

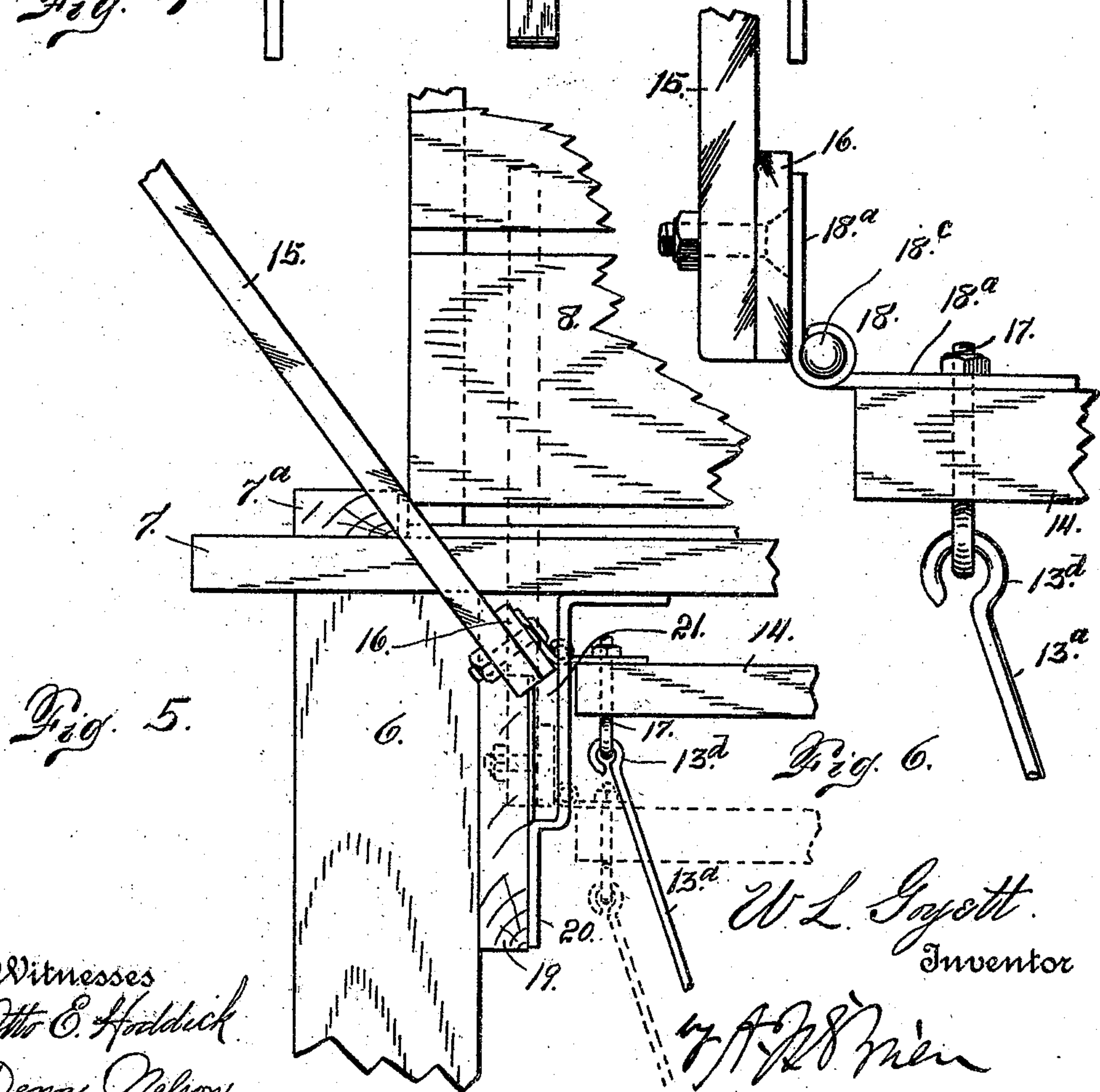
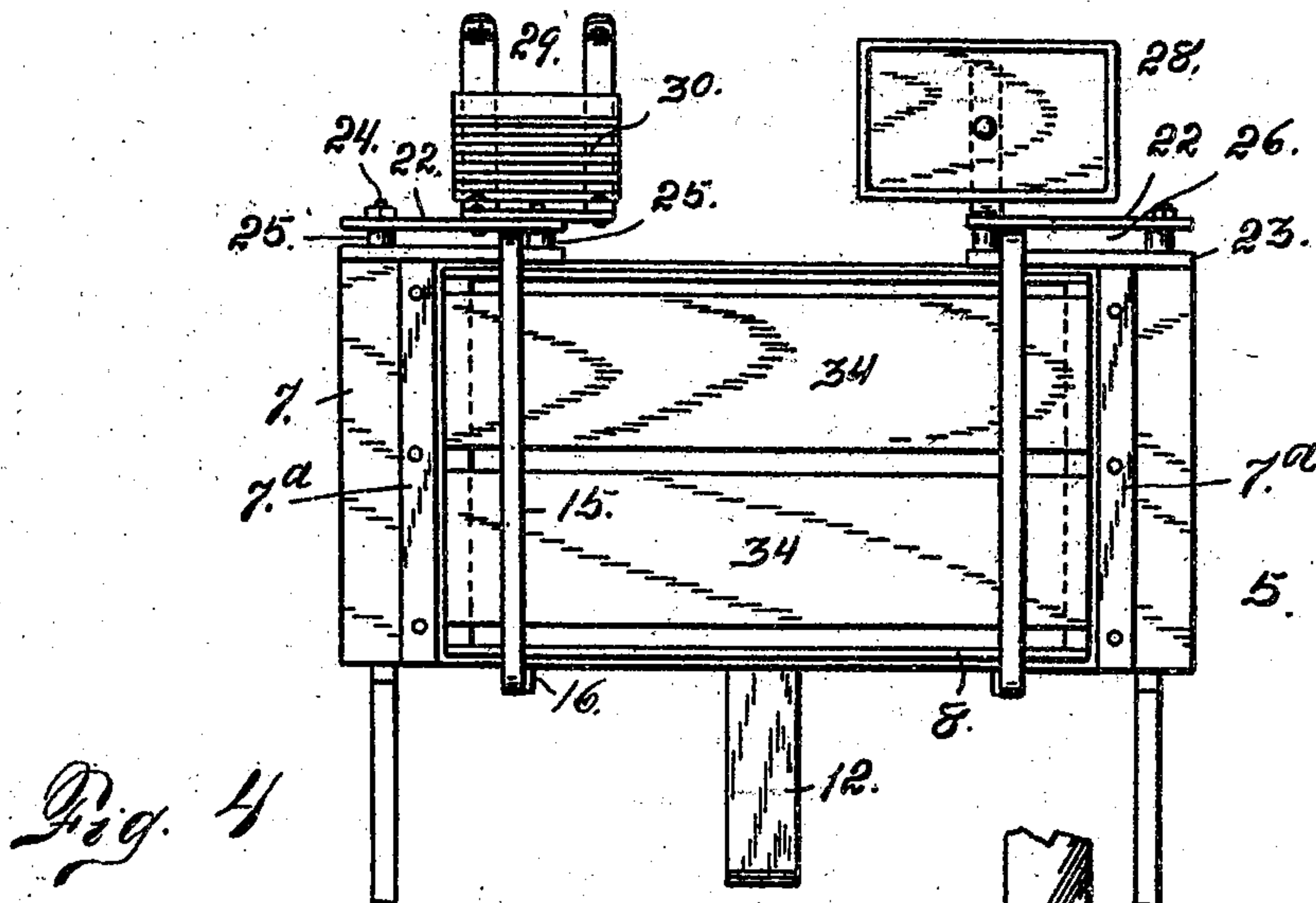
No. 814,954.

PATENTED MAR. 13, 1906.

W. L. GOYETT.
APPLE BOX PRESS.

APPLICATION FILED SEPT. 15, 1905.

2 SHEETS—SHEET 2.



Witnesses
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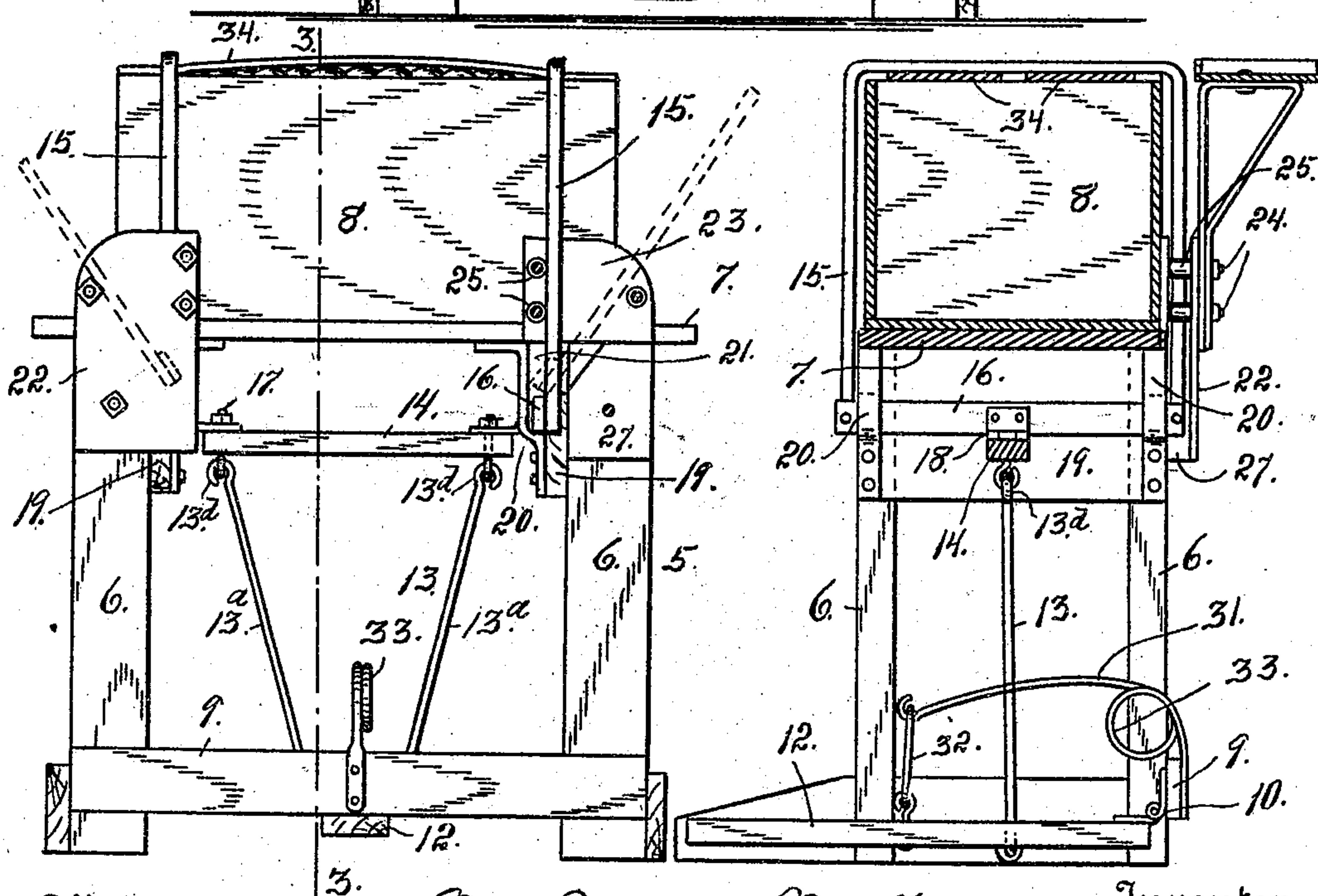
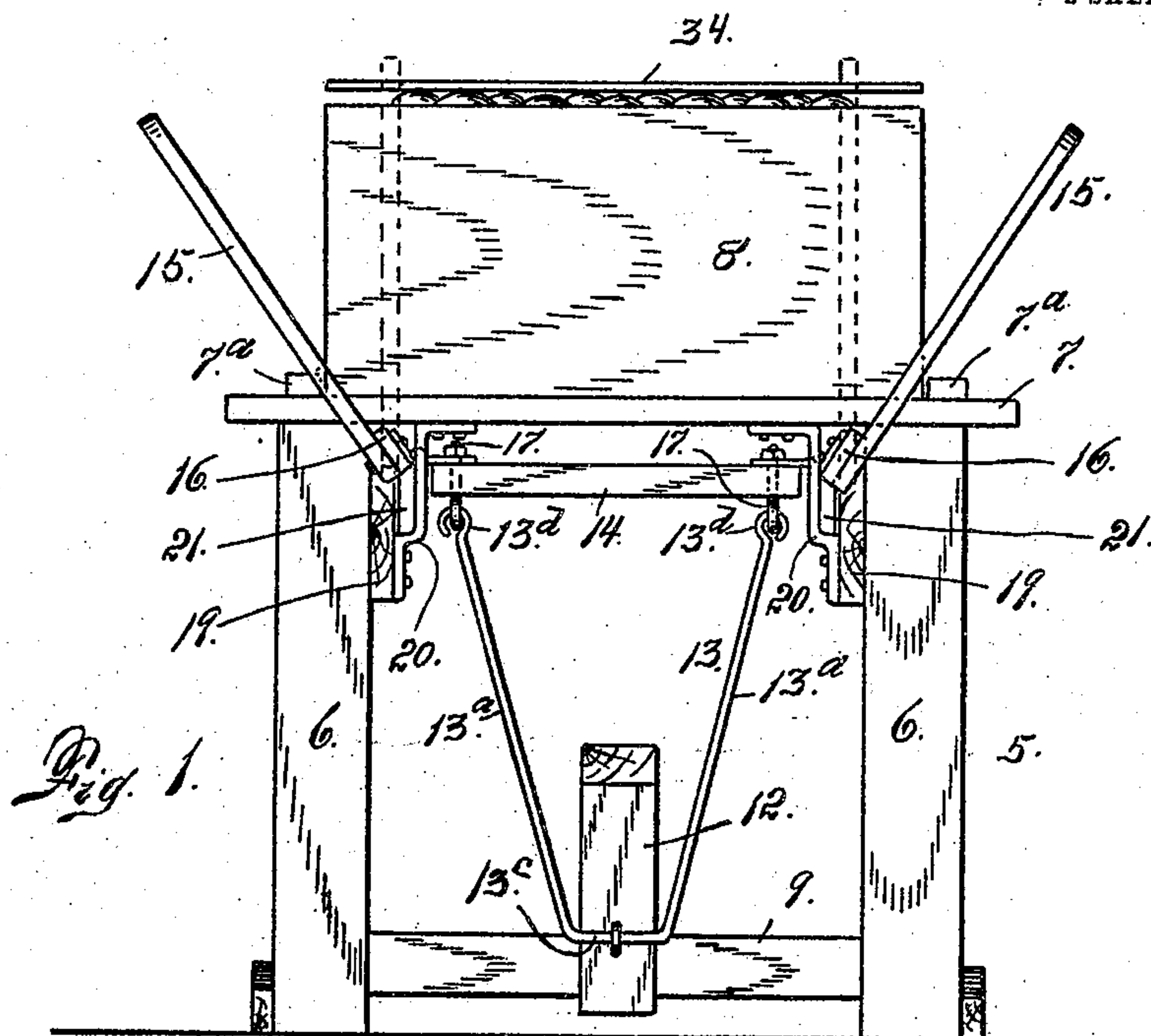
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2 SHEETS—SHEET 1.



Witnesses

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Fig. 2.

Fig. 3.

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UNITED STATES PATENT OFFICE.

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APPLE-BOX PRESS.

No. 814,954.

Specification of Letters Patent.

Patented March 13, 1906.

Application filed September 15, 1905. Serial No. 278,684.

To all whom it may concern:

Be it known that I, WARNER L. GOYETT, a citizen of the United States, residing at Canon City, in the county of Fremont and State of Colorado, have invented certain new and useful Improvements in Apple-Box Presses; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in machines more especially intended for use for boxing fruit, as apples, the object being to press the apples or other fruit tightly into the box, thus preventing them from shaking or moving during transportation. In order to accomplish this, the box while open on one side is sufficiently filled with apples to allow the uppermost layer to protrude above the sides of the box. The cover for the box, including one or more pieces of board, is then placed upon the apples, the cover in this event being raised some distance from the upper edges of the box. My improved device is adapted for use in pressing this cover downwardly sufficiently to permit the nailing of the same at the ends. This pressure upon the apples is sufficient to hold them tightly in place, but at the same time not strong enough to bruise them.

While my improved apparatus, as above indicated, is more especially intended for use in boxing apples, it is evident that it may be used in all other relations where a similar function is required.

Having outlined the function to be performed by the invention, I will proceed to describe the latter in detail, reference being made to the accompanying drawings, in which is illustrated an embodiment thereof.

In the drawings, Figure 1 is a front view of the apparatus shown in position for use, the box-embracing yokes being shown in two positions, one in full lines and the other in dotted lines. Fig. 2 is a rear view of the same. Fig. 3 is a section taken on the line 3-3, Fig. 2. Fig. 4 is a top plan view of the structure, also showing the box in position. Fig. 5 is a fragmentary detail view illustrating important features on a larger scale. Fig. 6 is a fragmentary detail view illustrating

the portion of the features shown in Fig. 5 on a still larger scale.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate a supporting-frame composed of uprights 6, suitably connected at the top and bottom. The top of this structure is provided with a platform 7, forming a support for a box 8, adapted to contain apples, which are indicated in Fig. 1 as extending slightly above the upper edge of the box or the edge that is uppermost when the apparatus is in use. In boxing apples the side which is called the "top" of the box after the boxing operation is completed is placed downwardly upon the platform 7. However, in this description the side of the box which is uppermost during the boxing operation will for convenience be termed the "top," since for the purposes of this specification this term will be sufficiently accurate.

Hinged, as shown at 10, to a rear cross-piece 9 at the bottom of the frame is a foot-lever 12, connected, by means of a rod 13, with a cross-head 14, centrally located below the platform 7 and having its opposite extremities hinged to yokes 15, consisting of U-shaped straps having their arms connected at their lower extremities by cross-pieces 16. The connecting-rod 13 is composed of two members 13^a, connected by a transverse part 13^c, which extends beneath the foot-lever. The members 13^a are provided with hooked extremities 13^d, which engage eyebolts 17, attached to the cross-head 14. The hinges which connect the extremities of the cross-head 14 with the cross-pieces 16 of the yokes are designated 18 in the drawings, being composed of two members 18^a, connected by a hinge-pin 18^c.

The upper extremities of the uprights 6 are provided at the top and on the inside with pieces 19, to which are attached the lower extremities of irons 20, the upper extremities of these irons being secured to the platform 7 underneath. These irons are so shaped as to form ways or openings 21 between the irons and the pieces 19. The pieces 19 do not extend to the platform 7, a space being left above these pieces and below the platform of sufficient depth to receive the cross-bars 16 and allow them to assume the inclined position illustrated in the drawings when the yokes are disengaged from the box. The hinge connection between the cross-head 14

is such that when the cross-head and yokes are raised sufficiently to bring the cross-bars 16 above the upper edge of the pieces 19 the yokes will swing outwardly by gravity to the position shown by full lines in Figs. 1 and 5 and by dotted lines in Fig. 2. This is due to the fact that the hinge-pin 18^c is located at the extreme lower edge of the cross-piece 16, the latter being located on the inside of the lower extremities of the yoke-arms. Attention is called to the fact that the pieces 19 do not extend beyond the uprights 6, while the cross-bars 16 extend slightly beyond these uprights, and the arms of the yoke 15 are connected to the extremities of the bars 16 beyond or outside of the uprights, and consequently beyond the extremities of the pieces 19. By virtue of this construction the yokes are free to swing outwardly when sufficiently raised, as heretofore explained.

At the rear of the machine one arm of each yoke 15 passes between two guide-plates 22 and 23, connected by bolts 24, which pass through spacing-sleeves 25. The plate 23 is secured to the platform 7 of the frame, while the plate 22 extends below the platform and is secured to a piece 27, located outside and attached to the upper extremities of the uprights 6, the two plates being connected above the platform by the bolts 24, as heretofore explained.

To the rear extremity of the supporting-framework and extending above the top thereof is secured a nail-tray 28 and a bracket 29, adapted to hold boards or slats 30, employed in closing the top of the box 8. These features are a great convenience while carrying on the boxing operation.

The foot-lever 12 may be connected with a spring 31. One extremity of this spring is secured to the cross-piece 9 at the bottom of the upright frame, while the other extremity is connected by a link 32 with the foot-lever forward of the connecting-rod 13. This spring is provided with a coil 33 and is made of sufficient tension to automatically raise the foot-lever as soon as the pressure thereon is released. It is evident that it may be used or not, as desired.

From the foregoing description the use and operation of my improved boxing apparatus or apple-box press will be readily understood. The box 8 is placed upon the platform 7, the latter being preferably provided at its opposite ends with cleats 7^a, between which the box fits. The box is then filled with apples, so that they are allowed to protrude, as indicated in Fig. 1. The yokes 15 are then swung outwardly, as shown in Fig. 1. The pieces 34, which are to close the top of the box, are then placed upon the apples, the pieces being raised, as shown in Fig. 1. Now as the operator places his foot upon the forward extremity of the lever 12 and forces the latter downwardly to the position shown in

Figs. 2 and 3 the cross-pieces 16 are moved downwardly in the ways 21, and the yokes 15 are simultaneously thrown over the extremities of the box or to the position indicated by dotted lines in Fig. 1, the said yokes being at the same time drawn downwardly, pressing the extremities of the pieces 34 against the ends of the box, the yokes being located inwardly far enough to permit the nailing of the ends of the cover-pieces 34 outside of the yokes. The operator holds the foot-lever down during the nailing operation, the nails being taken from the tray 28. As soon as this is done he releases the foot-lever 12, when the spring raises the same to the position shown in Fig. 1, when the yokes 15 swing outwardly automatically. The box is then removed and another box put in position, when the operation is repeated. The boxing of apples by the use of this apparatus is very rapid. If it is not desired to use the spring in connection with the foot-lever, the operator simply lifts the foot-lever by placing his foot under its outer extremity and raising the same. Very little power is required to do this. The construction is therefore complete and operative without the spring, though the latter may be employed, if desired, and under some circumstances it may be preferable.

Having thus described my invention, what I claim is—

1. In an apple-box press, the combination with a support for the box, of an ordinary movable cross-head mounted thereon, yokes hinged to the cross-head, means arranged to cause the yokes to swing inwardly automatically as the cross-head is moved downwardly, the yokes being so hinged that they have a tendency to swing outwardly.

2. In apparatus of the class described, the combination with a box-supporting frame, of a vertically-movable cross-head, and box-embracing yokes so hinged to the cross-head that there is a tendency to swing outwardly.

3. The combination with a box-supporting frame, of box-embracing yokes, the frame being provided with guides for the lower extremities of the yokes, a cross-head whose extremities are hinged to the yokes, and means connected with the cross-head for raising and lowering the same, the hinged connection between the cross-head and yokes being such that the yokes have a tendency to swing outwardly by gravity, the guides being constructed to allow the yokes to swing outwardly as the cross-head is raised and to cause them to swing inwardly as the cross-head is lowered.

4. The combination of a box-supporting frame provided with guides, yokes having parts adapted to move vertically in said guides, and means connected with the yokes for raising and lowering the same, the yokes being hinged to the said connection and hav-

ing a tendency to swing outwardly by gravity, the guides being constructed to cause the yokes to swing inwardly as they are moved downwardly and to allow them to swing outwardly when they have reached their upward limit of movement.

5. The combination with a box-supporting frame, of box - embracing yokes vertically movable on the frame, a cross-head to the opposite extremities of which the yokes are so hinged that they have a tendency to swing outwardly, guides for the yokes constructed to allow them to swing outwardly when raised and to cause them to swing inwardly when lowered, and an operating-lever connected with the cross-head for manipulating the latter, substantially as described.

6. The combination with a box-supporting frame, of box - embracing yokes vertically movable on the frame, a cross-head to which the yokes are hinged, a spring - supported foot-lever connected with the frame, and an operative connection between the foot-lever and the yoke whereby as the foot-lever is depressed, the cross-head and the yokes are moved downwardly, while as the pressure ceases to act on the foot-lever, the latter will move upwardly carrying the cross-head and the yokes with it, the frame being provided with guides for the yokes whereby they are caused to swing inwardly as they move downwardly, the yokes being so hinged to the cross-head that they have a tendency to swing outwardly.

7. The combination with a box-supporting frame, of box-embracing yokes, a vertically-movable cross-head to whose extremities the yokes are hinged, guides for the yokes, the hinged connection between the cross-head and yokes being such that the yokes have a tendency to swing outwardly by gravity, the guides being constructed to cause the yokes to swing inwardly and occupy a vertical position as they move downwardly, but allowing the yokes to swing outwardly when raised a predetermined distance, the frame being also provided with means for guiding the yokes during their lateral or swinging movement.

8. The combination with a box-supporting frame, of a vertically - movable cross - head, box-embracing yokes so hinged to the cross-head that there is a tendency of the yokes to swing outwardly, guides for the yokes during their vertical movement, the said guides causing the yokes to swing inwardly and assume a vertical position as they move downwardly allowing them to swing outwardly when they are raised a predetermined distance, the frame being also provided with means for guiding the yokes during their swinging lateral movement.

In testimony whereof I affix my signature in presence of two witnesses.

WARNER L. GOYETT.

Witnesses:

DENA NELSON,
A. J. O'BRIEN.