

T. J. M. JEWELL.

Cotton-Presses.

No. 158,417.

Patented Jan. 5, 1875.

Fig 1.

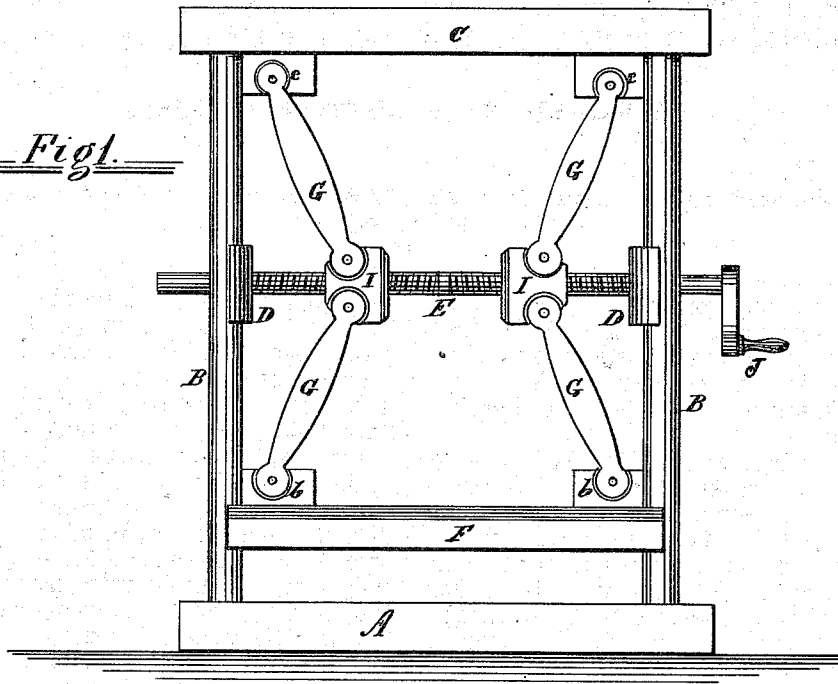
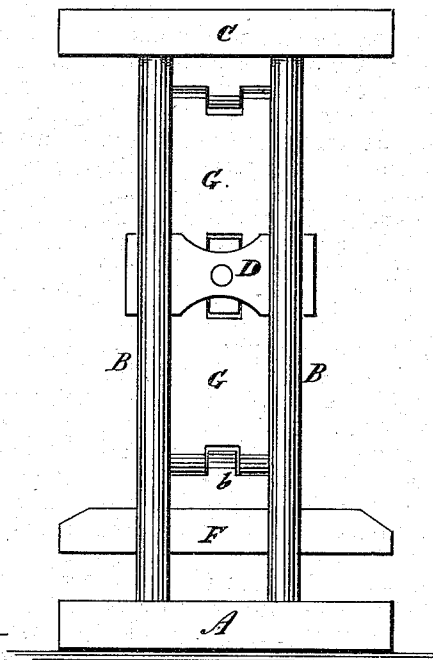


Fig 2.



Witnesses

Wm Edwards
James A Whitney

Inventor.

Thos M Jewell

UNITED STATES PATENT OFFICE.

TRYON J. M. JEWELL, OF NEW YORK, N. Y., ASSIGNOR OF HIS RIGHT TO
THEODORE W. BURGER AND EDWARD GARDINIER, OF SAME PLACE.

IMPROVEMENT IN COTTON-PRESSES.

Specification forming part of Letters Patent No. 158,417, dated January 5, 1874; application filed
May 1, 1874.

To all whom it may concern:

Be it known that I, TRYON J. M. JEWELL, of the city, county, and State of New York, have invented an Improvement in Toggle-Joint Presses, of which the following is a specification:

This invention relates to that class of presses in which the platen or follower is worked up and down by means of a toggle-joint or joints; and it consists in a novel combination of parts whereby is obtained a press of the description named, simple, strong, durable, conveniently operated by hand, capable of exerting very great power, and devoid of all carefully-adjusted and easily-disarranged parts.

Figure 1 is a side elevation, and Fig. 2 an end elevation, of a press made according to my invention.

A is the base of the press furnished at each end with two corner-posts, B, the four posts B being fixed at their upper ends to the horizontal top beam C, so that the base A, posts B, and beam C constitute the frame of the press. Fitted to the inner sides of the posts B, at each end of the aforesaid frame, are transverse sliding blocks D, the posts forming guides to direct the vertical movement of the said blocks during the working of the press, as hereinafter fully set forth. E is a horizontal screw, arranged longitudinally in the frame, with its end portions turned to journals which have their bearings in journal-boxes provided in the blocks D. This screw is right and left handed—that is to say, its threads run in opposite directions from its center *a*. F is the platen or follower suspended by or from the toggle-joints G, the lower ends of said toggle-joints being attached to the platen by pivots at *b*, and to the top beam C of the frame by like pivots at *c*. The inner ends of the toggle-arms, of which the aforesaid toggle-joints are composed, are pivoted to nuts I working upon the horizontal longitudinal screw E. The attachment of the toggle-joints to the beam C, and the platen or follower F, should be at or near the ends thereof, as shown in Fig. 1, in order that when the platen is forced down upon the bale or material to be compressed

the pressure may be uniformly applied, and in order that the platen itself may be controlled against lateral displacement during its vertical movement without any special reliance upon the posts B as guides for the platen. Such being the arrangement of the toggle-joints they, of course, bend or elbow inward, as shown in Fig. 1. It is essential, furthermore, to the perfect operation of the press that the toggle-joints be of such width as to extend, say, from one-half to three-fourths, or even more, of the distance across the platen and beam in order to prevent the sagging or tilting of the platen sidewise when worked up and down. A crank, J, being provided upon one end of the screw E to enable the same to be turned, the rotation of the screw in one direction, by moving the nuts I outward, will straighten the toggle-joints, and thereby force down the platen toward the base. A contrary or reverse motion of the screw, by turning the nuts toward its center, of course bends the toggle-joints inward, thereby lifting the platen. This straightening and bending of the toggle-joints necessitates a movement vertically of the screw, and this is permitted by the blocks D, which, carrying the bearings of the screw, have a vertical movement upon the posts B.

It should be here particularly observed that by arranging in lieu of the fixed bottom A of the press an inverted platen operated by a duplication of the parts hereinbefore set forth as actuating the platen, the apparatus may be especially adapted to what is technically termed "compressing"—that is to say, reducing the volume of bales, &c., already formed by subjecting them to further compression in a press of suitable construction.

I do not claim a horizontal frame guided at its four corners by corner-posts of the main frame, and at its center by a vertical plunger, which carries the platen, and is actuated through toggle-joints worked by a compound screw, as shown in the patent of B. G. Martin, January 14, 1873, for improvements in cheese-presses; but

What I claim as my invention is—

The single screw E formed with threads

running in opposite directions, and having its bearings in the disconnected and independent blocks D, arranged to slide upon the posts B, the nuts I, and the toggle-joints G pivoted at top in fixed and permanent relation to the top beam C, and at bottom at or near the extremities of the platen F, the whole combined

for joint operation, substantially as and for the purpose specified.

TRYON J. M. JEWELL.

Witnesses:

JAMES A. WHITNEY,
WILLIAM B. PHAIR.