

C. J. LUCE.
COTTON PRESS.

APPLICATION FILED MAR. 21, 1911.

1,014,764.

Patented Jan. 16, 1912.

Fig. 2.

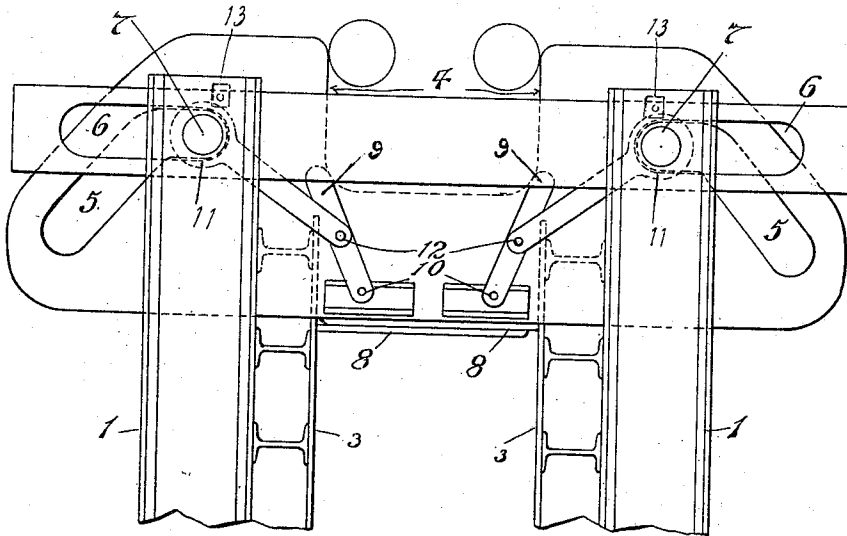
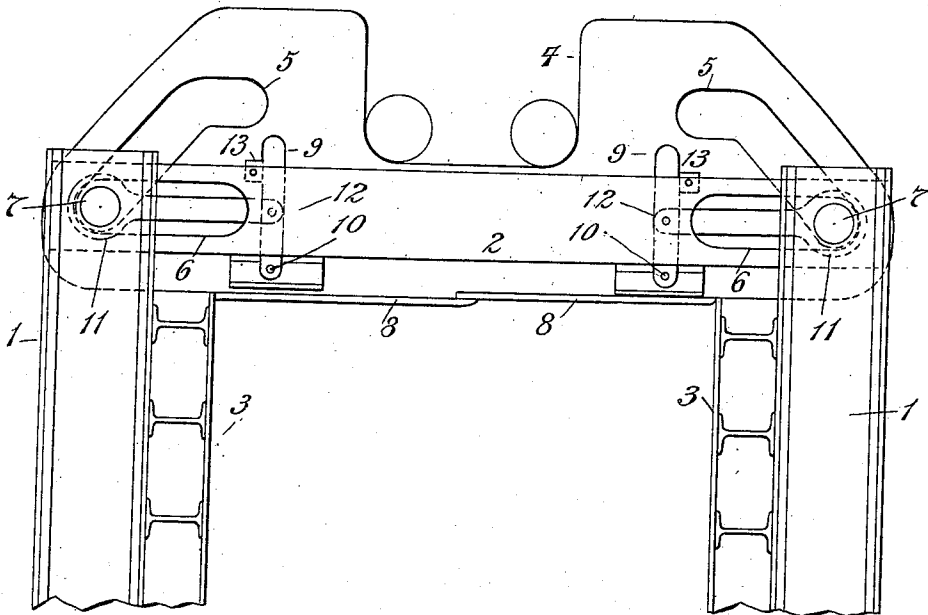


Fig. 1.



Witnesses:
Edward Dowland.
Charles D. Edwards

Charles J. Luce Inventor
By his Attorneys
Herrick Herrick

UNITED STATES PATENT OFFICE.

CHARLES J. LUCE, OF NIAN TIC, CONNECTICUT, ASSIGNOR TO THE STANDARD COTTON COMPRESS COMPANY, A CORPORATION OF DELAWARE.

COTTON-PRESS.

1,014,764.

Specification of Letters Patent.

Patented Jan. 16, 1912.

Application filed March 21, 1911. Serial No. 15,984.

To all whom it may concern:

Be it known that I, CHARLES J. LUCE, a citizen of the United States of America, and resident of Niantic, in the county of New London and State of Connecticut, United States of America, have invented certain new and useful Improvements in Cotton-Presses, of which the following is a specification.

My invention relates to an improvement in cotton presses, and, particularly, to the operation of collapsible pressure heads to be used in connection therewith and means for restoring the pressure heads to their initial position by the retraction of the press.

My present invention is an improvement on an invention for which I obtained Letters Patent of the United States on cotton presses dated June 1st, 1909, No. 923,190. In this case I have deemed it unnecessary to reproduce the entire press as shown in that patent, but have simply illustrated in two sectional views one collapsible pressure head first in its initial and then in its collapsed position.

In a cotton press of the type referred to the bale of cotton is first pressed at right angles to the direction of its original compression; the second compression is then at right angles to that last referred to and the original compression. The third compression is in the same direction as that of the original compression. When the first compression is applied at right angles to the original compression, the pressure heads employed are expanded to their full capacity, and when the secondary pressure at right angles to the first compression is applied, these pressure heads are collapsed in so far as the pressure exerted against the cotton by the secondary pressure is required to compress the same, then the final pressure is exerted and the bale is bound, then the press is retracted to its initial position and the bale is removed and another bale introduced for purposes of compression. At this point in the operation of my cotton press described in my Patent No. 923,190, it was necessary that I employ means to expand the plates forming the collapsible compression head to their initial position. My present invention is intended to provide automatic means by which this may be accomplished

as the compress is retracted to its initial position.

I have illustrated my invention in the accompanying drawings, referring to the several parts by numerals, designating like parts by like numerals.

Figures 1 and 2 are both horizontal sections of a press similar to the one described in said Patent No. 923,190, Fig. 1 showing the parts expanded, while Fig. 2 shows the parts contracted.

I have deemed it unnecessary to illustrate the entire machine or the entire square representing the compress. It will be understood that I have illustrated but half of the section of the press as the other half is a duplicate thereof, 1 and 2 representing the rectangular frame of the press, while 3 and 3 are the side platens and 8 and 8 and their correspondingly opposed platens are the end platens or pressure heads.

4 is a horizontal plate which is employed to bear upon the pressure head or platen 8 and force the same into the press.

5 and 5 are ways cut into the plate 4, while 6 and 6 are ways cut into the frame 2.

7 and 7 are vertical shafts, and in the operation of the press, these shafts 7 and 7 are drawn together by suitable means, thus carrying with them the frame 1—I and causing the plate 4 to move against the collapsible pressure heads 8 by reason of the fact that, in drawing the vertical shafts 7—7 together, they operate on the cam surfaces 5 to cause said plate 4 to move inwardly.

In the operation of my press referred to in said patent pressure is caused to bear upon the platens 8—8 and 3—3, the result being that when the bale is compressed, the plates forming the platens 8—8, which it will be seen in this drawing are caused to overlap, are driven to a position shown in Fig. 2. When the press is retracted, it is necessary to restore these plates to their initial position before operating the press again. As previously stated, my invention here expressed is intended to accomplish this result automatically.

I will now proceed to describe this attachment.

9 is a lever pivoted at 10 to one of the two plates 8 forming the platen 8—8. 11 is a second lever pivotally mounted on the verti-

cal shaft 7 and pivoted at the other end thereof at a point on the lever 9 which in the operation of the train of levers will accomplish the result desired. I have indicated this pivotal point as 12.

13 is a lug mounted in a fixed position on the permanent part of the frame 2 in a position to make contact with the lever 9 in the operation of the parts about to be described.

As the pressure is exerted to compress, the parts are finally brought from the position shown in Fig. 1 to that shown in Fig. 2. As they are retracted, the platens 3—3 recede as do the platens 8—8 and 8—8, but it will be noted that there is no immediate action of the levers which I have described to restore the plates to their initial position until such time as the platens 8—8 are relieved from the pressure of the retracting cotton, and, indeed, no operative function is performed until in the retraction of the lever 11 bearing with it the lever 9, the lever 9 is caused to engage with the lug 13, at which point it will be noted that the lever 11 begins to pull on the lever 9 at the point 12, which is its pivotal connection therewith, and seeing that the further movement of the lever 9 is retarded by the stationary lug 13, the pulling strain of the lever 11 operates to carry with it the plate 8 and to restore the same to the initial position shown in Fig. 1.

What I claim is:

1 In a cotton press substantially as described, a pressure head formed of overlapping plates which are adapted to collapse before the pressure of corresponding pressure heads operating at right angles to said collapsible heads in combination with two levers pivotally connected one with each plate and two other levers pivotally con-

nected at one end with corresponding movable parts of the compression and retraction mechanism of the press, the other end of the last mentioned levers being pivotally connected with the first mentioned levers at a suitable point, two stationary lugs adapted to engage the first mentioned levers as the press retracts, the system of levers being so adjusted as to accomplish engagement with said lugs at a predetermined point in the retraction of the press and when such engagement is had to operate to retract the plates to their initial position.

2. In a cotton press substantially as described, two pressure heads formed of overlapping plates which are adapted to collapse before the pressure of corresponding pressure heads operating at right angles to said collapsible heads in combination with four levers each pivotally connected with one plate, four other levers each pivotally connected at one end to a moving part of the compression and retraction mechanism of the press, the other end of each of said levers being pivotally connected respectively with one of the first mentioned levers at a suitable point, four stationary lugs adapted to engage the ends of said first mentioned levers as the press retracts, the system of levers being so adjusted as to cause engagement with the lugs at a predetermined point in the retraction of the press and operating to restore the plates to their initial position.

Signed by me at New York city, county and State of New York, this 20th day of March, 1911.

CHARLES J. LUCE.

Witnesses:

RALPH O. L. FAY,
CHARLES D. EDWARDS.