks 22 because of their great lateral extent provide a firm support for the rod 26 and will enable it to carry a mass of clothing, and a further effect of the transverse positioning of the block is to impart transverse rigidity to the side members 12 and 10.

It will further be observed that when either cover is in its closed position, the interengaging portions of the closure means thereon will cooperate with the rod 26 to give rigidity to the cabinet, and that thereby the closure means and

the garment support mutually coact, each reducing strain and protecting the other.

While my invention has been shown as embodied in one illustrative form thereof, it will be obvious that it may be embodied in many other forms, without departing from the spirit thereof as defined in the appended claims.

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

1. A collapsible container having end walls and side walls at least one of which is adapted to serve as a cover and whereby at least one side may be opened, and a dust and vermin proof closure between said cover and the adjacent walls, said closure comprising a male member of resilient sheet material and a female member adapted to receive the same, said female member being in the form of a pocket constituted by a wall of resilient sheet material having its free outer portion doubled over, thereby providing said wall with a doubled over portion and by a strip of resilient sheet material overlying said wall on the same side thereof as said doubled over portion and disposed parallel to the doubled over edge of said wall, said strip having its free edge spaced inwardly from the doubled over edge of said wall, and having portions adjacent its other edge secured to said wall.

2. A container having end walls and side walls at least one of which is adapted to serve as a cover and whereby at least one side may be opened, complementary closure means on said cover and the adjacent walls said closure means comprising a male member of corrugated board and a female member adapted to receive the same, said female member being in the form of a pocket constituted by a wall of corrugated board having its free outer portion doubled over, thereby providing said wall with a doubled over edge portion, and by a strip of corrugated board overlying said wall on the same side thereof as said doubled over outer portion, and disposed parallel to the doubled over edge of said wall, said strip having its free edge spaced inwardly from the doubled over edge of said wall, and having portions adjacent its other edge secured to said wall.

3. A collapsible container having end walls and side walls at least one of which is adapted to serve as a cover and whereby at least one side may be opened, complementary closure means on said cover and the adjacent walls, said closure means comprising a male member of corrugated board and a female member adapted to receive the same, said female member being in the form of a pocket constituted by a wall of corrugated board having its free outer portion doubled over, thereby providing said wall with a doubled over edge, and by a strip of corrugated board overlying said wall on the same side thereof as said doubled over portion, and disposed parallel to the doubled over edge of said wall, said strip having its free edge spaced from said doubled over edge but overlying said doubled over portion, and having portions adjacent its other edge secured to said wall.

EUGENE J. REEFER.