

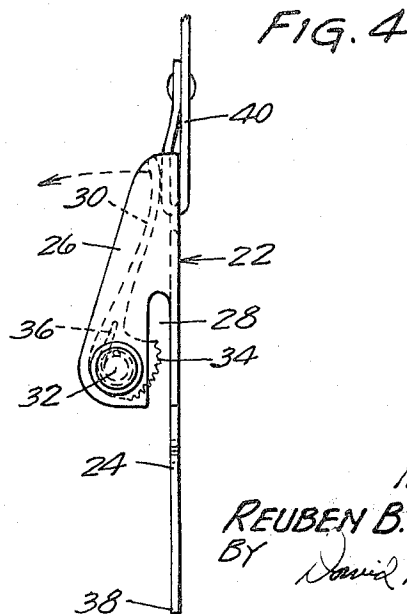
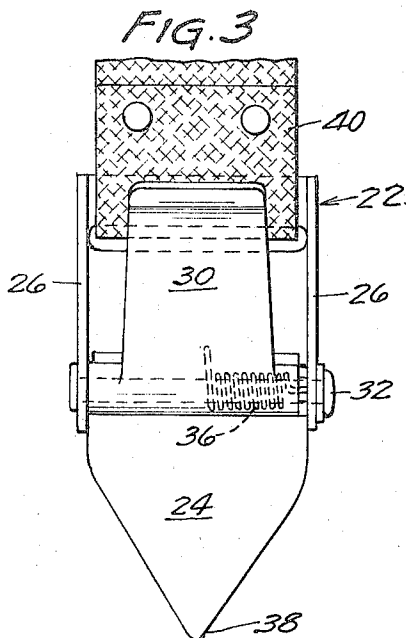
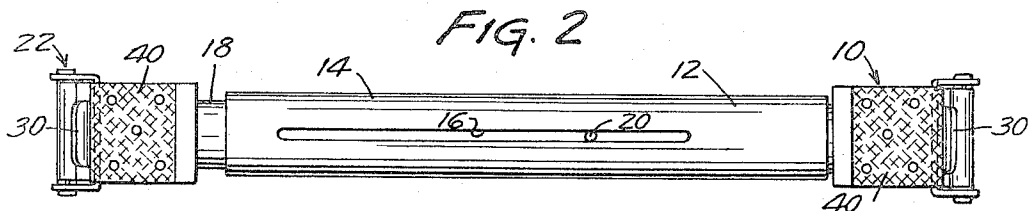
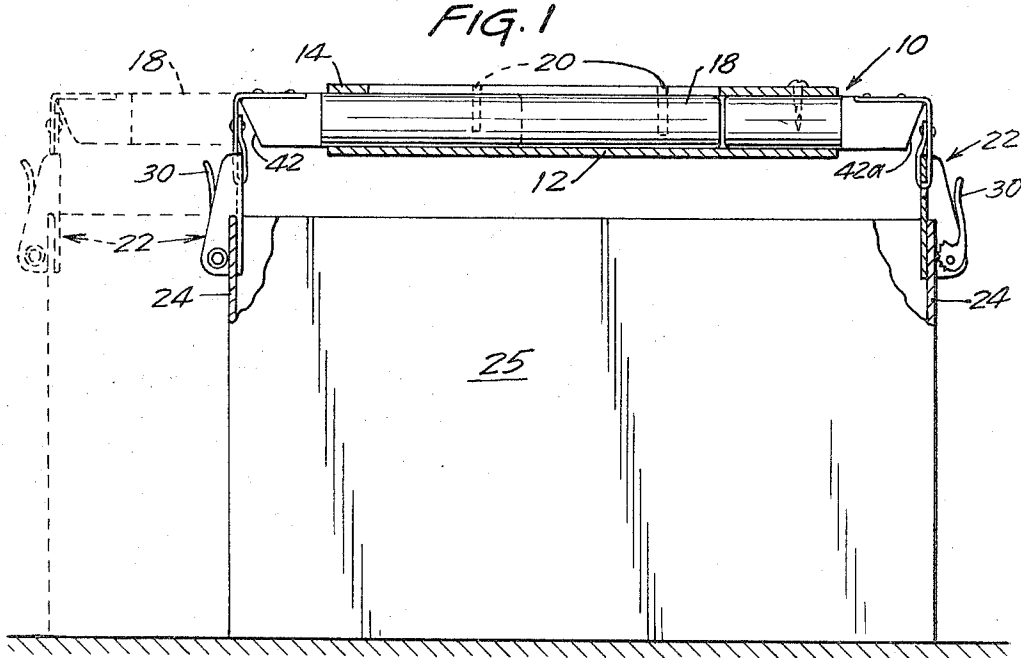
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CARRYING DEVICE

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3,305,260

CARRYING DEVICE

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2 Claims. (Cl. 294-16)

This invention relates to new and useful improvements in carrying devices, and more particularly to a rapidly attachable and releasable carrying device adaptable to various sizes of corrugated carton boxes, particularly of the type used to package various kinds of canned goods, breakfast foods and similar items in grocery stores, drug-stores and supermarkets.

It is common practice in many supermarkets and stores to partially or totally remove the top end of the cardboard cartons in which groceries and similar items are received, and to save the empty cartons, using them as convenient containers for their customers' purchases. However, even if the customer may desire his groceries, etc. packed in a salvaged carton rather than a paper bag, carrying such a carton or box normally requires the use of both hands and limits the customer to one such box if walking home from the store. If the customer is driving (and even if the store provides "carry out" service to the customer's car), nonetheless the customer must make several trips from his car into his home, even though the weight of the boxes is such that more than one could otherwise be carried at one time. Furthermore, it is not uncommon that the box must be set down while the customer opens the door to his home, and picked up once again after he opens the door.

It is therefore an object of the present invention to provide a carrying device which may be fastened to a salvaged carton whereby it may be conveniently carried in one hand, and which makes it easy to set the carton down and pick it up again.

It is another object of the present invention to provide such a carrying device which may be attached to boxes and corrugated cartons whether or not the top has been opened, and whether or not the carton is full or only partially filled.

Over the years others have addressed themselves to the problem of providing an attachable carrying device for various objects, or types of boxes, parcels and cartons, e.g. see U.S. Patent 516,420 for a Shawl Strap, or U.S. Patent 1,120,020 for a Parcel-Carrier, and U.S. Patent 1,655,744 for a Battery Carrier.

See also U.S. Patent 2,608,328 for a Parcel Carrier which shows a handle means for attachment to the binding cord of a package; U.S. Patent 2,800,353 for a Receptable Handle, which shows a transverse tubular handle having resilient pairs of spring fingers for attachment to the sidewalls of wooden boxes or crates, the bias of the springs toward a normally open position being limited by a slidable compression ring which is used to hold the fingers against the sidewall of the open-ended crate or box.

Also of interest is U.S. Patent 2,944,713 for a Detachable and Foldable Container Carrier, which shows a handle means particularly adapted for attachment to beverage cases, cartons and boxes which have pre-existing finger-slots or handles on the ends.

It is a further object of the present invention to provide a carrying device which is not limited to use on boxes or packages which had pre-existing slots in the sidewalls, or binding cords thereon, which has a dependable rapidly attachable and releasable fastening means for gripping the sidewalls of a box or carton, and which, in its preferred form, may be used on unopened corrugated cardboard or paper cartons.

Additional objects and advantages will become apparent

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from the following description and accompanying drawings, wherein:

FIGURE 1 is a side elevation of a carton with the top end sidewall partially broken away, showing, in partial section, my device attached thereto, and with a portion of a larger carton and part of the device shown by dash lines to illustrate the adaptability of the device to cartons of various sizes;

FIGURE 2 is a top view of my device;

FIGURE 3 is an end view of the presently preferred form of attachment means at one end of my carrying device; and

FIGURE 4 is a side view of a slightly modified form of the attachment means shown in FIGURE 3.

Referring more specifically to the drawings, my carrying device 10 comprises a telescoping tubular handle 12, comprising an outer member or portion 14 which in its preferred form has a keyway 16 formed therein, and an inner handle portion 18 having in its preferred form a corresponding key 20 sized appropriately to fit in the keyway and prevent axial rotation of the inner handle portion within the outer handle member. Appended from each end of the handle 12 are the rapidly attachable and releasable attachment or clamping means 22 which are used to attach the device to the sidewalls or endwalls of a salvage carton or other box, such as the sidewalls 24 of the box 25 as illustrated in FIGURE 1.

Referring now to FIGURES 3 and 4, the clamping means 22 comprises a backplate 24 having a pair of wings 26 projecting outwardly and downwardly from the top lateral edges of the backplate and perpendicular thereto whereby a slot 28 is formed between the lowermost portion of the wings and the backplate, the slot thus formed being of a size sufficient to receive the sidewall of a carton. A transverse axle 32 connects the wings and an arcuate lever 30 is attached to the axle 32 the lever having an ellipsoidal, serrated end portion 34 which in the closed position shown in FIGURE 4 projects partially into the slot 28 and which upon movement of the lever in the direction of the arrow in FIGURE 4 withdraws the serrated portion from the space defined by the slot 28 due to the ellipsoidal shape of the serrated end of the lever. Spring means 36 is connected to the axle 32 and lever 30 to bias the latter into the closed position.

To attach my device to an open ended carton one merely sufficiently opens the slot in the clamping device by appropriate movement of the lever 30 and inserts the sidewall of the carton into the slot. The lever is pushed back towards the closed position whereby the serrated edges thereof frictionally engage the sidewall, and in the case of cardboard cartons and the like, actually slightly indent and strongly grip the sidewall. The telescoping handle is adjusted to the appropriate length and the procedure repeated on the opposite sidewall to complete the attachment of my device.

The cooperating key 20 and keyway 16 serve to maintain the clamping means at each end of the handle member oriented in the same direction and thus aid in the ease with which my device may be attached to a carton. Furthermore if the device is not attached near the mid-line of the sidewall or the load is heavier on one side of the box, the torque which would tend to rotate the inner handle member upon lifting the box by the handle is resisted and accidental spillage is thereby avoided.

In the presently preferred form of my device the backplate 24 has a tapered or pointed end 38, as shown in FIGURE 3. With this form of the device, it is not necessary that the carton be open-ended, but rather my carrying device may be attached to any box that is made of a material (e.g. corrugated cardboard) that can be pierced by the point of the backplate.

As herein illustrated, the clamping means 22 are at-

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tached to the handle 12 by a flexible webbing 40, and the terminal portions of the outer handle member 14 and inner handle member 18 are undercut (as illustrated at 42 and 42a respectively in FIGURE 1) thus making it possible to attach my device to boxes having a width that is less than the shortest possible length to which the telescoping handle may be closed.

Because of its strength and light weight in relationship to cost, aluminum and aluminum alloys are preferred for use in constructing components of my device, but other materials may be used. Likewise the clamping means may be made as an integral part of the handle, or attached thereto by means other than the flexible web. Furthermore, if it is intended that the device will be used on only one size of box, the handle may be one piece, rather than telescoping. However, it should be understood that such substitution or modifications are within the spirit and scope of this invention, and that the particular form illustrated places no limitation thereon, except as defined in the appended claims.

What I claim is as follows:

1. A carrying device adapted for attachment to the sidewalls of an open-ended container whereby a handle is formed thereon, said device comprising a transverse handle member, and a pair of clamping members, one of each of said clamping members being respectively attached to an opposite end of said handle member; said clamping members each comprising a backplate for engaging an inner surface of a said sidewall having a pointed end, spaced wings attached to said backplate and being so

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arranged that the said wings and backplate define a slot adapted to receive a portion of a said sidewall, a transverse axle member extending between said wings and positioned adjacent said slot; and pivoted about said axle member, an arcuate lever having an ellipsoidal serrated end portion eccentrically positioned relative to said axle member which, when said lever is in a closed position, is disposed in such spaced relationship to said backplate that a portion of a said sidewall inserted in said slot is frictionally engaged and retained by said end portion and said backplate; and spring means connected to said axle and said lever and biasing said lever into a closed position in which said serrated end portion projects into said slot.

2. A carrying device according to claim 1 in which said handle member comprises telescoping parts, one part being an outer member having a longitudinal keyway formed therein and the other part being an inner member having a corresponding key sized to fit in said keyway.

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