S. E. & C. W. MADDOX.

FRUIT BOX PRESS.

APPLICATION FILED JULY 27, 1910.

995,695.

Patented June 20, 1911.

2 SHEETS—SHEET 1.

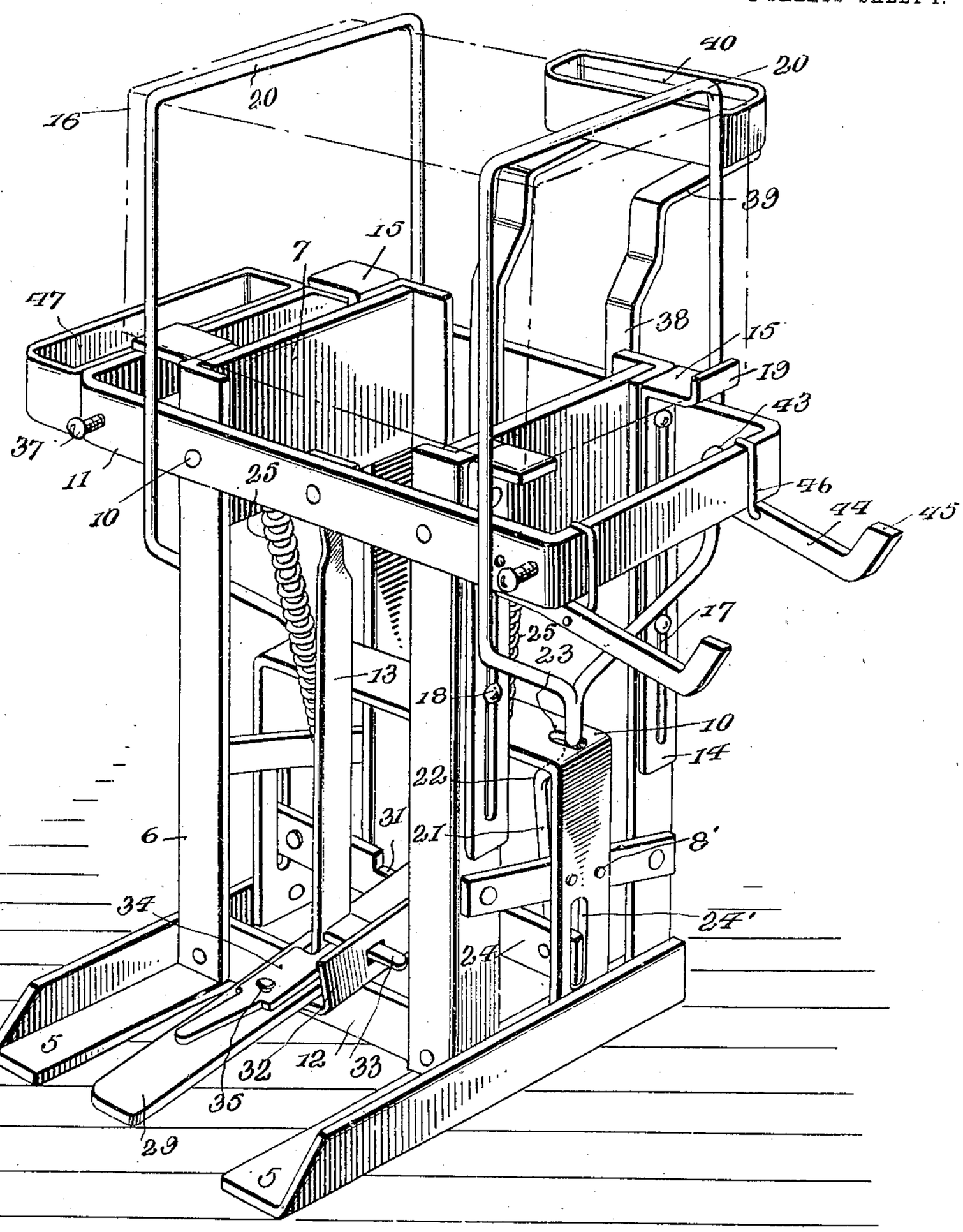

Fig. 1.

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2 SHEETS—SHEET 2.

Fig. 3.

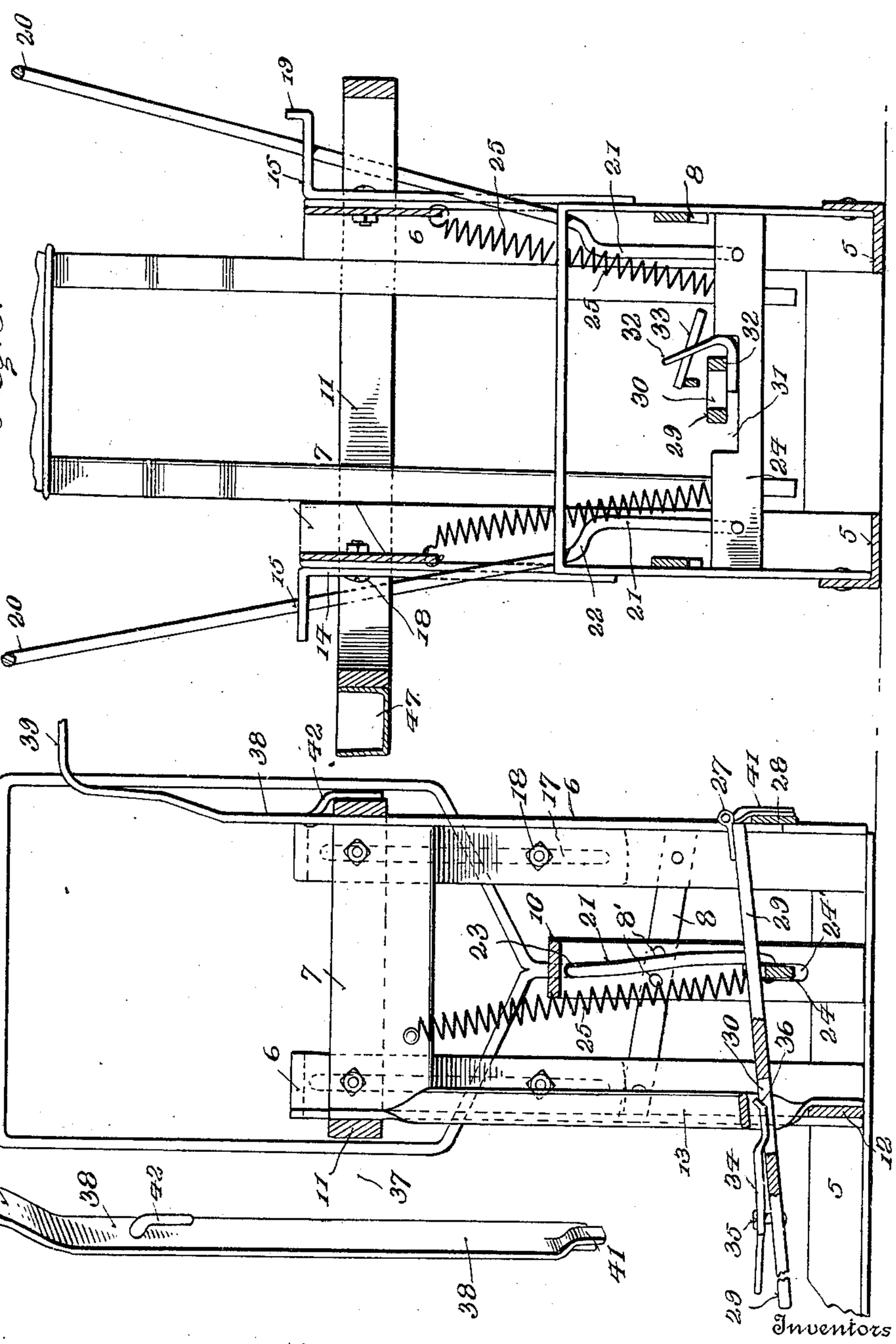

Fig. 2.

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UNITED STATES PATENT OFFICE.

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FRUIT-BOX PRESS.

995,695. Specification of Letters Patent. **Patented June 20, 1911.**

Application filed July 27, 1910. Serial No. 574,192.

To all whom it may concern:

Be it known that we, STEPHEN E. MADDOX and CHARLES W. MADDOX, citizens of the United States, residing at Aztec, in the county of San Juan and Territory of New Mexico, have invented certain new and useful Improvements in Fruit-Box Presses, of which the following is a specification.

This invention relates to presses and more particularly to a machine for pressing and packing fruit in crates, boxes and similar containers preparatory to shipment.

The object of the invention is to provide a strong, durable and thoroughly efficient machine of the character described, the construction of which is such that the lid of a crate or box may be pressed against the fruit and said lid clamped in position on the crate during the nailing operation, by the movement of a single actuating lever.

A further object is to provide a press including co-acting clamping loops or yokes having offset portions which project through openings in the supporting frame and serve to force said yokes into engagement with the lid of a crate when the actuating lever is depressed.

A further object is to connect the clamping loops or yokes to the vertically movable bar of the machine, in such a manner that one of said yokes may be moved into engagement with the crate or box, while the other remains idle.

A still further object of the invention is generally to improve this class of devices, so as to increase their utility, durability and efficiency.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

For a full understanding of the invention and the merits, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a perspective view of a fruit box press constructed in accordance with our invention, showing the yokes or loops forced downwardly into engagement with a crate or box; Fig. 2 is a vertical sectional view of Fig. 1; Fig. 3 is a longitudinal sectional view, showing the clamping yokes or loops in inoperative position; Fig. 4 is a detail perspective view of a portion of the frame of the nail receptacle.

Corresponding and like parts are referred to in following description and indicated in all the views of the drawings by the same reference characters.

The improved press forming the subject matter of the present invention comprises spaced horizontally disposed supporting sills 5, preferably formed of angle iron and to which are bolted or otherwise rigidly secured, spaced corner pieces or uprights 6 also preferably formed of angle iron.

The upper ends of the uprights 6 are connected by flat side plates 7 while the lower ends of said uprights are connected by side braces or bars 8 to which are riveted at 8′, the depending legs 9 of an inverted substantially U-shaped frame or yoke 10.

Disposed in spaced relation to the upper ends of the members 6 and secured to the exterior faces thereof by bolts or similar fastening devices, is a substantially rectangular frame 11, one side of which is connected to a transverse bar 12 by means of a vertical brace 13, preferably disposed at the front of the machine, as shown.

Secured to the exterior or interior faces of the members 6, are vertically adjustable bars 14 having their upper ends bent laterally to form angularly disposed lips 15 adapted to receive and support a crate, box or similar container, indicated at 16. The bars 14 are provided with slots 17 so as to permit vertical adjustment of the lips 15 and thus accommodate boxes of different sizes, there being bolts or similar fastening devices 18 extending through the slots and engaging the adjacent side members 6 for clamping the bars 14 in adjusted position.

The lip 15 of one of the bars 14 is provided with a vertical extension or stop shoulder 19 adapted to bear against the adjacent end of the box and prevent accidental displacement thereof.

Disposed on opposite sides of the machine and embracing the frame 11 are clamping loops 20, each provided with a shank 21, the intermediate portion of which is offset at 22 and passes through an opening 23 formed in the top of the frame or yoke 10 for connection with a vertically movable bar 24. The bar 24 is slidably mounted for vertical

movement in slots 24′ formed in the legs 9 of the yoke and is normally retained in engagement with the upper walls of said slots by means of coil springs 25, one end of each of which is secured to the bar 24, while the other end thereof is anchored in any suitable manner on the adjacent side plate 7.

It will here be noted that by making the intermediate portions of the shanks 21 offset, when the connecting bar 24 is pressed downwardly, the clamping loops will be forced inwardly and downwardly into engagement with the top of the crate, thus to firmly hold the same in position on the crate during the nailing operation and at the same time press the fruit within the crate.

Pivotally mounted at 27 on a cross bar 28 at the rear of the frame, is an actuating lever 29, the intermediate portion of which is provided with a slot 30 for the reception of the bar 13. The lower face of the lever 29 bears against the upper edge of the connecting bar 24 so that when the free end of said lever 29 is depressed, the loops 20 will be simultaneously actuated to clamp the lid on a crate. The connecting bar 24 is preferably provided with a recess 31 to accommodate the lever 29, but if desired, the recess may be omitted.

Secured to one side of the actuating lever 29, is an angle bar 32 having an opening formed in the vertical flange thereof for the shank of a clutch device 33, the latter being preferably in the form of a flat plate, the inner face of which is adapted to bite into the bar 13 and thus hold the loops 20 in engagement with the crate when the lever 29 is depressed.

As a means for releasing the clutch device 33, there is provided a foot operated lever 34, one end of which is pivotally mounted at 35 on the lever 29, while the opposite end thereof is provided with a finger 36 which extends within the recess 30, beneath the active end of the clutch 33 so that when the lever 34 is depressed, the clutch will be released from engagement with the bar 13, thus to permit the lever 29 to be returned to normal position and move the loops 20 outwardly to the position shown in Fig. 3 of the drawings.

It will here be noted that the lower or offset portions of the clamping loops 20 are connected to the bar 24 in such a manner, that said loops may be actuated simultaneously to clamp the crate, or independently, by merely holding one of said loops, while the other is in operation.

Extending laterally from the opposite ends of the frame 11 are set screws 37 which receive the impact of the clamping loops and also serve to limit the outward movement thereof.

Disposed at the rear of the machine, is an auxiliary frame including spaced bars 38 having their upper ends bent laterally to form supporting arms 39, to which is secured in any suitable manner a nail receiving receptacle 40. The lower ends of the bars 38 are cut or severed to produce spaced fingers 41 adapted to embrace the upper edge of the transverse bar 28 on opposite sides of the hinge 27, there being hooks 42 secured to the outer faces of the bars 38 and extending over the upper edge of the frame 11, as shown, for the purpose of retaining the auxiliary frame in position thereon. Thus it will be seen that by exerting a slight upward pull on the auxiliary frame, the latter may be readily detached from the main frame of the machine, when desired.

Pivotally mounted at 43 on one end of the frame 11, are spaced supporting arms 44 adapted to receive the lids or boards constituting the top or cover of the crate, the free ends of the arms being provided with angularly disposed retaining fingers 45 for preventing accidental displacement of said boards. Pivotally connected with each supporting arm 44, is a suspension hook 46 which engages the adjacent end of the frame 11 and serves to retain the arms in horizontal position.

By detaching the hooks 46 from the frame 11, the supporting arms 44 may be swung downwardly and inwardly to inoperative position, as will be readily understood.

An auxiliary nail receptacle 47 is preferably secured to the frame 11 at a point diametrically opposite the supporting arms 44.

In operation, a box or crate containing fruit or the like, is positioned on the fingers 15 with one end of the box bearing against the stop shoulder 19. The boards constituting the lid or cover are then placed on top of the box and the foot lever 29 depressed which causes the offset portions of the clamping loops to force the latter inwardly and downwardly into engagement with the cover of the crate and thus press the fruit within said crate, the clutch 33 serving to hold the loops in engagement with the lid and thus prevent accidental displacement of the lid during the nailing operation. By depressing the free end of the releasing lever 34, the clutch 33 will be thrown out of engagement with the bar 13, thereby permitting the free end of the foot lever 29 to ascend by the action of the springs 25, the clamping loops at the same time moving upwardly and outwardly to released position so as to permit the ready removal of the crate or box from the supporting table of the machine.

Having thus described the invention, what is claimed as new is:

1. A fruit press including a frame having means for supporting a crate, a yoke forming a part of the frame and having its up-

per portion provided with openings and its legs formed with vertical slots, a bar slidably mounted in said slots, clamping loops provided with shanks having their intermediate portions offset and extending through the openings in the yoke and their lower ends connected with said bar, springs forming a connection between the bar and frame, a foot lever pivotally mounted on the frame and adapted to depress the bar and move the loops into engagement with the crate, means for locking the foot lever in depressed position, and means carried by said lever for releasing the locking means.

2. A fruit press including a frame having means for supporting a crate, an inverted U-shaped yoke forming a part of the frame and having its upper portion provided with openings and its opposite legs formed with vertical slots, clamping loops having offset shanks extending through the openings in the yoke, a vertically movable bar connecting the lower ends of the shanks slidably mounted in said slots, means operatively connected with the movable bar for normally holding the latter in elevated position, and a foot lever pivotally mounted on the frame and adapted to depress the movable bar, thereby to cause the loops to engage the crate.

3. A fruit press including a supporting frame having vertically adjustable members provided with terminal lips adapted to receive and support a crate, a yoke forming a part of the frame and having its upper portion provided with openings and its legs formed with vertical slots, clamping loops having offset shanks extending through the openings in the yoke, a vertically movable bar slidably mounted in said slots and pivotally connected with the shanks, a spring forming a connection between said bar and frame, and a lever pivotally mounted on the frame and adapted to engage and depress the movable bar, thereby to move the clamping loops inwardly and downwardly into engagement with the lid of said crate.

4. A fruit press including a frame having means for supporting a crate and provided at its front end with a vertical bar, a yoke forming a part of the frame and having its upper portion provided with openings and its legs formed with vertical slots, clamping loops having offset shanks extending through the openings in the yoke, a vertically movable bar connecting the lower ends of the shanks and slidably mounted in the slots of the yoke, an operating lever pivotally mounted on the frame and provided with a slot for the reception of the vertical bar of said frame, a clutch carried by and arranged at right angles to the length of the operating lever and adapted to engage the vertical bar of the frame for holding the operating lever in depressed position, and a releasing device carried by the operating lever for disengaging the clutch.

5. A fruit press including a supporting frame, a yoke forming a part of the frame and having its upper portion provided with openings and its legs formed with vertical slots, vertically adjustable bars mounted on the frame and provided with fingers adapted to receive and support a crate, clamping loops provided with shanks having offset portions extending through the openings in the yoke, a vertically movable bar connecting the shanks and slidably mounted in said slots, and an operating lever pivotally mounted on the frame and adapted to bear against the connecting bar for depressing the latter to actuate the clamping loops.

6. A fruit press including a stand having means for supporting a crate, an inverted U-shaped yoke forming a part of the stand and having its upper portion provided with openings and its legs formed with vertical slots, a substantially rectangular frame also forming a part of the stand, clamping loops embracing the rectangular frame and provided with offset shanks extending through the openings in the yoke, a vertically movable connecting bar secured to the lower ends of the shanks and having its opposite ends slidably mounted in the vertical slots of the yoke, pins extending laterally from the rectangular frame for limiting the outward movement of the loops, an operating lever pivotally mounted on the frame and adapted to depress the movable bar for forcing the loops into engagement with the crate, means for locking the operating lever in depressed position, and means carried by said lever for releasing the locking means.

7. A fruit press including a stand having means for supporting a crate, an inverted U-shaped yoke forming a part of the stand and having openings therein, a substantially rectangular frame also forming a part of the stand, a vertical bar depending from the rectangular frame, clamping loops embracing said rectangular frame and provided with offset shanks extending through the openings in the yoke, a vertically movable bar forming a connection between the lower ends of the shanks, springs forming a connection between the movable bar and stand, an operating lever pivotally mounted on the stand having a slot formed therein for the reception of the vertical bar, a clutch device carried by the operating lever and adapted to engage the depending vertical bar for holding said lever in depressed position, means carried by the lever for releasing the clutch device, and pins extending laterally from the rectangular frame for limiting the outward swinging movement of the loops.

8. A fruit press including a main frame, an inverted U-shaped yoke forming a part of the main frame and having its upper por-

tion provided with openings and its legs formed with vertical slots, clamping loops having shanks provided with offset portions through the openings in the yoke, a vertically movable bar connecting the offset ends of the shanks and slidably mounted in the vertical slots of said yoke, an operating lever pivotally mounted on the main frame for depressing the connecting bar, and springs forming a connection between said connecting bar and main frame.

In testimony whereof, we affix our signatures in presence of two witnesses.

STEPHEN E. MADDOX. [L. S.]
CHARLES W. MADDOX.

Witnesses:
THOMAS L. MILLER,
FRANK HUGHES.