

No. 662,100.

Patented Nov. 20, 1900.

A. SHERRER.
HAY PRESS.

(Application filed Aug. 29, 1900.)

(No Model.)

2 Sheets—Sheet 1.

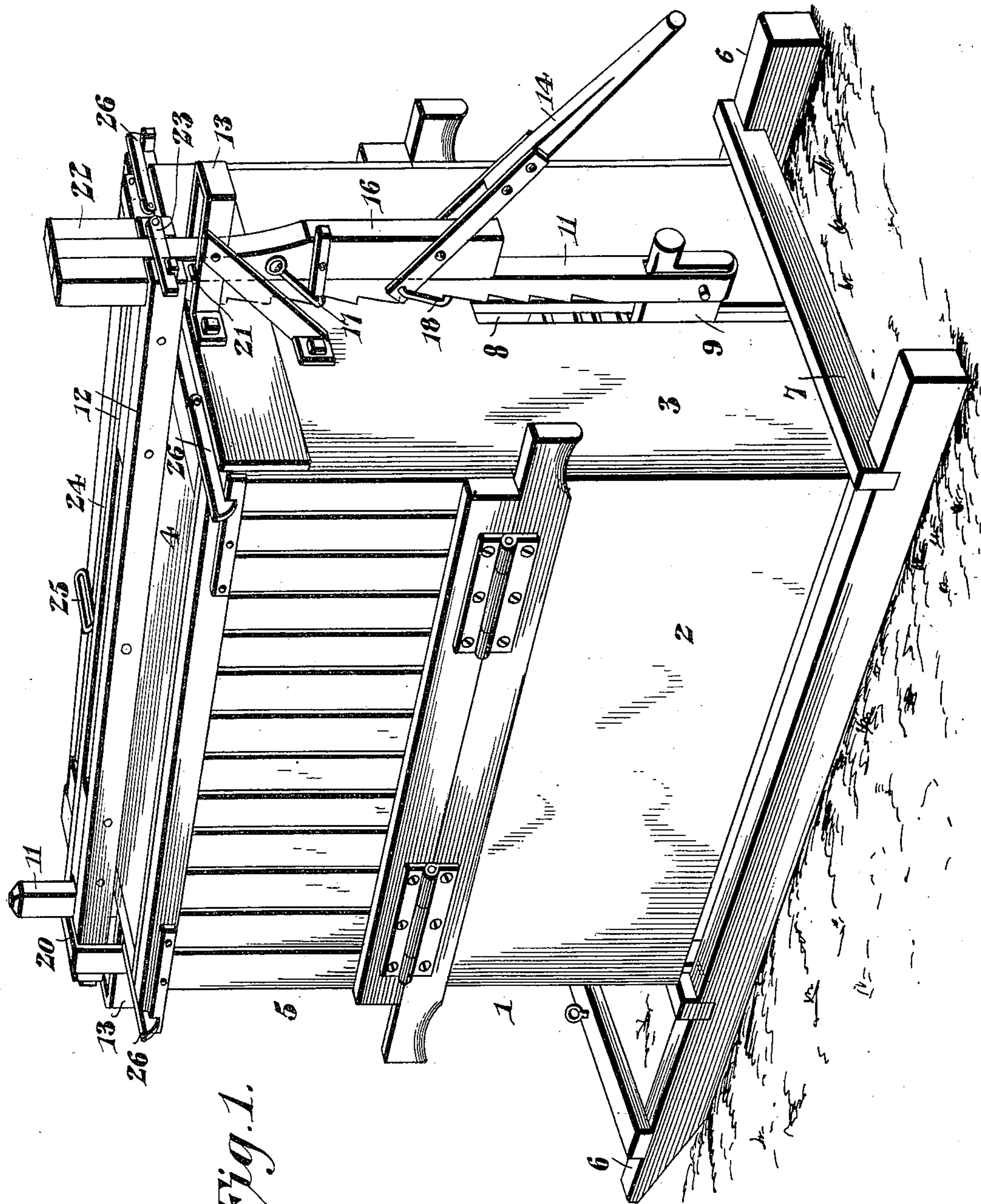


Fig. 1.

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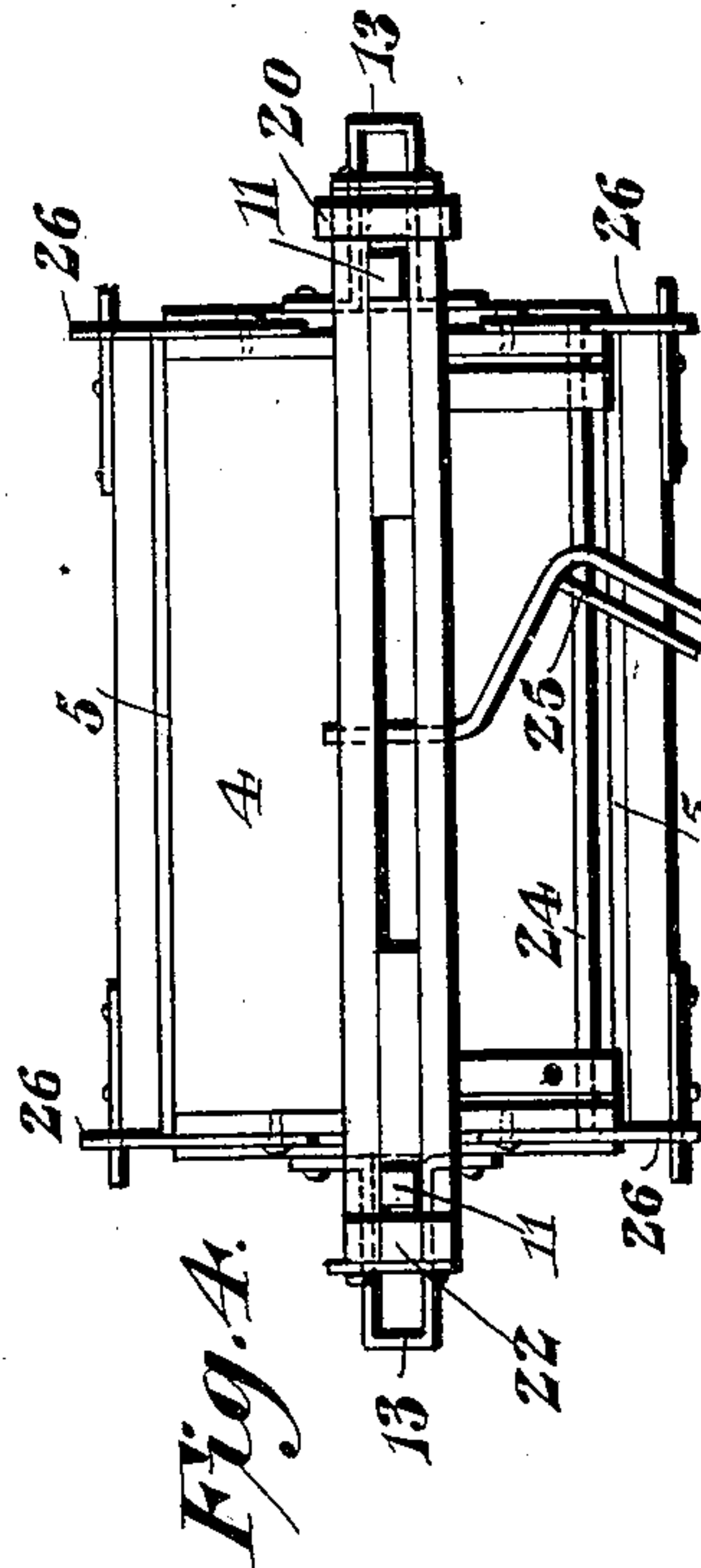
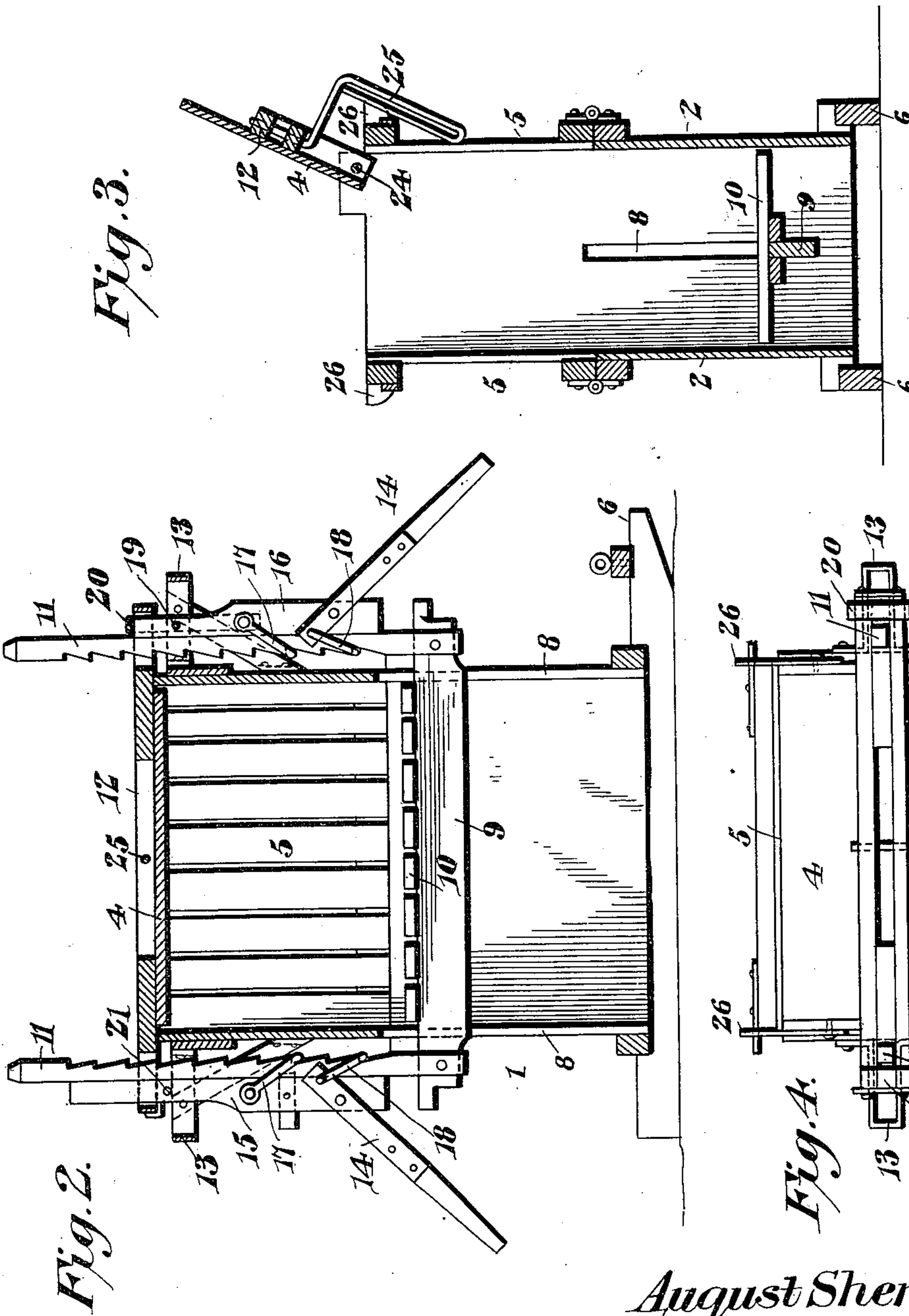
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UNITED STATES PATENT OFFICE.

AUGUST SHERRER, OF LA GRANGE, TEXAS.

HAY-PRESS.

SPECIFICATION forming part of Letters Patent No. 662,100, dated November 20, 1900.

Application filed August 29, 1900. Serial No. 28,434. (No model.)

To all whom it may concern:

Be it known that I, AUGUST SHERRER, a citizen of the United States, residing at La Grange, in the county of Fayette and State of Texas, have invented a new and useful Hay-Press, of which the following is a specification.

This invention relates to improvements in manually-operated hay-presses of that class which comprehend a press-box having a follower operated by actuating-levers through the medium of toothed racks connected at their lower ends to the extremities of the follower-beam and located beyond the opposite ends of the press-box.

The primary object in view is to simplify the construction and arrangement of the mechanism for guiding the racks and supporting the operating-levers and to cause the entire strain imposed by the operation of the follower to be maintained by the head-beam for the purpose of exerting a downward pressure upon the cover equal to the upward pressure exerted thereon by the compression of the bale in order that all danger of displacement of the cover under the excessive strain will be eliminated.

A further object of the invention subordinate to that stated is to utilize a supporting element of the plunger-operating mechanism as a locking device for the cover of the press-box; and still further objects of the invention contemplate the simplifying of the various features of the press, all as will appear more fully hereinafter in connection with the accompanying drawings, in which I have illustrated the preferred embodiment of the invention.

In said drawings, Figure 1 is a perspective view of my press complete. Fig. 2 is a vertical sectional view therethrough showing the follower and its operating mechanism in full lines. Fig. 3 is a sectional view taken at right angles to the section of Fig. 2, and Fig. 4 is a top plan view thereof.

Referring to the numerals of reference indicating like parts throughout the views, 1 indicates a press-box, the general characteristics of which are, as usual, the side and end walls 2 and 3, the hinged cover 4, and the hinged side door 5, constituting portions of the side walls 2. To facilitate the transpor-

tation of the press, the box is mounted upon runners 6, braced by suitable cross-bars 7. The end walls 3 of the box are provided with vertical slots or openings 8, through which project the opposite ends of a follower-beam 9, comprising an element of a slatted follower 10, vertically movable within the press-box and designed to be elevated by mechanism hereinafter described for the purpose of compressing the contents of the bale-chamber between the follower and the cover to form a bale, which is subsequently removed in a manner well understood in the art. The ends of the follower-beam 9 projecting beyond the end walls 3 of the box have engagement with the lower ends of a pair of vertical toothed racks 11, the upper ends of which extend between and are guided by the extended ends of a pair of cover-beams 12. These racks extend through horizontal guide-frames 13, bolted upon the ends of the box adjacent to its top and are designed to be operated for the purpose of elevating the follower by a pair of operating-levers 14, having their inner ends bifurcated and pivotally mounted at the lower ends of a pair of pendants 15 and 16. These pendants constitute an important feature of my invention, since they support the operating mechanism and serve to effect the secure retention of the cover during the formation of the bale. In addition to the operating-levers 14 each of the pendants supports a swinging pawl 17, arranged above the levers 14 and designed to engage the notches of the racks 11 to retain said racks against downward movement while the swinging pawls 18 upon the inner ends of the levers 14 are being moved by the swinging of the levers for engagement with successive teeth.

The pendant 16 has a permanent pivotal connection with the guide-frame 13, as by a pintle 19, and its upper end extends between the contiguous ends of the cover-beams 12, over which latter is swung a cover-securing bail 20, pivoted to the pendant 16 at a point below the guide-frame 13 and designed to be thrown into or out of engagement with the cover-beams for the purpose of assisting in the secure retention of the cover. At the opposite end of the press the pendant 15 is supported upon the other guide-frame 13 by a pintle 21, which, unlike the pintle 19 of the

pendant 16, is shiftable upon the frame 13 to permit the pendant 15 to have a pivotal movement, designed to facilitate the operation of the levers 14 and the swinging pawls, and to be capable of bodily movement toward or from the press for the purpose of effecting the engagement or disengagement of an enlarged cover-retaining head 22 with the cover-beams. The head 22 is an enlargement formed at the upper end of the pendant 15 and is designed, when moved to the position above the cover-beams, to prevent the elevation of the latter and to insure the proper positioning of the contiguous rack, it being observed that both of the racks 11 have extended bearings against the contiguous longitudinal edges of the pendants and that the upper ends of both the pendants and racks pass between the ends of the cover-beams, extending beyond the opposite end of the press. Extending between the ends of the cover-beams, adjacent to the retaining-head 22, is a pivoted latch 23, designed, when the cover is turned down and secured by the head, to prevent such lateral movement of the pendant 15 as would effect the removal of the head 22 from its retaining position.

The cover 4 is hinged between the end walls 3 of the press by a hinged bar 24, in order that when released by the bail 20 and head 22 it may be swung back to the position indicated in Fig. 3, in which position it will be held by an angular supporting-arm 25. Any suitable means for holding the side doors 5 in their closed positions may be provided—as, for instance, swinging latches 26, mounted upon the ends of the press.

The operation of my device is as follows: The plunger or follower being located at the bottom of the press-box or bale-chamber, the side doors are swung to their closed positions and are latched, as shown in Fig. 3 of the drawings. The press is then filled with the material to be baled and the cover is turned down to the position indicated in Fig. 1, and is secured first by swinging the securing-bail 20 into engagement with the ends of the cover-beams and additionally by moving the pendant 15 laterally to cause it to assume a position between the opposite ends of the cover-beams, with the retaining-head 22 positioned immediately thereabove. Accidental displacement of the pendant 15 is now prevented by means of the latch 23, and the press is ready for the formation of a bale. The swinging pawls at the inner ends of the operating-levers 14 are in engagement with the teeth of the racks 11, which latter are elevated to effect the elevation of the follower or plunger by depressing the outer ends of the levers, as usual. When the rack has been advanced the distance of one tooth or more in accordance with the limits of movement of the levers, the swinging pawls 17 effect the retention of the racks, while the outer ends of the levers are elevated to cause the pawls 18 thereon to engage teeth below those en-

gaged during the previous operation. The levers are now swung down to effect a farther advance of the follower, and this operation is repeated until said follower has been elevated to a proper point to complete the formation of the bale, which latter is then tied and removed by opening the side doors of the press in the usual manner.

From the foregoing it will be observed that I have produced an efficient baling-press embodying a number of novel features which serve to render its operation exceedingly effective; but while the present embodiment of the invention is believed at this time to be preferable I desire to reserve the right to effect such structural changes, modifications, and variations as may be comprehended within the scope of the protection prayed.

What I claim is—

1. In a baling-press, the combination with a press-box and movable cover, of a follower movable in the press-box, racks operatively connected with the follower, and pendants arranged to retain the cover and supporting operating mechanism for advancing the racks.

2. In a hay-press, the combination with a press-box provided with a movable cover and a follower movable within the box, of toothed racks connected to the follower, pendants provided with cover-retaining devices engaging the cover, and operating mechanism carried by the pendants and designed to elevate the racks.

3. In a baling-press, the combination with a press-box and movable cover, a follower movable within the box, and toothed racks operatively connected with the follower, of pendant-supports carrying cover-retaining devices movable into or out of engagement with the cover, and follower-actuating mechanism carried by said pendant-supports.

4. In a baling-press, the combination with a press-box, a follower movable therein, toothed racks connected to the follower, and cover-beams carried by the cover, of supporting-frames extending from the press-box, pendant-supports received within said frames, means carried by said supports for engagement with the cover-beams, and follower-operating mechanism carried by said supports below the supporting-frames.

5. In a baling-press, the combination with a press-box, a follower movable therein, toothed racks connected to the follower, and a cover for said box provided with cover-beams extended beyond its ends, of guide-frames extending from the opposite ends of the press-box and receiving the racks, pendant-supports received within the guide-frames and arranged for engagement with the cover-beams, and follower-operating levers carried by the supports and provided with swinging pawls engaging the racks.

6. In a baling-press, the combination with a press-box, a follower therein, toothed racks extending from the follower, and a cover for said box provided with cover-beams, of guide-

frames extending from the press-box and arranged for the reception of the racks, pendant-supports received and supported by the guide-frames, one of said supports being capable of lateral movement bodily, a retaining-head at the upper end of said support arranged to be presented above the cover-beams through the movement of the support, and follower-operating means carried by said supports below the guide-frames.

7. In a baling-press, the combination with a press-box, follower, cover and the cover-beams, of racks extending from the follower, guide-frames for the reception of the racks, pendant-supports each pivotally supported by the guide-frames, the pivotal connection of one of said supports being shiftable, a cover-retaining head located at the upper end of one of the supports, a cover-retaining bail carried by the other support, and follower-operating mechanism mounted upon said pendant-supports at points below the guide-frames.

8. In a baling-press, the combination with a press-box, follower and toothed racks extending from the follower, of a hinged cover for the press-box provided with a pair of cover-

beams extending beyond the opposite ends of the box, a pair of horizontal guide-frames extending from the opposite ends of the press-box for the reception of the racks, a pendant-support pivotally mounted in one of said guide-frames and having its upper end extended between the adjacent ends of the cover-beams, a securing-bail pivoted upon said support and arranged to be swung over the cover-beams, a second pendant-support located at the opposite end of the press and provided with a pintle mounted to slide upon the upper edge of the guide-frame and with an enlarged cover-retaining head designed for location above the cover-beams, a latch carried at the ends of the cover-beams adjacent to the last-named support, and an operating-lever and separate swinging pawl carried by each of the pendant-supports below the guide-frames and arranged for engagement with the racks.

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

AUGUST SHERRER.

Witnesses:

E. H. MOSS,

PAUL KLATT.