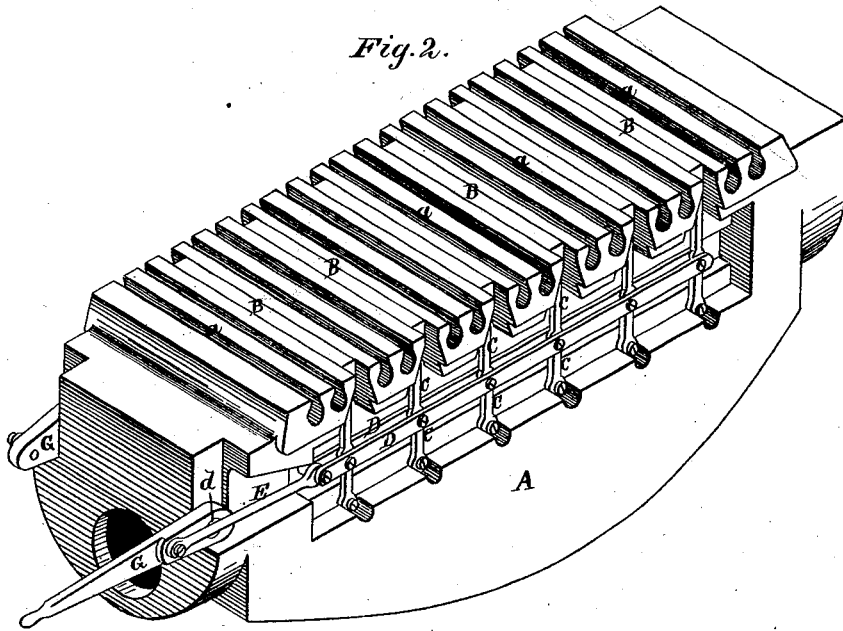
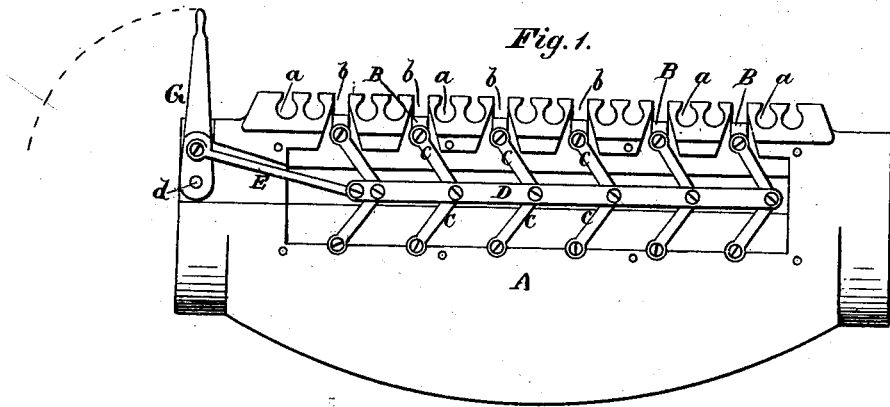


C. E. BOARDMAN.

DEVICE FOR TIGHTENING BANDS ON COTTON AND OTHER BALES.

No. 185,070.

Patented Dec. 5, 1876.



WITNESSES

*Henry A. Miller*

*C. L. Ewert*

INVENTOR

*Chas. E. Boardman*

*Alexander & Mason*

ATTORNEYS

# UNITED STATES PATENT OFFICE.

CHARLES E. BOARDMAN, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF OF HIS RIGHT TO LEWIS MILLER, OF READING, PENNSYLVANIA.

## IMPROVEMENT IN DEVICES FOR TIGHTENING BANDS ON COTTON AND OTHER BALES.

Specification forming part of Letters Patent No. 185,070, dated December 5, 1876; application filed November 25, 1876.

To all whom it may concern:

Be it known that I, CHAS. E. BOARDMAN, of New York, in the county of New York, and in the State of New York, have invented certain new and useful Improvements in Method for Tightening Bands on Cotton or other Bales; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

My invention relates to presses for baling cotton or other articles; and it consists in a device for tightening the bands and pressing the same into the bale, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side elevation of the bottom platen of a baling-press embodying my invention, and Fig. 2 is a perspective view of the same.

A represents the ordinary platen in the bottom of a baling-press, and provided with the usual air-grooves *a* across its upper surface, and also with the grooves *b* at suitable intervals, parallel with the air-grooves, for receiving the bands with which the bale is to be tied. In each of the grooves *b* is placed a bar, B, capable of being moved up and down in the same. The bars B B are, at their ends, connected with the platen A by means of toggle-levers C C, and these levers are, at the joints on each side, connected by bars D D, as shown. The bars D are at one end connected, by a rod, E, with an arm, G, attached to the ends of a shaft, *d*. One of the arms G forms a lever, which may be operated by hand, or by steam, or hydraulic or other pressure, so as to raise, by means of the toggle-levers C, the bars B flush with the upper surface of the platen. The follower at the top of the press is to be provided with similar bars, and devices for moving them; and the operation is as follows:

The bars B are moved to the bottom of the

grooves *b*, and the bands lie in the same on said bars. Now, when the bale is pressed the bars B in the bottom platen A are first moved upward, so as to press the bands into the under side of the bale. By the usual mechanism employed for that purpose the band is then drawn tight over the top of the bale, the bars B in the follower pressed outward, to press the bands into the top of the bale, and the bands then fastened by any of the ordinary bale-ties in common use.

By the employment of this device the bands are tightened much better, and the bale will not expand as much after the pressure of the press is removed as it otherwise would.

Though I prefer to use the toggle-levers C C, as shown and described, I do not desire to confine myself to the same, as various other mechanical means may be employed for moving the bars B out and in. For instance, on each side of the platen may be a pivoted disk, connected by rods with toggle-levers in opposite directions, and such disk operated by any suitable means to turn on its pivots; or cams or eccentrics may be used in place of the toggle-levers, if so desired.

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

1. In a baling-tie, a series of bars, B B, located in the band-grooves of the bottom platen and follower, all connected to suitable levers, or equivalent mechanism, and operating simultaneously up and down within the grooves by means of levers, or their equivalents, on the ends of the platen and follower, for the purposes set forth.

2. The combination of the platen A, with band-grooves *b*, the bars B, toggle-levers C, connecting-bars D, rod E, and lever G, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 21st day of November, 1876.

CHARLES E. BOARDMAN.

Witnesses:

L. E. EVANS,  
ARCH. M. PENTZ.