

(No Model.)

2 Sheets—Sheet 1.

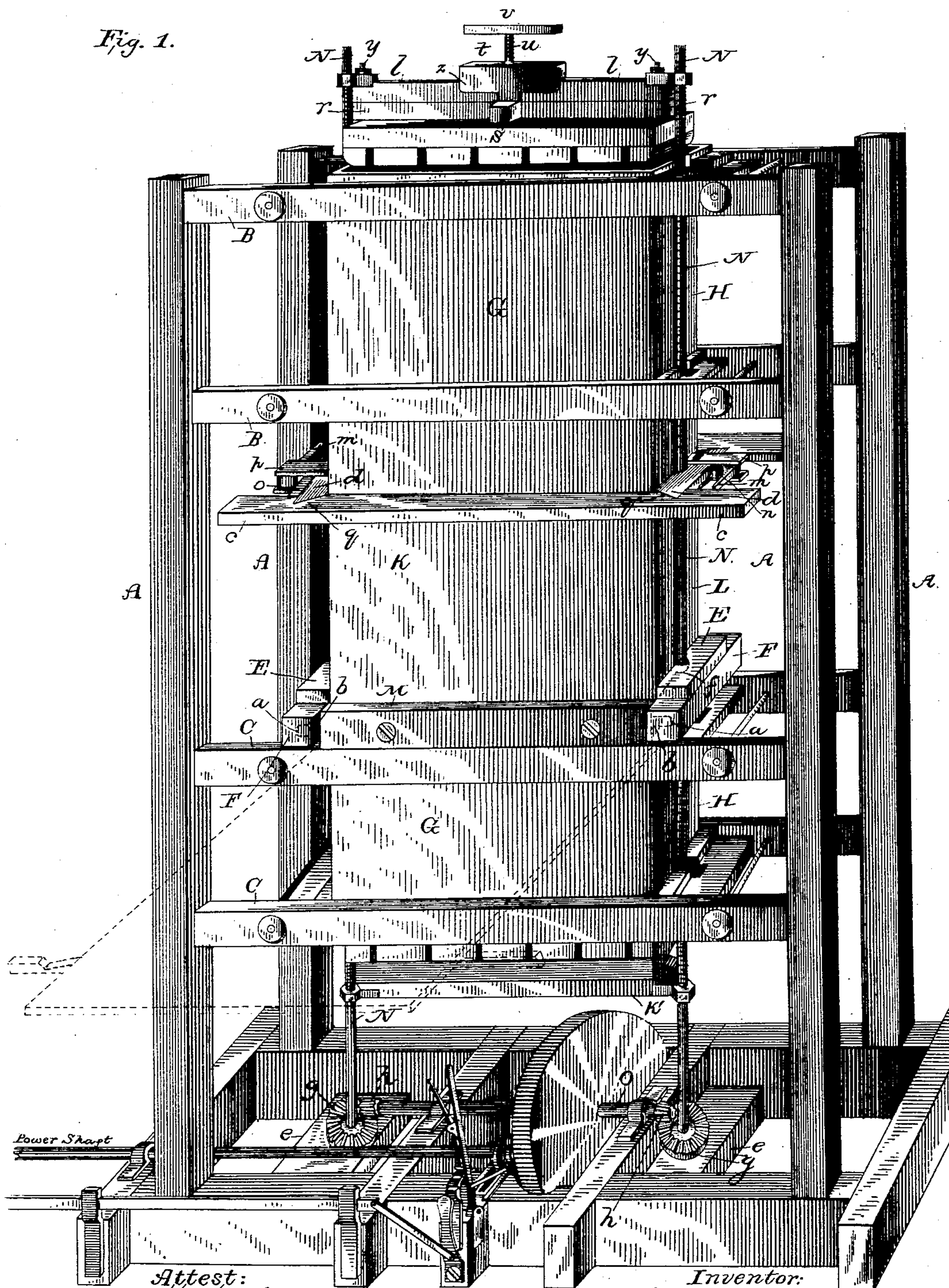
C. M. STONE.

BALING PRESS.

No. 313,551.

Patented Mar. 10, 1885.

Fig. 1.



Attest:

C. Hough
C. E. Jones,

Inventor:

Charles M. Stone.
By *Chas. J. Gooch*,
Associate Attorney.

(No Model.)

2 Sheets—Sheet 2.

C. M. STONE.

BALING PRESS.

No. 313,551.

Patented Mar. 10, 1885.

Fig. 2.

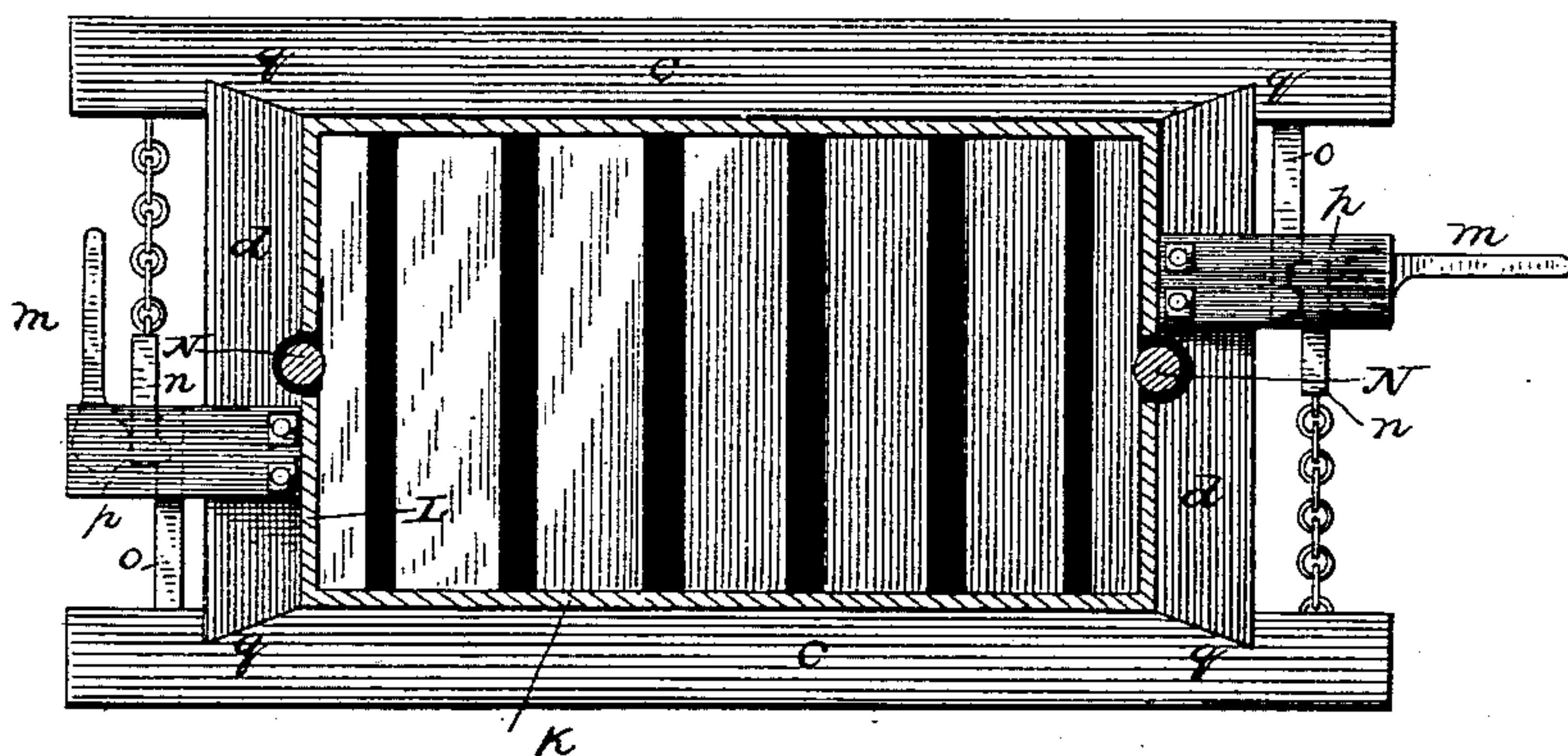


Fig. 3.



Fig. 4.

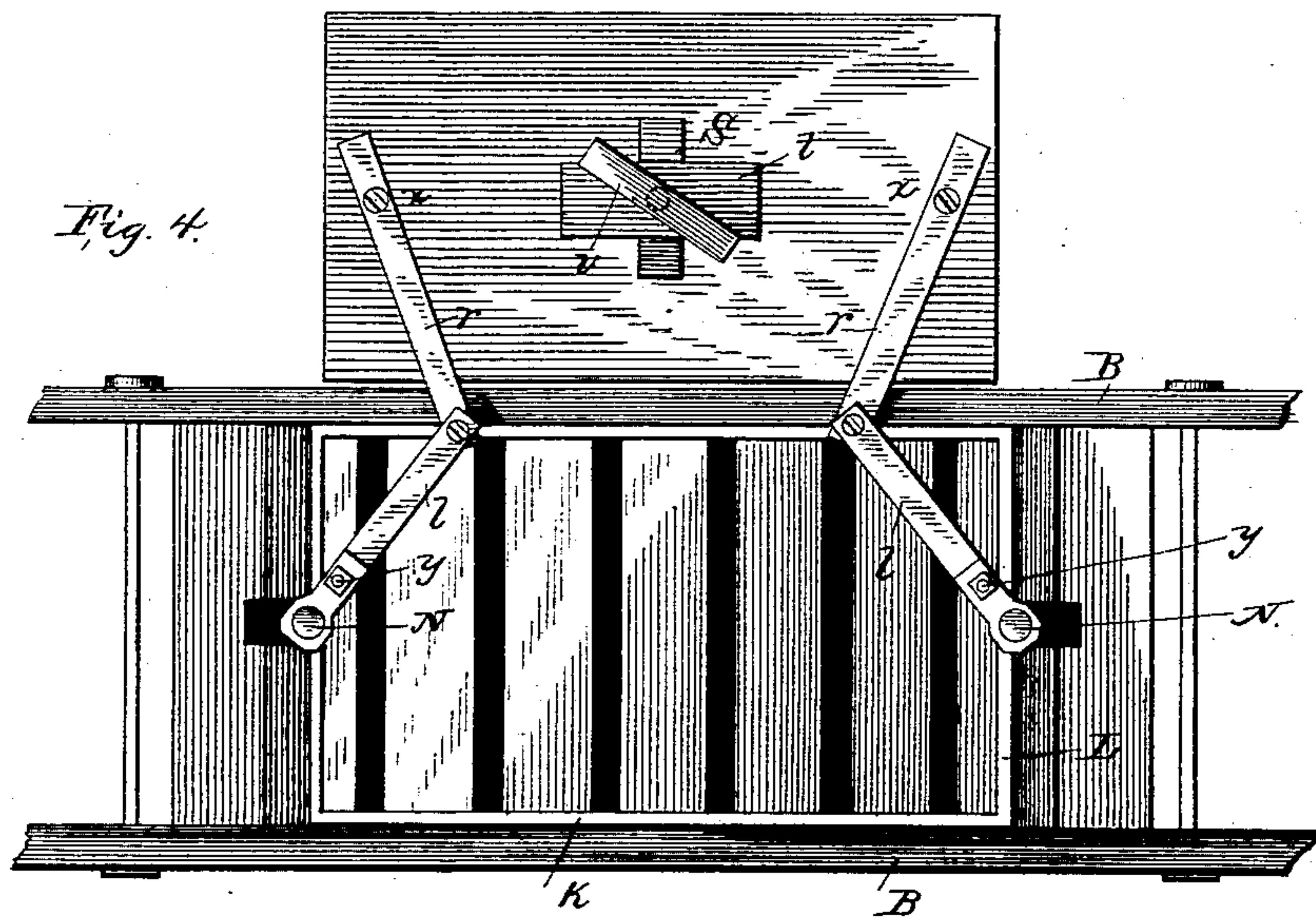
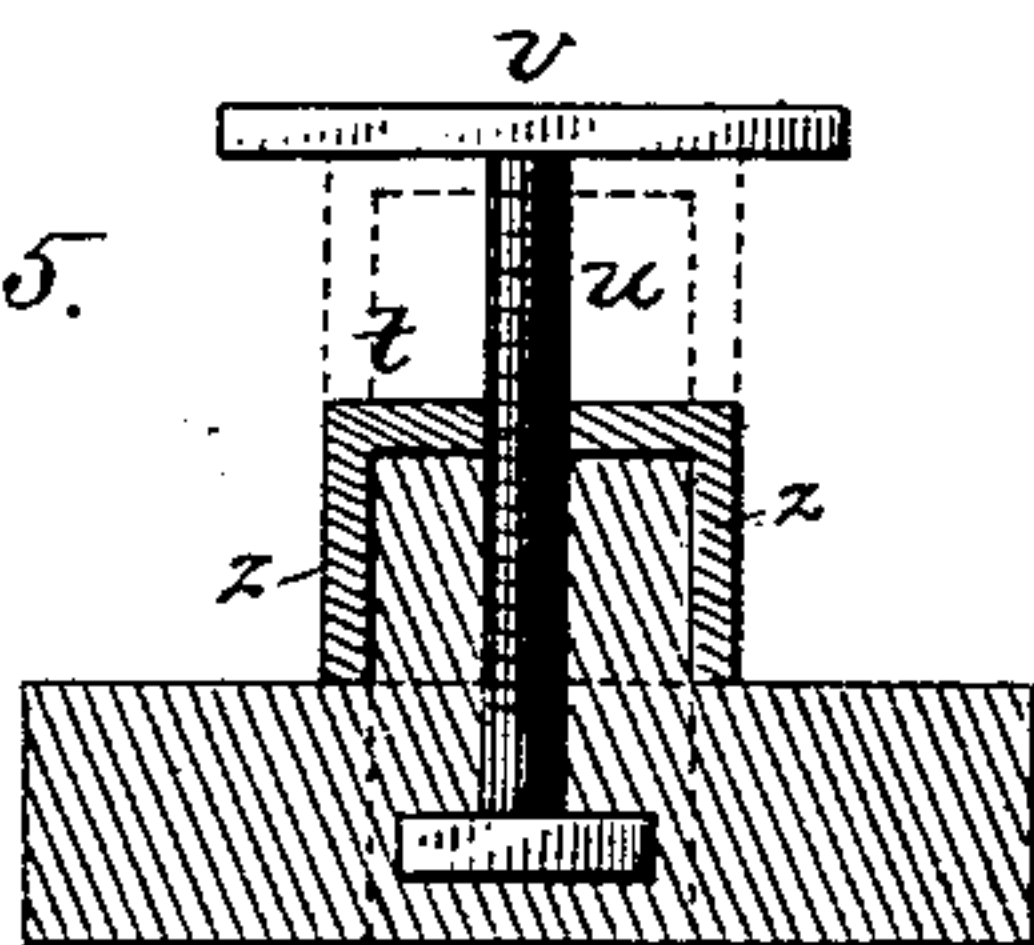


Fig. 5.



Attest:

C. D. Hough
L. E. Jones.

Inventor:

Charles M. Stone.
J. E. Kerr,
By Charles J. Gooch
Associate Attorney.

UNITED STATES PATENT OFFICE.

CHARLES M. STONE, OF BELTON, TEXAS.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 313,551, dated March 10, 1885.

Application filed October 12, 1884. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. STONE, a citizen of the United States, residing at Belton, in the county of Bell and State of Texas, have invented a new and useful Baling-Press, of which the following is a specification.

My invention relates to improvements in presses for baling cotton, hay, and similar substances; and the objects of my improvements are, first, to provide a press in which the two platens or following-blocks move toward each other simultaneously and press the bale together in the center of the box; second, to provide a device for locking together during pressing that part of the box which is made removable for taking out the bale when pressed; and, third, to afford facilities for easily and quickly removing the top platen for the insertion of material for the next bale. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front perspective view of my press. Fig. 2 is a horizontal view of my locking device. Fig. 3 is a vertical section through the lock itself. Fig. 4 is a top view of the press, showing my upper platen removed; and Fig. 5 is a cross-sectional view through my block and clamp for holding the extension-arms of the upper platen together.

Similar letters refer to the same parts in the various figures.

The posts A A, cross-pieces B B, C C, and D D represent the frame of the press. The parts G G H H of the box are not removable, being made of plank nailed vertically to the inner sides of the cross-pieces. The part K, formed of plank nailed vertically to the piece M and to the piece c of the locking device, has journals a a placed on the ends of the piece M, and free to turn in the bearings b b in the cross-pieces F F. The part K may therefore be made to rotate on M as an axis, and being brought to a horizontal position, as shown in dotted lines, may serve as a platform or bridge on which to roll out the bale when pressed. The part L of the box consists of plank nailed vertically to the piece E and to the piece d of the locking device. The part L is entirely removable, being held in place by the locking device and by the lower ends of its plank, which project down the inner face of the cross-

piece F. The parts K and L are alike on opposite sides of the box. At the middle of the narrow sides of the packing-box are placed the vertical screw-rods N N. These rods are journaled in bearings e e at their lower ends, and also in bearings f f in the blocks F F. (Shown in dotted lines.) At the lower ends of the rods N N are placed gears g g, which intermesh with gears h h, fixed upon the horizontal shaft O. The shaft O may be made to revolve by pulleys or gearing placed upon it, connecting with the engine or power which operates the press, in any suitable way to cause it to revolve in either direction, as desired. The screw-rods have threads turned upon them on their upper and lower ends the requisite distance, as shown. The cross-block k, carrying the lower platen, and the blocks l l, carrying the upper platen, have nuts in their ends fitting on the threads of the screw-rods. The threads on the rods turn in opposite directions on either end of each rod, and in reverse directions on the parts of the rods opposite each other. It is obvious, now, that if the shaft O is put in revolution the rods N N will turn in reverse directions and cause the cross-blocks k and the blocks l l to move with equal speed either toward or away from each other. The shaft O being set in motion to cause k to move up and l l down, and the box being full of cotton or other material to be pressed, it will be seen that a perfectly rectangular bale will be pressed in the center of the box, when the locking device may be unlocked, the part K turned down horizontally, the bale tied and rolled out. The side H and L is slitted vertically opposite the screw-rod sufficiently to allow the blocks l and k to pass up and down.

Figs. 2 and 3 show my improved device for locking the removable parts of the box together during pressing. The piece c, nailed to K, is notched at q q to receive the projecting beveled ends of d d. To prevent c c from falling apart, I provide the lock m n o p. p is slotted, as shown in Fig. 3. The latch o, bolted to c, is first placed in the slot, the latch n, interlocking with o, as shown, is next placed in the slot and the cam-lever m turned down, as shown, on the lower side, holding the whole securely. The latches have bolts passing through c c, and the nuts on their outer ends

may be turned up to make the proper adjustment.

Figs. 1, 4, and 5 show my device for removing the upper platen and for locking it in place 5 exactly over the box. The cross-blocks *l l*, which abut against each other over the middle of the block *s*, are bolted or hinged to the blocks *r r* at their inner ends by screws or bolts *y y*, and blocks *r r*, whose inner ends abut 10 against the block *s*, are bolted at their outer ends, by screws or bolts *x x*, to the platen *P*. Both *x x* and *y y* allow free play in a horizontal direction of the blocks *l l* and *r r* upon each other and upon the platen. By this lazy- 15 tongs device I am enabled to throw the platen clear of the top of the box, as shown in Fig. 4.

To lock the blocks directly over each other, and so the platen directly over the box, I use the cap shown enlarged in Fig. 5. The screw 20 *u* is journaled at its lower end, free to turn in a bearing in the block *s*, which is bolted to *P*. The cap *t* is provided with nut fitting on screw *u*. When the cap *t* is in the lower position, (shown in Fig. 5,) its overlapping edges *z z* 25 hold the blocks *l l* securely in direct line end to end, as shown in Fig. 1. Turning the handle *v* to the left will cause the cap *c* to rise upward to the upper position, (shown in Fig. 5 in dotted lines,) when the platen is free to be 30 thrown to one side, as shown in Fig. 4.

The advantages of my press are apparent. The nuts on the cross-blocks being placed opposite to and level with each other when the press is put together a perfectly true and rectangular bale is pressed every time. The bale 35 being pressed together in the center of the box, there is not only less wear and tear of the box, but also of all the parts of the press than there is in those presses in which one platen

traverses the whole length of the box and 40 presses the bale against a fixed platen at the other end of the box.

The locking device enables me to have a perfectly rigid and solid box during pressing, and at the same time to open it easily and 45 quickly after the bale is pressed. My top platen can be thrown to one side in an instant without removing or taking anything apart.

What I claim is—

1. The combination of the horizontal shaft, 50 the vertical screw - rods having reversed threads, as described, the blocks carrying the platens with the box of a press, substantially as described, and for the purpose set forth.

2. The packing-box of a baling-press hav- 55 ing at its center the horizontally-adjustable parts *K* on the broader sides and the removable ends *L*, substantially as described.

3. The combination of the pieces *c c* and *d d*, notched into *c c*, with a locking device, sub- 60 stantially as described.

4. The combination, with the pieces *c c* and *d d*, notched into *c c*, of the slotted piece *p*, 65 bolted to *d*, latches *n* and *o*, and cam-lever *m*, substantially as described.

5. The combination, with the vertical screw- 70 rods *N N*, of the flexible arms *l r* and the upper platen, substantially as described.

6. The combination, with the flexible arms, of the clamping device, consisting of screw- 75 bolt *u*, journaled in block *s*, and clamp *t*, having overlapping edges *z*, substantially as described.

CHARLES M. STONE.

Witnesses:

E. B. MCKENDREE,
T. J. HERRON.