

# W. Bullock, Cotton Press.

N<sup>o</sup> 3873.

Patented Jan. 4, 1845.

Fig. 2.

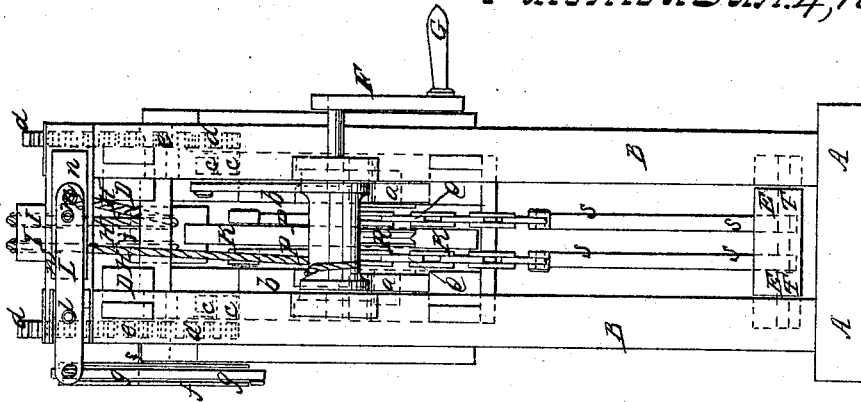
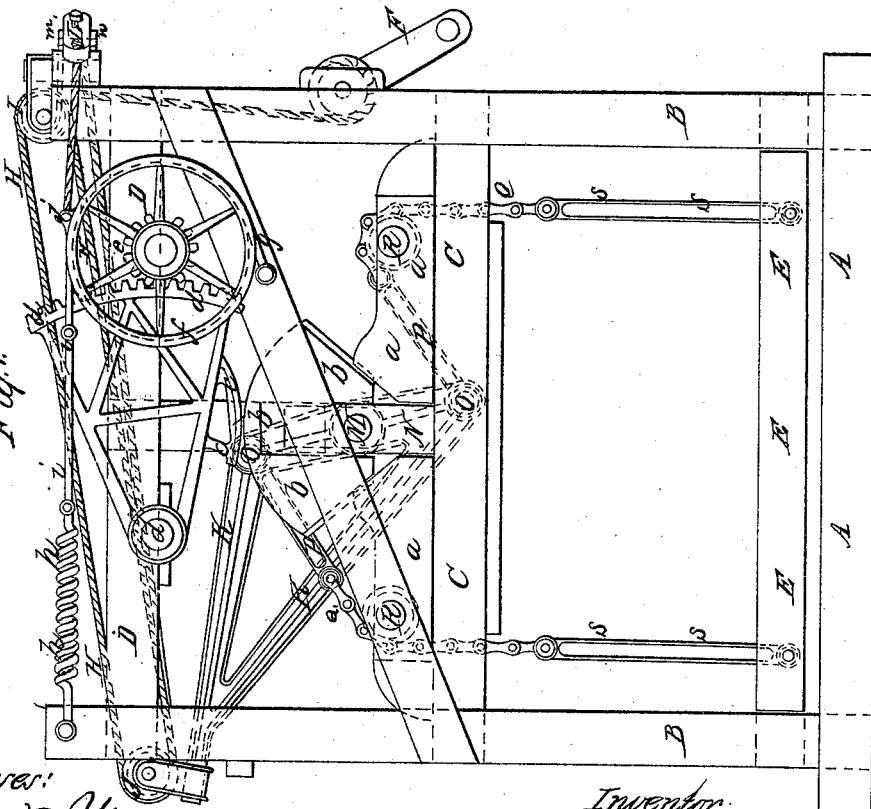


Fig. 1.



Witness:  
Paul C. Hodge  
James Harbottle

Inventor:  
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# UNITED STATES PATENT OFFICE.

WILLIAM BULLOCK, OF JERSEY CITY, NEW JERSEY.

## IMPROVEMENT IN COTTON-PRESSES.

Specification forming part of Letters Patent No. 3,873, dated January 4, 1845.

*To all whom it may concern:*

Be it known that I, WILLIAM BULLOCK, of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and Improved Press for the Pressing of Cotton, Hay, or any other Material; and I do hereby declare that the following is a full and exact description.

The nature of my invention consists of an arrangement of a compound lever, in combination with an arrangement which is so contrived as to release the pressure after it has arrived at a certain limit, so as to have a uniformity in all the bales to be pressed.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I construct my press as per drawings, Figures 1 and 2, Fig. 1 being a side elevation, and Fig. 2 an end elevation, of the press.

A A is the bottom of the press, into which are mortised four main standards or posts, two only of which, B B, are shown in the drawings.

C C are the cross-rails supporting a stationary platen.

D D are the top cross-rails; E E, the moving platen.

The power of the press arises from the following combination: F is a common windlass, which is operated on by a crank-handle marked G, which has a rope, H H H, passing around it, and thence over and around two pairs of sheave-blocks, I I and J J. Those marked I I are fastened onto the head of the press, and the corresponding pair (marked J J) is fastened on the upper end of the lever K K, which has the form of a scalene triangle. The other end of the rope H H is fastened to the end of a small lever, L, hereinafter mentioned. The main lever K has a fulcrum or center marked M, which has a bearing or hole in a vertical post marked N, which post is mortised into the cross-rail and stationary platen marked C. Attached to the extremity of the short side of the scalene-triangular lever K are two journals or pivots marked O O, on which are suspended or worked at one end straps or links P P, playing each side of the lever. Attached to the reverse end, which I mark Q Q, are chains passing over rollers marked R R, which chains pass down and are fastened to iron straps S S S S. These iron

straps support the movable platen marked E E. The ends of the straps work into two bars or bolts marked T T, passed through the movable platen for that purpose.

By the above arrangement the pressure for the bale is obtained.

It now remains for me to describe my contrivance for limiting the amount of pressure to be applied to the bale or bales. Sliding on the top of the rails forming the stationary platen marked C C, I have four pieces of wood, two of which are shown in Fig. 1 and marked a a a a. The journals of the rollers marked R R are working into them near the outside ends both right and left, while the inside ends, near the vertical standards marked N, are beveled, forming inclined planes of an angle of about forty-two degrees from a vertical line, into which is pressed a wedge-piece with corresponding planes, as marked b b b, which works up and down and is guided by the vertical standard N. The top of this wedge-piece is curved, and has pressing on it a curved cam-piece, c c, which is part of the segment of the wheel d d d, which radiates from the center pin, d', the spur-teeth of which work into two pinions, e e, e e. This pinion-shaft passes across the machine to work the corresponding pinion and segment which are marked in Fig. 2. Attached to this pinion-shaft is a friction-wheel marked f f, which has a friction-band passing around and impinging upon one half of its surface, (marked g g,) which impingement is maintained by means of a spiral spring marked h h, the spiral spring and band being connected by means of the rod or bar i i at the joint j. Attached to the same joint is another rod or rope which is connected to the lever L. This lever is of wood, works on a fulcrum-pin, l, and has on its other end the reverse end of the windlass-cord—that is to say, the cord passing from the windlass around the two pair of sheaves and fastened to the end of the wooden lever k at the point marked m, so that a direct connection is made between the windlass and the band on the friction-wheel f f.

Under the wooden lever k is an elliptic spring of steel, (marked n n,) which has a tension equal to the power required on the upper end of the lever for a given pressure on the bale, and when that power is exceeded the spring n n gives way and relaxes the friction-band g g

from the friction-wheel *ff* and the wedge-piece *b b*, which is all the while pressing against the cam-piece *c c*, which forces up the segment-wheel *d d*, &c. This, it will readily be seen, allows the two slide-pieces *a a a a*, which support the journals of the rollers marked *R R*, to come toward the center, lengthens the vertical portion of the chains, and slackens the pressure on the bale, thus giving the different bales equal size for equal weight.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of levers *K K* with the side links, *P P*, with chains *Q Q* passing over rollers *R R*, having vertical links to support the movable platen *E E*.

2. The invention of the arrangement for

connecting the self-adjusting platen to the machinery by which the power is applied to the press, so that whenever it takes beyond a limited amount of power to propel the press the simple action of the power in propelling the press will release the bale until only the given amount of power is required.

3. The invention of the arrangement for connecting the above arrangement for adjusting the power upon the bale to the movable platen of the press, substantially in the manner and for the purposes set forth.

WM. BULLOCK.

Witnesses:

JOHN B. HAIGHT,  
JULIAN P. CHAZOTT.