P. G. Gardiner,

Cotton Press.

No 3,930. Patented Feb. 28, 1845.

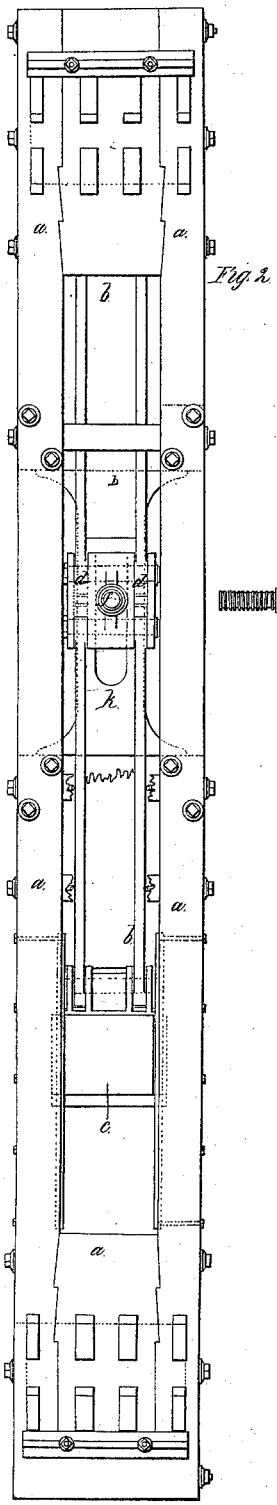


Fig. 2.

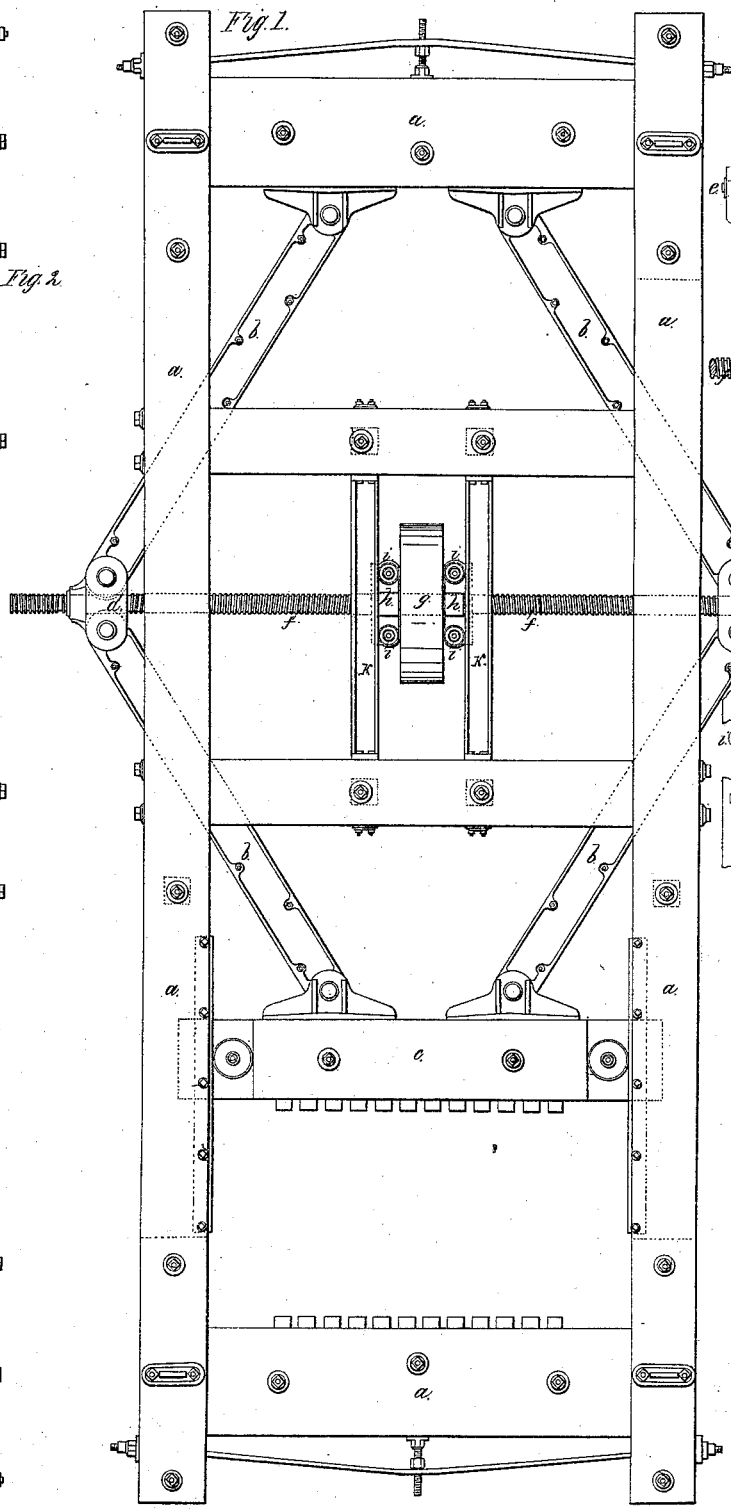


Fig. 1.

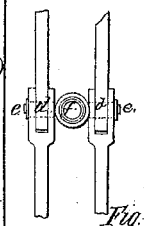
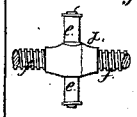


Fig. 3.



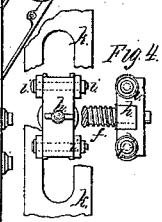


Fig. 4.

UNITED STATES PATENT OFFICE.

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

IMPROVEMENT IN COTTON AND OTHER PRESSES.

Specification forming part of Letters Patent No. **3,930,** dated February 28, 1845.

To all whom it may concern:

Be it known that I, P. G. GARDINER, of the city, county, and State of New York, have invented a new and useful Improvement in Presses for Cotton, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a front elevation of the press. Fig. 2 is an end elevation. Figs. 3 and 4 represent a modified construction.

The nature of my invention consists of the combination of an indicator or guide connected with the combined screw and toggle-joint, as hereinafter described.

The construction of the frame-work *a a* of my press may be similar to those now in common use, care being taken to make them strong enough to sustain the strain brought upon them. Two toggle-joint levers, *b b b b*, are connected with the head of the press, toward each end thereof, at their upper ends, and by their lower ones to a follower or platen, *c*. At the center joints, *d*, where the upper and lower arms, *b*, of the toggle-joints connect, are nuts or blocks of metal having a female screw through their centers, and also forming a part of the connection between the upper and lower arms, *b*, above named. There may may be a solid block, as represented in Figs. 1 and 2, having two nicks or knuckles cut out of it above and below, between which to receive the knuckles on the arms *b;* or the nut may be made cylindrical and small, as shown in Fig. 3, having two trunnions, *e*, projecting from it, which serve as the joint-pin.

The nuts above described are put onto a screw, *f*, that extends horizontally across the press, from one to the other side thereof. This screw is cut right and left from the center, so that when it is turned one way it straightens the levers *b b* and forces the platen down, and when the motion of the screw is reversed it elevates the platen. This is an old device, but it has heretofore been found impossible to make any practical use of it, for if the platen moved faster at one end than the other it would break all the machinery. My improvement to obviate this difficulty is as follows: On each side of the pulley *g*, situated in the middle of the screw, and by which it is driven, are two guides, *h*, that I denominate "carriages" or "indicators." These are oblong blocks, having holes through them big enough to pass the screw through. They bear against the hub of the pulley above named. These carriages have four wheels, *i*, to them, two only of each being shown in Fig. 1, which wheels traverse up and down with the carriage as the screw rises and falls, running on ways *k*, that are attached to the beams of the press. These ways *k* are made of iron, cast with a slot in them (shown in part in Fig. 2) for the screw to traverse in, and are firmly bolted in a vertical position to the braces of the press. As a modification of this arrangement the ways can be placed near the ends of the screws and the carriages attached to the ends of the screws, as shown in Fig. 4.

Having thus fully described my improvement, what I claim therein as new, and desire to secure by Letters Patent, is—

The combination of the guide carriages or indicators on each side of the pulley with the screw and lever power-press, to prevent the lateral motion, while it allows a free vertical action, all as above described.

P. G. GARDINER.

Witnesses:

J. J. GREENOUGH,

LAFAYETTE CALDWELL.