Sept. 29, 1931. A. J. BLACK 1,824,979

FRUIT PACKER'S BENCH

Filed Jan. 3, 1929 2 Sheets-Sheet 1

Fig. 2

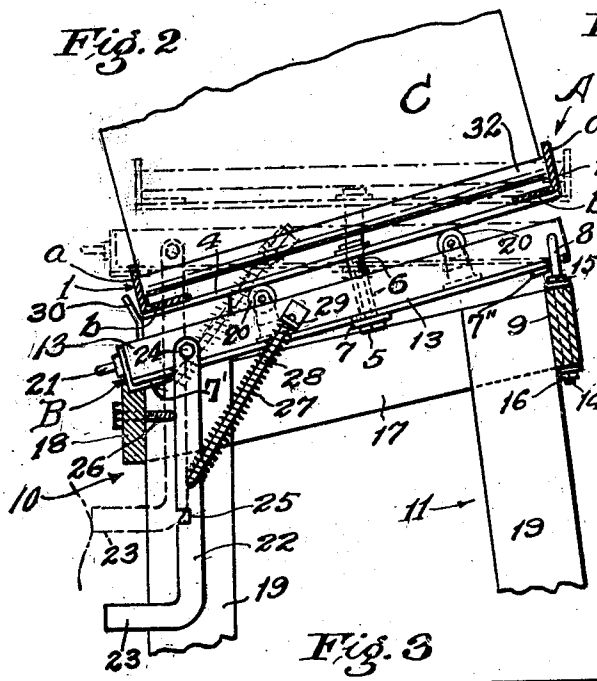


Fig. 1

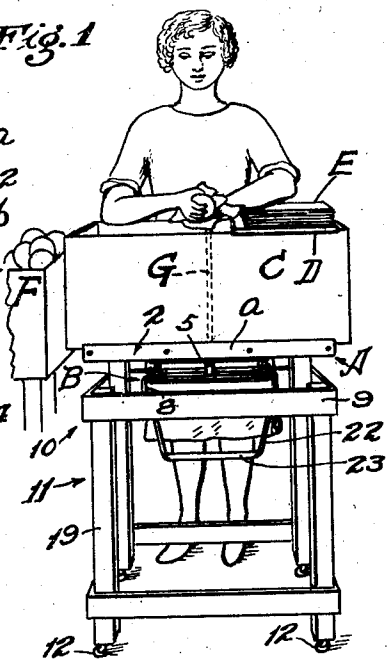
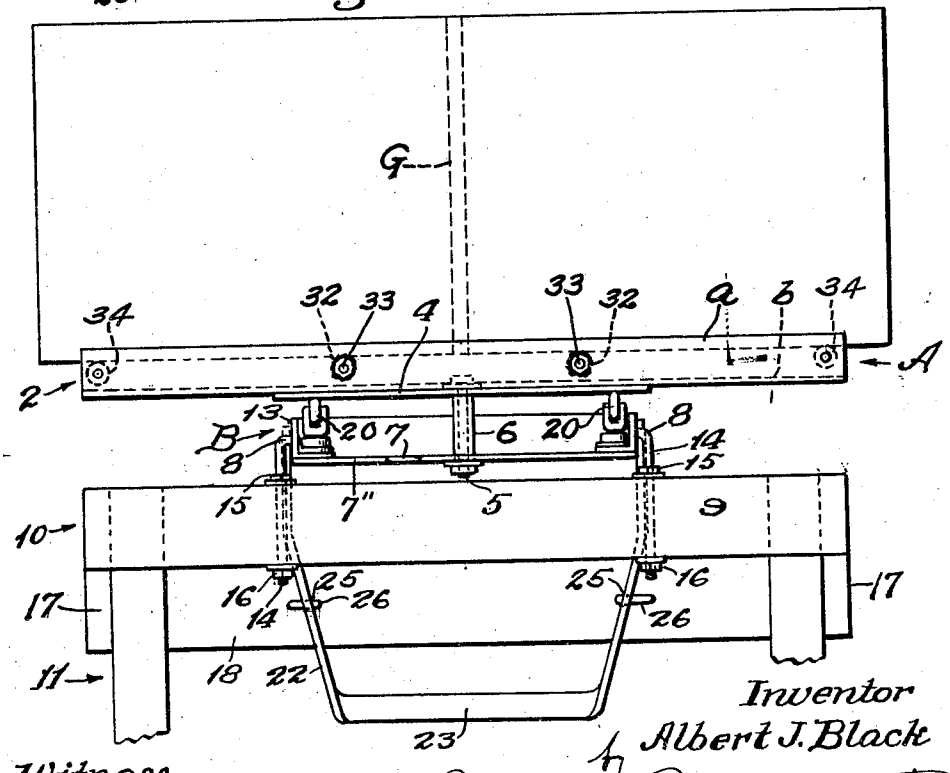


Fig. 3



Witness
C. H. Whitmore

Inventor
Albert J. Black
by James R. Townsend
his Atty.

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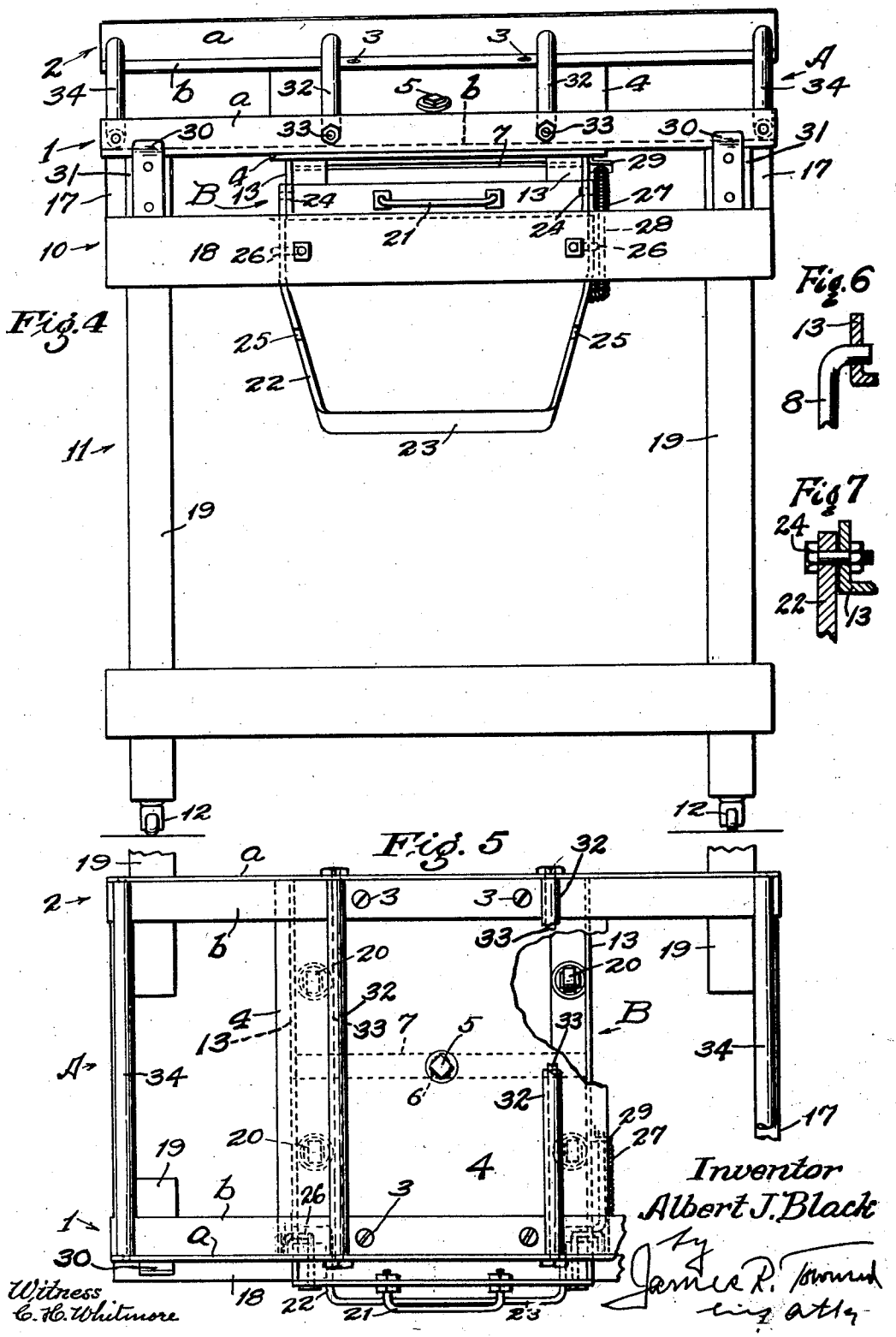


Fig. 4

Fig. 5

Fig. 6

Fig. 7

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UNITED STATES PATENT OFFICE

ALBERT J. BLACK, OF WHITTIER, CALIFORNIA

FRUIT PACKER'S BENCH

Application filed January 3, 1929. Serial No. 330,129.

This invention relates to a bench used in a packing house where lemons, oranges, other citrus fruits, and other fruits that require to be wrapped, are packed for shipment.

Such fruits are brought from the orchards in boxes called lugs and are graded and put into boxes that are to be delivered to the packers, and the packers wrap the separate fruits in paper wrappers of a required size, and, after wrapping each fruit, the packer packs it carefully and closely in the box being filled for storage or shipment.

The wrappers are usually printed papers of uniform size carrying a trade mark or the name of the fruit; and in practice a bunch of loose wrappers is placed on a board called a "paper board" that is placed on that side of the packer's stand opposite to the side on which the box of fruit to be packed is placed so that the packer may with one hand take the fruits separately from the fruit box and with the other hand may take up a wrapper and may wrap the fruit and put in in the shipping box.

The shipping boxes are deep and are twice as long as they are wide and are provided at the mid-length with a transverse partition that separates the box into two end compartments of equal size; and it is customary in practice to place the shipping boxes in a sidewise tilted position on a bench in front of the packer the top of the packing bench being aslant downward toward the packer for convenience in placing the fruit in the shipping box.

It is customary to place the "paper board" on top of that end of the shipping box which is opposite the end in which the fruits are being packed; and when one compartment is filled by the packer, it is customary to turn the box end for end, and to shift the "paper board" with its wrappers from the top of the empty to the top of the filled compartment, and then to proceed with the work as before.

The operation of lifting the boxes to turn them around consumes time and is laborious and bothersome; and as the work is usually done by women and girls, the work proves difficult and tiresome.

An object of this invention is to relieve the packer of such work and to increase the speed and facility with which the work can be done.

The invention is broadly new, basic and pioneer in that I provide a tilting revolvable shipping box support adapted to be held aslant during the packing of one compartment of the box and to be then brought to a horizontal position then revolved half way around and then tilted again to the packing position so that the packer may conveniently pack the other half of the box from the same side as before without changing his position or the method of handling the fruit and wrappers.

An object of the invention is to facilitate the operation of tilting and revolving the packing box and to hold the packing box support stationary in the tilted position.

The fruit boxes are always placed at one side of the packer's stand and an object of the invention is to make it convenient for the packer to arrange the stand for right hand or left hand work according as the packer is right or left handed.

Other objects, advantages, and features of the invention may appear from the accompanying drawings, the subjoined detailed description, and the appended claims.

The accompanying drawings illustrate the invention.

Figure 1 is a perspective view of the invention as in use; there being also shown a shipping box in position on the box holder; a packer standing at the packer's station; a fragment of a fruit box at the right hand of the packer, and a "paper board" with a bunch of wrappers thereon in position to be taken by the left hand of the packer; the tilting frame and box holder are shown in horizontal adjusted position, from which position the packer may return the box holder to the tilted position before beginning to pack fruit into the box.

Fig. 2 is a fragmental elevation of the stand and shipping box viewed from the left in Fig. 1; the tilted position of the tilting frame and box holder being shown

in solid lines and the adjusted position in broken lines.

Fig. 3 is a fragmental elevation of the invention viewed from opposite the packer's station and shown in adjusted horizontal position with the box in place.

Fig. 4 is a front elevation of the invention shown in Fig. 3, omitting the shipping box and showing the box holder and tilting frame tilted.

Fig. 5 is a fragmental plan view of the device with the box holder adjusted to the level position.

Fig. 6 is an enlarged fragmental sectional detail of one of the hinges of the tilting table.

Fig. 7 is an enlarged fragmental sectional detail of the pivot joint of the latch.

The box holder and turn-table A is shown constructed with parallel angle iron side rails 1, 2 that are arranged in fixed relation to each other and respectively provided with guard flanges *a* and base flanges *b*, the latter of which are fixed by screws 3 to a turn-table plate 4 that is pivotally mounted by means of a king bolt 5 and a sleeve 6 upon a cross bar 7 of a tilting frame B that is hinged by hinge pins 8 to the upper rear side member 9 of a stationary slanting top head frame 10 of a supporting stand 11 that is mounted on casters 12 so that it may be easily turned around and moved from place to place on the floor of the packing house as occasion may require.

The tilting frame B is shown as formed of an angle iron front rail 13 and strap iron cross bars 7, 7′, 7″, and is pivoted at one edge by the hinge pins 8 that are shown formed by the upper ends of the standard bolts 14 which are shown fixed as by nuts 15, 16 to the rear upper horizontal side member 9 of the stationary head frame 10 which is shown formed of said rear upper side member 9, the end pieces 17 and the horizontal front member 18 of the head frame that is supported by the legs 19 of the stand.

The tilting frame is provided with anti-friction supports shown as inverted casters 20 on which the turn table plate 4 rests and is revolvably supported in a plane parallel to the plane of the top of the tilting frame, thus allowing the turn table plate 4 with its box holder to be freely revolved on the king bolt 5 and supporting sleeve 6, when the tilting frame is brought to the horizontal position indicated by broken lines in Fig. 2 and solid lines in Fig. 3.

21 is a handle by which the front edge of the tilting frame with its turn table can be swung up and down to bring the box holder from the slanting to horizontal position.

22 is a swinging latch provided with a knee piece 23 and pivoted by a pivot pin 24 to the rails 13 at the front or operator's side of the tilting frame B. The latch is provided on its front edge with a catch 25 and the stand is provided with a keeper 26 formed of staples which the catch may engage to hold the tilting frame when the same is brought to horizontal position. 27 is a helical extension spring to hold the latch 22 forward to engage the keeper when the front of the tilting frame is lifted to bring the tilting frame to horizontal position. 28 is a spring supporting rod pivoted to the latch 22 and running through the spring 27 and fixed to the tilting frame, and said spring and rod are arranged to allow the latch to be retracted by the knee of the operator, thereby, as in Fig. 2, to release it from the keeper, and the spring will return the latch to engagement with the keeper when rearward pressure on the knee piece is relaxed.

The notch 25 in the latch 22 is spaced from the latch pivot 24 such a distance that when the tilting frame has been brought to the level position shown in broken lines in Fig. 2, and solid lines in Fig. 3, the notches 25 engage the keepers 26, thus to hold the tilting frame level.

30 indicates forwardly aslant turn table stops projecting up from upward extensions 31 of the posts that form the front legs of the stand frame. Said turn table stops are in position to be engaged by the front side of the turn table when such table is brought into slanting position for the fruit packing operation.

The box holder is shown provided with anti-friction box supporting rollers 32 journalled on cross rods 33 so that when the box is packed with fruit it may be easily slid endwise off of the box holder along the endwise open runway formed by the side rails 1, 2, held together by the turn table plate 4 and made anti-friction by the rollers 32.

The packer at the front side of the stand, as in Fig. 1, will take hold of the handle 21 and with knee pressed against the latch 22, as indicated in broken lines at 23 in Fig. 2, will lower the front side of the tilting frame to tilting position as indicated in solid lines in Fig. 2. When the pressure of the operator's knee is withdrawn from the latch, the spring 27 will move the latch forward to press against the keepers 26 ready for engagement when the operator again brings the tilting frame to horizontal position.

With the tilting frame and box C tilted as indicated in Fig. 2, the packer proceeds to pack the box and when it is filled, takes hold of the handle 21 and brings the tilting table and box to horizontal position as in Fig. 2, then turns the box half way around and shifts the paper board D with its wrappers E to the full end of the box and proceeds to fill the empty compartment with wrapped fruit as before.

If the operator is left handed and wishes to work from a station opposite from that shown in Fig. 1, she will simply reverse the stand, thus bringing the fruit box F to her left instead of to her right.

G indicates the partition dividing the box in the customary manner.

The method of use will be understood from the foregoing.

The tilting frame will be adjusted to horizontal position and a shipping box will be placed on the rollers 32, that are journalled on the cross rods 33 of the turn table, and the packer standing in front of the stand will lift slightly on the handle 21 to ease the latch from the keeper, and will press against the knee piece 23, thus retracting the latch, and will then lower the front side of the tilting frame to the slanting position where it will remain under the force of gravity as the packing operation proceeds as stated.

The end spring bars 34 are smooth cylinders fixed to the side rail flanges *a*, *b*, and serve to hold the same positively spaced apart and prevent them from binding the rollers 32.

When one end compartment is filled, the packer adjusts the tilting frame and its box holder to horizontal position, whereupon the spring moves the latch into position to hold the frame in level position, then the packer or an attendant may move the box to the left with comparative ease by reason of the anti-friction rollers, and the packed box will then be removed, an empty box will be placed on the box holder, the handle 21 grasped as before, and the weight on the catch relieved, the latch released by rearward pressure of the knee on the latch, and the frame returned to tilted packing position.

I claim:—

1. The combination with a support; of an adjustable tilting frame hinged to the support rearwardly of the front edge thereof; means to releasably hold the front edge of the tilting frame in an adjusted position; a turn table adapted to hold a receptacle and mounted to be revolved on the tilting table; means to hold the tilting table with its front edge elevated in an adjusted position, and knee operated means to release the table from the adjusted position.

2. In a device of the character set forth, comprising a tilting frame; a support therefor and a keeper; of a latch pivoted to the tilting frame and adapted to engage the keeper when the front edge of the frame is raised; a knee piece on said latch by which the latch may be released by the knee of the operator; and a handle above the knee piece so that the front edge of the frame may be conveniently lifted by the hand, and the latch released by the knee at the same time.

3. In a fruit packer's stand, a runway having side rails and cross rollers; a turn-table support for the runway; and means to move the turn-table support to change the rollers from slanting to horizontal position, and vice versa.

4. The combination with a tilting frame, of inverted casters on the frame; a runway comprising side rails and a plate secured to the side rails and resting on the casters; and a king bolt revolvably securing the runway to the tilting frame.

5. A fruit packer's bench comprising the combination with a support; a turn table adapted to hold a box; an adjustable tilting frame hinged to the support rearwardly of the front edge thereof; said tilting frame comprising an angle iron front rail and cross bars; said box support comprising parallel angle iron side rails arranged in fixed relation to each other and respectively provided with guard flanges and base flanges; said base flanges being fixed to a turn-table plate that is pivotally mounted by a king bolt and a sleeve to said tilting frame; said tilting frame being provided with anti-friction supports on which the turn table plate rests and is revolvably supported in a plane parallel to the plane of the top of the tilting frame, thus allowing the turn table plate with its box support to be freely revolved on said king bolt and sleeve, when said tilting frame is brought to the desired position.

In testimony whereof, I have hereunto set my hand at Los Angeles, California, this 28th day of December, 1928.

ALBERT J. BLACK.