

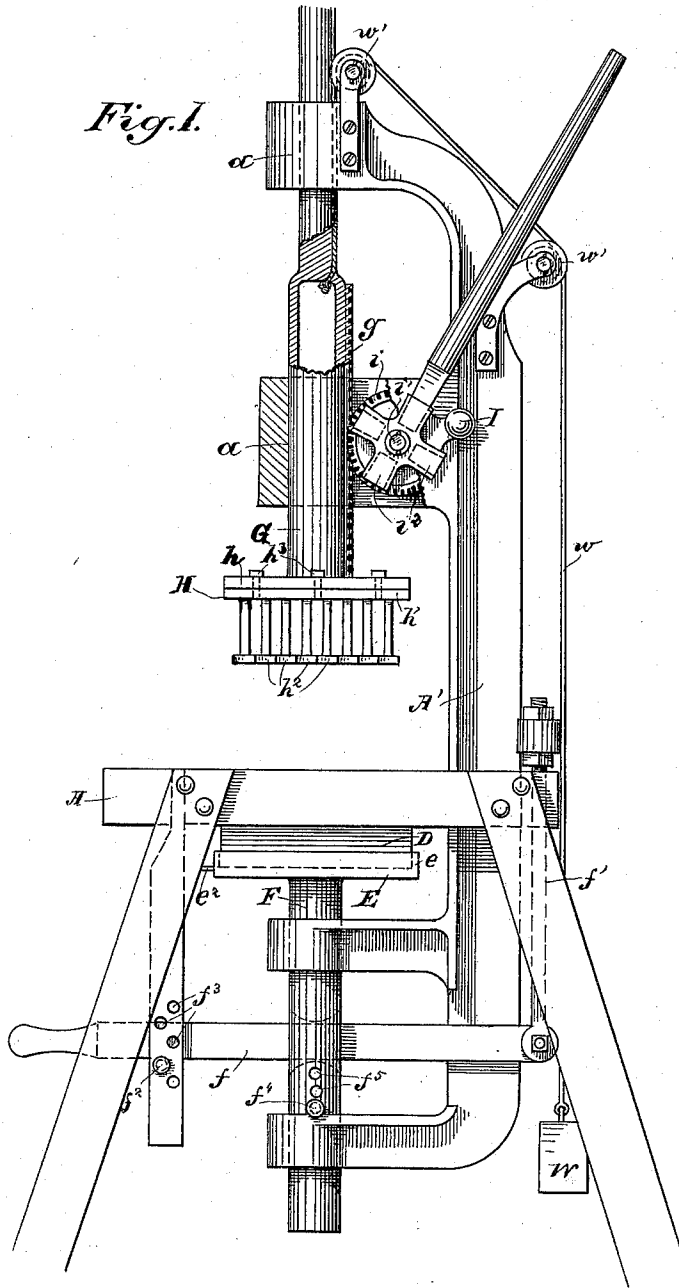
(No Model.)

2 Sheets—Sheet 1.

A. C. DENOTOVICH & J. PORTEOUS.
PRESS FOR PACKING FRUIT.

No. 544,886.

Patented Aug. 20, 1895.



Witnesses,
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H. F. Aschbeck

Inventors,
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By Dewey Co. atty.

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Fig. 2.

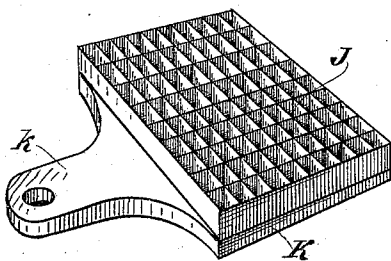


Fig. 3.

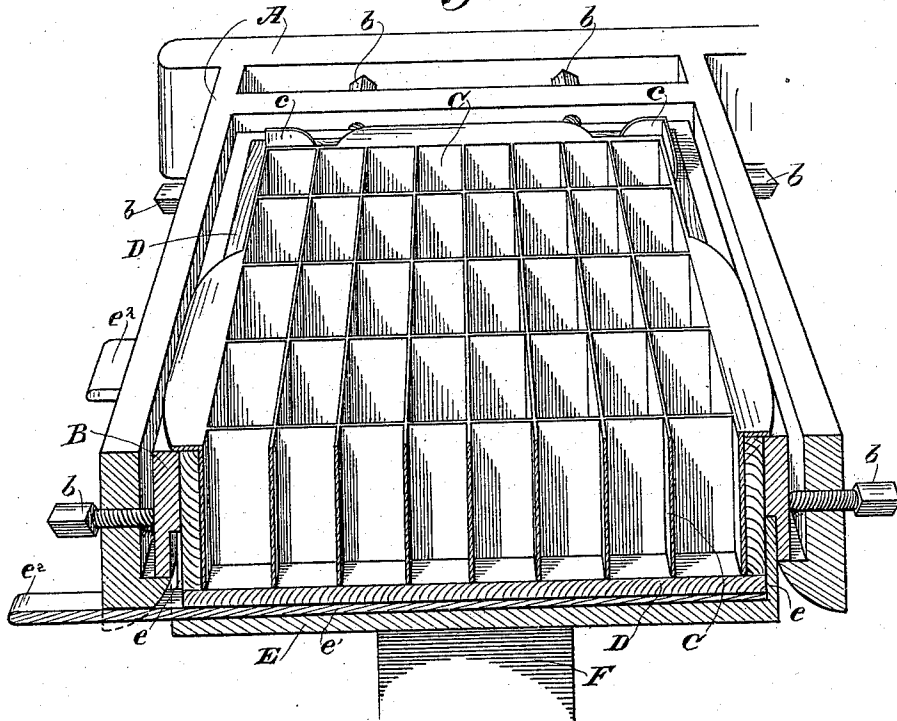
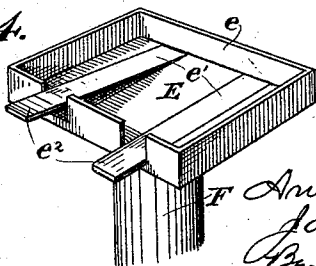


Fig. 4.



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UNITED STATES PATENT OFFICE.

ANTONY C. DENOTOVICH AND JAMES PORTEOUS, OF FRESNO, CALIFORNIA;
SAID DENOTOVICH ASSIGNOR TO SAID PORTEOUS.

PRESS FOR PACKING FRUIT.

SPECIFICATION forming part of Letters Patent No. 544,886, dated August 20, 1895.

Application filed February 15, 1895. Serial No. 538,581. (No model.)

To all whom it may concern:

Be it known that we, ANTONY C. DENOTOVICH, a subject of the Emperor of Austria-Hungary, and JAMES PORTEOUS, a citizen of the United States, residing at Fresno, Fresno county, State of California, have invented an Improvement in Presses for Packing Fruit; and we hereby declare the following to be a full, clear, and exact description of the same.

Our invention relates to means for packing fruit into boxes in such a manner that it shall lie therein in separate packages or parcels, whereby any one or more of said packages may be removed from the box without difficulty; and our invention consists of the constructions and combinations of parts forming an improved press for packing the fruit, as we shall hereinafter fully describe and claim.

Referring to the accompanying drawings for a more complete explanation of our invention, Figure 1 is a side elevation of our press. Fig. 2 is a perspective view of one of the supply-molds J with its removable bottom board K. Fig. 3 is a perspective view showing the main mold C in position in its frame B, from which it is separated by a circumscribing space to permit the sides of the box D to pass upwardly, said box being here shown as held up to place directly under the mold. Fig. 4 is a view of the vertically-movable platform E within which box D rests.

A is the stand or frame of the press, in the table or top of which is seated a frame B, the relative position of which in said table-top is regulated by the set-screws *b*. Rigidly connected with and supported by the frame B is the mold C, which consists of a frame open top and bottom and provided with intersecting strips, whereby the mold is formed into a number of separate compartments. These compartments may be of any shape desired. The sides of the mold are separated from the sides of the frame B, leaving a space between them, and into this space the sides of the packing-box D are adapted to enter, whereby said box may be raised up under and overlap the mold. The packing-box rests upon a platform E, which is provided with an encircling flange *e*, embracing the lower portion of the box and forming a stiffener or protection

against the excessive pressure within the box, tending to burst it.

Countersunk in the upper surface of the platform E are two ejector-strips *e'*, an end of each of which projects through a suitable groove in the encircling flange *e*, and is formed with a handle *e''* on the outside, by the grasping of which the strip *e'* may be raised and thereby free the box from the flanged platform when the box is to be removed.

The platform E is movable vertically, which result may be accomplished in any suitable manner and by any suitable mechanism. We consider the best form is that here shown, and which consists of a stem F extending downwardly from the platform and adapted to be vertically moved by means of a lever *f* suitably engaging said stem. This engagement is here shown as being effected by said lever passing through a slot in the stem, and said lever is to be properly fulcrumed, (here shown as suspended from an adjustable link *f'* on the back of the frame.) The lever may be held in any position to which it is adjusted in order to regulate the height of the platform E by any suitable gage or stop device. The simplest form is by means of a removable pin entering a series of holes, and this may be, as shown, by the pin *f''* passing under the lever and engaging with any of the series of holes *f'''* in the frame of the machine, or by the pin *f''* entering any of a series of holes *f''''* in the stem F and adapted to rest upon one of the frame-bars and thereby hold the stem. The object and effect of both of these forms are merely to regulate the vertical position or height of the platform E for the purpose we shall hereinafter describe.

Rising from the frame A is a standard A', the upper portion of which is bent over and is provided with sockets *a*, through which reciprocates the stem G of the plunger H. This plunger is best formed of an upper plate *h* and a lower plate *h'*, on which are formed the separate or individual presses or plungers *h''*, said plate *h'* being adapted to be removably secured to the top plate *h* by bolts *h'''*, whereby one plate *h'* may be removed and another having other shapes or forms of individual plungers *h''* be substituted. This plunger H

is adapted to be raised and lowered, and in lowering its individual plungers are adapted to enter the compartments of a mold C. Any suitable mechanism may be employed to raise and lower this plunger; but the best means we consider as consisting of the rack *g*, formed on the plunger-stem *G*, said rack engaging with a pinion *i* on a short shaft *i'*, provided with a handle *I* and having also a socket *i''* to receive a longer lever when it is desired to effect a great pressure. By operating the handle the plunger may be raised and lowered quickly, and by operating the lever a suitable pressure may be applied when required.

J is a supply-mold. This consists of a frame open top and bottom and divided by intersecting strips into a number of separate compartments, said mold being similar to the main mold C. There may be as many of these molds as there are operatives attached to this particular machine, and for each supply-mold there is a temporary resting board or base *K*, provided with a handle *k*.

Upon the corners of the main mold C are the angular flanges *c*, which serve to accurately register the supply-molds *J* when they are placed on top of said main mold.

The object of the set-screws *b* is to so adjust the frame B as to bring the main mold C into proper alignment with the plunger above, so that its individual pressers will register accurately with the compartments of the mold.

The plunger is counterbalanced by a weight *W*, suspended from a line *w* running up over suitable pulleys *w'* on the frame-standard *A'* and thence passing down to and suitably connected with the stem *G* of the plunger, the connection being here shown as an interior one, the end of the line passing into the hollow base of said stem.

In practical operation and with the use of sticky or gummy fruit—such as figs—it is found best to make the separate packages or parcels by supplying successive layers of single independent pieces, which layers are successively forced from the compartment-mold into the box until the complete package or parcel is built up. This is for the purpose of avoiding excessive friction or adhesion, which follows the attempt to force from the molds a complete package or parcel of gummy fruit.

The operation of our invention is essentially as follows: The operatives, in any number, each having a supply-mold *J*, place fruit each in his own mold until all the compartments of the mold are full. He may either place a single piece of fruit in each compartment or may fill a complete parcel or package in each compartment, preferably the former, and thus supply a single layer each time. Then with the supply-mold upon the temporary base *K* he delivers it to the pressman, who places the mold, with the temporary base, on top of the main mold C and registers it accurately by contact with the

corner-flanges *c*. Then he withdraws the temporary base, thus leaving the supply-mold directly on top of the main mold. He then brings down the plunger until the individual pressers or plungers enter the compartments of the supply-mold and passing through them force each piece of fruit out into the compartments of the main mold and down therein onto the underlying box, which at this time is pressed up by the platform *E* close under the main mold and forms a bottom therefor. He thereupon raises the plunger, and the supply-mold, being free, is taken off and given to the filler. Then he brings the plunger down again through the compartments of the main mold and presses strongly upon the fruit, so that it is flattened out to assume the shape of the mold. Then he relieves the plunger, and now he drops the platform *E* one peg, so that the box will drop down from the main mold to about the thickness of the fruit to be pressed into it. Then he puts pressure on the plunger again, whereby the fruit is pressed out of the mold into the box, and continued pressure will cause the fruit to flatten out and fill up the creases or spaces due to the thickness of the walls of the mold-compartments. Now with the box resting still in this position, a second supply-mold is put in place, and the operation is repeated to drive down another layer, and after the second pressure the box is dropped down one more notch to provide for this second layer, and so on throughout the operation, until as many layers are pressed into the box as are necessary to complete the packages or parcels, and these lie independently and separately in the box and are pressed closely and tightly together, though readily separable.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A press for packing fruit consisting of a compartment mold to receive the fruit, an underlying platform to support and hold the box up to the mold, a means for regulating the height of the platform and holding it where regulated consisting of a lever connected with the platform and having adjustable stops, and a plunger adapted to enter the compartment mold and force the fruit therefrom into the underlying box.

2. A press for packing fruit consisting of a compartment mold to receive the fruit, an underlying platform to support and hold the box up to the mold, a means for regulating the height of the platform and holding it where regulated, consisting of a lever connected with the platform and having adjustable stops, an adjustable fulcrum for the lever, and a plunger adapted to enter the compartment mold and force the fruit therefrom into the underlying box.

3. In a press for packing fruit, the combination of the compartment mold, the reciprocating plunger, the adjustable box holding

platform underneath having the encircling flange to protect the box, and the ejector strips in said platform for removing the box.

4. In a press for packing fruit, the combination of a reciprocating plunger, the compartment mold in which said plunger operates and the adjustable frame carrying said mold and separated from it, whereby it is caused to register with the plunger and space

is provided to receive the box pressed up to from below.

In witness whereof we have hereunto set our hands.

ANTONY C. DENOTOVICH.
JAMES PORTEOUS.

Witnesses:

W. D. CRICHTON,
J. W. DUMAS.