

Nov. 17, 1931.

F. MYERS

1,832,410

PACKING STAND

Filed April 30, 1928

2 Sheets-Sheet 1

Fig. 1.

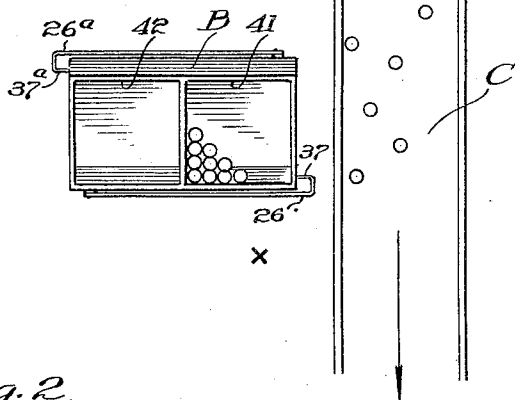


Fig. 2.

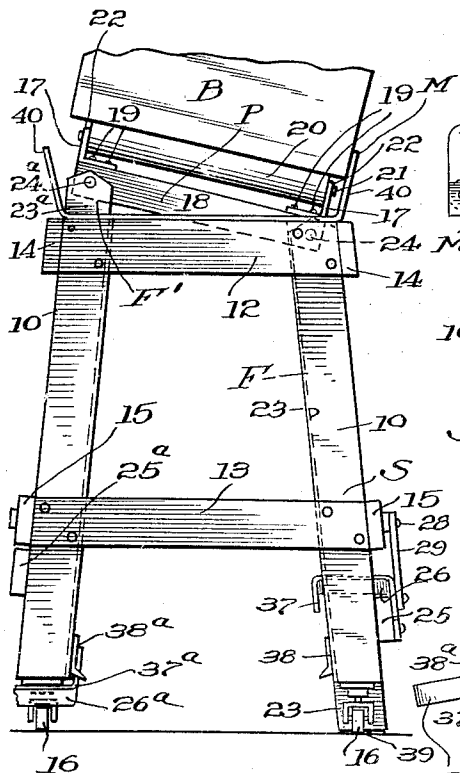
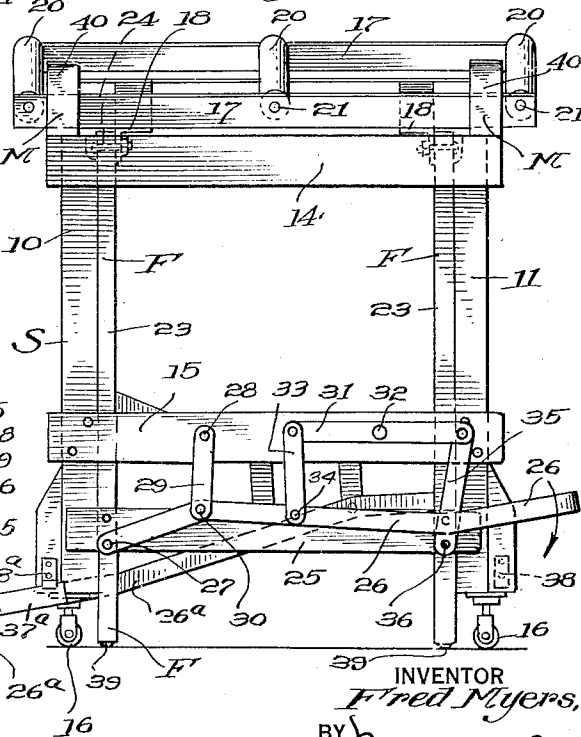


Fig. 3.



INVENTOR
Fred Myers,
BY *Munn & Co*
ATTORNEYS

Nov. 17, 1931.

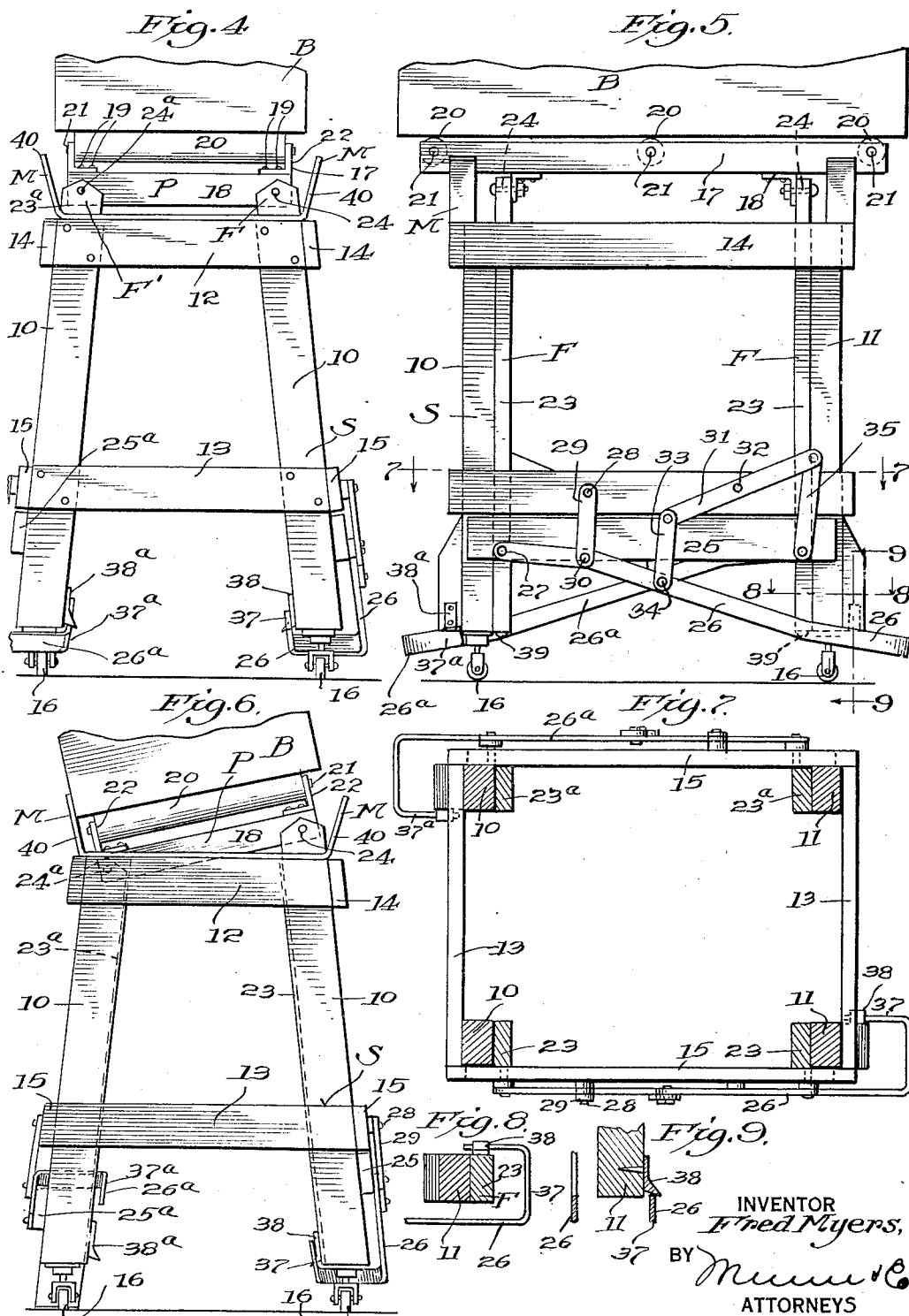
F. MYERS

1,832,410

PACKING STAND

Filed April 30, 1928

2 Sheets-Sheet 2



UNITED STATES PATENT OFFICE

FRED MYERS, OF FALLBROOK, CALIFORNIA

PACKING STAND

Application filed April 30, 1928. Serial No. 274,111.

My invention relates to and has for its purpose the provision of a simple, substantial and inexpensive packing stand particularly adapted, although not necessarily, for use in citrus fruit packing plants, and by which the packing of fruit in the different compartments of the conventional form of crates or boxes is greatly facilitated, and the manual labor attendant the necessary moving and shifting about of the box with respect to the usual traveling conveyor from which the fruit to be packed is removed by the operator, to the positions most convenient to the operator for the packing of the fruit in the different compartments of the box, is reduced to a minimum, and the manipulation of the box while packing the fruit therein accomplished with the utmost ease and dispatch and to the entire elimination of any lifting or other physically fatiguing labor on the part of the operator.

I will describe only one form of packing stand embodying my invention and will then point out the novel features in claims.

In the accompanying drawings,

Fig. 1 is a view showing in plan one form of packing stand embodying my invention, with a box or crate supported thereon, and illustrating the manner in which the stand is adapted to be associated with a fruit delivering conveyor during the packing operation;

Fig. 2 is a view of the packing stand in end elevation and illustrating one position in which a box or crate is adapted to be supported on the stand;

Fig. 3 is a view in side elevation of the packing stand illustrated in Fig. 2;

Fig. 4 is a view of the packing stand illustrating another position in which a box or crate is adapted to be supported on the stand;

Fig. 5 is a view in side elevation of the stand as shown in Fig. 4;

Fig. 6 is a view similar to Figs. 2 and 4 and illustrating still another position in which a box or crate is adapted to be supported on the stand.

Fig. 7 is a horizontal sectional view taken on the line 7—7 of Fig. 5 and looking in the direction of the arrows; and

Figs. 8 and 9 are enlarged detail sectional views taken respectively on the lines 8—8 and 9—9 of Fig. 5, and illustrating one of two latching devices embodied in the packing stand.

Referring specifically to the drawings in which similar reference characters designate similar parts in each of the several views, my invention in its present embodiment comprises a support designated generally at S constructed of wood or other suitable material to provide two pairs of upright members 10 and 11, with the members of each pair rigidly connected together in spaced and upwardly converging relation by means of upper and lower transverse rails 12 and 13 respectively, while the upright members of one pair are rigidly connected in spaced parallel relation to those of the other pair by upper and lower longitudinal rails 14 and 15 respectively, to the end that all of the members will co-operate to form a rigid skeleton frame which is mounted for rolling movement over the floor by means of casters 16 secured to the lower ends of the pairs of upright members 10 and 11.

To provide means for supporting a box B to be packed with fruit, in an elevated position on the support, a platform designated generally at P is shown; and means is provided by which the platform is mounted for movement on the support to occupy a horizontal position as shown in Fig. 4 or either one of two inclined or tilted positions as shown in Figs. 2 and 6.

The platform P in the present instance comprises a pair of longitudinal bars 17 of L shaped cross section rigidly connected in spaced parallel relation by transverse bars 18 also of L shaped cross section and secured to the undersides of the longitudinal bars by fastening members 19. Spanning the longitudinal bars 17 are a plurality of rollers 20 having stub shafts 21 at their ends journaled in the vertical portions 22 of the longitudinal bars. Upon the rollers, the box or crate to be packed with fruit is adapted to rest, and it will be appreciated that while the rollers normally firmly support the box, they permit the box when fully packed with fruit to be

rolled from the platform with a minimum amount of labor on the part of the operator.

The means for mounting the platform for movement in the frame to occupy is two oppositely tilted positions and its horizontal position comprises in the present instance two frames designated generally at F and F' which are mounted for vertical movement in the support S at opposite sides thereof. As the frames F and F' are identical in construction a description of one will suffice for both, and to distinguish the reference characters of one frame from those of the other, the characters for the parts of one frame are provided with exponents.

The frame F comprises a pair of upright members 23 disposed at the inner or confronting sides of one of the members of each pair of members 10 and 11 of the support S and pivotally connected at their upper ends by bolts 24 to the transverse bars 18 of the platform P, while the upright members 23 are tied together in definite spaced relation adjacent their lower ends by a single horizontal member 25. The extremities of the horizontal member 25 project beyond the upright members 23 and ride upon the outer sides of the members 10 and 11 of the support S as the frame F is raised or lowered to thus prevent inward displacement of the frame F, and it will be clear that as the latter is raised or lowered, a corresponding movement will be imparted to one side of the platform P. Such movements of the other frame F' will impart corresponding movements to the opposite side of the platform, to the end that with the frame F lowered and the frame F' raised as is shown in Figs. 2 and 3 the platform P will be inclined towards one side; and with the frame F' lowered and the frame F raised as shown in Fig. 6, the platform will be inclined towards the opposite side, whereas with both frames F and F' raised as shown in Figs. 4 and 5, the platform will occupy a horizontal position.

For each of the frames F and F' I provide an actuating mechanism by which the frames can be moved to their raised positions and releasably retained or latched therein, and as these two mechanisms are identical, a description of one will suffice for both, the reference characters designating the parts of one mechanism being distinguished from those of the other by exponents.

The actuating mechanism for the frame F comprises a foot actuated member in the form of a lever 26 pivoted at one end at 27 on the outer side of the horizontal member 25 of the frame F and projecting at its free end beyond one end of the support S. Pivoted at 28 on a lower longitudinal rail 15 of the support S is a link 29 pivotally connected to the lever 26 at 30, while an equalizing lever 31 is pivoted medially between its ends at 32 to the rail 15 of the support S. To one end

of the equalizing lever 31 is pivotally connected a link 33 pivotally connected at 34 to the actuating lever 26, and to the other end of the equalizing lever is pivotally connected a link 35 in turn pivotally connected at 36 to said horizontal member 25 of the frame F. Upon depression of the free end of the actuating lever 26 by the foot of the operator, from the position shown in Fig. 3 to that shown in Fig. 5, it will be clear that through the medium of the compounded lever system above described the frame F will be raised to the position shown in the latter figure to impart a corresponding movement to the respective side of the platform P.

To provide means for latching the frame F in its raised position, the free end of the actuating lever 26 is bent back upon itself to form a latching arm 37 which in the depressed position of the lever is adapted to be engaged with a keeper 38 secured to the upright member 11 of the support S. The latching of the lever 26 in its depressed position is effected by a slight lateral shifting of the free end of the lever towards the keeper as the foot of the operator depresses the lever, and the unlatching of the lever is effected by a slight reverse lateral movement of the latter, thus permitting the frame F to gravitate to its lowered position under the weight of the platform and the box supported thereon.

It will be understood that the actuating mechanism for the frame F' is associated with the horizontal member 25^a of the latter and the lower longitudinal rail 15 at the opposite side of the support S in the same manner just described for the actuating mechanism of the frame F, to the end that the free ends of the actuating levers 26 and 26^a will project from the support S at diagonally opposite corners thereof for actuation of the respective frames independently of each other.

The lower ends of the members 23 and 23^a of the frames F and F' respectively are provided with friction elements 39 in the form of rubber buttons which engage the floor when the frames occupy their lowered positions, thus definitely limiting the lowered positions of the frames and positively preventing accidental rolling movement of the support S over the floor, when the platform P occupies either of its inclined positions.

To prevent displacement of a box from the platform P under the action of gravity when the platform occupies its inclined positions, stop members designated generally at M are provided, one at each end of the support S, and each comprising a length of strap metal secured upon the top side of an upper transverse rail 12 of the support S and having its free ends bent upwardly to provide abutments 40 which are disposed in the path of movement of the box should the latter tend to slide downwardly on the plat-

form under the action of gravity. However, when the platform is in its horizontal position, the bottom of a box on the platform will clear the upper extremities of the abutments 40 so that the latter will not interfere with rolling of the box off of the platform.

In the operation of the packing stand, reference will first be had to Fig. 1 wherein C indicates a conveyor alongside of which stands an operator who is facing the packing stand which has also been rolled to a position alongside of the conveyor and has a box B to be packed with fruit, supported on its platform P. The operator stands sufficiently close to the conveyor as at X to conveniently reach and remove fruit from the conveyor with one hand as the conveyor travels in the direction of the arrow.

Let it be assumed that the platform P has been adjusted on the support to one of its inclined positions wherein the box B will be tilted downwardly towards the operator so that the latter can conveniently reach into the compartments 41 and 42 of the box B; and that the side of the platform directly in front of the operator is that which is controlled by the actuating lever 26, the latter being disposed at the forward right hand corner of the support S as is shown in Fig. 1. The operator now removes an article of fruit from the conveyor with the right hand and wraps the article with tissue paper, after which the article is placed by the left hand of the operator in the right hand compartment 41 of the box, this operation being repeated until the compartment 41 is filled.

The operator now steps upon the lever 26 and latches the latter in its depressed position, which operation raises the side of the platform directly in front of the operator so that the platform and hence the box occupy horizontal positions.

The friction elements 39 of both frames F and F' now clear the floor, so that the operator can now rotate the packing stand bodily on its casters 16, 180° from its former position so that the empty compartment 42 of the box will now be the right hand compartment and the actuating lever 26^a occupies the same relation to the operator as previously did the actuating lever 26. The actuating lever 26^a which during the filling of the compartment 41 was latched in its depressed position is now released allowing the side of the platform at present directly in front of the operator, to lower, so that the platform and hence the box is again inclined downwardly towards the operator. The filling of the compartment 42 is then accomplished in the same manner as was the compartment 41, after which the operator steps upon the actuating lever 26^a to move the latter to and latch it in its depressed position, thus again restoring the platform and hence the box to horizontal position.

The operator now rolls the packing stand over the floor to another conveyor (not shown), and then rolls the completely filled box of fruit off of the platform P onto this conveyor. The packing stand is then returned to the conveyor C; another and empty box is placed on the platform P; and the side of the platform directly in front of the operator is lowered, after which the above described operation is repeated.

From the foregoing operation, it will be manifest that broadly I have provided a packing stand capable of being readily moved from place to place and embodying a means for supporting a box or crate to be filled with fruit, which means is capable of being adjusted in such manner and with a minimum expenditure of manual labor as to dispose a box or crate supported thereon in a position tilted downwardly towards the operator to permit the rapid and convenient filling of both the compartments of the box, which would be impossible unless reversing of the positions of the box compartments with respect to the fruit delivering conveyor while maintaining the box tilted downwardly towards the operator, could be effected, as the operator cannot remain in easy and convenient reaching distance of the conveyor and of both the box compartments at one end the same time.

Although I have herein shown and described only one form of packing stand embodying my invention, it is to be understood that various changes and modifications may be made therein without departing from the spirit of the invention and the spirit and scope of the appended claims.

I claim:

1. A packing stand comprising a support, a platform capable of supporting a box, means for mounting the platform in an elevated position on the support for movement to occupy a horizontal position and either one of two oppositely inclined positions, and two means, one for actuating the mounting means to elevate one extremity of the platform and the other for actuating the mounting means to elevate the opposite extremity of the platform, whereby to move the platform to one or the other of two oppositely inclined positions according as one or the other of said two means is actuated, and to move the platform to a horizontal position in response to actuation of both of said two means.

2. A packing stand comprising a support, a platform capable of supporting a box, means for mounting the platform in an elevated position on the support for movement to occupy a horizontal position and either one of two oppositely inclined positions, two means, one for actuating the mounting means to elevate one extremity of the platform and the other for actuating the mounting means to elevate the opposite extremity of the plat-

form, whereby to move the platform to one or the other of two oppositely inclined positions according as one or the other of said two means is actuated, and to move the platform to a horizontal position in response to actuation of both of said two means, and means for latching the platform in its inclined and horizontal positions.

3. A packing stand comprising a support mounted for rolling movement, means for supporting a box in which citrus fruit is adapted to be packed, means for mounting the first means in an elevated position on the support for movement to occupy one position wherein a box on the first means will be tilted in one direction, and a second position wherein the box will be tilted in a reverse direction, means by which the mounting means can be actuated to dispose the box in one or the other of its positions, and means for releasably retaining the mounting in either of its positions.

4. A packing stand comprising a support mounted for rolling movement, means for supporting a box in which citrus fruit is adapted to be packed, means for mounting the first means in an elevated position on the support for movement to occupy one position wherein a box on the first means will be tilted in one direction, a second position wherein the box will be tilted in a reverse direction, and a third position wherein the box will be horizontally disposed, means by which the mounting means can be actuated to dispose the box in any one of its said positions, and means for latching the mounting means in any one of its said positions.

5. A packing stand comprising a support, means for supporting a box in which citrus fruit is adapted to be packed, means for mounting the first means in an elevated position on the support for movement to occupy one position wherein a box on the first means will be tilted in one direction, and a second position wherein the box will be tilted in a reverse direction, and foot operated means by which the mounting means can be actuated to dispose the box in one or the other of its positions.

6. A packing stand comprising a support mounted for rolling movement, means for supporting a box in which citrus fruit is adapted to be packed, means for mounting the first means on the support for movement to occupy one position wherein a box on the first means will be tilted in one direction, and a second position wherein the box will be tilted in a reverse direction, and means by which the mounting means can be actuated to dispose the box in one or the other of its positions, said mounting means adapted to engage the floor when the first means occupies either of its positions, to thereby prevent rolling movement of the support.

7. A packing stand comprising a support

mounted for rolling movement, means for supporting a box in which citrus fruit is adapted to be packed, means for mounting the first means on the support for movement to occupy one position wherein a box on the first means will be tilted in one direction, a second position wherein the box will be tilted in a reverse direction, and a third position wherein the box will be horizontally disposed, and means by which the mounting means can be actuated to dispose the box in any one of its said positions, said mounting means adapted to engage the floor when the first means occupies its first and second mentioned positions, to thereby prevent rolling movement of the support, and adapted to clear the floor when the first means occupies its third mentioned position so as to render the support free for rolling movement.

8. A packing stand comprising a support, means for supporting a box in which citrus fruit is adapted to be packed, means for mounting the first means in an elevated position on the support for movement to occupy one position wherein a box on the first means will be tilted in one direction, a second position wherein the box will be tilted in a reverse direction, and a third position wherein the box will be horizontally disposed, means by which the mounting means can be actuated to dispose the box in any one of its said positions, and means for preventing displacement of the box from the first means under the action of gravity when the box occupies its first and second mentioned positions, yet being ineffective to prevent such displacement when the box occupies its third mentioned position.

9. A packing stand comprising a support mounted for rolling movement, means for supporting a box in which citrus fruit is adapted to be packed, means for mounting the first means on the support for movement to occupy one position wherein a box on the first means will be tilted in one direction, a second position wherein the box will be tilted in a reverse direction, and a third position wherein the box will be horizontally disposed, means by which the mounting means can be actuated to dispose the box in any one of its said positions, and means for preventing rolling movement of the support when the first means occupies its first and second mentioned positions, yet being ineffective to prevent such rolling movement when the first means occupies its third mentioned position.

10. A packing stand comprising a support, a platform for supporting a box, means for mounting the platform for movement on the support to occupy either of two oppositely tilted positions according as one extremity of the platform is raised and the opposite extremity lowered or vice versa, and to occupy a horizontal position according as both of said sides are raised, and means for actuating the

mounting to move the platform to any of its said positions.

11. A packing stand comprising a frame, a platform on which a packing box for citrus fruit is adapted to be supported, means for mounting the platform for movement on the frame to occupy either of two tilted positions and a horizontal position comprising a pair of members mounted for vertical movement in the frame and pivotally connected to the platform to raise or lower one side of the latter according as the members are raised or lowered, and a second pair of members mounted for vertical movement in the frame and pivotally connected to the platform to raise or lower the opposite side of the latter according as the second pair of members are raised or lowered, and two means, one for each of said pair of members, for actuating the pairs of members independently of each other.

12. A packing stand comprising a frame, a platform on which a packing box for citrus fruit is adapted to be supported, means for mounting the platform for movement on the frame to occupy either of two tilted positions and a horizontal position comprising a pair of members mounted for vertical movement in the frame and pivotally connected to the platform to raise or lower one side of the latter according as the members are raised or lowered, and a second pair of members mounted for vertical movement in the frame and pivotally connected to the platform to raise or lower the opposite side of the latter according as the second pair of members are raised or lowered, and two means, one for each of said pair of members, for actuating the pairs of members independently of each other, each of said two means comprising a foot actuated member, and a compounded lever system operatively connecting the foot actuated member and a pair of said members, and operable in response to a depression of the foot actuated member to raise the corresponding pair of members, and means for latching the foot actuated member in depressed position.

13. A packing stand as embodied in claim 11 wherein said platform comprises a pair of longitudinal spaced apart members, a pair of transverse members connecting the longitudinal members, and rollers spanning and journaled in the longitudinal members, on which a box is adapted to be directly mounted to facilitate rolling of the box onto and off of the platform.

14. A packing stand as embodied in claim 11 including stop members secured to the frame in such positions as to prevent displacement of a box from the platform under the action of gravity when the platform occupies its tilted positions.

15. A packing stand comprising a support, a platform, means for mounting the platform

on the support for movement to occupy either of two oppositely inclined positions, two means, one for actuating the mounting means to move the platform to one inclined position and the other for actuating the mounting means to move the platform to the other extreme position, and means for latching the platform in one position or the other.

16. A packing stand comprising a support, a platform, means for mounting the platform on the support for movement to occupy either of two oppositely inclined positions, two actuating means separate from each other, one for moving the platform to one inclined position and the other for moving the platform to the other inclined position, and two means, one for releasably retaining the platform in one position and the other for releasably retaining the platform in the other position.

Signed at Fallbrook, in the county of San Diego and State of California, this 20th day of April, A. D. 1928.

FRED MYERS.

90

95

100

105

110

115

120

125

130