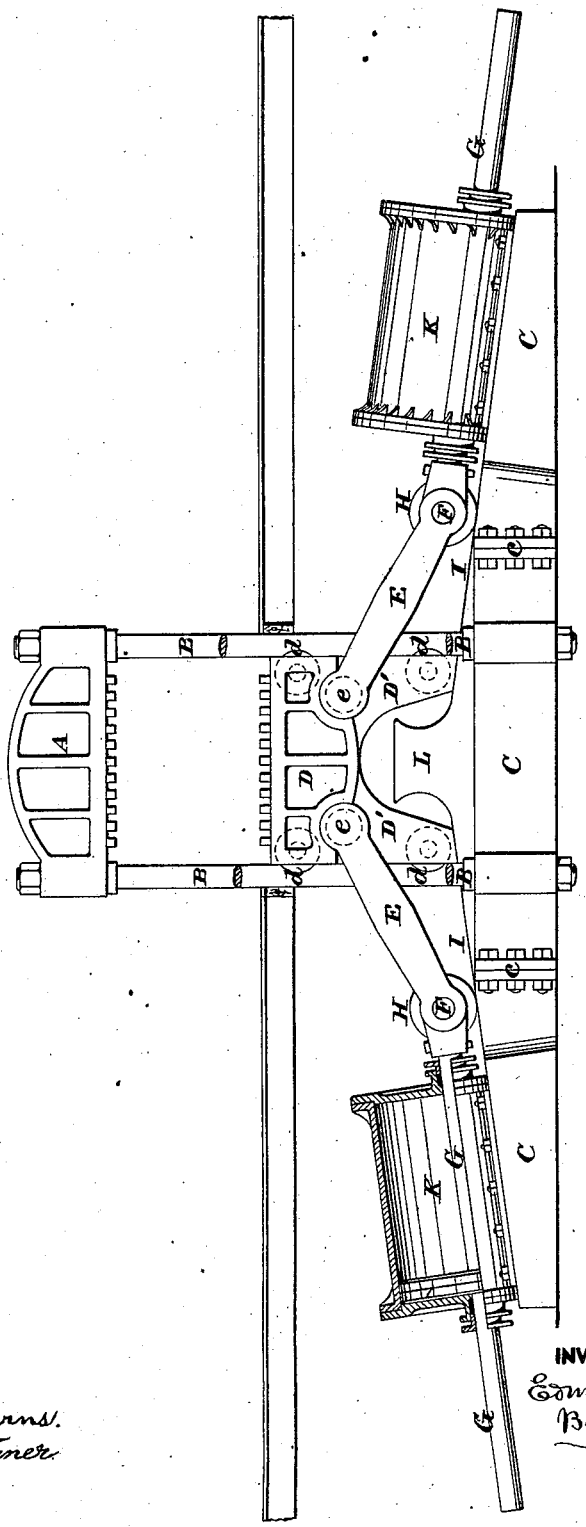
E. L. MORSE.

Press for Cotton-Bales.

No. 161,812. Patented April 6, 1875.



ATTEST:

Robert Burns.
Henry Tanner.

INVENTOR:

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UNITED STATES PATENT OFFICE.

EDMUND L. MORSE, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF HIS RIGHT TO JOSEPH W. BRANCH, OF SAME PLACE.

IMPROVEMENT IN PRESSES FOR COTTON-BALES.

Specification forming part of Letters Patent No. **161,812**, dated April 6, 1875; application filed December 26, 1874.

To all whom it may concern:

Be it known that I, EDMUND L. MORSE, of St. Louis, in the county of St. Louis and State of Missouri, have invented a certain new and useful Improvement in Cotton Compresses, of which the following is a specification:

This invention consists in the combination with the moving platen of toggle or push-bars, one end of each bar being jointed to the said platen, and the other end connected to the piston of a steam or hydrostatic cylinder. The latter end of the bar is connected to a cross-bar or axle having wheels or rollers, which travel on inclined track-bars. The axle constitutes the cross-head of the piston-rod, and the wheels or rollers, with the track, form the guide to the cross-head. The lower ends of the two toggle-bars are forced toward each other by the pistons, to raise the platen, which latter is guided by concave rollers running against the cylindrical columns by which the upper and fixed platen is supported.

The drawing is a side elevation with one-half of one cylinder in section, and parts of the platen and columns removed.

A is the stationary platen supported by columns or rods B, whose lower ends are fixed in the bed-plate or base C. Said bed-plate may be constructed in sections bolted together as shown, to allow of facility in casting and moving to place; the connecting-bolts being shown at *c* passing through flanges. D is the movable platen supported, when elevated from its rest on the bed-plate, by the toggle or push-bars, or rods E. One end of each of the toggle-bars is hinged to the moving platen at *e*, and the other end has connection to the end of the piston-rod G by means of a cross-bar or axle, F, which constitutes the cross-head of the piston-rod and the axle of the wheels or rollers H H, upon which the toggle-bars are supported, and which travel a rail-track, I, upon the bed-plate C. The track I I make inclined, as shown, so that the platen shall have greater movement in proportion to the movement of the piston, than would be the case were the track horizontal. The advantages derived from the use of the inclined track are, that a shorter cylinder can be used, which renders the press cheaper, quicker on account of the short stroke of the cylinder, and more compact.

The piston-rods I prefer to make to pass through both ends of the cylinder, as shown, so as to form a guide to the piston-rod, in addition to the main guide furnished by the track I and wheels H H. The cylinders are shown at K, and may be made of any suitable form for connection to the bed-plate C. At the ends of the platen D are concave-faced rollers, *d*, which run against the sides of the columns B, and constitute the guides to the platen, in its vertical movement. The side plates D′ of the platen D extend downward, so that when the top of the platen is level with the floor the platen is supported on the bed-plate. L is a stop-block on the bed-plate, which acts, when the platen D has attained its full height, to stop the farther inward movement of the lower ends of the toggle-bars E. The inward movement of the toggle-bars preferably stops at such a point that the weight of the platen will tend to force them asunder, so that it will not be necessary to admit live steam into the inner ends of the cylinders to start the platen downward.

I claim as my invention—

The inclined tracks I I, in combination with the push-bars E E, steam-cylinders and pistons G K, and platens A D, as set forth.

EDMUND L. MORSE.

Witnesses:

SAML. KNIGHT,

ROBERT BURNS.