

(No Model.)

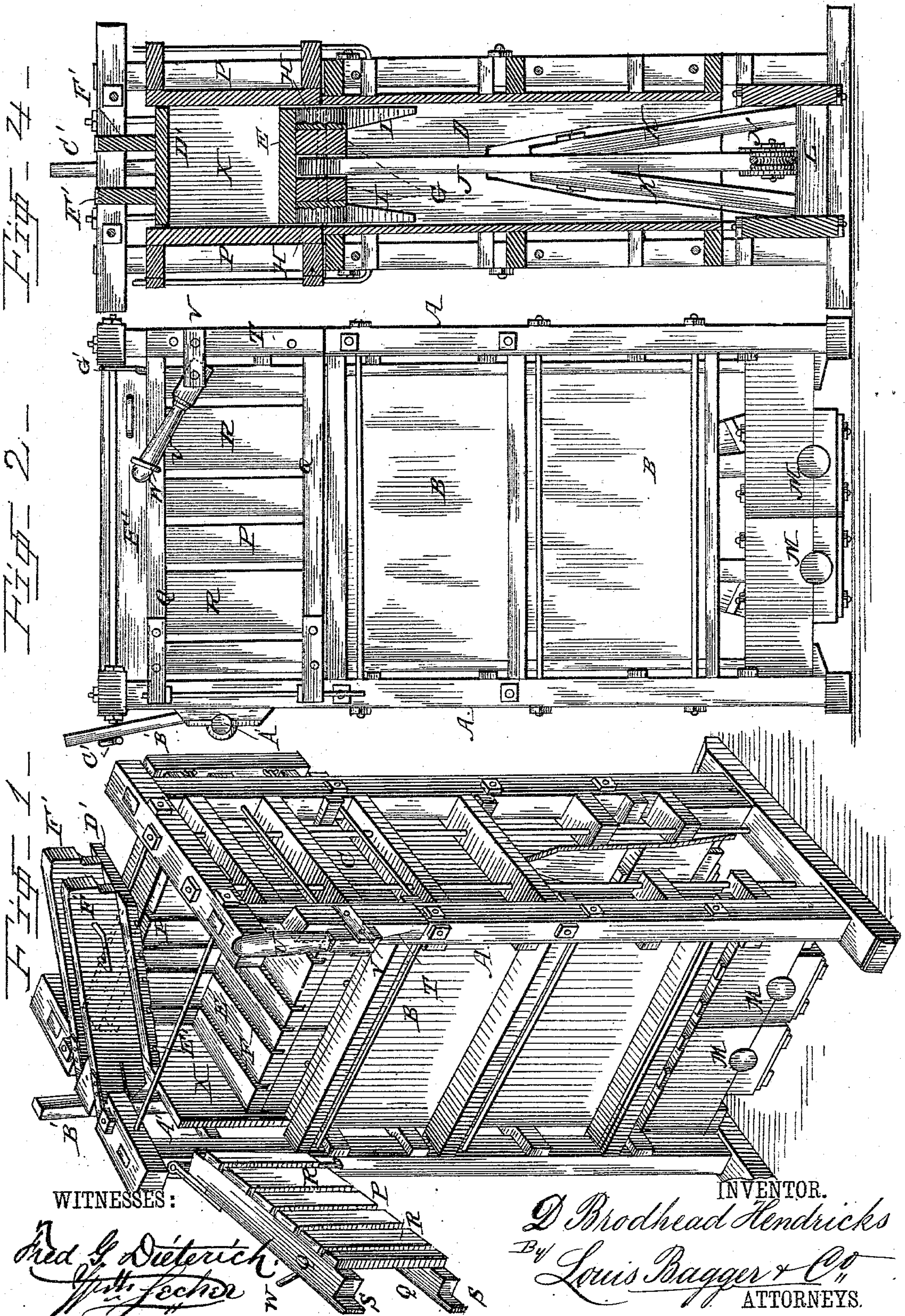
2 Sheets—Sheet 1.

D. B. HENDRICKS.

BALING PRESS.

No. 295,122.

Patented Mar. 11, 1884.



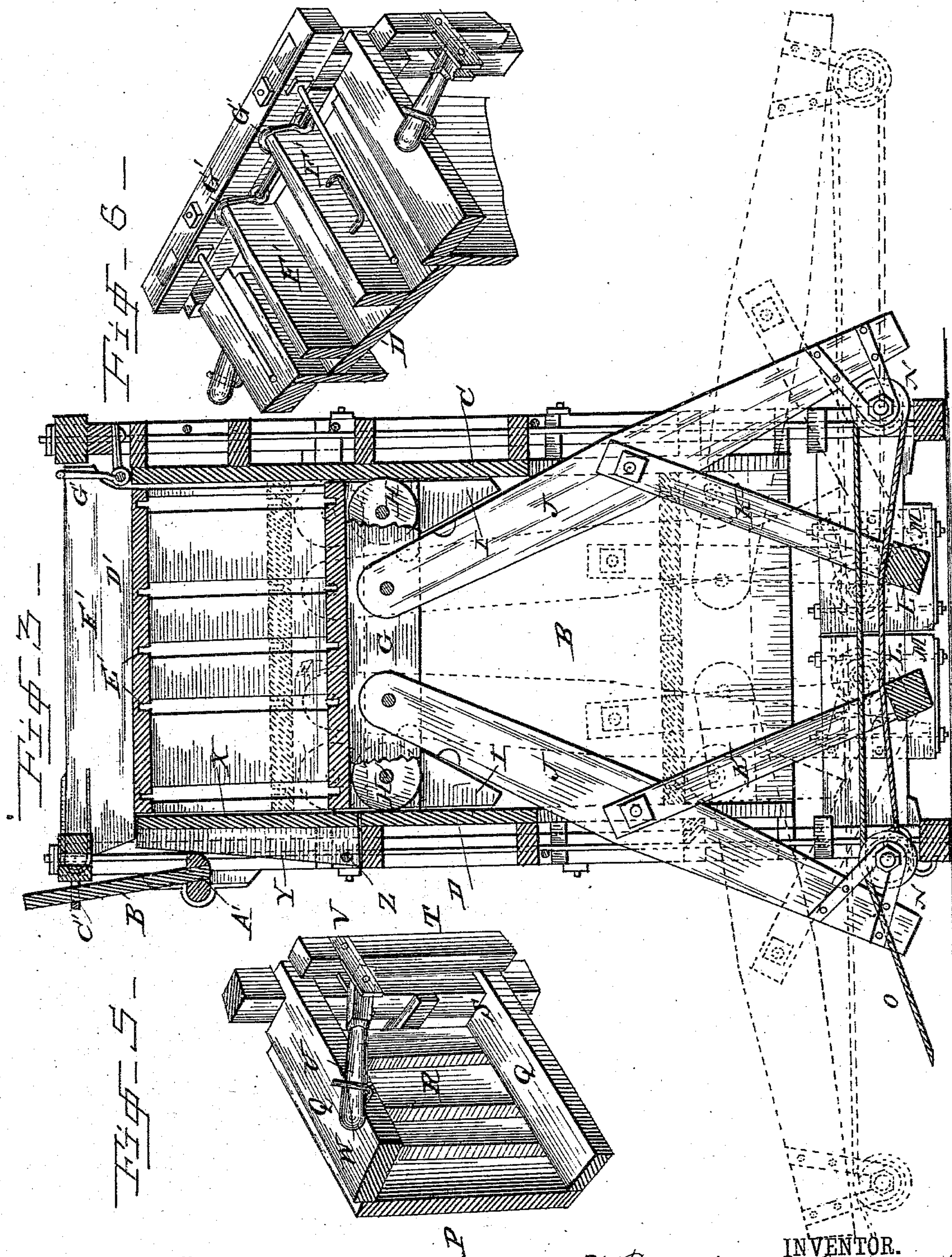
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WITNESSES:

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UNITED STATES PATENT OFFICE.

D. BRODHEAD HENDRICKS, OF GLASCO, NEW YORK.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 295,122, dated March 11, 1884.

Application filed December 27, 1883. (No model.)

To all whom it may concern:

Be it known that I, D. BRODHEAD HENDRICKS, a citizen of the United States, and a resident of Glasco, in the county of Ulster and State of New York, have invented certain new and useful Improvements in Baling-Presses; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to 5 which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of my improved baling-press, showing it open. Fig. 2 is a front view of the same, showing it closed. Fig. 3 is a longitudinal vertical section of the same. Fig. 4 is a vertical cross-section, and Figs. 5 and 6 are detail views of the fasten- 15 ings for the sides of the press.

Similar letters of reference indicate corresponding parts in all the figures.

My invention has relation to that class of baling-presses in which the plunger or follower travels upward, operated by toggle-levers; and it consists in the improved construction and combination of parts of the same, as hereinafter more fully described and claimed.

In the accompanying drawings, the letter A indicates the upright rectangular frame, the wider sides of which are closed by walls B, extending from the lower end to a distance from the top of the frame, about one-third of the height of the frame being thus left open at the 35 upper end of the same. The narrower sides of the frame are covered by walls C and D, one, C, of which extends to the top of the frame, and has a slot at its lower end, allowing the toggle-levers to be extended, while the other side, D, extends to the same height as the wider sides or walls, and is slotted at its lower end in the same manner as the opposite wall.

E is the plunger or follower, the upper side of which is grooved transversely at F for the 45 insertion of the wires or hoops used in tying the bale. The under side of the follower is provided with two longitudinal beams, G, recessed at their ends for the reception of two pairs of guide-rollers, H, which travel upon the inner sides of the narrow sides of the casing, and of the edges of the slots in the lower por-

tions of the said sides, guiding the follower, and two pairs of downwardly-projecting bars, I—one bar at each corner of the follower—serve to guide the same and keep it level. The upper ends of the long upper toggle-arms, J, are 55 hinged to the longitudinal beams at the under side of the follower, near the center of the same, and the said toggle-arms are pivoted at their centers between the upper ends of two pairs of lower toggle-arms, K, the lower ends of which are secured to cross-pieces L, forming trunnions at their ends, journaled in transverse bearings M in the lower end of the press-frame, near the middle of the same. 65 Two sheaves, N, are journaled at the outer or lower ends of the long toggle-arms, and a rope, O, secured at one end to the frame, passes over these pulleys, and is attached to a capstan or similar means for drawing it at its other end, 70 the rope serving to draw the ends of the long toggle-arms together, thereby raising the follower. The open sides of the upper portion of the press box or frame are closed by two hinged doors, P, opening to the sides, which 75 doors are composed of two or more longitudinal bars, Q, hinged to the posts of the frame, and a number of vertical slats, R, secured to the inner sides of the longitudinal bars, having spaces between them for the insertion of 80 the tying wires or hoops. The free ends of the longitudinal bars of the doors are cut out to rest, with the reduced ends S, thus formed, against the outer sides of the corner-posts, and the said reduced ends are secured or locked 85 by means of a vertical locking-bar, T, hinged upon the outer side of the corner-post, swinging over the ends of the longitudinal bars, and an arm, U, pivoted at one end between two lips, V, projecting from the locking-bar, is 90 adapted to be held in a hook or catch, W, upon the outer side of the door, preventing the locking-bar from swinging out from the ends of the door. A plate, X, having two or more vertical re-enforcing bars, Y, is pivoted at its 95 lower end above the upper end of the side D of the frame upon a rod, Z, passing transversely through the re-enforcing bars, and secured at its ends in the corner-posts, so as to have a small amount of play for its upper end, 100 and an eccentric cross-bar, A', is pivoted transversely upon the corner-posts of the frame, near

the upper end of the pivoted plate, and has a pivoted handle, B', at its upper side, which may be caught in a hook, C', upon the upper end of the frame, the said eccentric cross-bar serving to force the upper end of the plate inward when the handle is caught, and allowing it to swing slightly outward when the handle is released, allowing the compressed bale to expand longitudinally. The top of the press-box is formed by a plate or plank, D', having a number of transverse grooves, E', upon its under side, corresponding to the grooves in the follower, and secured upon the under sides of two or more longitudinal bars, F', hinged at one end upon the upper end of the frame, swinging upward, and adapted to be secured at their free ends by means of hinged bails G', hinged upon the inner side of the casing, at the side opposite to the side upon which the bars are hinged, the said bails swinging over the free ends of the said bars, holding them down.

When the press is to be used, the sides and top of the press-box are opened, and the hay or other product to be pressed is packed into the lower portion of the box until it reaches the open sides, when the doors are closed and locked, and the pivoted side piece forced inward. The remainder of the box is now filled and the top closed and secured, when draft is applied to the rope, which draws the ends of the long toggle-arms together, raising the follower. When, now, the follower reaches to a level with the upper edges of the rigid side pieces of the frame, the wires or hoops are inserted through the grooves of the follower and of the top piece, passing through the openings between the slats of the doors, through which the ends may be drawn and secured together, while the follower is completing the pressing of the bale, when the doors may be opened, the side piece released, and the top opened immediately after the completion of the stroke of the follower, the tying being completed at the same time as the pressing, with all the sides of the press closed, and the bale may be removed and the follower allowed to drop down again, when the same operation may be repeated.

It will be seen that by having the follower passing above the lower edges of slatted hinged doors in completing its stroke the wires or hoops may be inserted and tied before opening the doors, thus saving time and preventing the bale from expanding before tying it, which will happen with presses in which the sides of the press-box have to be opened for the pur-

pose of securing the ties. It will also be seen that by having the lower toggle-arms pivoted in pairs at the lower end of the frame, and having the longer toggle-arms pivoted at their middle between the ends of the lower arms, the pieces of the lower end of the frame, in which the lower ends of the lower arms are pivoted, may be placed at the lowest point of the frame, resting upon the ground, which is advantageous, as the heaviest strain falls upon that portion of the frame, the lower ends of the long toggle-arms in this construction of a press passing between the lower arms above the journaled cross-pieces.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The combination of the press-frame forming the press-box at its upper end, the follower sliding in the frame, the long toggle-arms having pulleys at their lower ends and hinged to the follower at their upper end, the lower toggle-arms secured in pairs at their lower ends upon cross-pieces pivoted at the lower end of the frame, and having the long toggle-arms pivoted at their middle between the upper ends of the lower toggle-arms, and the rope secured at one end passing over the pulleys and attached to means for drawing it, as and for the purpose shown and set forth.

2. The combination of the side or end piece of the press-box, pivoted at its lower end upon a transverse rod between the corner-posts of the frame, at the upper end of the same, the eccentric cross-bar pivoted between the corner-posts of the press-frame, near the upper end of the pivoted side piece, and the handle pivoted in the eccentric cross-bar, and having means for securing it at the upper end of the frame, as and for the purpose shown and set forth.

3. The combination of the hinged door having the longitudinal bars reduced at their free ends, the swinging locking-bar hinged upon the corner-post and having the projecting lips, the handle pivoted at one end between the said lips, and the hook upon the outer side of the door, adapted to hold the free end of the handle, as and for the purpose shown and set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

D. BRODHEAD HENDRICKS.

Witnesses:

A. VAN BEAMER,
L. HARRY SMITH, Jr.