May 18, 1965 R. V. JOHNSON 3,184,135

CUSHIONING PAD

Filed March 18, 1963

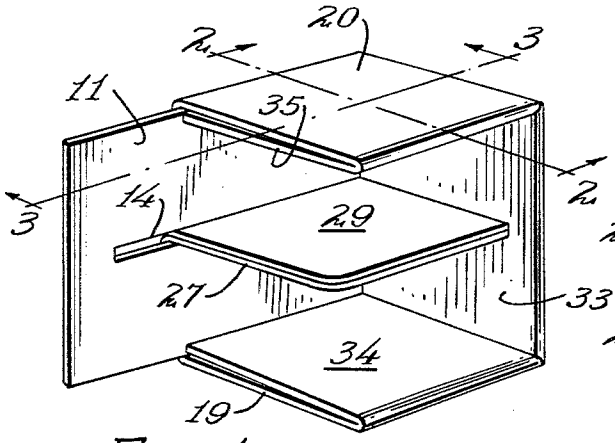


FIG. 1

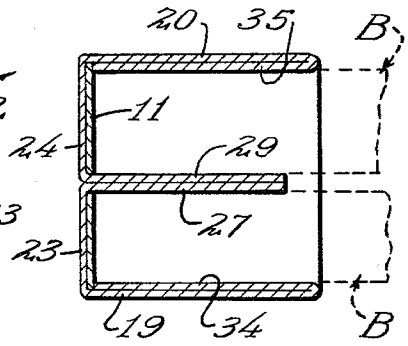


FIG. 2

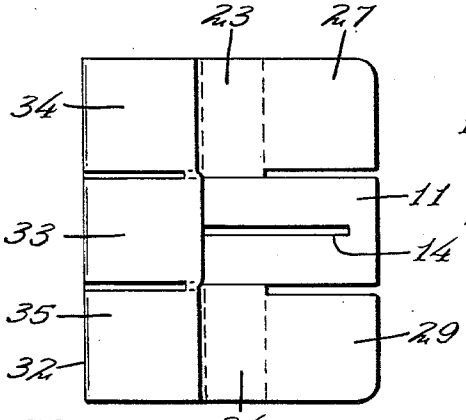


FIG. 6

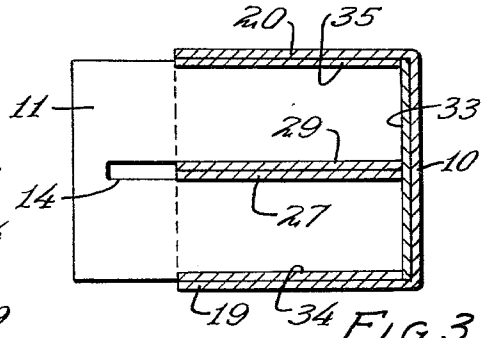


FIG. 3

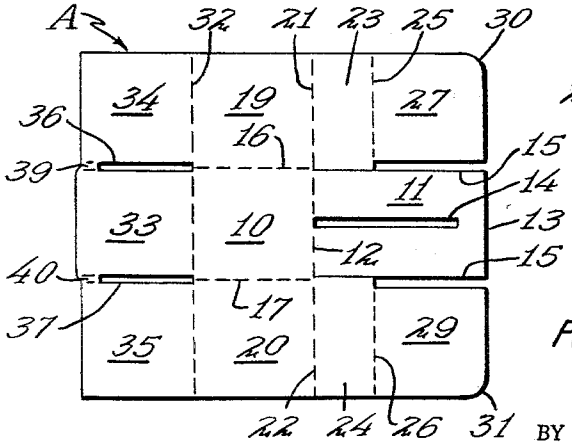


FIG. 5

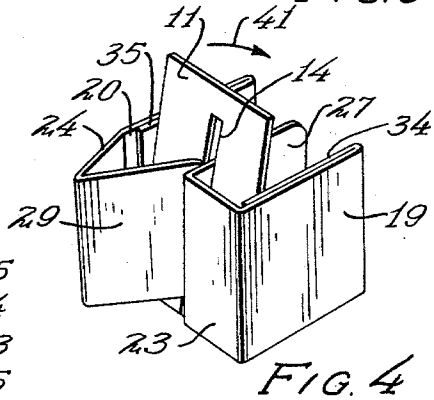


FIG. 4

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CUSHIONING PAD

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This invention relates to an improvement in cushioning pad and deals particularly with a pad construction designed to fit between the corners of parallel rectangular panels to hold them in spaced parallel relationship.

In many instances, pairs of rectangular panels are shipped in a single package. For example, ping pong tables are usually formed of two table top sections of equal size, and these panels are shipped in a single package in spaced parallel contiguous relation in order to save shipping space. Means must be provided for holding the panels in spaced parallel relation in order to prevent one panel from marring the surface of the other panel during transportation and storage. It is an object of the present invention to provide a simple and effective corner pad which may be used for this purpose.

A feature of the present invention resides in the provision of a corner pad construction which includes a pair of right angularly arranged panels designed to extend along the adjoining edges of the panels at the corners. Partition panels are hinged to certain of the panels and designed to extend between the panels to hold them spaced. Additional connecting panels are provided between the two first named panels to connect them and hold them in right angular relation. These latter panels extend in face contact with the outer surfaces of the panels to hold them assembled.

A feature of the present invention resides in the provision of a device of the type described which is formed of a generally rectangular blank of paperboard, such as corrugated paperboard, which is of sufficient thickness to hold the panels in proper relation and which provide the desired cushioning effect.

A further feature of the present invention resides in the provision of a pad of the type described which can be quickly erected from a flat form to an assembled position in an extremely short period of time and without the use of special tools or equipment.

A further feature of the present invention resides in the provision of a construction of the type described in which the panels which overlie the surfaces of the panels as well as the edges thereof may all be of double thickness to provide an effective cushion.

These and other objects and novel features of the present invention will be more clearly and fully set forth in the following specification and claims.

In the drawings forming a part of the specification:

FIGURE 1 is a perspective view of the corner pad in erected position.

FIGURE 2 is a sectional view through the pad, the position of the section being indicated by the line 2—2 of FIGURE 1.

FIGURE 3 is a vertical sectional view through the pad, the position of the section being indicated by a vertical plane through broken line 3—3 of FIGURE 1.

FIGURE 4 is a perspective view of the pad in partially erected condition.

FIGURE 5 is a plan view of the pad blank while it is in flat form.

FIGURE 6 is a view similar to FIGURE 5 showing the pad after the completion of the first folding operation.

The cushioning pad is indicated in general by the letter "A," and is shown as including a substantially square

first panel 10, and a rectangular panel 11 connected along a common line of fold 12. The panel 11 is preferably elongated in a direction from the fold line 12 to the free end 13, and the panel 11 is slotted as indicated at 14, the slot extending at right angles to the fold line 12 connecting the panels 10 and 11. When the panels to be packed are of equal thickness, the slots 14 are located centrally between the side edges 15 of the panel 11.

The panel 11 is foldably connected along third and fourth edges 16 and 17 to generally rectangular panels 19 and 20, respectively. These panels 19 and 20 are foldably connected along fold lines 21 and 22 which are substantially extensions of the fold line 12 to panel portions 23 and 24. The width of the panels 23 and 24 are substantially equal to the distance between the edges 15 of the panel 11 and the slot 14 therein so that the panel portions 23 and 24 may fold into a common plane in face contact with the panel 11 as will be later described. The edges of the panel portions 23 and 24 which are parallel to the fold lines 21 and 22 are connected by fold lines 25 and 26 to partition panels 27 and 29 respectively. These partition panels 27 and 29 are preferably provided with rounded outer corners 30 and 31, respectively.

Where it is not necessary to make the panels 10, 19 and 20 of double thickness, the pad may be cut off along the edge defined by the fold line 32. However, in preferred form, the panels 10, 19, and 20 are preferably connected to liner panels 33, 34, and 35 respectively along the fold line 32. The panels 33, 34, and 35 are of substantially the same shape and area as the panels 10, 19, and 20 to which they are hinged so as to be substantially contiguous thereto in the erected form of the pad.

In view of the fact that the panels 33, 34, and 35 lie inwardly of the panels 10, 19, and 20 when these latter panels are folded into U-shaped form, slots 36 and 37 are provided between the center panel 33 and the outer liner panels 34 and 35, respectively. Usually, the center panel 33 is connected to the outer liner panels along short areas of connection 39 and 40 at the ends of the slots 36 and 37, these areas of connection 39 and 40 being short enough so that these portions may be deformed by the folding of the panels so as not to interfere with the formation of the double thickness walls.

In the erection of the corner pad, the blank is preferably folded along the fold line 32 from the position shown in FIGURE 5 of the drawings to the position shown in FIGURE 6 so that the liner panels 33, 34, and 35 overlie the panels 10, 19, and 20 to which they are hinged. The panel 11 is then folded up into right angular relation to the panel 10 to which it is hinged, and the walls 19 and 20 with their liner panels 34 and 35 are folded up to also extend in right angular relation to the bottom panel 10. The panel portions 23 and 24 which bear the partition panels 27 and 29 are then folded so that the partition panels 27 and 29 extend through the slot 14 in face contact with one another and the panel portions 23 and 24 lie outwardly of the panel 11 and in face contact therewith. This operation is greatly simplified if, during the assembly operation, the panel 11 is swung forwardly or in the direction of the arrow 41 in FIGURE 4 of the drawings until the panel 11 is near the liner panel 33 overlying the bottom panel 10. After the partition panels have been inserted through the lower portion of the slot 14, the panel 11 may be folded up in a reverse direction to the arrow, the slot 14 being of approximately the same length as a diagonal from the curved corners 30 and 31 of the partition panels to the diagonally opposite corners of these panels so that this reverse folding can take place.

When fully assembled, the pad appears as in FIGURE 1 of the drawings. When the pad is used, the panel **11** extends along one edge of the two contiguous panels (portions of which are indicated in dotted outline at B in FIGURE 2 of the drawings) and the liner panel **33** and bottom panel **10** extend along the right angularly extending edges of these panels. The partition panels **27** and **29** extend between the two panels, while the panels **19** and **20** and their liners **34** and **35**, respectively extend over the outer opposed surfaces of the contiguous panels B. Thus the panels are held in spaced parallel relation, and are protected from rubbing together during shipment. The panels are either wrapped or contained in an outer container in the usual manner, the wrapper or container holding the pads in proper position.

In accordance with the patent statutes, I have described the principles of construction and operation of my improvement in cushioning pad, and while I have endeavored to set forth the best embodiment thereof, I desire to have it understood that changes may be made within the scope of the following claims without departing from the spirit of my invention.

I claim:

1. A blank for forming a corner pad for a pair of spaced parallel members and including three generally square panels of substantially equal size connected along parallel fold lines, a rectangular panel hinged to an edge of the intermediate panel of the series and being longer in a direction at right angles to the line of hinge than in width, said rectangular panel having a slot therein of a length greater than the width of said square panels and extending at right angles to the hinge line supporting the same, panel portions hinged to the edges of the remaining two square panels along fold lines substantially aligned with the hinge line connecting the rectangular panel to the intermediate square panel, said panel portions being substantially equal in length to the distance between the adjacent edge of the rectangular panel and said slot, and partition panels foldably connected

to the ends of said panel portions, the length of said slot substantially equaling the diagonal distance across said partition panels.

2. A blank for forming a corner pad for a pair of spaced parallel members and including three generally square panels of substantially equal size connected along parallel fold lines, a rectangular panel hinged to an edge of the intermediate panel of the series and being longer in a direction at right angles to the line of hinge than in width, said rectangular panel having a slot therein of a length greater than the width of said square panels and extending at right angles to the hinge line supporting the same, panel portions hinged to the edges of the remaining two square panels along fold lines substantially aligned with the hinge line connecting the rectangular panel to the intermediate square panel, said panel portions being substantially equal in length to the distance between the adjacent edge of the rectangular panel and said slot, partition panels foldably connected to the ends of said panel portions, and a reinforcing panel hingedly connected to each said square panel along a line of fold parallel to those connecting the panel portions and a rectangular panel to said square panels, said reinforcing panels being substantially equal in size to said square panels.

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