Oct. 23, 1945. G. HARRISON 2,387,326

MEANS FOR COMPLETING THE PACKAGING OF BERRIES

Filed Feb. 22, 1944 3 Sheets-Sheet 1

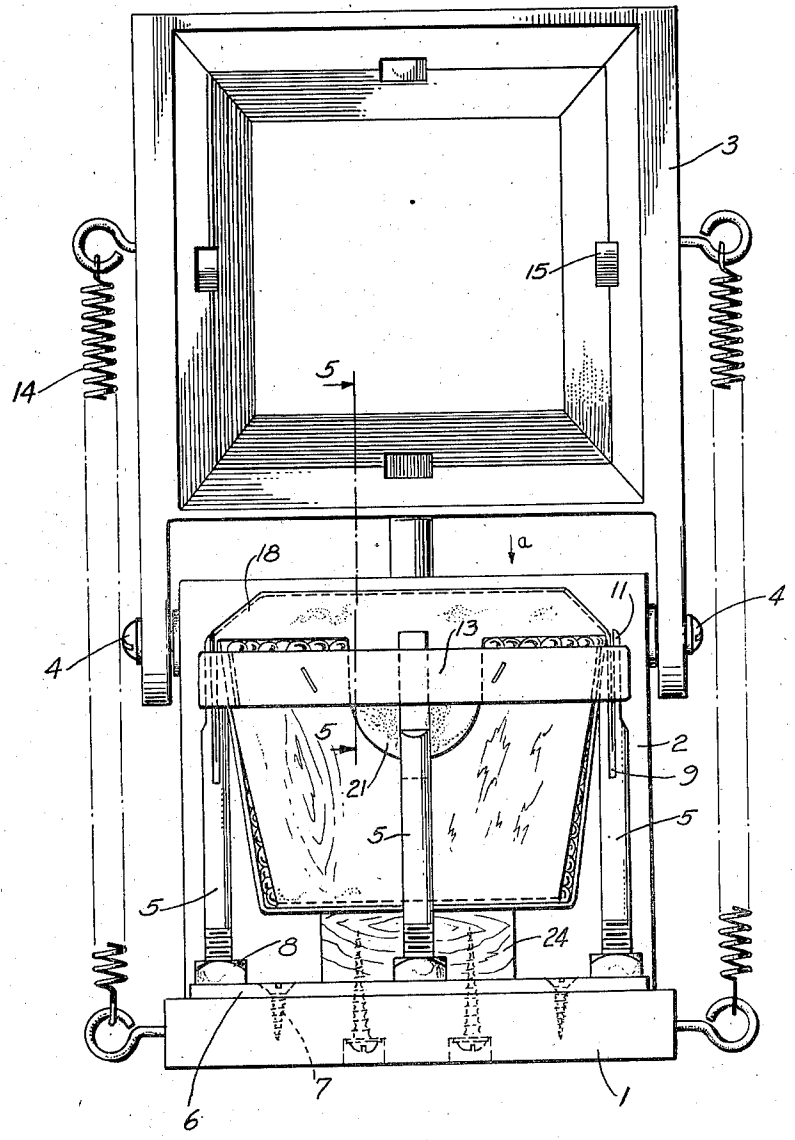


Fig. 1

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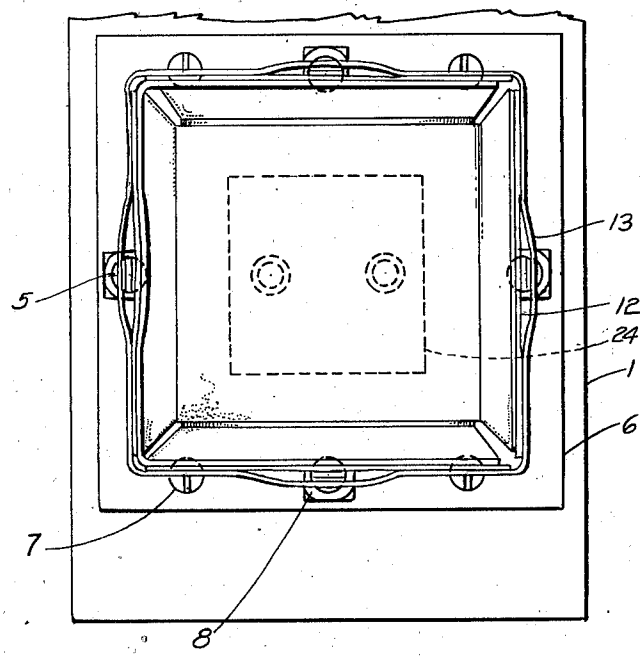


Fig. 2

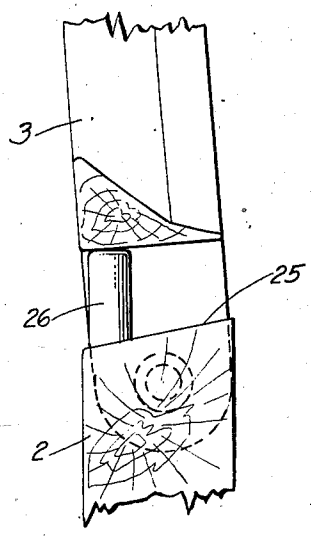


Fig. 5

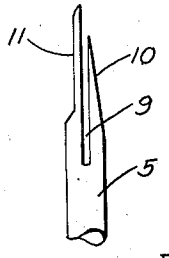


Fig. 3

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Filed Feb. 22, 1944 3 Sheets-Sheet 3

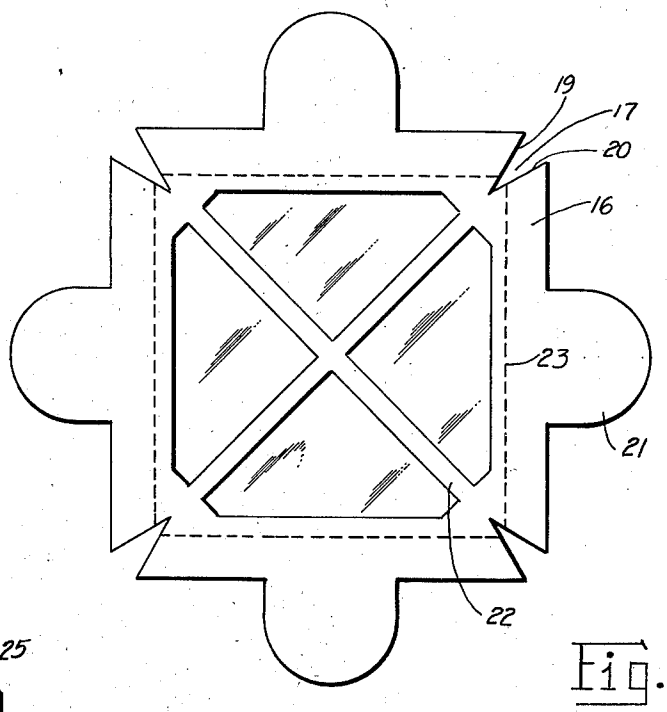


Fig. 4

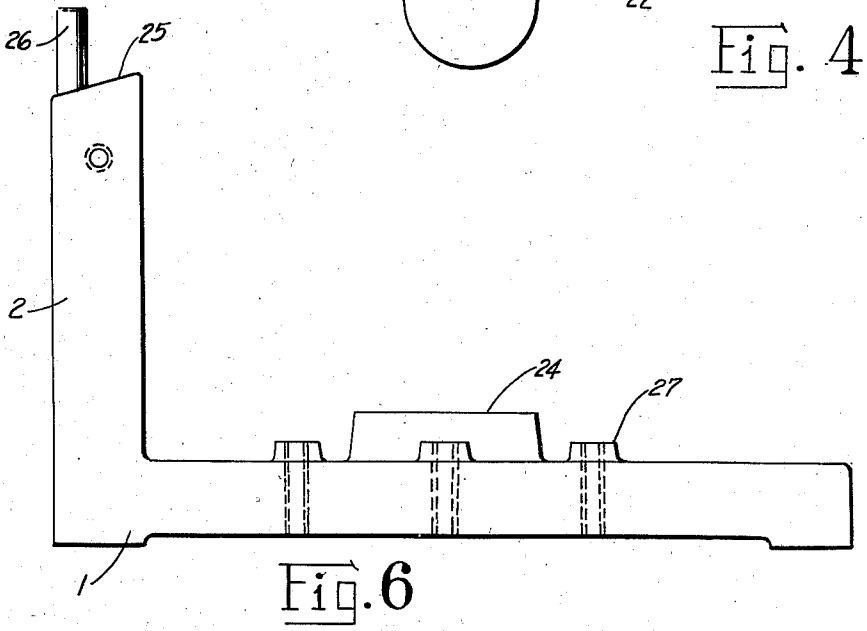


Fig. 6

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MEANS FOR COMPLETING THE PACKAGING OF BERRIES

Gale Harrison, Ivanhoe, N. C.

Application February 22, 1944, Serial No. 523,389

8 Claims. (Cl. 206—44)

This invention relates to means for completing the packaging of berries in boxes or containers having the usual type of rim.

My present application is directed to improvements in the apparatus and process of filling berry containers as set forth in my Patent 2,318,483, issued May 4, 1943. This patent discloses the procedure followed in handling the berries after they come from the field to the packing house, and is directed particularly to the structure required for "topping" the boxes, ready to receive the covering, such as Cellophane, which is required to hold the berries in the box or container during shipment and distribution.

The application of the Cellophane to the boxes, after they have been topped by means of the apparatus described in my patent, is a troublesome operation as it takes nimble as well as long fingers to apply the Cellophane properly. I have found that many persons cannot perform this operation as it takes considerable experience, in addition to the other qualifications referred to, to perform the operation speedily and satisfactorily. After watching the operators do this work, and after considerable study, I have produced means for combining the two operations; i. e., the "topping" operation and the application of the cover to the box, while the box is positioned in the topping apparatus.

It is therefore the principal object of my invention to provide means for overcoming the covering difficulties heretofore mentioned.

Another object is to provide means for topping and covering the boxes whereby unskilled persons may be trained in a few minutes to do this work, thereby reducing the costs involved in these final operations preparatory to shipping the berries to the market.

My present improvements are set forth in the annexed drawings wherein:

Figure 1 is a front elevation of the topping apparatus, with the topping lid turned back, similar to that shown in my patent, but with the improvements added thereto and with the cover for the berries slightly raised.

Figure 2 is a plan view of the base portion of the apparatus showing the container or berry box in place, ready to receive the berries.

Fig. 3 is an elevational view of the upper end of one of the spreader pins used for spreading the rim of the box as illustrated in Figure 2.

Figure 4 is a plan view of the cover used in closing the berry box after the box has been filled with berries.

Figure 5 is a fragmentary view on the line 5—5 of Figure 1.

Figure 6 is an elevational view of a modified form of the base and lid support of the topping apparatus.

Referring now to the details wherein like members refer to corresponding parts, 1 is the base of the apparatus having an upright support 2 on which a lid 3 is pivotally mounted as by screws 4. The lid 3 is constructed in the same manner as shown in my patent to which reference may be made, with the exception of one detail which will be later referred to.

On the base 1 which, together with the support 2 and lid 3, may be made of any satisfactory material such as a suitable grade of wood, are mounted a plurality of studs 5, there being four in number, spaced so that there is one for engagement with each side of the box and preferably at the center of the side. These studs or spreader pins are fastened to the base 1 in any satisfactory manner, and as shown in Figure 1 they are mounted on a steel plate 6 which in turn is fastened to the base 1 as by screws 7, lock nuts 8 being preferably used. If desired, the base 1 may have a hole therein to receive the lower end of the studs 5 with a nut to clamp the studs securely in position to the plate 6. As an alternative, the studs 5 may be welded to the plate 6. The upper end of each stud or spreader pin 5 is slotted at 9; also, the two parts 10 and 11, forming the slot 9, are tapered as shown in Figure 3, and the part 11 preferably extends somewhat beyond the part 10. The object of this construction will now be referred to.

As usually constructed, the berry boxes have a ribbon-type rim made of a narrow strip of wood which passes around on the inner periphery and then around the outer periphery of the two body portions of the box, all of which are stapled together. With the construction of the spreader pins as shown in Figure 3, and mounting them as shown in Figure 2, the box may be placed between the spreader pins 5 and pushed downwardly toward the base whereby the tapered portions 10 and 11, which are quite rigid, will slip between the body part 12 of the box and the outer rim portion 13 as shown in Figure 2. The box, after being placed in this position, is ready to be filled with the berries, and then the lid, normally held in open position by the springs 14, is moved into topping position, all as described in my patent referred to. Since the part 11 of the spreader pins 5 preferably extend above the rim 13, as

shown in Figure 1, small recesses 15 are cut in the four sides of the lid 3 to receive these projecting ends of the part 11.

After the topping operation has been completed, the lid 3 is turned back to the position shown in Figure 1 and the cover is applied. This cover, as shown in Figure 4, is made up of a frame 16 of some material that has considerable stiffness, such as cardboard or the equivalent. When the frame is formed, angular corner portions 17 are cut out so that the edges of the frame may be bent at 18, as shown in Figure 1, at an acute angle to fit over the top surface of the berries; and when bent into position, the edge portions 19 and 20 come together to form a complete enclosure of the frame. The frame has four ears 21, one on each side, and reenforcing portions 22 which are preferably arranged at diagonals. Carried on the inner side of the frame 16, as indicated by the broken line 23, in any manner as by suitable cement, is a sheet of transparent material such as Cellophane which forms a window for the cover.

After the cover has been formed as indicated in Figure 4, and the four edges bent into the form shown in Figure 1, the ears 21 are inserted into the slot 9 of the spreader pins 5 until the outer edges of the frame 16 engage the rim of the cover. As shown in Figures 1 and 3, the extended portions of the parts 11 of the studs 5 assist in entering the ears 21 into the slots 9.

After the cover has been put into position as just described, the package is complete and the box is lifted off the studs, and since there is no strain or friction applied to the ears or lugs 21 of the cover during this operation, the cover stays in place and the ears 21 are then gripped between the box portion 12 and the rim portion 13, thereby completing the packaging of the berries.

As shown in Figure 1, the base 1 carries a block 24 on which the box may be positioned. By making the block 24 somewhat smaller than the bottom of the berry box, there is no danger of berries lodging on this block due to any careless handling by the operators. Instead of the square form of block, the block may have a plurality of tapered surfaces to allow the berries to roll off.

In Figure 5 I have shown an additional improvement in the topping apparatus which consists of an outwardly slanting surface 25 on the top edge of the support 2, whereby when the apparatus is used in the earlier form shown in my patent, no berries can collect on top of the support 2, and when this construction is used, a pin 26 acts as a stop for the lid 3.

In Figure 6 I have shown the base 1, support 2 and stop pin 26 all as one integral piece which may be cast of suitable metal, including bosses 27 to give additional screw area for the spreader pins. Also, the central support member 24 may be cast integral with the base.

While I have shown a preferred form of my improvements, certain of the details may be varied without departing from the spirit of my invention or the scope of the appended claims.

What I claim is:

1. Means for applying to a berry box, having at least on the outside a ribbon-type rim band, a cover having a frame carrying a tough transparent protective sheet, the frame having ears for holding the frame to the box, comprising a topping apparatus having a base to receive the box and a plurality of studs, one for each side of the box, extending upwardly from the base, each stud having its upper free end slotted and these slotted ends being tapered so as to readily pass between the body of the box and said outer rim band when the box is placed between the studs and pushed down toward the base of the topping apparatus, the slots in the studs being of a width and depth to receive the said frame ears when the said cover is placed over the box, with the edge of the frame in engagement with the rim of the box, the ears thereby being positioned and held between the body of the box and the outer rim band on lifting the box off the studs.

2. Means for assembling a cover onto a berry box as set forth in claim 1, further defined in that the outer part of each of said slotted and tapered stud ends is longer than the inner part for the purpose described.

3. Means for applying to a berry box, having a rim with laterally displaceable parts, a cover for seating on the rim and having a frame carrying a suitable transparent protective sheet, the frame having ears to be gripped by the rim parts, comprising a topper structure having a base and studs extending upwardly therefrom and positioned in quadrature corresponding to the sides of the box, the studs having longitudinally slotted and tapered ends whereby they will go between parts of the rim and laterally displace these parts when the box is forced downwardly between the studs as described, after which the cover may be placed onto the box with the frame ears going into the slots in said studs so that when the box is withdrawn from the studs the ears are left between the parts of the rim which were displaced by the studs.

4. Means for applying to a berry box, a cover as set forth in claim 3, further defined in that the base has a centrally raised portion to receive the box, and the means includes a lid having interior sides formed with recesses to receive, when the lid is in berry-filling position, the ends of the studs which extend through the box rim.

5. Means for applying to a berry box, a cover as set forth in claim 3, further defined in that the base has an integral central raised portion to receive the box, an integral upright support, a lid carried by said support, and a stop on the support for the lid when in open position, the free end of the support being slanted away from the base for the purpose described.

6. The method of completing the packaging of berries in a box having a rim certain parts of which can be spread by means comprising the use of a topping apparatus having a lid and a base with upstanding studs one for each side of the box, the free ends of the studs having slotted and tapered ends, which consists in placing the box on the base by pushing the free ends of the studs between the spreadable parts of the rim, moving the lid over the top of the box, then performing the topping operation, then moving the lid from the box and then taking a cover having ears and pushing the ears into the slotted ends of said studs and finally withdrawing the box and cover off the base and studs thereby trapping the ears between the parts of the rim that were spread by the pins.

7. A cover for a berry box having a ribbon type rim around the top of the body of the box comprising, a sheet of tough transparent material such as Cellophane, a four sided frame around said sheet, the frame being stiff as compared with the Cellophane sheet and having the outer

edges of its sides adapted to engage and seat against the rim of the box, said frame having acute angle cut-out corner portions with the apex thereof extending inwardly whereby the sides may be bent so as to extend inwardly at an acute angle to the sides of the box, the frame having reinforcement members extending across and over said sheet of transparent material in alignment with the apex of said cut-out corners and ears projecting from only the mid portion of the four sides of the frame to be gripped by portions of the outer part of the rim and the top of the body of the box.

8. A cover for a berry box having a ribbon type reinforcing rim around the top of the body of the box comprising, a frame having four sides with V shaped acute angular portions initially cut out at the corners, the apex of the V extending toward the central axis of the frame, whereby the sides of the frame may be bent until the opposite sides of the V substantially meet, thereby forming a polygonally shaped saucer-like frame of considerable stiffness, a transparent member supported by the interior parts of the cover frame and forming the bottom of the saucer-like structure, and ears extending from only the mid portion of each side of said frame for slipping between the body of the box and at least part of the rim to hold the cover on the box with the outer edges of the cover frame seated against the outer edge of the box rim.

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