

Jan. 31, 1967

W. J. JESTER

3,301,452

HANDLE

Filed March 10, 1965

3 Sheets-Sheet 1

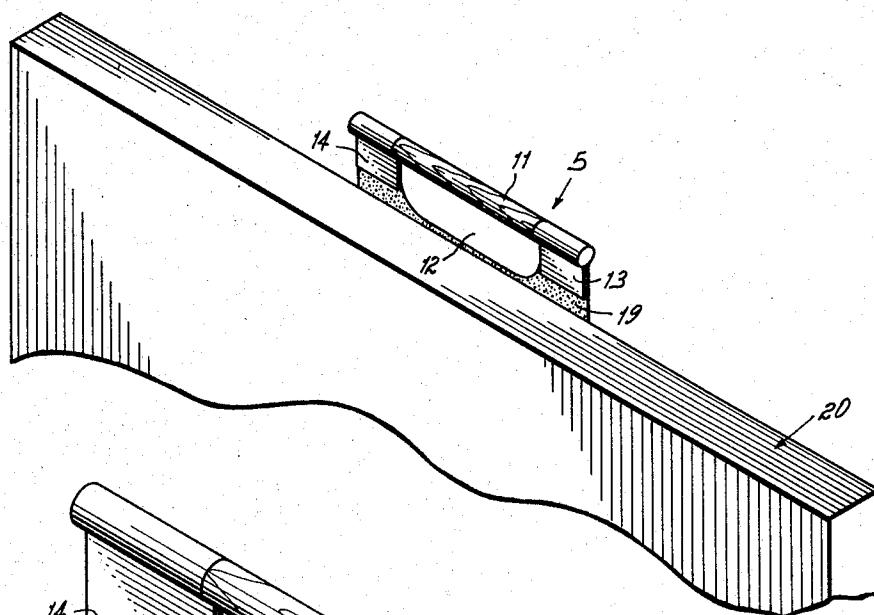


Fig. 1

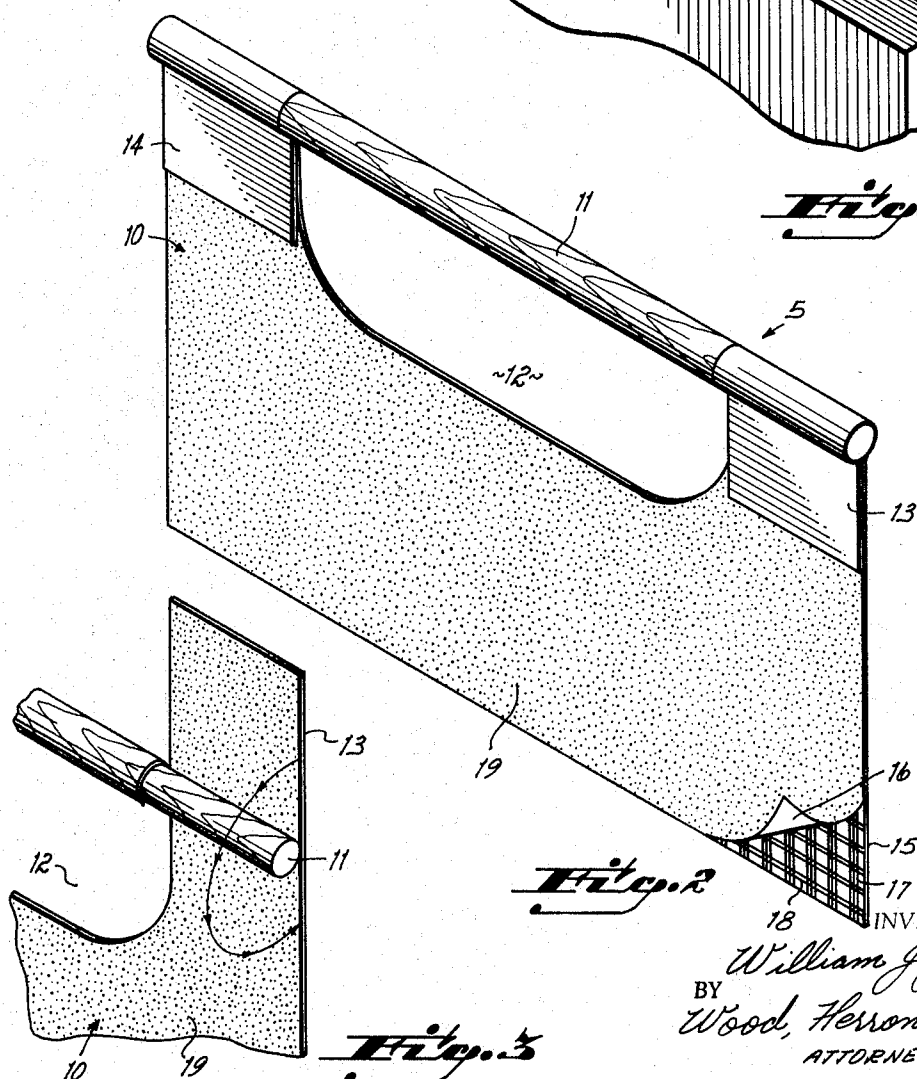


Fig. 2

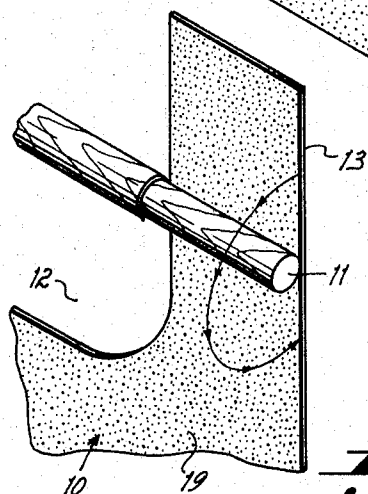


Fig. 3

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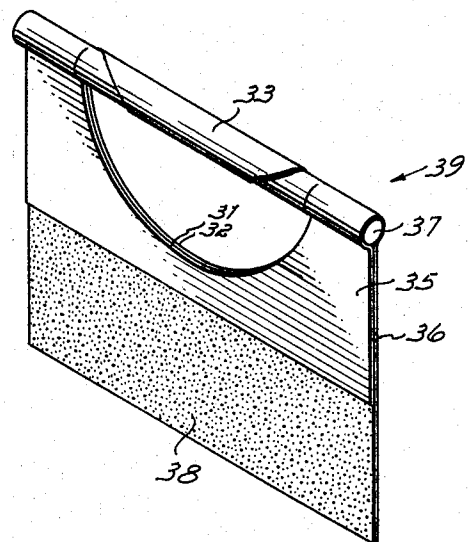
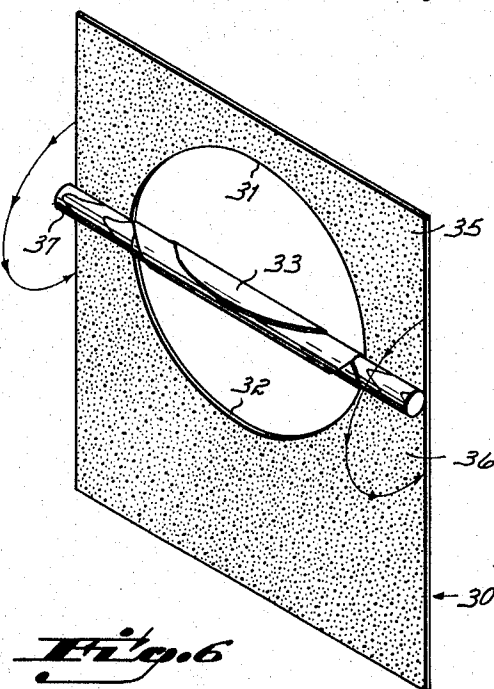
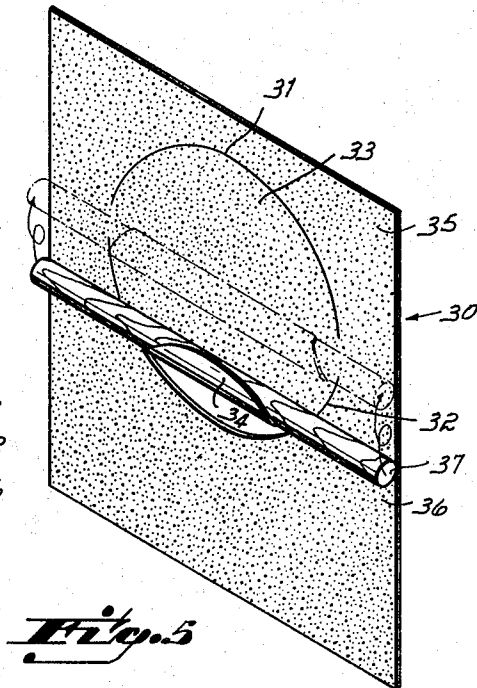
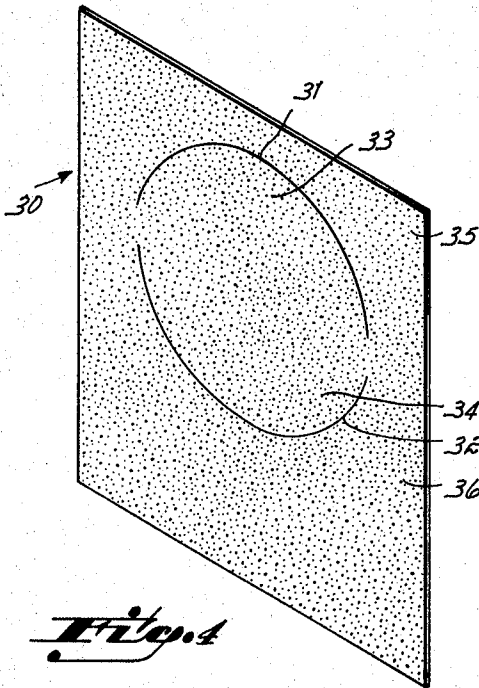
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3 Sheets-Sheet 2



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3 Sheets-Sheet 3

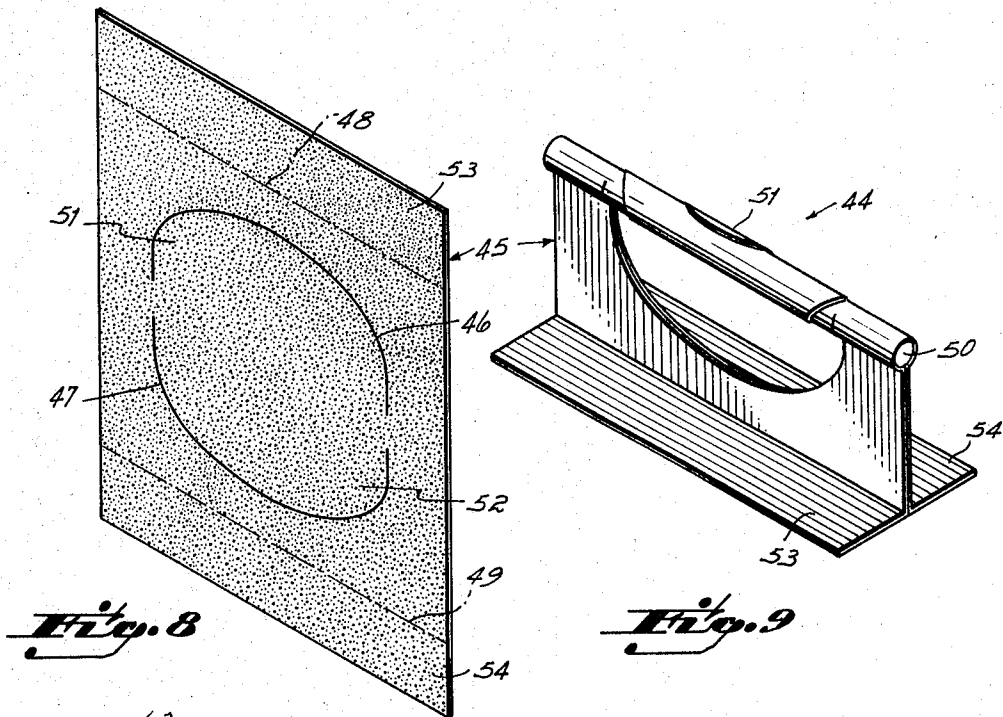


Fig. 8

Fig. 9

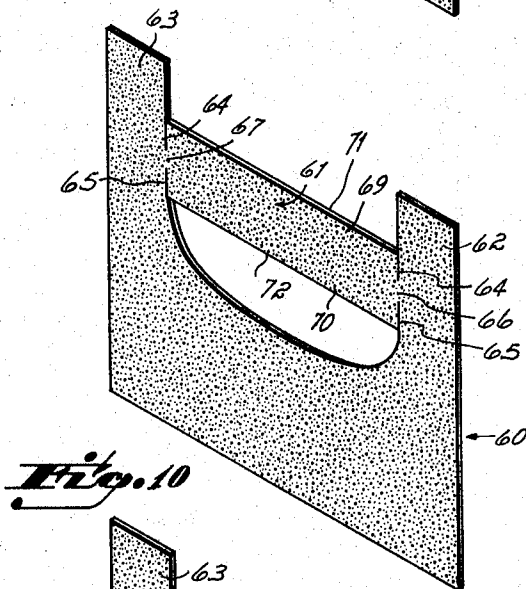


Fig. 10

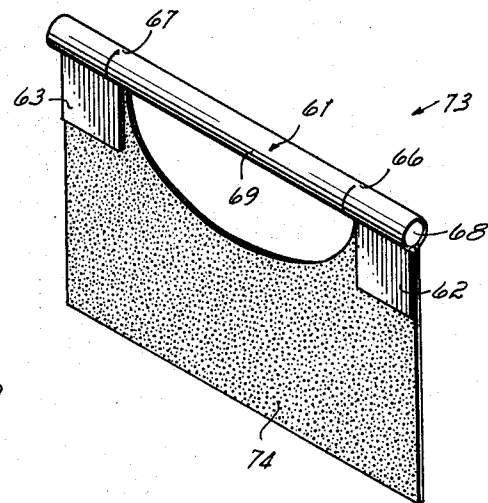


Fig. 12

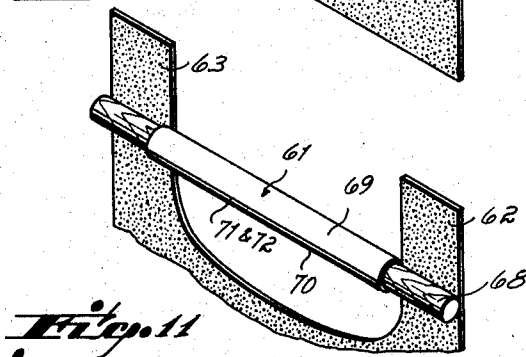


Fig. 11

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3 Claims. (Cl. 224-45)

This invention relates to carrier handles and more particularly to a handle attachment which may be added or attached to any conventional box, carton, sheet of cardboard, etc. to facilitate carrying of that object.

It has been an objective of this invention to provide an inexpensive heavy-duty handle which may be attached to and used to carry cartons and other relatively heavy articles.

Still another objective of this invention has been to provide a handle which may be easily attached to any heavy paperboard object without the use of any special tools or equipment such that any commercial establishment may attach them to boxes or paperboard objects to facilitate customer handling of the objects.

Still another objective of this invention has been to provide a paper product handle reinforced so that it may be used to support or carry heavy loads, as for example, clothing cartons, art supplies, etc. To this end, this invention incorporates a handle made from heavy two-ply paper reinforced by both longitudinal and lateral threads. This reinforced paper is adhesively secured to the carton or object to be carried and is also wrapped around a dowel pin or reinforcing member by means of which the load is to be carried. In other words, the adhesively backed reinforced paper is interposed or extends between the load supporting member, preferably a wooden dowel pin, and the load, such as a carton. The dowel pin and adhesively backed reinforced paper together thus constitute a heavy-duty handle which may be adhesively secured to any carton or other object and used to carry that object.

The primary advantage of this handle over other paperboard or adhesively secured handles is that it may be used to carry much heavier loads than any other adhesively applied handles heretofore available. Specifically, one preferred embodiment of the handle described herein may be adhered to and used to carry a thirty-seven pound load.

Other objects and advantages of this invention will be more readily apparent from a description of the drawings in which:

FIGURE 1 is a perspective view of one preferred embodiment of the handle of this application secured to a carton,

FIGURE 2 is an enlarged perspective view, partially broken away, of the handle of FIGURE 1,

FIGURE 3 is a perspective view of a portion of the handle of FIGURE 1 illustrating the manner in which the flexible sheet portion of the handle is applied to the dowel pin portion,

FIGURE 4 is a perspective view of the flexible sheet portion of a second embodiment of the handle,

FIGURE 5 is a perspective view of the flexible sheet of FIGURE 4, partially applied to a dowel pin so as to illustrate the manner of assembly of the handle,

FIGURE 6 is a perspective view of a continuation of the wrapping process of FIGURE 5,

FIGURE 7 illustrates the completed handle of FIGURE 6 after the flexible sheet is completely assembled about the dowel pin portion of the handle.

FIGURE 8 is a perspective view of the flexible sheet portion of a third embodiment of the handle,

FIGURE 9 illustrates the completed handle formed with the sheet of FIGURE 8,

FIGURE 10 is a perspective view of the flexible sheet of a fourth embodiment of the handle,

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FIGURE 11 is a perspective view of the flexible sheet of FIGURE 10 partially assembled about a dowel pin during an intermediate stage of the handle formation, and

FIGURE 12 is a perspective view of a complete handle made from the flexible sheet of FIGURE 10.

Referring first to FIGURES 1 through 3, there is illustrated one preferred embodiment of the invention. In this embodiment, the handle 5 is made from a generally square flexible sheet 10 of adhesively backed material secured to a wooden dowel pin 11. This sheet of material has a longitudinal recess 12 cut from it so as to define longitudinal extending flaps 13 and 14 located on opposite sides of the sheet 10 of material.

The sheet 10 of material used to form the handle consist of two plies 15, 16 of heavy kraft paper laminated or adhesively secured together with an intermediate layer of longitudinal reinforcing fibers 17 and traverse fibers 18 secured therebetween. The reinforcing fibers may be threads of any flexible, high tensile strength material, such as nylon or fiberglass. These threads or strands 17, 18 of reinforcing material increase the tear strength of the otherwise weak two-ply kraft paper. This same two-ply, bi-directional reinforced paper material is used to produce the flexible sheets from which all embodiments of the handle disclosed in this application are made.

The laminate sheet 10 has one side 19 completely covered with a water moistenable adhesive. Thus, by simply wetting the surface or side 19 of the laminate material 10, that side of the handle may be secured to any object such as a cardboard carton 20 as illustrated in FIGURE 1.

To secure the circular cross-section wooden dowel pin 11 to the flexible sheet 10, the inside or adhesively coated side of the flaps 13, 14 is moistened with water and doubled over or wrapped around the ends of the dowel pin so as to secure the pin 11 between the doubled over flaps 13, 14.

The handle 5 may be easily secured to the carton 20 by simply wetting the lower portion of the adhesively backed side 19 of the sheet 10 and placing that moistened side upon the object 20 to be carried by the handle.

Another embodiment of a handle 39 is illustrated in FIGURES 4 through 7. This embodiment of the handle is also made from a generally square sheet of adhesively backed, two-ply, bi-directional reinforced paper described hereinabove. The upper portion of the flexible sheet 30 has two opposed arcuate severance lines 31, 32 cut through it. These lines 31, 32 define two flaps 33, 34, each one of which is wrapped around a circular cross-section wooden dowel pin 37 that extends transversely across the full width of the handle. As shown in FIGURE 5, the wrapping is accomplished by first completely wrapping one flap 34 around the dowel pin and thereafter, wrapping the other flap 33 over the already rolled flap 34. Thus, in this embodiment, that portion of the dowel pin which is grasped by a person using the handle is covered with paper, and there is no waste of paper or flexible material.

This handle 39 is completed by wetting the upper portion 35 of the adhesive surface of the handle and folding it over the adhesively covered side of lower section 36 so that the dowel pin 37 is secured therebetween. When the upper portion 35 of the sheet 30 is folded downwardly, the upper portion only covers approximately one half the area of the lower portion 36 so that, as shown in FIGURE 7, an adhesively covered surface 38 of the lower portion 36 of the sheet remains exposed. It is this adhesively covered surface 38 that is moistened and attached to the side of a carton or other object in the same fashion as the handle 5 is attached to the carton 20 in FIGURE 1.

Still another embodiment of the handle is illustrated in FIGURES 8 and 9. This embodiment is very similar to that illustrated in FIGURES 4 through 7 but differs therefrom principally in the manner in which it is to be attached to a carton or object to be carried. It, too, is made from a sheet 45 of adhesively backed, two-ply bi-directional reinforced kraft paper.

To accommodate attachment of the handle 44 to the top rather than the side of a box or carton, the opposed arcuate severance lines 46, 47 are located differently than in the embodiment of FIGURES 4 through 7. Specifically, they are located on opposite sides of a transverse center line of the sheet 45 which divides the sheet into identical halves such that if the sheet 45 were folded along this center line, the severance lines 46, 47 would coincide or overlap. This embodiment also includes a pair of transverse score or fold lines 48, 49 located adjacent the top and bottom respectively of the sheet 45.

A wooden dowel pin 50 is wrapped by both flaps 51, 52 formed by the severance lines 46, 47 in the same manner as described with respect to the embodiment of FIGURES 4 through 7. The upper and lower portions of the sheet 45 are folded into overlapping relationship about the dowel pin 50 after that portion of the sheet 45 located between the score lines 48, 49 is moistened. The end flaps 53, 54 formed by the score lines 48, 49 are free to be turned outwardly as shown in FIGURE 9 so that each flap 53, 54 is located in a plane normal to the plane of the overlapping top and bottom portion of the sheet.

When the handle of FIGURE 9 is attached to a box or other object, the bottom surface of the flaps 53, 54 is wetted so as to render the adhesive applied thereto tacky. The handle is then attached to the top surface of a box, carton or other object to be carried by the handle.

Referring now to FIGURES 10 through 12, there is shown still another embodiment of the invention. This embodiment includes a sheet 60 of two-ply laminated kraft paper reinforced with a bi-direction reinforcement as described hereinabove. This embodiment differs from embodiment includes a sheet 60 of two-ply laminated cludes a transverse strip 61 which extends between and is attached to the longitudinally extending flaps 62, 63. At the line of attachment between the transverse strip 61 and the flaps 62, 63, severance lines 64, 65 are cut longitudinally through the sheet so that only thin sections 66, 67 extend between and connect the ends of the strip 61 to the flaps 62, 63 respectively.

To attach the sheet 60 to a wooden dowel pin 68, the dowel is placed transversely across the sheet so as to be located over the connecting sections 66, 67 of the sheet. The upper portion 69 of the strip 61 is then wrapped over the dowel 68 and the lower portion 70 of the strip 61 is wrapped beneath the dowel 68. The height of the strip 61 is the same as the circumference of the dowel 68 so that when the strip 61 is wrapped around the dowel 68, the top edge 71 of the strip 61 abuts against the bottom edge 72.

After the dowel has been wrapped with the strip 61 of the sheet 60, the flaps 62, 63 are folded downwardly around the dowel 68 and secured together by the adhesive coating applied to the underside of the sheet 60. The resulting handle 73 is shown in FIGURE 12. To attach this handle 73 to a carton or other object, the adhesive coated surface 74 of the lower portion of the sheet 60 is moistened and applied to the carton or object which is to be carried by the handle.

The primary advantage of all the handles of this application is the relatively heavy weight objects which may be carried with them. This stems from the bi-directional reinforcement between the plies of the paper and the inclusion of a rigid dowel to form the gripping section of the handle. This dowel distributes the load evenly throughout that portion of the handle which is attached to the carton or object to be carried with the result that there are no stress points in the bond between the paper

handle and the carton as would occur if a nonrigid member were used for the gripping section.

Another advantage of all of the handles of this application is the ease with which they facilitate the carrying of a very large sheet of material, such as, either a paper wrapped or an unwrapped 28" x 44" sheet of artboard paper product. To carry such an article with the handles of this application, the handle is attached at an individual carrier's arm length from the top of the side of the article so that it may be easily cradled and carried under the arm.

In the case of a paper wrapped article, the rigidity of the handle dowel becomes particularly important since it serves to distribute the pressure points across the bottom of the paper wrapped package and, thus, increase the amount of weight that may be carried. A non-rigid handle concentrates the load with the result that the paper is subject to tearing at the stress or pressure points.

While only a few embodiments of the invention have been disclosed and described herein, those skilled in the art to which this invention pertains will readily appreciate that numerous changes and alterations may be made without departing from the spirit of the invention. Therefore, I do not intend to be limited except by the appended claims.

Having described my invention, I claim:

1. A handle adapted to be adhesively secured to objects to be carried by said handle, comprising;

a flexible sheet of material comprised of two superposed plies of paper material having bi-directional reinforcing strands of flexible high tensile strength material sandwiched therebetween, one side of said sheet having a water moistenable adhesive secured thereto, said sheet including a pair of spaced flaps extending longitudinally from one side thereof, each of said flaps including an end section and a middle section,

a strip extending transversely between and attached to each of said flaps in an area between said end and middle sections,

a wooden dowel pin extending transversely between said flaps in the area of said strip, each of said flaps being wrapped around one end of said dowel pin with the adhesively coated side of the end section of the flap secured to the adhesively coated side of a middle section of said flap, and a portion of said strip being wrapped around said dowel pin in one direction and another portion of said strip being wrapped around said dowel pin in another direction.

2. A handle adapted to be adhesively secured to objects to be carried by said handle, comprising;

a flexible sheet of material comprised of two superposed plies of paper material having reinforcing stands of flexible high tensile strength material sandwiched therebetween, one side of said sheet having an adhesive secured thereto, said sheet including a pair of spaced flaps extending longitudinally from one side thereof, each of said flaps including an end section and a middle section,

a strip extending transversely between and attached to each of said flaps in an area between said end and middle sections,

a rigid dowel extending transversely between said flaps in the area of said strip, each of said flaps being wrapped around one end of said dowel with the adhesively coated side of the end section of the flap secured to the adhesively coated side of a middle section of said flap, a portion of said strip being wrapped around said dowel pin in one direction and another portion of said strip being wrapped around said dowel pin in another direction.

3. For use in combination with a package, a handle adapted to be adhesively secured to one side of said package, said handle comprising;

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a flexible sheet of material having one side completely coated with an adhesive material, the opposite side being free of adhesive material, said sheet including a pair of spaced flaps extending from one edge thereof, each of said flaps including an end section and a middle section, 5
a rigid dowel secured to said flexible sheet by said pair of spaced flaps, each of said flaps being wrapped around one end of said dowel with the adhesively coated side of the flaps contacting the dowel and the adhesively coated side of the end section of each flap being secured to the adhesively coated side of the middle section of the flap, 10
said adhesively coated side of said flexible sheet being secured to a flat side of a package when the handle is 15

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in use such that the package may be carried by said rigid dowel.

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