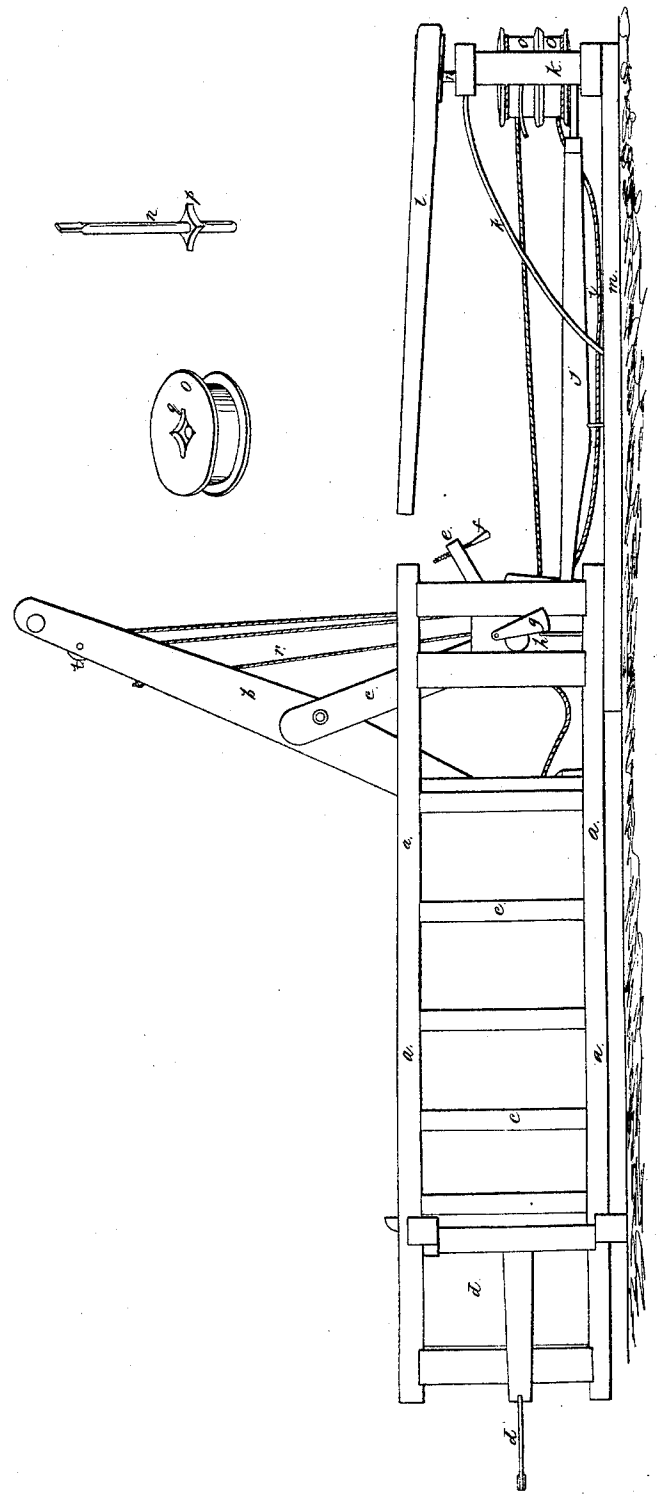
G. W. Penniston,

Cotton Press,

No. 18,766, Patented Dec. 1, 1857.



UNITED STATES PATENT OFFICE.

G. W. PENNISTON, OF NORTH VERNON, INDIANA.

IMPROVEMENT IN COTTON AND HAY PRESSES.

Specification forming part of Letters Patent No. **18,766**, dated December 1, 1857.

To all whom it may concern:

Be it known that I, GEORGE W. PENNISTON, of North Vernon, in the county of Jennings and State of Indiana, have invented certain new and useful Improvements in Presses for Pressing Cotton, Hay, &c.; and I do hereby declare that the same are described and represented in the following specification 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 an elevation of one side of a press with my improvements. Fig. 2 is the shaft and clutch of the capstan. Fig. 3 is a view of one of the capstan-barrels.

The nature of my invention and improvements in presses for pressing cotton, hay, &c., consists in arranging two separate and distinct capstan-barrels upon one shaft, so that either of them may be locked to and made to turn with the shaft or released from it, so as to turn without the shaft, at the will and pleasure of the operator, the rope fastened to and wound upon one of the barrels operating the levers and toggle to work the press, and the rope fastened and wound upon the other barrel drawing back the plunger after pressing a bale, to prepare the press to receive a new supply of the material to be pressed.

In the accompanying drawings, *a a* are the sills of a horizontal press, connected to the top bar, *a' a'*, by the posts *c' c'*, so as to form a strong frame, which is connected to a similar one by cross-bars at top and bottom, and planked on the inside in the usual manner, and provided with a door at the top, through which the material to be pressed is supplied.

d is a door, which is opened to remove the bale pressed, and fastened when closed by the locking-bar *d'*.

b is one of a pair of levers having their lower ends jointed to the plunger of the press, so as to operate it. These levers are connected to the toggle-bars, one of which is shown at *c*, by the pin *c'*, the bars *c* being framed into the rock-shaft c^2, which is fitted to turn in boxes in the sides of the frame. The rope *r* is fastened to the levers *b* at *s*, and passes down around a sheave fixed near the bottom of the frame and up over the sheave *t*, between the levers *b*, and down again around another sheave fixed near the bottom of the frame, and from that onto the capstan-barrel *o*, which is fitted to turn freely on the shaft *n*, above the clutch *p*, to which it is fitted, as shown at *q*, Fig. 2, so that when it drops onto the clutch it locks it to the shaft *n*. The capstan-barrel *o'* is similar to *o* reversed—that is, the cavity *q* is in the upper side—so that it is locked to the shaft by raising it up by the lever *j*, which has its fulcrum on the standard *j'*, fastened to the base *m*. The rope *i* from the barrel *o'* is fastened to the plunger to draw it back after pressing a bale. The shaft *n* turns in the frame *k*, fastened to the base *m*, and braced by the brace *k'*. *l* is a lever fastened to the top of the shaft *n*, to turn it and operate the press by horse or other power.

The press is filled with the material to be pressed, and the doors closed and secured. The lever *l* is carried around, so as to wind the rope *r* on the barrel *o*, which is locked to the shaft and draws down the levers *b*, so as to straighten the toggle and press the bale, which may be secured by bands. The operator now vibrates the lever *j*, so as to release the barrel *o* and lock the barrel *o'* to the shaft. The lever *l* is now turned in the same direction as before, to draw the plunger back by the rope *i*, and as the rope from the barrel *o'* is fastened directly to the plunger one turn of the barrel draws the plunger back as much as four turns of the barrel *o* carried it forward, and in doing so it contracts the toggle and unwinds the rope *r* from the barrel *o*, so that if a horse is turning the capstan he can go all the time one way, thereby saving the time and labor of reversing him. Besides, he retracts the press in one-fourth of the time that has heretofore been required; hence it will be apparent that my improvements save three-fourths of the time heretofore required to draw back the plunger, and, in addition to that, the time and labor of reversing the horse twice for every bale pressed. When the lever *j* is vibrated to lock the barrel *o'* to the shaft, the lever may be locked down, so as to hold up the barrel and keep it locked to the shaft by swinging the latch *g* over the end *h* of the lever; and when the press has been filled and the doors secured, the latch may be swung off,

so as to let the barrel o' down, and release it and let the barrel o onto the clutch p, and lock it to the shaft n, to work the press again.

I believe I have described and represented my improvements in presses 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:

What I claim as my invention and improvement in the above-described press is connecting each of the ropes which operate the toggle to work the press and draw back the plunger, to separate and independent capstan-barrels arranged to turn freely on the same shaft, provided with a device to lock either of them to said shaft when desired, substantially as described, so as to save three-fourths of the time heretofore required to retract the press, and the time and labor of reversing the horse twice for each bale pressed.

GEORGE W. PENNISTON.

Witnesses:

HIRAM PRATHER,

GALLUS KEVIHNER.