George M. Robinson,

Apparatus for Operating Horse Hay Fork.

Fig. 1

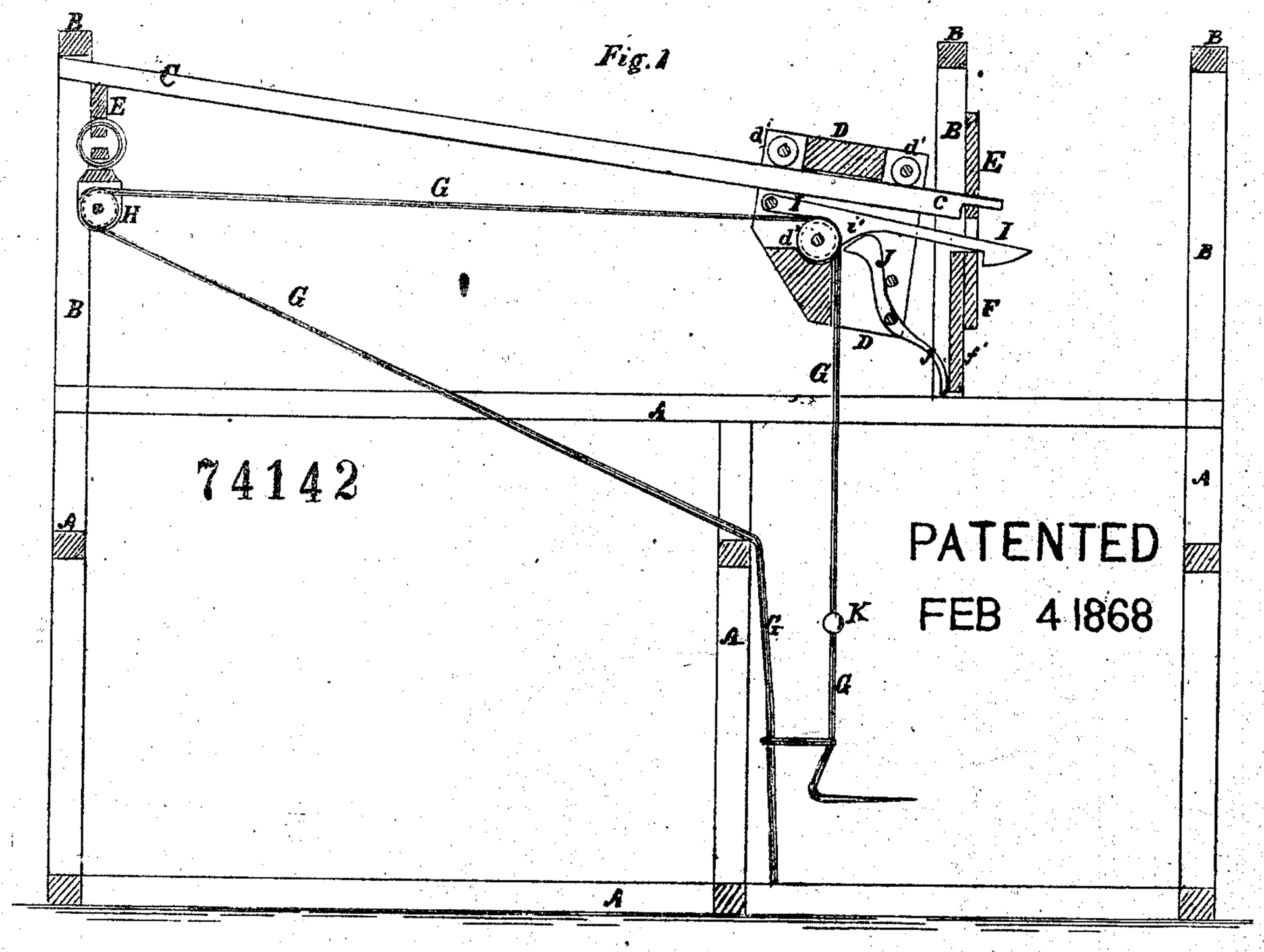
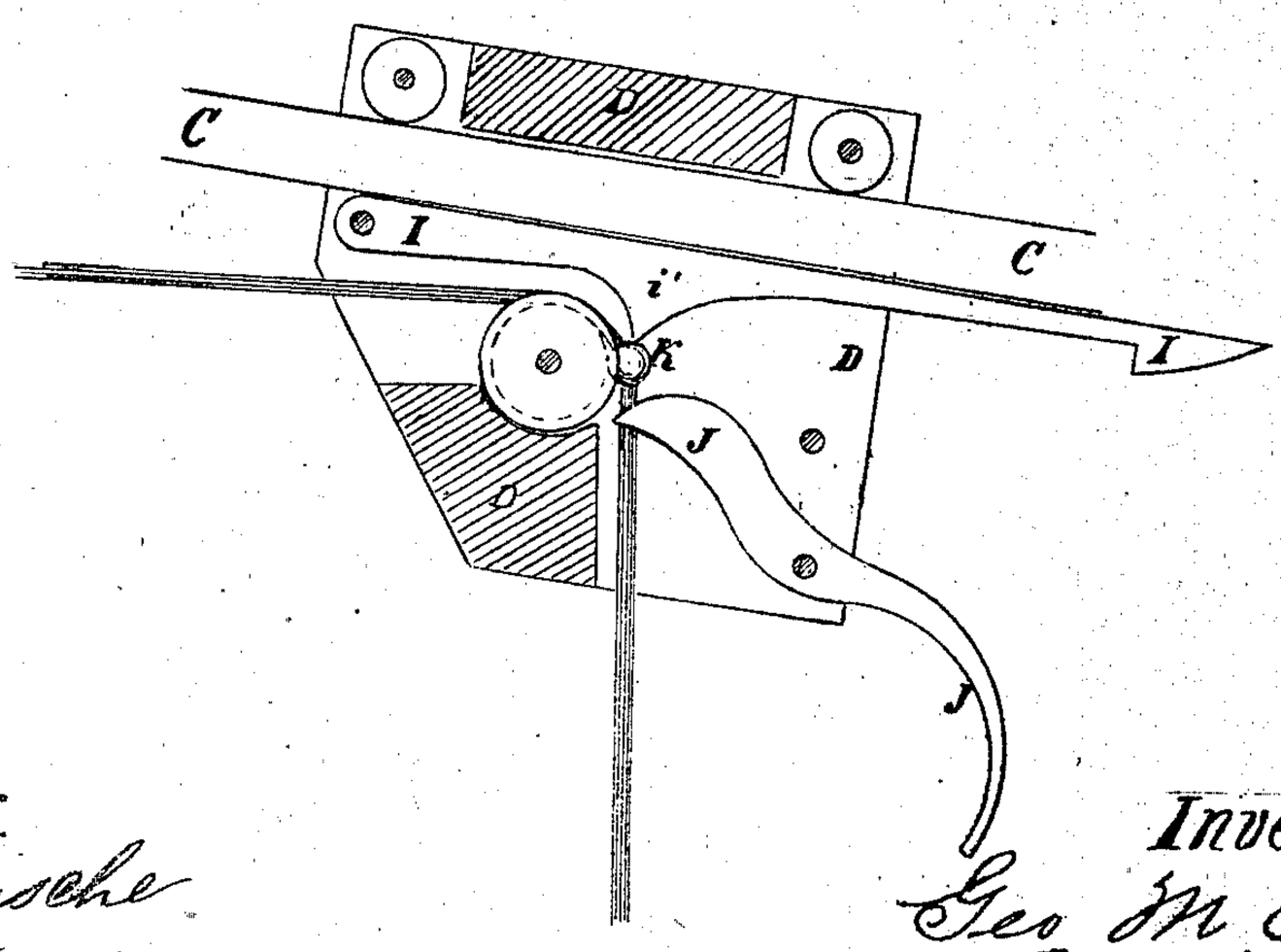


Fig. 2



Witnesses
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GEORGE M. ROBINSON, OF NEW WILMINGTON, PENNSYLVANIA.

Letters Patent No. 74,142, *dated February* 4, 1868.

IMPROVEMENT IN APPARATUS FOR OPERATING HORSE HAY-FORKS.

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 M. ROBINSON, of New Wilmington, in the county of Lawrence, and State of Pennsylvania, have invented a new and useful Improvement in Apparatus for Operating Horse Hay-Forks; 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 drawings, forming part of this specification, in which—

Figure 1 is a vertical section of the frame of a barn, illustrating the use of my improved device.

Figure 2 is a detail view, showing the catches in position for supporting the fork.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved device for supporting and holding the fork, while carrying a fork-load of hay to the mow, and while returning empty for another load; and it consists in the combination of the catches and ball with the pulley-block or carriage and hoisting-rope, and in the inclined bar or beam upon which the carriage moves back and forth, the whole being constructed and arranged as hereinafter more fully described.

A is the frame of a barn, and B are the rafters, about the construction of which there is nothing new. C is an inclined bar or beam for the pulley-block or carriage D to move back and forth upon. The upper end of the bar C is supported by a cross-bar, E, attached to the rafters B, or other supports, just below the ridge of the roof. The other or lower end of the inclined beam is supported by a cross-bar or board, F, attached to the pair of rafters B, which are in such a position above the floor that when the carriage or pulley-block D reaches the lower part of the inclined beam C, and the fork descends, it will come down upon the load of hay standing upon said floor to be unloaded. The beam C must be placed at such an inclination that the weight of the carriage itself, and of the empty fork, will bring the carriage back to the lower part of said beam as soon as the hoisting-rope G is slackened. The carriage D moves back and forth upon the friction-wheels or rollers d^1, pivoted in its upper part, as shown in figs. 1 and 2. G is the hoisting-rope, to one end of which the fork is attached, and to its other end is attached the horse. The rope G passes from the fork over the pulley d^2, pivoted in the middle part of the carriage D, and over the guide-pulley H, attached to some suitable support, directly beneath the upper end of the beam C, as shown in fig. 1. Thence the rope G passes around guide-pulleys to the point at which the horse is attached. I is a lever-catch, the end of which is pivoted to the forward part of the carriage D, just below the beam C. The projecting end of the catch I is inclined, and has a catch or shoulder formed upon it, so that, as the carriage D runs down the inclined beam C, it may catch upon the board or bar F, or upon a catch attached to said bar, and hold the carriage stationary until disengaged in the manner hereinafter described. Upon the middle part of the lower side of the catch I is formed a projection, i', which fits over the pulley d^2, as shown in figs. 1 and 2, for the purpose hereinafter stated. J is a lever-catch, which is pivoted in the lower part of the rear end of the carriage D, as shown in figs. 1 and 2. The upper end of the catch J is made heavy, and its forward end or edge is notched to fit around the hoisting-rope G. The rear or outer end of the catch J is bent or inclined downward, so that, as the carriage D runs down the inclined beam G, it may strike against the stop f', formed upon or attached to the board or bar F, and lift the forward end of said catch away from the hoisting-rope G. K is a ball securely attached to the hoisting-rope G, a little above the end to which the fork is attached, and which is of such a size that it can enter the carriage or pulley-block D.

In using the apparatus, the fork is loaded, and the horse started. As the ball K enters the carriage D, it lifts and passes the forward end of the catch J, which immediately drops forward beneath it, preventing its return. The ball K next lifts the catch I, disengaging the carriage, by striking against the projection i' of said catch, against which it rests while the carriage and loaded fork are being drawn up the inclined beam C. The fork is unloaded in the ordinary manner, and, as the hoisting-rope G is slackened, the carriage D runs down the inclined beam C, the empty fork being supported by the ball K resting against the upper side of the forward end of the catch J. As the carriage D reaches the lower part of the inclined beam C, the catch I catches upon the bar or board F, and holds the carriage stationary. At the same time the lower end of the catch J strikes

against the stop f', which lifts its forward end away from beneath the ball K, allowing the fork to drop down upon the load of hay, to be again loaded.

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

1. The carriage D, upon the inclined bar C, having the pivoted catch I, upon the lower side of which the projection i is formed, and also provided with the cam-lever J, in combination with the bars E F f', pulley d^2, and ball K, as herein described, for the purpose specified.

2. The combination of the ball K and hoisting-rope G with the catch I, having projections i, the cam-lever J, pulley d^2, and carriage D, as herein shown and described.

3. The carriage D, operated by the single hoisting and fork-rope, when the loaded fork reaches its highest elevation in relation to the carriage, before the latter is permitted to move upon the inclined bar, and when the act of raising the loaded fork disengages the catches of the carriage from their fastenings, as herein shown and described.

GEORGE M. ROBINSON.

Witnesses:

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