May 19, 1953 A. J. GOLDSMITH 2,639,082

CONTAINER STRUCTURE WITH HANDLE ATTACHMENT

Filed May 26, 1948

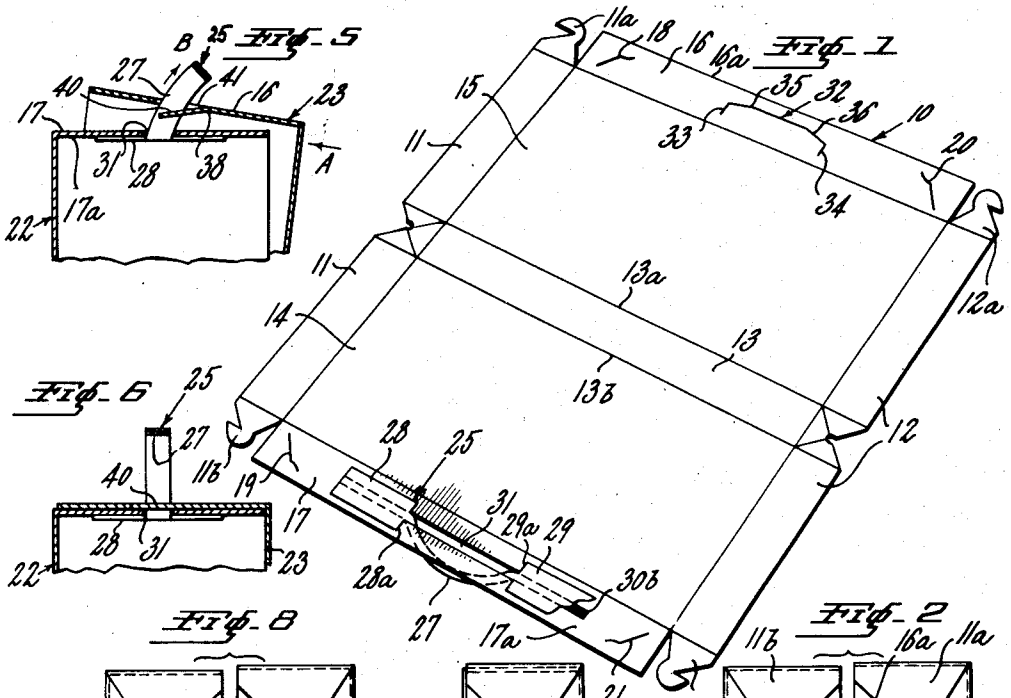


Fig. 5

Fig. 6

Fig. 8

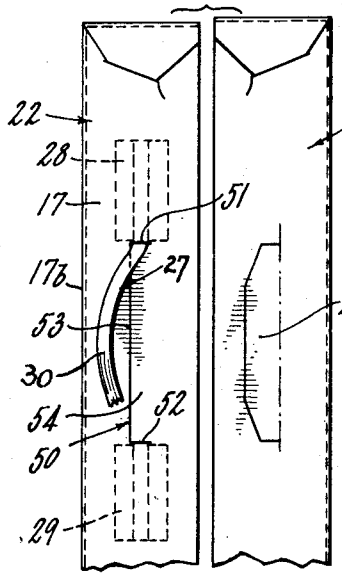


Fig. 3

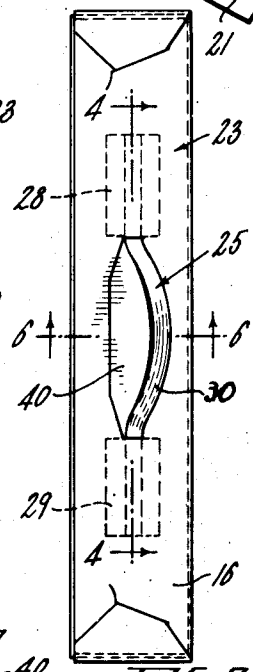


Fig. 2

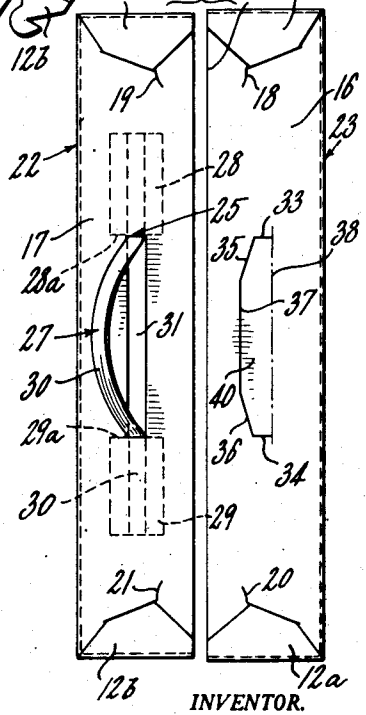


Fig. 4

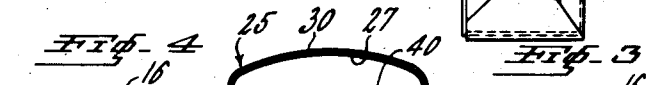
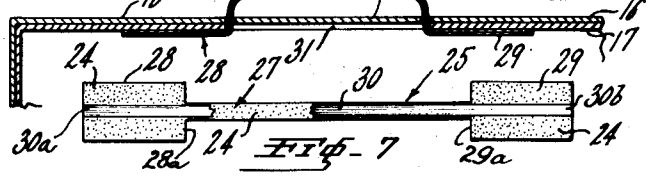


Fig. 7



INVENTOR.
ALBERT J. GOLDSMITH
BY Leon M. Strauss Atty.

Patented May 19, 1953

2,639,082

UNITED STATES PATENT OFFICE

2,639,082

CONTAINER STRUCTURE WITH HANDLE ATTACHMENT

Albert J. Goldsmith, New York, N. Y.

Application May 26, 1948, Serial No. 29,357

1 Claim. (Cl. 229—52)

1

This invention relates to improvements in carrying handle structures for cartons, parcels and like containers.

It is one of the objects of the invention to provide means affording simplicity and economy in the manufacture of a strong, durable and efficient handle structure adapted for ready incorporation in cartons and like carrying cases.

It is another object of the invention to provide means contributing to a neat appearance for the handle structure, which may serve simultaneously as a lock for the carton or the like and is preferably so affixed to the carton that the latter may be advantageously used for holding light as well as heavy articles.

It is a further object of the invention to provide means facilitating the attachment of the handle structure to the carton during the production stages of the latter.

Still another object of the invention resides in the provision of means minimizing the weakening of the walls of the container although the handle structure is threaded or passed through slits of the latter.

Yet a further object of the present invention is to provide means ensuring suitable and convenient hand gripping structures applied to the container or carton at a location thereof remote from that portion of said handle structure which is engaged by the hand of the user.

Still another object of the invention is to provide means ensuring the location of the handle structure with respect to the carton so that at all times a perfect balance is obtained when the user carries the carton or box.

Still a further object of the invention is to provide means affording the distribution of pulling or other forces in a most favorable manner whereby the median or gripping portion of the handle structure is directed to the opposite ends of closeable slits provided in the carton top walls from where the enlarged end portions of the handle structure extend and fixedly engage the underface of the lowermost top wall and adjacent the closeable slit thereof. Thus, the points of attack of the pulling forces are diverted toward the underface of the lowermost top wall of the carton halves when the same telescopically engage with each other in closed condition of the carton.

It is still another object of the invention to provide means protecting the handle structure from being damaged or coming apart when the carton is being carried during rainy weather etc., the handle structure preferably forming layers or

2

plies of material such as paper and tape, or other cellulosic material, or plastic material with tape.

These and other objects of the invention will be pointed out in the following description and claim and illustrated in the accompanying drawing which discloses, by way of example, the principle of the invention and preferred modes which have been contemplated for applying said principle.

In the drawing:

Fig. 1 is a top plan view of a knock-down carton embodying the invention.

Fig. 2 is a top plan view of the carton of Fig. 1 in erect condition and in the process of being closed.

Fig. 3 shows a top plan view of the carton of Fig. 1 in closed condition.

Fig. 4 is a cross sectional view taken along line 4—4 of Fig. 3.

Fig. 5 is a fragmentary vertical sectional view through the carton and handle in the process of being closed.

Fig. 6 is a sectional view taken along line 6—6 of Fig. 3.

Fig. 7 shows a top plan view of the handle with a part thereof broken away.

Fig. 8 shows a fragmentary view similar to that of Fig. 2, the carton embodying a modified form of the invention.

Referring now more particularly to the drawing, there is shown in Fig. 1 a knock-down carton 10 in unfolded condition which has the conventional side flaps 11 and 12, the bottom 13, the side walls 14, 15 and the top walls or flaps 16 and 17. The side flaps 11 and 12 terminate in hook-shaped elements 11*a*, 11*b* and 12*a*, 12*b*, respectively, for insertion in slots 18, 19 and 20, 21, whereby two engageable carton or receptacle parts 22, 23 are provided which swing about fold lines 13*a*, 13*b* of the bottom 13 for engagement with each other, whereby receptacle part 22 comes to lie within the confines of receptacle part 23.

For clarity's sake, Fig. 2 shows the top flaps 16 and 17 of carton 10 in erected condition with the hook-shaped elements 18, 20 and 19, 21, respectively, in engagement position.

As can be further seen from Fig. 1, to the inner surface 17*a* of flap 17 is permanently affixed as by adhesive 24 or other securing means a handle 25 which consists of a middle or gripping portion 27 of paper and outer end portions 28, 29 (Fig. 7). Lengthwise and centrally of and laminated with gripping portion 27 and outer end portions 28, 29 which are of larger

width than said portion 27, extends a reinforcing tape 30 which is preferably made from light fabric or thread material.

As can be further seen from Fig. 7, handle 25 has a median part 27 whose width corresponds approximately to the width of the tape 30 while the outer portions 28 and 29 expose to view parts of adhesive 24, the areas thereof extending beyond the tape ends 30a, 30b, respectively.

As can be further seen from Fig. 1, handle 25 is so arranged with respect to an opening 31 provided in flap 17 that the edges 28a and 29a of the outer end portions 28 and 29 of the handle 25 are substantially coinciding with the ends of opening 31, whereby the middle portion 27 of the handle 25 may be threaded through opening 31, as can be seen in Fig. 2. Flap 16 of receptacle part 23 has a slit 32, having the end portions 33 and 34 of substantially the same width as the width of slit 31 and the oblique slit portions 35, 36 terminating in a substantially straight cut portion 37 which is parallel to the edge 16a of top flap 16. This slit 32 thus defines a flap 40 which may be swung about an axis 38 which connects the end portions 33 and 34. Flap 40 is preferably so shaped that its oblique edge portions 35, 36 form guide means permitting ready manipulation thereof with respect to handle portion 27 when the same is brought into engagement with the end portions 33 and 34 of slit 32, whereby flap 40 overlies and closes opening 31, as may be easily realized from Figs. 3 and 4.

Fig. 5 shows how the lower receptacle part 22 is brought into engagement with upper receptacle part 23 which moved in the direction of arrow A. The inner face 17a of top flap 17 carries handle 25 whose outer end portions are affixed to said inner face 17a, whereas the middle portion 27 of the handle is in the process of being moved past the tapered flap 40 provided in the top flap 16 of receptacle part 23. The intermediate part 27 is moved in the direction of arrow B through the opening 41 which is obtained when tapered flap 40 is moved in downward direction (Fig. 5) or in opposite direction, if desired.

Fig. 6 shows the median handle portion 27 of handle 25 in its final position whereby the carton parts 22 and 23 are in engaged and closed position and tapered flap 40 closes slot 41 and overlies opening 31.

Fig. 8 shows the carton or receptacle parts 22, 23 in a position similar to that shown in Fig. 2. In this embodiment open slot 31 is replaced by a narrow, knife-edge slit 50 having the end portions 51, 52 and the intermediate slit portion 53 which is substantially parallel to the edge 17b of top flap 17. As can be seen from Fig. 8, the width of median handle portion 27 is substantially the same as the extent of end portions 51 and 52 of the slit 50 which defines a flap 54 in the wall of top flap 17 and may be easily swung in downward or upward direction to permit passage of the median handle part 27, as may be realized from Fig. 8. It will further be obvious that in engaged and closed condition of receptacle parts 22, 23, handle 27 will extend above closed flap 40 which overlaps closed flap 54 in a manner similar to that shown in Fig. 3.

Due to the fact that the outer end portions 28 and 29 of handle 25 are affixed to the innermost face 17a of the superimposed top flaps 16 and 17 of the carton in closed condition thereof, the user is capable of carrying heavy loads contained in the carton when gripping the median portion of handle 25.

It can further be seen that the carton, particularly due to the slit arrangements 37, 50 is not weakened to any marked degree, the carton is rather reinforced adjacent and at areas remote from said aforesaid slit arrangements by the lengthy tape reinforced paper end portions 28 and 29 of the handle.

Since the tape 30 comes to lie uppermost with respect to the paper layer of the handle when the latter is in operative position (in closed condition of the package or carton 10), the aesthetic appearance of the carton-handle construction will be enhanced while the paper layer of the median portion 27, which is arranged below tape 30 contributes to smooth and convenient engagement between said portion and the hand of a user who grasps the handle for carrying the package or carton.

As may be also realized from Figs. 5, 6 and 8, the width of the elongated slot 31 or slit 50 is such that median handle portion 27 of substantially similar width comes into engagement with the opposite ends of this slot 31 or slit 50 and is further held in this engagement position by the adjacent flap edges or ends 33, 34 which, after the median handle portion 27 has subsequently been moved past said flap 40, come in contact with said portion 27 whose width also corresponds substantially to that of said edges 33, 34 of said flap 40.

It can thus be seen that there has been provided according to this invention a carton, box or like container with two telescopically engageable parts, whose top walls are arranged in superposed position to each other to form lowermost and uppermost top walls in closed condition of said container parts, and means for securing said container parts in closed condition and for carrying the same, said means comprising a handle device provided with a median portion and an outer end portion at either end of said median portion, said lowermost top wall having an elongated opening whose width corresponds substantially to that of said median portion of said handle device, securing means attaching said end portions endwise and adjacent said opening to said lowermost top wall, the uppermost top wall being provided with a closeable slot including a tapered flap having opposite ends, said tapered flap being in registry with said opening in said lowermost top wall, the width of said opposite ends of said tapered flap being substantially the same as the width of said opening of said lowermost top wall and of said median handle portion, whereby upon passing said median handle portion through said opening of said lowermost top wall and then past said tapered flap of said uppermost top wall, said median handle portion will engage said opposite ends of said tapered flap and extend to the surface of said uppermost top wall.

Although the invention has been described with reference to certain specific embodiments thereof, it is to be distinctly understood that various modification and adaptations of the arrangements herein disclosed may be made and may readily occur to persons skilled in the art without constituting a reparture from the spirit and scope of the invention as defined in the objects and in the appended claim.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent, is:

In a container having upper and lower walls arranged in superposed position in closed condition of said container; said upper wall and said lower wall being each provided with an elongated flap, the lengths of said flaps being substantially equal, each flap being defined by a narrow knife-edge slit provided in the respective wall and being provided with opposite ends of substantially equal width, said flaps being arranged in overlapping relation to each other so that a portion of the flap of the upper wall overlies in lateral direction said slit of said lower wall and closes said slit of said lower wall in closed condition of said container, the opposite ends of said flap of said upper wall being parallel, said flap of said upper wall including portions extending obliquely from the ends at an angle greater than 90° to provide handle guide means, a handle provided with a median gripping piece and with enlarged end pieces, said end pieces being permanently affixed to the underface of said lower wall, the width of said median gripping piece corresponding substantially to the width of the opposite ends of said flaps, whereby said median gripping piece may be moved through said slits and guided past said flaps along said guide means for position within said opposite slit ends and for contact with said opposite flap ends so as to extend above said flaps in said closed condition of said container,

said enlarged end pieces of said handle terminating at said opposite ends of said slits of said lower wall and forming a reinforcement thereat, and a fabric tape reinforcing and laminated to said handle, said fabric tape being of uniform width throughout its length and corresponding to the width of said median gripping piece and being of a length terminating at said end pieces of said handle, the width of each end piece being at least twice the width of said median gripping piece.

ALBERT J. GOLDSMITH.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
1,039,619	Webb	Sept. 24, 1912
1,076,076	Story	Oct. 21, 1913
1,141,789	Freese	June 1, 1915
1,171,228	Misroch	Feb. 8, 1916
1,268,706	Freese	June 4, 1918
2,117,502	Reich	May 17, 1938
2,222,358	Olsen	Nov. 19, 1940
2,250,010	Cohn	July 22, 1941
2,344,009	Trogman	Mar. 14, 1944

FOREIGN PATENTS

Number	Country	Date
454,304	France	Apr. 24, 1913