

(No Model.)

W. RODHAM.
HAY ELEVATOR.

No. 409,303.

Patented Aug. 20, 1889.

Fig. 1.

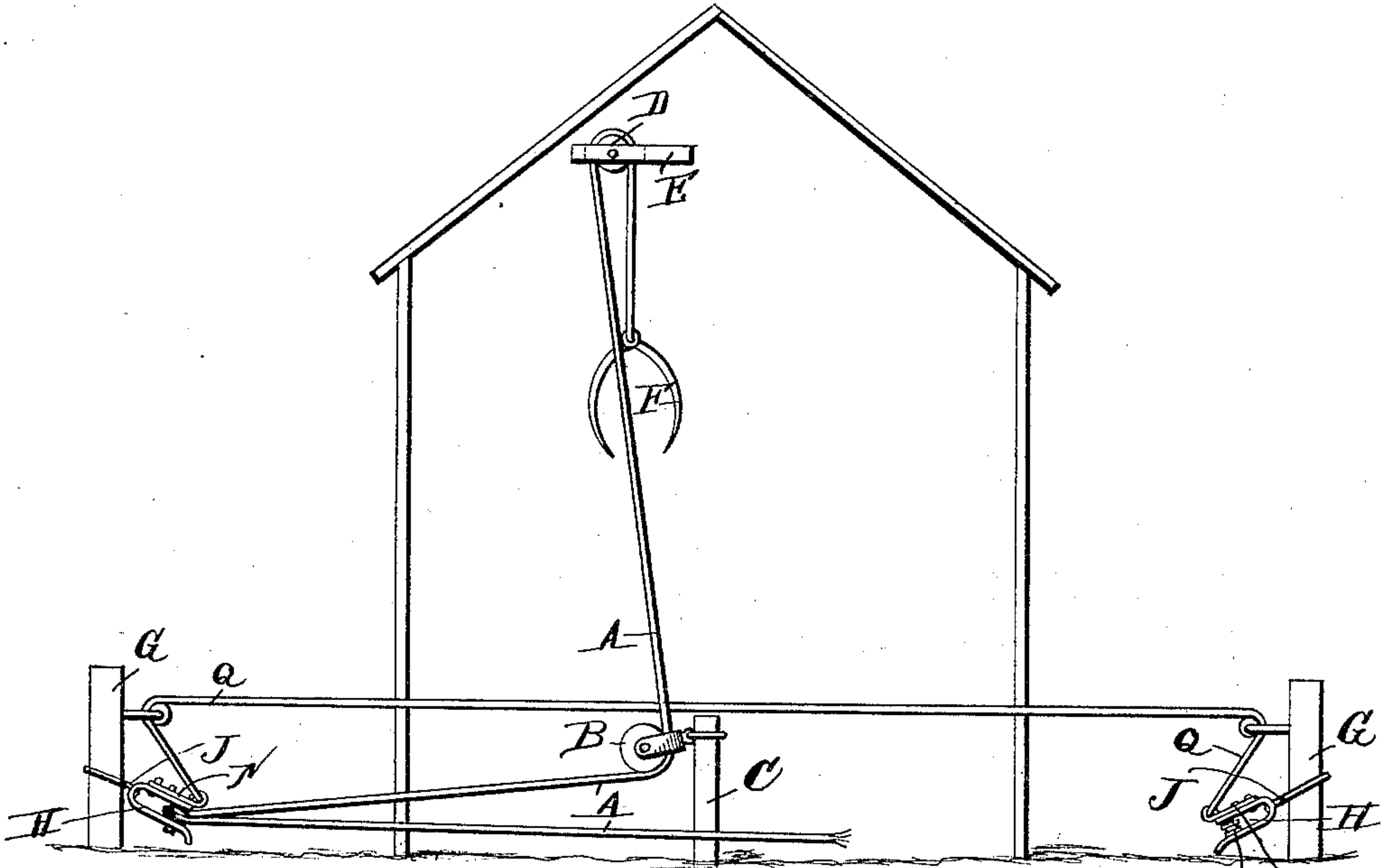


Fig. 2.

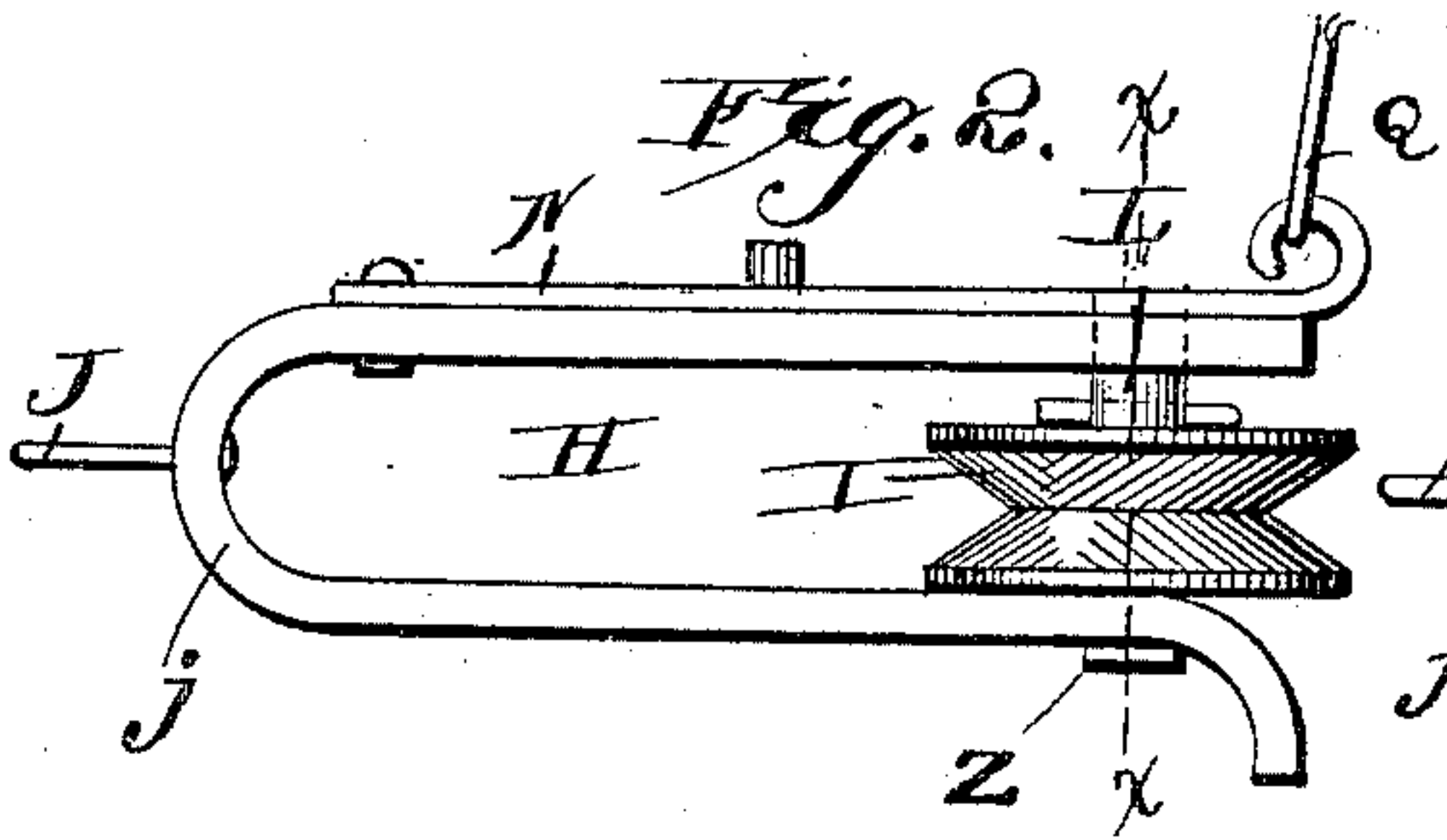


Fig. 3.

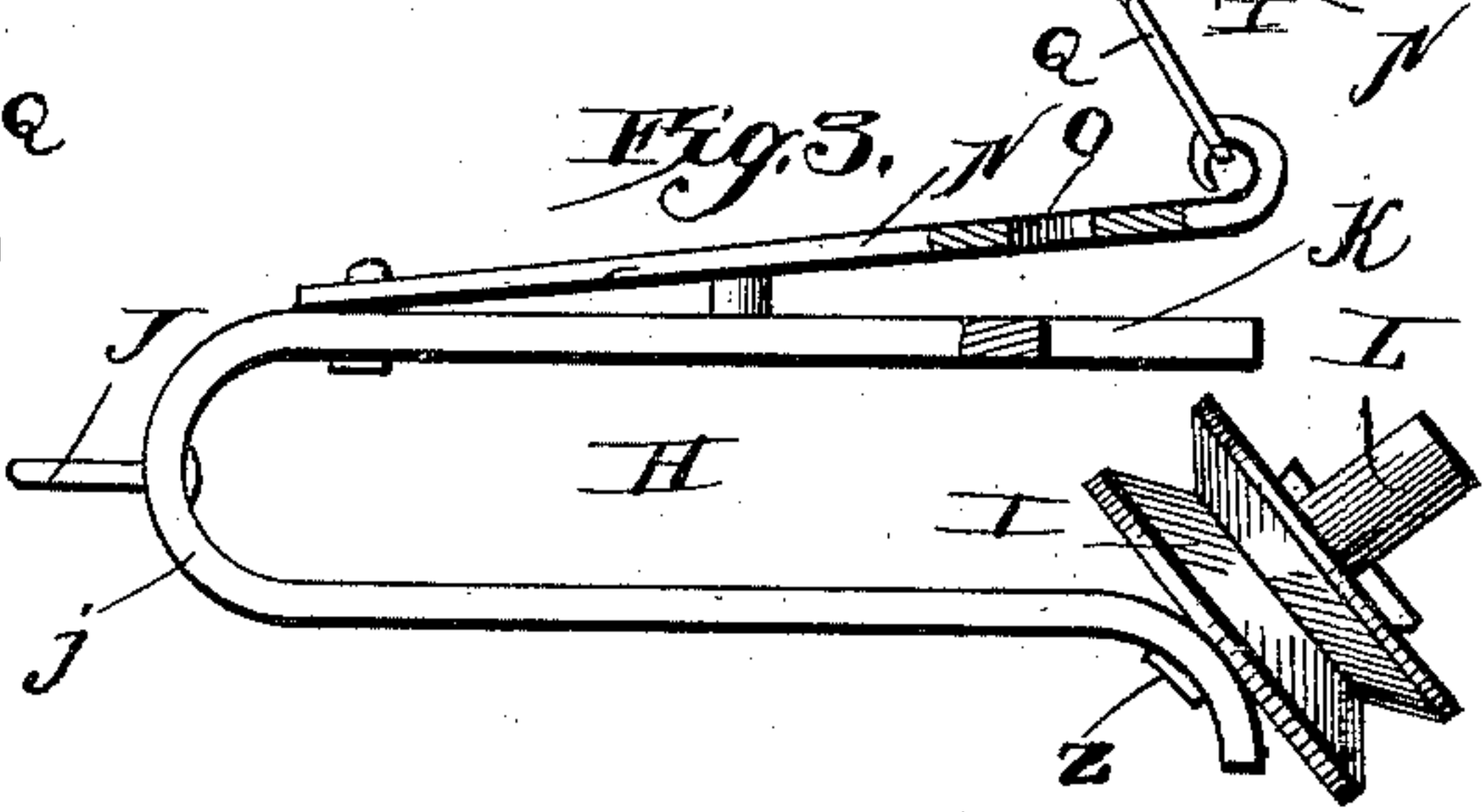


Fig. 4.

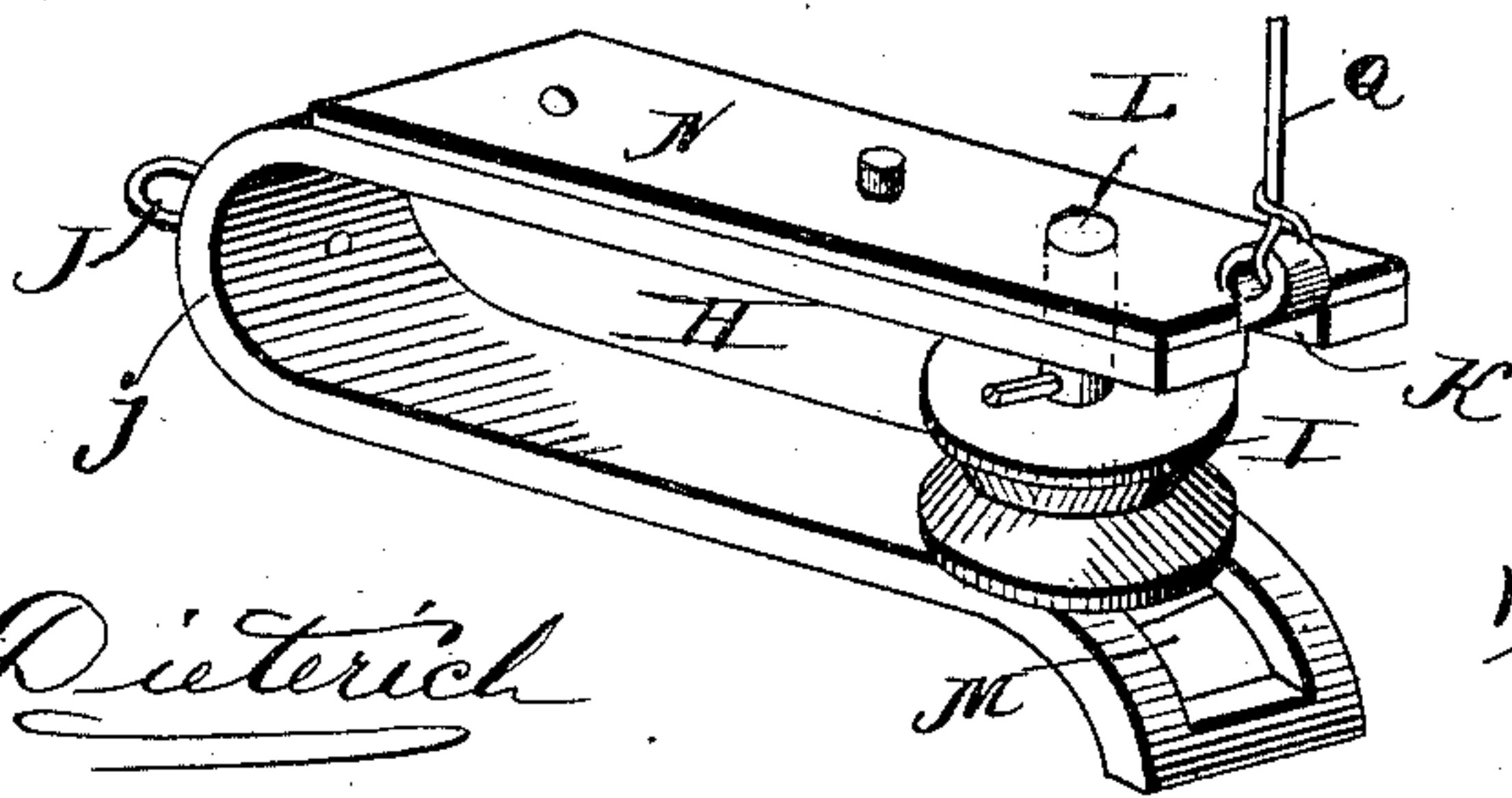
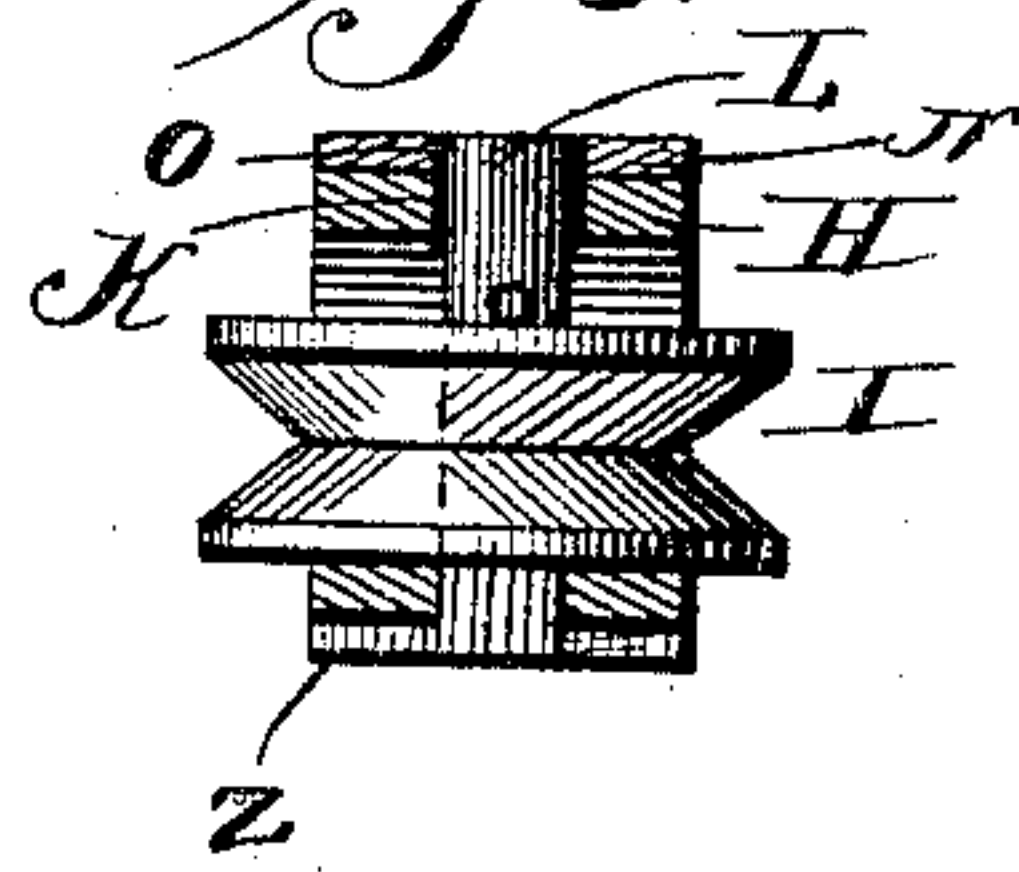


Fig. 5.



Witnesses
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WILLIAM RODHAM, OF SHULLSBURG, WISCONSIN.

HAY-ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 409,303, dated August 20, 1889.

Application filed April 20, 1889. Serial No. 307,986. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM RODHAM, a citizen of the United States, residing at Shullsburg, in the county of Lafayette and State of Wisconsin, have invented a new and useful Hay-Elevator, of which the following is a specification.

My invention relates to improvements in hay-elevators; and it consists in certain novel features hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a view showing a hay-elevator provided with my improvements. Figs. 2 and 3 are enlarged side views of the pulley and its frame, showing the operation of the same; and Fig. 4 is a detail perspective view of the pulley and its frame. Fig. 5 is a transverse sectional view on the line $x x$ of Fig. 2.

The hoisting apparatus consists, essentially, of the elevating-rope A, a pulley B, secured to a post C near the foundation or base of the barn, a pulley D, mounted in an arm E, projecting from the side of the barn, and a hay-fork F, secured to the end of the hoisting-rope, all of the usual or any preferred construction. At a suitable distance from the posts C, and on opposite sides of the same, I erect the posts G G, and one of my improved pulleys is mounted on each of these posts.

The frame or bracket H, in which the pulley block or roller I is supported, consists of a U-shaped bar provided at its closed or bent end j with an eye or ring J, through which a suitable securing-rope is passed to attach the said frame or bracket to the post G. The upper arm of this bracket is provided at its end with a longitudinal slot or notch K, which is engaged by the upper end of the shaft L of the pulley-block I. The end of the lower arm of this bracket is curved downward, as clearly shown, and is provided with a longitudinal slot M, which is engaged by the lower angular portion of the shaft L of the roller. The said lower portion of the said shaft is provided with a T-head Z, which extends transversely beneath the lower arm of the bracket, and so prevents the shaft being withdrawn therefrom through the slot M.

On the upper side of the upper arm of the bracket I secure a spring-latch N, which is provided near its free end with a perforation

O, which is adapted to engage over the end of the shaft L and thereby hold the roller within the bracket, as will be readily understood on reference to Fig. 2. A cord Q is secured to the end of this spring-latch, and extends upward therefrom to near the top of the post G, passing over a pulley at that point, and may be extended between the two posts G G, as shown in Fig. 1. The exact form of this spring-latch is not material, as it is obvious that minor changes may be readily made therein without departing from my invention.

In practice the hoisting-rope, after passing under the pulley B, is carried to one of the posts G, and is passed around the pulley mounted on said post. The load of hay is then secured on the hay-fork in the usual manner and the horse driven toward the opposite post G, thereby drawing on the hoisting-rope, so as to raise the load of hay in the usual manner. When the load of hay has been raised to the desired point and removed from the fork, the cord Q is drawn upward, so as to disengage the latch from the upper end of the shaft of the roller, when the roller will at once swing downward around the curved end of the lower arm of the bracket, out of engagement with the notch in the upper arm thereof, as shown in Fig. 3. The hay-fork then descends by reason of its own weight, the hoisting-rope is passed around the pulley on the post G, which was formerly idle, and the horse then driven in the direction contrary to that in which he has just been driven. This operation is repeated until all of the hay has been raised and stored in the barn, as will be readily understood.

It will be readily seen from the foregoing description, taken in connection with the accompanying drawings, that I have provided an extremely simple device, by the use of which the travel of the horse will be materially decreased, as when my pulley is used the horse raises a load of hay when moving in each direction, instead of being forced to travel back to the starting-point after raising each load, as heretofore. The bracket supporting the roller or pulley-block will hang slightly downward, so that when the latch is lifted the roller will positively fall, so as to release the hoisting-rope. The roller will be

prevented from being lost by the T-head on the lower end of its shaft, and when the roller is raised and pushed up between the ends of the arms of the bracket the upper end of its shaft will be automatically and positively engaged by the latch, so that it will be securely held.

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

1. The combination of the frame having its lower arm provided with a downwardly-curved end and having a notch in the end of its upper arm, the roller having the lower end of its shaft mounted in the curved end of the lower arm of the frame and adapted to play longitudinally therein, and having the upper end of its shaft adapted to engage the notch in the upper arm of the frame, and the latch mounted on the upper arm of the frame and adapted to engage the end of the roller-shaft, as set forth.

2. The combination of the frame having its lower arm provided with a longitudinally-slotted downwardly-curved end, and having its upper arm provided with a notched end, the roller having the lower end of its shaft

provided with a T-head engaging the slotted curved end of the lower arm of the frame, and having the upper end of its shaft engaging the notched end of the upper arm of the frame, and a latch mounted on the upper arm of the frame and engaging the upper end of the roller-shaft, as set forth.

3. The combination of the frame, the roller having its shaft mounted in the lower arm of the frame and adapted to engage the upper arm of the same, a latch mounted on the frame and adapted to engage the shaft of the roller to hold it within the frame, and a cord secured to the latch to release the roller, as set forth.

4. The combination of the frame, the roller-shaft having its lower end loosely mounted in the frame, and a latch mounted on the frame and adapted to engage the upper end of the roller-shaft, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

WILLIAM RODHAM.

Witnesses:

S. FIELD,
F. LAW.