METHOD OF ASSEMBLING FIBER SHIPPING CASES

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This invention relates to a method for assembling the blanks of a fiber shipping case of a specified construction. In my Patent No. 1,375,127, dated April 19, 1921, and in the Lemon Patent No. 1,428,597 dated September 12th, 1922, a shipping case is shown in which three blanks are employed, namely, a body blank folded to provide the bottom, two side walls and the cover wings, and provided at the ends of the two side walls and the bottom with end flaps. The other two blanks comprise each an end wall provided with a sealing flap. These sealing flaps are arranged to be engaged with the cover wings for sealing the case.

A container of this character has great possibilities in its commercial appeal for the reason that it involves a large saving in material, and the bottom and side walls are kept free of all flaps which are objectionable in sliding the box or in carrying the box on certain conveyor systems. However, the great practical objection to a box of this kind at the present time is the cost of assembling the box, as each end has to be separately inserted and stitched separately on a wire stitching head. This involves considerable labor cost and quite large capital investment to provide the stitching machines necessary to stitch these containers together. It is the object of the present invention to provide a new and novel method of handling and stitching these blanks together whereby the fasteners or stitches may be driven in simultaneously in two rows, thereby substantially cutting the labor cost in two, and considerably lessening the capital investment in a large plant where a shipper requires a number of machines for assembling the boxes.

In the drawings:
Fig. 1 is a plan view of one of the end blanks.
Fig. 2 is a plan view of the other end blanks.
Fig. 3 is a plan view of the body blank showing the first step of the method, wherein two end blanks are simultaneously stitched to the bottom wall of the body blank.
Fig. 4 shows the position of the blanks on the anvil.
Fig. 5 is a section taken on the line 5—5 of Fig. 4.
Fig. 6 is a perspective of the case showing the second step in the method.
Fig. 7 is a perspective showing the third step in the method.
Fig. 8 is a section on the line 8—8 of Fig. 7.
Fig. 9 is a section on the line 9—9 of Fig. 7.

The two end blanks and body blanks are substantially the same blanks as shown in Lemon, and also shown in my prior patent above referred to. However, in my prior patent, flaps are provided on the cover wings, but this is immaterial so far as the method of assembling the blanks that form the container is concerned. The body blank is scored and cut to form two cover wings a and b, two side walls c and d, and one bottom wall e. The end flaps f, g, h, i, j, and k are provided on the two ends of the two side walls and the bottom wall. The two end blanks are designated m and n and each is provided with a sealing flap, one designated o and the other p. The usual way of assembling a box of this kind is to fold together the body blank to form a bottom and two side walls, insert an end blank and then separately stitch down the three end flaps over the end blank; then the case is reversed and the opposite end blank is put in in exactly the same way. This requires altogether too much time for assembly. It is also too large a labor cost.

I very materially lessen the cost of assembly by my new method. In the first step, the two end blanks m and n are secured to the bottom wall of the body blank on opposite sides by simultaneously stitching the flaps g and j to these end blanks as shown in Fig. 4 where the stitches are taken in the order designated 1, 2, 3, 4, 5 and 6. Now conceivably, these stitches or fasteners could be driven in on opposite sides by an operator driving the fasteners in with a hand tool, one operator being stationed on each side. However, this would not be a commercially practical way of handling the blanks, and to do this work in the quickest possible time, a pair of anvils r and s are provided, which are spaced substantially the length of the case. Over these anvils will be supported a pair of stitching heads such as shown in my prior Patent No. 1,480,150.

The next step is to fold the body blank shown in Fig. 6 and to present the same to the two anvils which are spaced apart substantially the width of the case. The stitches...
7, 8, 9, 10, and 11 and 12 are then taken simultaneously on opposite sides. These fasteners could conceivably be driven by two operators on opposite sides of the anvil, but obviously for practical purposes they would be driven in by a machine. The case is then reversed and the stitches 13, 14, 15, 16, 17 and 18 taken on the same pair of anvils for stitching on opposite sides of the case, being done simultaneously either by two workmen equipped with hand tools or by two stitching heads.

In factories engaged in large production the end blanks would be first stitched to the ends of the bottom walls on one machine. The stitched blanks then would be carried to a second machine where the second and third steps would be taken. However, it is possible to perform the three stitches on a single machine by first stitching all the blanks together so that the end空白s adhere to the ends of the bottom wall, then changing the adjustable spacing of the anvils and stitching heads so as to accommodate them to the width of the case, then the blanks may all be given the second and third stitches to complete the assembly.

What I claim is:

1. The method of assembling a shipping case constructed of three blanks comprising two end blanks and a single body blank the latter including two side walls with an intervening bottom wall and all three walls having end flaps at their ends, which comprises simultaneously securing the two end blanks to the flaps at the ends of the bottom wall, second, folding the body blank to bring the side walls in parallelism and simultaneously securing the end flaps of two of the side walls to one end blank, then third, simultaneously securing the remaining two end flaps of the two side walls to the other end blank.

2. The method of assembling a shipping case constructed of three blanks comprising two end blanks and a single body blank the latter including two side walls with an intervening bottom wall and all three walls having end flaps at their ends, which comprises simultaneously securing the two end blanks to the end flaps of the bottom wall, then folding the body blank to bring the two side walls in parallelism and securing the end flaps of the two side walls to one end blank and then securing the remaining two side flaps of the two side walls to the other end blank to complete the assembly.

3. The method of assembling a shipping case constructed of three blanks comprising two end blanks and a single body blank the latter including two side walls with an intervening bottom wall and all three walls having end flaps at their ends, which comprises laying the body blank and the two end blanks on a pair of anvils spaced approximately the length of the case and with their end flaps at the ends of the bottom wall lying against the end blanks, and simultaneously driving of the two rows of metallic fasteners to secure the two end blanks to the opposite ends of the bottom wall, the folding of the body blank to bring the side walls in parallelism, and folding over the end flaps on the two side walls against an end blank, and over a pair of anvils spaced apart to fit within the width of the case, then simultaneously driving two rows of metallic fasteners through the two flaps into the end blank to secure the same together, and, third, reversing the case and placing it over the anvils and securing the remaining end flaps to the other end blank by driving simultaneously two rows of metallic fasteners through the flaps and into the end blank.

4. The method of assembling a shipping case constructed of three blanks comprising two end blanks and a single body blank the latter including two side walls with an intervening bottom wall and all three walls having end flaps at their ends, which comprises the laying of the body blank and two end blanks on two anvils spaced substantially the length of the case with the end flaps of the bottom wall in engagement with the end blanks and simultaneously stitching the two opposite end flaps of the bottom wall to the end blanks, and then stitching the remaining flaps to the end blanks to complete the assembly.

5. The method of assembling a shipping case constructed of three blanks comprising two end blanks and a single body blank the latter including two side walls with an intervening bottom wall and all three walls having end flaps at their ends, which comprises the laying of the body blank on two anvils spaced substantially the length of the case, the placing of the end blanks in contact with the end flaps of the bottom of the body blank, the simultaneous stitching of such end flaps to the end blanks, secondly, the removal of the blanks and the folding of the same to bring the side walls into parallelism, and the end flaps at one end of the two side walls into contact with one of the end blanks over the two anvils spaced to fit within the width of the case, then simultaneously stitching such two flaps to the end blank, then reversing the case and bringing the remaining two end flaps in contact with the remaining end blank and simultaneously stitching the same to the end blank.

In testimony whereof I affix my signature.

HERBERT R. BLISS.