

J. H. SNYDER.
COTTON-PRESS.

No. 177,579.

Patented May 16, 1876.

Fig. 1.

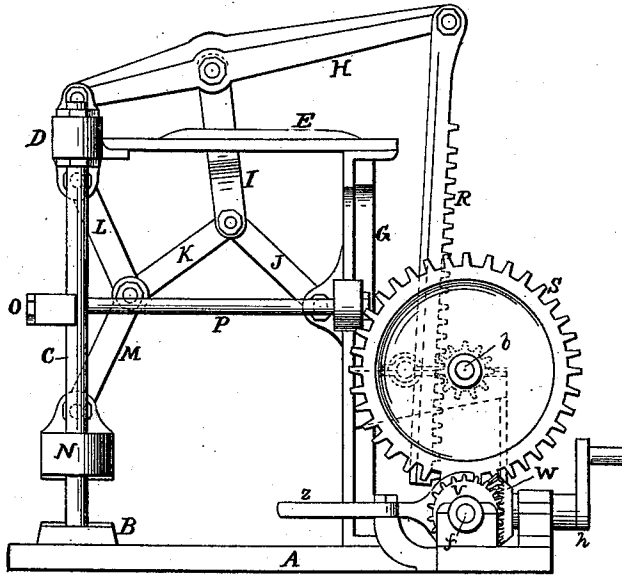


Fig. 2.

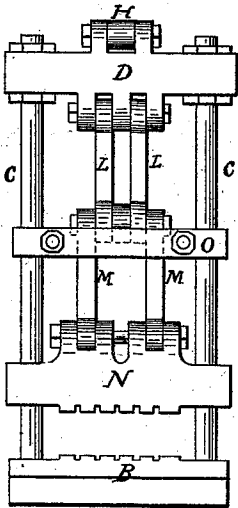
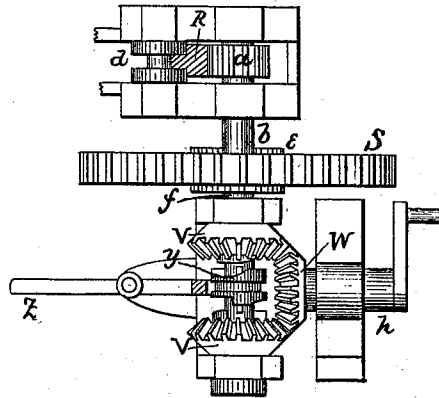


Fig. 3.



WITNESSES

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IMPROVEMENT IN COTTON-PRESSES.

Specification forming part of Letters Patent No. **177,579**, dated May 16, 1876; application filed April 21, 1876.

To all whom it may concern :

Be it known that I, JOHN H. SNYDER, of Richmond, in the county of Henrico, and in the State of Virginia, have invented certain new and useful Improvements in Cotton-Compress; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a cotton-compress, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side elevation of my compress. Fig. 2 is a front view of the same. Fig. 3 is a plan view of a part thereof.

A represents the bed of my machine, upon which, near one end, is formed or attached the grooved platen B. At or near each end of the platen B rises a guide-post, C, the upper ends of which are connected by a head-block, D, firmly secured thereon. From the back of the head-block D extend two horizontal stringers, E, connected with the upper forked end of a standard, G, secured near the other end of the bed A. On the top of the head-block D, between two central lugs thereon, is pivoted one end of a lever, H, which extends backward beyond the standard G. This lever is made concave or hollow on its under side, and has an arm, I, pivoted therein at a suitable point between the ends of the lever. The lower end of the arm I is forked, and between the two prongs thereof are pivoted three levers, J, J, and K. The two side levers J J extend toward the rear, and have their other ends pivoted between lugs or projections on the front of the standard G, while the center lever K extends forward, and has its front end pivoted between the lower ends of two hangers, L L, pivoted between lugs or projections on the under side of the head-block D. The same bolt which pivots the lever K and hangers L L also pivots the upper ends of two

arms, M M, the lower ends of which are pivoted between suitable projections on the upper side of the follower N. This follower slides upon the vertical guides C C. Above the highest point on said guides that the follower will reach there is an arched brace, O, placed against the front sides of the guides, and this brace is, by rods P P, connected with side lugs or projections on the standard G, so as to strengthen and brace the frame.

When the parts are bolted together, as indicated, the structure is firm, and will withstand any strain placed upon it.

From the outer end of the lever H is suspended a rack-bar, R, which passes downward and meshes with a pinion, a, secured upon a horizontal shaft, b, and the rack-bar is held in gear with said pinion by a circumferentially-grooved friction-roller, d, the back of the rack-bar being grooved to fit the same. On the shaft b is also secured a large cog-wheel, S, which meshes with a pinion, e, on another shaft, f. Upon this shaft are placed two loose miter-wheels, V V, which both mesh with a similar wheel, W, on the driving-shaft h. Between the two miter-wheels V V on the shaft f is a movable feathered clutch, Y, operated by a lever, Z, to be thrown in gear with either of the said wheels V V, or be held between them, as shown in Fig. 3.

In the practical operation of this compress there will be a very large and heavy fly-wheel attached on the shaft h, which may be revolved at a high rate of speed by a comparatively small boiler and engine. When the operator is then ready for pressing the bale, he throws the clutch Y in gear with the proper wheel V, and the momentum of the heavy fly-wheel, added to the action of the engine, will, by means of the pinion a and rack-bar R, draw down the lever H. The combination of arms and levers connecting said lever with the follower N exerts a tremendous pressure on the bale.

It will be noticed by the peculiar arrangement of said arms and levers that the pressure is increased the farther the follower descends, so that as the bale gets compressed there is more and more pressure on the same until the pressing is completed, when the operator at once throws the clutch Y out of gear. It will

also be seen that the entire weight of all the operating parts is, in my machine, utilized to aid in compressing the bale.

When the bale is pressed, it is held in the machine until tied, when the clutch Y is thrown in gear with the other wheel V, to raise the follower.

This machine can be built at a greatly-reduced cost, as compared with those now in use, and the expense of running the same is also greatly reduced, as I can use an engine of a vastly smaller size and power than has heretofore been done.

In place of the miter cog-wheels V, V, and W, I may use friction-wheels, to answer the same purpose.

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

1. In a cotton-compress, the combination, with the follower N, of the arms M M, hangers L L, levers K and J J, forked arm I, and

lever H, all arranged substantially as and for the purposes herein set forth.

2. The combination, with the mechanism for operating the follower, of the frame-work, consisting of the vertical guides C C, head-block D, stringers E E, standard G, arched brace O, and rods P P, substantially as herein set forth.

3. The combination, with the shaft b and its cog-wheel S and pinion a, for operating the rack-bar R, of the shaft f, with pinion e, loose miter-gears V V, feathered clutch Y with lever Z, and the miter-gear W on the driving-shaft h, all substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 21st day of April, 1876.

JOHN H. SNYDER.

Witnesses:

C. L. EVERT,

WILLIAM L. BRAMHALL.