J. R. BLOSSOM.
Baling-Press.

No. 203,880. Patented May 21, 1878.

Fig. 1.

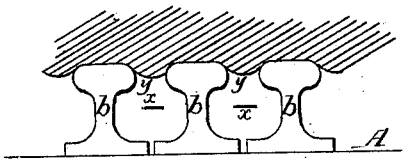


Fig. 2.

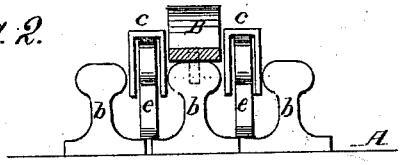


Fig. 3.

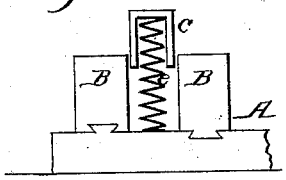


Fig. 4.

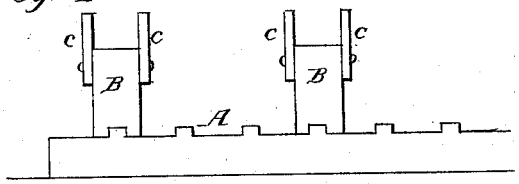


Fig. 5.

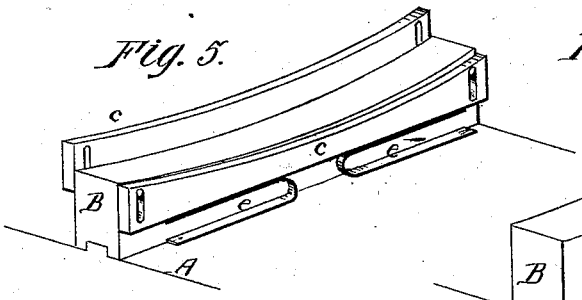
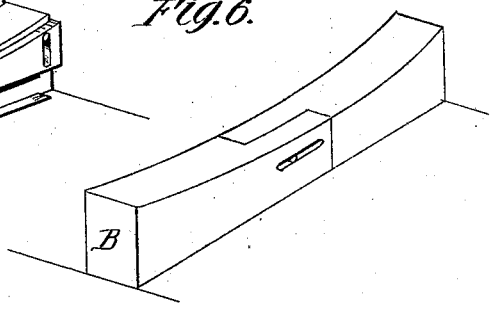


Fig. 6.



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UNITED STATES PATENT OFFICE.

JOSEPH R. BLOSSOM, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN BALING-PRESSES.

Specification forming part of Letters Patent No. **203,880**, dated May 21, 1878; application filed April 17, 1878.

To all whom it may concern:

Be it known that I, JOSEPH R. BLOSSOM, of Brooklyn, Kings county, New York, have invented Improvements in Baling, of which the following is a specification:

My invention is an improvement in pressing and baling cotton, &c., fully described hereinafter, whereby the bale is secured at the points of its greatest compression, and expansion after pressure is removed is greatly reduced.

In the drawing, which forms part of this specification, Figure 1 is a view, illustrating a common mode of baling; Fig. 2, a view showing part of a press with my improved appliances; Figs. 3 and 4, modifications; and Figs. 5 and 6, perspective views, showing different forms of press-bars and the arrangement of the guards.

In baling cotton hitherto the platens generally used have consisted of parallel bars *b*, Fig. 1, of various forms, often of railway-iron, or approximately similar shape, the object being to readily pass the iron bands *x*, each having the tie or buckle attached to one end, around the bale while the platens were in contact with it, at such distance apart as to have any desired number of bands, from five to twelve, upon bales, which greatly vary in length.

Other platens, with some of the bars curved in pairs, between which the bands are passed, and with intermediate bars with faces coinciding with a horizontal plane, have been patented, but are not effective, because the spaces between the paired bars have always been too small to permit the band to be quickly passed through from side to side. With all these forms the cotton will protrude between the bars, making puffs *y*, around which each band, in one piece, is pulled by hand or by complicated appliances, the square corners of the pressed bale and rigidness of the iron being great hindrances to drawing the bands tightly; and as the band is not put at the points of greatest compression, the expansion of the intermediate parts, after the pressure is relieved, and the consequent increase in size of the bale, is very great.

In some cases the bands have been each in two pieces, afterward fastened at each side and laid upon and against platens that are flat, and the part around which the bands are placed is no smaller than any other part of the bale.

Another plan has been to employ platens with a fixed number of ribs, upon and against which half-bands have been secured, the spaces between said ribs being occupied by sections or blocks projecting and held beyond the ribs by springs, serving to prevent displacement of the bands, and depressed only to the level of the ribs or bars by the bale when pressed; but in no case has the rib on which the band is placed been constructed so as to project beyond the plane or level of the rest of the platen under pressure, so as to force the bands by the power of the press into a recess in the bale made by the rib.

To obviate much of the great expansion resulting from baling by any and all of the foregoing methods is the main object of my invention.

When the platen consists of parallel bars *b*, first described, Figs. 1 and 2, I apply thereto bars B, Fig. 2, which, by any suitable appliances, as dowel-pins, dovetails, clamps, or bolts, &c., can be adjusted and secured at desired distances apart, so as to suit all lengths of bales and any number of bands desired. These bars I make with straight or curved faces—that is, thickest at the ends—in a shape most nearly resembling the outline which the compressed bale tends to take after pressure is removed; and to the faces of the bars I apply the bands, which are thereby forced into the bales.

The curving of the bars to a form approximating the shape of the expanded bale reduces the length of the bands needed, and also leaves less slack than with any other mode of baling, correspondingly reducing the size of finished bale.

At the sides of either straight or curved bars I may arrange spring-guards *c*, which, upon pressure, move below the face of the rib or bar upon which the band rests, so that every band is forced as deeply as desired into the material, with less power than is usually required in ordinary processes, as the faces between the bands can be relieved of pressure to any desired degree by simply raising or thickening the adjustable rib or bar. These

guards, which prevent displacement of the bands, can be supported by any suitable springs, *e*, and may either be separate from or attached to the straight or curved bars B. In Figs. 2 and 3 they are shown arranged between the bars *b* B; in Figs. 4 and 5, as applied to bars B, adjustable on the platen-base A.

The bars B may be modified in form to adapt them to varying forms of bar platens or to the flat platen, on which the bars may be arranged at any desired distance apart, giving base enough to maintain them steady under pressure; and dowel-pins, dovetailed ribs, bolts, or other devices may be employed to secure the bars adjustably in place, either on the flat platen-plate or on the faces of the bars *b*.

The bars B may be each in one piece or in two pieces, extending partly across the platen from each side; or they may extend so far as to overlap, as shown in Fig. 6, in which case the ends may be united by a pin on one piece extending into a slot in the other, thus permitting the length of the bar to be adjusted at will.

I claim—

1. The process herein described in pressing and baling, consisting in applying the bands upon the faces of ribs which are more prominent when under pressure than any other part of the platen, thereby forcing the ribs and bands into the bale, and securing the ends of the bands while the bale is under compression, as set forth.

2. A platen provided with a series of curved parallel ribs, constructed and adapted to receive the bands on their faces and to force the same into the bale on lines coinciding substantially with the outline the bale assumes on expanding, substantially as set forth.

3. The spring-supported guards *c*, arranged to sink below the faces of the band-supporting bars on application of pressure to the bale, as set forth.

4. The platen consisting of a series of plane-faced parallel bars, B, thicker at the outer ends than at the center, and arranged upon a flat platen-plate, substantially as set forth.

5. The bars B, made each in two sections, for varying the length, as set forth.

6. The combination, with the platen-plate A, of movable bars B and appliances for securing the same adjustably on the plate A, as and for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH R. BLOSSOM.

Witnesses:

JAMES J. DEAN,

F. B. CHICHESTER.