J. W. Conway,

Hay Press.

No. 27,429. Patented Mar. 13, 1860.

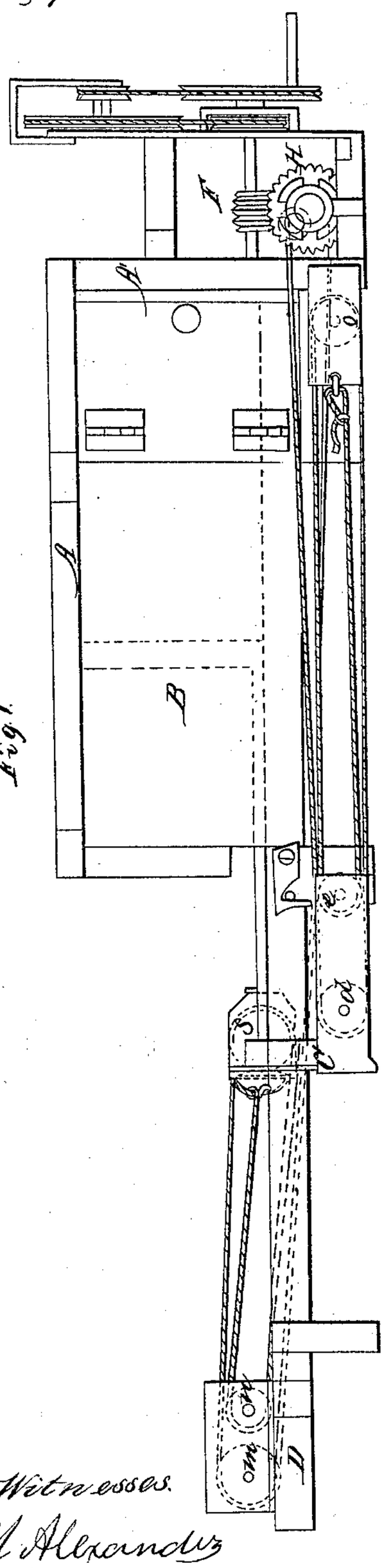

Fig. 1.

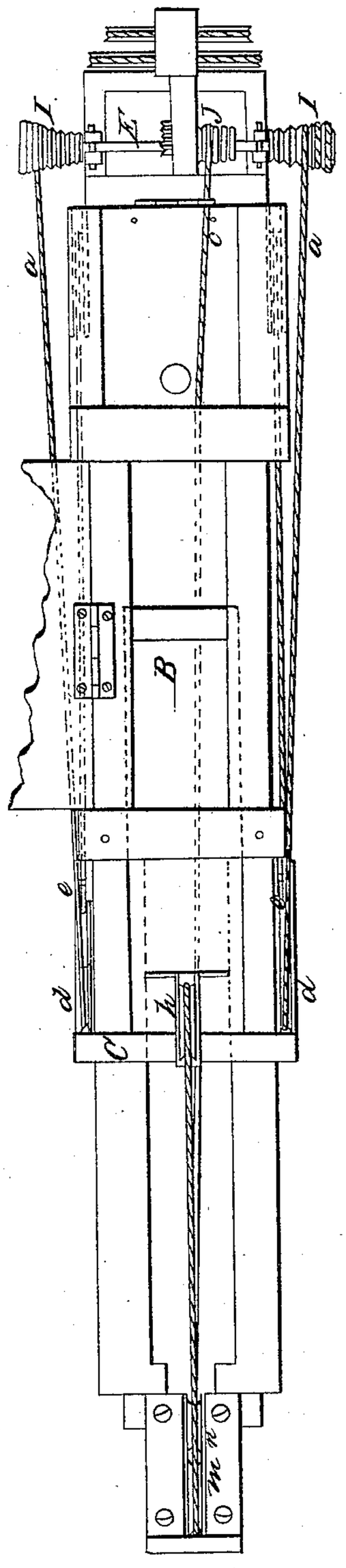

Fig. 2.

Witnesses.

C. M. Alexander

S. A. Gentman

Inventor.

J. W. Conway

UNITED STATES PATENT OFFICE.

J. W. CONWAY, OF FRANKLIN, INDIANA.

IMPROVEMENT IN COTTON AND HAY PRESSES.

Specification forming part of Letters Patent No. **27,429**, dated March 13, 1860.

To all whom it may concern:

Be it known that I, J. W. CONWAY, of Franklin, in the county of Johnson and State of Indiana, have invented certain new and useful Improvements in Cotton and Hay Presses; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in the employment of the several devices hereinafter particularly described, substantially in the manner set forth.

In the drawings, Figure 1 represents a side elevation. Fig. 2 represents a top view.

In the figures, A represents a receiving press-box, which is made of any suitable size, and of a rectangular or any other convenient shape. This box is provided with one head or end, A′, the other end being open.

B represents a press-head, which is made to fit snugly in the box, and to slide backward and forward in it for the purpose of pressing, and relieving the bale of cotton or hay, &c. This head is secured to a sliding frame C, said frame sliding upon a table, D, at one end of the box A, as is seen. The frame C is provided with a series of pulleys, *d*, *e*, and *h*, there being two on each side and one near the center of the frame. The table D is also provided with two pulleys, *m n*, as seen. At the opposite end of the box from these pulleys is situated a horizontal shaft, E, upon which are secured three conical pulleys, I I and J, and also a gear-wheel, H. The pulleys I I are secured at the ends of the shaft, and two cords, *a a*, passing around these pulleys, are carried back by the sides of the box, passed around pulleys *d*, are then carried forward, passed around pulleys *o*, situated near the conical pulleys, then carried back around pulleys *e*, then forward again, and the ends of said cords secured to the boxes in which the pulleys *o* are secured. It will be seen then that one end of the cords *a* is secured to the conical pulleys, and the other end to the boxes in which the pulleys *o* are secured. One end of the cord *c* being secured to the conical pulley J, the other end is passed back around pulley *m*, thence around pulley *s*, thence around pulley *n*, and being carried back is secured to the box of pulley *s*. The cords *a a* are used for the purpose of drawing the frame C toward the box A, and thus forcing the head B against the material within said box to be pressed. The cord *c* is for the purpose of drawing the frame C and the head B back from the box; and it will be understood that the pulleys are all so proportioned and connected that the cords will always be kept stretched either in turning the shaft E backward or forward, and that a slight turn of the said shaft in either direction will give a corresponding direction to the head B.

F represents a screw, which is secured upon a shaft immediately above the gear-wheel H. The threads of this screw pass between the teeth upon the wheel H, and when said screw is turned it causes the wheel to revolve also. Gearing may be used to give more or less speed to the shaft of screw F, according to the amount of power required for pressing. If great power is required, the gear will be so arranged as to give a very slow motion to the screw; but if less power is required, the screw may have more motion given to it.

It will be seen that when the head B is drawn back and the box filled with material to be pressed it does not require so much power to press as it does when the material is in a more compact form. The cords *a a* consequently lie around the large ends of the pulleys I I when the head B begins to move and press the material. Said head also has more motion at this time than any other; but as the head presses the material in, the cords pass toward the small end of the pulleys, thus increasing the power and decreasing the motion of the head.

I am enabled by this arrangement of cords and pulleys to increase the pressure according to the resistance of the material. As the resistance is little, the power is not so much; but when the resistance increases, the power increases also.

I am enabled by the use of the screw, in connection with this arrangement of cords and pulleys, to dispense with horse-power, if necessary, in pressing cotton and hay and substitute man-power with as much efficacy as horse-power has been used in other presses. The

box A is provided, of course, with suitable doors, through which the bale passes after being pressed.

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

The employment of the screw F, the toothed wheel H, the conical pulleys I I and J, and the cords *a a* and *c*, when the same are arranged together and used in connection with the moving press-head B, substantially as and for the purpose herein set forth.

J. W. CONWAY.

Witnesses:
C. C. HAMILTON,
WM. CONWAY, Jr.