Sheet 1. 2 Sheets.

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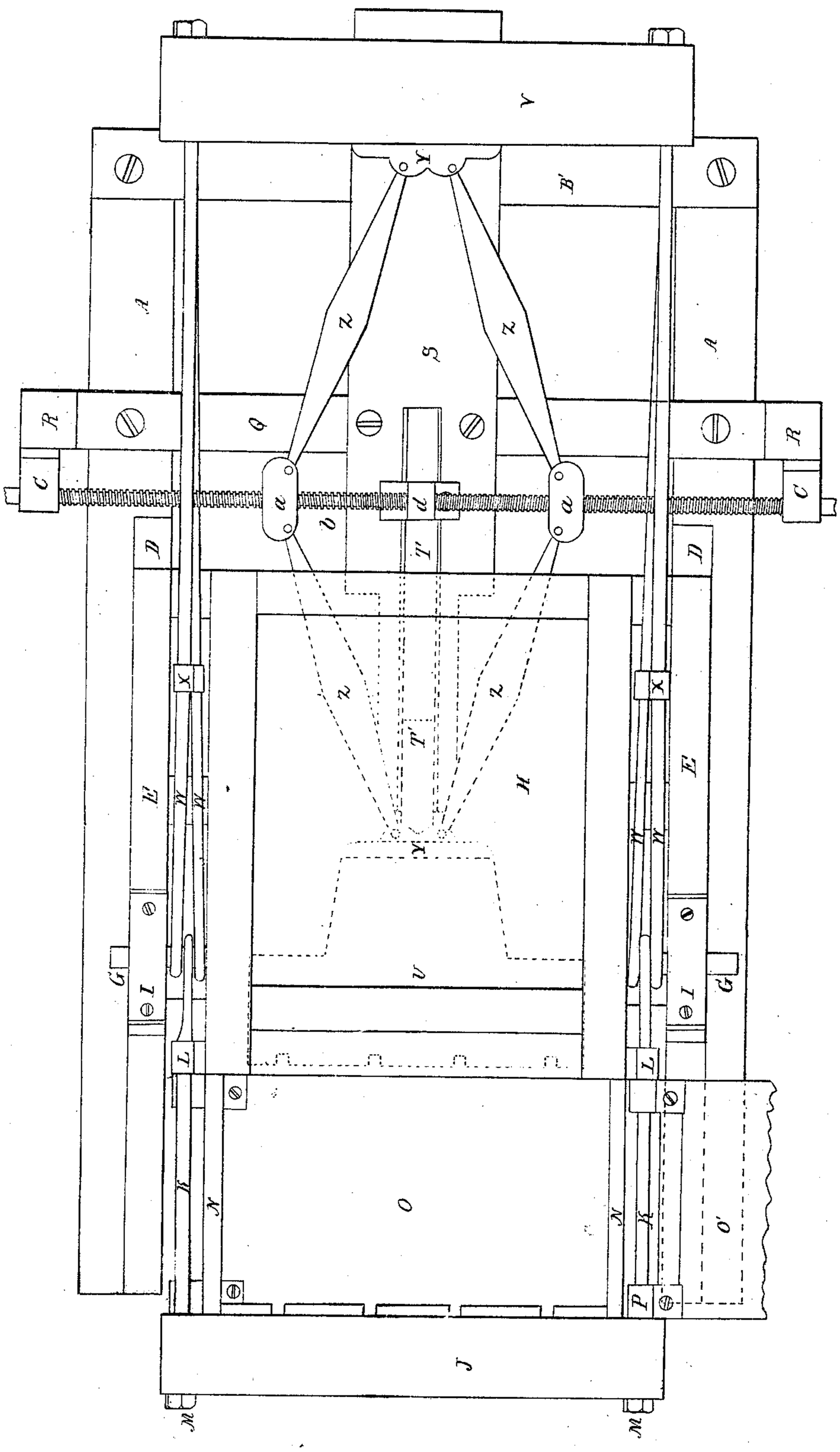
Cotton Press,

No. 19,071, Patented Jan. 12, 1858.



Sheet 2 - 2 Sheets

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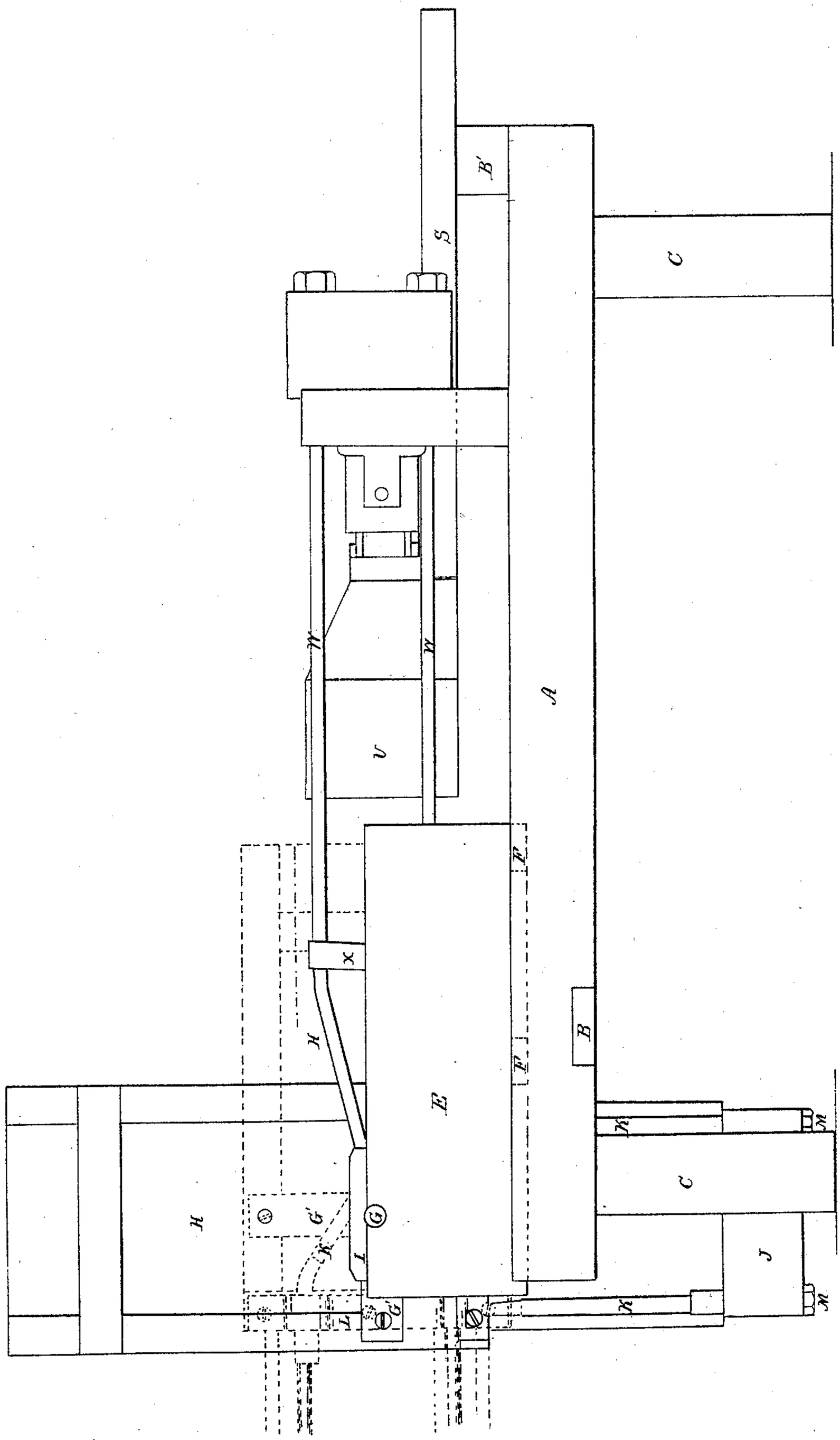

UNITED STATES PATENT OFFICE.

NATHAN CHAPMAN, OF MYSTIC RIVER, CONNECTICUT.

IMPROVEMENT IN COTTON-PRESSES.

Specification forming part of Letters Patent No. **19,071**, dated January 12, 1858.

To all whom it may concern:

Be it known that I, NATHAN CHAPMAN, of Mystic River, in the county of New London and State of Connecticut, have invented certain new and useful Improvements in Presses for Pressing Cotton, Hay, and other Substances; and I do hereby declare that the same are described and represented in the following specifications and drawings.

To enable others skilled in the art to make and use my improvements, I will proceed to describe their construction and operation, referring to the drawings, in which the same letters indicate like parts in each of the figures.

Figure 1 is a plan or top view of a press with my improvements, the press-box lying horizontal. Fig. 2 is an elevation of the same with the press-box turned upright in whole lines, and horizontal in broken lines.

The nature of my improvements in presses for pressing cotton, hay, and other substances consists in making the rods which connect the head and foot of the press in two parts, and connecting them by a hinged joint, so that one of the parts can be vibrated while the other remains stationary; also, in hanging the press-box on pivots, so that it may be turned upright to be filled, and turned horizontal to press the cotton, hay, or other substance with which it is filled; also, in so constructing and arranging the pivots of the press-box that they may serve for pins in the hinge-joints of the connecting-rods, and in making the boxes in which the pivots of the press-box turn to traverse on ways, so as to accommodate the position of the press-box as may be required; lastly, in arranging a bar to slide in a groove, for the purpose of holding the follower in place while the press-box is turned up to be filled, and to guide it in the press-box while it is pressing the bale.

In the accompanying drawings, A A are the sills of the press, connected by the cross-bars B and B′, and supported by the posts C C, which may be set in the ground or secured to the floor, so as to hold the sills firm in a proper position while the press is worked. There is a rabbet, D, cut in the inside top corner of each of the sills A A, for the blocks E E to traverse in, which blocks are connected by cross-bars fastened to their lower edges, and shown by dotted lines in Fig. 2 at F F, and there is a score cut in the top of each of the blocks E for the pivots G G of the press-box H, and caps I I are fastened over the pivots G G, as shown in the drawings. The press-box H may be made of a frame of scantling, lined with plank, or in such other manner as will answer the purpose, and the pivots G G upon which it turns are firmly fastened to bars of metal, one of which is shown at G′, Fig. 2, which bars G′ are firmly fastened to the press-box H. The foot J of the press is fastened or connected to the pivots on the press-box by the staples K K, made in the form shown in the drawings, so as to receive the pivots G G in the loops of the staples. Each leg of each staple passes through metal brackets fastened to the press-box, (one of which brackets is shown at L, Fig. 2,) and then through the foot J, and secured by nuts M M, or otherwise. The foot of the press-box is formed of movable doors N N and O O′. The two former fit into grooves in the latter, to hold them in place. The doors O O′ are fastened to the staples K K by the hinges P P, and door O′ is represented as thrown open in Fig. 1. The doors O and O′ may be fastened, when closed, by some clasps or clamps, made to embrace the ends of the doors. The cross-bar Q is fastened to the sills A A, to support the standards R R and to aid in supporting the bar S, which is fastened to it and to the bar B′. This bar S has a groove, T, in it for the bar T′ to traverse in, which bar is fastened to the follower-block U, to hold it in place while the press-box is turned upright, (to be filled,) as shown in Fig. 2, and to guide the follower in the press-box while it is pressing the bale. The head V of the press has a score in the under side, to traverse on the bar S, and is connected to the pivots G G of the press-box by the rods W W, which are provided with an eye to slip onto the pivot and with a nut at the opposite end to hold the head V. These rods are braced apart, to allow the toggle-joints and arms room to pass between them, by the braces X X. The toggle-stands Y Y, links Z Z, and knuckles *a a* may all be made as represented in the drawings, or in such other form as may be desirable, and one of the stands Y may be fastened to the head V, and the other to the follower-block U, and the knuckles *a a*, provided with female screws to fit the right-and-left screw *b*, which screw is fitted to turn in boxes *c c*, fastened to the standards R R, and has its center supported

by the box *d*, fastened to the bar S, as shown in the drawings. This screw *b* may have gears, pulleys, cranks, or such other devices as may be preferred applied to one or both ends, to turn it and operate the press by the toggle-links Z Z.

In using the above-described press I put all the doors in place and turn the press-box perpendicular, as shown in Fig. 2, and fill it with the substance, to be pressed in the usual or some other manner, and then turn the box into a horizontal position, as shown in Fig. 1, and by dotted lines in Fig. 2, and then turn the screw, so as to draw the knuckles together or up to the box *d*, so as to straighten the toggles and move the press-box to the right and the follower to the left, the boxes *c c* and *d* with the screw remaining stationary, one half of the screw having a right and the other a left hand thread, so as to work the knuckles equally in each direction when the screw is turned. The doors of the press may now be opened and the bale hooped in the usual manner, when the screw may be turned so as to draw the knuckles apart and let the bale fall out, when the doors may be put in place and the operation repeated.

I contemplate that rollers may be applied to the blocks E E to run on the ways on the sills A A, or wheels substituted for the blocks; also, that the rods may be welded so as to form long links, with one narrow end for the pivot on the press-box, and the other end wide for the end of the head or foot of the press.

I believe I have described and represented my improvement in presses for pressing cotton, hay, or other substances so as to enable any person skilled in the art to make and use them. I will now state what I desire to secure by Letters Patent, to wit:

I claim—

1. Making the rods which connect the head and foot of the press in two parts, and connecting them by a hinged joint, so that one of the parts may be vibrated while the other remains stationary, substantially as described.

2. Hanging the press-box on pivots so that it may be turned upright to be filled and turned horizontal to press the cotton, hay, or other substance with which it is filled, substantially as described.

3. So constructing and arranging the pivots of the press-box that they may serve for pins in the joints of the connecting-rods, substantially as described.

4. Making the boxes in which the pivots of the press-box turn to traverse on ways, substantially as described.

5. The bar T′ and groove T, as described, in combination with the follower, for the purpose of holding it in position while the press-box is turned up to be filled and to guide it in the press-box while it is pressing the bale.

NATHAN CHAPMAN.

Witnesses:

I. DENNIS, Jr.,
WILBUR F. FORT,
J. F. CALLAN.