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SHIPPING CARTON

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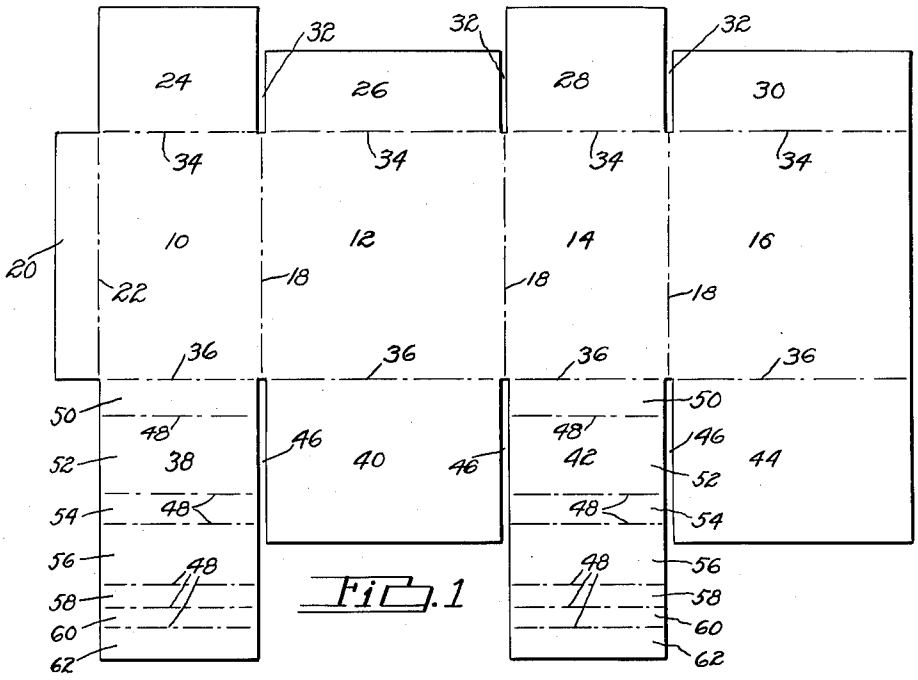


Fig. 1

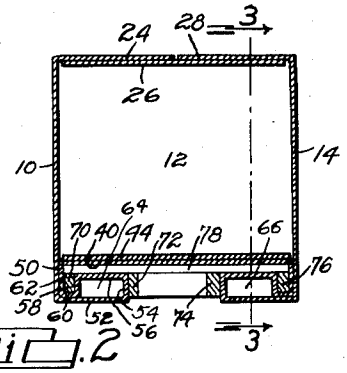


Fig. 2

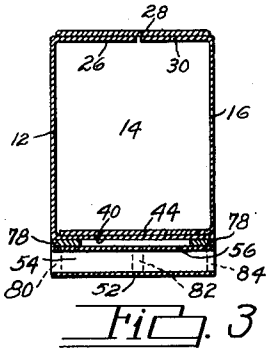


Fig. 3

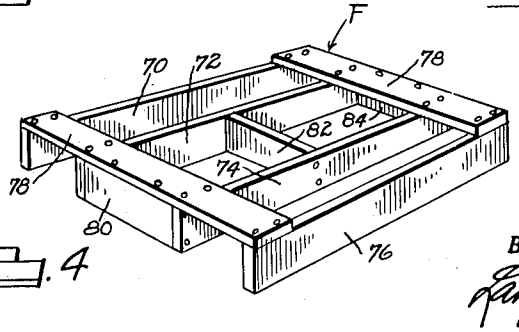


Fig. 4

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SHIPPING CARTON

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2 Claims. (Cl. 229—6)

This invention relates to a container and more particularly to a storage or shipping carton of the heavy duty type mainly formed from corrugated paper board or the like and provided with a stabilizing base in the form of a frame.

The invention provides a carton for containing heavy articles and a means for conveniently handling the packed carton when lifting or moving the carton from one place to another.

Heretofore it has not been desirable to package heavy articles in paper cartons because they lack stability and have not been convenient for lifting, either by manual operation or by mechanical means. Lifting means have been provided for drums, metal receptacles and wooden crates, but such are of a rigid construction and require the same storage space when not in use as when packed for shipping or storage.

It is an object of the present invention to provide a carton which is inexpensive to manufacture, one which is collapsible for convenient storage while not in use, and one which may be easily lifted when packed with heavy articles without distortion on the carton.

More specifically stated, the invention provides an insertion means in the bottom of the carton for raising the bottom above the floor or supporting surface and stabilizing the carton, whereby a mechanical lifting device may be readily inserted between the floor and the carton without the necessity of one or more operations required for tilting or lifting the heavy carton manually onto the mechanical lifting device.

A further object of the invention is to form the major portion of the carton from a single sheet of material and to cut and bend certain portions of the sheet to desired size and shape whereby portions of the carton interlock the load stabilizer in the bottom of the carton. The finished carton is complete with top, side walls and bottom, and a reinforced tunnel extends through the carton for the reception of a lifting means.

Other objects and advantages of the invention will more fully appear from the following description taken in connection with the accompanying drawings, in which:

Fig. 1 is a top plan developed view of a blank from which the major portion of the carton is formed;

Fig. 2 is a cross sectional view through the finished carton;

Fig. 3 is a cross sectional view through the carton, taken on line 3—3 of Fig. 2; and

Fig. 4 is a perspective view of the stabilizer reinforcing member confined in the bottom of the carton.

Referring to the drawings, I have illustrated the invention as applied to a carton which is rectangular or square and, as herein illustrated, is formed from heavy corrugated paper board cut from a sheet, scored and folded to desired size, shape and form.

In Fig. 1 I have illustrated a blank sheet having cuts shown by the full lines and scored portions shown by the dot and dash lines for bending. The four side walls of the carton are designated by the numerals **10, 12, 14**

and **16**, divided vertically by the score lines **18**. An attaching flap **20**, provided at one side of the blank, is scored at **22** for securing to the outer edge of the side wall **16**. This may be done by staples, cement or tape when the side walls are bent along the score lines **18** and **22** into the rectangular or square form.

Upper flaps **24, 26, 28** and **30** are separated vertically by cuts **32** and transverse score lines **34** for bending at right angles to the plane of the side walls **10, 12, 14** and **16** forming a top closure for the carton.

Transverse scores **36** are formed in the blank, forming bottom sections **38, 40, 42** and **44** separated by vertical cuts **46**. These sections when bent along the score lines **36** form the bottom of the carton. It will be noted that the sections **38** and **42** are longer than the sections **40** and **44** and are provided with additional horizontal score lines **48** forming sections **50, 52, 54, 56, 58, 60** and **62**. These sections when folded form rectangular tunnels **64** and **66** below the folded sections **40** and **44** at the bottom of the carton.

Fig. 2 clearly shows the folded shape of the sections **38** and **42**, forming the tunnels **64** and **66**. These tunnels are open at the opposite ends and form a support for the inturned sections **40** and **44**.

The bottom portion of the carton is stabilized and reinforced by a rigid frame insert F, Fig. 4, preferably formed from strips of wood, or it may be molded from metal or plastic. As herein illustrated, the frame comprises transversely spaced strips **70, 72, 74** and **76**, tied together by transversely extending strips **78** at the opposite ends of the transversely spaced strips and nailed thereto. The two intermediate strips **72** and **74** are tied together by transverse strips **80, 82** and **84** which are nailed to the strips **72** and **74** and the end strips **80** and **84** are nailed to the strips **78**. Thus, a rigid frame is provided having a closed end central portion and tunnel side portions for receiving the tunnels **64** and **66** of the carton.

After the carton blank has been folded and formed to its box like shape, with the sections **38** and **42** folded to tunnel shape, the tunnels **64** and **66** are bent outwardly along the score lines **36** and the frame F is placed under the inturned sections **40** and **44**. The tunnels **64** and **66** are then folded inwardly between the spaced strips **70** and **72**, and **74** and **76**. It will be noted that the folded portions of the sections **58, 60** and **62** embrace the lower and side faces of the strips **70** and **76** and that the section **62** overlaps the ends of the strips **78** with the section **62** pinched between the inner face of the side sections **10** and **14** and the outer faces of the strips **70** and **76**. The width of the tunnels **64** and **66** are such that they have a tight frictional fit in the tunnels of the frame insert.

The insert frame gives rigidity to the bottom portion of the carton and serves as a stabilizer. It prevents the weight within the carton from crushing or collapsing the tunnels **64** and **66** so that the tunnels are accessible to a lifting device. The carton is inexpensive to manufacture and easily fabricated. It can be folded to a flat position for economical storage and shipment when not in use. It is reinforced where strength is required and it is provided with means for elevating the bottom of the carton above the floor or other support for permitting access of lifting means for the carton without manually tilting a heavily loaded carton, such as used in packing bolts, nuts, nails and metal parts.

It will be understood that while I have herein illustrated and described a preferred form of the invention, various changes, including the size, shape and arrangement of parts, may be made without departing from the spirit of my invention and it is not my intention to limit its scope other than by the terms of the appended claims.

I claim:

1. A carton having four side walls and a bottom portion of paper board, a floor spaced above the lower edge of said bottom portion, a reinforcing frame of wood material below said floor, said reinforcing frame comprising spaced longitudinally extending wood frame members and transverse wood frame members, and tunnel portions folded from extensions at the lower edges of opposite side walls below said frame and in the space between an adjacent pair of said longitudinally extending members.

2. A carton having four side walls and a bottom portion formed by folding a single sheet of paper board, a floor spaced above the lower edge of said bottom portion of paper board, a reinforcing frame of wood material below said floor, said reinforcing frame comprising spaced

vertical and longitudinally extending wood frame members, and tunnel portions folded from extensions at the lower edges of opposite side walls below said frame and in the space between an adjacent pair of said longitudinally extending members, a portion of said tunnels embracing opposite side faces of the outer longitudinally extending members.

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