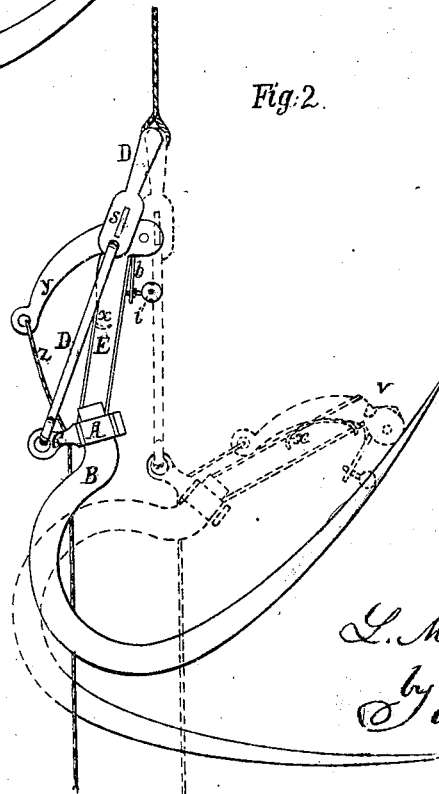
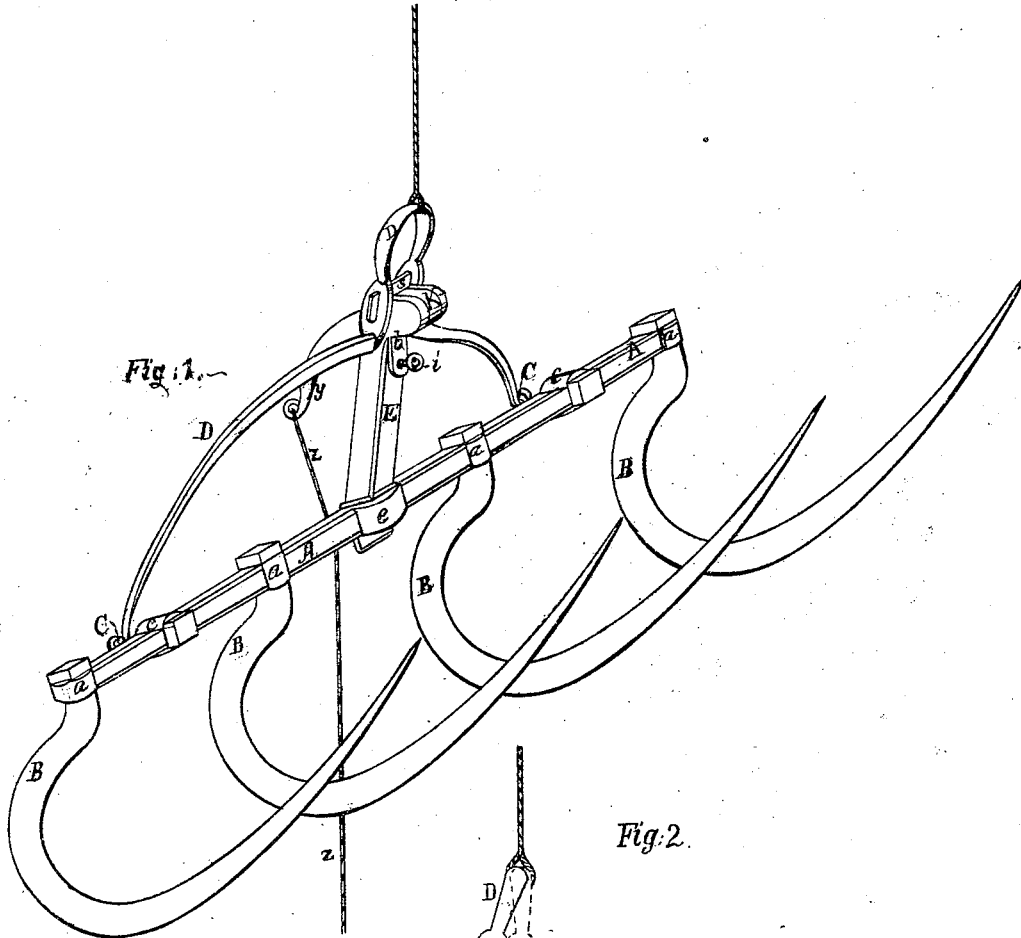


*L. M. Roby,*  
*Hay Fork.*

*No. 53878.*

*Patented April 10, 1896.*



*Witnesses*  
*James C. Cushman*  
*W. C. Clayton*

*L. M. Roby,*  
*by Atty*  
*J. C. Clayton*

# UNITED STATES PATENT OFFICE.

L. M. ROBY, OF LEESVILLE, OHIO.

## IMPROVEMENT IN HORSE HAY-FORKS.

Specification forming part of Letters Patent No. 53,878, dated April 10, 1866.

*To all whom it may concern:*

Be it known that I, L. M. ROBY, of Leesville, Carroll county, in the State of Ohio, have invented certain new and useful Improvements in Elevating Hay-Forks; and I do hereby declare that the following is a full and exact description thereof, reference being had to the annexed drawings, forming a part of this specification.

In the drawings, Figure 1 is a perspective view of the hay-fork as it appears in the act of being elevated. Fig. 2 is a side view of the same, the red lines indicating the position of discharging the load.

My invention relates to that class of hay-forks intended to be used for elevating hay by horse-power, the fork being attached to a cord passing over a suitable block-pulley and drawn by a horse.

The drawings so fully set forth its construction and operation as to render unnecessary any long description.

A is the head of the fork. This head is formed out of one-inch square bar-iron, which is swelled out by forging at *a*, so as to be strong enough to allow a square mortise through it for each of the tines B B B B. It is also swelled out in the same manner at *c*, so as to allow other like mortises for the reception of the bail-posts C. The mortises for the bail-posts are, however, at right angles to the mortises for the tines. The butts of both the bail-posts and the tines are square to fit in their mortises, where they are secured by nuts.

B B B B are the tines, which should be of steel and of the form shown in the drawings.

C C are the bail-posts, and are two short iron studs, each with an eye on its outer end and at its inner end mortised to the rear of the head A. The bail-posts are about one-sixth the length of the head.

The bail D, by which the fork is lifted, is hooked into the eyes of the bail-posts. This bail is a piece of iron wire provided with hooks at each end, and may be described as having a semicircular form with an inverted-U loop in the center. At the bottom of this loop is inserted a flat piece of steel, *s*, to take into the notch *v* of the catch K.

E is the trigger-post, which is mortised at *e* to the center of the head A, which is swelled

out for that purpose. The length of this post is about one-fourth or one-third of the length of the head A, and it is set at an angle of about sixty degrees with the top of the head, so that when the fork is lifting the post E will be nearly vertical, forming a small angle (of about ten degrees) with the bail, and when the fork has discharged the post E will be at an angle of about sixty degrees with the bail, which will then be vertical.

K is the catch or trigger, which is pivoted in a cleft at the top of the trigger-post E. This trigger is provided with a notch, *v*, in which the tooth *s* takes, so as to hold the tines in their lifting position. It is also provided with a small arm, *b*, extending down the front side of the post E. Through this arm *b* passes a small set-screw, *i*, which presses against the post E to throw the arm away from this post, so as to regulate the degree of hold of the trigger upon the tooth *s*, thereby regulating the degree of tension necessary to disengage the trigger from the bail.

*x* is a spring which makes the trigger catch. *y* is the lever of the trigger, to which the cord *z* is attached. A pull of the cord disengages the trigger from the bail, and at once the tines fall downward and forward, as shown in red lines, Fig. 2, and discharge the hay at the desired point. Since the trigger-post is so long, it happens that when the disengagement takes place the ends of the tines will fall down with sufficient momentum to drop below a horizontal line, and will, therefore, wholly and rapidly discharge the hay. After the load is discharged the fork is lowered in the discharged position to the hay, into which it is forced until it is full, the cord is slackened a little, when the weight of the fork makes it roll backward and set the trigger. The fork is then ready to be lifted.

By my invention I have made a hay-fork cheaper, stronger, lighter, and more easily operated than any known to me.

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

1. The combination and arrangement of head-bar A, constructed as described, with the tines B, secured as specified, and with bail-posts C, bail D, trigger-post E, and adjustable

trigger K, substantially as and for the purposes set forth.

2. The trigger K, constructed as described, in combination with arm *b*, screw *i*, spring *x*, and tooth *s*, substantially as and for the purposes set forth.

In testimony that I claim the above I here-

unto set my hand this 31st day of October, 1865.

L. M. ROBY.

In presence of—

WILLIAM CHAPMAN,  
P. C. PRICE.