(No Model.)

J. T. DULANY.

COTTON PACKER.

No. 348,490. Patented Aug. 31, 1886.

Fig. 1.

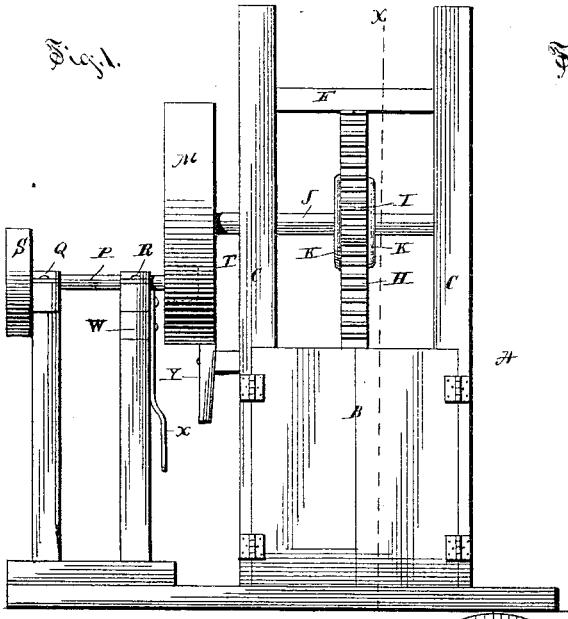


Fig. 2.

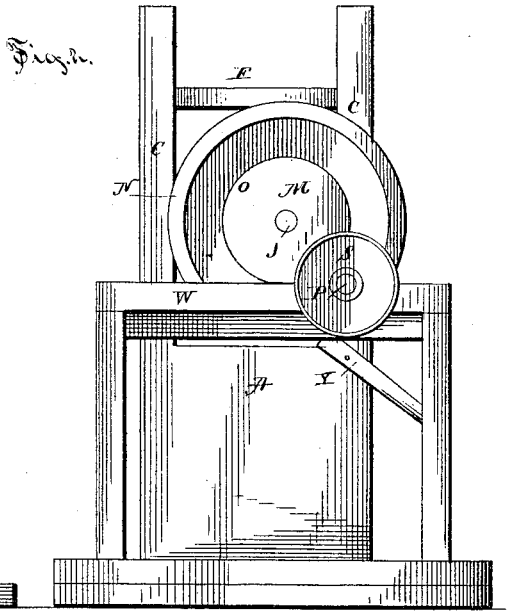


Fig. 3.

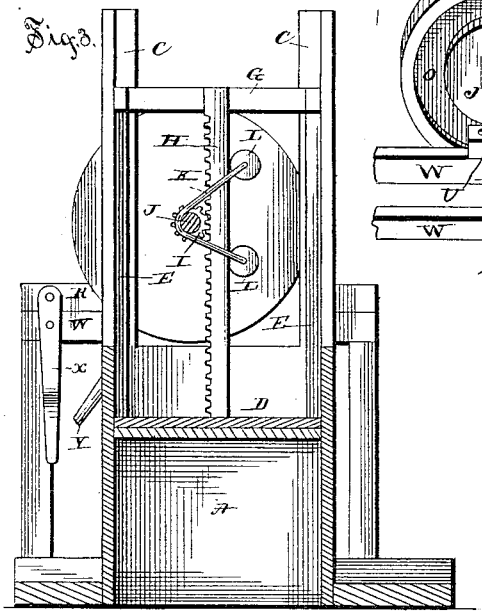


Fig. 5.

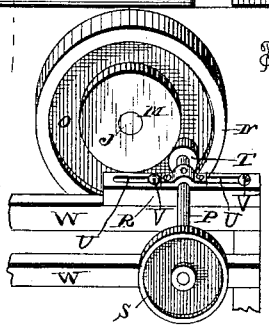
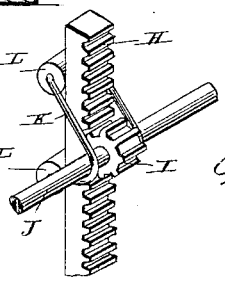


Fig. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

JOHN THORNTON DULANY, OF NEAR BELTON, TEXAS.

COTTON-PACKER.

SPECIFICATION forming part of Letters Patent No. 348,490, dated August 31, 1886.

Application filed April 10, 1886. Serial No. 198,478. (No model.)

To all whom it may concern:

Be it known that I, JOHN THORNTON DULANY, a citizen of the United States, and residing near Belton, in the county of Bell and State of Texas, have invented certain new and useful Improvements in Cotton-Packers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a front view of my improved cotton-packer. Fig. 2 is a side view. Fig. 3 is a vertical sectional view on line *x x*, Fig. 1. Fig. 4 is a perspective detail of the pinion, a portion of the rack-bar, and the guide for the pinion and rack-bar; and Fig. 5 is a perspective view of the driving mechanism and sliding bearing for the friction-pulley.

Similar letters of reference indicate corresponding parts in all the figures.

My invention has relation to presses for packing cotton, hay, straw, or other material in bales; and it consists in the improved construction and combination of parts of the same, as hereinafter more fully described and claimed.

In the accompanying drawings, the letter A indicates the box of the press, which is provided with suitable doors, B, for feeding the material to be pressed into the box, and the corners of the box are formed with upright guides C. A follower or plunger, D, fits and slides within the box and its guides, and is formed with four upright guide-bars, E, at its corners, which fit and slide within the upright guide-posts of the box, and the upper ends of each pair of these upright bars are connected by means of cross-pieces F F, the middles of which are connected by means of a top piece, G. An upright rack-bar, H, is secured at its ends to the middle of the follower and to the middle of the top piece, and a pinion, I, upon a shaft, J, journaled transversely in the upper end of the box, engages this rack-bar. A frame consisting of two bent arms, K K, straddling the shaft at both sides of the pinion, and having rollers L L journaled between their united ends, traveling upon the rear side of the rack-bar, serves to guide the rack-bar, preventing the pinion from becoming disengaged from the rack-bar, and bracing the rack-bar at the point where the pinion exerts its strain. The outer end of the shaft is provided with a wheel, M, which is provided upon its face with a flange, N, projecting from the periphery of the face, and a flange, O, parallel with the peripheral flange, but nearer to the center of the wheel. A drive-shaft, P, is journaled in a rigid bearing, Q, and in a sliding inner bearing, R, and has a pulley, S, upon its outer end, to which the power may be applied. The inner end of this shaft is provided with a small friction-pulley, T, of a diameter less than the space between the flanges, and the bearing for the inner end of the drive-shaft consists of a bar having two longitudinal slots, U U, through which pass bolts V V into the frame W, upon which the bearing slides. One end of a lever, X, pivoted upon the frame, is pivoted to the bearing, so that by tilting the lever the bearing may be slid. A brake, Y, bears with its inner end against the periphery of the flanged wheel. It will now be seen that the shaft having the friction-pulley upon its inner end may be moved by means of the lever and sliding bearing, so that it may either bear against the outer or inner flange, and when it is brought to bear against the inner side of the outer flange it will exert greater power upon the wheel, and consequently, through the shaft and pinion, upon the rack-bar and plunger, than it will when engaging the inner flange, so that the friction-pulley is brought to bear against the outer flange when the follower is to be forced down, compressing the material in the box, while it is brought to bear against the inner flange when the follower is raised, when less power and more speed is desirable. The brake may be brought to bear against the wheel, when the drive-shaft is stopped or the friction-pulley is removed from the flanges, when it will hold the wheel and the follower firmly until the brake is released.

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

1. In a press, the combination of a press-operating shaft having a wheel upon its outer end provided with parallel concentric flanges upon its face, a shaft having connection to the driving-power, and having a friction-pulley upon its inner end projecting between the

flanges of the wheel, a bearing for the inner end of the shaft having two longitudinal slots sliding upon bolts, a lever having its end pivoted to the sliding bearing for shifting it, and a brake bearing with its shoe against the wheel, as and for the purpose shown and set forth.

2. The combination, with the rack-bar and pinion, of a guiding device consisting of a frame formed by two bent arms, K, which straddle said shaft at both sides of the pinion, and have rollers L journaled upon their united ends, which rollers engage the back edge of said rack, substantially as and for the purpose set forth.

3. The combination of a press-box having suitable feeding-doors, and having upright guide-posts at its corners, a plunger having a rectangular upright guide-frame provided with a top piece, and having a vertical rack-bar secured to the middles of the follower or plunger and of the top piece, a shaft journaled transversely in the upper end of the box and having a pinion engaging the rack-bar, a guide-frame consisting of two bent arms straddling the shaft at both sides of the pinion, and two pulleys between the united ends of the arms bearing against the rear side of the rack, a wheel upon the end of the shaft having forwardly-projecting concentric flanges upon its face, a brake engaging the periphery of the wheel, a shaft having connection to the drive-power, and having a friction-pulley upon its inner end projecting between the flanges of the wheel, a bearing for the inner end of the shaft, and having longitudinal slots for the reception of bolts upon which it slides, and a lever pivoted upon the frame of the press, and having one end pivoted to the sliding bearing, as and for the purpose shown and set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

JOHN THORNTON DULANY.

Witnesses:

H. C. SURGHNOR,

A. H. DAVIS.