

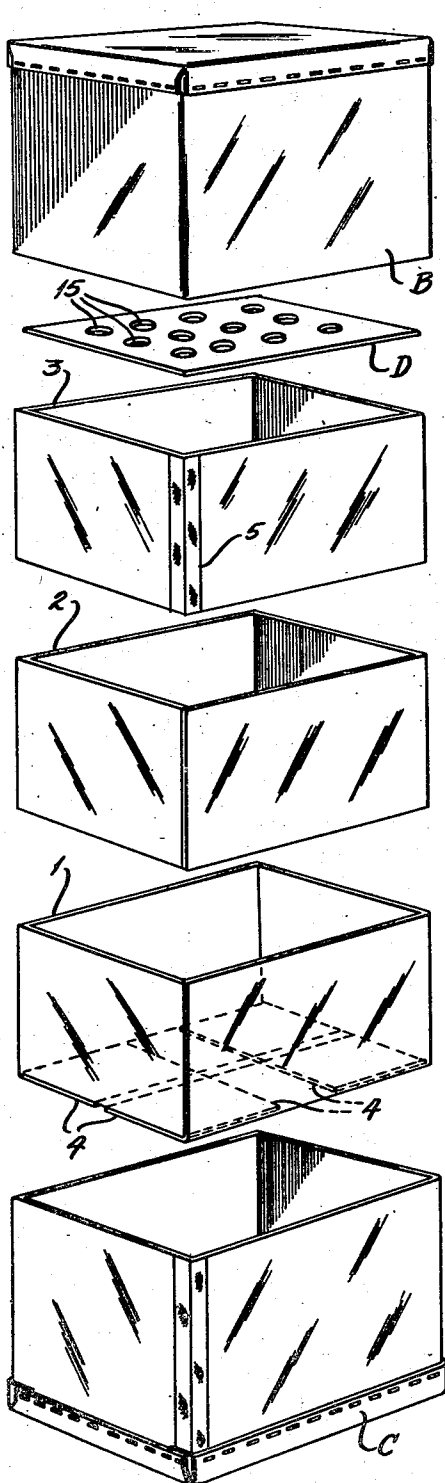
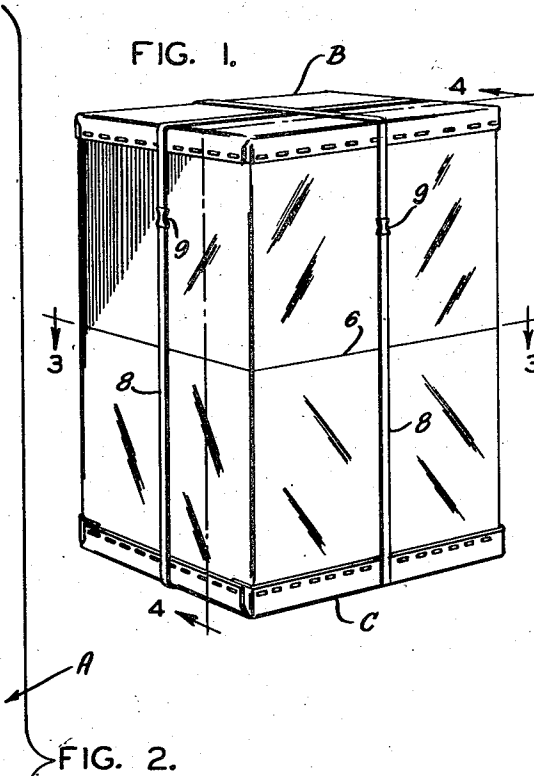
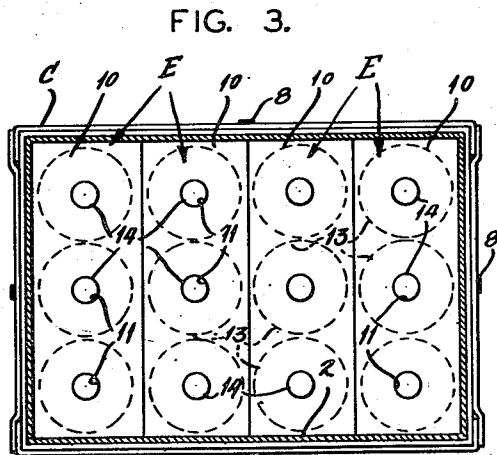
Oct. 9, 1951

W. C. GEORGE
MASTER SHIPPING CARTON

2,570,340

Filed Jan. 17, 1949

3 Sheets-Sheet 1



INVENTOR:
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Oct. 9, 1951

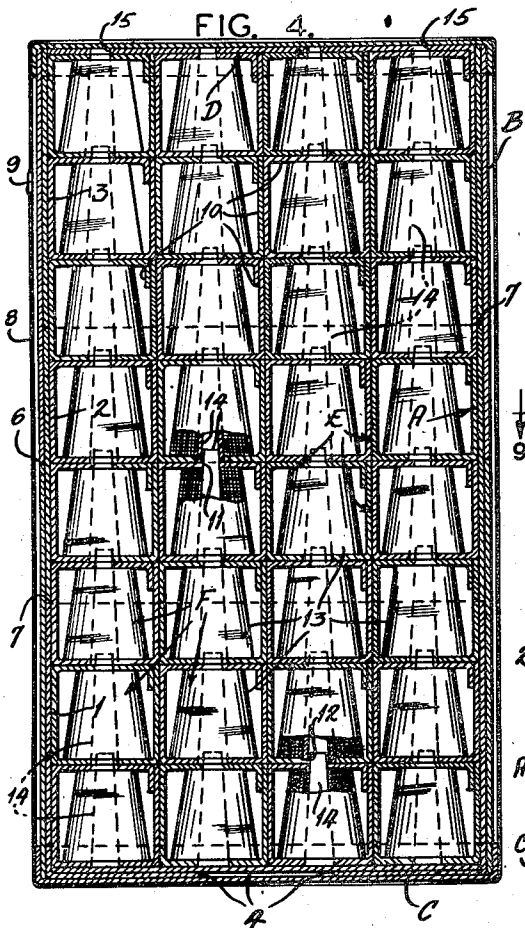
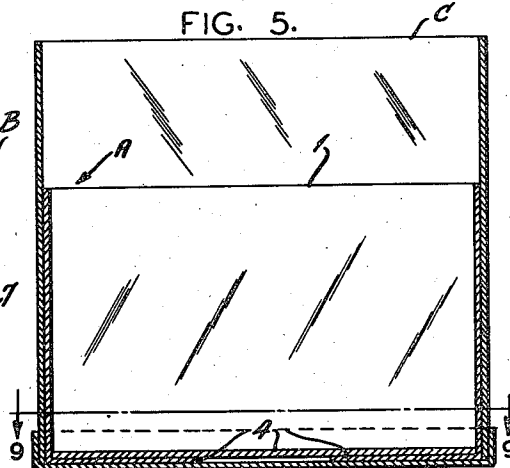
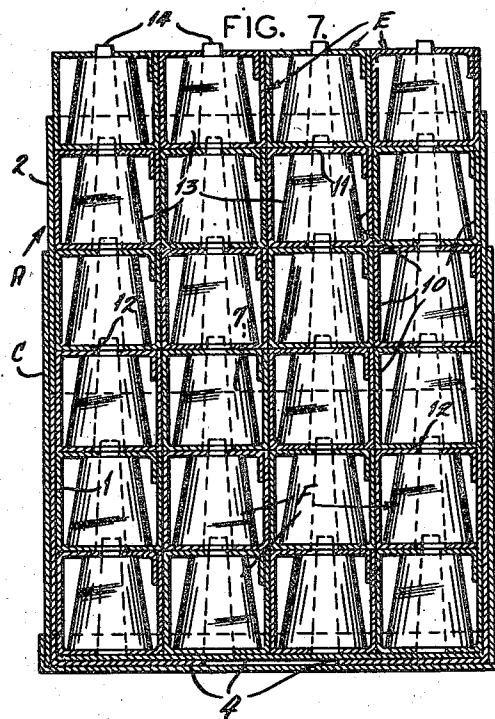
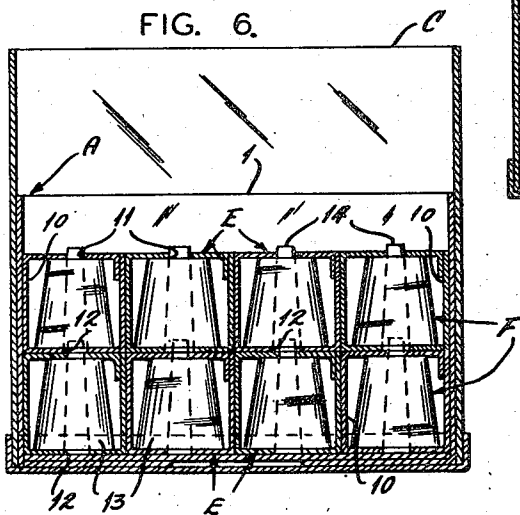
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MASTER SHIPPING CARTON

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3 Sheets-Sheet 2



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MASTER SHIPPING CARTON

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3 Sheets-Sheet 3

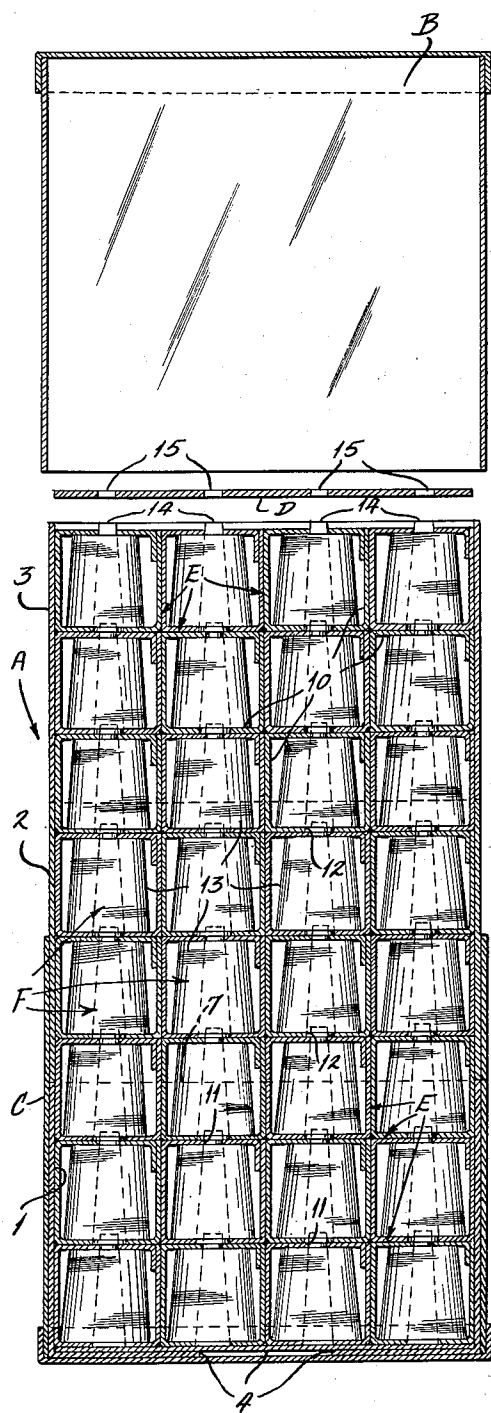


FIG. 9.

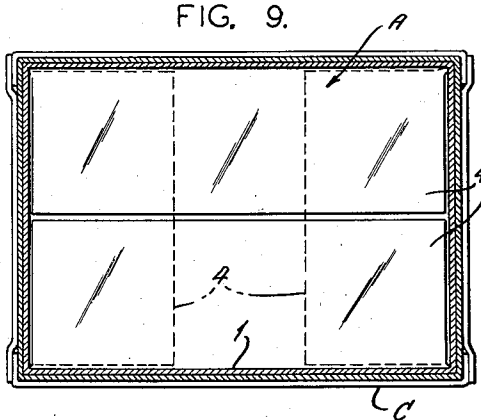


FIG. 10.

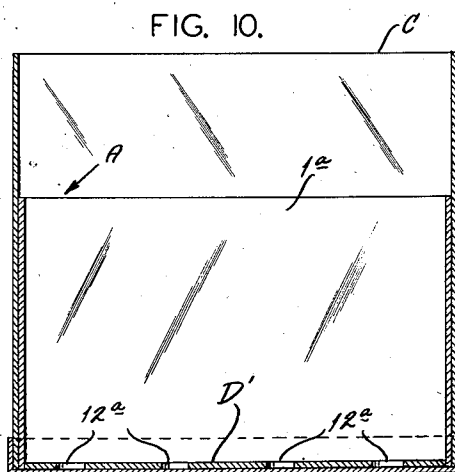


FIG. 11.

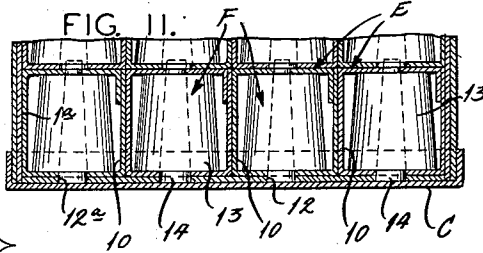


FIG. 8.

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UNITED STATES PATENT OFFICE

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MASTER SHIPPING CARTON

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1 Claim. (Cl. 206—65)

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This invention relates to heavy duty master cartons of the kind used for shipping a multiplicity of small packages or articles and comprising a tall, tubular, open-ended liner and duplicate upper and lower slip covers fitting over the open ends of said liner with their opposing ends in abutting relation substantially midway of the height of said carton. A serious practical objection to the above type carton is that the height of the liner prevents the packer from reaching through the open upper end thereof to the lower portion thereof in order to stack a multiplicity of small packages or articles therein. The principal object of the present invention is to provide a shipping carton of the above type that will permit easy access to be had to the tall tubular liner to facilitate packing of the lower portion thereof. Other objects are simplicity and cheapness of construction, increased strength and compactness of design.

The invention consists in making the tubular liner in three sections, namely, a lower section, an intermediate section and an upper section adapted to be assembled and packed in the order named. The invention also consists in fitting the lower liner section in the lower cover with its upper end terminating short of the open upper end thereof, fitting the intermediate liner section in the lower cover with its lower end seated on the upper end of the lower liner section therein and with its upper end terminating above the upper end thereof, mounting the upper liner section on the upper end of said intermediate liner section, and slipping the upper cover over the entire upper liner section and the portion of the intermediate liner section that projects from the upper end of said lower cover. The invention also consists in providing the lower liner section with a closed bottom so as to increase the strength, resistance to wear, and moisture-proof qualities of the bottom of the carton. The invention also consists in locating the joints between the intermediate and upper and lower liner sections substantially equal distances above and below the joint between the upper and lower covers. The invention also consists in the carton and in the parts and in the arrangements and combinations of parts hereinafter described and claimed.

The accompanying drawings, which form part of this specification and wherein like symbols refer to like parts wherever they occur,

Fig. 1 is a perspective view of a shipping carton embodying my invention,

Fig. 2 is a perspective view, showing the parts

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of the carton in disassembled relation and from bottom to top order of assembly,

Fig. 3 is a horizontal cross-sectional view on the line 3—3 in Fig. 1,

Fig. 4 is a vertical sectional view on the line 4—4 in Fig. 1,

Fig. 5 is a vertical sectional view showing the liner section mounted in the lower cover and ready for packing,

Fig. 6 is a view similar to Fig. 5, showing the first stage of the packing,

Fig. 7 is a view showing the intermediate liner section in position with additional articles stacked therein,

Fig. 8 is a vertical sectional view showing the top liner section in place and the remaining articles packed therein, and with the top liner pad and top cover ready for movement into final position,

Fig. 9 is a horizontal cross-section on the line 9—9 in Fig. 5,

Fig. 10 is a view similar to Fig. 5, showing a modified form of the invention; and

Fig. 11 is a view similar to Fig. 10, showing the packages in position.

In the accompanying drawings, my invention is shown embodied in a shipping container comprising a relatively tall tubular liner A of rectangular cross-section, counterpart upper and lower slip covers B and C, respectively, and a top closure pad D, all made of corrugated board, fiber board, or other bendable material. The tubular liner A is made in three sections, a lower section 1, and intermediate section 2 and an upper section 3, all of substantially the same height. The three liner sections are each formed from a blank which is bent to form the four sides of said section and its opposite ends brought together to form one of the vertical corners of said section. The brought-together, corner-forming ends of the blank from which the upper liner section is formed, are connected by a strip 5 of adhesive tape; and the corresponding ends of the blanks from which the lower and intermediate sections are formed are preferably left unconnected. The upper and intermediate liner sections are open at their tops and bottoms and the lower liner section is preferably closed at its bottom by closure flaps 4 along the lower edges of the four sides thereof, the closure flaps on two opposite side walls overlapping the closure flaps on the two other opposite side walls. The lower liner section 1 has a snug fit in the upwardly opening lower cover C and seats on the bottom of said cover with its upper edge

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terminating some distance below the open upper end thereof. The lower portion of the intermediate liner section 2 has a snug fit in the upper portion of the lower cover C and seats on the upper edge of the lower liner section therein. The intermediate liner section 2 preferably extends the same distance above and below the top edge of the lower cover C. The upper liner section 3 seats on the upper edge of the intermediate liner section 2 and is closed at its upper end by means of the top closure pad D which has a snug fit therein. The downwardly opening upper cover B telescopes over the upper liner section 3 with its closed upper end seated on the upper edge thereof and with its lower end seated on the upper end of the lower cover C, thus completing the carton. The intermediate liner section 2 preferably extends the same distance downwardly into the upper end of the lower cover C and upwardly into the upper cover B, whereby the horizontal joint 6 between the abutting ends of the two covers is located midway of the top and bottom of said intermediate liner section and the horizontal joints 7 are offset vertically relative to the joint between said covers and are covered thereby. As shown in the drawings, the carton may be bound with crossed metal securing bands or straps 8 that extend around the carton along the top, bottom and sides thereof and are locked in contracted position by means of suitable coupling members 9.

The above master carton is particularly adapted for use in shipping a multiplicity of small packages E stacked flatwise one upon another in the tall upright sectional liner A of said carton and each containing a plurality of rayon spools or cones F. As shown in the drawings, each of the smaller packages E comprises a horizontally disposed open-ended tube 10 of rectangular cross-section having a plurality of relatively small holes 11 in its top panel and a plurality of relatively large holes 12 in its bottom panel in vertical alignment with said relatively small holes. Each of the rayon cones F comprises rayon yarn 13 wound upon an upwardly tapering hollow core 14 projecting at each end from the yarn. The rayon cones F are positioned in the tubular packages E with the small upper ends of their cores 14 extending upwardly through the small holes 11 in the top panels of said packages and with the large lower ends of said cores disposed in the large holes 12 in the bottom panels of said packages flush with the undersides thereof. By this arrangement, the rayon cones F are firmly held in the tubular packages E out of contact with one another. The open-ended tubular cone containing packages E are compactly stacked in the tall upright liner A of the master carton one upon another in vertical and horizontal rows with the small upper ends of the cores 14 of the cones of each package extending upwardly into the large lower ends of the cores of the cones in the packages seated thereon. The top closure pad D is also provided with holes 15 adapted to receive and retain the upper ends of the cores 14 of the cones in the top row of packages E.

The master shipping carton is assembled and packed in the following manner: The lower liner section 1 is positioned in the upwardly opening lower cover C in the manner hereinbefore described and a first stack of the packages E is laid in said lower liner section with the top of said first stack terminating below the upper edge of

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said lower liner section a distance corresponding substantially to one-half of the height of a package. The intermediate liner section 2 is then placed in position and a second stack of packages E placed therein with the top of this second stack located above the upper edge of said intermediate liner section. The upper liner section 3 is then slipped over the exposed upper portions of the top row of packages of the second stack, after which a third stack of packages is laid in said upper liner section. The upper open end of the complete liner A is then closed by the top closure pad D which seats on the top row of stacked packages. The downwardly opening upper slip cover B is then telescoped over the upper liner section 3 and the exposed upper end portion of the intermediate liner section 2 with the top of said cover seated on the upper edge of said upper liner section and with the lower edge of said cover seated on the upper edge of the lower cover C, thus completing the master carton. The carton is then bound with the crossed metal securing bands or straps 8.

The hereinbefore described master shipping carton has several important advantages. The making of the tall upright tubular liner in sections permits easy access to be had thereto and facilitates packing of the lower portion thereof. The upper liner section is held in place during the packing thereof by the packages which extend into the lower end of said carton from the upper end of the intermediate section. The horizontal joints between the liner sections are offset relative to the joint between the abutting ends of the upper and lower covers, thereby strengthening the carton. The carton is further strengthened by offsetting the joints of the sectional liner relative to the joints between two adjacent horizontal rows of the smaller packages. The closed lower end of the lower liner section also provides two additional thicknesses in the bottom of the carton, thus increasing the strength, rigidity and water-proof qualities thereof. The carton is also of economical construction and may be quickly and easily assembled and packed and readily disassembled and unpacked.

In the modification shown in Figs. 10 and 11 the bottom closure flaps 4 are omitted from the lower liner section 1a and the open lower end of said section is closed by a pad D' seated therein. In this construction, the bottom closure pad D' is shown provided with a series of holes 12a adapted to receive and retain the large lower ends of the cores 14 of the cones F in the bottom row of packages E in the event that said cones are forced downwardly in said packages by the weight of the packages thereabove.

What I claim is:

A package comprising a master shipping carton, a tubular upright liner therefor receiving a multiplicity of relatively small articles or packages therein, said liner having an overall height that renders it inconvenient to pack the lower portion thereof by reaching through the upper end thereof, and counterpart upper and lower slip covers telescoping over the respective upper and lower ends of said liner with their ends in abutting relation, the improvement which consists in making said liner of separate lower, intermediate and upper sections adapted to be assembled and packed in endwise abutting relation in the order named with said lower liner section located entirely within said lower cover and terminating short of the upper end thereof with said upper liner section located entirely within

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said upper cover and terminating short of the lower end thereof and with said intermediate liner section extending downwardly into said lower cover into abutting relation to said lower liner section and upwardly into said upper cover into abutting relation to said upper liner section, whereby the said intermediate section extends across the joints between the abutting ends of said cover and said cover extends across the joints between the abutting ends of said intermediate and end sections, and wherein said articles or packages are packed in said sectional liner in horizontal rows with one row of packages extending across each of the joints between said intermediate and end liner sections.

WALTER C. GEORGE.

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