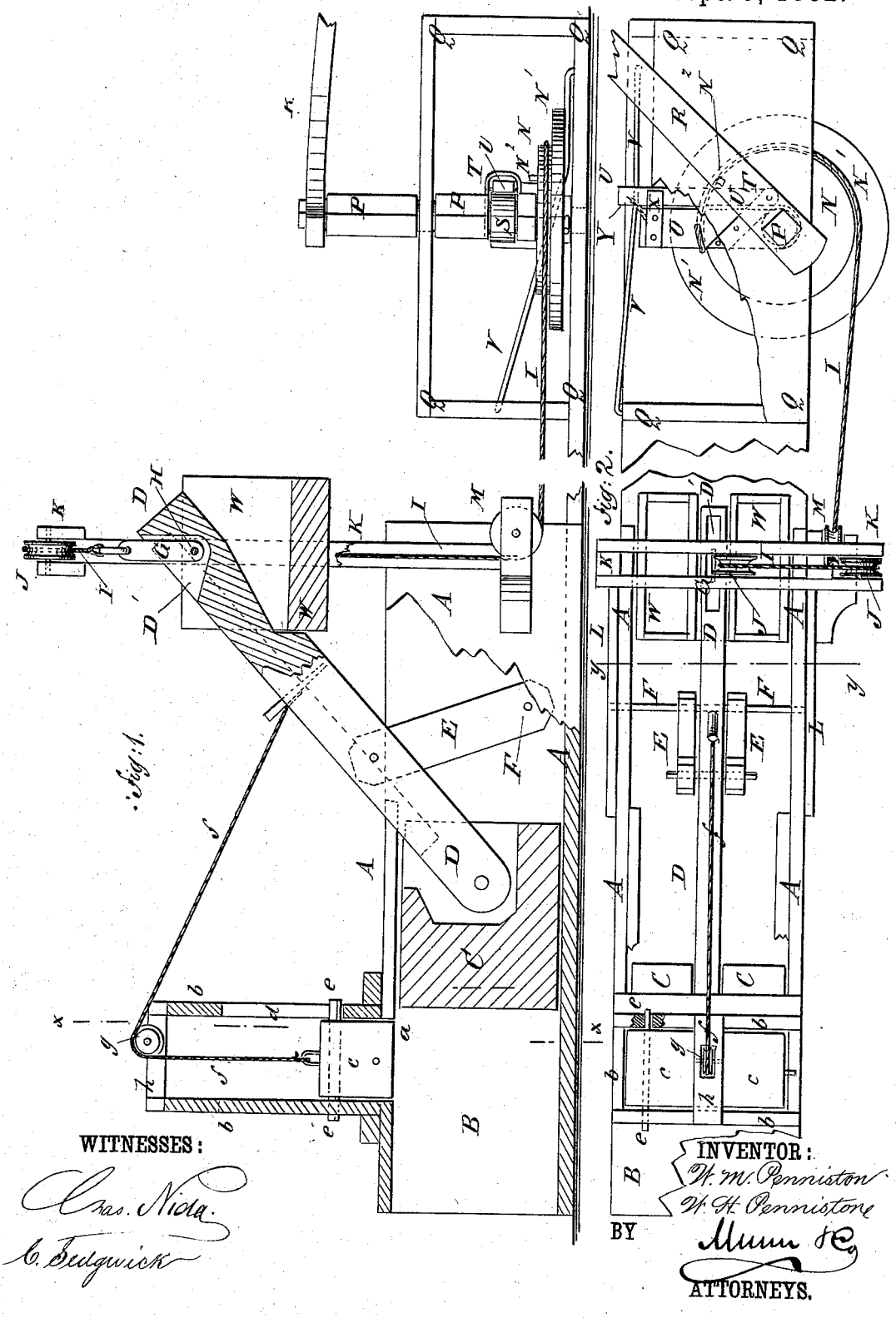
(No Model.) 2 Sheets—Sheet 1.

# W. M. & W. H. PENNISTON.

## BALING PRESS.

No. 263,953. Patented Sept. 5, 1882.



WITNESSES:

Chas. Nida.

C. Sedgwick

INVENTOR:

W. M. Penniston

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No Model.)

2 Sheets—Sheet 2.

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## BALING PRESS.

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Fig. 3

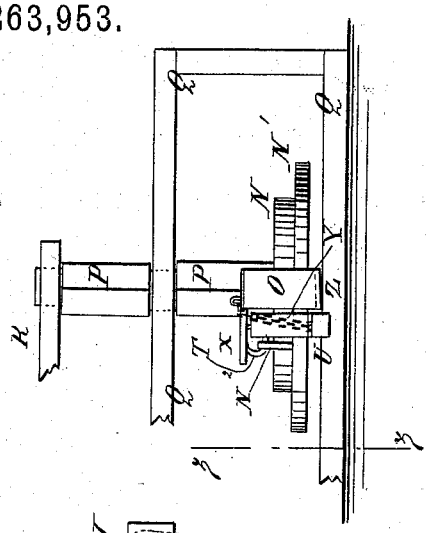


Fig. 6

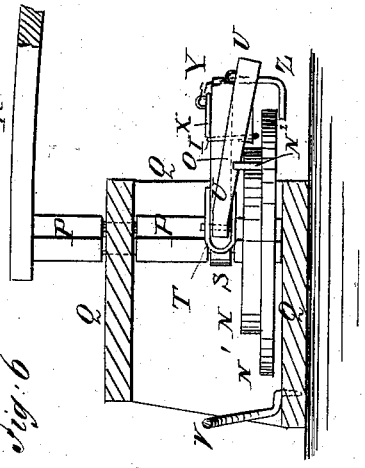


Fig. 5.

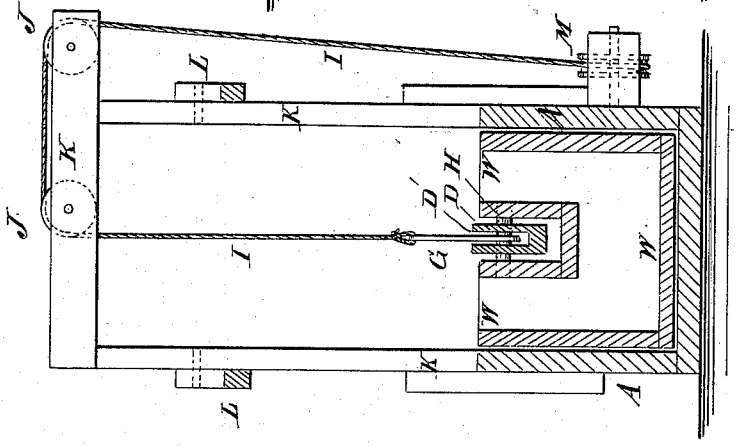
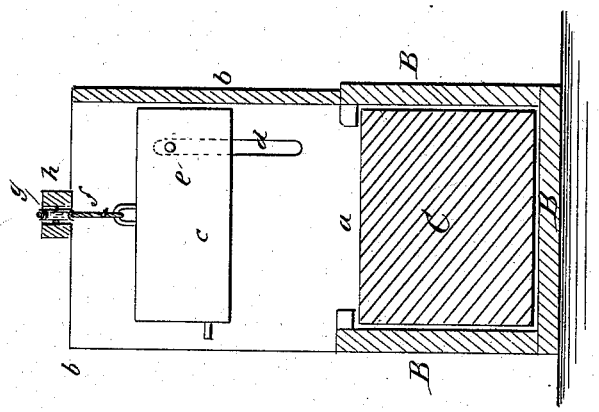


Fig. 4.



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# UNITED STATES PATENT OFFICE.

WILLIAM M. PENNISTON AND WILLIAM H. PENNISTON, OF FOX, MISSOURI.

## BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 263,953, dated September 5, 1882.

Application filed June 14, 1882. (No model.)

*To all whom it may concern:*

Be it known that we, WILLIAM M. PENNISTON and WILLIAM H. PENNISTON, of Fox, in the county of Ray and State of Missouri, have invented a new and useful Improvement in Baling-Presses, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1, Sheet 1, is a side elevation of our improvement, partly in section. Fig. 2, Sheet 1, is a plan view of the same, parts being broken away. Fig. 3, Sheet 2, is a side elevation of a part of the same. Fig. 4, Sheet 2, is a sectional end elevation of the same taken through the line *x x*, Fig. 1. Fig. 5, Sheet 2, is a sectional end elevation of the same taken through the line *y y*, Fig. 2. Fig. 6, Sheet 2, is a sectional end elevation of the same taken through the line *z z*, Fig. 3.

The object of this invention is to improve the construction of the presses for which Letters Patent No. 155,671 were granted to William H. Penniston, October 6, 1874, in such a manner as to make them more reliable in use and more effective in operation.

The invention consists in a baling-press constructed with a slot or groove in the upper side of the rear end of the lever that operates the press-follower to receive a bar attached to the end of the hoisting-rope, whereby the said lever will move freely without affecting the vertical position of the said bar and hoisting-rope. The feed-box of the press has vertical slots in its sides to receive pins attached to the beater to limit the downward movement of the beater. The beater is connected by a rope with the lever that operates the follower, so that the said beater will be operated at the proper times by the movements of the said lever. The trip-arm is connected with the swinging arm to which the hoisting-rope is attached by a chain to prevent the said trip-arm from moving back too far upon the trip-wheel. To the end of the swinging-rope-carrying arm is attached a stop-plate to underlap the flange of the trip-wheel and prevent the said arm from rising from the said trip-wheel, as will be hereinafter fully described.

A represents the press-frame, and B is the baling-box, the forward part of which is not shown in the drawings, as there is nothing new in its construction. C is the follower by which the material being operated upon is forced into the forward end of the baling-box B and compressed into a bale.

In the slotted rear end of the follower C is hinged the end of a lever, D, to the opposite sides of which, at a little distance from the follower C, are hinged the upper ends of two bars, E, the lower ends of which are hinged to the lower part of the press-frame A by a rod, F, or other suitable means, so that the lever D and the bars E will operate as a toggle-joint to force the follower C forward with increased power as it approaches the forward end of its movement. The rear end of the lever D is slotted, or has a deep groove, D′, formed in its upper side to receive the lower end of the bar G, which is hinged in the said groove or slot D′ by a pin or bolt, H, passing through it and through the end of the said lever, so that the play of the said lever will not interfere with the vertical position and movement of the said bar G.

To the upper end of the bar G is attached the end of a rope, I, which passes over guide-pulleys J, pivoted to the top of an upright frame, K, attached to the rear end of the press-frame A, and strengthened in an upright position by braces L, attached to it and to the press-frame A. From the pulleys J the rope I passes to and around a pulley, M, pivoted to a support attached to the lower rear corner of the press-frame A, and passes thence to and around the trip-wheel N, and its end is attached to the outer part of the arm O. The trip-wheel N is rigidly attached to the lower part of the upright shaft P, which revolves in bearings in the power-frame Q, and to the upper end of which is attached the sweep R, to which the draft is applied. The trip-wheel N is made of such a size that about half a revolution of the said wheel will raise the rear end of the lever D to a sufficient height to withdraw the follower C from the baling-box B. The inner end of the arm O is connected with the upright shaft P by a strap, S, so that the said arm O can swing freely around the shaft P and will not be effected by the revolution of

the said shaft. The arm O is made with a downward projection upon the lower side of its outer end, which passes down across the face of the trip-wheel N and rests upon the wide flange N′, formed upon the lower side of the said trip-wheel. The projection or shoulder of the arm O should be made of such a depth that the said arm will pass over the stop-pin or shoulder $N^2$, attached to or formed upon the said wheel N. The friction between the projection of the arm O and the flange N′ of the trip-wheel N may be lessened by a roller pivoted to the said projection.

To the rear side of the inner end of the arm O is hinged by a clevis, T, or other suitable means, the inner end of an arm, U, the lower side of the outer part of which rests upon the upper edge of the wheel N, so as to be struck by the stop-pin or shoulder $N^2$ of the wheel N, and made to carry the arm O with it as it is carried forward by the revolution of the said wheel, and wind up the rope I, raising the rear end of the lever D and drawing back the follower C. As the rear end of the lever D reaches the highest point of its movement the arm U strikes the inclined bar V and is raised above the stop-pin $N^2$, releasing the arms O U and allowing the said arms to be drawn back by the weight-box W, suspended from the rear end of the lever D, and which acts as a power to force the follower C forward to compress the material. The arm U is kept from being raised too high by a stop-plate, X, attached to the top of the outer end of the arm O and projecting over the said arm U. The arm U is kept from being thrown back too far by a short chain, Y, attached to the outer ends of the arms O U. The arm O is kept from being raised from the wheel N by a stop-plate, Z, attached to the outer end of the said arm O, and which is bent inward to underlap the flange N′ of the trip-wheel N, as shown in Fig. 6.

The material to be pressed is inserted through an opening, *a*, in the top of the rear part of the baling-box B, which opening is surrounded upon the sides and one end by a feed-box, *b*. Within the feed-box *b* is placed a beater-block, *c*, by the descent of which the material placed in the said feed-box is forced down into the bailing-box B, to be compressed into the forward part of the said baling-box by the advance of the follower C. In the sides of the feed-box *b* are formed vertical slots *d*, to receive pins *e*, attached to and projecting from the sides of the beater *c*, to prevent the said beater from descending any lower than to bring its lower surface flush with the inner surface of the top of the baling-box B, so that the material will be forced fully into the said baling-box, and so that the said beater will not be in the way of the follower C in its forward movement.

To the top of the beater *c* is attached the end of a rope, *f*, which passes over a pulley, *g*, pivoted to a support, *h*, attached to the top of the feed-box *b*. From the pulley *g* the rope *f* passes to the rear part of the lever D and is secured to the said lever. With this construction as the follower C moves forward the beater *c* is raised to allow more of the substance to be pressed to be inserted in the feed-box *b*. As the follower C moves back the beater *c* descends and forces the substance in the feed-box *b* down into the baling-box B, ready to be compressed by the next forward movement of the said follower.

The power-frame Q is designed to be made separate from the press-frame A, so that the said power-frame can be placed at the end or side of the press-frame, as may be convenient, and can be slid upon the press when moving from place to place. With this construction one or two presses can be worked with one trip-wheel and one hoisting-rope, if desired.

Having thus fully described our invention, we claim as new and desire to secure by Letters Patent—

1. In a baling-press, the combination, with the hoisting-rope I and the lever D, having slot or groove D′, of the hinged bar G and the hinging-bolt H, substantially as herein shown and described, whereby the said lever will be free to move without affecting the vertical position of the said bar and hoisting-rope, as set forth.

2. In a baling-press, the combination, with the feed-box *b*, having vertical slots *d* and the beater *c*, of the pins *e*, substantially as herein shown and described, whereby the downward movement of the said beater is limited, as set forth.

3. In a baling-press, the combination, with the beater *c* and the lever D, that operates the follower C, of the rope *f*, substantially as herein shown and described, whereby the said beater will be operated at the proper times by the movements of the said lever, as set forth.

4. In a baling-press, the combination, with the arms O and U, of the chain Y, substantially as herein shown and described, whereby the arm U is kept from passing too far back upon the trip-wheel, as set forth.

5. In a baling-press, the combination, with the rope-arm O and the flange N′, of the trip-wheel N, of the stop-plate Z, substantially as herein shown and described, whereby the said rope-arm is kept from rising from the said wheel, as set forth.

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Witnesses:
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JOHN REED.