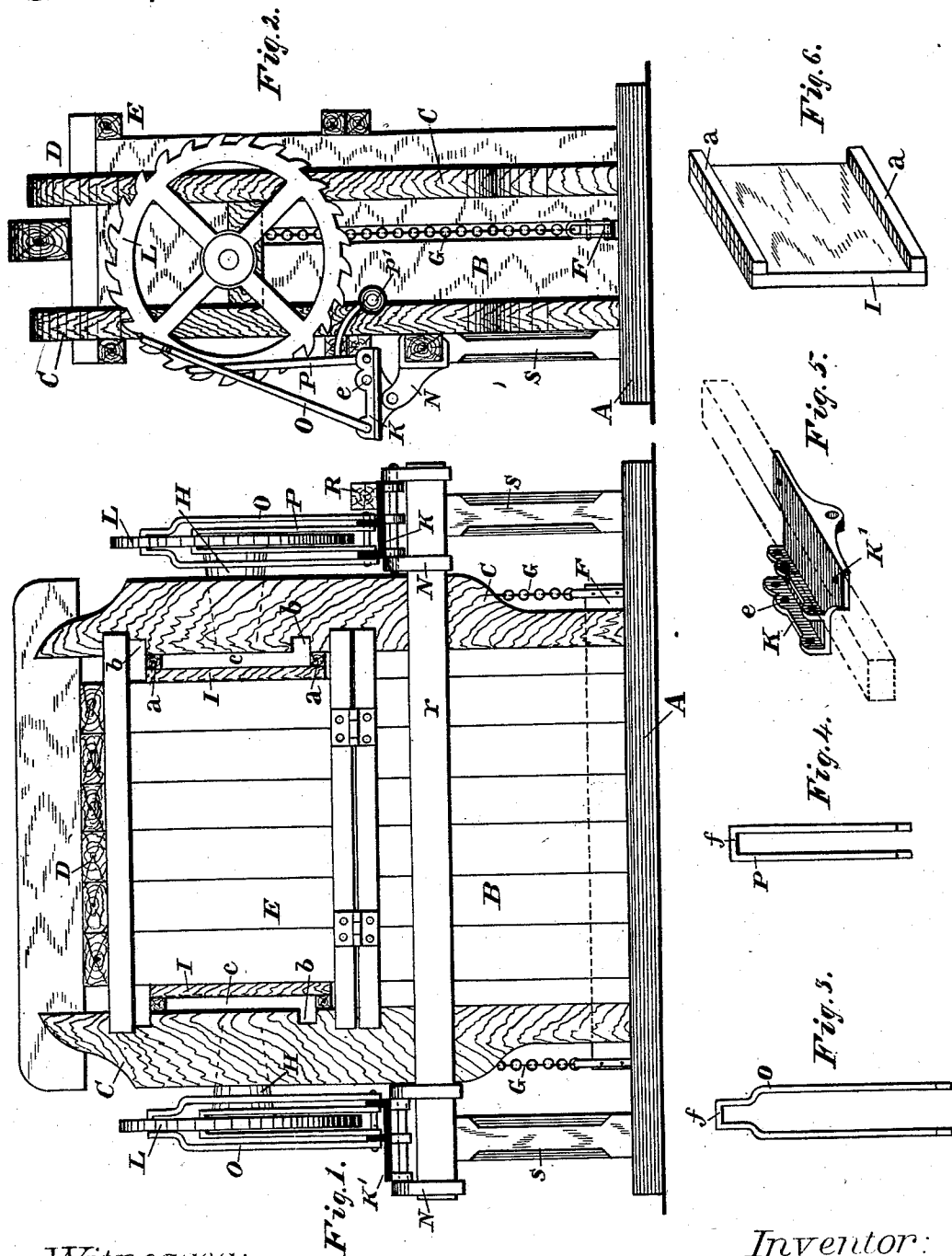


(No Model.)

R. W. WHITEHURST.
BALING PRESS.

No. 282,017.

Patented July 24, 1883.



Witnesses:
A. C. Eader
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UNITED STATES PATENT OFFICE.

ROBERT W. WHITEHURST, OF NORFOLK, VA., ASSIGNOR OF TWO-THIRDS
TO AURELIUS WRENN AND McDONALD L. WRENN, OF SAME PLACE.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 282,017, dated July 24, 1883.

Application filed May 18, 1883. (No model.)

To all whom it may concern:

Be it known that I, ROBERT W. WHITEHURST, a citizen of the United States, residing at Norfolk, in the county of Norfolk and State of Virginia, have invented certain new and useful Improvements in Baling-Presses, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to certain improvements in presses for baling hay, cotton, and other articles, and will first be described, and then designated in the claims.

In the drawings, Figure 1 is a side elevation of the press. Fig. 2 is an end elevation. Fig. 3 is a view of the large stirrup. Fig. 4 is a view of the small stirrup. Fig. 5 is a view of the oscillating stirrup-actuator. Fig. 6 is a view of one of the movable ends.

The letter A designates the foundation-frame; B, the press-box; C, two vertical beams at each end; D, the movable or hinged top; E, hinged sides, and F the follower-beam. A chain, G, is attached to the end of the follower-beam, and is wound on a cone-drum, H.

The mounting for the cone-drum, the means for securing the movable top, and other details of construction are sufficiently described in Letters Patent of the United States issued to me November 28, 1882, No. 268,334, and the same need not therefore be again described here.

The upper part of the press-box, where the hinged sides are attached and whereat the finished bale is removed, is provided with movable end pieces, I, which have at one side top and bottom cross-bars *a*. At each end of the press-box is an opening or space, *c*, entirely across the end between the two opposite hinged sides E and the vertical beams C. The inner side of each vertical beam has two notches, *b*, each adapted to receive one of the cross-bars on the end pieces. The parts are also so arranged that the cross-bars *a* may rest against the inner side of the beam, just below the notches, as shown in Fig. 1. This is the position of the parts when the baling operation begins. It will be seen that the follower is down, the hinged sides are closed, and the movable end pieces are in contact with the hinged sides. Now, upon the follower being raised by winding the chain, the compression of the bale is

effected, and is nearly or quite completed when the follower has arrived at the lower edge of the hinged sides. When the follower has reached or passed beyond this point, (as the case may be, according to the construction,) it will come in contact with the lower edge of the movable end pieces, I, and the continued raising of the follower will have the effect to raise the end pieces until the cross-bars *a* coincide with the notches *b*, whereupon the cross-bars will enter the notches—the end pieces themselves moving laterally, caused so to do by the pressure thereon occasioned by the condensed bale. The effect of the end pieces moving laterally and away from the bale is to so relieve the pressure at the end of the press-box that the compressed bale may be easily removed when the hinged sides are opened.

Heretofore in many presses, after the two hinged sides have been opened and the pressure of the follower has been released, the bale has been held fast by the ends. My above-described improvement, it will be seen, obviates this difficulty.

Another feature of my present invention relates to the mechanism for turning the ratchet-wheel L. A metallic stirrup-actuator, K, is pivoted in a suitably-shaped bearing or bracket, N, and is thereby adapted to oscillate. At each end of the upward-projecting plate is a hole, and near the center of the plate, above the pivot, is another hole, *e*. A stirrup, O, is pivoted at the hole in the outermost end of the plate, and one of the two arms of the stirrup is on each side of the ratchet-wheel, while the cross-piece *f* at the end connecting the two arms engages with the teeth of the ratchet-wheel. A smaller stirrup, P, is pivoted at the hole in the opposite end of the plate, and also engages with the wheel. Thus each end of the oscillating actuator carries a pivoted stirrup. The large stirrup O has sufficient space between the arms to admit the small stirrup, as shown in Fig. 1. A flange, K', projects from the oscillating stirrup-actuator and supports a lever, R, which is bolted or otherwise made fast to the flange. The lever R projects both ways, and each end serves as a handle. By this means and the arrangement of the stirrups either or both ends of the lever may be manned, and when the lever is in motion one of the stir-

rups is always at work pulling on the wheel. When the front end of the lever is pulled down, the large stirrup does duty and the small stirrup rises, and vice versa. The wheel, therefore, is kept turning all the time, thus greatly facilitating the operation of raising the follower. A weight, p' , on the end of an arm rigidly attached to the small stirrup serves to keep the latter in engagement with the wheel. This arrangement of the actuator and lever and one of the stirrups provided with an arm having a weight permits the pivoted stirrups to project upward, whereby this mechanism for operating the ratchet-wheel may be placed below said wheel. Thus in a construction of the kind shown, where the ratchet-wheel has necessarily an elevated position, the lever may have position low down, where a man can work it conveniently. The hole e in the oscillating actuator, located between the two end holes, is to permit the small stirrup to be shifted from the position shown in Fig. 1 and pivoted nearer the center of the actuator, in which latter position it would, by an ordinary move of the lever, catch only one ratchet-tooth, and also having more leverage at this point, the mechanism would require for its operation less power. Where but one man is working the lever, and he at the front end, the attachment of the small stirrup at the hole e lessens the labor at the lifting movement of the lever.

The brackets N are secured to the projecting ends of a beam, r , extending lengthwise of

the press, and under each end of the beam is an upright stud, s , which supports it.

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

1. In a baling-press having the usual follower, a press-box having at its upper part, whereat the finished bale is removed, end pieces adapted to be moved by the follower, whereby the pressure on the end of the bale is relieved, as set forth.

2. In a baling-press, the press-box having at its upper part, whereat the finished bale is removed, movable end pieces, each provided with cross-bars a , and the vertical beams provided on their inner side with notches b , whereby, when the bale has been compressed, the end pieces may be raised until the bars enter the notches, thereby allowing the end pieces to move away from the bale, as set forth.

3. The herein-described mechanism for operating the ratchet-wheel, consisting of the oscillating stirrup-actuator K , a large stirrup, O , pivoted at one end and a small stirrup, P , pivoted at the other end, and having attached thereto an arm with a weight, p' , as set forth.

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

ROBERT W. WHITEHURST.

Witnesses:

L. B. ALLEN,

L. H. SCLATOR.