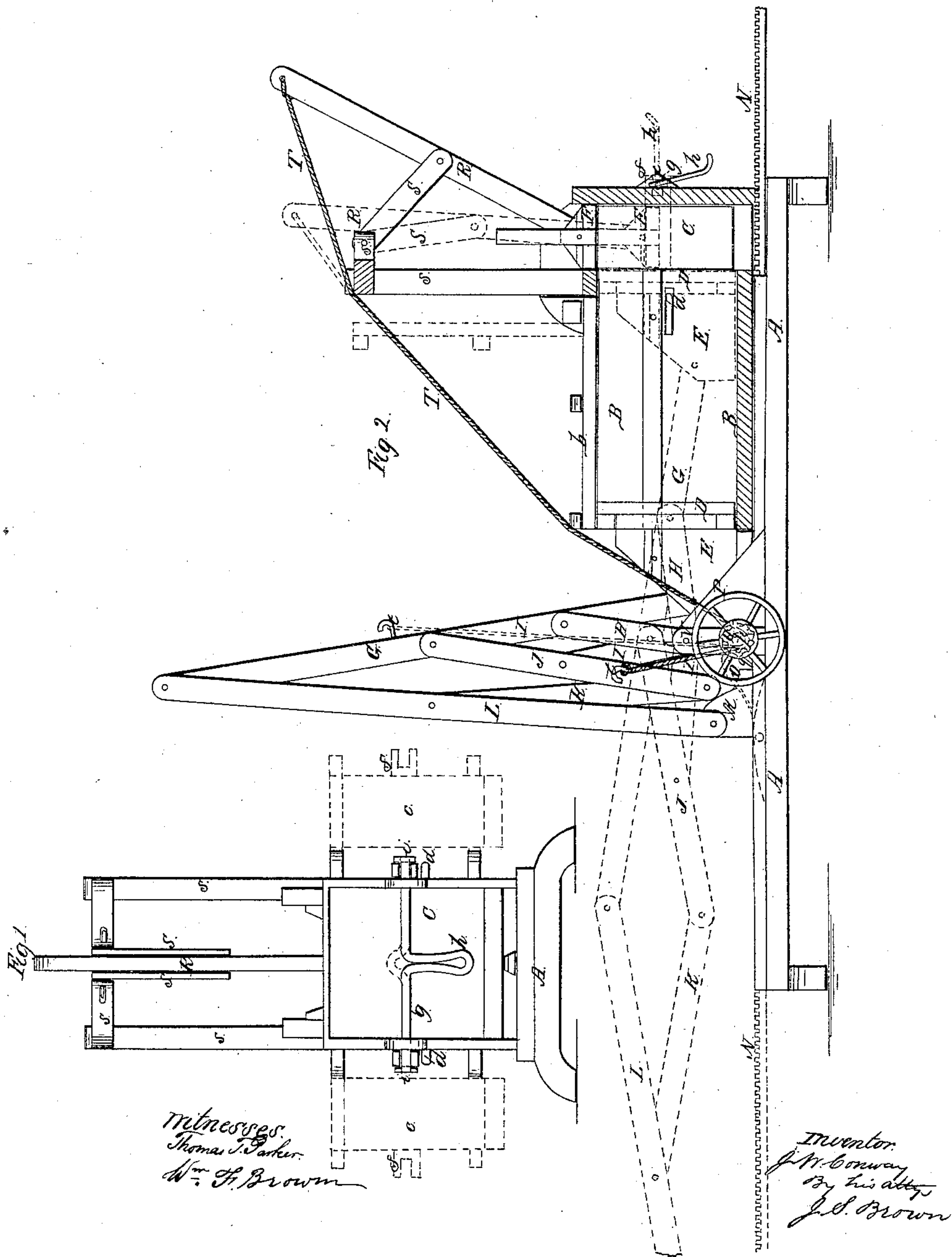


*J. W. Conway,*

*Hay Press.*

*N<sup>o</sup> 63,477.*

*Patented Apr. 2, 1867.*



# United States Patent Office.

J. W. CONWAY, OF MADISON, INDIANA.

Letters Patent No. 63,477, dated April 2, 1867; antedated March 21, 1867.

## IMPROVEMENT IN COTTON AND HAY PRESS.

The Schedule referred to in these Letters Patent and making part of the same.

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, J. W. CONWAY, of Madison, in the county of Jefferson, and State of Indiana, have invented an Improved Cotton, Hemp, and Hay Press; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification—

Figure 1 being an end elevation of the press.

Figure 2 a side elevation thereof.

Like letters designate corresponding parts in both figures.

My improved press is constructed and arranged so as both to press and compress the bale in succession, the same power being applied alternately. The power is applied in a peculiar manner, so as to drive the compressing-follower while the driver of the pressing-follower is moving back, and *vice versa*. The press is also so arranged that either hand power, with greater purchase, or horse power, with direct-lever action, may be used at any time. I have also a peculiar device for fastening the doors of the compressing-box. Let A represent any supporting frame or foundation for the press; B the pressing-box, placed horizontally; and C the compressing-box, at one end of the pressing-box. The pressing-follower D moves horizontally forward till it reaches the compressing-follower F, and then it is retained in that position, (as in red lines, fig. 2,) till the follower F descends vertically and compresses the bale. In order that the pressing-follower D may thus remain stationary, and form one side of the compressing-box, while the compressing-follower descends, the said follower D is separate from its driver E, but fits against it so as to be driven forward thereby in its proper upright position. Then, as soon as it reaches the compressing-box and follower, strong spring catches *d*, one or more on each side of the box, spring behind the follower and prevent its return while the driver E is drawn back. By this arrangement I am enabled to simplify the construction of the press, and economize space, power, and time in operating it; for, while the levers which drive the follower D are returning, they can resist in operating the follower F, and no time nor power will be lost in the work. And this use of the levers which operate the follower D, to assist in driving the follower F, obviates the employment of additional levers for that purpose, and hence compactness and simplicity of construction are enhanced. The leverage for driving the follower D, and serving as the prime mover for the follower E, consists of the combination of six levers, G, H, I, J, K, L, arranged substantially as represented in fig. 2. The first and last, G and L, are of the greatest length; one end of each is pivoted respectively to the driver E, and to the fulcrum-block M, and their contiguous ends are pivoted together. The next pair, J and K, are of half the length of the former-named pair, are pivoted at their upper ends respectively to the middle of said long levers, and at their lower ends to each other. The third pair, H and I, are of half the length of the preceding pair, J K, are pivoted at their upper ends respectively, one to the lever G, at one-half the distance from the pivot of the lever I therein to the lower end, and the other to the middle of the lever J, while at their lower ends they are pivoted at once to each other and to a fulcrum, V, secured to the frame or foundation.

By drawing the extreme outer end of the long lever L inward toward the pressing-box, these levers are, as it were, shut together in an upright position, and the inner end of the lever G is correspondently drawn outward, thus drawing out the driver E of the follower D to the outer end of the pressing-box, as shown by black lines in fig. 2. But on extending the lever L outward toward a horizontal position, the other levers are all extended in a similar position, and consequently the driver E, with its follower D, is forced into the pressing-box, as indicated by red lines in the same figure. To operate these levers I propose either directly to draw the lever L inward and outward by the power of a horse or horses, or to use manual power applied upon a crank or wheel, P, on the shaft of which there is a pinion, Q, (shown in dotted lines, fig. 2,) gearing into a sliding-rack, N, to which the fulcrum-block M of the lever L is attached. A pawl, O, takes into a ratchet-wheel, *q*, on the shaft *p* of the driving-wheel P, to prevent the rack being pushed back by the elasticity of the cotton or hay if the power is intermitted or slackened. The immediate operation of the compressing-follower F is by means of a toggle-lever, R, and bar S, the former pivoted to the follower and to the lower end of the bar S, about at the middle of its length, and the latter pivoted at its upper end to a standard, *s*, of the frame. To move this toggle-lever and bar by the lever system G, H, I, J, K, and L, a cord or rope, T, extends from the upper end of the lever R, first down around the shaft *p* of the driving-wheel P, or around a pulley secured in a position near the same, and thence up to a hook, *t*, on the lever G, as shown. When the lever G is extended, as shown by red lines, in



operating the follower D, the rope T is slackened and let out, thus allowing the follower F to rise; but when the lever G is raised, in the act of drawing the follower-driver back, the hook *t* draws on the rope T, and forces the follower F down, which thus compresses the bale. After the bale is bound and withdrawn, the follower D is freed from the spring-catches *d d*, and pushed back to its driver E, (as shown by black lines in fig. 2,) and the lid *b* of the pressing-box is raised for placing another supply of the material to be pressed therein. The doors *c c* of the compressing-box C have each a projecting-bar, forked or notched in the end where it projects, as shown; and the two doors are fastened by a shaft, *g*, which has a T-shaped head, *i*, at each end. The shaft *g* has a handle, *h*, which, when raised to a horizontal position, (as shown by red lines in fig. 2,) brings the heads *i i* also into a horizontal position, coinciding with the notches in the bars *f f*, so that the doors can then be opened. But when the handle *h* is dropped downward, (as shown by black lines in the same figure,) the T-heads *i i* hold against the forks of the bars, and securely retain the doors closed. This device is very simple, and can be operated by a child.

What I claim as my invention, and desire to secure by Letters Patent, is—

Both pressing and compressing the bales in one press, when the followers act alternately and by the same arrangement of leverage, but in reverse motions thereof, substantially as and for the purpose herein specified.

I also claim the detached follower D, arranged and operating substantially as and for the purpose herein set forth.

I also claim the system of six levers G, H, I, J, K, and L, arranged and operating in combination with the sliding-rack N, substantially as herein described.

I also claim the combination of the lever system G, H, I, J, K, and L, and the toggle-lever and bar R S, through the medium of the rope T, substantially as herein specified.

The above specification of my improved cotton and hay press signed by me this 21st day of May, 1866.

J. W. CONWAY.

Witnesses:

T. C. VANNUYS,

S. C. STEVENS.