

A. Baldwin,

Cotton Press.

No. 95411.

Patented Oct. 5. 1869.

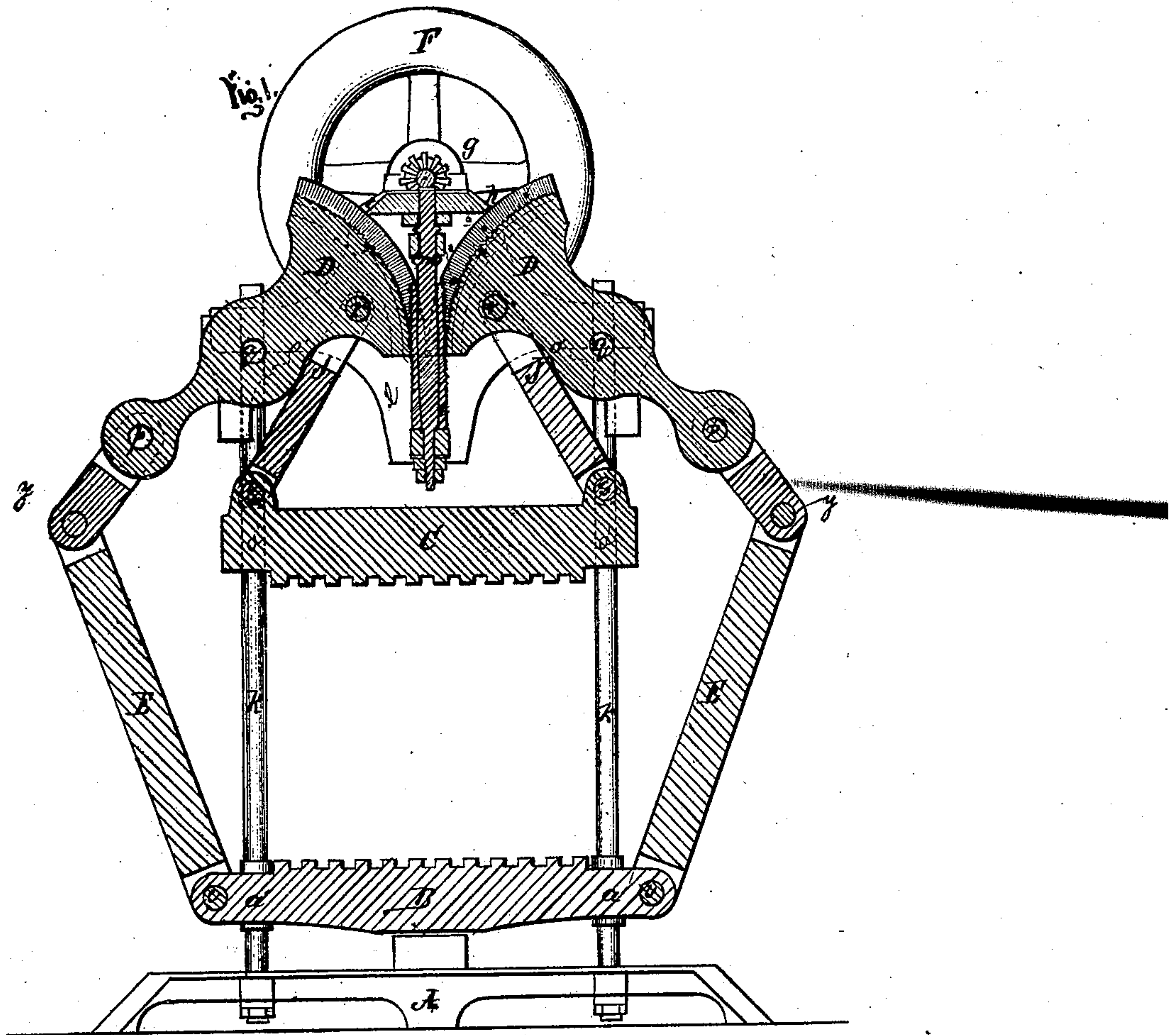


Fig. 2. a.

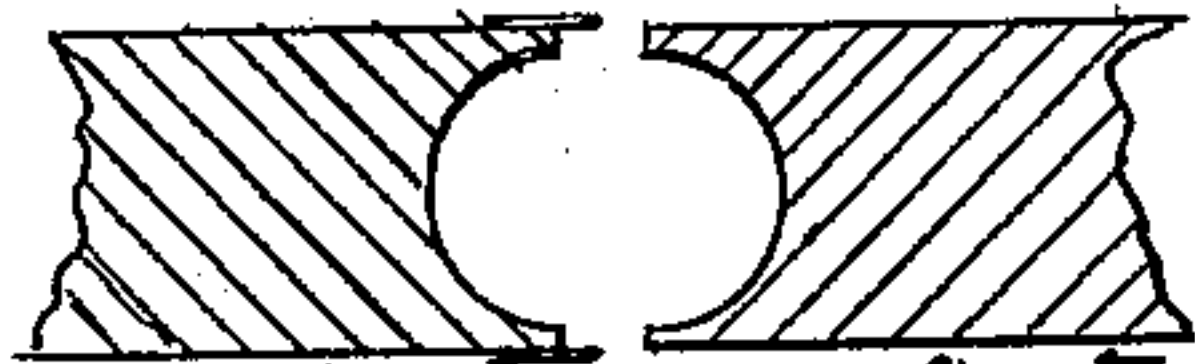
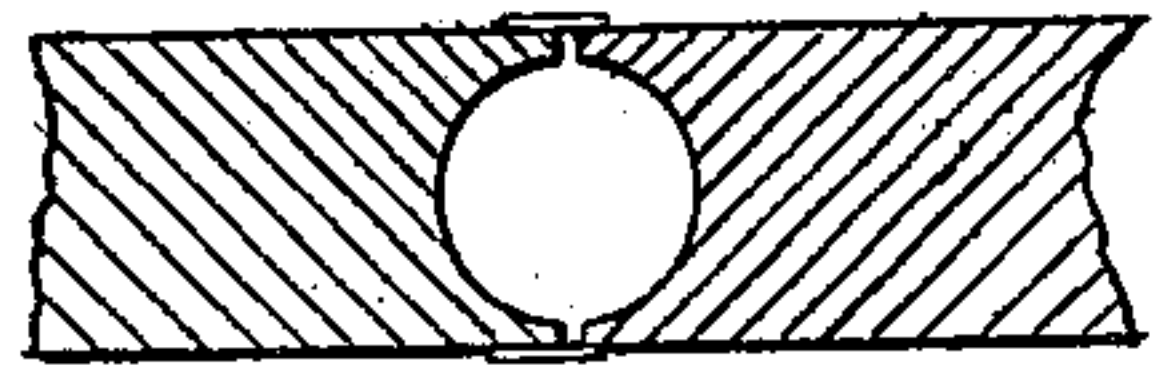


Fig. 4.



Fig. 5.

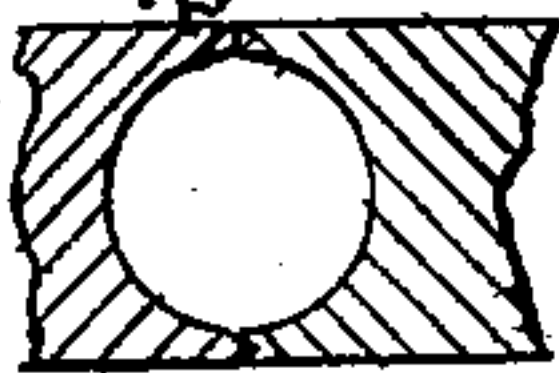
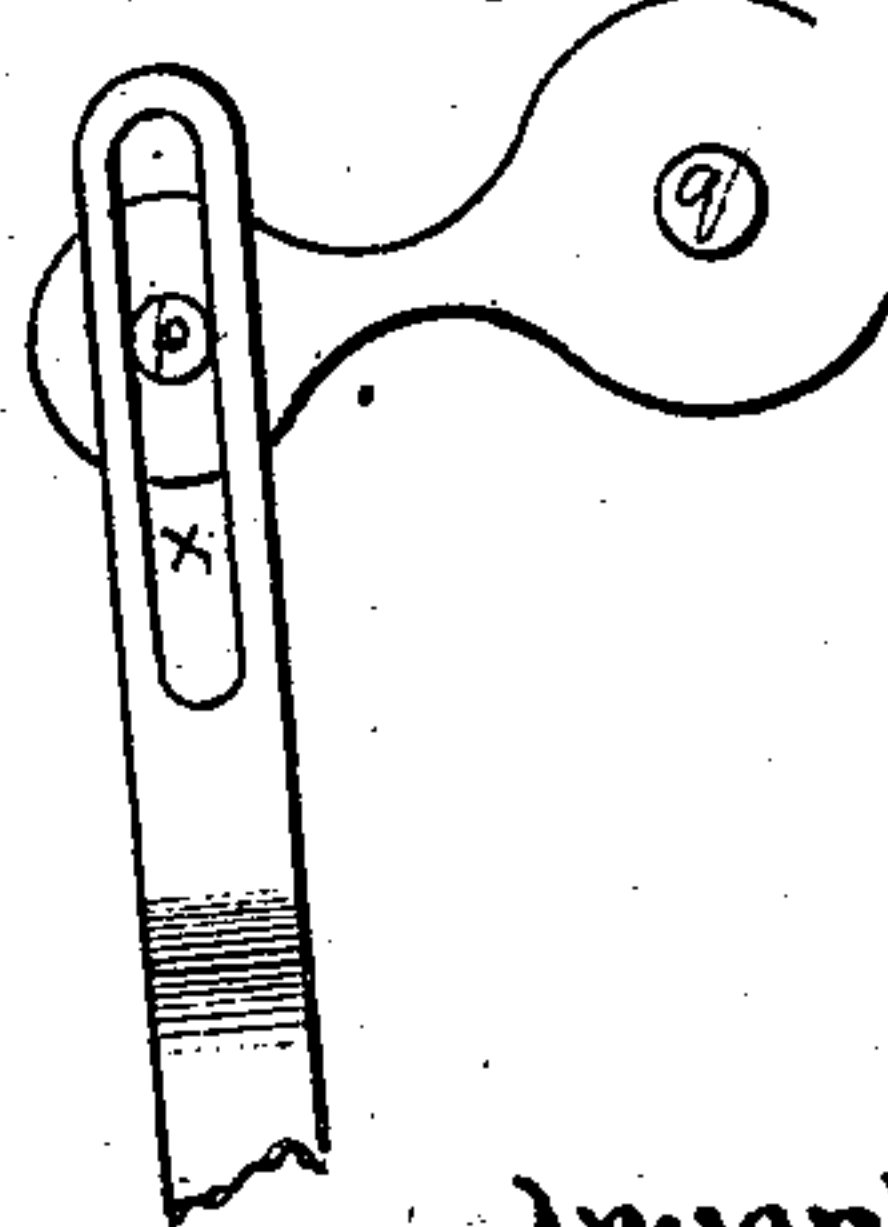


Fig. 6.



*Witnesses,
James J. Allen
H. B. Woodrup*

*Inventor,
A. Baldwin
by Atty. Frank Fuller*

United States Patent Office.

AUGUSTINE BALDWIN, OF NEW YORK, N. Y.

Letters Patent No. 95,411, dated October 5, 1869: antedated September 22, 1869.

IMPROVED COTTON-PRESS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, AUGUSTINE BALDWIN, of the city, county, and State of New York, have invented a new and useful Improvement in Cotton-Presses; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to construct the same, and the public to fully understand it, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

Figure 1 represents a vertical section of my improved press.

Figures 2, 4, and 5, represent horizontal sections of the threaded segment.

Figure 3 represents the upper portion of the external rod E, provided with a slot, *a*", as an equivalent for the joint *y*.

The nature of my invention consists in the construction of a press for cotton and other substances, having two movable platens, one of which is stationary during the early stages of the process of compression by the movement of the other, but which is brought into action and made to expedite the concluding stages of the process, by being caused to approach the platen, which is first set in motion at a stage of the process when additional power is needed, and when, from the position of the toggle-joint, said additional power can be most effectively applied.

A is the bed of the press.

B is the lower platen.

C is the upper platen.

D D are segments.

E E are rods connecting the lower platen with the exterior portions of the segments D D, by the bolts *u u* and *p p*, which form movable joints.

These rods are not continuous, but are divided into two parts, and united by additional movable joints, as shown at *y y*.

An equivalent for said additional toggle-joint is shown in the form of a slot, in the upper portion of said rods, at *x*, fig. 3.

The object of the toggle-joint *y*, or its equivalent, the slot *x*, in the rods E E, is in order to prevent them from raising the lower platen in the early stage of the process of compression.

J J are the rods connecting the upper platen with the interior portion of the said segments, by the bolts *s s* and *r r*, forming movable joints.

l is the frame-work within which are the interior portions of the segments D D, and the upright screw *m*, actuating the same.

The continuation of said frame-work is shown by the dotted lines O' O'.

g is the bevelled gear attached to the shaft of the driving-wheel F. and working into the horizontal bev-

elled gear *h*, which is attached to the upper portion of the upright screw *m*.

K K represent two of the four posts connecting the frame-work *l* with the bed A, and upon which the upper and lower platens are caused to slide, by the encircling extensions at *d' a' a' a'*.

q q are the bearings upon which the segments are centred, and upon which they are caused to move in their partial revolutions.

n n are removable threaded faces, attached to said segments by the screws, as shown at *o o o*.

t is a removable threaded collar, encircling the upright shaft *m*, which may be keyed to its proper position in the usual way.

Upon that portion of the removable faces of the segments which form the edges of the threaded groove, are reciprocating prominences and depressions, which act as guides for the two halves of the nut formed by the segments, and serve to hold the segments in their true position, and to prevent what is known as "side-lash," or side pressure upon the upright threaded shaft. These guides may be made in the form of a V-shaped tenon and groove, as shown in fig. 5; or by the process of "halving," as in fig. 4; or by external strips, acting as guides, as shown in fig. 2.

It will be seen, that by revolving the driving-wheel in one direction, the upper platen will be impelled to descend, while the lower platen, being connected to the outer portion of the segment by the rod E, provided with its additional joint *y*, or its equivalent, the slot remains stationary until the bundle or bale is partially compressed, and the toggle-joint, formed by the inner rod and the segment, is straightened.

At this point, when, from the increasing density of the bale, additional power is demanded to reduce it, and when, also, the toggle-joint formed by the outer rod and the outer portion of the segment is in such a position as to be most effective, the upward movement of the lower platen begins, and this added power speedily concludes the operation.

The object of constructing the threaded parts of the upright screw and of the interior portion of the segments D D of separate pieces, is in order that they may be made of harder materials, as of steel or some alloy better calculated to resist wear than the metal or material of which the upright shaft and segments are chiefly composed, as well as to render the repair of these portions less expensive and less difficult to accomplish.

The guides which I employ on the edges of the removable faces of the segments, are found to be of great advantage, in preventing a tendency to jam or to affect injuriously, by lateral pressure, the horizontal threaded shaft. I find it impossible to successfully operate my press without these or equivalent guides,

and, therefore, deem this device essential to its successful use.

The whole structure, with the exception of the threaded portions alluded to, is designed to be constructed of cast or wrought-iron, and the dimensions may be varied according to the size of the bale which it is intended to make.

I do not claim, either severally or in combination, the segments, the screw, the upper and lower platens movable in opposite directions, or their connecting-rods, for all these I know to be old; but

I claim—

1. The external rods E E, when provided with the toggle-joint *y y*, or its equivalent, the slot, connected with the lower platen B, for the purpose of securing the co-operation of said lower platen toward the con-

clusion of the operation of compression, substantially as set forth.

2. The combination of the jointed or slotted rod E E with an upright shaft, having a removable threaded collar, and with segments, having removable threaded faces, encircling said threaded collar, the whole being constructed substantially as and for the purposes specified.

3. The halves or V-shaped groove and tenon, for the purpose of guiding the segments in the line of the threaded shaft, substantially as above set forth.

The above specification signed by me, this 30th day of December, 1868.

Witnesses:

AUGUSTINE BALDWIN.

JAMES T. ALLEN,

H. B. WOODRUFF.