J. Chambers,

Cotton Press.

No 3,087. Patented May 19, 1843.

Fig. 1.

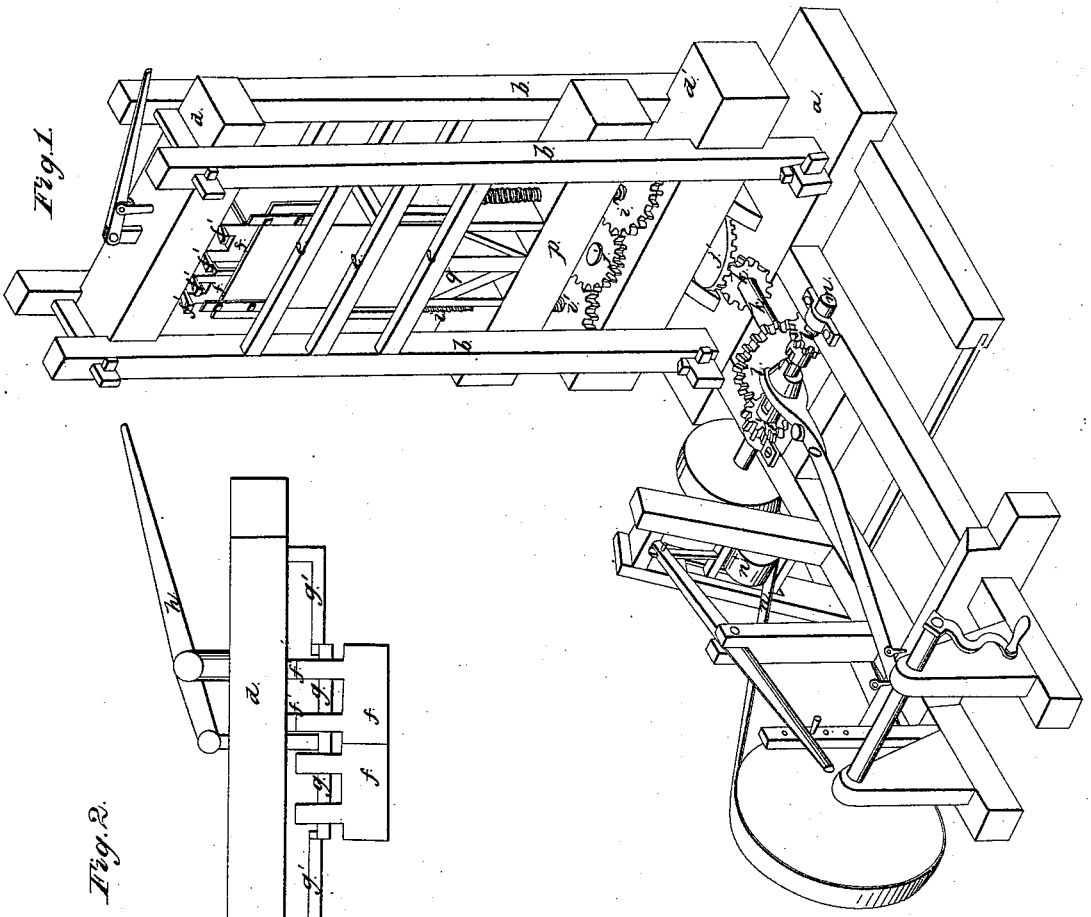
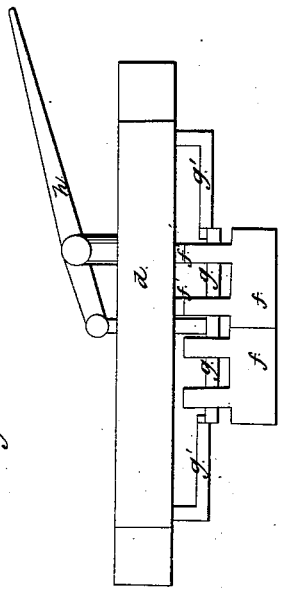


Fig. 2.



UNITED STATES PATENT OFFICE.

JOSIAS CHAMBERS, OF ALEXANDRIA, LOUISIANA.

IMPROVEMENT IN COTTON-PRESSES.

Specification forming part of Letters Patent No. **3,087**, dated May 19, 1843.

To all whom it may concern:

Be it known that I, JOSIAS CHAMBERS, of Alexandria, in the parish of Rapides and State of Louisiana, have invented a new and useful Improvement in the Cotton-Press; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is an isometrical projection of the press; Fig. 2, detached parts.

The nature of my invention consists in constructing a double screw-press with proper gearing so arranged as to move the follower up or down, the press-box and upper parts of the press being so formed as to afford the greatest facilities in packing.

The frame of the press is erected on two clamp-pieces, which support the sills *a*. On these are placed the four "gallows-posts" *b*. These have mortises in them at top and bottom to receive the tenons of two cross-pieces on each side. These pieces serve to sustain the head and foot beams *d* and *d'*, and resist the thrust of the screws in pressing. The cross-pieces *e*, composing the frame-work of the press-box, are also let into the upright posts *b*. The press-box is like those now in common use, and the doors removable in the usual way. These are above the upper cross-piece, *e*. Between the box and the head-beam *d* there is a follower, *f*, formed of two separate pieces. On the upper side of these are elevated pieces at each of their ends, through which a horizontal bar runs. In the center of this bar *g* a piece projects up through the head-beam to a lever, *h*, which has its fulcrum on said beam, by which this double follower is raised and lowered. When at its highest point, the bar *g* is brought on a line with two other bars, *g'*, the outer ends of which are turned up at right angles and enter the head-beam. These are for holding the follower when the two halves are slid back from over the box. When they are brought to the center again, they are keyed there by a key passing through the bar, which presses against the elevated parts of the follower nearest the center. This keeps them in place. When the follower is lowered down just within the box, blocks *f'* are put between the follower and the beam *d*, to hold it down while pressing.

On the upper side of the lower beam, *d'*, are two inks, which receive the lower ends of the screws *i*. These screws extend upon each side of the press-box, and may have their upper ends steadied in the box-frame, if necessary. Near their lower ends they have spur-wheels on them. Between these spur-wheels *i'* there is a pinion, *j*, meshing into both. The shaft on this pinion runs down through the center of the beam *d'*, and rests its lower end in an ink on the sills *a*, between the sill and the beam. There is a bevel-wheel, *j'*, on this shaft, into which a bevel-pinion, *k*, works, its axis being horizontal. On the outer end of the axis *k'* of the pinion *k* there is a bevel-wheel, *l*. Into this two bevel-pinions, *l'*, work—one on each side. These are on a shaft, *m*, and turn loosely on it, and to this shaft the motive power is applied by a band, *n*. This band, which runs loose when the press is not in action, is tightened by means of a friction-pulley, *n'*, in the common way. Between the two pinions *l'* there is a clutch of the common construction, which can be made to connect either of the pinions with the shaft at pleasure by means of the lever *o*, which is moved from side to side. This arrangement will cause the screws to turn either way at pleasure without reversing the motion of the prime mover.

There is a cross-beam, *p*, which runs through the frame of the press-box and extends beyond it. On each side, near the ends of this beam, the nuts are inserted, through which the screws *i* on the sides pass. On this beam *p* are three uprights within the box, which sustain the lower follower, *q*. Diagonal braces are also added to strengthen it. The follower is made like those in common use.

When the lower follower is at the bottom of the box and the two halves of the upper one are removed to each side, the box is filled with cotton in the usual way. The upper follower is then slid over the box and keyed to the bar *g*, and is then brought down a little within the box, and the blocks *f'* inserted. The screws *i* are then set in motion and the follower *q* forced up. The other operations in packing are like

those in common practice, and do not require to be described. By reversing the motion of the screws the follower is again brought down.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The construction and arrangement of the upper follower, *f*, in the manner and for the purpose herein described.

2. The combination of the bars *g* and *g'* with the follower *f*, for the purpose set forth.

3. The combination of the double screws with the running-gear below the press, combined and arranged as above specified, the motion of the screws being thereby readily changed.

JOSIAS CHAMBERS.

Witnesses:
WM. H. KITCHEN,
I. FENWICK BRENT.