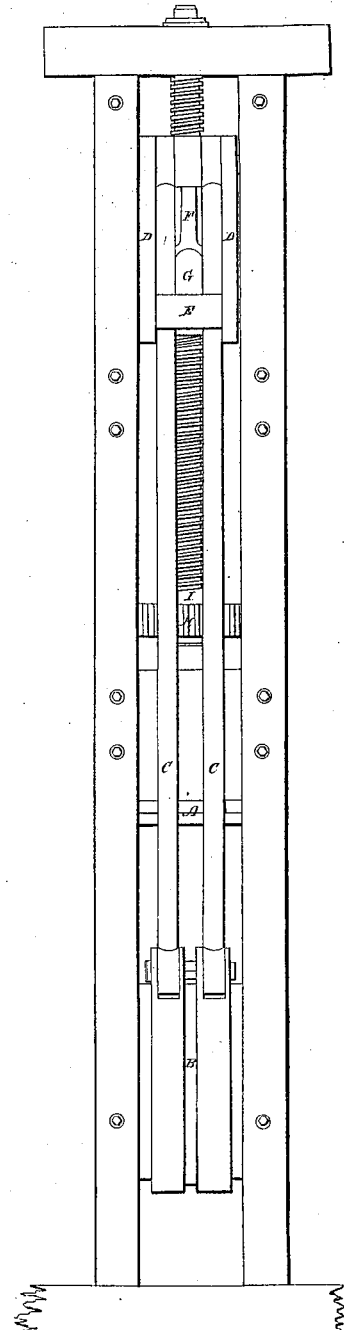


Sheet 1-2 Sheets.



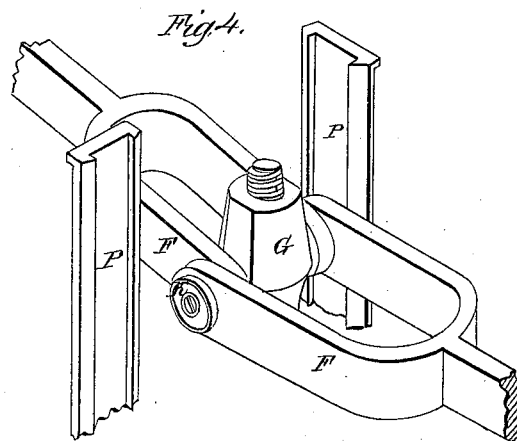
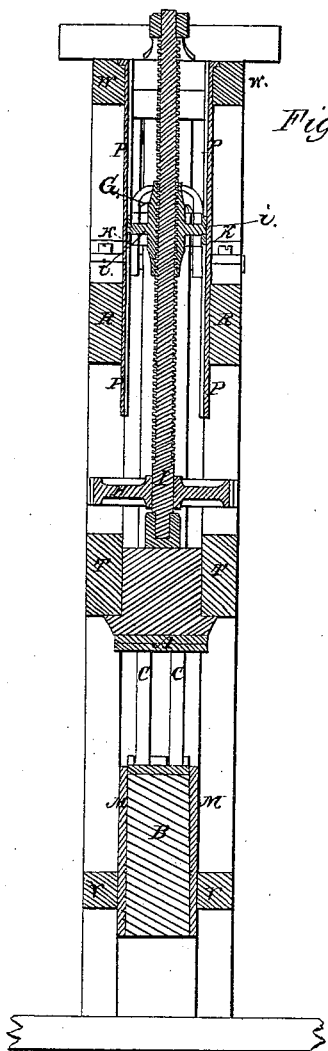
P. G. Gardiner,

Sheet 2 - 2 Sheets.

Cotton Press,

No. 5,453,

Patented Feb. 22, 1848.



UNITED STATES PATENT OFFICE.

P. G. GARDINER, OF NEW YORK, N. Y.

IMPROVEMENT IN PRESSES.

Specification forming part of Letters Patent No. 5,452, dated February 22, 1848.

To all whom it may concern:

Be it known that I, PERRY G. GARDINER, of the city, county, and State of New York, have invented a new and Improved Press for Compressing Cotton, &c.; and I do hereby declare the following to be a full, clear, and exact description of the construction and operation thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side elevation; Fig. 2, an edge view; Fig. 3, a vertical section, and Fig. 4 a perspective view showing in detail parts of the press detached.

Similar letters refer to corresponding parts in all the figures.

The respective operating parts of my improved press are placed in a strong and suitable frame, constructed in any well-known or usual manner. Motion is communicated to the platen B through the medium of the vertical screw I, the toggle-joint levers F F and D D, and the suspension-rods C C. The levers D D are in pairs, and each pair is secured to an axle, E. The axles E E have their bearing-boxes secured to the beams R R of the supporting-frame. The outer ends of each of the levers F F are embraced between the inner ends of the double levers D D, and are united to the same by the joint-pins *l l*. The rods C C are suspended to the joint-pins *l l* and connected to the platen by the joint-pins *m m*. The inner ends of the levers F F are forked, as shown in Fig. 4, and embrace the nut G, working on the screw I, to which they are connected by the trunnions *i i*.

k k are guiding-rollers on the ends of the trunnions *i i*.

P P are vertical posts or ways, secured to the cross-beams W W and R R of the frame opposite the screw, having grooves formed in their inner sides which receive the guiding-rollers *k k*, and forms ways in which they traverse as they rise and fall. The object of the ways P P and rollers *k k* is to guide the nut

G, and thereby guard the screw from injury from lateral strain, should there be a greater amount of pressure exerted at one end of the platen than at the other, as is frequently the case. By this arrangement and combination the whole power of the press can be brought to bear upon either end of the platen without straining the screw, and without throwing the platen out of a horizontal position.

H is a cog-wheel on the lower end of the screw I, through which power is applied to the same from a driving-pinion. The screw I rests upon the bearing-block N, which is supported on the bed A of the press. The bed A is secured between and bears against the under side of the cross-beams T T of the supporting-frame.

S S are struts or inclining posts, connecting the beams R R and T T. Their upper ends are let into the under side of the beams R R immediately under the bearings of the levers D D, and their lower ends incline in toward the center of the press, and are let into the beams T T immediately over the ends of the bed A, by which arrangement they transmit the reaction of the levers directly to the bed, and thereby guard the supporting-frame from excessive strain and injury.

Having thus fully described my improved press for compressing cotton, &c., what I claim therein as new, and desire to secure by Letters Patent, is—

The manner of guarding the screw against injury from lateral pressure when there is a greater amount of power exerted at one end of the platen than at the other by means of the combination of the nut G, trunnions *i i*, and levers F F with the guiding-rollers *k k* and double ways P P, substantially in the manner herein set forth.

P. G. GARDINER.

Witnesses:

Z. C. ROBBINS,
GUY C. HUMPHRIES.