

W. ADRIANCE.  
Horse Hay-Rakes.

No. 199,486.

Patented Jan. 22, 1878.

Fig. 1.

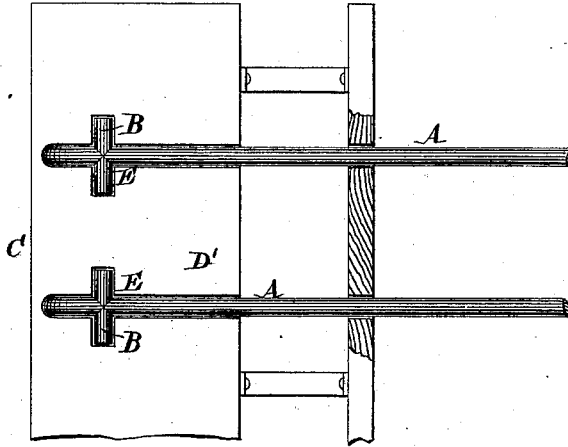
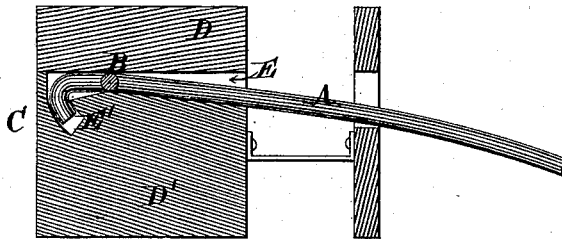


Fig. 2.



Witnesses.  
Otto Aufeland  
Chas. Wahlers.

Inventor.  
Walter Adriance.  
by  
Van Santvoord & Hauff  
his attorneys.

# UNITED STATES PATENT OFFICE.

WALTER ADRIANCE, OF POUGHKEEPSIE, NEW YORK.

## IMPROVEMENT IN HORSE HAY-RAKES.

Specification forming part of Letters Patent No. **199,486**, dated January 22, 1878; application filed July 14, 1877.

*To all whom it may concern:*

Be it known that I, WALTER ADRIANCE, of Poughkeepsie, in the county of Dutchess and State of New York, have invented a new and useful Improvement in Horse Hay-Rakes, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a plan or top view of my improvement applied to a rake, when the upper section of the rake-head is removed. Fig. 2 is a vertical cross-section thereof.

Similar letters indicate corresponding parts.

My improvement relates to certain novel means for connecting the teeth to rake-heads, and is especially applicable to horse hay-rakes.

It consists in the combination of a rake-tooth having a cross-piece near its inner end with a rake-head divided into an upper and lower section, the lower section being provided with a cross-shaped recess for the reception of said rake-tooth, so that when the tooth is put in place it is effectually held against a lateral and longitudinal movement, while it is susceptible of a vibratory motion, and hence is adapted to clear any obstructions that may be presented thereto in the passage of the rake over the ground; also, in the combination of a rake-tooth which is bent at its inner end, and provided with a cross-piece near such end, with a rake-head divided into an upper and lower section, and the lower section of which has a cross-shaped recess, which is bent at its inner end correspondingly to said end of the rake-tooth, so that the tooth is adapted to resist a great longitudinal strain, as hereinafter more fully described.

In the drawing, the letter A designates a rake-tooth, which is provided with a cross-piece, B, near its inner end; and C is a rake-head, constructed of an upper section, D, and a lower section, D', which are fastened together in any desirable way. In the lower section, D', is formed a recess, E, which extends from the rear edge of the rake-head inward, and is cross-shaped, as seen in Fig. 1, so that it is adapted to receive the tooth A and its cross-piece B within it, the recess being, moreover, made of a corresponding size to said tooth. Said recess E is formed in the upper surface of the lower section, D', and when the tooth A is placed therein the upper section, D, should be removed.

It will be seen that the cross-piece B has the effect of preventing both a longitudinal and a lateral movement of the tooth A, while it does not interfere with a vibratory motion thereof, said cross-piece constituting a fulcrum on which the tooth moves.

In order to facilitate said vibratory motion of the tooth A, the bottom of the recess E is inclined from the point of the cross-piece B outward.

The extreme inner end of the tooth A is bent either downward or upward, or in a lateral direction, being in the example shown bent downward; and the recess E is also bent at its inner end correspondingly to the tooth A, as at E', Fig. 2, this part E' being made of greater depth than the length of the bent end of the tooth A.

When the rake-tooth A, with its cross-piece B, is placed in the recess E, the bent end of the tooth is inserted in the bent end E' of the recess; and hence any longitudinal strain on the tooth A is brought to bear partly on said bent end of the tooth, and partly on the cross-piece B, so that the tooth is capable of great resistance in the line of draft of the rake.

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

1. The combination, in a horse-rake, of a rake-tooth having a cross-piece near its inner end with a rake-head divided into an upper and lower section, the lower section being provided with a cross-shaped recess for the reception of said rake-tooth, substantially as hereinbefore set forth.

2. The combination of a rake-tooth which is bent at its inner end, and provided with a cross-piece near said end, with a rake-head divided into an upper and lower section, and the lower section of which has a cross-shaped recess, which is bent at its inner end correspondingly to said end of the rake-tooth, substantially as hereinbefore set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 6th day of July, 1877.

WALTER ADRIANCE. [L. s.]

Witnesses:

WM. R. WOODIN,  
EMOTT WOODIN.