

Aug. 6, 1940.

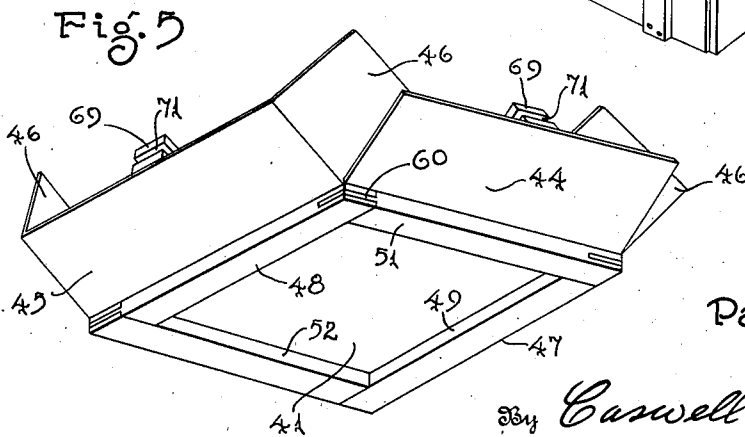
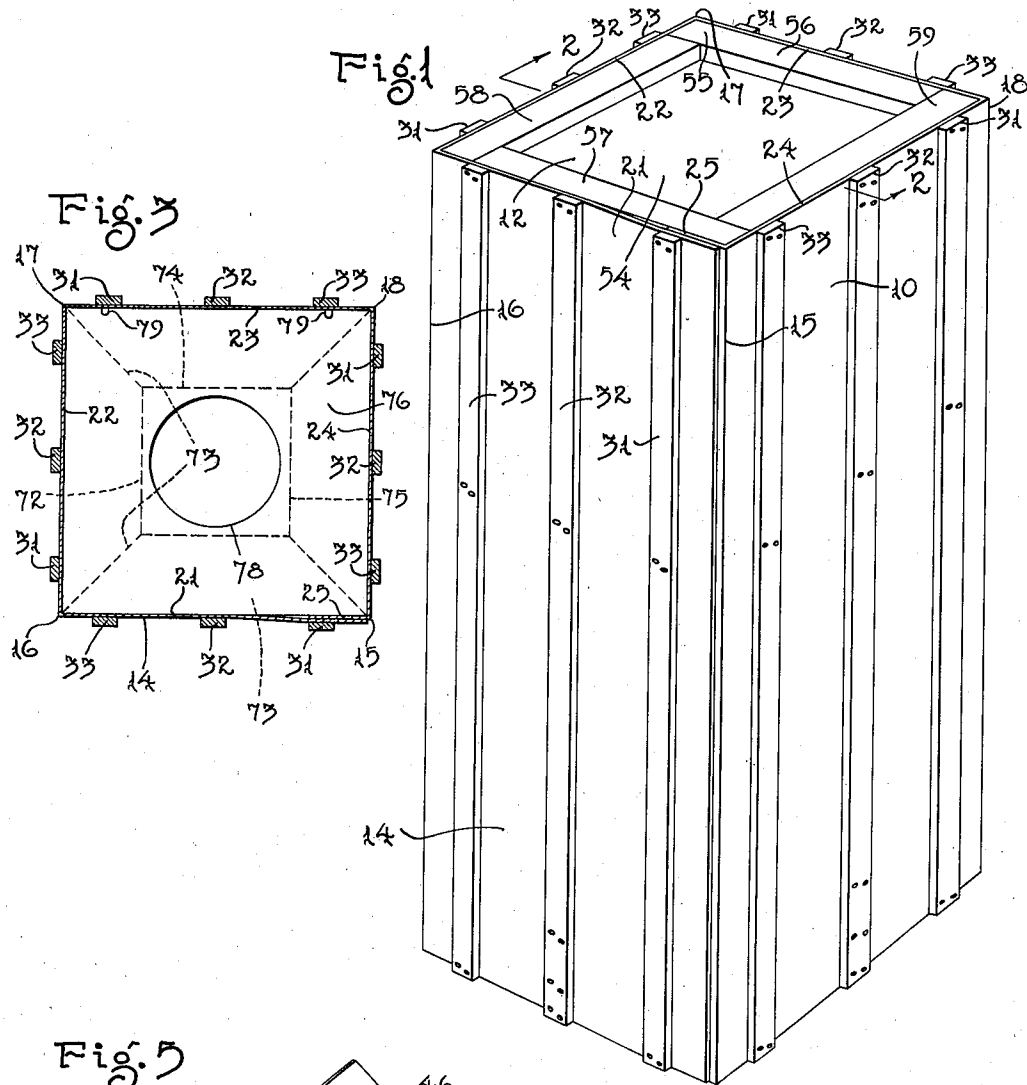
P. F. BOEYE

2,210,162

BOX

Filed Oct. 15, 1937

2 Sheets-Sheet 1



Inventor

Paul F. Boeye

By *Caswell & Lazard*

Aug. 6, 1940.

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2 Sheets-Sheet 2

Fig. 4

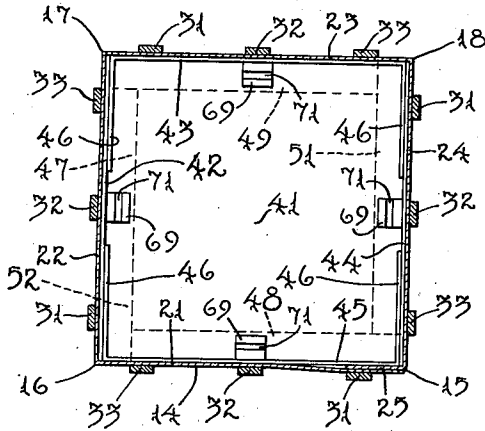


Fig. 6

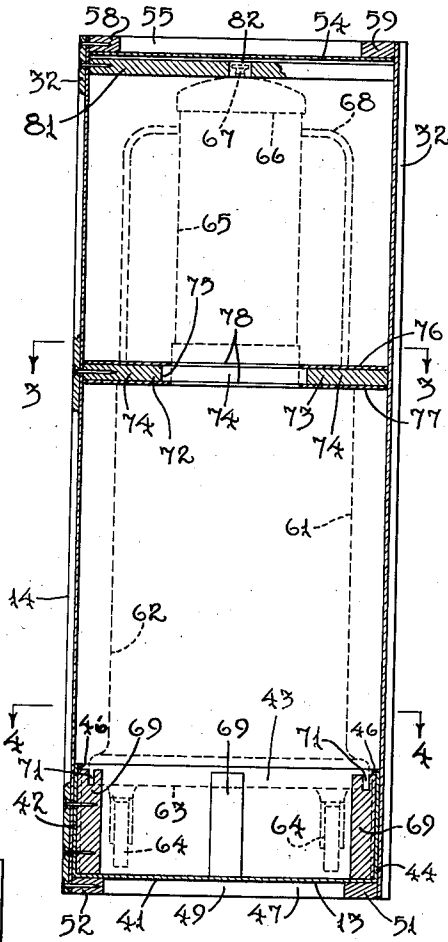
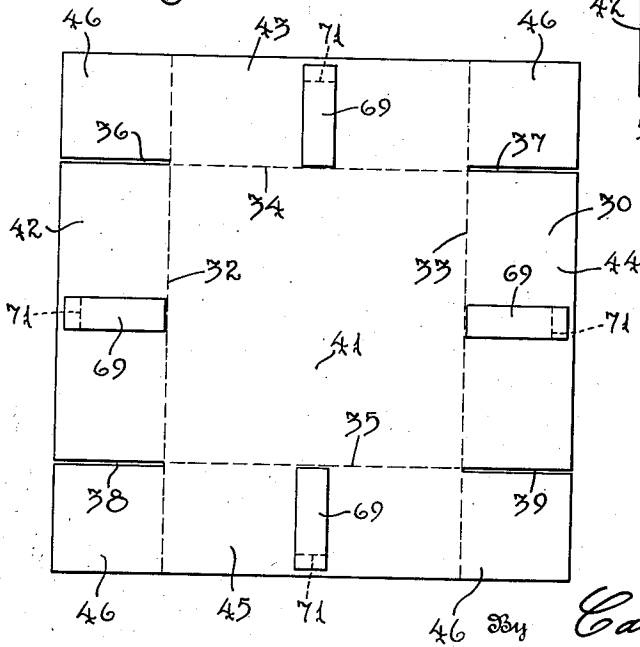


Fig. 2

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UNITED STATES PATENT OFFICE

2,210,162

BOX

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Application October 15, 1937, Serial No. 169,225

6 Claims. (Cl. 217-36)

My invention relates to boxes and has for an object to provide an extremely sturdy and rigid box in which heavy and awkward articles may be packed and shipped.

Another object of the invention resides in providing a box in which the article contained within the box is held spaced from the walls of the box to protect fragile parts protruding therefrom.

Another object of the invention resides in providing a box having a lateral wall assembly formed from a sheet of material bent to provide side walls, a front wall and a rear wall and having cleats extending longitudinally of the walls and secured thereto.

A still further object of the invention resides in providing a bottom constructed from a sheet of material bent to form a body portion and flanges issuing outwardly therefrom and adapted to lie along the inner walls of the wall assembly and having a frame secured thereto and attached to said cleats.

A still further object of the invention resides in providing supporting blocks secured to said flanges and supporting within the box an article having legs or casters in a manner to hold the same above the bottom of the box.

Another object of the invention resides in constructing said box with grooves for receiving the rim of an article received within the box.

Another object of the invention resides in providing a spacer within the box disposed intermediate the ends of said walls and attached to said cleats.

A feature of the invention resides in constructing the spacer with a frame attached to the cleats and with sheets of material secured to the frame and having openings therein for the reception of parts of the article contained within the box, said spacer serving to hold the article spaced from the walls of the box.

Another object of the invention resides in constructing the top, bottom and spacer of the box with frames and in securing all of said frames to the cleats of the box.

Other objects of the invention reside in the novel combination and arrangement of parts and in the details of construction hereinafter illustrated and/or described.

In the drawings:

Fig. 1 is a perspective view of a box illustrating an embodiment of my invention.

Fig. 2 is an elevational sectional view taken on line 2-2 of Fig. 1.

Fig. 3 is a plan sectional view taken on line 3-3 of Fig. 2.

Fig. 4 is a plan sectional view taken on line 4-4 of Fig. 2.

Fig. 5 is a perspective view of the bottom wall of the box detached therefrom and viewed from the under-side thereof.

Fig. 6 is a developed view of the blank from which the bottom wall of the box is constructed.

In the handling and shipment of articles having protruding parts, such as casters, legs and the like, it has been found that such parts are readily bent, broken or damaged. The present invention overcomes this difficulty by providing a box in which these parts are held spaced from the walls of the box.

My invention, as best shown in Figs. 1 and 2, comprises a lateral wall assembly 10, a top wall 12 and a bottom wall 13 which will now be described in detail.

The wall assembly 10 is constructed from a blank formed from a sheet of paper board or corrugated board which is designated by the reference numeral 14. This blank is constructed with spaced parallel, vertical scores 15, 16, 17 and 18 which divide the sheet into four panels 21, 22, 23 and 24 and a flap 25. The panels 22 and 24 form the side walls of the box, the panel 23, rear wall and panel 21 of the front wall of the box. Upon the outer surface of the blank 14 are attached, to each of the panels 21, 22, 23 and 24, cleats 31, 32 and 33 which may be secured thereto by glueing, stitching or otherwise. The cleats 32 are disposed near the centers of the panels, while the cleats 31 and 33 are disposed inwardly of the corners 15, 16, 17 and 18.

The bottom wall 13 is constructed from a blank 30, best shown in Fig. 6, which is formed from sheet material the same as the blank 14. This blank is formed with transverse scores 32 and 33 and with longitudinal scores 34 and 35 extending up to the scores 32 and 33. The blank is further formed with longitudinally extending slits 36, 37, 38 and 39 which extend from the scores 32 and 33 up to the edges of the blank and which lie in continuation of the scores 34 and 35. These scores and slits divide the blank into a body portion 41 which is adapted to fit snugly into the interior of the lateral wall assembly 10, flanges 42, 43, 44 and 45 extending outwardly therefrom and flaps 46 extending outwardly from the flanges 43 and 45. The various parts are adapted to be folded, as suggested in Fig. 5, so that the body 41 closes the lower end of the box and so that the flanges 42, 43, 44 and 45

45 and the flaps 46 lie along the inner surfaces of the lateral walls of the box.

Attached to the under side of the blank 30 is a frame 47, best shown in Fig. 5, which is constructed of wood and comprises frame members 48, 49, 51 and 52. These frame members are connected together at their corners by means of tongue and groove joints 60 which are glued to form a rigid and substantial construction.

The frame 47 is of the same dimensions as the body portion 41 of the bottom wall 12 and fits snugly within the lateral walls of the box. The bottom is attached to the lateral walls by means of nails which extend through the cleats 31, 32 and 33 and are nailed into the frame members 48, 49, 51 and 52 of the frame 47.

The top wall is similar to the bottom wall and is constructed from a rectangular sheet of material 54 similar to the sheet from which the blank 31 is constructed. This sheet also fits snugly within the walls 21, 22, 23 and 24. The sheet 54 has attached to it a rectangular wood frame 55 which comprises frame members 56, 57, 58 and 59 joined together at their corners by means of tongue and groove joints which are similar to the joints 60 of the bottom frame 47. The frame 55 is adapted to be secured to the cleats 31, 32 and 33 by nails which pass through said cleats and into the frame members thereof.

The particular box illustrated is designed to support a grease container shown in dotted lines at 61. This grease container has a body 62 formed with a depending rim or flange 63. Attached to the body 62 are caster wheels 64 which support the container upon the floor. Issuing upwardly from the body 61 is a cylindrical neck 65 which has attached to it a cap 66 secured in place by a thumb screw 67. A bail 68 is attached to the body 62 and serves to move the container about.

For supporting the grease container 61 within the box four blocks 69 are employed which are secured to the flanges 42, 43, 44 and 45 at the centers of the same. These blocks are glued or attached thereto by staples or in any other suitable manner. The blocks 69 have formed in the upper ends thereof grooves 71 which extend parallel to the flanges to which the blocks are attached. These grooves are of such dimensions and the box is so proportioned that the rim or flange 63 of the grease container 61 becomes seated in the same when the grease container is properly inserted in the box. The bottoms of these grooves are of such height above the bottom portion 41 of the bottom wall 13 that the caster wheels 64 become spaced from the bottom wall 13 and are thus held out of contact with any portion of the box. The blocks 69 rest upon the body portion 41 directly over the frame members of frame 47. It will be noted that the box is of sufficient dimensions so that the body portion 62 of the grease container 61 is spaced from the lateral walls of the box.

For the purpose of holding the grease container 61 at a locality above the lowermost portion thereof spaced from the lateral walls of the box, a spacer 72 is employed. This spacer consists of a rectangular frame of wood, indicated by the reference numeral 73, and best shown in Figs. 2 and 3. This frame consists of a number of frame members 74 which may be mitered together at the corners, as shown at 73 or which may be secured to one another by tongue and groove joints, similar to joints 60. These frame members are of a width greater than the width

of frame members 47 and 55 and provide an opening 75 within the same, of dimensions considerably greater than the diameter of the neck 65. Attached to the upper and lower surfaces of the frame 72 are two sheets of material 76 and 77 which are similar to the material from which the blank 14 is formed. These sheets are glued, stitched or otherwise secured to the frame 72 and are provided at the centers thereof with concentric openings 78 which are adapted to snugly receive the neck 65 and to hold the same from lateral movement. The spacer 72 is secured to the lateral walls of the box by means of nails which extend through the cleats 31, 32 and 33 and which are nailed into the frame members 74. The spacer 72 is constructed with two notches 79 which receive the bail 68 and hold the same in position within the box.

At the uppermost portion of the box is a cross bar 81. This cross bar is constructed at the center of the same with a hole 82 adapted to receive the screw 67 of the grease container 61. Bar 81 bears down upon the cap 66 of the grease container and holds the rim 63 thereof within the groove 71 of blocks 69. This bar is secured by nails to two of the opposite cleats 32 of the box. This cross bar is installed before the top wall 12 is in position.

The manner of using the invention is as follows. The lateral wall assembly 10 and the bottom wall 13 are normally flat. The flanges of the bottom wall are first bent at right angles to the body portion thereof and nails are driven through the frame 47 and into the ends of the block 69. This holds the flanges in erected position. The lateral wall assembly is now wrapped about the bottom wall 13 and the cleats thereof nailed to frame 47. The grease container 61 is next inserted into the container and the flange or rim 63 thereof let into the groove 71 of blocks 69. The spacer 72 is next slipped over the neck 65 and lowered to its proper position and nails driven through the cleats 31, 32 and 33 and into the frame 73 thereof. The cross bar 81 is next applied and similarly secured to cleats 32 and thereafter the top wall 12 may be inserted and nails driven through the cleats 31, 32 and 33 and into the frame 55 thereof. The box is then completely erected and the article is properly held in position therein.

The advantages of my invention are manifest. An extremely rigid and rugged construction results which can be handled roughly without injury to the contents of the box. The article within the box is held spaced from all of the walls thereof so that injury to the walls of the box will not injure the article. The fragile projecting portions of the article are free from the box and the box supported through the more rigid portion of the article whereby the article is firmly held within the box. The box can be collapsed in a flat state prior to use and is easily assembled when desired for use. The box can be constructed at a nominal cost.

Changes in the specific form of my invention, as herein disclosed, may be made within the scope of what is claimed without departing from the spirit of my invention.

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

1. A box comprising lateral walls, a bottom wall formed from sheet material and having a body portion and flanges extending outwardly therefrom said flanges being adapted to lie along the lateral walls upon the interior thereof, and supporting blocks secured to said flanges and held

from outward movement by the lateral walls of the box, said blocks supporting an object within the box and holding the same spaced from the bottom.

5 2. A box comprising lateral walls, a bottom wall formed from sheet material and having a body portion and flanges extending outwardly therefrom said flanges being adapted to lie along the lateral walls upon the interior thereof, a frame 10 secured to said body upon the underside thereof, said lateral walls being attached to said frame and supporting blocks secured to said flanges and held from outward movement by the lateral walls of the box, said blocks supporting an object with- 15 in the box and holding the same spaced from the bottom.

3. A box for holding an article having a downwardly extending rim said box comprising lateral walls, a bottom wall formed from sheet material 20 and having a body portion and flanges extending outwardly therefrom said flanges being adapted to lie along the lateral walls upon the interior thereof, and supporting blocks secured to said flanges and held from outward movement by the 25 lateral walls of the box, said blocks having grooves in the upper surfaces thereof adapted to receive the rim of the article and holding the article spaced from the bottom.

4. A box for holding an article having a body 30 portion provided with spaced supporting members depending therefrom, said box comprising lateral walls, a bottom wall formed from sheet material and having a body portion and flanges extending outwardly therefrom said flanges being 35 adapted to lie along the lateral walls upon the interior thereof, and supporting blocks secured

to said flanges and held from outward movement by the lateral walls of the box, said blocks engaging the body of said article and being of a height greater than said supporting members to hold the supporting members clear of the bottom 5 of the box.

5. A box for holding an article having a body portion formed with a depending rim and caster wheels secured to said body portion, said box comprising a bottom wall formed from sheet ma- 10 terial and having a body portion and flanges extending outwardly therefrom said flanges being adapted to lie along the lateral walls upon the interior thereof, and supporting blocks secured 15 to said flanges and held from outward movement by the lateral walls of the box said blocks having grooves therein for the reception of said rim, said blocks being of a height at the bottoms of said 20 grooves greater than the distance of projection of the caster wheels beyond said rim and holding the caster wheels spaced from the bottom wall of the box.

6. A box for holding an article having a body and a neck extending upwardly therefrom, said box comprising lateral walls, a bottom connected 25 thereto and a spacer within said lateral walls disposed intermediate the height thereof, said spacer comprising a rectangular frame adapted to be secured to the lateral walls and providing an opening therein of dimensions greater than the neck 30 and sheets of paper board secured to said frame and having openings therein conforming to the form of said neck and holding the object from lateral movement through engagement with the neck. 35

PAUL F. BOEYE.