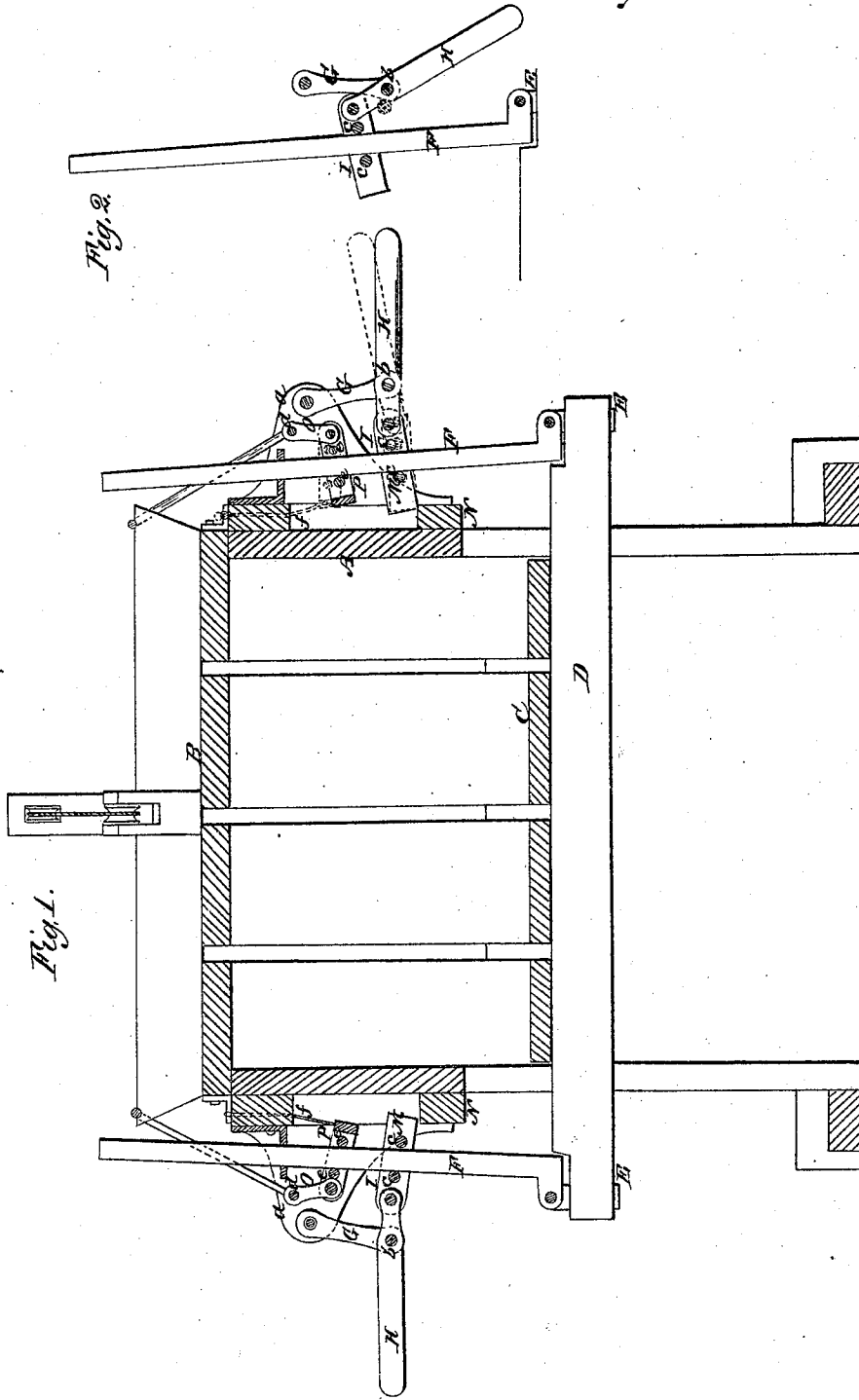


*S. Ingersoll,
Cotton Press.*

N^o 14,663.

Patented Apr. 15, 1856.



UNITED STATES PATENT OFFICE.

SIMON INGERSOLL, OF GREEN POINT, NEW YORK.

IMPROVEMENT IN HAY AND COTTON PRESSES.

Specification forming part of Letters Patent No. 14,663, dated April 15, 1856.

To all whom it may concern:

Be it known that I, SIMON INGERSOLL, of Green Point, in the county of Kings and State of New York, have invented a new and Improved Hay and Cotton Press; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a longitudinal vertical section of my improvement, the plane of section being through the center. Fig. 2 is a detached vertical section of the levers at one side of the press, showing the way in which an increased power is obtained.

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

My invention consists in operating the follower by means of levers hung in swinging frames and connected to vibrating clamps, which grasp the follower-bars and cause them to be moved upward as the levers are depressed, the clamps during the upward movement of the levers being free from the follower-bars, which are secured in proper position by retaining-clamps, as will be presently shown and described.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the press-box; having a door, B, at its upper end, and C represents a follower, which is fitted within said box A, the follower being attached to a bar, D, the ends of which pass through slots in the sides of the box A. Each end of the bar D has a metallic strap, E, fitted upon it. The upper ends of these straps are attached by pivots or joints to the lower ends of vertical bars F. The lower ends of the bars F are bent for a short distance horizontally, the straps being attached to the ends of the horizontal parts.

To each side of the upper part of the press-box there are firmly attached two projecting plates, one of which, *a*, is shown at each side of the press-box. To the outer ends of the plates *a a* there is attached a swinging frame, G, and to the lower end of each swinging frame there is attached a lever, H, the levers working on a rod, *b*, in the frame. The inner ends of the levers are each attached to a vibrating clamp, I. These clamps are formed of two bars, M, connected by rods *c c*, between

which the follower-bars F F pass. The inner ends of the bars M of the clamps rest upon ledges or projections N, attached to the sides of the press-box.

O O are links, which are hung on rods *d*, between the projecting plates *a*, at each side of the press-box. To the lower ends of these links there are attached clamps P P, one to each link. The clamps P are constructed precisely similar to the clamps I, the follower-bars F passing between its rods *c*, as clearly shown in Fig. 1. To the inner ends of the clamps P chains or ropes *f* are attached.

The operation of the press will be readily understood. The press-box is filled with the material to be pressed, the follower C being at the bottom of the press-box. The door B is then closed and secured in any proper manner. The outer ends of the levers H are then depressed, and the inner ends of said levers will be forced or turned upward, causing the rods *c c* of the clamps I to bind or grasp the rods F, and causing said rods to be elevated. When the outer ends of the levers H are elevated, to be again depressed, the rods *c c* do not bind or grasp the rod, but the rods are retained by the clamps P. By this means the follower C is raised and the article in the press-box compressed. At the commencement of the operation the levers H are worked in nearly or quite a horizontal position, or a horizontal position may be considered as the central points of their stroke or vibration in order to obtain speed, as much power is not required at first; but as the material becomes somewhat compressed an increase of power is required, and the levers H are then worked in a more oblique or inclined position, as shown in Fig. 2. By this means the lower ends of the swinging frames G G are thrown inward or toward the press-box A, and the rods *b*, which are the fulcras of the levers H, are consequently brought nearer the weight to be overcome, or nearer the points of attachment of the levers H to the clamps I, and consequently the power will be increased and the speed correspondently diminished.

When the article within the press-box is fully compressed and bound, it is removed therefrom, and the follower C is allowed to descend to the bottom of the press-box by pulling the chains *f*, which will cause the inner ends of the retaining-clamps P to be elevated,

and the rods *e e* to release their hold of the follower-bars F F.

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

Operating the follower C by means of the levers H H, attached to swinging frames G G, and connected with the clamps I I or their equivalents, for lifting the follower-bars F F,

the retaining-clamps P or their equivalents being employed for sustaining or holding the follower when the bars F are released from the clamps I, substantially as shown and described.

SIMON INGERSOLL.

Witnesses:

J. W. COOMBS,
WM. TUSCH.