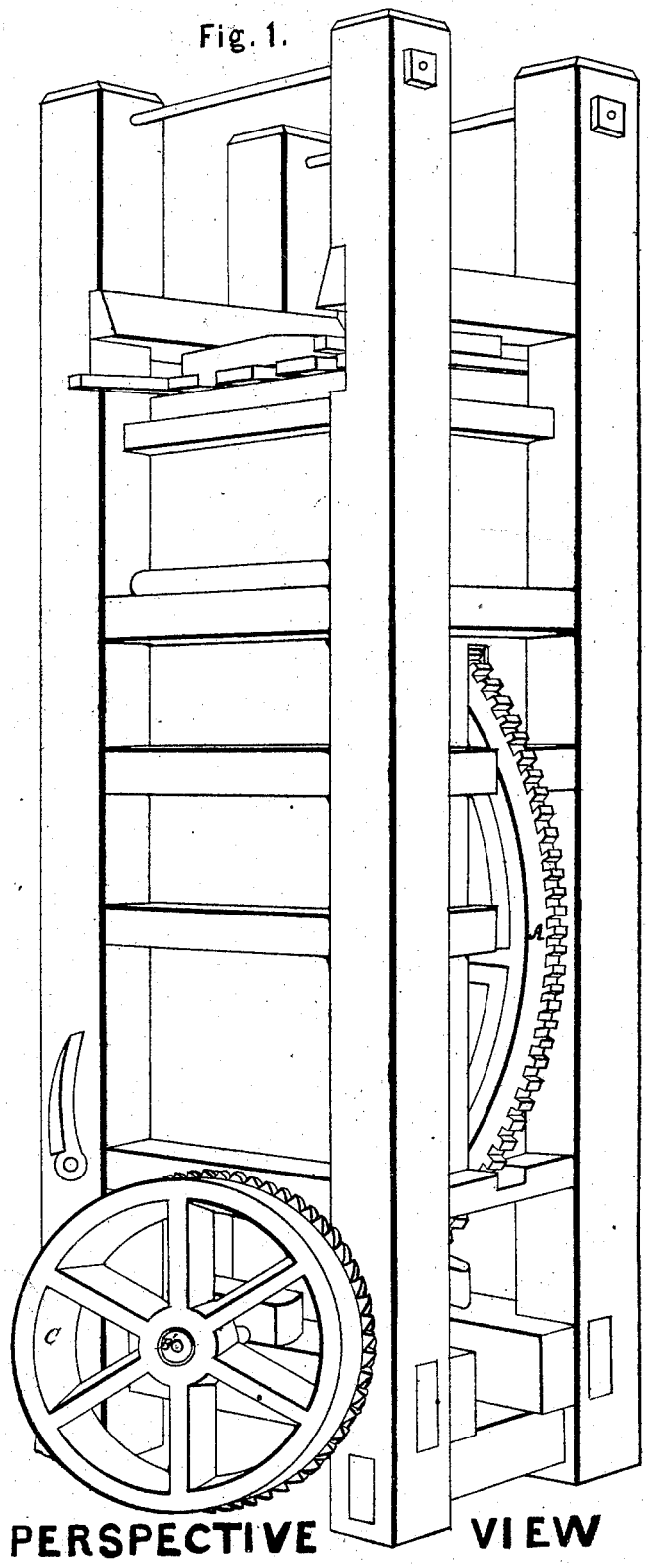
2 Sheets.
Sheet. 1.

S. W. Bullock.

No 2.507. Hay Press. Patented. Mch 23. 1842.

Fig. 1.



PERSPECTIVE VIEW

3 Sheets.
Sheet. 2.

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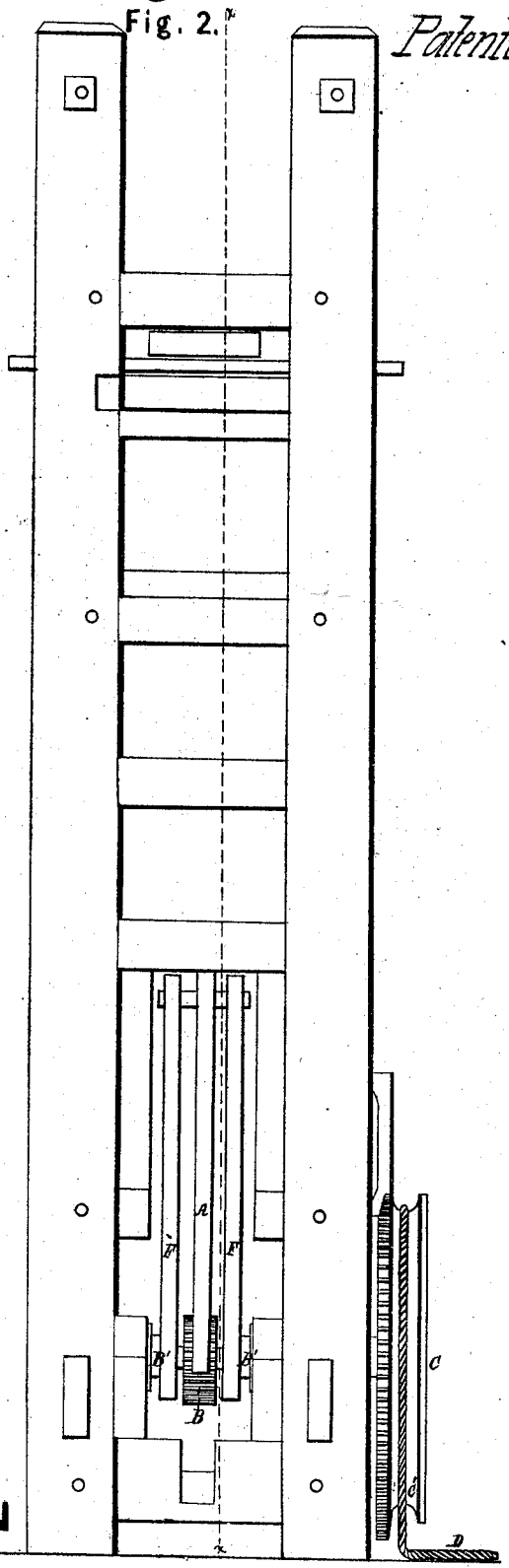
Hay Press.

No 2,507

Fig. 2.

Patented Mch 23. 1842.



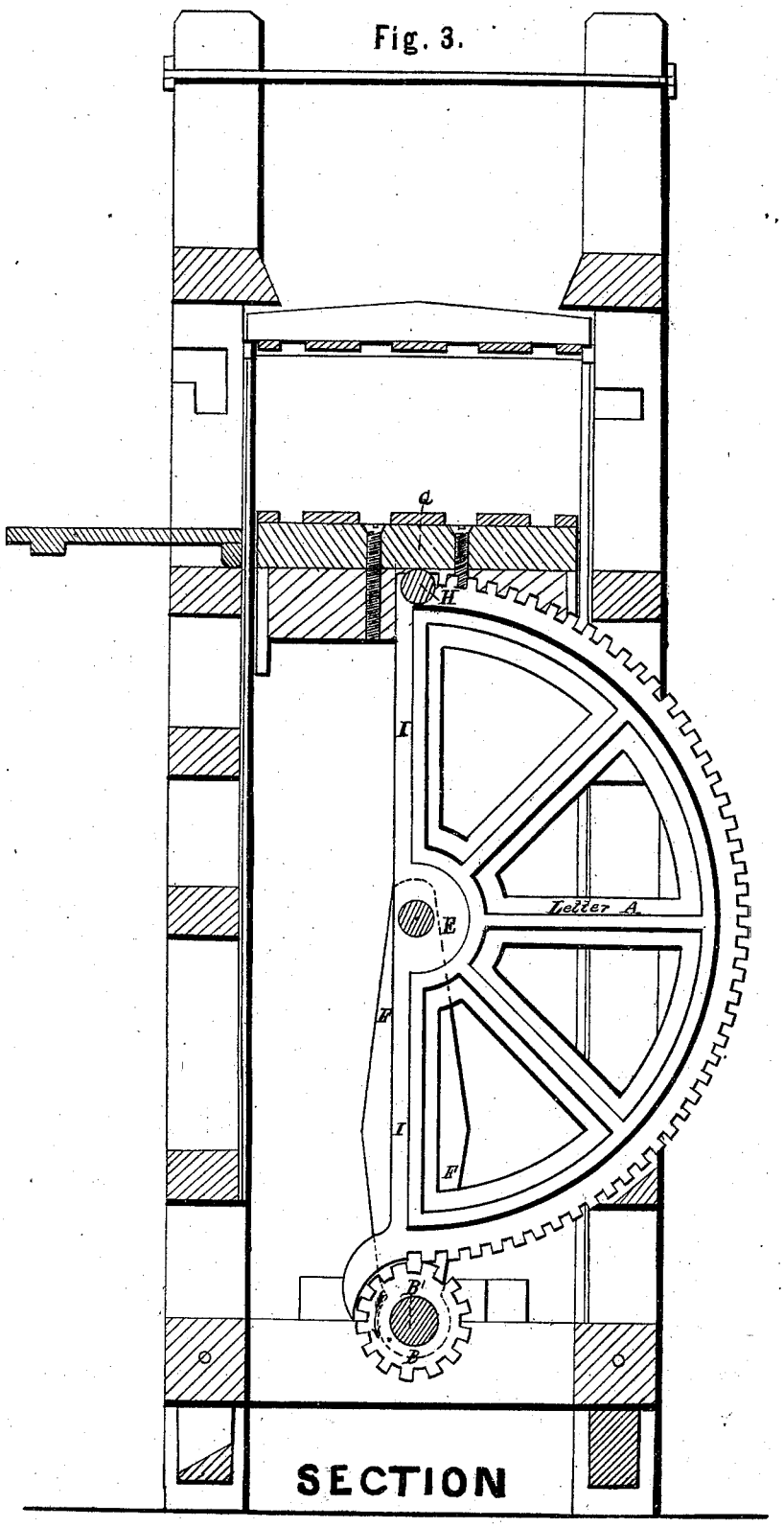
ELEVATION

S. W. Bullock.

3 Sheets. Sheet 3.

No 2,507 **Hay Press.** Patented Mch 23 1842.

Fig. 3.



UNITED STATES PATENT OFFICE.

S. W. BULLOCK, OF CATSKILL, NEW YORK.

IMPROVEMENT IN THE METHOD OF CONSTRUCTING PRESSES FOR PRESSING HAY, COTTON, &c.

Specification forming part of Letters Patent No. **2,507**, dated March 23, 1842.

To all whom it may concern:

Be it known that I, S. W. BULLOCK, of Catskill, in the county of Greene and State of New York, have invented a new and useful improvement in the manner of constructing presses which may be applied to the pressing of a great variety of articles, and is specially applicable to the pressing of cotton, hay, and other substances which require a considerable range in the follower; and I do hereby declare that the following is a full and exact description thereof.

In the accompanying drawings, Figure 1 is a perspective view of my press; Fig. 2, a side elevation thereof, and Fig. 3 a vertical section from side to side in the line *x x* of Fig. 1.

In each of these figures like parts are designated by the same letters of reference.

The frame-work of this press does not require any particular description, as it is similar to that of many other presses, the novelty consisting in the manner of constructing and arranging the parts by which the motive power is communicated to the follower.

In the drawings I have represented my press as adapted to the pressing of cotton, this serving equally well with any other object to exemplify the manner of its action. I make a segment cog-wheel, A, which consists of a semicircle or half-wheel, into the teeth of which a pinion, B, is to mesh. This pinion is fixed on a shaft, B′, to which the power is to be applied.

C is a wheel on one end of the shaft B′, around which a rope or chain, D, may be wound on its grooved part C′, and to which rope or chain a horse or horses may be attached, and being driven off will consequently cause the wheel C to revolve. This wheel is represented as having its rim on one side formed into a ratchet for the purpose of being checked by a pawl; but it may consist of a cog-wheel having a pinion working into it in the manner of the ordinary windlass. The segment-wheel A does not turn upon a fixed axis, but has a short axis, E, passed through and affixed to it, and this axis is embraced upon each side of the wheel by one end of two bridles, F. The other ends of these bridles embrace the shaft B′ of the pinion B. By this arrangement the segment-wheel and pinion are held in correct gear with each other in every position of said wheel.

G is the follower, and H a gudgeon attached to the segment-wheel, and received within proper boxes on the under side of the follower, which latter is shown as at its greatest elevation in the press.

Operation: When the follower is to be depressed preparatory to using the press, the shaft B′ is turned in the direction of the arrow on the pinion B, by which means the side I I of the segment-wheel will be brought into a horizontal position and the follower will be depressed to its lowest point. When it is desired to raise the follower for the purpose of pressing, the pinion B is to be turned in the reverse direction. This will produce an initial rise in the follower equal in amount to that which would be produced were the pinion B operating upon a vertical rack; but the rapidity of this rise will be perpetually decreasing and the power proportionally augmenting until the segment-wheel is brought into the position shown in Fig. 3, when the power will be at its maximum. The action upon the follower is in this case perfectly analogous to that produced by that arrangement of progressive levers usually called the "toggle-joint;" but the range of the follower is much greater than can advantageously be obtained by those levers, and the application of the power is much more direct.

Having thus fully explained the nature of my invention and shown the operation of my improved press, what I claim therein as new, and desire to secure by Letters Patent, is—

The manner in which I have combined the follower and the segment-wheel A with the pinion B and its shaft B′, the axis of the segment-wheel and the shaft B′ being connected by bridles in the manner set forth, and the follower being sustained and operated on by the segment-wheel through the intermedium of a gudgeon, H, or other analogous device on the under side of said follower, the respective parts being combined and operating substantially in the manner herein set forth.

S. W. BULLOCK.

Witnesses:

THOS. P. JONES,

JOS. O. ANDREW.