T. Gilbert,

Cotton Press.

No. 31,967. Patented Apr. 9, 1861.

Fig: 1.

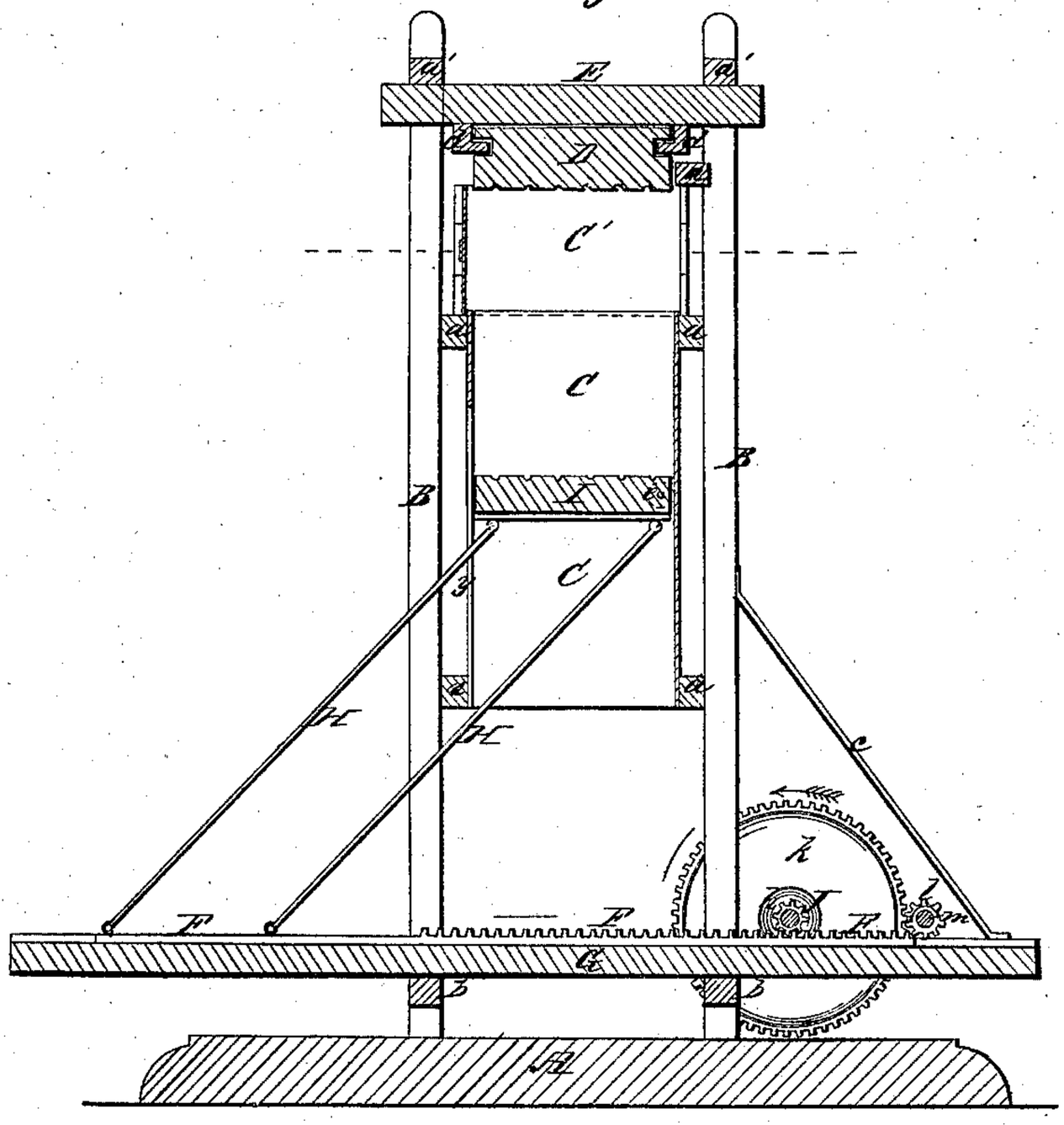
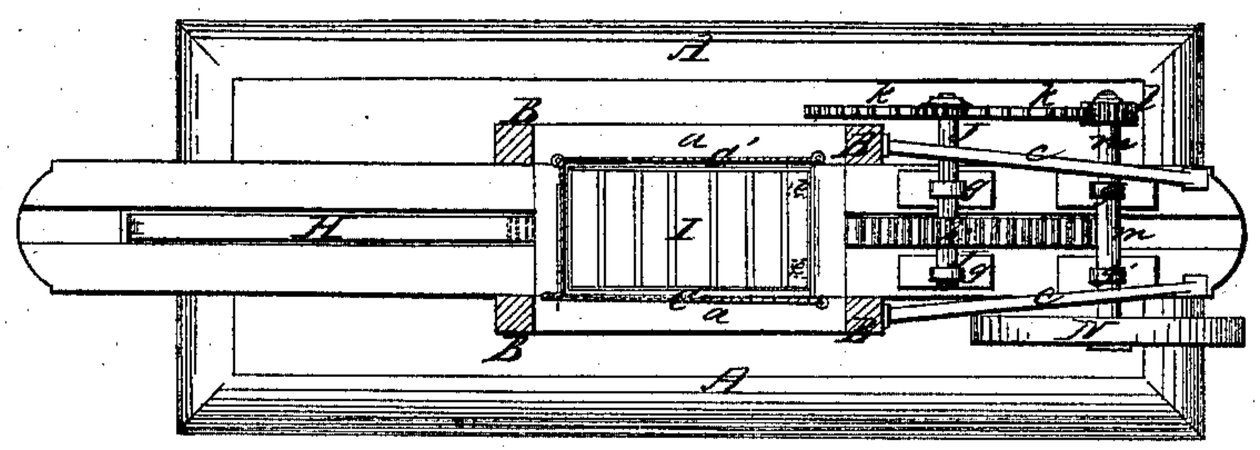


Fig: 2.



Witnesses.

L. W. Pendre

C. W. Coutant

Inventor.

Timon Gilbert

per Munn & Co

Attorneys.

UNITED STATES PATENT OFFICE.

TILMON GILBERT, OF NATCHEZ, MISSISSIPPI.

IMPROVEMENT IN COTTON-PRESSES.

Specification forming part of Letters Patent No. **31,967,** dated April 9, 1861.

To all whom it may concern:

Be it known that I, TILMON GILBERT, of Natchez, in the county of Adams and State of Mississippi, have invented a new and Improved 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 a vertical longitudinal section through the middle of the improved cotton-press. Fig. 2 is a section taken through the press-box in a horizontal plane indicated by the red line *x x* in Fig. 1.

Similar letters of reference indicate corresponding parts in the two figures.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A is the floor or base, and B B B B are four perpendicular posts which are firmly secured thereto. These posts are firmly braced and tied together with the timbers *a a a' a'*.

Between the cross-timbers *a a*, within the frame composed of posts B B, is a press-box, C, which is made in the usual strong manner, so as to withstand the lateral pressure which takes place in the operation of pressing the cotton. Above this press-box C is another press-box, C', the sides of which are hinged at the corners of the box, and a suitable spring-latch is used to secure the sides of this box C' together while the pressing takes place, as the cotton is all forced up by the follower within this latter box, where the pressed bale can be bound, and from which the bale can be removed after it is pressed and bound. Above the box C' is a sliding head-block, D, which may be moved out of the way in filling the press with cotton or for removing the pressed bale, so as to give more space to work in above the box C. In order to allow this head-block D to be thus moved, the arms *d d*, in which it slides, extend out from one side of the frame B B. When the press-box C is filled with cotton, the head-block D is brought back over the box-space C' before the sides forming this box are locked together.

E is a strong cross-timber at the top of frame B B, which is held down firmly by the ties *a a'* against upward pressure.

Near the bottom of the frame B B, and extending in a longitudinal direction through this frame, is a horizontal beam, G, which is securely supported in its horizontal position by the cross-ties *b b* and the two bracing-rods *c c*. A deep channel is formed through the middle of the upper surface of the beam G from end to end of this beam, which channel is intended to serve as a guide for the rack-bar F, that is made to slide in a direction with its length back and forth by wheel-work, which will be hereinafter described.

H H are two strong bars, the ends of which are hinged, respectively, at equal distances apart to one end of the sliding rack-bar F and to the under side of the follower I, as shown in Fig. 1. The two bars H H will thus preserve their parallelism as the rack-bar F is moved back and forth on beam G; and this horizontal motion of the rack-bar F will cause the follower I to rise and fall in a horizontal plane and in a line perpendicular to the bar F. The follower-block I has two friction-rollers, *e e*, projecting slightly from one end, which prevent this end from rubbing on the side of the box C. It is found necessary to use these friction-rollers *e e* as above described, as the power which is applied to the follower to raise it is in an oblique direction, or in a direction with the length of the parallel bars H H, which do not stand in a perpendicular position until the follower is at its highest point in box C. These rollers *e e*, therefore, prevent the bars H H from forcing the end of the follower hard against the side of the press-box C, which would have the effect of wedging the follower tightly between the sides of this box.

J is a horizontal shaft which has its bearings in the blocks *g g*, and *h* is a pinion spur-wheel which is keyed to shaft J, the teeth of which engage with the teeth of rack-bar E.

k is a large spur-wheel which is keyed to one end of shaft J. The teeth of this wheel *k* engage with a spur-pinion, *l*, which is keyed to one end of the driving-shaft *m*, which latter shaft has its bearings in two blocks, *g' g'*, as shown in Fig. 2 of the drawings. The driving-shaft *m* carries on its opposite end to that carrying the pinion *l* a belt-wheel, N, which receives its motion from the steam-engine. The wheel N may be attached to its shaft by a suitable clutch, so that it can be engaged or

disengaged with its shaft, and thus the motion of the follower I may be stopped at pleasure.

The operation of the entire machine is as follows: The cotton which is to be pressed and made up into a bale is put into the box C when the follower I is in the position represented in Fig. 1. The sides forming box C′ are then brought together and securely bolted, the head-block D being placed in a position to cover the box C′. The wheel-gearing is now rotated in the direction indicated in Fig. 1 by the arrows, and the rack-bar F is moved up toward the gearing, as indicated by the arrow over bar F in Fig. 1, carrying with it the lower ends of bars H H and forcing the follower I upward in the box C with a gradually-increasing power. This movement is continued until the bars H H stand perpendicular to the rack-bar F, when the follower will be at its highest point and all the cotton which was put into the box C will have been compressed within the box C′. At this point in the operation the motion of the gearing is stopped, the box C′ is opened, and the ball, after being suitably bound, is removed from the machine to fill the box C to repeat the operation of pressing.

The box C, into which the cotton is at first put, is made very deep in order to hold a large quantity of cotton, and it is necessary to make an opening, *y*, in one side of this box to allow the bars H H to work through this side, as is shown in Fig. 1.

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

The arrangement of the sliding rack F and hinged bars H H with each other, and with the follower I and gearing *h k l*, all in the manner and for the purpose herein shown and described.

TILMON GILBERT.

Witnesses:

DANIEL BOWERS,

JNO. C. BROWN.