

Sept. 11, 1928.

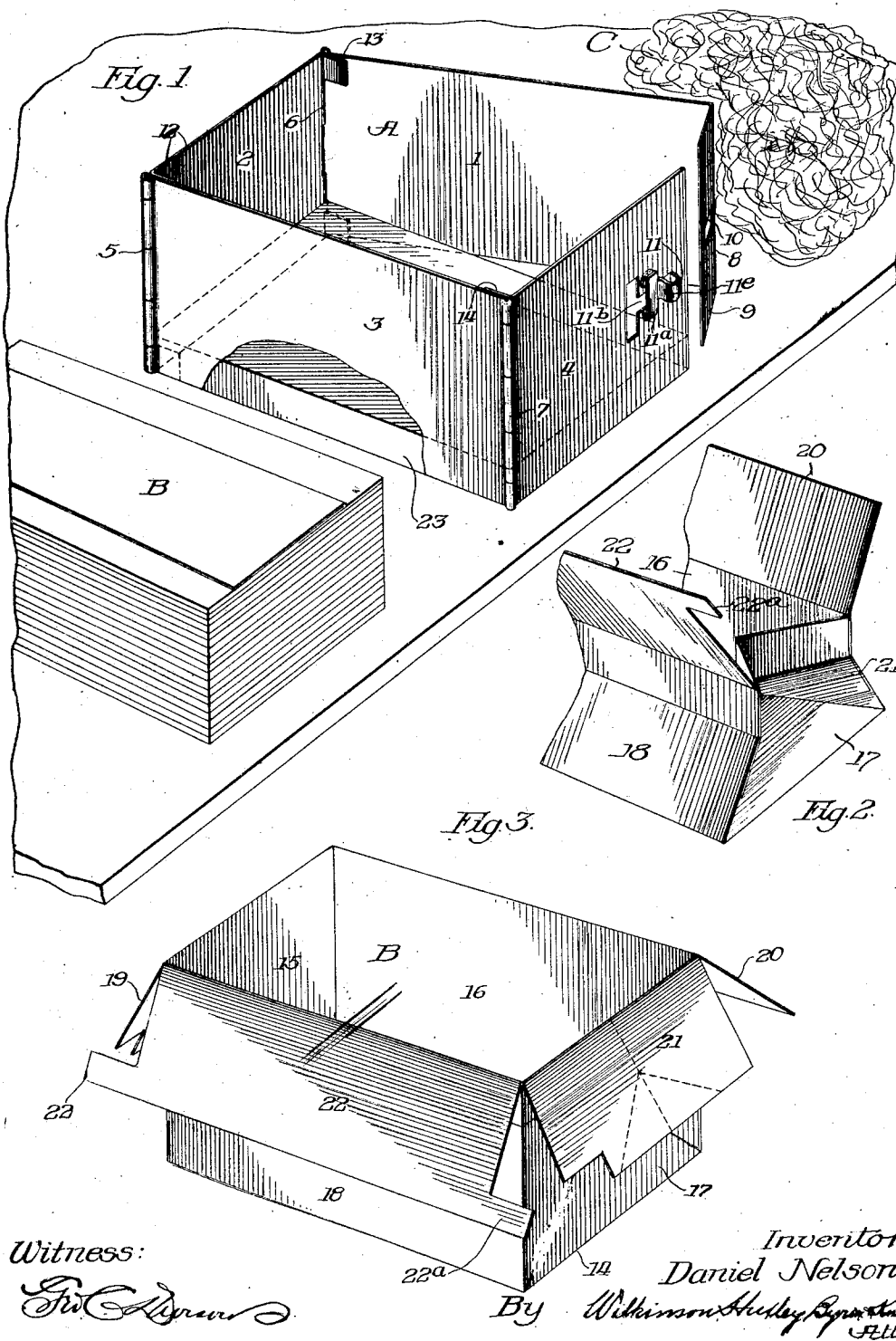
1,683,843

D. NELSON

METHOD OF AND MEANS FOR PACKAGING MERCHANDISE FOR SHIPMENT

Filed April 6, 1925

3 Sheets-Sheet 1



Sept. 11, 1928.

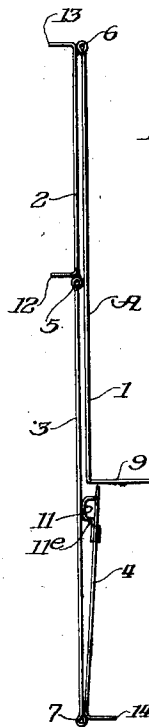
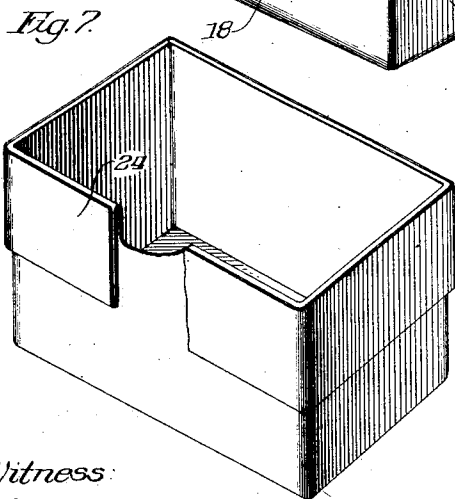
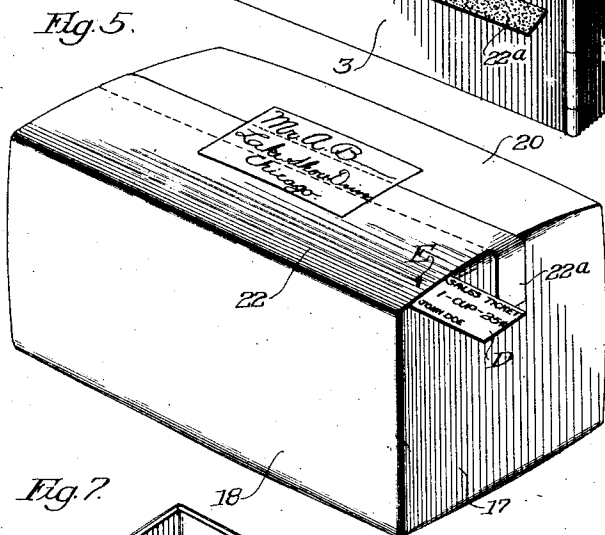
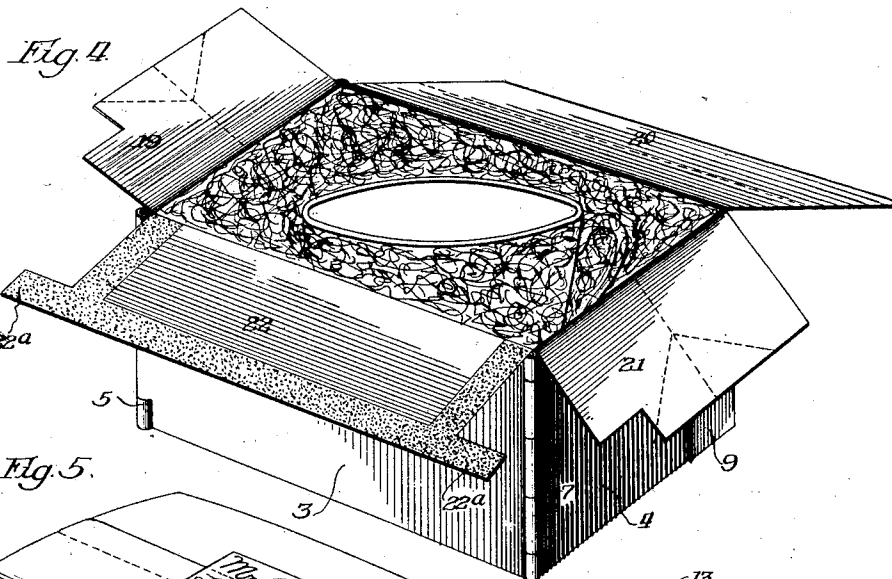
1,683,843

D. NELSON

METHOD OF AND MEANS FOR PACKAGING MERCHANDISE FOR SHIPMENT

Filed April 6, 1925

3 Sheets-Sheet 2



Witness:

D. C. Nelson

Inventor:
Daniel Nelson.

By *Wilkinson, Hixley, Ryan & Knight*
Attys

Sept. 11, 1928

1,683,843

D. NELSON

METHOD OF AND MEANS FOR PACKAGING MERCHANDISE FOR SHIPMENT

Filed April 6, 1925

3 Sheets-Sheet 3

Fig. 8

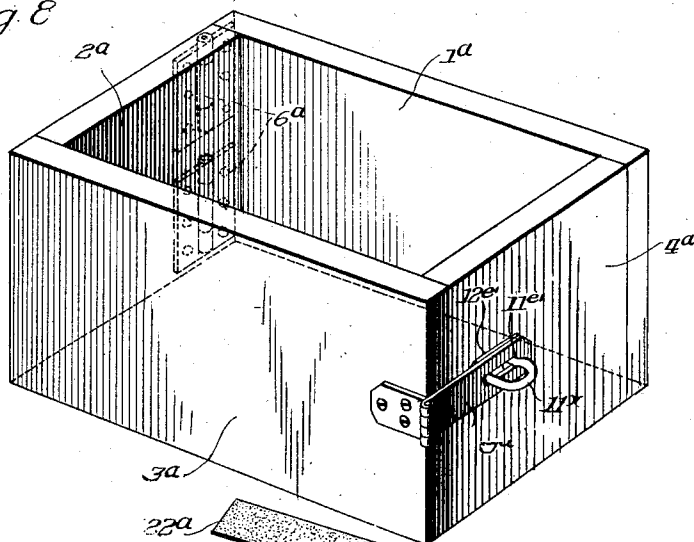


Fig. 9

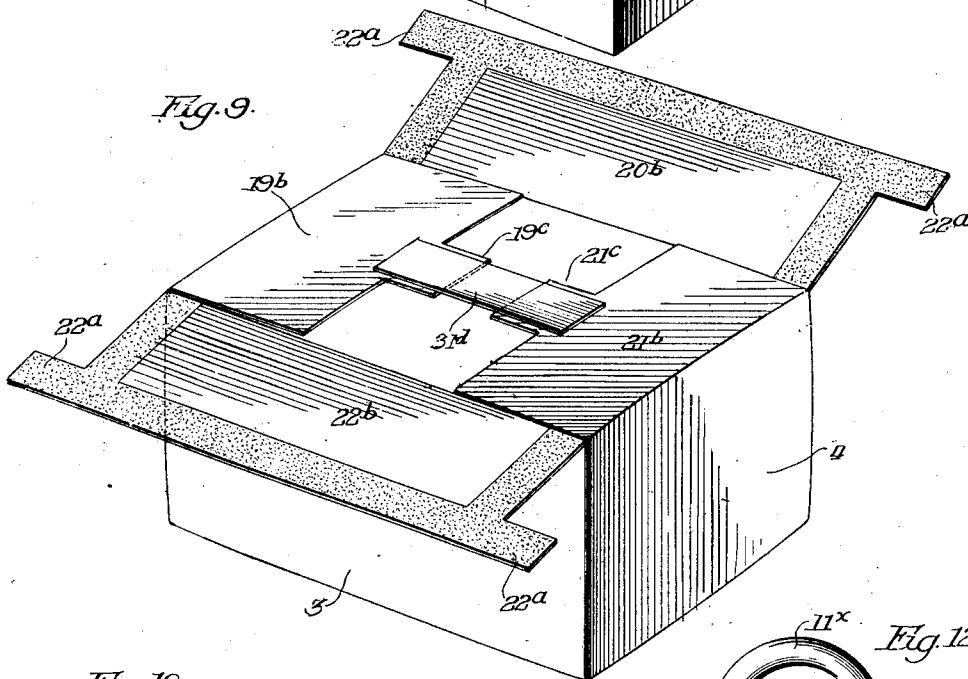
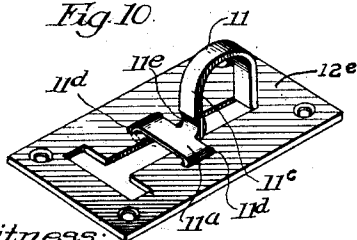


Fig. 10



Witness:

Edw. C. Brown

Fig. 11

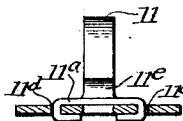
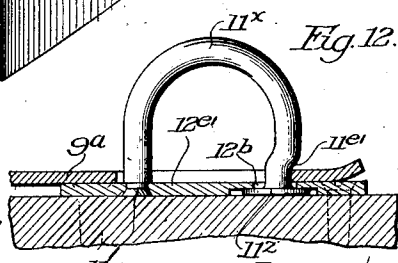


Fig. 12



Inventor:

Daniel Nelson

By *Williamson & Wesley Byron Knight*
Attys.

Patented Sept. 11, 1928.

1,683,843

UNITED STATES PATENT OFFICE.

DANIEL NELSON, OF OAK PARK, ILLINOIS, ASSIGNOR TO MARSHALL FIELD & COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

METHOD OF AND MEANS FOR PACKAGING MERCHANDISE FOR SHIPMENT.

Application filed April 6, 1925. Serial No. 20,926.

This invention relates to a package of merchandise constructed to protect the merchandise from injury, resulting from external shock during shipment; also to an envelope constructed for use in producing such a package of merchandise.

One object of the invention is to provide a package of merchandise which, while embodied in a substantially rectangular or plinth-like form insured against deformation that would endanger the contents of the package, and comprising in its organization a substantial mass of cushioning material for absorbing shocks received in transportation, can, nevertheless, be produced very inexpensively, both as to time consumed and materials employed; and to this end one feature of the invention consists in a package of merchandise comprising, in addition to the article enclosed, a mass of packing material of known quality, for instance, excelsior, or equivalent packing material in fibrous form, molded to substantially rectangular form and capable of retaining substantially such form, and a conforming envelope of relatively light flexible material such, for instance, as tough paper, having inherent tensile strength, and closely conforming to and closed into tensional sustaining relation with said mass of packing material.

Another object of the invention is to provide a new construction of paper envelope which may be used with peculiar advantage in forming the package of merchandise described, and to this end another feature of the invention resides in an envelope having a closed quadrilateral bottom and walls upstanding perpendicularly from said bottom, integral at their meeting edges through a substantial portion of their vertical dimension, but slit or severed through the upper portion of said dimension and for a sufficient distance to provide closing flaps foldable upon the respective upstanding walls, at different levels determined by the vertical dimension of the molded packing mass to be enclosed, and adapted to lie horizontally across the top of the molded mass of packing and to be drawn together and united in a manner to hold the opposite sides of the envelope against spreading. For securing the oppositely folding and individually movable flaps, under tension, they are preferably secured one to another through means of adhesive applied in a convenient manner,

and the securing of one pair of oppositely hinging flaps may also be made the means of holding together the other pair of such flaps.

Preferably, the package will be formed through the aid of a molding frame within which the envelope snugly fits; the separation of the folding flaps at their margins, coinciding with corners of the bag, will be continued downward to at least the upper margin of the molding frame; and the molding frame will be used to gage the volume of packing material molded within it and, likewise, define the lines upon which the flaps are folded.

In the accompanying drawings, in which the preferred details of the invention are shown by way of illustration—

Figure 1 is a perspective view showing a packer's bench with a supply of envelopes, a packing frame containing a bottom block, and a supply of packing material.

Figure 2 is a fragmentary view showing a portion of one of the envelopes of Figure 1 in partially open condition.

Figure 3 is a view showing an envelope in completely opened position.

Figure 4 is a perspective view illustrating the packing frame and an envelope in assembled relation, and an article of merchandise in process of being packed within the same.

Figure 5 is a perspective view of a package produced in accordance with the present invention and ready for shipment.

Figure 6 is a view of a knock-down packing frame in collapsed condition; and

Figure 7 is a perspective view showing a modified construction of envelope.

Figure 8 is a perspective view of a modified form of packing frame.

Figure 9 is a perspective view showing a filled and partially closed envelope with modified form of sealing flaps.

Figures 10 and 11 are detail views showing one construction of securing staple for the packing frame; and

Figure 12 is a view partly in side elevation and partly in section showing a modified construction of staple, together with its attaching base and a portion of a hasp intended to be used in connection therewith.

Referring to Figure 1, A represents a packing frame, B a stack of envelopes for use within such frame, and C a supply of

packing material of known kind, for instance, excelsior or equivalent packing material in fibrous form for use in lining and filling a package of merchandise. Frame A consists preferably of sides 1, 2, 3 and 4, with hinging connection 5 between at least two sides, for instance, the sides 2 and 3, although two of the other corners are preferably also of hinging construction, for instance, as shown at 6, where the sides 1 and 2 meet, and at 7 where the sides 3 and 4 meet; and the fourth corner 8 involves in its construction some suitable form of releasable connection, for instance, a hasp and staple connection. If the frame is made of metal as shown, the hasp may take the form of a projection 9, integral with the side 1, and adapted to lap over the adjacent end of the side 4, said projection having a slot 10 adapted to receive the staple 11 after the manner of a hasp and thereby hold the packing frame in service position while leaving the connection readily releasable for opening up the frame when the package is completed. The hinged corners of the frame A are preferably also provided with justifying stops 12, 13 and 14, each made to project rigidly from one wall, for instance by bending up a part of the wall material, in position to receive abutment of the other wall involved in the hinge connection, and thereby cause the walls to assume rectangular relation when the frame is set up. An equivalent result can be obtained in frames made of wood, such as shown in Figure 8, or other material of substantial thickness by causing the end of each side, properly squared, to abut against the face of the adjacent side to which it is hinged. The effect in either case is to establish abutment between the end of one of the hinged members and a face of the other hinged member.

Each envelope B comprises a bottom 14 and sides 15, 16, 17, and 18 united therewith, as well as with one another, in a manner to provide, when the envelope is distended, five sides of a rectangular closure, the sixth side of which is left open for receiving the merchandise and packing material, but adapted to be closed by means of flaps 19, 20, 21, and 22 projecting from the upper margins of said sides. As originally supplied, the envelopes will be folded in a manner to render them convenient for opening and distention, as, for instance, by folding the sides in the manner usual in supplying paper bags in collapsed form, and as suggested in Figure 2. The frame A, having been set up as suggested in Figure 4, and being selected from a supply of such frames of different sizes in order to conform substantially in dimensions with the envelope that is being used, the envelope is introduced within the frame, as shown in Figure 4, and the packing and merchandise are introduced and

solidly pressed into the space defined by the envelope, but sustained by the rigid packing frame, the packing being, of course, disposed in a manner to thoroughly protect the merchandise, and the flaps 19, 20, 21, and 22, one or more of which may be gummed on their margins, for instance, as suggested by the marginal shading on the flaps of Figures 4 and 9, are then folded inward over the now solid mass, within the envelope, and secured by adhering an uppermost flap, for instance, the flap 22, to the flap which immediately underlies it; also, if desired, by causing hold-down tabs 22^a, provided on one of the side flaps, for instance the flap 22 as shown in Figure 4, or upon both of the side flaps 20^b, 22^b, as shown in Figure 9, to adhere to the ends of the envelope, the hasp-latch 10, 11, being in the meantime released and the packing frame opened sufficiently to admit the said end tabs. Sealing tabs 22^a may or may not be incorporated in the form of the envelope. When used, they may be included in the construction of the flaps without waste of material by appropriately cutting the envelope blank and leaving notches in the end of the flaps 19 and 21 (Figure 4) or 19^b, 21^b (Figure 9). In leaving tabs 22^a on both the side flaps as shown in Figure 9, the end flaps 19^b, 21^b will be left with projections 19^c, 21^c presented toward each other when the flaps are folded over the contents, and thus afford convenient means for preliminarily securing the end flaps, as, for instance, by adhering a strip 21^d of glue paper thereon, after which the flaps 20^b, 22^b can be closed and sealed in the manner described.

In order to adapt the frame A to give shape to packages of different vertical dimension, any one of a series of blocks similar to the block 23 (Figure 1) may be introduced into the frame to constitute a false bottom therefor. While but one of these blocks is shown, it is to be understood that a plurality of the same will be conveniently available to be introduced, selectively, into the situation referred to, and for the purpose stated. While the flaps 19, 20, 21, and 22 are shown as being of definite width and extending from envelope side walls of definite height, which may bring the hinging line of the flaps at a level above the upper margin of the side walls of the packing frame A, especially when a filling block is introduced to vary the depth of the frame, it is to be understood that the folding line of the flaps can readily be re-established to coincide with the vertical dimension of the package, gauged by the frame, by merely tearing the flaps down at the corner edges until the tearing is arrested by the rounding of the flap over the edge of the frame. Similarly, if the separation of the corner edges of the side walls in producing the flaps leaves the integrity of the side walls ending

at a lower level than the sides of the frame, the sustaining relation of the side walls of the frame to the sides of the envelope will nevertheless establish a folding line for the flaps at the packing level defined by the depth of the packing space within the frame.

According to the construction of packing frame A illustrated, the staple 11 can be conveniently provided on a base 12^c (Figure 10) or on the end wall 4 of the frame (Figures 1 and 6) by stamping from the metal of the base or wall a T-shaped tongue, the head 11^a of which, by the upward arching of the staple 11, is brought into bridging relation with the narrow portion of the resultant slot 11^b, and there secured in any suitable way that will maintain the form of the staple. Preferably, this will be done by passing the ends of the T-head 11^a through slots 11^d in the base or wall from which the staple is stamped, and clinching said ends in said slots; the slots being made of sufficient length to permit slight movement of the T-head in order to develop a resilient leg 11^c of the staple that will yield in forcing the hasp to or from its seat; said resilient leg 11^c being preferably formed with a slight recess 11^e into which the end wall of the slot of the hasp 9 (Figures 1 and 6) and 9^a (Figures 8 and 12) will snap, for instance, as illustrated in the modified construction of staple shown in Figure 12, thereby securing the hasp releasably in engagement with the staple. According to the modification shown in Figure 12, the staple 11^x, conveniently made from rolled rod or stock, has one leg fixedly riveted at 11^z in the base plate 12^e, while its other leg is firmly anchored against withdrawal, but with limited movement in the base plate, by passing said leg through the slot 12^f of the plate 12^e, and providing said leg with a head 11^z that prevents withdrawal of the leg from the slot; one leg of the staple being thus rendered resilient to the hasp snapping over it; and said resilient leg being provided with the recess 11^e for the purpose of releasably retaining the hasp. Also, with all of the corners hinged as described, the packing frame A is adapted to be collapsed into the condition shown in Figure 6 in order to render it more convenient for storage where a plurality of frames of different dimensions are to be kept within selective reach of the operator.

If desired, instead of using flaps 19, 20, 21, and 22 as the closing means for the envelope, the envelope may be in the form shown in Figure 7, where the closing means consists of a wall extension 24 gathered upon the upper portion of the bag by a reverse fold, after the manner of a cuff, so as to avoid hindrance of the packing operation, and presenting the edge for convenient

prehension and withdrawal as soon as the packing is finished in order to provide folding portions to the walls in forming a closure similar to that usually restored to in closing a paper bag, and which may, of course, be secured in any approved known manner.

From the foregoing description it will be seen that a package which ultimately relies upon a light and cheap outer jacket or envelope of paper or other suitable material, can be packed with the same effectiveness and with the same security as in a box made of wood or other rigid material, opportunity being thus afforded for building an effective protection around the merchandise in the form of a solid mass which resists external forces. It is possible to rely on such a thin, cheap enveloping means for the reason that stresses imposed upon the envelope are mainly in the direction of tension.

I claim:

1. A shipping package comprising an envelope of flexible material which offers substantially no resistance to forces imparted transversely thereto, an article of merchandise within the same, and molded packing material supporting and positioning the article within the envelope; said packing material consisting of a moldable mass of resilient sub-divided material molded in situ to conform to the space between the walls of the envelope and the enclosed article and to provide a package having a predetermined regular outer surface and standing under initial compression, and the envelope having continuous closed walls, maintaining the form and compression in the molded packing material and standing under tension induced by the expansive force of the molded packing material.

2. A shipping package comprising an envelope of flexible material which offers substantially no resistance to forces imparted transversely thereto, an article of merchandise within said envelope and molded packing material located between the walls of the envelope and said article; said envelope comprising integral bottom and side walls and sealed flaps constituting a top wall, the packing material consisting of a moldable mass of resilient sub-divided material molded in situ to conform to the space between the walls of the envelope and the enclosed article and to provide a package having a predetermined regular outer surface and standing under initial compression, and the walls of the envelope standing under tension induced by the expansive force of the molded packing material.

Signed at Chicago, Illinois, this 4th day of April, 1925.

DANIEL NELSON.