

(No Model.)

J. S. DAVIS.

BALING PRESS.

No. 285,237.

Patented Sept. 18, 1883.

Fig: 1.

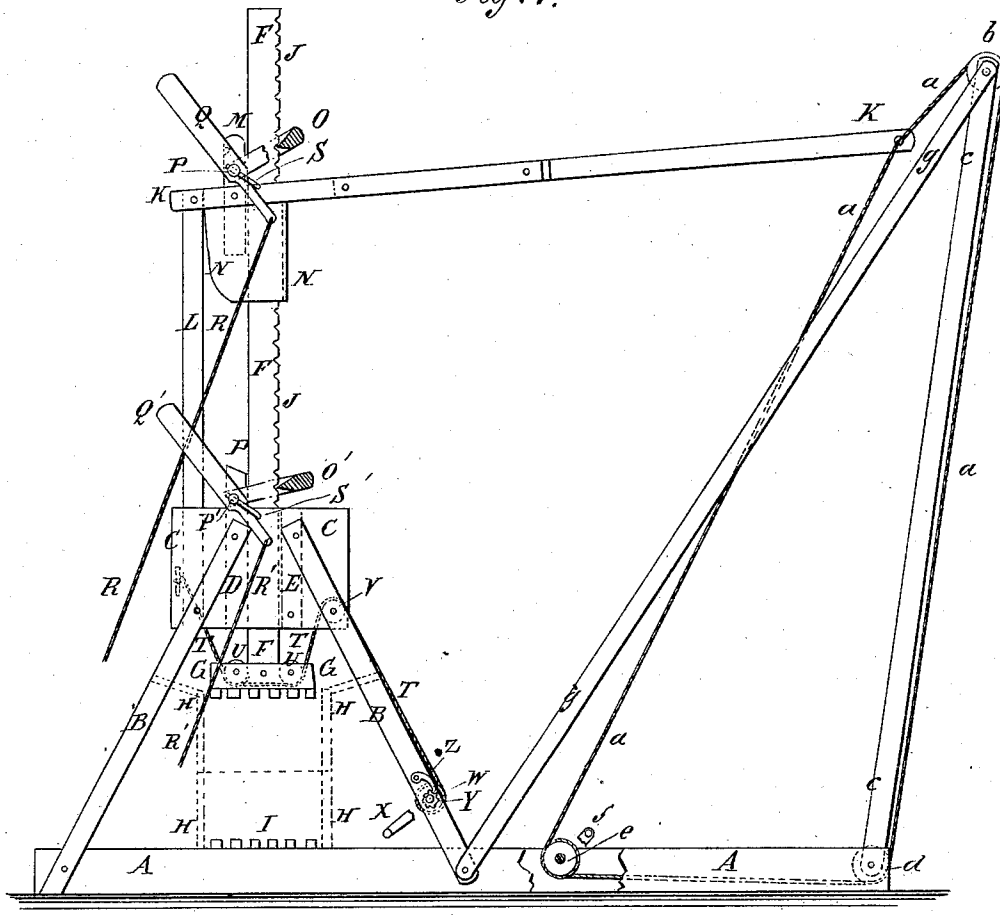


Fig: 2.

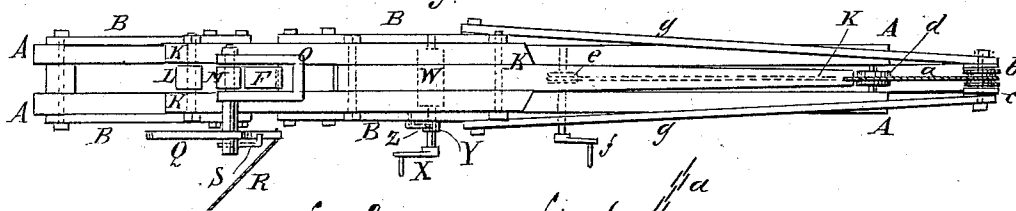


Fig: 3.

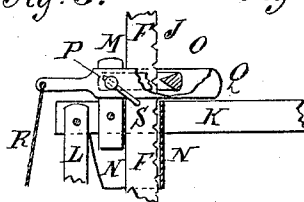
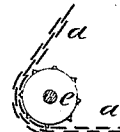


Fig: 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN S. DAVIS, OF FRANKFORT, KENTUCKY.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 285,237, dated September 18, 1883.

Application filed June 20, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN SPRAGUEN DAVIS, of Frankfort, in the county of Franklin and State of Kentucky, have invented certain new and useful Improvements 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 is a side elevation of my improvement, parts being broken away. Fig. 2 is a plan view of the same. Fig. 3 is a sectional side elevation of a part of the same, showing the connection between the press bar and lever. Fig. 4 is a sectional side elevation of a part of the lever-operating mechanism, showing a modification.

The object of this invention is to provide a simple, convenient, inexpensive, and efficient means for compressing cotton and other substances into bales by hand or other power.

The invention consists in the baling-press constructed with a frame carrying a follow block and bar, a lever provided with a pawl, a weighted lever, and a bent arm for connecting the said lever with the follow-bar, a pawl, weighted lever, and bent arm for holding the follow-bar while the lever is being raised, a rope or chain, guide-pulleys, a supporting-standard, and a drum for forcing the lever up and down, and a rope, guide-pulleys, and a drum for raising the follower, as will be hereinafter fully described.

A represents the base-frame of the press, to which are attached two pairs of bars, B, to support the operating mechanism of the press. The upper ends of the pairs of bars B incline toward each other and are bolted to two parallel plates, C, and to the vertical bars D E, that keep the said plates at the proper distance apart. The plates C and the bars D E form a guide-socket for the sliding bar F, to the lower end of which is attached the follow-block G. The follow-block G moves up and down through the baling-box H, which is secured to the base-frame A and the bars B, as indicated in dotted lines in Fig. 1, and provided with doors for the removal of the bales in the ordinary manner. The head-block I is secured to the base-frame A. The bar F

has teeth J formed in its forward edge, and its upper part passes up through the slotted rear part of the lever K. The rear end of the lever K is fulcrumed to the upper end of a standard, L, the lower end of which is bolted to and between the rear ends of the plates C. To the lever K is pivoted the middle part of a short bar, M, which passes through the slot in the said lever and rests against the rear edge of the follow-bar F. The follow-bar F is held against the sliding bar M by a shield, guard, or keeper, N, of sheet metal, attached to the lower part of the said bar M, and which passes around the said follow-bar F. O is a U or clevis shaped pawl, which has an edge upon the inner side of its bend to engage with the teeth J of the follow-bar F. The clevis-pawl O passes around the follow-bar F, and its ends are hinged to the opposite sides of the bar M by a pivot, P, which passes through the said ends and bar, and upon the projecting forward end of which is pivoted a lever, Q, the upper end of which is made heavy, and to its lighter lower end is attached the end of a cord, R. The pivot P is rigidly connected with the clevis-pawl O, and to the forward end of the said pivot is rigidly attached an arm, S, which projects downward and forward at an angle of about forty-five degrees (45°) with the said clevis-pawl O. The outer end of the arm S is bent inward, as shown in Figs. 1, 2, and 3, so that when the heavy upper end of the lever Q is swung to the rearward, as shown in Figs. 1 and 2, the lower end of the said lever will rest against the lower side of the bent end of the arm S, and the said weighted end of the lever Q will hold the clevis-pawl O raised into position to engage with the teeth of the follow-bar F; and when the heavy upper end of the lever Q is swung forward it will rest upon the upper side of the bent end of the arm S, and will hold the clevis-pawl O down upon the upper side of the lever K and out of gear with the teeth of the follow-bar F. By this construction the clevis-pawl O can be thrown into and out of gear with the teeth of the follow-bar F by swinging the weighted lever Q forward and back by means of the cord R. The rear guide-bar, P, projects above the plates C, and to its upper end is pivoted a clevis-pawl, O', similar to the

clevis-pawl O, and provided with a pivot, P', a weighted lever, Q', a trip-cord, R', and a stop-arm, S', in the same manner as the said pawl O. To the rear parts of the plates C is attached the end of a rope, T, which passes around guide-pulleys U, pivoted to the follow-block G, over a guide-pulley, V, pivoted to the forward part of the plates C, and is secured to a drum, W, pivoted to the forward pair of inclined bars, B, and provided with a crank, X, for operating it, and with a ratchet-wheel, Y, and a pawl, Z, for holding the said drum in any position into which it may be turned. With this construction, by throwing the pawls O O' out of gear with the teeth of the bar F and turning the crank X, the follow-block G and the bar F can be easily and quickly raised out of and above the baling-box H, so that material for another bale can be readily placed in the said baling-box. To the outer end of the lever K is attached a rope or chain, a, which passes over a pulley, b, pivoted to the upper end of the standard c, and around a pulley, d, pivoted to the lower end of the standard c or to the forward end of the base-frame A. From the pulley d the rope or chain a passes to and around the drum e, and thence back to the end of the lever K. The drum e is pivoted to the base-frame, or to some other suitable support, and is provided with a crank, f, for convenience in turning it. When a rope is used, it should be wound several times around the drum e, to prevent it from slipping, or should be attached to the said drum, in which case it should be wound as many times around the said drum as will give the lever K the necessary amount of movement. When a chain is used, the drum e should be provided with spurs, as shown in Fig. 4, to prevent the said chain from slipping. The lower end of the standard c is attached to the forward end of the base-frame A, and the said standard is strengthened against the pull of the rope or chain a by the inclined braces g, the upper ends of which are attached to the upper end of the said standard c, and their lower ends are attached to the base-frame A. With this construction, by throwing the upper pawl, O, into gear with the follow-bar F, and turning the drum e in one direction, the lever K will be drawn downward, forcing the follow-bar F and follow-block G downward into the baling-box; and by throwing the lower pawl, O', into gear with the follow-bar F and the upper pawl, O, out of gear, and turning the drum e in the other direction, the lever K will be drawn upward for another stroke, and the follow-block will be held from rising by the said lower pawl, O'. By repeating this operation a sufficient number of times the material in the baling-box

will be compressed to the proper size for a bale, and can be tied and removed from the baling-box in the ordinary manner.

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

1. A baling-press constructed substantially as herein shown and described, and consisting of the frame A B C, the follow block and bar G F, the lever K, the rope or chain and drum a e, the pawls O O', and the weighted levers Q Q', for forcing the follow-block downward, and the rope T and drum W, for raising the follow-block, as set forth.

2. In a baling-press, the combination, with the base-frame A and the follow-bar F, of the inclined bars B, the pair of plates C, and the guide-bars D E, substantially as herein shown and described, whereby the said follow-bar will be supported and guided in its up and down movements, as set forth.

3. In a baling-press, the combination, with the plates C and the toothed follow-bar F, of the standard L, the pawls O O', the weighted levers Q Q', the lever K, and its rope or chain a e, substantially as herein shown and described, whereby the follow-block can be forced downward to compress the material, as set forth.

4. In a baling-press, the combination, with the follow-bar F, the lever K, and the pawls O O', of the weighted levers Q Q', the bent arms S S', and the trip-cords R R', substantially as herein shown and described, whereby the said pawls can be thrown into and out of gear with the said follow-bar, as set forth.

5. In a baling-press, the combination, with the base-frame A and the lever K, of the rope or chain a, the guide-pulleys b d, the drum e, and the standard c, substantially as herein shown and described, whereby the said lever can be readily raised and lowered to force the follow-block downward, as set forth.

6. In a baling-press, the combination, with the inclined bars B, the plates C, and the follow-block G, of the rope T, the guide-pulleys U V, and the drum W, substantially as herein shown and described, whereby the said follow-block can be readily and quickly raised, as set forth.

7. In a baling-press, the combination, with the follow-bar F and the pawl-carrying bar M, of the guard N, substantially as herein shown and described, whereby the said follow-bar is held against the said pawl-carrying bar, as set forth.

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Witnesses:

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