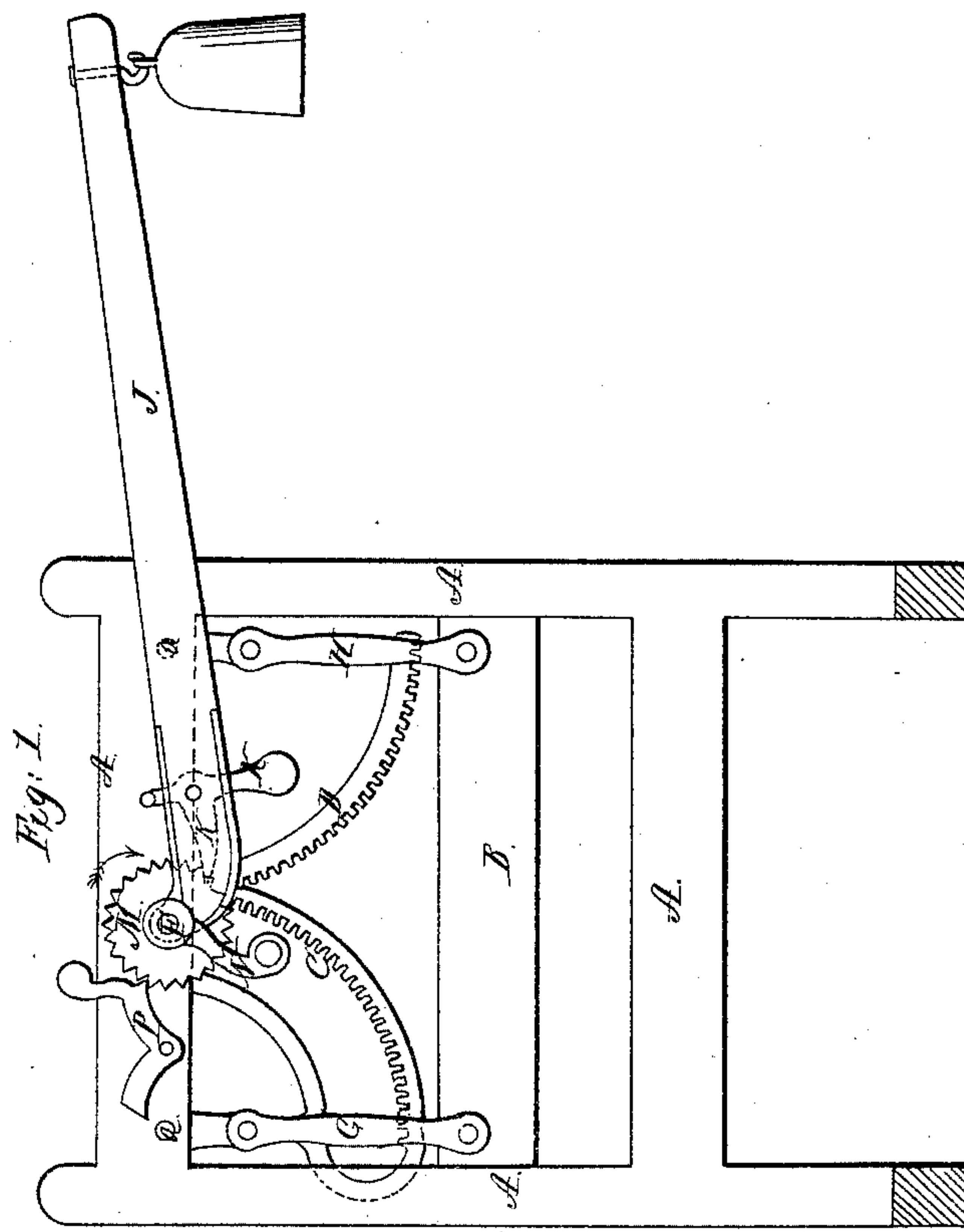
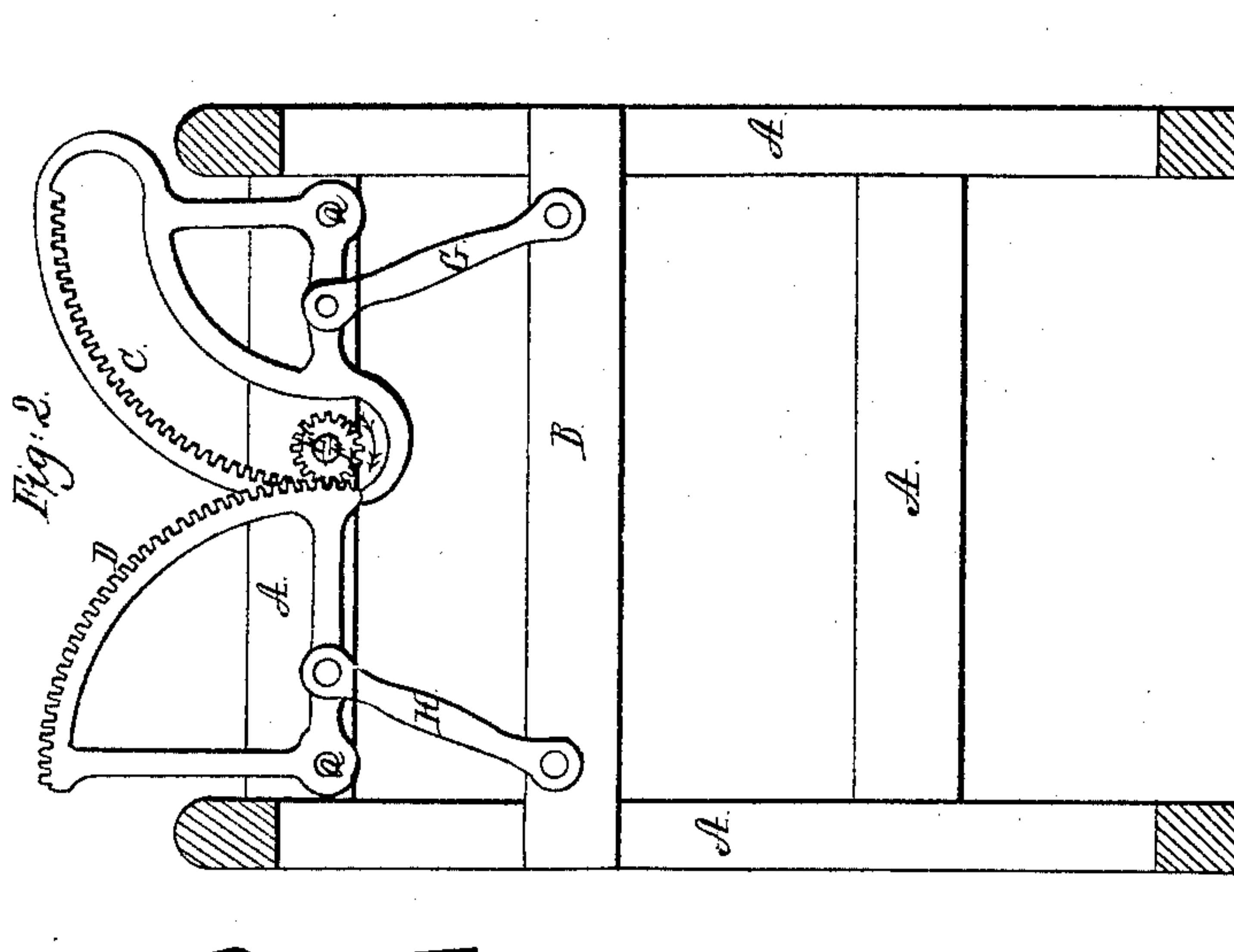


*C. Oyston,*  
*Cotton Press,*  
*N<sup>o</sup> 28,401,                      Patented May 22, 1860.*



Witnesses:  
*R. S. Spurr*  
*J. W. Coombs.*

Inventor:  
*Chas Oyston*  
*per Munnell &*  
*Attorneys*

# UNITED STATES PATENT OFFICE.

CHARLES OYSTON, OF LITTLE FALLS, NEW YORK.

## IMPROVEMENT IN POWER-PRESSES.

Specification forming part of Letters Patent No. 28,401, dated May 22, 1860.

*To all whom it may concern:*

Be it known that I, CHARLES OYSTON, of Little Falls, in the county of Herkimer and State of New York, have invented a new and useful Power-Press; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a front view of the arrangement of machinery forming the press, showing the several parts in their relative positions when the follower or pressing-head is down and the article is confined under it. Fig. 2 shows, in a longitudinal vertical section of the frame of the press, the sectors, pinion-wheel, and pitmen connections with the follower.

Similar letters of reference indicate corresponding parts in both figures.

To enable those skilled in the art to fully understand my invention, I will proceed to describe the same with reference to the drawings.

In the drawings, A represents a strong frame, which may be constructed for hay or cotton with a press-box, or for cheese with a table. The frame represented is formed of two parallel uprights with top and bottom cross-braces, these two uprights serving as guides to keep the follower B in place in its up and down movements.

C D represent two sectors, one, C, having inside gearing, while the other has outside gearing or cogs. These have their centers of motion at *a a*—the extreme ends of the top longitudinal bars of the frame A—and they are hung at these points by strong axles, which may have metal bearing-boxes. Both sectors engage with the teeth of a pinion spin-wheel, F, Fig. 2, which is keyed to shaft F—that is, placed at an intermediate point between the axes *a a* of sectors C D.

To the arms of each of the sectors C D, and near the axes of the same, are pivoted pitman rods or levers G H, which, being of a suitable length, are pivoted to the follower B near its ends. These pitman-rods have a movement and an action somewhat similar to the ordinary toggle-levers, as will be seen by reference to the drawings, so that, as the sectors are gradually brought down, the upper ends of these pitmen recede from each other or are forcibly separated. From this move-

ment, combined with the depressing movement of the levers, an immense power can be obtained and brought upon the bale of hay or cotton or mass of cheese with great effectiveness.

The power is applied to the pinion-shaft F by a lever, J, one end of which is attached loosely to the shaft, and from the other may be hung a suitable weight, as represented in Fig. 1. To this lever is applied a weighted pawl, K, which engages with the teeth of a ratchet-wheel, M, that is keyed securely to shaft F. Now, by raising or depressing this lever J the shaft will be turned in the direction indicated by the arrow, and the follower will be forced down. In obtaining this great power it is necessary to provide some means for operating the follower with a rapid movement in raising it or bringing it down upon the article to be pressed, so as to save time and labor. For this purpose I affix to the end of shaft F which projects out from the frame of the machine a crank or winch, N, and a two-holding pawl, P, which pawl serves to prevent a recoil of the follower B during the operation of pressing with the lever J, and it also serves to keep the follower, with its accompanying parts, in an elevated state. Now, by disengaging lever-pawl K from ratchet-wheel M the shaft E may be rotated by turning crank N either for raising the follower or for depressing it, and by this means the follower may be operated, where the lever-power is not required, with a fast movement independently of the lever.

From this description it will be seen that the power gradually increases as the follower is depressed in using the lever J, in consequence of the straightening out of the levers or pitmen G H, combined with their downward movement.

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

The combination of the internally-gearred sector C, formed, as shown, with the sector D, pinion E, follower B, rods G H, lever J, crank N, and pawls K P, the said parts being constructed and arranged to operate as and for the purpose herein shown and described.

CHARLES OYSTON.

Witnesses:

THOMAS BATESON,  
GEO. S. RANSOM.