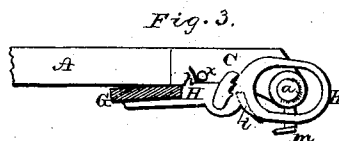
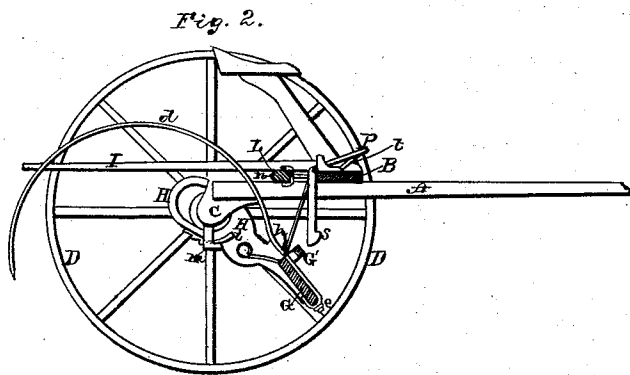
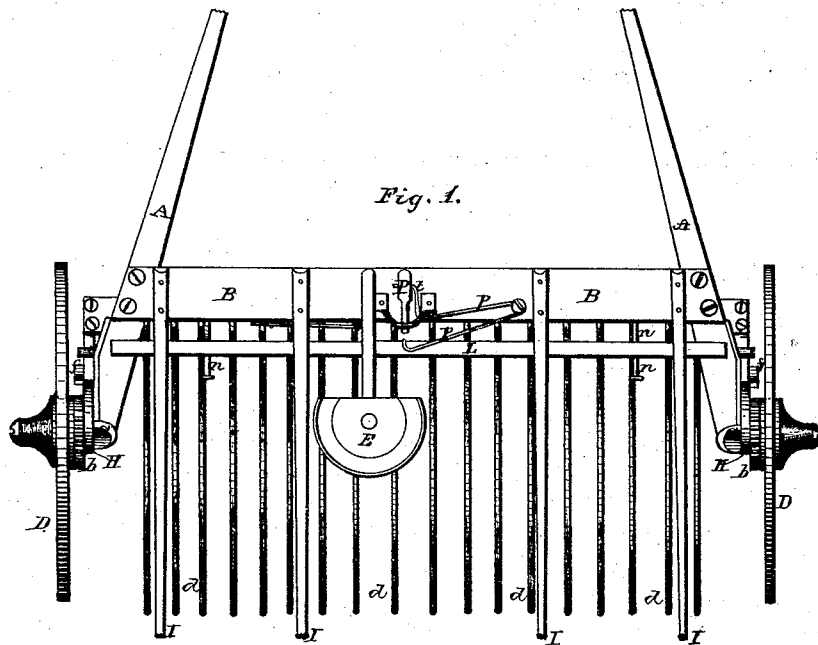


**B. D. TABOR.**  
**Horse Hay-Rakes.**

No. 157,038.

Patented Nov. 17, 1874.



**WITNESSES.**

*Frank Gandy*  
*J. W. Farmer*

**INVENTOR.**

*Sydney D. Tabor*  
*per*  
*J. A. Lehmann, Atty.*

# UNITED STATES PATENT OFFICE.

BYRON D. TABOR, OF WILSON, NEW YORK, ASSIGNOR OF ONE-HALF HIS  
RIGHT TO CLINTON D. TABOR, OF SAME PLACE.

## IMPROVEMENT IN HORSE HAY-RAKES.

Specification forming part of Letters Patent No. **157,038**, dated November 17, 1874; application filed  
August 5, 1874.

*To all whom it may concern:*

Be it known that I, BYRON D. TABOR, of Wilson, in the county of Niagara and State of New York, have invented certain new and useful Improvements in Horse-Rakes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

The nature of my invention consists in the construction and arrangement of a horse-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 drawing, which illustrates my invention.

A A represent the shafts, which are connected near their rear ends by a cross-bar, B, secured on their upper sides. Upon this cross-bar the seat E is supported, as shown. The shafts extend a suitable distance in rear of the cross-bar B, and to the rear end of each shaft is secured a casting, C, from which extends the spindle *a* for the reception of the driving and supporting wheel D, said wheel having a ratchet-wheel, *b*, secured on its inner side, and the hub of the driving-wheel projecting inward beyond the ratchet-wheel. The head of the rake is composed of two bars, G and G', the latter being secured edgewise upon the upper side along the rear edge of the former. *d d* are the teeth, constructed of wire, in the usual manner, their front ends passing through vertical slots in the lower edge of the bar G', on top of the bar G, and bent into slots or notches made in the front edge of said bar G, where they are held by means of plates *e e* fastened over them in the edge of said bar. At each end of the rake-head is secured a casting, H, which extends toward the rear, and its rear portion is slotted to pass over the inner projecting end of the hub of the driving-wheel. On the outer side of the casting H is pivoted a spring-pawl, *f*, to engage at certain times with the ratchet-wheel *b* on the

driving-wheel, as hereinafter described. The casting H is further provided on the upper side with a projection, *h*, and on the inner side with a curved projection, *i*. The axle-casting C has upon its outer side a pin, *x*, and upon its under side, near the rear end, a downward-projecting arm with lug *m*. I I are the usual cleaners, attached to and projecting from the cross-bar B. Under these cleaners, and upon the rear ends of the shafts, is a bar, L, sliding upon pins or guides *n n*, and pressed rearward by means of a spring, *p*. On top of the cross-bar B is pivoted a foot-lever, P, made in L shape, its lower end forming a hook, *s*, to catch and hold the rake-head, said lever being held in position by a spring, *t*.

The operation is as follows: When it is desired to dump the rake, press down the foot-lever P until the rake-head has passed down clear of it, when the lever is released. The teeth then draw the head backward, or, more properly speaking, the head and teeth remain stationary, while the wheel-hubs move forward in the castings H until the pawls *f* engage the ratchet-wheels *b*. The head is thereby carried down, the lugs *i* on its castings riding over the lower lugs *m* on the axle-castings C, which hold the pawls and ratchets in gear until the lugs *i* have passed the lugs *m*, when the weight of the teeth and head carries the rake down, and throws it out of gear. The lugs *i* now ride under the lugs *m*, the head goes up to place, and the projections *h* on the rake-castings H ride up in front of the pins *x* on the castings C. This throws the draft on said pins, instead of on the hubs.

The spring-bar L assists in throwing the rake-teeth downward, which is necessary, as they are partly balanced by the head.

When not in use, the rake-teeth are held up by means of a forked rod, R, hinged to the back of the cross-bar B, which rod is thrown down and made to straddle one of the teeth back of the head.

It will be noticed that the attachment of the teeth is low, and far ahead of the axles of the wheels, by which means I do away with the necessity of pressure on the top of the tooth to keep it down, giving a chance to use

a tooth that will run flat and easy along the ground, doing away with digging up the dirt. If such a tooth were dumped from the point of draft, it would lift the windrow bodily from the ground. For this reason I have arranged my rake to dump from another point, from which it dumps very easy, assisted as it is by the weight of the head in front of the center.

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

1. In a horse hay-rake, the rake head *G*, secured to slotted movable bearings, which extend back over the axles, whereby the rake is made to draw and dump from different points, substantially as specified.

2. The combination of the rake-head *G* *G'*

with slotted castings *H* and the driving-wheels *D*, with elongated hubs passing through the slots in said castings, as herein set forth.

3. The lugs *i* on the rake-castings *H*, in combination with the lugs *m* on the axle-castings *C*, for holding the pawls and ratchets in gear, as herein set forth.

4. The projections *h* on the rake-castings *H*, in combination with the pins *x* on the axle-castings *C*, for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 29th day of July, 1874.

BYRON D. TABOR.

Witnesses:

H. M. DAVIS,

FRANK HAMLIN.