

Feb. 2, 1960

W. E. TINGLEY

2,923,455

TAPERED CARTON WITH HANDLE

Filed Aug. 19, 1958

2 Sheets-Sheet 1

Fig. 1

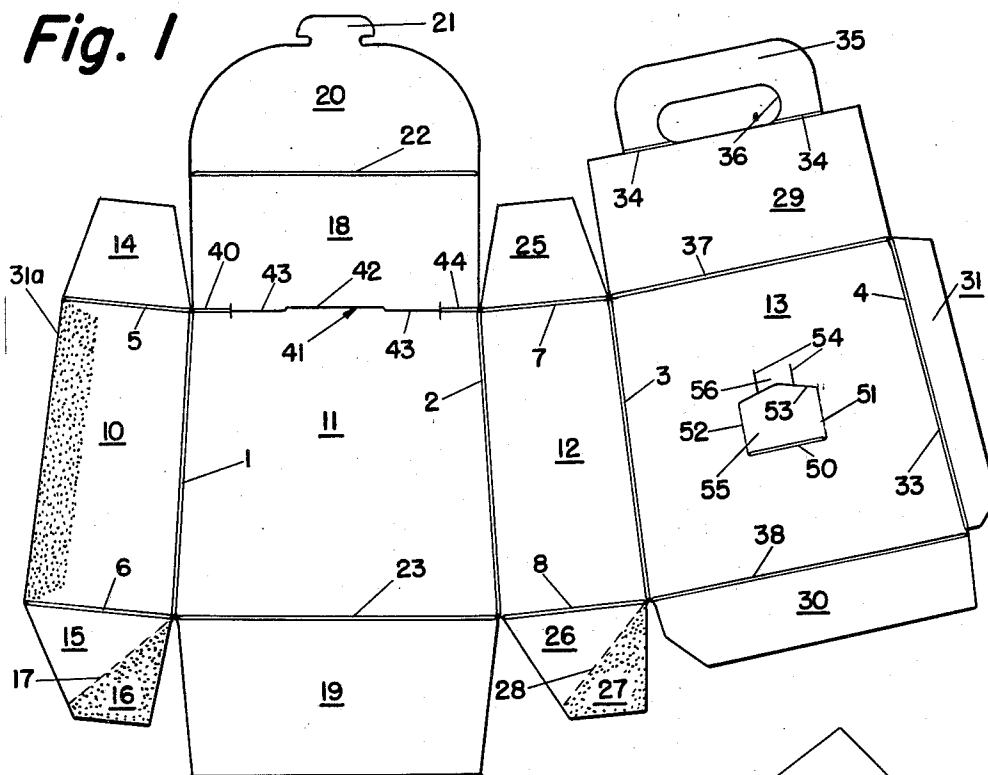


Fig. 2

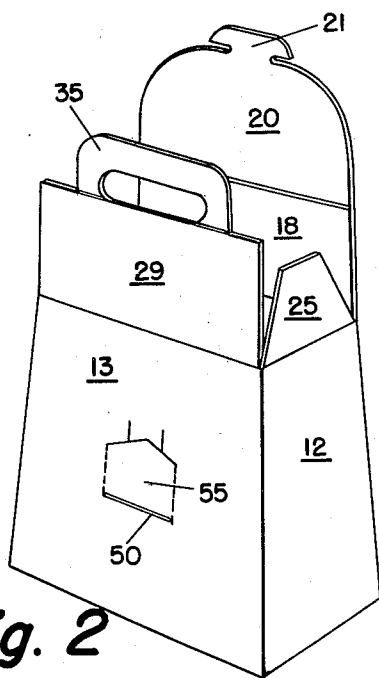
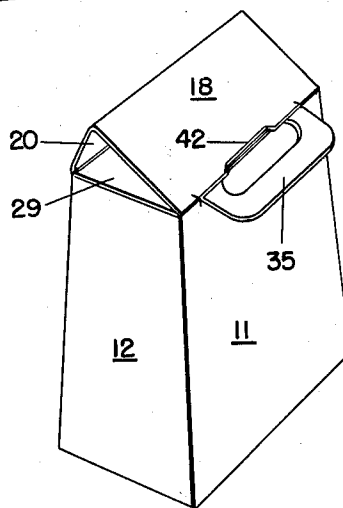


Fig. 4



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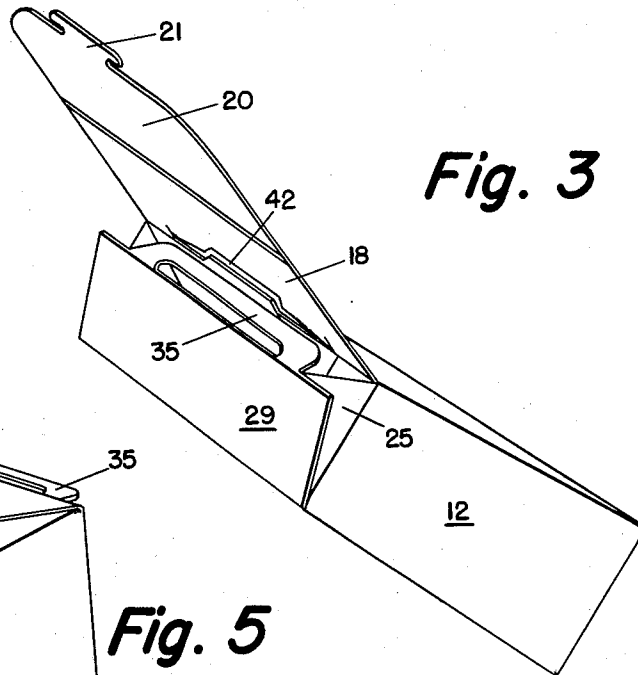


Fig. 3

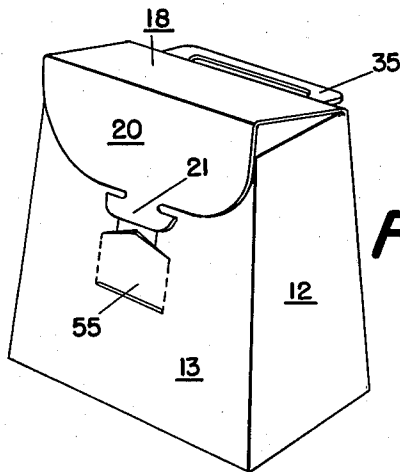


Fig. 5

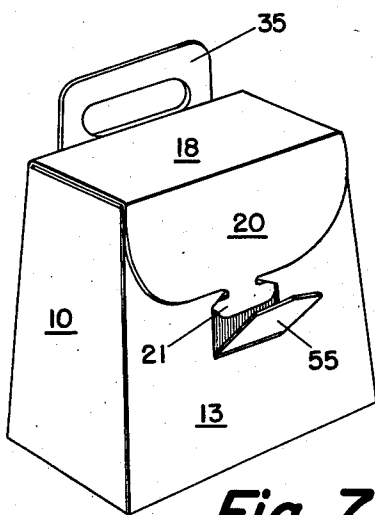


Fig. 7

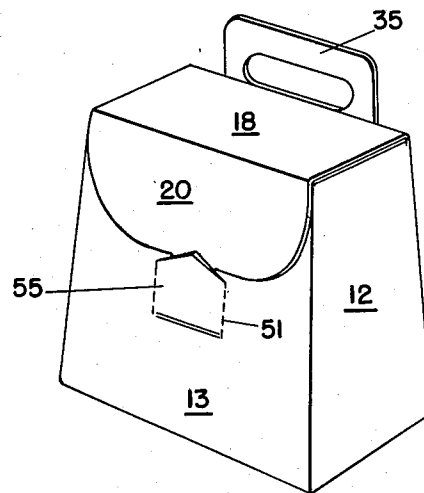


Fig. 6

1

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TAPERED CARTON WITH HANDLE

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3 Claims. (Cl. 229—52)

This invention relates to a carton construction made of a single blank of suitable sheet material, such as paper and the like. The blank is suitably cut and scored to provide all the structural elements of the carton, such as a carrying handle, the walls of the receptacle portion, closure flaps and reclosable closure locking means.

Further details of the novel carton construction and advantages thereof will be apparent from the following specification and accompanying drawings, wherein—

Figure 1 is a plan view of the blank suitably cut and scored from which the carton is constructed,

Figure 2 is a perspective view of the tapered carton set up to receive contents therein from its upper open end,

Figure 3 is a perspective view looking down at the top partially closed end of the carton,

Figure 4 is a perspective view of the carton showing a further stage in closing the top of the carton,

Figure 5 is a perspective view of the carton at a further stage in closing the carton,

Figure 6 is a perspective view of the carton in fully closed condition, and

Figure 7 is a perspective view of the carton showing the first stage in opening the carton.

Referring to the drawings, the carton is constructed from a single blank of cardboard and the like, as shown in Figure 1, suitably cut and scored to form a front wall 13, a rear wall 11, and side walls 10 and 12, which are hinged together along score lines 1, 2 and 3. Front wall 13 is provided at its free margin with a glue panel 31 hinged thereto along score line 33. Side wall 10 is provided with upper closure flap 14 hinged along score line 5 and a lower closure flap 15 hinged along score line 6. Flap 15 is provided with a diagonal weakened line 17 preferably formed of spaced cuts or perforations to facilitate folding and to form glue tab 16.

Rear wall 11 is provided with an upper outer closure flap 18 hinged along spaced aligned score lines 40 and 44. Score lines 40 and 44 are continued by a slit or cut line 41 formed by cut lines 43 which join the inner ends of score lines 40 and 44 and are connected by an offset cut line 42. An inner bottom closure flap 19 is hingedly connected to rear wall 11 along score line 23. The closure flap 19 is preferably of substantially the dimensions of the bottom of the carton on which the contents will be supported.

A locking flap 20 is hinged to closure flap 18 along score line 22. Flap 20 is provided with a locking tongue 21 at its extremity having undercut wing portions. Side wall 12 is provided with an upper closure flap 25 hinged thereto along score line 7 and a lower closure flap 26 hinged thereto along score line 8. Flap 26 is provided with a diagonal weakening line 28, preferably formed of spaced cuts or perforations, to facilitate folding and for providing a glue tab 27.

Front wall 13 is provided with a lower closure flap 30 hinged thereto along score line 38 and an upper inner closure flap 29 hinged along score line 37. A handle 35 is hinged to flap 29 along spaced aligned score lines 34.

2

The handle 35 is formed of suitable contour by cutting out an oval shaped opening 36 in the carton blank. An arched shaped slit or cut line 53 is provided at the medial portion of front wall 13 of such dimension as to receive the locking tongue 21 of locking flap 20. Spaced upwardly extending cut lines 54 are provided in front wall 13 which intersect slit 53 to provide an inwardly depressible tab portion 55 for facilitating insertion of locking tongue 21 in slit 53. The ends of slit 53 are intersected by downwardly extending spaced weakening lines 51 and 52, formed by spaced perforations, which are joined by a horizontal score line 50 to provide a tab portion 55 which can be grasped at the slit 53 and pulled downwards so as to tear the tab 55 along lines 51 and 52 for a purpose to be explained later.

The walls and flap portions previously described are preferably slightly tapered so that the side walls of the carton will have a slight upward taper, as shown in Figures 2 to 6.

In forming the carton from the blank as described, all the bottom flaps 15, 19, 26 and 30 are folded on their respective hinge lines 6, 23, 8 and 38 so as to overlie their respective adjacent walls 10, 11, 12 and 13. Glue tab 16 is then folded back along fold line 17 so as to overlie flap 15, and glue tab 27 is folded back along fold line 28 so as to overlie flap 26. Adhesive is then applied to the marginal area portion of end wall 10, as indicated by numeral 31a in Figure 1, corresponding to the area and contour of glue panel 31, and adhesive is also applied to glue tabs 16 and 27. The blank is then folded along score line 3 so as to superimpose front wall 13 over rear wall 11. End wall 10 is then folded along hinge line 1 so as to be superimposed over rear wall 11 and thereby adhere its marginal portion 31a provided with adhesive to glue panel 31. Glue tab 16 will also be adhered to the contacting end portion of flap 30 and glue tab 27 will be adhered to the contacting end portion of flap 19. The carton will thus be completed in flap collapsed condition which can be readily set up when it is to be used.

When it is desired to package any described articles the flat collapsed carton, previously described, is set up by positioning the front, rear and end walls at right angles to each other. The lower bottom flaps of the carton will then be automatically set up to form a closed bottom, the inner closure flap 19 being supported by and overlapping flaps 15, 26 and 30 which extend at right angles to the respective adjacent walls of the carton. The articles are then placed in the carton through the upper open end. The carton is then closed by first inwardly folding flaps 14 and 25, and then folding the upper inner closure flap 29 inwardly over the open end of the carton, as shown in Figure 3, and then inserting handle 35 through slit 41, as shown in Figure 4, so that the handle 35 extends outwardly of the rear carton wall 11. The outer closure flap 18 is then folded over so as to overlie the inner closure flap 29, as shown in Figure 6, and then locking flap 20 is folded down so as to overlie the upper portion of front wall 13. Locking tongue 21 is then inserted in slit 53 so as to retain locking flap 20 in closed position, as shown in Figure 6.

When it is desired to open the carton in order to remove the contents therein upper tab portion 56 is depressed inwardly of the carton and the upper cut edge of lower tab 55 is then grasped and pulled outwardly along score lines 51 and 52, as shown in Figure 7. Locking tongue 21 can now be released so as to permit locking flap 20 and outer closure flap 18 to be hinged open. The inner closure flap 29 can now be hinged open since the handle 35 will readily pass through the slit 41. The contents within the carton will now be readily accessible. The carton can be reclosed if desired by repeating the

sequence of steps previously described in closing the carton.

I claim:

1. A carton formed from a single blank comprising front, rear, side and bottom walls, a glue panel hingedly securing a side and front wall, an upper inner closure panel hinged to said front wall, a handle hinged to said inner closure panel, a slit in said front wall for receiving a locking tongue, an upper outer closure panel hinged to said rear wall along a hinge line, said hinge line being slit at its medial portion and of a length at least equal to the length of said handle, said handle being inserted through said last mentioned slit and extending outwardly of the carton, and a locking flap hinged to said upper outer closure panel and folded over the upper portion of said front wall, said locking flap being provided with a locking tongue inserted in the slit in the front wall.

2. A carton as defined in claim 1, wherein the slit in the front wall is intersected by spaced cut lines extending above said slit to form a depressible tab portion to facilitate insertion of the locking tongue and the ends of said slit are intersected by spaced lines of weakening extending below said slit to form a tab portion adapted to be hinged

outwardly of the front wall for releasing the locking tongue.

3. A carton formed from a single blank comprising consecutively first, second, third and fourth side walls, and a bottom wall, a glue panel hingedly securing two adjacent of said side walls, an upper inner closure panel hinged to said first side wall, a handle hinged to said inner closure panel, a slit in said first side wall for receiving a locking tongue, an upper outer closure panel hinged to said third side wall along a hinge line, said last-mentioned hinge line being provided at its medial portion with a slit of length at least equal to the corresponding dimension of said handle, said handle being inserted through said last-mentioned slit and extending outwardly of the carton, and a locking flap hinged to said upper outer closure panel and folded over the upper portion of said first side wall, said locking flap being provided with a locking tongue inserted in the slit in the first side wall.

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