2 Sheets. Sheet 1.

C. N. Lovejoy,

Cotton Press.

No. 25901. Patented Oct. 25, 1859.

Fig 2

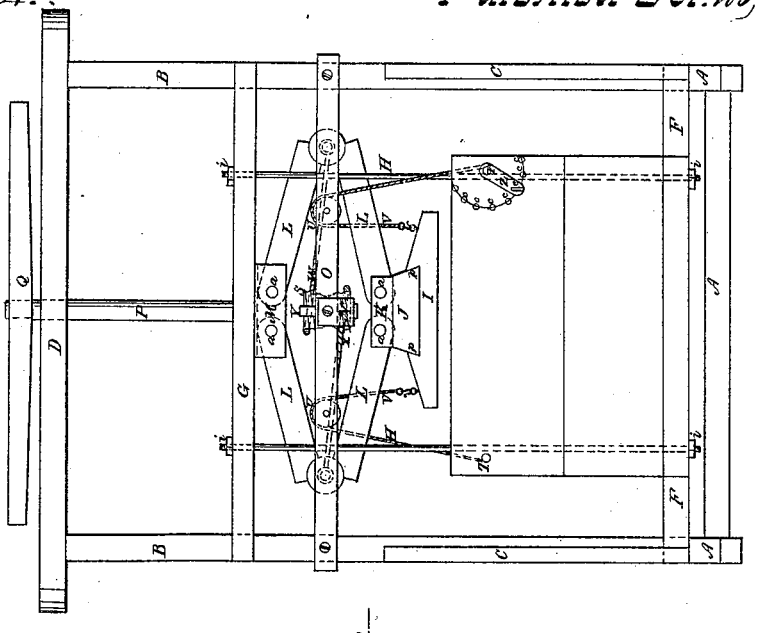
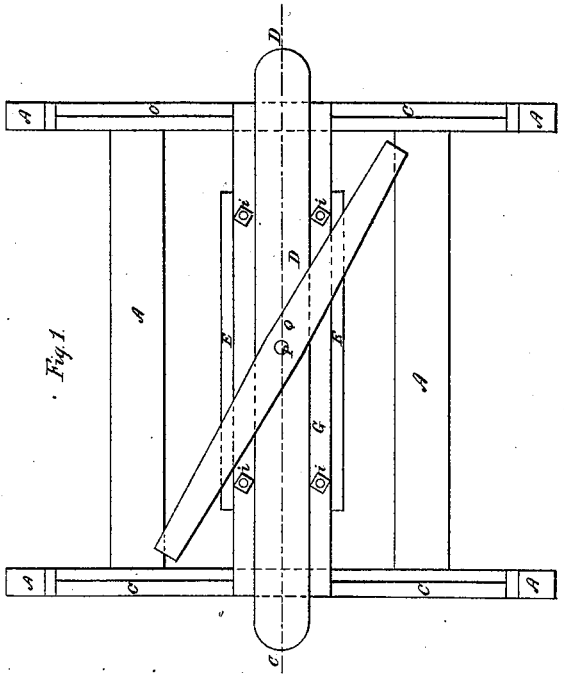


Fig 1.



Witnesses
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Solon Dike

Inventor
Charles N Lovejoy

2 Sheets. Sheet 2.

C. N. Lovejoy,

Cotton Press.

No. 25,901. Patented Oct. 25, 1859.

Fig 4

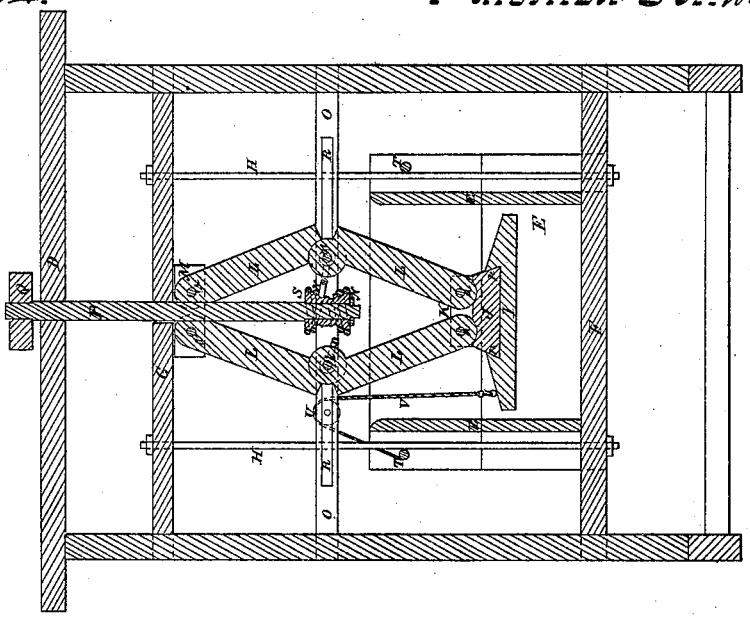
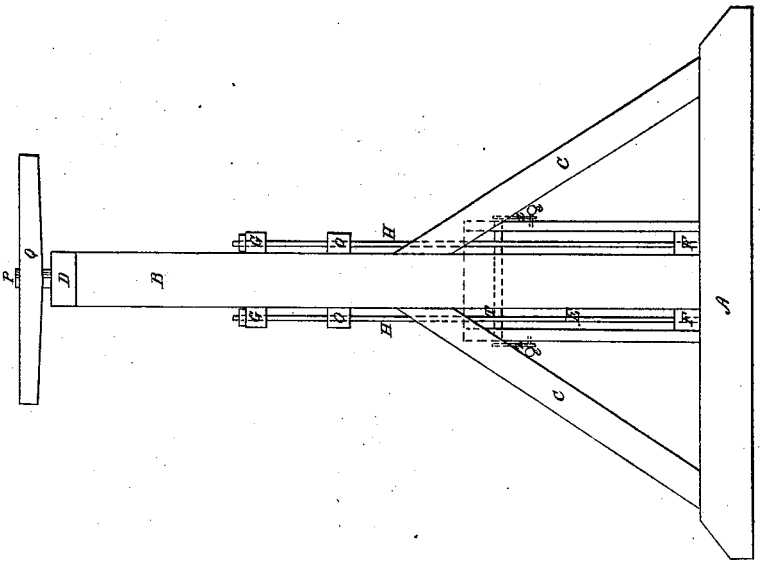


Fig 3



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES N. LOVEJOY, OF COLUMBIA, SOUTH CAROLINA.

IMPROVEMENT IN COTTON-PRESSES.

Specification forming part of Letters Patent No. **25,904**, dated October 25, 1859.

To all whom it may concern:

Be it known that I, CHARLES N. LOVEJOY, of Columbia, in the district of Richland and State of South Carolina, have invented a new and useful Cotton-Press; and I hereby declare that the following specification, in connection with the accompanying drawings and references thereon, constitute a lucid, clear, and exact description of the construction and use of the same.

In referring to the said drawings, Figure 1 denotes a plan or top view; Fig. 2, a front side elevation; Fig. 3, an end elevation; Fig. 4, a longitudinal and vertical section on line C D of Fig. 1.

The nature of my invention consists in the follower I, connected to toggle-levers by block J, so as to be slid therefrom and from the cotton-box, when raised, and made self-parallel by cords V, operated by windlasses T and Z to adjust this parallel, and in guides Y for effectually retaining the chains in grooves of fusee-wheels, when these parts are combined with cotton-box E, F, and G and its operative parts L and S, all being arranged and operated as hereinafter seen.

To enable persons skilled in the art to which my invention appertains to construct and carry out the same, I will describe it, as follows:

I construct two bed-pieces of wood (seen at A) and unite them firmly by cross-bars A′. From each of the two bed-pieces A, I erect an upright post, B, the tops of which are surmounted by and secured by a cap-piece, D, firmly uniting both uprights B together. These uprights are braced by braces C, uniting them to the bed-pieces A, as seen in Figs. 1, 2, and 3.

I construct a cotton-box as follows: The bottom F is made to slide up and down on uprights B and be guided thereby. Above the main portion of the cotton-box I position the top piece, G, and which also slides up and down upon and is guided by the uprights B. The parts F and G of cotton-box are connected together by four strong iron bolts or rods, H, the sides and ends of box being seen at E.

I construct two pairs of toggle-levers, (seen at L,) the upper end of each being hinged in stand M by pins *a*, and which is attached to the under side of top piece, G, and the lower ends are hinged by pins *a* to stand K, which is secured to block J of follower I.

I construct two guide-bars (seen at O) and bolt them strongly to uprights B, as seen in the drawings. These bars O are channeled, as seen at R, Fig. 4, to receive the ends of pins *n*, which pass through and secure the central joints in toggle-levers L, and which guide their movement when drawn up or down or straightened to press the cotton. The object of this is to cause the chains to draw in straight line when the greatest pressure is being given the cotton.

To the central portion of the bars O, I firmly secure a stand (seen at F) to receive the lower end of shaft P, and to revolve freely therein, while its upper end turns in cap-piece D, the beam Q being the part to which the mule or horse is to be tackled.

Near the lower end of the shaft P, I secure a double inverted fusee-wheel, (seen at S, Figs. 3 and 4,) and each section connected to pin *n* of toggle-levers L by chains W and X with stirrups or otherwise, so that when the draft commences the speed will be fast, as the required pressure is then light; but in proceeding, and as the pressure increases, the speed decreases and power increases, exactly as required, Figs. 1, 2, and 3 showing my press in readiness to commence the pressing operation, and Fig. 4 showing the same when the pressing is complete.

Guard-pieces (seen at Y) are fitted to conjoin with the exterior of fusee-wheels S, and are firmly secured to bars O, so as to guide the chains W and X into and never allow them to slip from grooves of fusee-wheel S, which is an important feature.

It will be seen that the cotton-box rises when the pressing is being performed by the levers pressing against part G and follower I, the pins *n* not moving vertically. Thus the entire power which is applied to my machine is directed to and expended in pressing the cotton, excepting a trifling friction on pins *a* and *n*. This is of the greatest importance, and allows a greater pressure upon the cotton with the same applied force than any other press known, and by this means I can press and compress the cotton on the plantation.

The follower I is so constructed as to be slid off from the cotton-box when (this follower is raised) out of the way by unhooking cords V. The block J, with its dovetails *p*, allows the follower to be slid off, and this is of the utmost

consequence, as it allows a rapid and convenient refilling of the box with cotton. This cotton-box is of sufficient weight as to bring all movable parts of my press to the position indicated at Figs. 1, 2, and 3, by simply reversing the movement of shaft P. The follower I is made to travel vertically downward by cords V, one end being hooked to each of two opposite corners of I, while its other ends are passed over pulleys U, secured in bars O, and then down and around a windlass-roller, T, connected so as to revolve in sides E of the cotton-box. The parallel of this follower I is adjustable by these windlasses T, operated by lever Z, with check-pins *e* to enter holes *c* in box E.

Portions of the sides of box E are made removable when desired, and the necessary notches and channels (not shown) are formed to allow the bale to be conveniently tied when compressed.

It will be seen that in my entire press I do not employ a single gear or screw or other friction-creating device. On the contrary, my operating device is almost absolutely anti-frictional, while it is very simple and cheaply constructed, and consequently not liable to get out of order; and it is susceptible of pressing and compressing the cotton bale by two revolutions or less of the shaft P. I intend to make use of my press for any object or substance to which it may be applied.

I do not claim toggle-levers of themselves, or in any manner, nor when operated by fusee-wheels; nor do I claim drawing the follower and cotton-box together; nor do I claim any part or device shown in Patent No. 2,611, nor the patent granted to Aaron Hale June 22, 1832; nor do I claim any part or device shown in the patent of Henry Schrader, March 30, 1858.

What I do claim, and desire to secure by Letters Patent, is—

The guides Y for guiding the chains W and X upon fusee-wheels S, and the follower I, block J, and windlasses T and Z, arranged and operated with each other, and in the manner as described, when combined with the cotton-box E, F, and G and its operative parts L and S, in the manner described, and for the purposes fully set forth.

CHARLES N. LOVEJOY.

Witnesses:

E. W. SCOTT,

SOLON DIKE.