(Model.)

A. H. SMITH.

Hay Elevator.

No. 234,083. Patented Nov. 2, 1880.

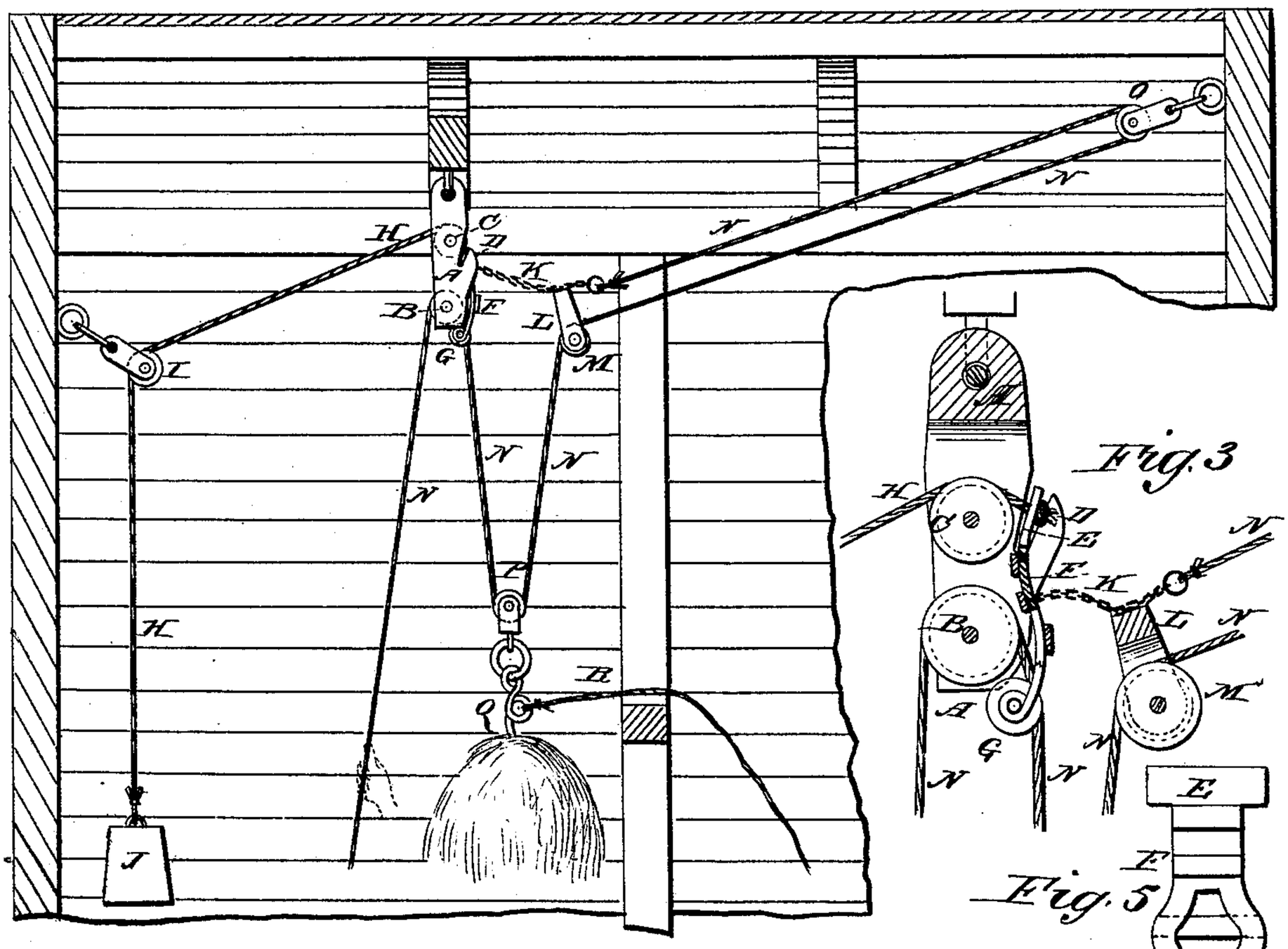

Fig. 2

Fig. 3

Fig. 5

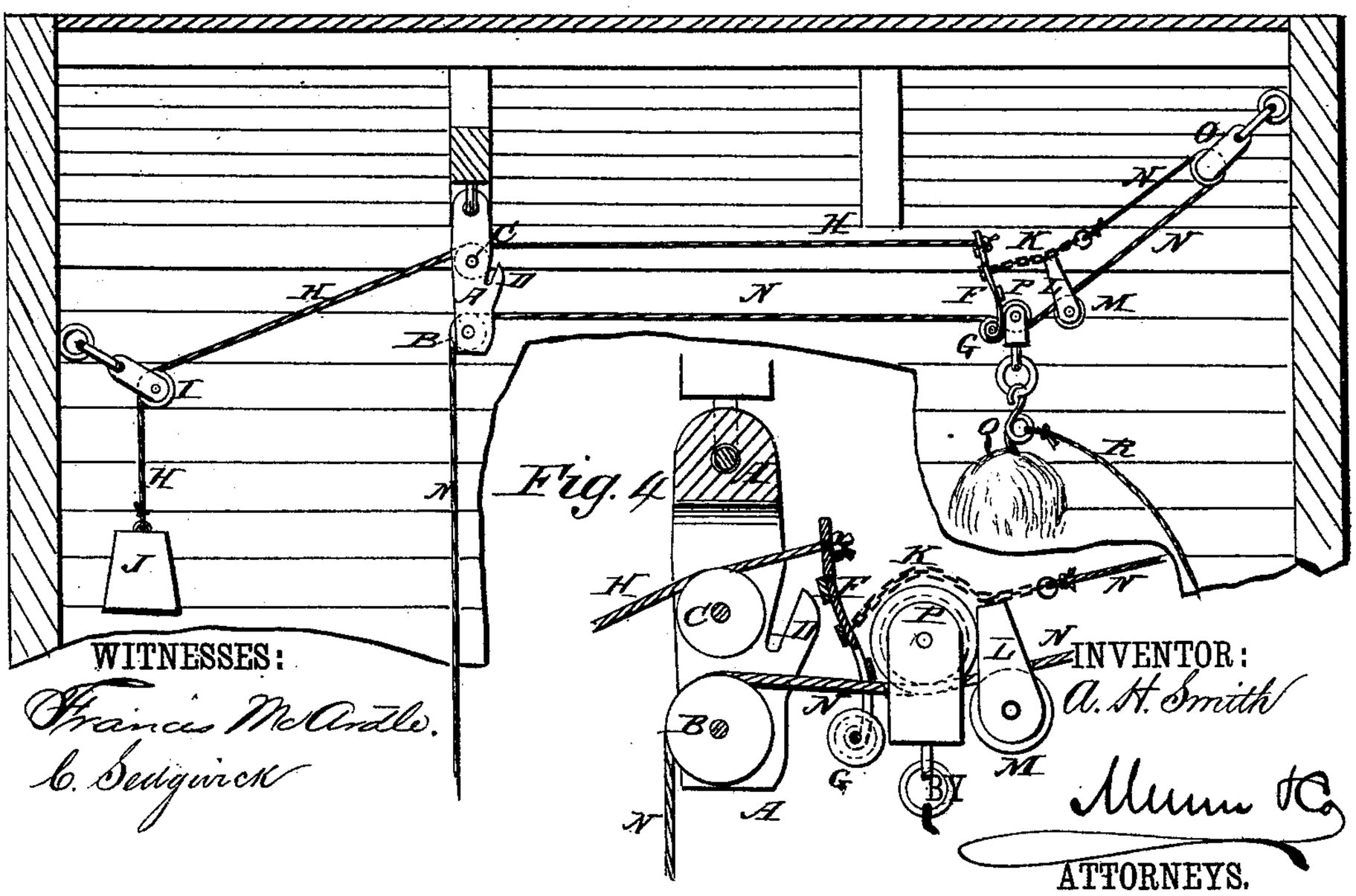

Fig. 4

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UNITED STATES PATENT OFFICE.

ABRAM H. SMITH, OF WAUSEON, OHIO.

HAY-ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 234,083, dated November 2, 1880.

Application filed April 2, 1880. (Model.)

To all whom it may concern:

Be it known that I, ABRAM HOLMES SMITH, of Wauseon, in the county of Fulton and State of Ohio, have invented a new and useful Improvement in Hay-Elevators, of which the following is a specification.

Figure 1 is a side elevation of the improvement shown in position for raising the loaded fork. Fig. 2 is a side elevation of the same shown in position for carrying the loaded fork over the mow. Fig. 3 is a sectional elevation of the arrangement shown in Fig. 1 enlarged. Fig. 4 is a sectional elevation of the arrangement shown in Fig. 2 enlarged. Fig. 5 represents the catch-plate.

The object of this invention is to furnish hay-elevators so constructed that they may be easily operated, and will not allow the loaded fork to settle down or sag while being carried from the barn-floor to the mow.

The invention consists in constructing a hay-elevator of the slotted block having pulleys and slotted lugs, the catch-plate having arms to engage with the said slotted lugs, and a pulley, the weight-rope, the chain, the hoisting-rope, the block and pulley, and the pulley carrying the fork, whereby the elevator will be locked and unlocked automatically and the loaded fork will be prevented from sagging while being transported, as will be hereinafter fully described.

Similar letters of reference indicate corresponding parts.

A represents a block, which is suspended from the frame of the barn, and is slotted from its lower end nearly to its upper end, and within which are pivoted two pulleys, B C.

In the forward edges of the parts of the pulley-block A are formed lugs D, which are notched or slotted to receive the arms E, formed upon the opposite edges of the upper end of the catch bar or plate F. The lower end of the catch-plate F is slotted, and to the said lower end is pivoted a pulley, G. To the upper end of the catch-plate F is attached the end of the rope H, which passes over the upper pulley, C, of the block A, over a guide-pulley, I, pivoted to the frame of the barn, and to its other end is attached a weight, J, of sufficient gravity to draw back the fork after the load has been discharged and the hoisting-rope slackened. To the other side of the catch-plate F, a little below its upper end, is attached the end of a short chain, K, to which is attached a block, L, having a pulley, M, pivoted to its slotted lower end. To the other end of the chain K is attached the end of a rope, N, which passes over a pulley, O, attached to the frame of the barn at the farther side of the mow, passes back over the pulley M of the block L, over the pulley G of the catch-plate F, over the lower pulley, B, of the block A, and around one or more guide-pulleys to bring it into proper position for the attachment of the horse or other power.

Upon the hoisting-rope N, between the pulley G of the catch-plate F and the pulley M of the block L, is placed a pulley, P, with which the fork Q is connected. R is the cord by means of which the fork Q is tripped to discharge its load.

With this construction, when the fork Q is loaded the hoisting-rope N is drawn upon, which raises the loaded fork Q. As the hoisting-rope N becomes straight between the pulleys B M the pulley P comes in contact with the chain K and raises arms E of the catch-plate F out of the notches of the lugs D. As the hoisting-rope N continues to be drawn upon the loaded fork Q, the catch-plate F, and the pulley and block M L move together over the mow, raising the balancing-weight J. When the desired place has been reached the cord R is drawn upon, which trips the fork Q and discharges the load. The hoisting-rope N is then slackened, and the weight J draws back the empty fork until the upper end of the catch-plate F comes in contact with the pulley-block A. The fork Q is then drawn down by means of the trip-cord R, to be again loaded. This downward strain draws the catch-plate F downward, bringing its arms E into the notches of the lugs D, locking the upper part of the rope N against any movement until the said catch-plate F is again raised by the rise of the loaded fork.

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

1. A hay-elevator constructed substantially as herein shown and described, consisting of the block A, having pulleys B C and notched

lugs D, the catch-plate F, having arms E and pulley G, the weight-rope H, the chain K, the hoisting-rope N, the block and pulley L M, and the pulley P, carrying the fork Q, as set forth.

2. The combination, with the pulley-block A, having lugs D, of the slotted catch-plate F, having arms E and pulley G, the chain K, having pulley-block L, and the rope N, passing over the pulleys O M P B, as shown and described.

3. In a hay-elevator, the catch-plate F, having arms E and pulley G, in combination with the notched lugs D of the pulley-block A, the weight-rope H, the chain K, and the hoisting-rope N, substantially as herein shown and described, whereby the elevator is locked and unlocked automatically, as set forth.

ABRAM HOLMES SMITH.

Witnesses:
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