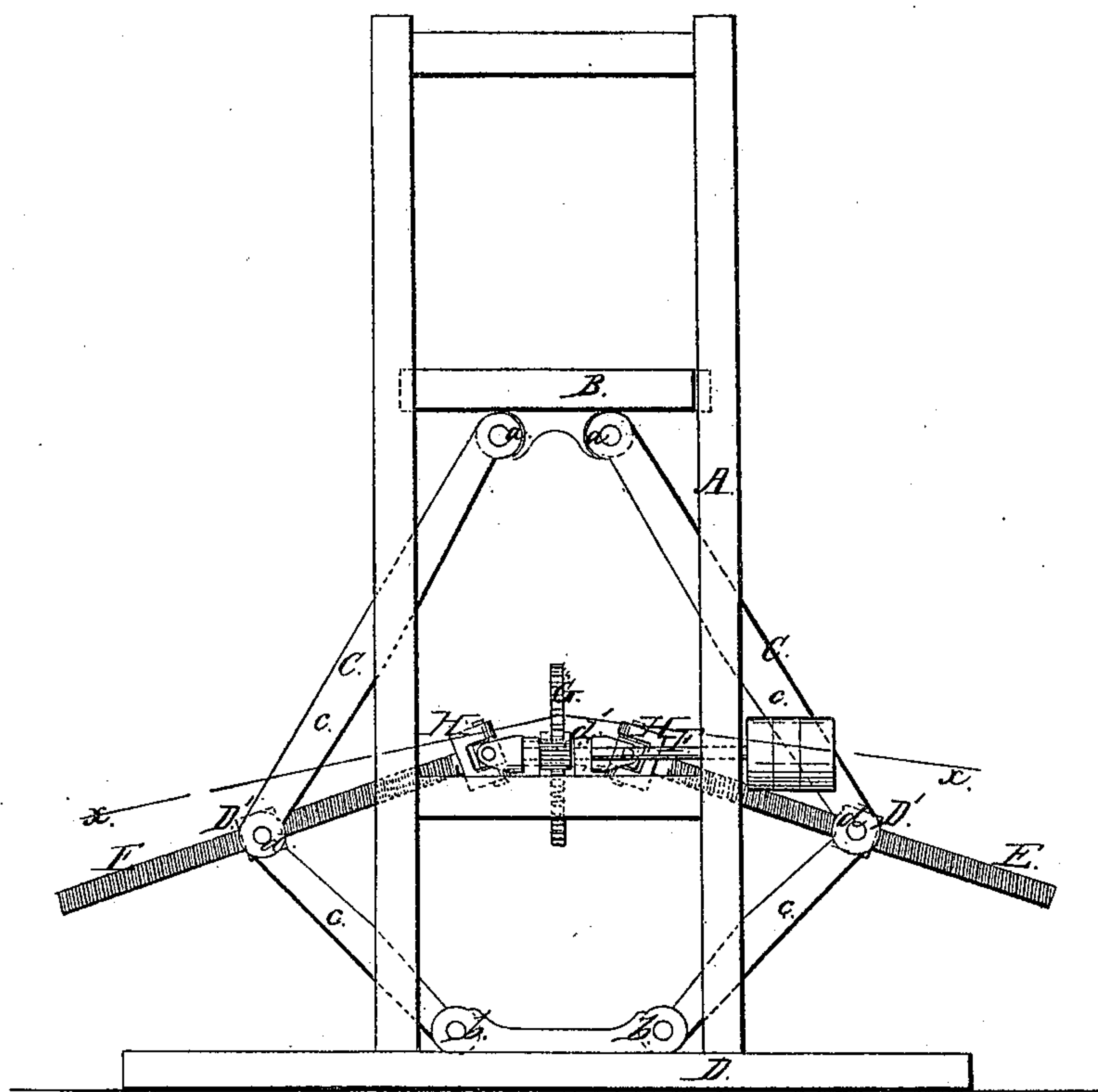


*M. B. Hand,*  
*Cotton Press.*

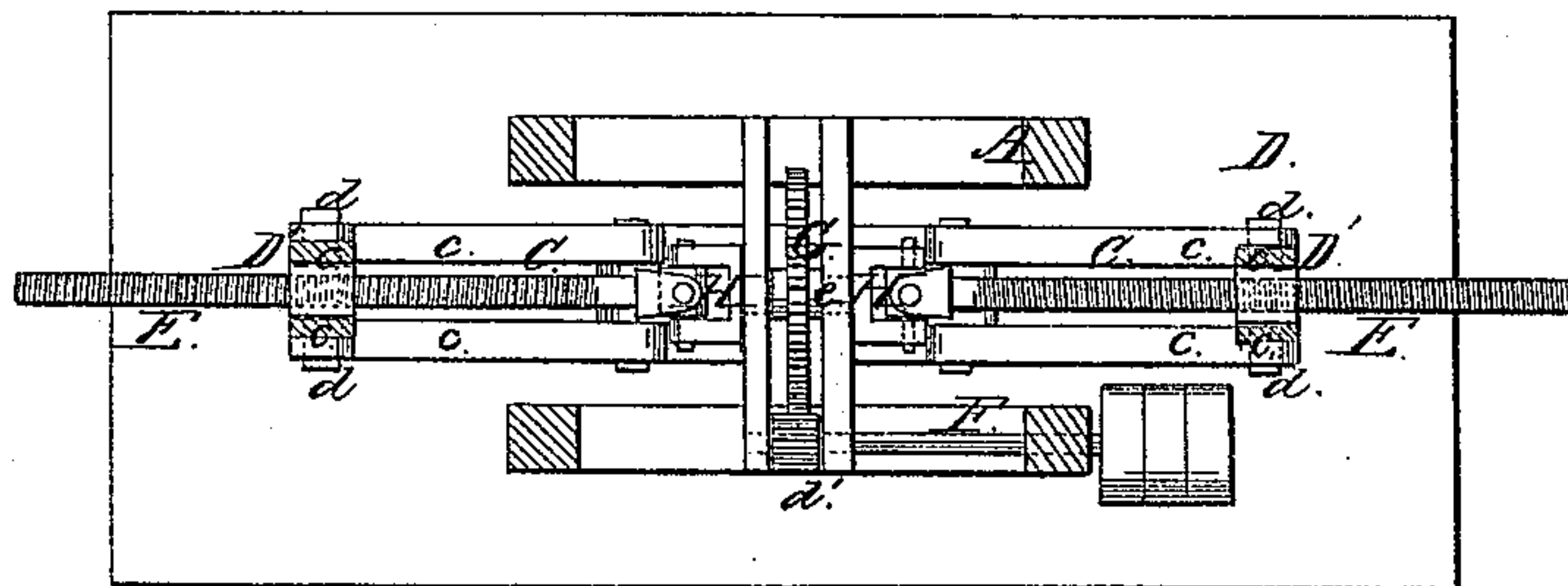
*N<sup>o</sup> 25,161.*

*Patented Aug. 16, 1859.*

*Fig: 1*



*Fig: 2.*



*Witnesses;*  
*L. M. Hand,*  
*Wm. N. Ludabock.*

*Inventor;*  
*Miles B. Hand.*

# UNITED STATES PATENT OFFICE.

MILES B. HAND, OF HANDSBOROUGH, MISSISSIPPI, ASSIGNOR TO HIMSELF  
AND SHELDON B. HAND, OF SAME PLACE.

## IMPROVEMENT IN COTTON-PRESSES.

Specification forming part of Letters Patent No. 25,161, dated August 16, 1859.

*To all whom it may concern:*

Be it known that I, MILES B. HAND, of Handsborough, in the county of Harrison and State of Mississippi, have invented a new and Improved Press for Compressing Cotton, Hay, and other Commodities for Baling; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a front elevation of my invention. Fig. 2 is a section of the same, taken in the line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts in the two figures.

This invention consists in operating the follower of the press by a combination of toggles and screws arranged in a novel way, as hereinafter fully described, whereby the same are rendered capable of a general application to all forms of presses, whether designed for animal or other power, and a very simple, compact, and powerful operating mechanism obtained.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a rectangular framing, in the upper part of which the bale-box may be placed, as usual, and in which the follower B works. The bale-box is not represented, as it possesses no peculiarity of construction.

To the under side of the follower B the upper ends of toggles C C are attached by joints *a a*, the lower ends of the toggles being attached to the base D of the framing A by joints *b*. Each toggle C is double, or formed of two pairs of levers, *c c*, as shown clearly in Fig. 2. The joints of the toggles C C are formed each of nuts D', through which screws E pass. The nuts D' are provided with arms or journals *d d*, which pass through the levers *c* of the toggles, and form the pintles of the joints. One screw E has a reverse thread to that of the other, or, in other words, one is a right and the other a left hand screw.

In the framing A a driving-shaft, F, is placed. This shaft has a pinion, *d'*, on its inner end, said pinion gearing into a wheel, G, the shaft *e* of which is connected at its

ends with the screws E by universal joints H H, constructed in the ordinary way.

From the above description it will be seen that when power is applied to the shaft F and rotated in one direction the screws E E, through the medium of the gearing *d' G* and universal joints H H, will draw toward each other and straighten the toggles C C, which will consequently force upward the follower B and compress the commodity in the bale-box, in which the follower works. When the shaft F is rotated in a reverse direction, the toggles will of course be moved outward from each other or forced apart, and the follower is made to descend. This latter movement of the follower, in order to economize in time, should be much quicker than its upward-pressing movement. This result may be obtained by having the pulleys of the belt which moves down the follower of a proper relative size. The screws E E, in consequence of being connected to the shaft *e* of the wheel G by the universal joints H H, and passing through the nuts D' D', which are allowed to turn in the toggles, are allowed to rise and fall as they rotate and conform to the movement of the toggles which they actuate, the screws gradually rising and assuming a horizontal position as the toggles straighten or assume a vertical position, and vice versa. By this arrangement a stationary driving or power shaft, F, is obtained, and any convenient power may be applied to the working parts without difficulty.

The invention is also applicable to various forms of presses, whether vertical or horizontal.

Toggles have been applied to presses and arranged in various ways. A right and left screw-rod has also been combined with toggles, the former passing through nuts at the joints of the toggles. In this latter arrangement, however, the screw-rod is the driving or power shaft, and its position is continually varying with the movement of the toggles, thereby rendering the application of power somewhat difficult and involving certain mechanism to compensate for its instability.

I do not claim, broadly, the employment or use of toggles, nor the combination of toggles



with screws for the purpose of operating the follower of a press irrespective of the arrangement herein shown, whereby a stationary driving or power shaft is obtained, or one working in stationary bearings.

I claim, therefore, as new and desire to secure by Letters Patent—

The combination of the toggles C C and screws E E when the latter are connected to

the driving or power shaft, or to a shaft connected therewith, by means of universal joints H H, substantially as and for the purpose set forth.

MILES B. HAND.

Witnesses:

L. M. HAND,

M. N. CUDABACK.