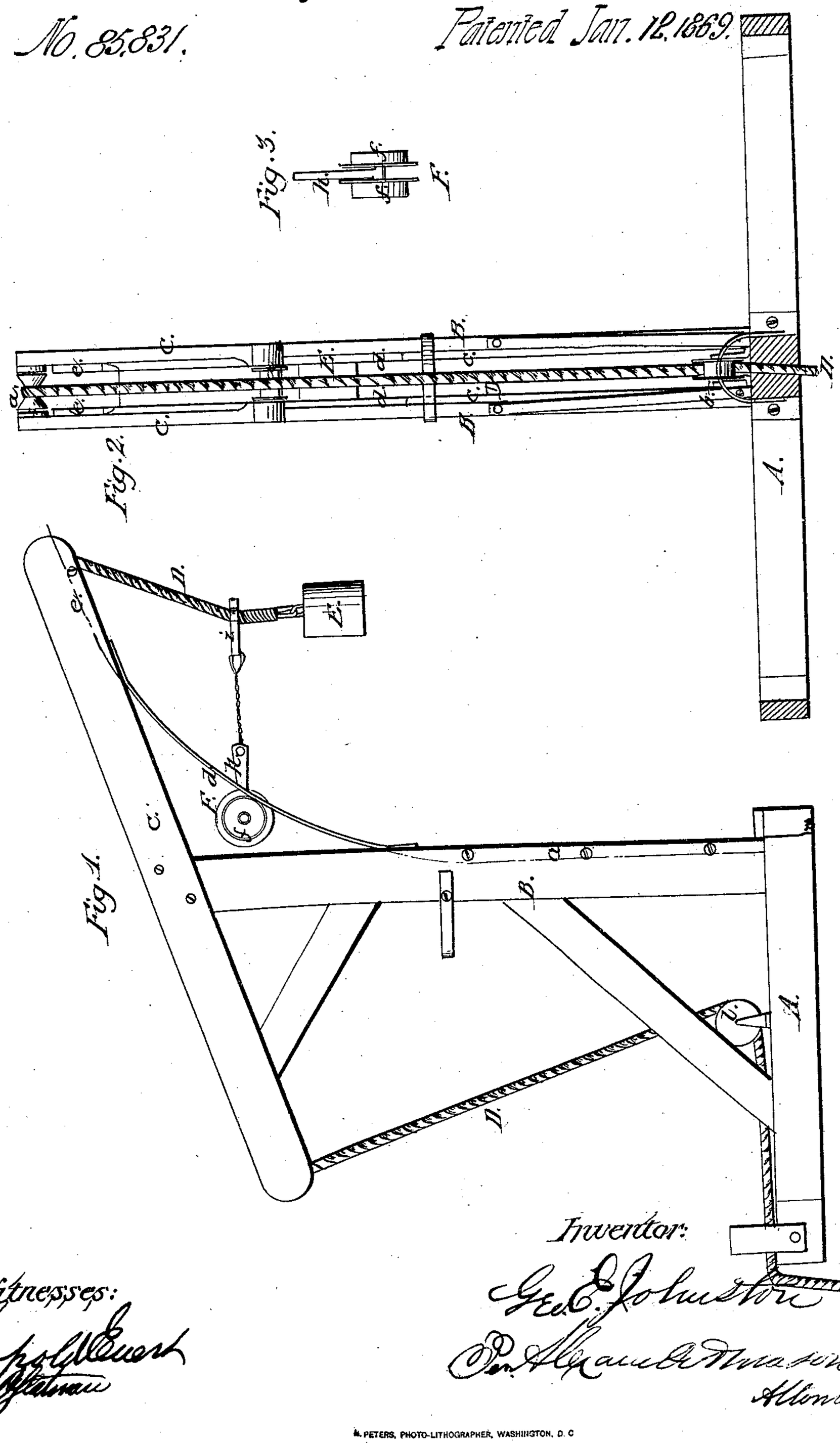
G. E. Johnston.

Hay Derrick.

No. 85,831. Patented Jan. 12. 1869.



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GEORGE E. JOHNSTON, OF BLOOMINGTON, ILLINOIS.

Letters Patent No. 85,831, *dated January* 12, 1869.

HAY-DERRICK.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, GEORGE E. JOHNSTON, of Bloomington, in the county of McLean, and in the State of Illinois, have invented certain new and useful Improvements in Hay-Derricks; 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.

The nature of my invention consists in the construction of a "hay-derrick," by which a lateral as well as perpendicular motion is obtained, and which will be hereinafter 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 drawings, which form a part of this specification, and in which—

Figure 1 is a side elevation,

Figure 2, a rear view, and

Figure 3 is a plan view of the "transferring-wheel."

A represents a triangular frame, in the centre of the base of which are two upright standards, B B, at suitable distance apart.

At the top of the standards B B are placed two inclined bars, C C, so arranged that the higher ends are outward from the frame A.

Between the ends of the bars C C are pulleys *a a*, over which the hoisting-rope D passes, said rope passing under a pulley, *b*, in rear of the standards B B, and is hitched, by suitable means, to the horse.

The other end of the rope passes down to the ground from the higher end of the bars C C, for the purpose of raising the hay, which is represented by the weight E.

Along the front edge, on the inside of the standards B B, are small slats, *c c*, which form ways or tracks for the "transferring-wheel" F.

The slats *c c* extend from the frame up a suitable distance, and are at their upper end bevelled, and lead on to curved metal bars *d d*, which form a continuation of the same, carrying the "transferring-wheel" upwards and outwards on to similar slats, *e e*, placed along the inner lower edges of the outer ends of the bars C C.

The "transferring-wheel" F consists of two flanged wheels, *f f*, with a tongue, *h*, between them, the said tongue having suitable journals, on which the flanged wheels *f f* are placed.

The front end of the tongue *h* is connected with a clamp, *i*, which encircles and holds the hoisting-rope D at any point desired.

When the machine is placed in proper position, it will be seen that the end of the rope D comes down to the ground, at or near the foot of the standard B, and when the hay is hoisted up, it is carried perpendicularly upward from the starting-point, the "transferring-wheel" moving also upward, on the track *c*, until this wheel arrives on the curved bars *d d*, when, as the wheel advances on the same, and on the slats *e e*, the hay is carried outward as far as the ends of the bars C C.

By changing the position of the clamp *i* on the rope D, the hay will be carried outward at any height desired.

Having thus fully described my invention,

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

1. The arrangement of the standards B B and inclined bars C C, with their slats *a a* and *e e* and curved bars *d d*, all substantially as shown and described.

2. In combination with the above, the "transferring-wheel" F, clamp *i*, and hoisting-rope D, all constructed and operating substantially as and for the purposes herein set forth.

3. The "transferring-wheel" F, constructed, as described, of a tongue, *h*, and a flanged wheel, *f*, on each side, substantially as shown and described.

In testimony that I claim the foregoing, I have hereunto set my hand, this 25th day of November, 1868.

GEORGE E. JOHNSTON.

Witnesses:

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