April 28, 1970 C. R. SHULTZ 3,508,698

COMBINATION SHIPPING AND STORAGE CONTAINER

Filed July 29, 1968 2 Sheets-Sheet 1

FIG. 2

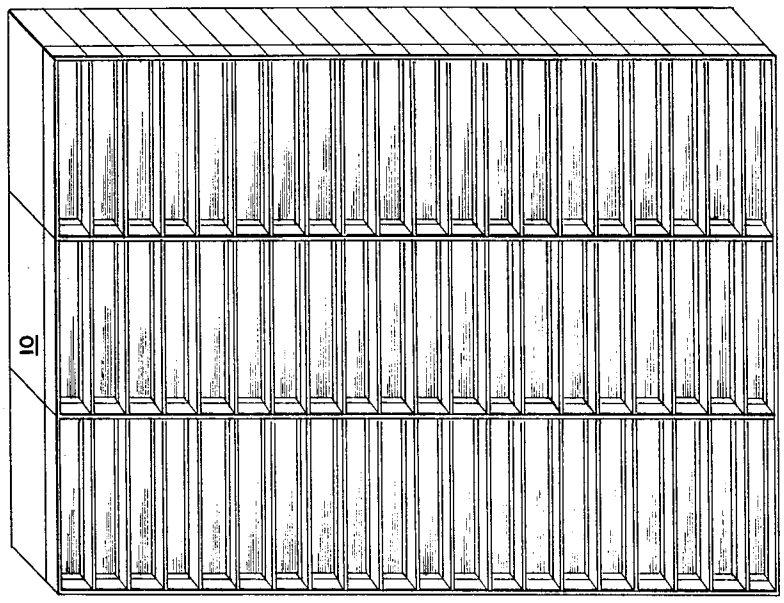


FIG. 1

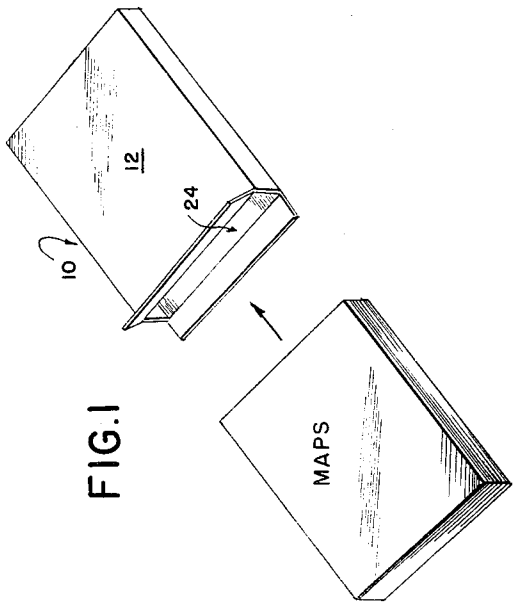
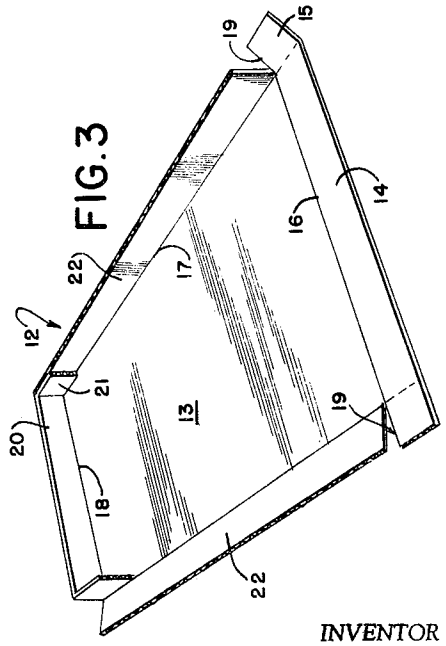


FIG. 3



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FIG. 6

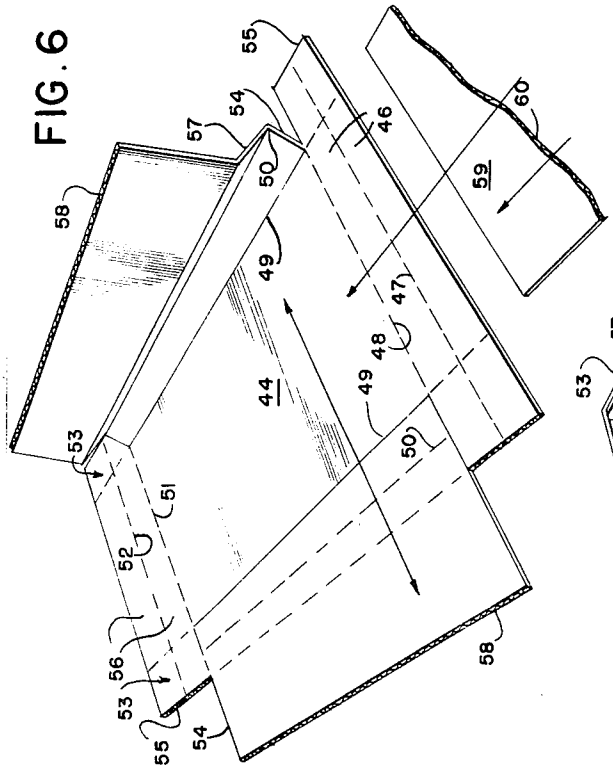


FIG. 7

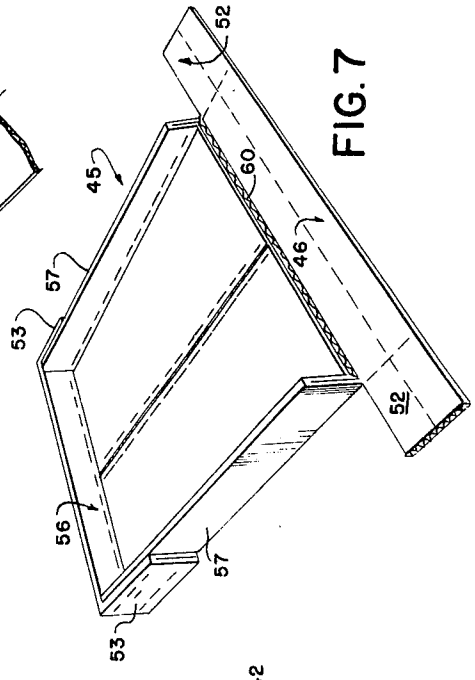


FIG. 4

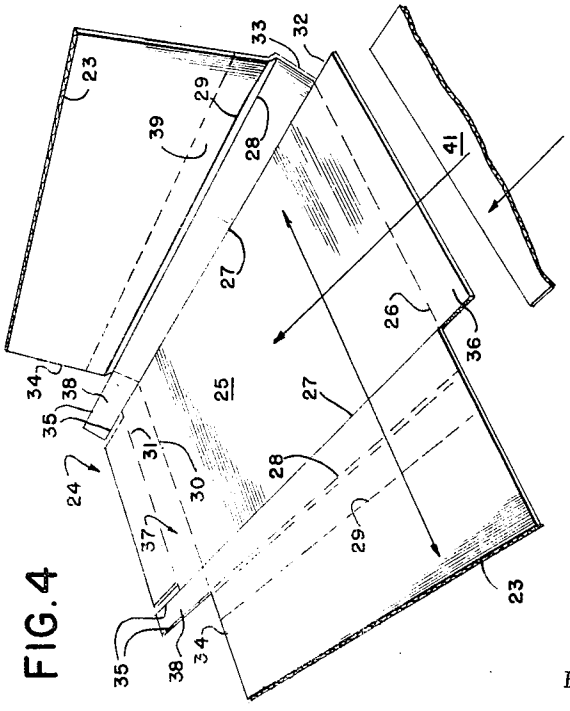
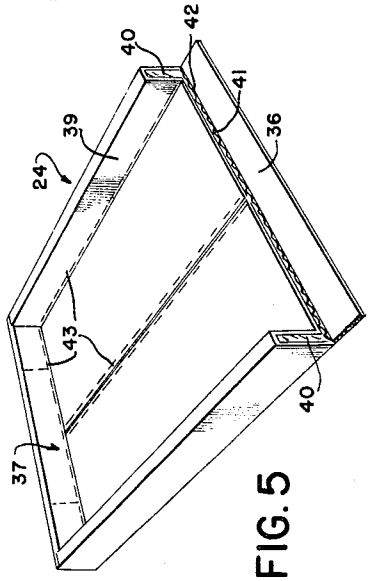


FIG. 5



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COMBINATION SHIPPING AND STORAGE CONTAINER

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Int. Cl. B65d *13/00*
U.S. Cl. 229—23 2 Claims

ABSTRACT OF THE DISCLOSURE

This invention comprises a combination storage and shipping container. The container is adapted to be stacked with similar units and designed to be durable for field use to store maps and other documents. The container includes upper and lower telescoping members having a sealed end and an end which may be opened. The lower member includes foldable flaps to enclose reinforcing members to give a triple layer construction.

The invention described herein may be manufactured and used by or for the Government for governmental purposes without the payment to me of any royalty thereon.

BACKGROUND OF THE INVENTION

Field of the invention

The present invention relates to shipping containers and more particularly to a shipping container adapted for use as a storage stack for field use.

Description of the prior art

A need exists for a single container for transporting and storing under adverse conditions certain flat articles such as military maps. These maps must be stored in the field adjacent or in battle zones, and it is logistically advantageous to use the shipping container as a map file. It is not practical to provide a conventional metal map file for shipment of maps, due to the weight of such files. The same problem applies to conventional shipping containers of wood. Cardboard containers, on the other hand, lack the durability necessary to provide level stacks ten of twenty containers high under adverse conditions of heat or humidity.

SUMMARY

The container of this invention is a telescoping cardboard box, the top and bottom of which are permanently closed at one end and closable at the other end by freely swingable flaps which may be sealed by tape or other convenient means during transportation. The top is otherwise conventional, and the bottom is formed of a sheet of cardboard, reinforcing wooden fillers for the side walls, and a cardboard casing extending under the sheet and having flaps at the front, rear, and both sides. The side flaps fold over the wooden fillers to form side walls and also extend over the sheet to meet in the middle thereof. The base of the box is therefore triple layered cardboard and the side walls are double layers of cardboard with reinforcing wood fillers sandwiched therebetween. The rear wall of the box bottom folds over small flaps extending from the sides, forming permanently closed rear corners. With the front flaps in the open position, the box constitutes a self-leveling, stackable file element of great strength and durability.

Accordingly, it is an object of this invention to provide a combination shipping and file storage box.

It is another object to provide a relatively lightweight, durable box with separate reinforcing members enclosed in the walls and base.

It is a further object to provide a self-leveling, stackable file element for field use in stacks as map files.

These and other objects will become apparent with reference to the drawings and following description.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of the box of this invention positioned to receive a stack of flat sheet maps.

FIG. 2 is a perspective view of side by side stacks of the storage containers of this invention.

FIG. 3 is a perspective view of the blank from which the telescoping top of the container of this invention is formed.

FIG. 4 is a perspective view of the blank from which the bottom portion of the container of this invention is made including a reinforcing strip.

FIG. 5 is a perspective view of the assembled bottom portion.

FIG. 6 is a perspective view of a modified blank and reinforcing member to provide an alternate configuration of the container of this invention.

FIG. 7 is a perspective view of the partially assembled bottom portion having the modification of FIG. 6.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

The map container, **10**, of this invention includes a top portion, **12**, and a telescoping bottom portion, **24**. Container, **10**, is adapted to be used in the field in stacks as shown in FIG. 2.

Top, **12**, as shown in FIG. 3, is formed from a flat, water resistant, laterally flute reinforced cardboard blank by conventional box forming techniques. By the usual scoring or indenting, bend lines **16**, **17**, and **18** are imprinted on blank, **13**. Closure tabs **15** and **21** are formed by slitting along line **19**. Permanent closure of rear wall, **20**, of top, **12**, may be achieved by stapling or otherwise securing rear wall, **20**, through its rear corners, **21**, and to side walls, **22**.

FIG. 3 shows the closure front wall, **14**, on top, **12**, with one of its front corners, **15**, in a slightly bent or overlapping relationship to side wall, **22**. Any conventional closure means may be used to fasten front corners, **15**, to side walls, **22**.

Bottom portion, **24**, of container, **10**, is shown assembled in FIG. 5, with its front wall, **36**, in the open position for use in telescopic cooperation with top, **12**, as shown in FIG. 1.

Bottom portion, **24**, is formed from a blank, **25**, as shown in FIG. 4. Blank, **25**, after scoring and indenting along lines **26**, **27**, **28**, **29**, **30**, and **31**, and trimming along lines **32**, **33**, **34**, and **35**, is bent to form front wall, **36**, rear wall, **37**, and side wall tabs, **38**, and, side wall portions **33** and **39**. In assembly of bottom portion, **24**, the substantially flat cardboard sheet, **41**, is placed on top of blank, **25**, to cover central rectangular portion of blank, **25**, between lines **26**, **27**, and **30**. Sheet, **41**, is then positioned so that its corrugated reinforced flutes, **42**, extend substantially longitudinally of said central portion of bottom, **24**, whereas the flutes, **23**, of blank, **25**, are arranged to flow transversally.

Rectangular wooden reinforcing members, **40**, are then placed in an upright position longitudinally along the length of sheet, **41**, and at the edges thereof, generally coinciding with bend lines, **27**, of blank, **25**.

To complete the assembly of the bottom portion of **24**, portions **33**, **34** and **39** of blank, **25**, are bent over reinforcing members, **40**, as shown in FIG. 5. Members, **40**, are enclosed by side wall, portions **33**, **39**, of blank,

25, to form the reinforced side walls of bottom portion 24.

Bottom portion side tabs, 34, after being bent over members, 40, are positioned to overlie sheet, 41, from the side walls to the longitudinal center line of the bottom portion, 24. Tabs, 34, together with sheet, 41, and the central portion of blank, 25, form a bottom wall of triple thickness.

The permanently closed rear wall, 37, of bottom portion, 24, is formed by bending along lines, 30, and, 31, so as to enclose the side wall tabs, 38, of side wall portion, 33. The rear wall portions, 37, are bent upwardly outside of side tabs, 38, and then downwardly around the same to form rear wall, 37, of said bottom portion, 24, reinforced by tabs, 38, of the side walls.

Fastening means such as staples, 43, are used to permanently close or join rear wall, 37, to the side walls through tabs, 38, thereof. Blank, 25, should be permanently secured to members, 40, by staples, 43, joining side wall tab, 39, to members, 40.

The bottom wall portions, side wall, 39, sheet, 41, and the central part of blank, 25, are also permanently secured together with staples, 43, extending through and interconnecting these three layers.

Container, 10, is prepared for shipment by bending front wall, 36, of bottom portion, 24, upwardly into a rectangularly positioned and abutting relationship with the front ends of members, 40, and side walls, 39. Removable adhesive tape or like securing means may hold front wall 36 to the side walls.

Front wall, 14, of the top portion, 12, is likewise closed for shipment with removable adhesive tape to hold tabs, 15, of front wall, 14, in an overlapping relationship with side walls, 22.

After the top portion, 12, is telescoped over the bottom portion, 24, all surface edge separations may be covered with tape to prevent moisture contamination.

An alternate embodiment of the container of this invention is shown in FIGS. 6 and 7. In this embodiment the top and bottom portions are identical except the top is larger and telescopes over the bottom.

Blank, 44, is formed of the same type of cardboard by conventional box forming techniques. By scoring or indenting, bend lines, 47, 48, 49, 50, 51, and 52 are imprinted on blank, 44. Closure tabs, 46, and, 56, are formed by slitting or cutting along lines 54, and, 55.

Permanent closure of the rear wall, 56, of bottom portion, 45, may be achieved by securing with conventional staples. The rear walls, 56, may be stapled through their rear corners, 53, to side walls, 57, in the overlapping relationship shown in FIG. 7.

FIGS. 6 and 7 also show the closable front wall, 46, of bottom portion, 45, with front corners, 52, perpendicularly to the side walls, 57. Front corners, 52, may be attached for closure to walls 57 by any conventional means.

Bottom portion, 45, shown in FIG. 7, may be used in in the open position shown with for example the same top portion previously described in the stack of FIG. 2, providing said top is slightly larger for telescoping over the said bottom. It may also be used as the closed container of FIG. 1, with its front wall open.

During assembly the modified bottom portion, 45, of this embodiment, the substantially flat carboard sheet, 59, is placed on top of blank, 44, to cover the central rectangular portion thereof between bend lines, 48, 49, and, 51. The reinforcing flutes, 60, of sheet, 59, extend longitudinally to the central portion of blank, 44, while the flutes, 58, of said blank are disposed transversally to the said central portion.

Further, assembly is achieved according to the procedure outlined for FIGS. 3, 4, and 5. It will be noted that the embodiment of FIGS. 6 and 7 does not include reinforcing members, 40, for the side walls, but achieves structural rigidity through the double overlapping in the closed condition of the rear and front corners, 53, and, 52, with side walls, 57.

The embodiments of this invention hereinabove described are intended to include those materials of construction and closure means which would be obvious to one of ordinary skill in the art and not limited to, for example, wooden reinforcing members or staple closures.

I claim:

1. A stackable combination shipping and storage container for maps and other flat objects, said container having upper and lower telescoping members comprising:

(a) a lower telescoping member comprising a base member with integral side and rear wall forming tabs and a front flap, said tabs adapted to be folded to form the side and rear walls, and wherein said base member is constructed of flute reinforced cardboard, siad flutes extending transverse to the longitudinal axis of the base member;

(b) at least one rectangular base reinforcing sheet, said sheet disposed in an adjacent facial relationship with the upper surface of said base member and wherein said reinforcing sheet is constructed of flute reinforced cardboard having flutes extending parallel to the longitudinal axis of the base when said sheet is covering said base;

(c) means for reinforcing the side walls comprising at least one rigid strip, said strip laterally enclosed by a side wall when said side wall extending upwardly, is folded downwardly internally to said container and laterally over said reinforcing sheet to cover said sheet, so that said strip is disposed between the upwardly extending outer portion of said side wall and the downwardly extending inner portion thereof to form a reinforced side wall; and

(d) an upper telescoping member including a plane surface with depending rigid side and rear walls, adapted to telescopically receive said lower telescoping member, and a foldable front flap for receiving the said objects in cooperation with the front flap of said lower telescoping member and for enclosing said objects in said container when said lower member is telescopically received in said upper member.

2. The container of claim 1 wherein the side wall reinforcing means comprises lateral extensions of the rear wall, said extensions secured to the external surface of said side walls when said walls are folded to form the side walls of said lower member, said extensions secured to said side walls and holding said rear wall in an upright position to form tde rear wall of said container.

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U.S. Cl. X.R.

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