S. POPE.

Cotton-Press.

No. 203,644. Patented May 14, 1878.

Fig. 1

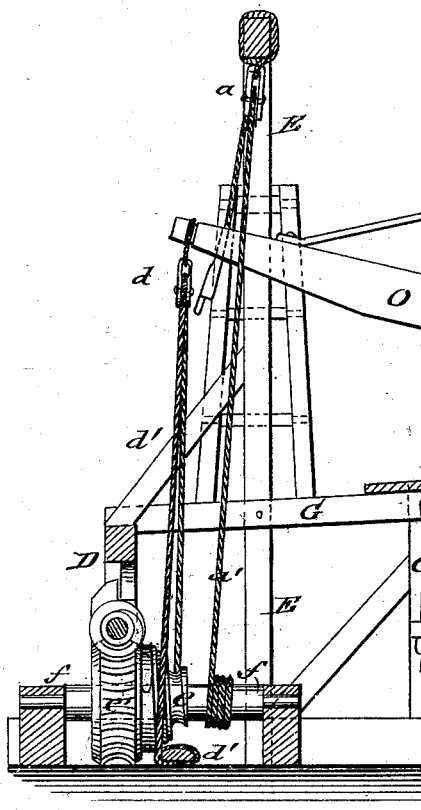


Fig. 2

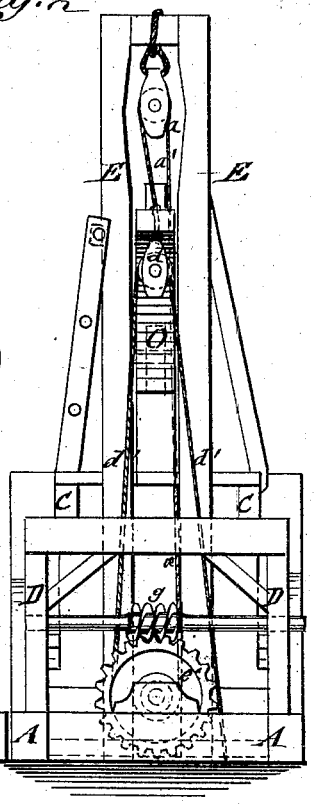


Fig. 3

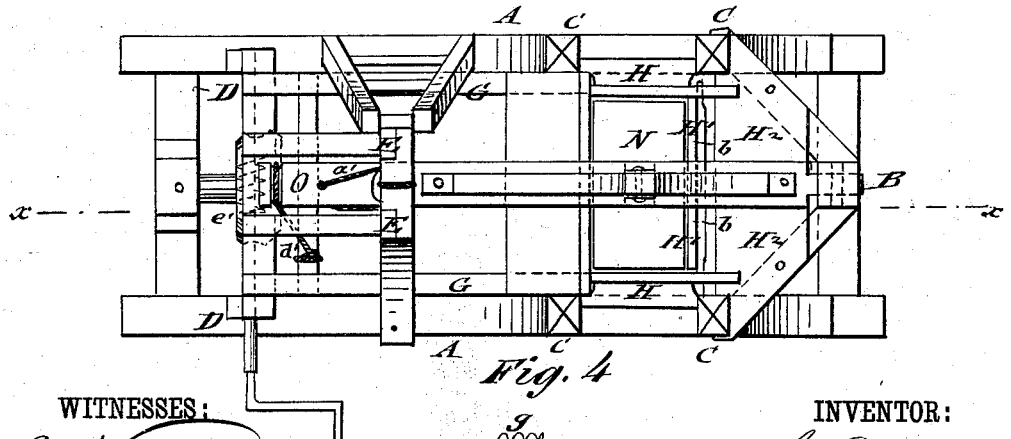
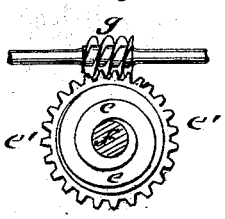


Fig. 4



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UNITED STATES PATENT OFFICE.

SAMPSON POPE, OF WILLIAMSBURG, MISSISSIPPI, ASSIGNOR TO HIMSELF AND JOHN M. SIMS, OF SAME PLACE.

IMPROVEMENT IN COTTON-PRESSES.

Specification forming part of Letters Patent No. **203,644**, dated May 14, 1878; application filed March 8, 1878.

To all whom it may concern:

Be it known that I, SAMPSON POPE, of Williamsburg, in the county of Covington and State of Mississippi, have invented a new and Improved Cotton-Press, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a vertical longitudinal section of my improved cotton-press on line *x x*, Fig. 3; Fig. 2, an end elevation of the same, and Fig. 3 a top view of the same.

Similar letters of reference indicate corresponding parts.

This invention relates to an improved press for cotton, hay, and other materials, by which the follower receives greater speed when the power required is light, but is moved slower when the resistance increases and a greater power is required. The press is readily filled and effectively operated, the cotton or hay being pressed into a smaller compass by the increased power that is obtained, while the construction is, notwithstanding, light, and the press easily transported.

The invention will first be described in connection with the drawing, and then pointed out in the claim.

Referring to the drawing, A represents the foundation or the base, to which the press-frame proper is applied; B, an upright part, to which the compressing-lever is pivoted. C are the four posts of the press-box; D, the posts that support the windlass, and E two vertical posts that are extended to a sufficient height to support the suspension-pulley *a* of the compressing-lever, and also guide the lever in its motion. The different posts are braced and laterally connected in suitable manner, so as to give strength and rigidity to the whole press-frame. From the press-posts C to the windlass-posts run top sills G, that support a ladder and side braces of the upright posts E.

The press-box H is supported in the press-posts by suitable cross slats or railings, and made with boxing-boards and doors at the lower end, in the usual manner. At the upper end of the press-box is arranged a swinging expansion-door, H^1, which is dropped back to a horizontal platform, H^2, that is arranged at a level with the upper part of the press-box, so as to fill the press-box with the cotton and hay, and furnish thereby additional room for the easy filling of the press-box. When the press-box is filled, the expansion-door is forced back into upright position and secured by a lateral bar, *b*, that is inserted with its ends into holes of the side of the press-box.

The follower-block N is hung to the compressing-lever O, so as to swing readily thereon into or out of the press-box. The lever O is strengthened by a truss construction and central brace applied to its upper side, and is connected at the outer end with the top pulley *a*, through which one of the operating-ropes, *a'*, is passed, while the second operating-rope, *d'*, passes through a pulley, *d*, at the outer end of the lever O.

The cord *d'* is attached at one end to the base-frame A, and secured at the opposite end to a grooved spiral wheel, *e*, that is attached to the arms of a cog-wheel, *e'*, keyed to the windlass *f*, that turns in suitable bearings of the base-frame A.

The second rope, *a'*, is attached to the outer end of the lever O, and wound by its opposite end around the windlass-roller. The windlass is operated by the endless screw or worm *g*, that is keyed to a horizontal shaft turning in side boxes of the uprights D, and revolved by a hand crank or cranks at the ends, so as to gear with the toothed wheel *e'* of the windlass-roller, and transmit the motion to the same. By the use of the windlass and worm-screw the operating-lever may be moved either up or down, as desired, by reversing the motion of the crank.

The groove of the spiral wheel *e* of the windlass commences in the outer edge of the cog-wheel and gradually tapers off to the roller, so as to impart thereby increased speed to the follower when the same enters the press-box, and gradually retard the motion of the same and increase its power, so as to overcome the resistance of the material to be pressed in the press-box.

The bale, when compressed, is hooped in the usual manner, the same being compressed

to a much smaller compass than usual by the increased power obtained by the press-construction.

The press is made mainly of wood, while all those parts that are likely to become disordered by constant use are made of iron, so as to furnish a press combining strength and durability with a light construction and ease of transportation.

The horizontal shaft may also be provided with a second worm-wheel, and engage the cog-wheel of a second grooved spiral wheel placed on the same shaft as the first, the cogs of the wheel and the thread of the worm-screw being, however, the reverse of those shown in the drawing. The second grooved wheel is also connected, by means of cords and pulleys, to the end of the compressing-lever, so as to operate the same in conjunction with the first worm-screw and wheel from the same shaft, and facilitate thereby the transmission of power to the follower.

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

The combination, in a press, with the follower-lever O, of the flexibly-suspended pulleys *a d*, ropes *a' d'*, and spirally-grooved pulley *e* on the windlass, as and for the purpose specified.

SAMPSON POPE.

Witnesses:
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