March 15, 1927. 1,621,225

H. B. WALTER

BOX

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Fig. 1.

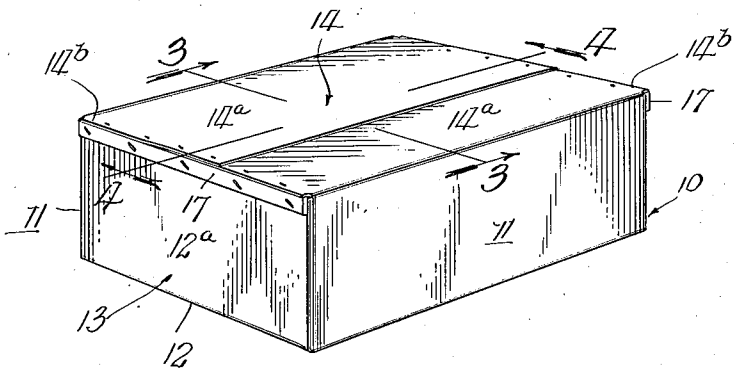


Fig. 2.

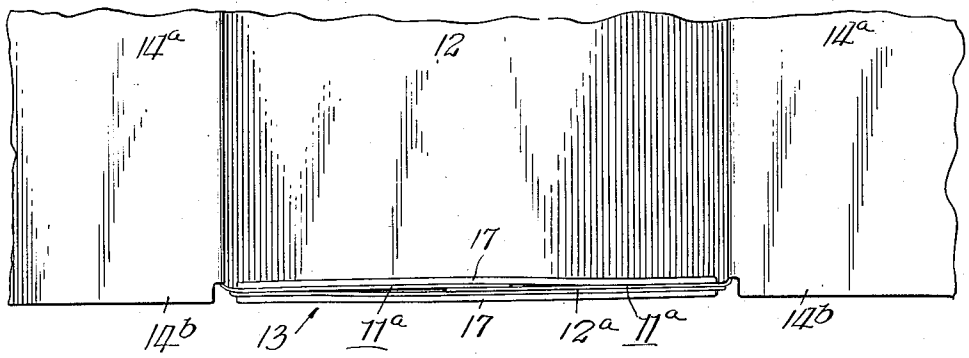
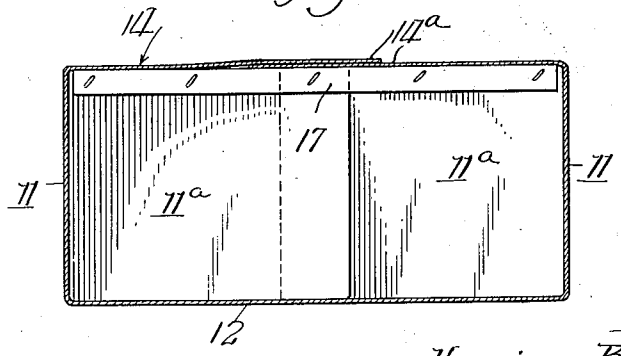


Fig. 3.



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Fig. 4.

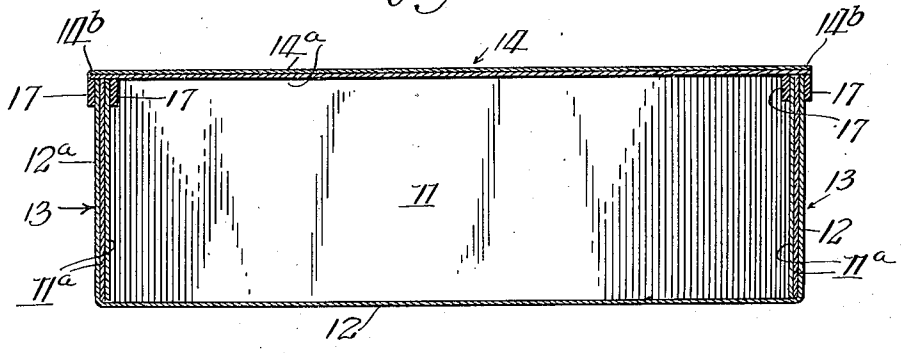


Fig. 5.

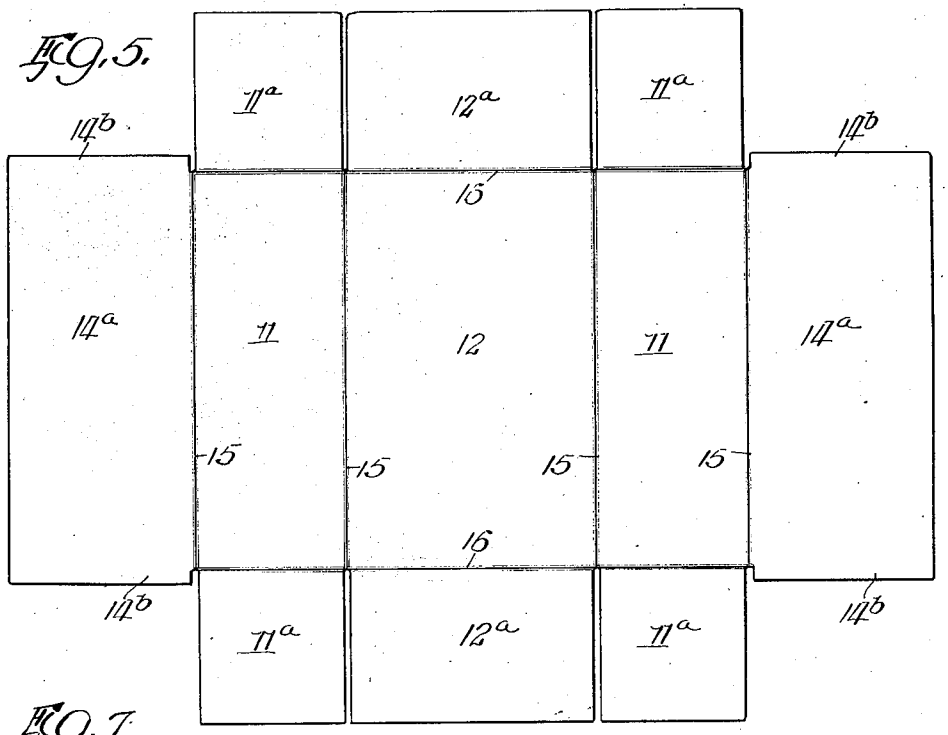


Fig. 7.

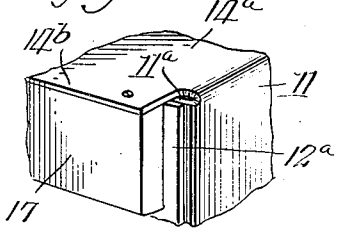


Fig. 6.



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UNITED STATES PATENT OFFICE.

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BOX.

Application filed April 13, 1922. Serial No. 552,342.

This invention relates to improvements in boxes made of fibre or paper board or the like and consists of the matters hereinafter described and more particularly pointed out in the appended claim.

The object of the invention is to provide a collapsible fibre or paper board box capable of top loading which may be manufactured at a minimum cost of labor and material and which has a top closure that may be nailed shut, so that it can be easily opened by the use of the familiar nail puller, when the contents of the box are to be inspected, and again nailed in closed position.

The advantages of the invention will appear as I proceed with my specification.

In the drawings:

Figure 1 is a perspective view of the improved box;

Figure 2 is a partial top plan view of the box with the top closures turned back in open position;

Figure 3 is a transverse, vertical cross section of the box in a plane indicated by the line 3—3 of Fig. 1;

Figure 4 is a longitudinal, vertical section of the box in a plane indicated by the line 4—4 of Fig. 1;

Figure 5 is a plan view of the blank to form the box;

Figure 6 is a perspective view of a wood bar included in the box structure;

Figure 7 is a partial perspective view of a corner of the box.

Referring now to that embodiment of the invention illustrated in the accompanying drawings:—10 indicates the body of the box, which, as shown, is somewhat elongated and is wider than it is deep, although these proportions may be varied to meet the requirements of the box. 11, 11 indicate the sides of the box; 12 the bottom of the box; 13, 13 the ends of the box; and 14 indicates the top closure, which in this case consists of two flaps 14^a, 14^a, each somewhat wider than one-half the width of the box, so that they overlap, when in closed relation, as clearly appears in Figures 1 and 3.

The box in its preferred form is made from a single blank of paper (see Fig. 5) which is cut and creased to fold into box form. The main length of the blank is creased along transverse parallel lines 15 to provide the bottom 12, the sides 11, 11 and the two cover flaps 14^a, 14^a,—all of which are laid out side by side in proper order, with their lengths extending transversely of the blank and with the flaps 14^a, 14^a at the ends of the blank. 16, 16 indicate parallel, spaced, crease lines, extending lengthwise of the blank and defining the ends of the sides 11, 11 and of the bottom 12. The flaps 14^a, 14^a extend at their ends 14^b, 14^b somewhat beyond the longitudinal crease lines 16, 16, which terminate at the transverse crease lines 15, 15 upon which the flaps 14^a, 14^a are designed to fold. The blank has lateral extensions intermediate the flaps 14^a, which extensions are cut to define end flap extensions 11^a, 11^a on each of the box side-forming parts 11, 11 of the blank and end flap extensions 12^a, 12^a on the box bottom-forming part 12 of the blank. When the blank is folded into box form, said flap extensions provide the ends of the box,—the flap extensions 12^a being each of the width and depth of the box and the flap extensions 11^a being of the depth of the box along the crease lines 16, but having a length at right angles to said crease lines somewhat greater than the width of the box so that they will overlap, when folded, one upon the other, as appears in Fig. 3.

The box is set up by folding the blank to bring the sides 11, 11 into a position at right angles to the bottom 12, whereupon the side end flaps 11^a, 11^a are folded one upon the other and the bottom end flap 12^a is folded up outside the said side end flaps. The several flaps named are secured in this position—in which they form the end walls of the box—by transverse pairs of wood cleats 17, 17. The said wood cleats are of a length substantially equal to the width of the box and are preferably wider or deeper than they are thick. Each pair of wood cleats is attached, by stapling or otherwise, to the several end flap extensions, forming the end of the box, with said end flaps embraced between them and with the top edges of the cleats, providing a top surface against which the top flaps 14^a, 14^a may be closed, as shown in Figures 2 and 3.

Since the one wood cleat 17 at each end of the box is located outside of or beyond the ends of the bottom plan of the box, the reason for end extensions 14^b of the top flaps is manifest,—said end extensions over-

lying and closing upon the outside end cleats 17, as is shown in Fig. 7.

After the box is loaded through its open top, the top closure flaps 14^a are folded down, one overlapping the other, upon the top edges of the ends of the box comprising the wood cleats 17, 17 and end flap extensions of the sides and bottom—respectively, 11^a, 11^a and 12^a—embraced between them. Said top closure flaps are then nailed at their ends to the ends of the box thus comprised,—the nails readily taking into the composite nailing edges of the box,—preferably through the fibre or paper board sheets between the wood cleats.

The wood cleats provide the required resistance to the hammer shocks due to nailing the top closures in place and in addition, reinforce the box against stacking and loading strains. With the fibre or paper end parts embraced between them, said wood cleats furnish composite nailing seats for the top closures, since the nails, while intended to be driven into the fibre, will manifestly take as well into the wood or more usually into the wood on one side and into the fibre on the other.

The novel box is of particular advantage for use in shipping light vegetables, such as head lettuce, cabbage and the like, all of which require inspection and the necessary opening of the box in transit.

The boxes are shipped flat to the packers or users, as in the case of other collapsible boxes, the wood cleats either being sent with the fibre or paper blanks or being supplied by the the users, as may be, commercially convenient.

While in describing my invention I have referred to several details of construction and arrangement of parts, it is to be understood that the invention is not thereby limited except as may be pointed out in the appended claim.

I claim as my invention:—

A box made of a single blank of fibre or paper board, the blank being cut and creased to provide a bottom wall, two side walls and two top closure flaps adapted to overlap along a median line of the box, the bottom wall having end extensions to provide ends of the full depth and width of the box, and the side walls having end extensions which are folded against the end walls to substantially cover said end walls, and wood cleats, a pair for each end of the box, embracing the extensions forming the end of the box between them and being stapled thereto, said wood cleats extending the full width of the box and the top closure flaps of the box being folded down upon said wood cleats and nailed to the composite seats thus provided.

In testimony that I claim the foregoing as my invention, I affix my signature this 6th day of April, A. D. 1922.

HARRISON B. WALTER.