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SHIPPING PACKAGE FOR PAPER AND TO A CARTON
SPECIFICALLY DESIGNED THEREFOR
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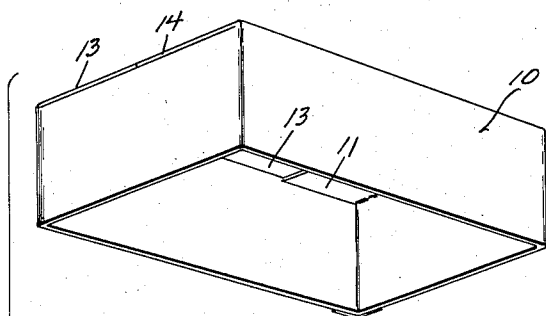


Fig. 1

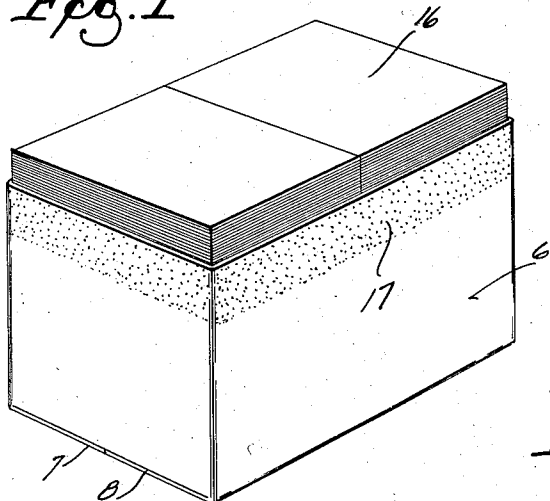


Fig. 2

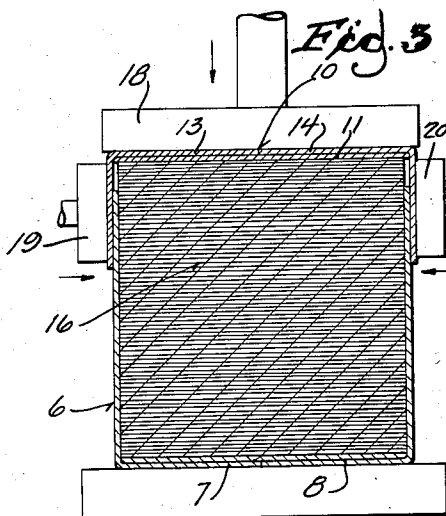
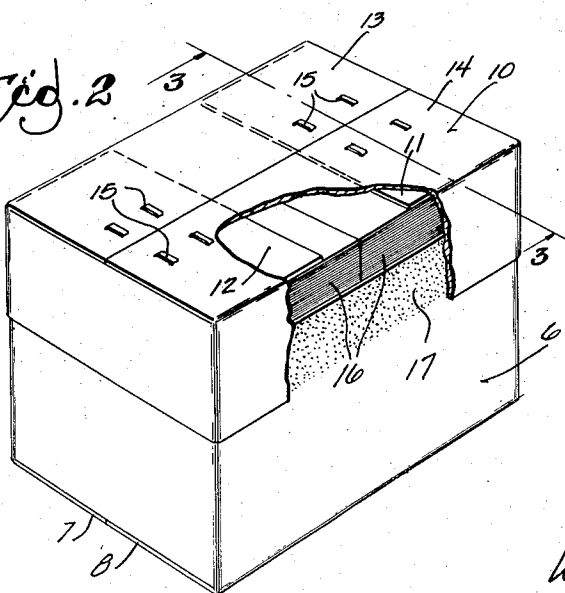


Fig. 4

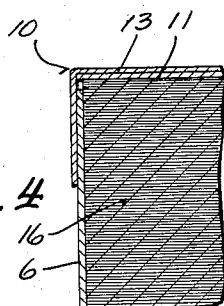


Fig. 5

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SHIPPING PACKAGE FOR PAPER AND TO A CARTON SPECIFICALLY DESIGNED THEREFOR

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3 Claims. (Cl. 206—83.5)

This invention relates to a shipping package for paper and to a carton specifically designed therefor.

Paper is sold by the ream which is a measure of the number of sheets. The thickness of a ream of paper varies widely in accordance with the weight of the paper. In the past, a large number of different cartons has had to be maintained in stock in order to accommodate, within reasonable limits, the various thicknesses required for given quantities of paper of differing weights. Attempts to close the flaps of a conventional carton over a ream of paper of heavier weight than that for which the carton was designed have been unsatisfactory because of the bulging of the carton and possible damage to the contents.

According to the present invention I provide cartons having telescopically related upper and lower lid and tray elements, the respective carton elements having closed top and bottom flaps. The paper is placed in the bottom or tray portion of the carton and projects above the level of its walls to a greater or lesser extent, depending on sheet thickness. The cover portion is then telescoped over the tray portion of the carton under pressure on the contents and all four of its side walls are glued or otherwise fastened to the corresponding side walls of the tray portion, the cover desirably being maintained, meantime, under pressure upon the tray portion and its contents. If the weight of the paper is such that the contents, in reams, greatly exceed in thickness the height of the tray portion, this is immaterial, the only result being that the walls of the cover will lap to a lesser degree the walls of the tray. Because of the pressure assembly of the parts of the package, the contents will be held very securely regardless of their thickness, within the capacity of the carton.

A consumer desiring to open such a carton does not have to disassociate the walls of the cover from those of the tray, since the cover section of the carton has flaps exactly like those of a conventional carton. Thus the resulting carton can be opened either by pulling its staples or otherwise according to standard techniques.

In the drawing:

Fig. 1 is a view showing in perspective the relatively separated cover and tray, the latter containing paper projecting above its top margin and having its side wall portions coated with glue in readiness for application of the cover.

Fig. 2 is a view in perspective showing the complete package, with portions of the side wall and top flap of the cover being broken away.

Fig. 3 is a view taken in section of the plane generally indicated at 3—3 in Fig. 2 but showing diagrammatically the pressure sealing of the cover to the tray.

Fig. 4 is a fragmentary detailed view in transverse section showing the relationship of the cover tray and contents when the contents comprise a ream of relatively lightweight paper.

Fig. 5 is a view similar to Fig. 4 showing the relation-

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ship of the components when the contents comprise paper of heavier weight.

The tray portion 6 of the carton is made like any box with the exception that it has no top flaps, its various walls having their free upper margins at a common level. There will ordinarily be bottom flaps such as those indicated at 7 and 8 but the construction of the bottom of the tray may be assumed to be identical with that of the cover.

The cover 10 has the form of an inverted tray sufficiently exceeding the tray 6 in length and width so that the walls of the cover 10 are telescopically slidable over the walls of the tray 6 with a reasonably close fit to facilitate gluing to provide a secure adhesive connection between these walls. The cover is desirably closed by flaps in any manner conventional in carton manufacture. In the preferred construction illustrated there are flaps 11 and 12 turned inwardly from the end walls of the cover and overlying flaps 13 and 14 folded in from the side walls and connected by staples 15 or otherwise to the end flaps 11 and 12.

With the tray 6 packed with the requisite number of paper sheets 16, as shown in Fig. 1, and the various walls coated with glue as indicated at 17, the cover 10 is applied and desirably subjected to pressure as indicated diagrammatically by ram 18 in Fig. 3. This compresses the contents 16 of the package to assure a firm assembly of the parts. Thereupon the walls of the cover 10 are adhered to the glue-treated walls of the tray 6 as is diagrammatically illustrated by the lateral rams 19 and 20 (Fig. 3), it being understood that the illustration of these rams is merely by way of exemplification. They are neither claimed nor do I wish to limit myself to any particular means of adhering the walls of the cover to those of the tray to maintain the contents under compression.

If the paper sheets 16 are relatively thin, the resulting package may be lower than that suggested in Fig. 3, the cover approaching closely to the top margins of the tray as shown in Fig. 4. If the sheets 16 comprise a heavier weight of paper, the cover 10 will not telescope downwardly as far over the sides of tray 6 and the resulting package may be somewhat as shown in Fig. 5.

Regardless of the weight of paper, within the capacity of the container, there will be no distortion of the container and no exposure of the contents, and the contents will be maintained under substantially uniform pressure in all package dimensions by reason of the connection of the cover walls to the tray walls while the tray is pressed onto the contents with a predetermined degree of pressure. It will be observed that this statement assumes that the contents will at least slightly project above the top margin of the tray in accordance with the disclosures herein and the connection of the cover walls and tray walls will be affected while the contents are subject to compression.

Notwithstanding these advantages, it is important that the consignee of such a package is not required to use any new technique for opening, the opening being preferably done by withdrawing the paper from the top or bottom of the carton in accordance with conventional practice.

I claim:

1. A package comprising as its contents paper sheets measured in reams and disposed in a stack of indeterminate height but of standard cross section, a tray element having four walls in permanently fixed connection and of fixed cross section corresponding dimensionally to the cross section of such stack and having upper free margins above which the paper of the stack extends to a level depending upon the thickness of

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the individual sheets of paper in the stack, a cover element comprising an inverted tray having four wall portions in fixed connection and telescopically engaged about those of the tray element first mentioned, said cover being in pressure engagement with the paper at the top of the stack and its said wall portions lapping those of the tray to an indeterminate extent dependent on the thickness of the paper sheets comprising the stack, and means permanently connecting wall portions of the cover element with those of the tray element first mentioned to maintain the paper of the stack under compression.

2. The package of claim 1 in which one of said elements is provided with closure flaps comprising means for the opening of the package and the withdrawal of its contents independently of any disconnection of cover walls from the walls of the tray element.

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3. The package of claim 1 in which the corresponding walls of the cover and tray are in adhesive connection with each other to maintain the pressure engagement of the cover upon the contents of the package.

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