

J. C. STOKES.  
Baling-Press.

No. 164,779.

Patented June 22, 1875.

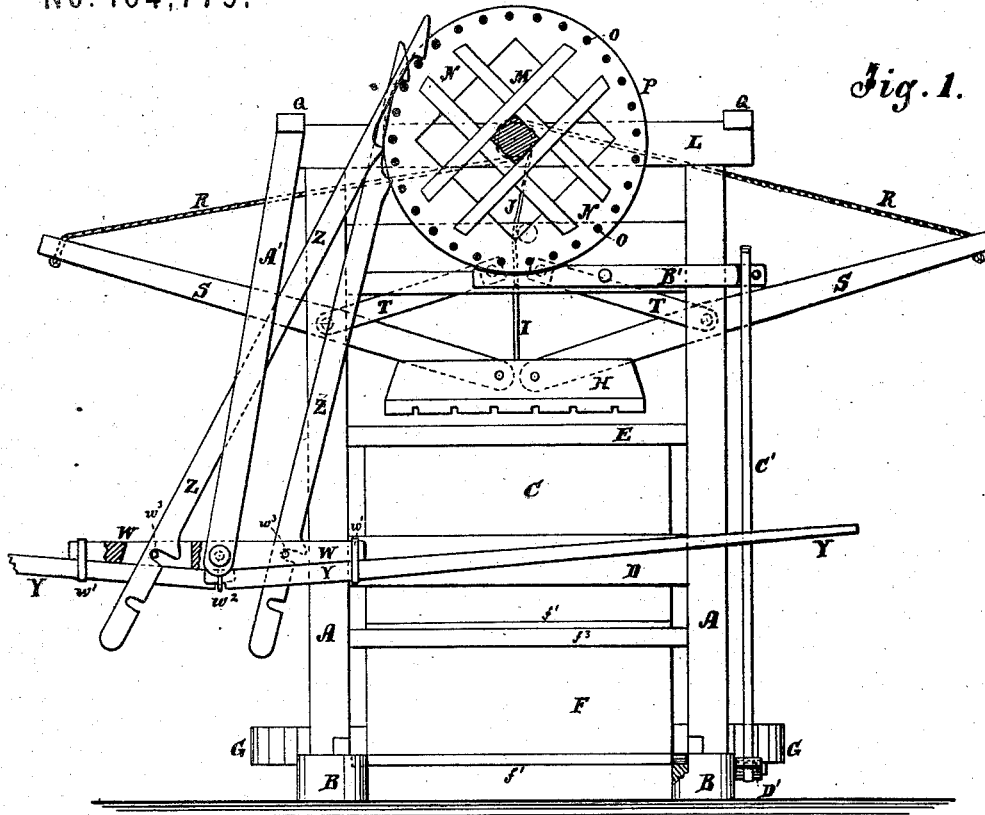


Fig. 1.

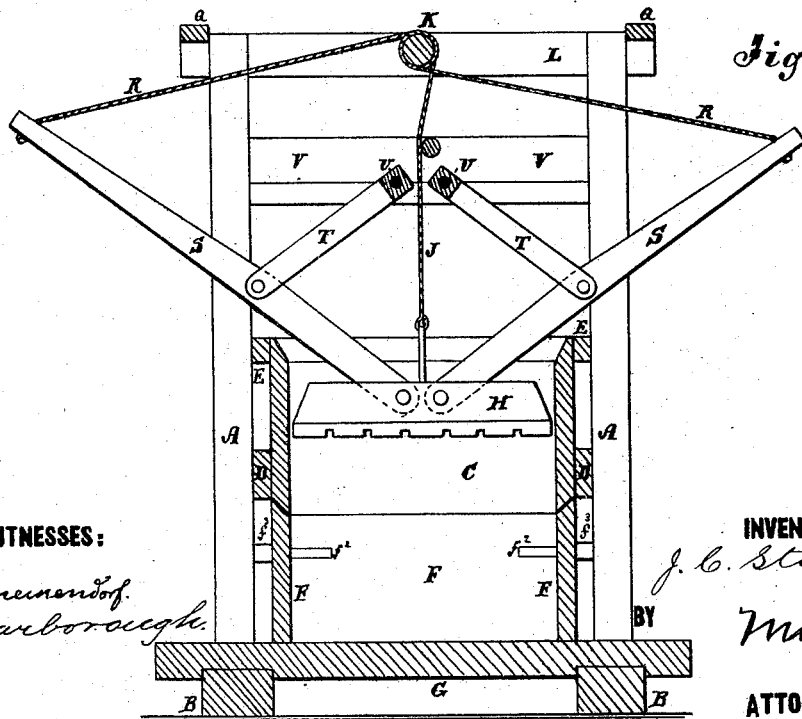


Fig. 2.

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*J. C. Stokes*

BY

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Fig. 3.

Fig. 5.

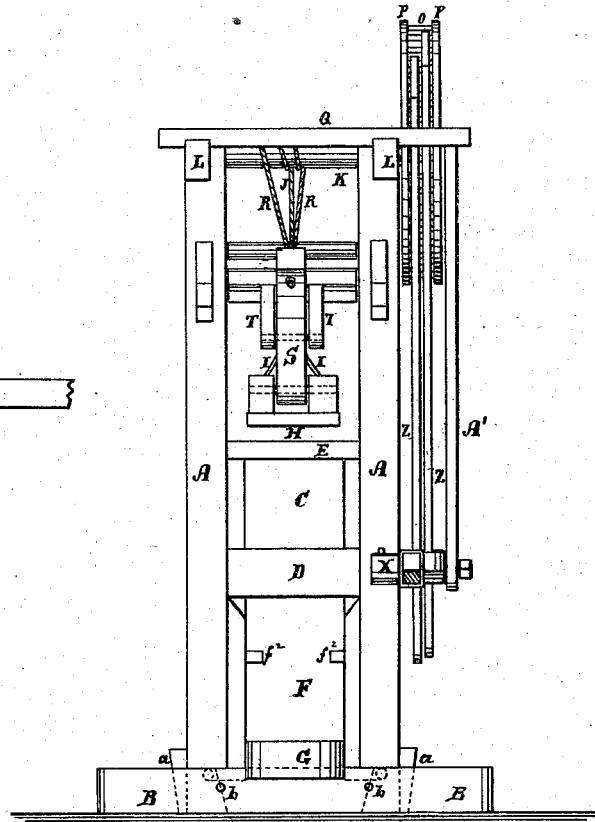
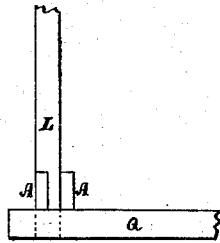
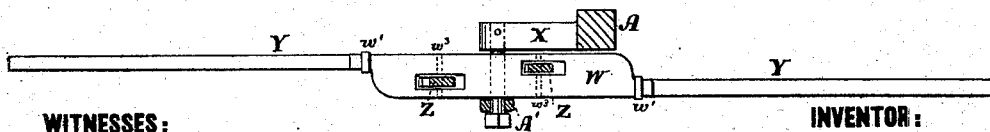


Fig. 4.



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# UNITED STATES PATENT OFFICE.

JOHN C. STOKES, OF VILLANOW, GEORGIA, ASSIGNOR TO HIMSELF AND  
JOSEPH W. CAVENDER, OF SAME PLACE.

## IMPROVEMENT IN BALING-PRESSES.

Specification forming part of Letters Patent No. 164,779, dated June 22, 1875; application filed  
March 6, 1875.

*To all whom it may concern:*

Be it known that I, JOHN C. STOKES, of Villanow, in the county of Walker and State of Georgia, have invented a new and useful Improvement in Baling-Press, of which the following is a specification:

Figure 1, Sheet 1, is a side view of my improved baling-press, parts being broken away to show the construction. Fig. 2, Sheet 1, is a vertical section of the same. Fig. 3, Sheet 2, is an end view of the same. Fig. 4, Sheet 2, is a detail view of the operating-lever and its handles. Fig. 5, Sheet 2, is a detail top view of one corner of the press-frame.

Similar letters of reference indicate corresponding parts.

My invention has for its object to improve the construction of the baling press for which Letters Patent No. 157,241 were granted to me November 24, 1874, so as to make it more convenient in use and more effective in operation.

The invention consists in the construction and combination of parts hereinafter fully described, and specifically pointed out in the claims.

A represents the posts of the press-frame, upon the lower ends of which are formed tenons, dovetailed upon their inner edges, and inserted in mortises in the sills B, where they are secured in place by wedges *a'* driven into the outer ends of said mortises along the outer edges of said tenons. The dovetailed connection is strengthened by pins *b'* crossing the inner ends of the mortises, and against which the inclined edge of the tenons rests, as shown in Fig. 3. C is the stationary part of the baling-box, the lower and upper parts of the sides and ends of which are secured to frames D E, which are framed into the posts A. The upper ends of the sides and ends of the stationary part C of the baling-box are beveled off upon their inner sides to facilitate the entrance of the follower, and their lower ends are beveled upon their outer sides for the beveled upper ends of the sides and ends or doors F of the baling-box. The side doors F are strengthened by cross-bars *f*<sup>1</sup> attached to their outer sides. The ends of the lower cross-bar *f*<sup>1</sup> project and are rounded off to enter and

work in notches in the sills B, as shown in Figs. 1 and 2. The lower ends of the end doors F are rounded off and enter transverse grooves in the upper side of the bed or head-block G, and their upper parts are supported against outward pressure by hook bars or straps *f*<sup>2</sup>, attached to the side doors.

This construction allows all the doors F to be turned down outward, and to be conveniently removed when desired.

The upper parts of the side doors F are sustained against outward pressure by the lock-bars *f*<sup>3</sup>, the ends of which are inserted in notches formed in the posts A, so that they can be readily detached to allow the doors to be opened.

The bed or head-block G is made of the exact width of the interior of the baling-box C F, and consequently of the bale, to facilitate the tying of the bale, and its removal from the baling-box.

H is the follower, to the middle of the upper side of which, near its side edges, are attached the ends of a bail, I, to the center of which, or to a loop formed in or attached to its center, is attached the lower end of a rope, J, the upper end of which is attached to the shaft K, and which is wound upon said shaft to raise the follower from the baling-box to allow material for another bale to be put in. The journals of the shaft K revolve in bearings attached to the bars L. The end of the shaft K projects, is squared off, and to it is attached a frame, M, made of four bars halved to each other in such positions as to form a hole of such a size as to fit upon the square end of the shaft K. To the opposite sides of the end parts of the bars of the frame M are attached segments N, the outer edges of which are connected by a series of pins, O.

The pins O may be made round, and inserted in holes in the segments N, as shown in Fig. 1; or they may be made square and inserted in notches formed in the edges of the segments N. In either case, the wheel may be strengthened by bands P, of wood or metal, passed around the edges of the said segments.

In the outer sides of the bearing-bars L are formed notches of a depth equal to half the thickness of the said bars, and of a width

equal to the breadth of the frame-posts A, thus forming a tenon with a double shoulder, which tenons are inserted in notches in the upper ends of the posts A, as shown in Fig. 5, thus double-shouldering the bearing-bars L to the posts A. Q are the plates of the frame, which are attached to the projecting ends of the bearing-bars L to take them out of the way of the operating wheel and ropes.

To the shaft K are attached the ends of two ropes, R; the other ends of which are attached to the outer ends of two long levers, S, the inner ends of which are pivoted to the middle part of the upper side of the follower H, upon the opposite sides of, and equally distant from, its center. To the levers S, at a little distance above the follower H, are pivoted the lower ends of the toggle-bars or levers T, the upper ends of which are attached to rock-bars U, the journals of which work in bearings in the bars V, placed a little below the bearing-bars L, and having their ends framed into the posts A.

By this construction, as the shaft K is turned in the direction to wind up the rope J and raise the follower H, the ropes R will be unwound, allowing the outer ends of the levers S to drop outward beneath the plates Q by their own weight, so that the follower H may be free to rise. As the shaft K is turned in the direction to wind up the ropes R, the upper ends of the levers S will be drawn inward, and as they approach a vertical position the levers S T will act as toggle-joints, and press the follower H downward with immense power.

W is a lever, which is pivoted at its center to an arm, X, attached to the frame of the press, and which may be the projecting end of a side bar of the frame D. The under side of the lever W is tapered from its center toward its ends, so that it may be worked by one or more men standing upon the ground, even when the press may stand upon an uneven surface. Y are the handles, which are passed through downwardly-projecting loops or stirrups  $w^1$ , attached to the end parts of the lever W, and their inner ends are inserted in a loop or stirrup,  $w^2$ , attached to, and projecting down from, the center of the lever W, the handles Y being thus upon the opposite sides of the central longitudinal line of the lever W. In the lever W, upon the opposite sides of, and equally distant from its center, and upon the opposite sides of the central longitudinal line of said lever, are formed two mortises, to receive the pawls Z, so that each pawl may be in line with the handle Y, that projects from the opposite end of the said lever W. This arrangement prevents the lever W from rocking while being used. In the forward side of the upper or engaging end of the pawl Z are formed long notches, the shoulders at each end of said notches being slightly concaved to adapt them to take hold of the

pins O of the wheel M N O P, and turn it by pushing or pulling, as may be desired. In the forward side of the lower ends of the pawls Z are formed two notches, to receive a pin,  $w^3$ , passing transversely through the lever W. The upper shoulder of the upper notch in the lower ends of the pawl Z projects, so that the pawls cannot drop through the mortises in the lever W.

Pin-holes may be used to receive the pins  $w^3$ , if desired.

The outer end of the pivot of the lever W is supported by the brace A', the upper end of which is attached to the projecting end of a plate, Q, of the press-frame. B' is the brake-lever, the forward part of which, or a shoe attached to said forward part, rests against the rim of the wheel M N O P. The brake-lever B' is pivoted to the frame of the machine, and to its outer end is pivoted the upper end of a connecting-rod, C', the lower end of which is pivoted to the treadle D'. The inner end of the treadle or foot-lever D' is pivoted to a sill of the press, and its outer end projects into such a position that it may be conveniently operated by an attendant with his foot.

When the motion of the follower is to be changed, the lever W is operated to free one of the pawls Z by moving it up or down. The brake B' C' D' is then operated to hold the wheel M N O P while the other pawl is being shifted.

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

1. The pawls Z, having long notches with concave shoulders formed in the forward side of their upper ends to receive the pins of the wheel M N O P, and with two sets of notches or holes in their lower ends to receive the pins  $w^3$  of the lever W, substantially as herein shown and described.

2. The ratchet-wheel formed of the bars or arms M, the segments N, the pins O, and the bands P, to adapt it to be turned in either direction by the pawls Z, substantially as herein shown and described.

3. The combination of the hoisting-rope J that raises the follower H and the pressing-ropes R that operate the toggle-levers S T to compress the bale with the same shaft K, substantially as herein shown and described.

4. The bale I, in combination with the hoisting-rope J and the follower H, substantially as herein shown and described.

5. The combination of the brace-bar A' with the lever W, the pawls Z, and the plate Q of the press-frame, substantially as herein shown and described.

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Witnesses:

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