

Sept. 5, 1967

L. D. VAN ANTWERPEN

3,339,722

PACKAGE AND CUSHIONING STRIP FOR FRAGILE ARTICLES

Filed Oct. 8, 1965

Fig. 1

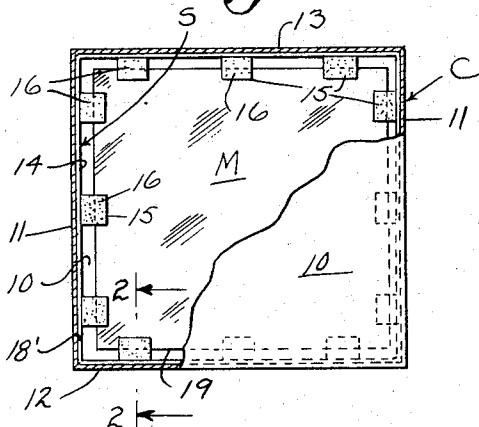


Fig. 2

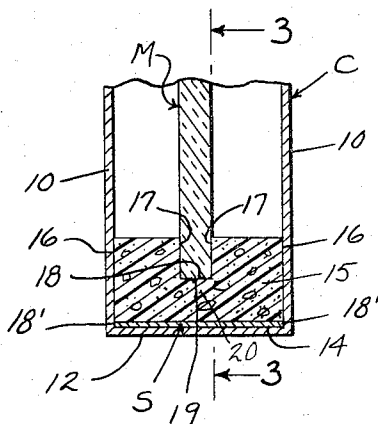


Fig. 3

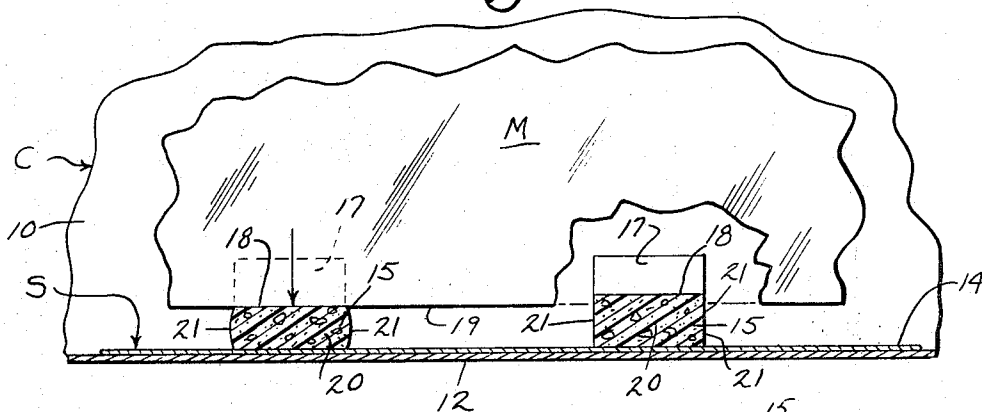
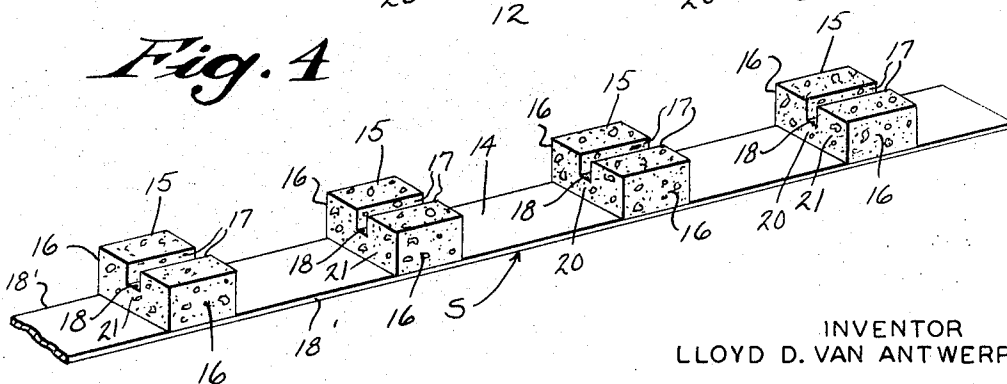


Fig. 4



INVENTOR
LLOYD D. VAN ANTWERPEN

BY

George W. Hylton Jr.

1

3,339,722

PACKAGE AND CUSHIONING STRIP FOR FRAGILE ARTICLES

Lloyd D. Van Antwerpen, Milwaukee, Wis., assignor to Vanant Company, Inc., Milwaukee County, Wis.
Filed Oct. 8, 1965, Ser. No. 494,091
1 Claim. (Cl. 206—62)

ABSTRACT OF THE DISCLOSURE

A package for fragile articles including a packaging and cushioning strip comprising an elongated base strip of flexible sheet material and a series of spaced resilient cushioning blocks secured to one surface of the strip, the cushioning strip being placed about and fitting around the peripheral edges of fragile articles such as mirrors and placed in a shipping carton.

This invention appertains to packaging of fragile articles and more particularly to new and useful improvements in a cushioning strip and means for packaging mirrors, plate glass and the like for shipping.

In the shipping of fragile articles, particularly mirrors, it is important that the peripheral edges of the mirrors be cushioned so that blows against the ends and sides of the cartons containing the mirrors will not cause the mirrors to crack or break.

Various types of cushioning strips have been developed in order to aid in the proper and safe packaging for shipping of these fragile articles. Certain types of cushioning material are well illustrated in the following Van Antwerpen patents: No. 2,504,473 issued Apr. 18, 1950 (FIGS. 28 to 31); No. 2,603,349 issued July 15, 1952 and 3,101,166 issued Aug. 20, 1963, and others. These particular cushioning strips were formed of a three-ply corrugated media and the present invention relates to a cushioning strip carrying resilient, spaced members preferably of a foam rubber.

It is therefore a prime object of the present invention to provide an effective means for shipping fragile articles so that the articles will be spaced from all of the walls of the shipping carton and effectively cushioned against jarring.

Another important object of the present invention is to provide a novel cushioning, packaging strip having a flexible base strip and secured thereon spaced members of a resilient material so constructed and arranged that the resilient material fits about the peripheral edges of the article being shipped.

A further important object of the present invention resides in providing a cushioning packaging strip having resilient spaced blocks secured to a base strip, each block having a longitudinal groove therethrough to provide side walls and a bottom supporting surface for the peripheral edge of the fragile article.

A salient feature of the present invention resides in the construction of the resilient blocks and spacing the same along a base strip so that when the peripheral edge of the article is placed in the groove provided in the resilient block, the weight of the article will cause the resilient block to more firmly grip the article and also to engage the sides and walls of the carton thereby preventing slipping and movement of the strip.

With these and other objects in view, the invention consists in the novel construction, arrangement and formation of parts as will hereinafter more specifically be described, claimed and illustrated in the accompanying drawings, in which

FIGURE 1 is a side elevational view of a mirror in its shipping carton with the cushioning strip in its proper

2

position, certain parts being broken away and in section to illustrate details of construction;

FIGURE 2 is an enlarged fragmentary transverse section through the carton, taken on the line 2—2 of FIGURE 1 and looking in the direction of the arrows;

FIGURE 3 is a fragmentary longitudinal section on a slightly reduced scale from FIGURE 2, the section being represented by the line 3—3 of FIGURE 2, looking in the direction of the arrows with certain parts of the mirror being broken away to illustrate the resiliency of each block member, and

FIGURE 4 is a perspective view of a portion of the cushioning packaging strip made in accordance with the present invention.

A clearer understanding of the construction and method of operation of this invention may be had by referring to the drawings in detail, wherein like reference characters designate the same or similar parts throughout the several views.

The letter C generally indicates a shipping carton for fragile articles, such as the mirror M, and the improved cushioning strip S is illustrated particularly in FIGURE 1 in its proper position about the peripheral edges of the mirror.

While the carton C forms no particular part of the present invention, the strip S is constructed in such a way as to cooperate with the side walls 10 of the carton to hold the strip firmly in position. Therefore, the carton C includes the side walls 10, end walls 11, a bottom wall 12 and a top wall 13. The carton is preferably of a size and configuration to receive the mirror M in such a manner that it may be spaced from all of the walls of the carton as shown. The improved strip S includes broadly a base strip 14 of any desired length and secured thereto either by gluing or stapling are a series of spaced resilient block members 15. Each member 15 is provided with a longitudinally extending groove intermediate the end walls 16 and this groove provides side walls 17 and a bottom supporting surface 18. Each of these blocks 15 may be secured to the base strip 14 equidistantly one from the other, or may be placed in uneven distances, as desired. Preferably and for purposes of assembly, the blocks 15 are spaced equally one from the other. The strip S and blocks 15 secured thereto are of a size and configuration, so that the side edges 16 of the blocks and the edges 18 of the strip engage the side walls 10 of the carton when the strip is placed about the peripheral edge 19 of the mirror M, with the edge 19 being received between the side walls 17 and engaging the bottom surface, 18.

Referring now particularly to FIGURES 2 and 3 of the drawings, the manner in which the resilient blocks cooperate to firmly grip the edge 19 of the mirror and engage the sides of the carton is well illustrated. With the peripheral edge 19 of the mirror in the groove, it can be seen that when weight is placed on the bottom surface 18, the lower portion 20 of block 15 is compressed (note FIG. 3 arrow), and thus the walls 21 will bulge outwardly, as shown. Likewise, the end walls 16 will be slightly extended and bulged and thus will grip the side walls 10 of the carton. Further, the downward pressure on the bottom wall 18 of the block will cause the side walls 17 of the groove to be pulled inwardly, in the direction of the arrows, FIGURE 2, and thus firmly grip the peripheral edge of the mirror. There may be a slight pulling away of the upper portion of the walls 16 from the side of the carton 10, due to the weight of the material and resiliency of the block but the lower portion of the wall 16 will be extended to firmly grip the side walls.

In FIGURE 3, the lower portion of the mirror M has been broken away at the right hand side of the figure to illustrate the cushioning block 15 in its uncompressed condition, and to compare the same with the left hand

3

block showing how the material will compress when weight is placed upon it in the direction of the arrows.

Thus it can be seen that the cushioning strip made in accordance with the present invention cooperates with the carton and the article to be shipped in such a manner that when weight is placed on the block, the article will be more firmly gripped and the strip tends to hold its position in the carton without slipping or sliding, and thus, effectively spaces the fragile article from all of the walls of the carton.

Therefore from the foregoing, it is believed that the features and advantages of the invention will be readily apparent to those skilled in the art, and it will of course be understood that certain changes in the spacing, form, proportion and minor details of construction may be resorted to without departing from the spirit of the invention or scope of the appended claims.

What is claimed as new is:

A package for fragile articles, mirrors and the like comprising in combination, a carton having side, end, bottom and top walls of a size and configuration to receive and completely encompass the article in spaced relation to all of said walls, a cushioning strip including an elongated flexible base strip, a series of spaced resilient cushioning blocks secured to one surface of said strip, each

4

block having a groove therein extending completely from one side to the other to provide side walls and a bottom supporting surface intermediate said base strip and upper block portion, said strip being placed about the peripheral edge of said article with said grooved side walls and bottom surface engaging respective portions of said mirror, each block being of similar construction and having a substantially rectangular shape with its side walls terminating adjacent the side edges of said strip, the dimensions of said strip and blocks having a size and configuration that when placed about the peripheral edge of said article will engage the respective adjacent portions of the sides of said carton, whereby the weight of said article will compress the lower portion of said block and pull said grooved side walls to firmly grip the respective adjacent portions of said mirror.

References Cited

UNITED STATES PATENTS

20	2,746,667	5/1956	Murphy	-----	229—14
	3,166,227	1/1965	Ragnow	-----	229—14
	3,181,766	5/1965	Kane et al.	-----	206—46

THERON E. CONDON, *Primary Examiner*.

25 WILLIAM T. DIXSON, Jr., *Examiner*.