

C. E. Gladding. Hay Elevator.

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PATENTED JUN 27 1871

Fig. 1

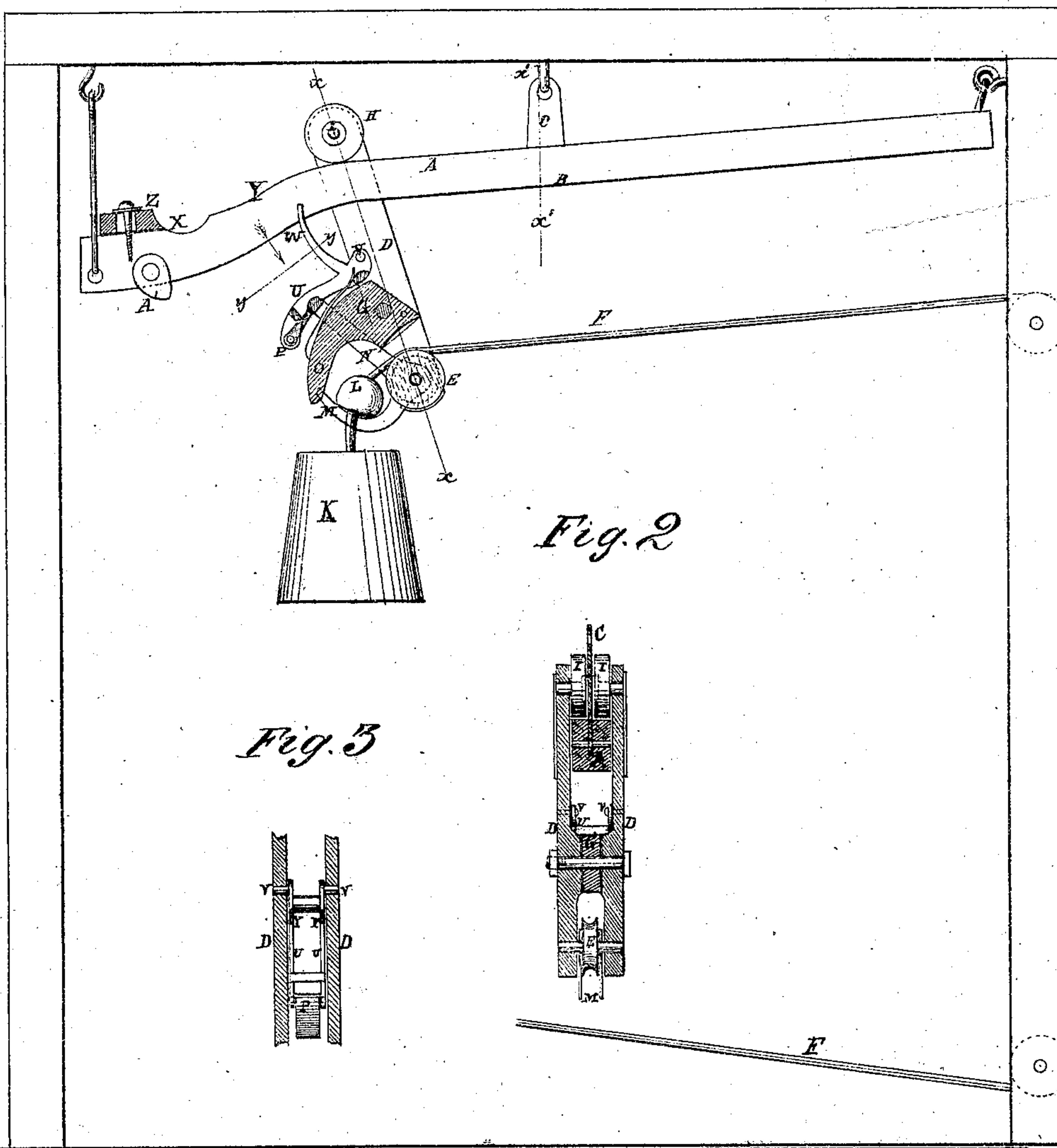


Fig. 2

Fig. 3

Witnesses:

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UNITED STATES PATENT OFFICE.

CHARLES E. GLADDING, OF TOWANDA, PENNSYLVANIA.

IMPROVEMENT IN HAY-ELEVATORS.

Specification forming part of Letters Patent No. 116,300, dated June 27, 1871.

To all whom it may concern:

Be it known that I, CHARLES E. GLADDING, of Towanda, in the county of Bradford and State of Pennsylvania, have invented a new and Improved Hay-Elevator; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

My invention consists in improving hay-elevators, as hereinafter fully described and subsequently pointed out in the claims.

Figure 1 is a sectional elevation of my improved apparatus. Fig. 2 is a sectional elevation of the traveler, and Fig. 3 is a section on the line X' X'.

Similar letters of reference indicate corresponding parts.

A is the beam for the traveler, suspended at each end, in any suitable way, from any support, and between the cords, and especially where it may be weakened by splicing, as at B. It is suspended by a thin plate or bar, C, arranged with the plane of its longest diameter in the longitudinal axis of the beam. D is the traveler, consisting of two parallel bars rigidly connected together by bolting to a block, G, with a pulley, E, between them, at the lower end, for the hoisting-rope F to work over, and at the upper end having a thin roller, H, on a strong stud, I, on each of the said bars; said rollers face each other across a slight intervening space between them, which is provided for, to allow the traveler to pass the suspension bar C. The weight K represents the load to be hoisted and conveyed over the mow or stack. L is a ball, knot, or other enlargement on the rope a short distance above the weight, or the fork or hooks which take the load; and M is a pair of hooks for catching under the ball to hold the load up while the traveler moves to the place of discharging. These hooks are pivoted to the lower end of the traveler, preferably in the axis of the pulley E, and they are connected at the axis to the yoke N, between the bars of which the hoisting-rope works, and the yoke swings up and down over the segmental tongue O of the block G, being raised up by the hoisting-rope and ball L. As the free end of the yoke passes up over the tongue O it passes under a pawl, P, between two arms, U, pivoted to the traveler at V, and provided with a tripping-

arm, W. The said pawl P is pivoted to the outer or free ends of the arms U, and is raised off the tongue O, as the said arms U are also, by the free end of yoke N when it rises; and it drops behind it and prevents it from falling back, thereby securing the load from falling back while it is being drawn along the beam A by the hoisting-rope. The traveler is suspended from the beam at the cavity X when hoisting, in which cavity the rollers H rest; and as soon as the load is elevated and secured and the rope is prevented from running over the pulley E by the ball coming in contact with the yoke, the force of the hoisting-rope becomes so great on the traveler as to draw it out of the cavity up the inclines Y and along the beam as far as required for discharging the load, which is done by tripping the forks holding it. Then, the hoisting-rope being let free, the traveler runs back down the beam, inclined for the purpose, to the cavity X; here it is arrested by the block Z, and the tripping-arm W comes against the block A', a little before the traveler stops and lifts the arms U and the pawl P, letting the yoke N and hooks M fall and release the ball L and the fork or hooks, which then run down to the hay to be elevated, for taking another load. The block A' is cam-shaped, and mounted on a pivot for being shifted to arrest the trip-lever sooner or later, and the block Z is mounted on the beam A adjustably, so as to be adjusted for stopping the traveler, as may be required. The incline Y in the beam A is made abrupt, for imparting sufficient speed to the traveler to insure the striking of the trip-lever against the block A' forcibly enough to trip the yoke N in all cases. When the pawl P drops behind the yoke N it falls upon the curved surface of the segment and locks the yoke N. It swings downward to release the yoke when the arms U are raised.

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

1. The inclined beam A of a hay-elevator, having the steep declivity Y, stop Z, and block A' relatively placed, as and for the purpose specified.
2. In combination with a traveler, rope, hooks, and knot, the yoke N, tongue O, and pawl P, arranged as and for the purpose specified.

CHARLES E. GLADDING.

Witnesses:

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