(No Model.)

A. J. HILL.

HAY PRESS.

No. 420,685. Patented Feb. 4, 1890.

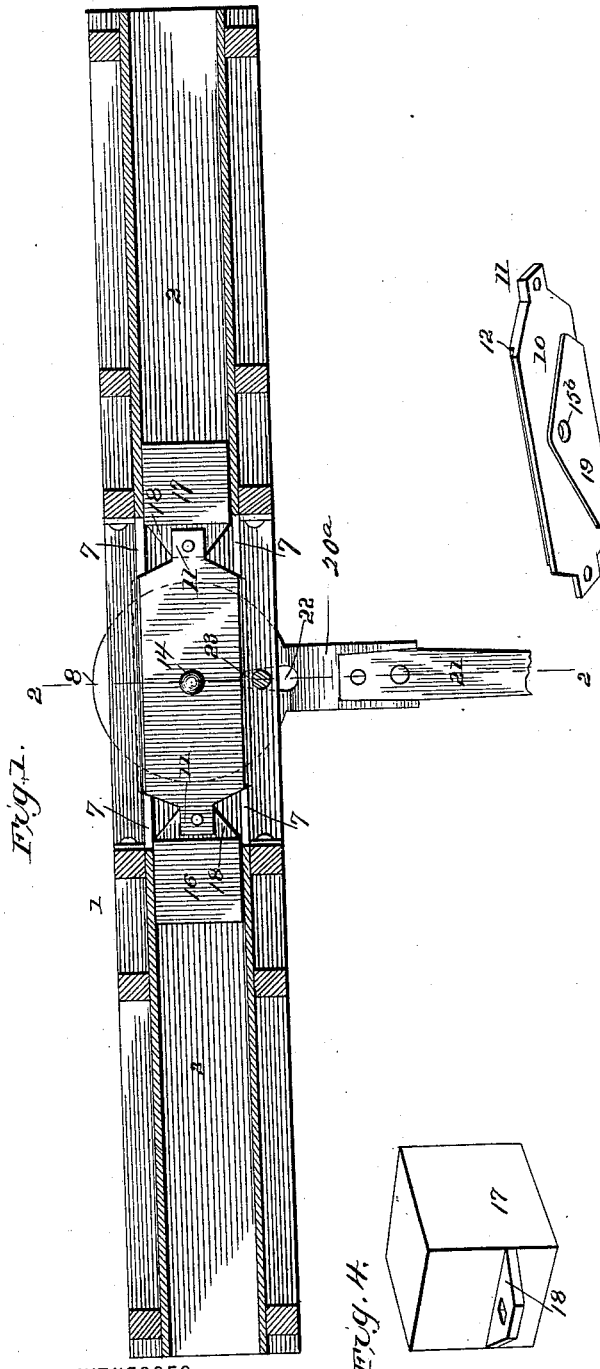

Fig. 1.

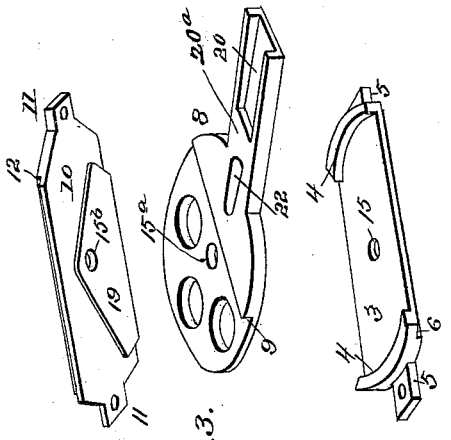

Fig. 3.

Fig. 4.

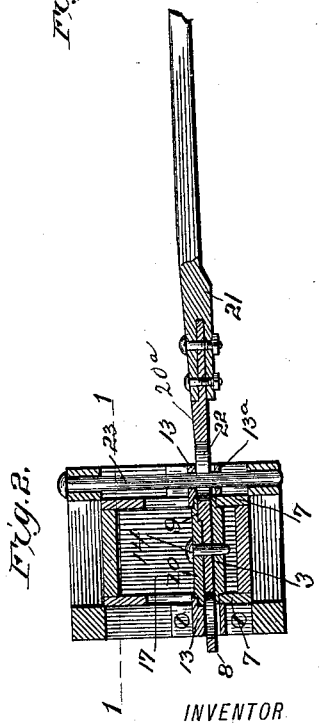

Fig. 2.

WITNESSES:

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ABRAHAM J. HILL, OF CHARLESTON, TEXAS, ASSIGNOR OF ONE-HALF TO LORENZO D. WOOD, OF SAME PLACE.

HAY-PRESS.

SPECIFICATION forming part of Letters Patent No. 420,685, dated February 4, 1890.

Application filed July 15, 1889. Serial No. 317,520. (No model.)

To all whom it may concern:

Be it known that I, ABRAHAM J. HILL, of Charleston, in the county of Delta and State of Texas, have invented a new and useful Improvement in Hay-Presses, of which the following is a specification.

My invention consists in a new and improved double-acting hay-press, which will be hereinafter fully described and claimed.

Referring to the accompanying drawings, Figure 1 is a horizontal section taken on line 1 1, Fig. 2. Fig. 2 is a cross-section taken on line 2 2, Fig. 1. Fig. 3 is a detail view of my improvement, and Fig. 4 is a detail view of one of the followers.

The same numerals of reference indicate corresponding parts in all the figures.

Referring to the several parts by their numerals, 1 indicates the body of the press, having at each end at each side of its center the boxes 2 2, in which the bales are compressed. At the center of the press are placed the follower-operating devices, which consist of the following parts:

3 indicates a horizontal sliding casting, formed at each end with the curved shoulders 4 4 and having the perforated end lugs 5. The lower sides of the longitudinal edges of the casting 3 are formed with guide-recesses 6 to adapt the casting to fit and slide on the vertical lower edges 7 of the press-frame.

8 indicates the drive-wheel, consisting of a flat wheel or disk which fits loosely in the casting 3, as shown, and is formed with the straight shoulder 9, for the purpose hereinafter described. A top plate or casting 10, of the same size as the casting 3, fits upon the top of the said casting and is formed at each end with a perforated lug 11. The longitudinal edges of this top plate are recessed at 12 to adapt them to fit and slide under guide-straps 13.

When the casting 3, the disk 8, and the plate 10 are placed in position, a pivot 14 is passed down through registering central apertures 15, 15^a, and 15^b in the plate, wheel, and casting, respectively, the drive-wheel turning on this central pivot.

16 17 indicate the two followers, each of which is formed at its inner end with a perforated lug 18, and the said lugs are pivoted between the perforated end lugs 5 and 11 of the casting and top plate.

On the lower side of the top plate is a lock or stop plate 19, of a wide V shape, which may be either a separate plate secured to the top plate, or may be cast or formed integral with the same.

A projecting arm 20^a of the drive-wheel 8 has a socket 20 formed at one side, in which fits and is bolted one fork of the bifurcated end of an arm 21, by which the press is operated. The wheel 8 is formed at the side with the tapering opening 22, which begins in the base of the arm 20^a, its outer end being about one inch outside of the circular circumference of the wheel and extends in toward the center of the wheel, being about eleven inches long. The outer end of this opening is about three and one-half inches wide, and it decreases in width toward its inner end, so that the said inner end is only two inches wide. The king-bolt 23 passes through the press-frame and through the guide-strips 13 and 13^a and through the tapering opening 22, the arm 20^a passing out between the said guide-strips 13 and 13^a.

The press is usually driven by one horse or mule, which is attached to the outer end of the lever-arm 21 and walks back and forth in a nearly straight line, going only about twenty-two feet before turning. The wheel 8 turns only one-quarter of a circle, when a straight shoulder 9 comes in contact with one straight edge of the V-shaped locking shoulder or plate 19 of the top plate 10, the wheel being thus stopped at the end of each stroke. As the wheel 8 is thus turned for a quarter-revolution first in one direction and then in the other it slides the casting 3 and plate 10 first in one direction and then in the other, moving the followers 16 17 alternately back and forth. The tapering opening 22, through which the king-bolt 23 passes, effectually prevents any hanging or binding of the wheel and castings, enabling the several parts to work freely and easily, passing the center without friction and binding in making the necessary strokes.

My new and improved double-acting press is worked entirely from the side, and the

horses that draw it to the stack-yard or meadow are therefore not in the way. One man can put the hay in the two boxes. As the horse or mule has only to travel twenty-two feet for each stroke, owing to the wheel 8 only turning for a quarter-circle, my press operates very rapidly and will press two hundred bales per day, each bale weighing one hundred pounds.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a double-acting baling-press, the combination, with the two followers having the apertured end lugs, of the sliding casting having the curved shoulders 4, the central aperture, and the apertured end lugs, the top plate having the apertured end lugs and central opening, the drive-wheel having the handle-socket and formed with the tapering opening 22 and the central opening, the central pivot, and the king-bolt, substantially as set forth.

2. In a double-acting baling-press, the combination, with the two followers having the apertured end lugs, of the sliding casting having the curved shoulders 4, the central aperture, and the apertured end lugs, the top plate having the V-shaped stop-shoulders, the apertured end lugs, and the central opening, the drive-wheel having the straight shoulder 9, the handle-socket, the tapering opening 22, and the central opening, the central pivot, and the king-bolt, substantially as set forth.

3. In a double-acting baling-press, the combination, with the frame having the guide-strips, of the two followers having the apertured end lugs, the sliding casting having the edge recesses 6, the curved shoulders 4, the central aperture, and the apertured end lugs, the top plate having the edge recesses 12, the V-shaped stop-shoulders, the apertured end lugs, and the central opening, the drive-wheel having the straight shoulder 9, the handle-socket, the tapering opening 22, and the central opening, the lever-arm, the central pivot, and the king-bolt, substantially as set forth.

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Witnesses:
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