

H. MYERS.
Horse Hay-Rakes.

No. 155,102.

Patented Sept. 15, 1874.

Fig 1

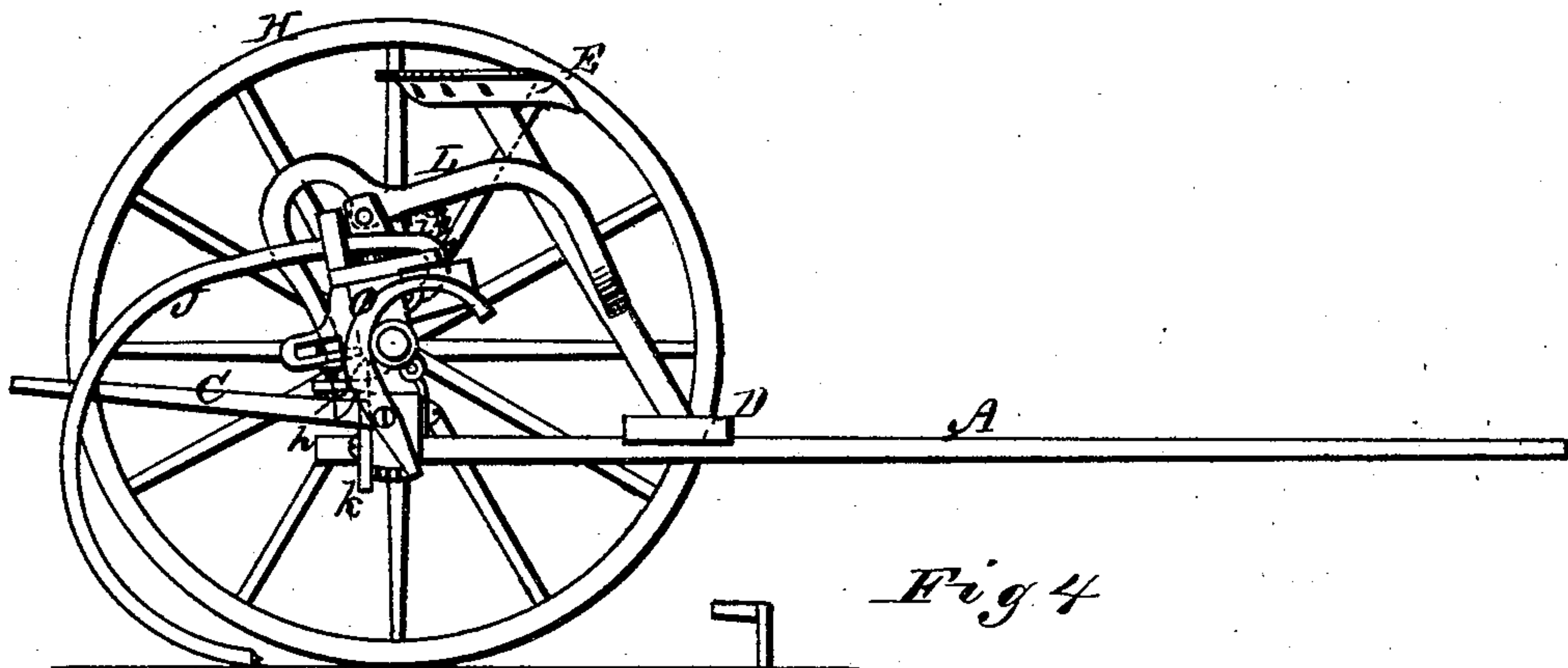


Fig 4

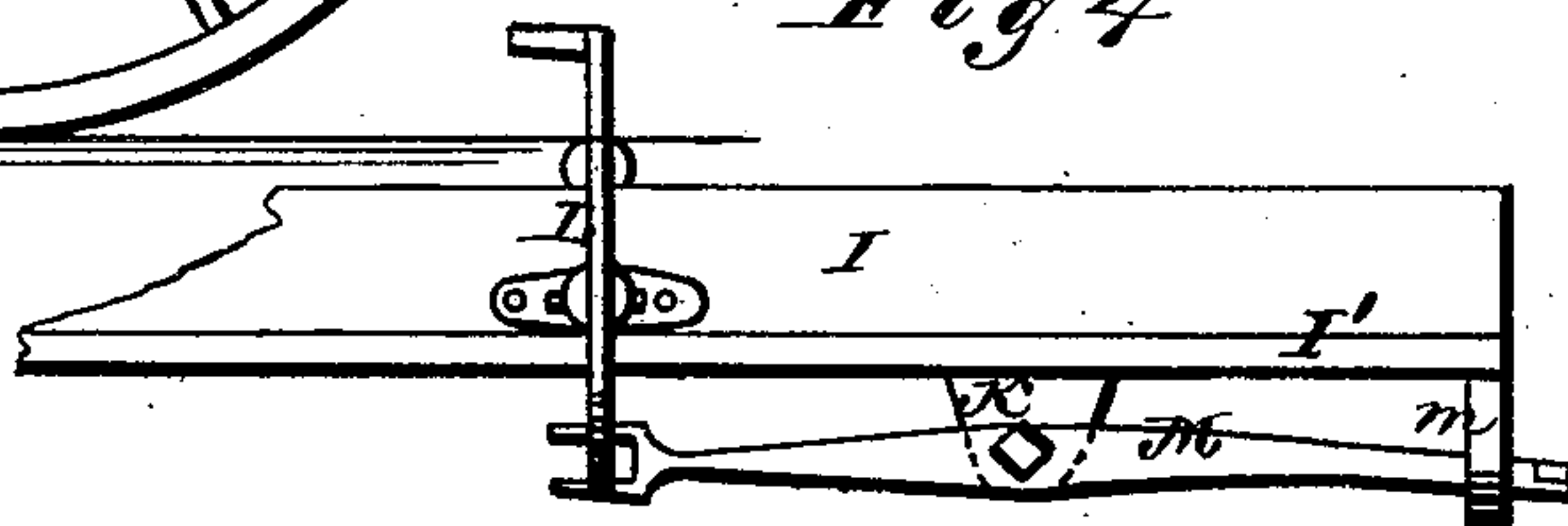


Fig 3

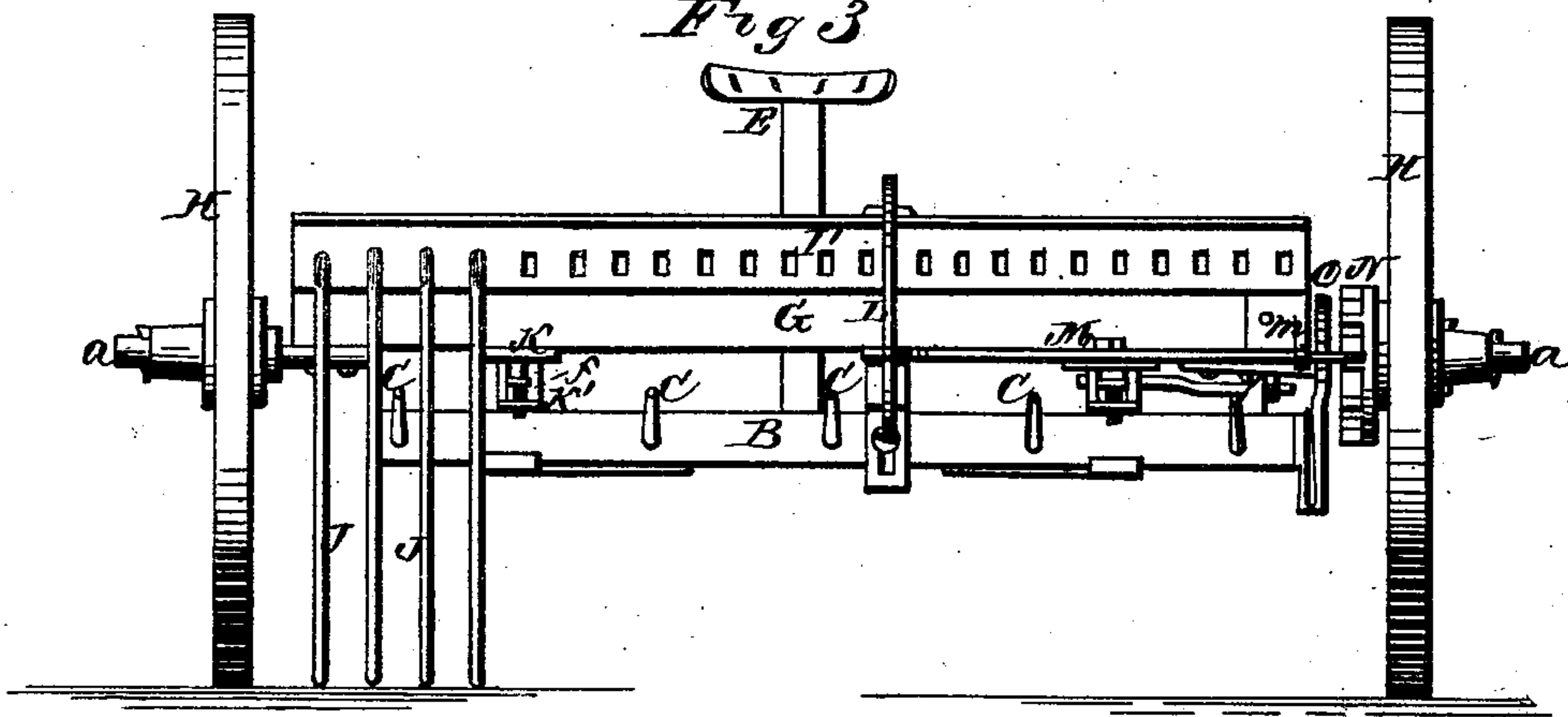
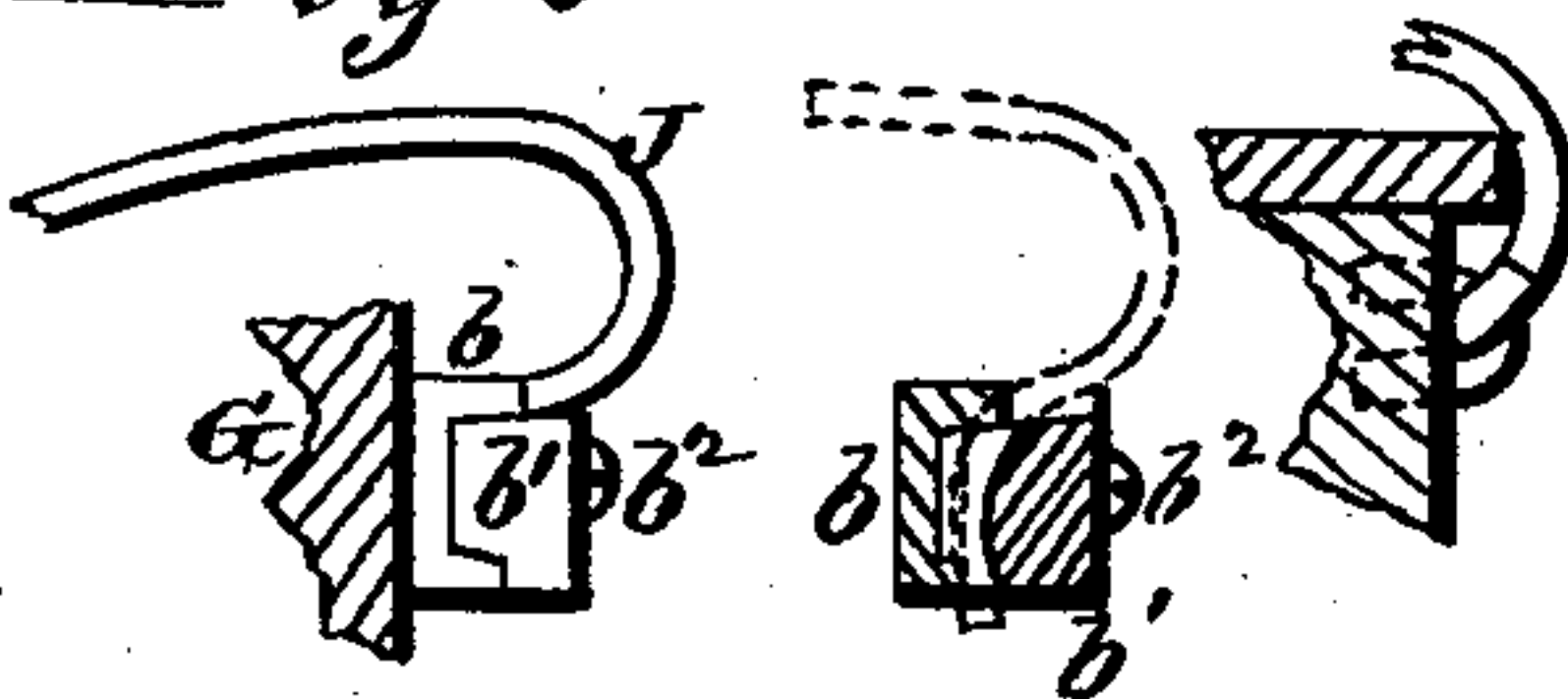


Fig 6



Fz" 5

WITNESSES

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INVENTOR

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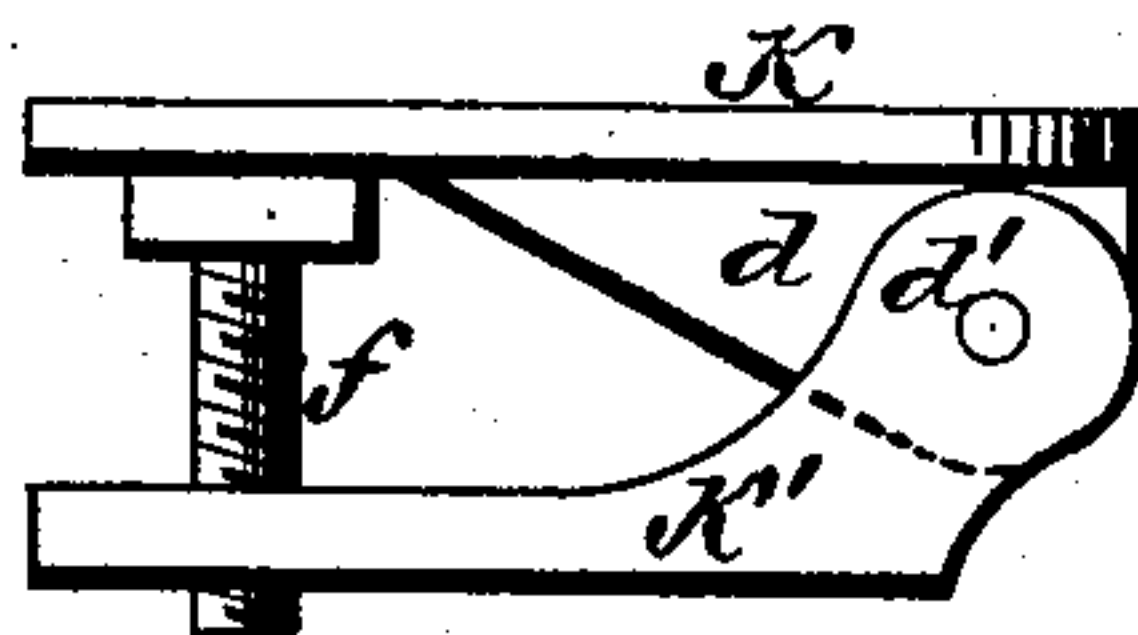
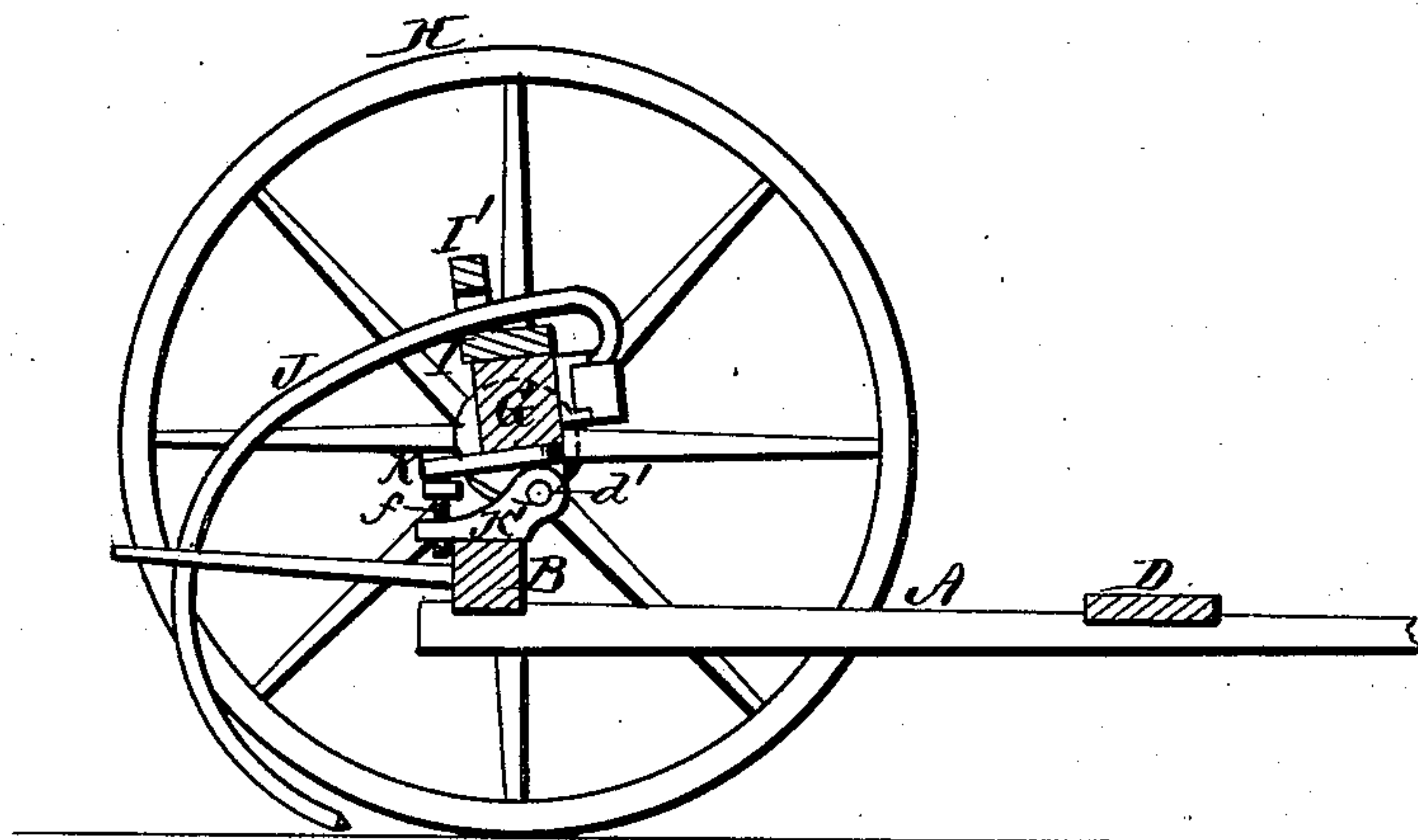
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Fig 2



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UNITED STATES PATENT OFFICE.

HIRAM MYERS, OF SPRINGFIELD, OHIO.

IMPROVEMENT IN HORSE HAY-RAKES.

Specification forming part of Letters Patent No. **155,102**, dated September 15, 1874; application filed August 18, 1874.

To all whom it may concern:

Be it known that I, HIRAM MYERS, of Springfield, in the county of Clarke and in the State of Ohio, have invented certain new and useful Improvements in Horse Hay-Rake; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a horse hay-rake, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a side elevation of my hay-rake with one wheel removed. Fig. 2 is a transverse section, and Fig. 3 a rear view, of the same. Figs. 4, 5, and 6 are detached views of parts thereof.

A A represent the shafts of my hay-rake. Upon the rear ends of the shafts A A is secured a cross-bar, B, from which the ordinary cleaners C C extend toward the rear. At a suitable point in front of said cross-bar on the shafts is secured a cross-bar or platform, D, from which the driver's seat E is supported. G represents the axle having a spindle, *a*, secured at each end on its under side for the reception of the driving-wheels H H. The rake-head is secured on the upper side of the axle G, said head consisting of two pieces, I and I'. The board I is laid flat on the axle and secured thereto, and the board I' is secured at right angles thereto along the rear edge. Through vertical slots in the board I' pass the rake-teeth J J, the front ends of which are fastened in clamps consisting of two parts, *b* and *b*¹, as shown in Fig. 6. The part *b* is provided with a flange along its upper and lower edge, and the part *b*¹ fits in between said flanges. The end of the tooth J passes through a curved groove in the part *b*¹ and through notches in the flanges of the part *b*, the two parts being then fastened together and to the front of the axle G by a screw, which firmly clamps the tooth. In Fig. 5 I have shown the end of the

tooth passed simply through an eye on the front of the axle. On the under side of the axle G, at suitable points, are secured two plates, K K, which extend a suitable distance in rear of the axle. Each plate K is provided on its under side with a rib or ear, *d*, which is pivoted between two corresponding ears, *d'* *d'*, on a plate, K', secured on the top of the cross-bar B, thus hinging said cross bar and shafts to the axle. The lower plate K' also extends in rear, and through its projecting end is passed a set-screw, *f*, upon which the end of the plate K will rest, thus holding the teeth at a certain distance from the ground. By raising or lowering the set-screw *f* the teeth may be adjusted up or down, as desired. In a post on the rake-head is pivoted a lever, L, the front end of which is bent forward and downward, forming a foot-lever to be pressed upon by the driver from the seat E. The rear end of the lever L extends downward and forms a hook, *h*, to catch on a catch, *k*, secured on the rear side of the cross-bar B, thus locking the rake in position for use, the front end of the lever being pressed upward by means of a spring, *i*. The catch *k* is adjustable up and down, so that it may be moved to correspond with the setting of the rake by means of the set-screws *f*, as described above. On the top of the projecting end of one of the hinge-plates K is pivoted a lever, M, the inner end of which is forked, and straddles the lower rear end of the foot-lever L. The outer end of the lever M passes through a guide-arm, *m*, secured at the end to the rear side of the axle, and the extreme end of the lever projects over a cog-wheel, N, attached to the inner end of the hub of the driving-wheel H on that side.

When the front end of the foot-lever L is pressed down, the hook *h* is released from the catch *k*, and at the same time the outer end of the lever M is thrown into the cog-wheel N, so that as the rake advances the axle with the rake attached thereto will be rotated and drop the hay or grain collected by the rake-teeth. As the axle turns on its hinges a cam-arm, O, fastened to the end of the cross-bar B throws the end of the lever M up away from the cog-wheel, so that the rake will fall down of its own weight and be locked by the hook *h* and catch *k*.

The cam-arm O is adjustable, whereby the throwing out of the lever M from the cog-wheel N is easily regulated.

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

1. The combination of the rake-tooth J, bent in S shape at its upper end, the flanged casting *b*, and the grooved casting *b*¹ fitted between the flanges of the casting *b* over the end of the rake-tooth, the two castings and the tooth being secured together and to the axle G by a single screw-bolt, *b*², substantially as set forth.

2. The hinge K K', uniting the axle and rake with the cross-bar B, and having its leaves extended toward the rear, and provided with a set-screw, *f*, for regulating the rake-teeth, substantially as herein set forth.

3. The combination, with the hinged axle G,

rake-head I I', and cross-bar B, of the foot-lever L, forming a hook, *h*, at one end, the adjustable catch *k*, and spring *i*, all substantially as and for the purposes herein set forth.

4. The combination, with the rake-head I I', of the pivoted lever L and spring *i*', forked lever M, the square cogged wheel N on the hub of the driving-wheel, and the adjustable cam-arm O on the end of the cross-bar B, all substantially as set forth.

5. The adjustable cam-arm O, in combination with the lever M, for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 23d day of July, 1874.

HIRAM MYERS.

Witnesses:

J. J. SMITH,

F. LANG.