W. ADRIANCE.
HORSE HAY-RAKE.

No. 193,205. Patented July 17, 1877.

Fig. 1.

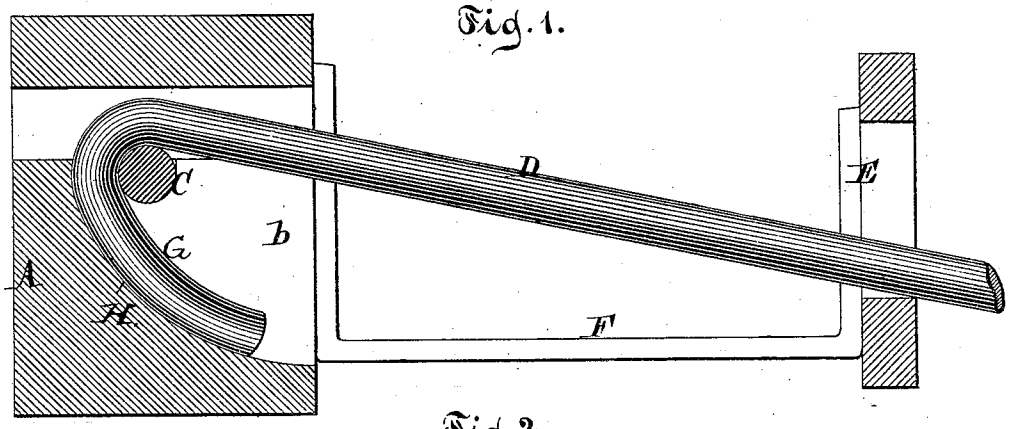


Fig. 2.

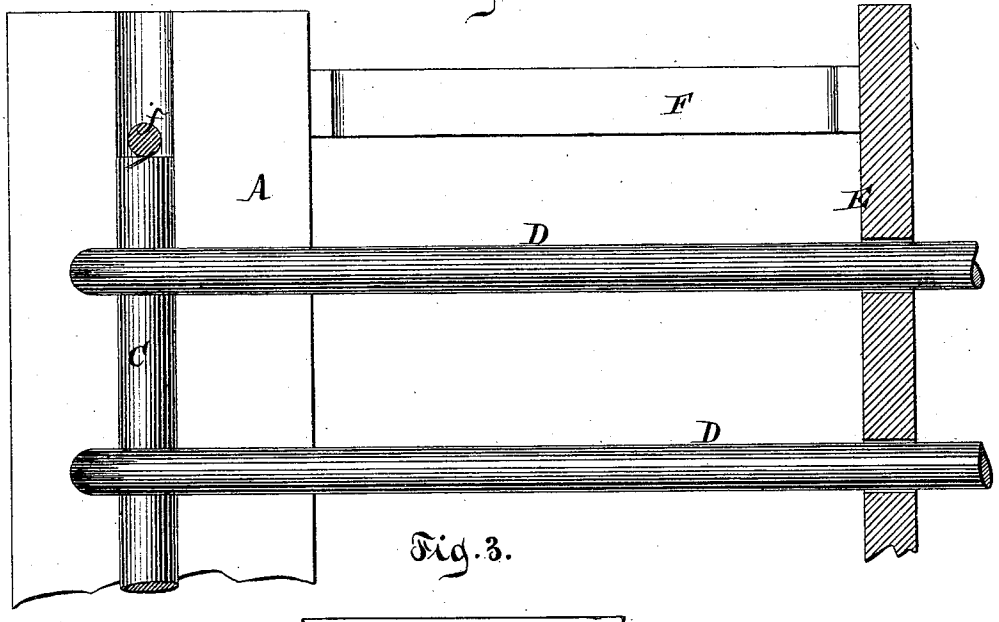
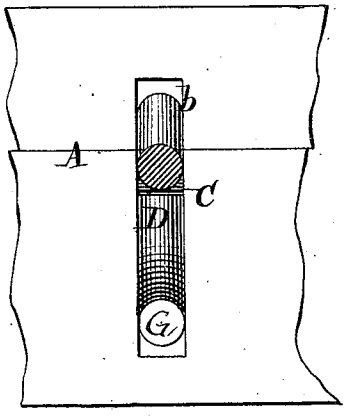


Fig. 3.



Witnesses.
Otto Hufeland.
Chas. Wahlers.

Inventor.
Walter Adriance
by
Van Santvoord & Hauff
his attorneys

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WALTER ADRIANCE, OF POUGHKEEPSIE, NEW YORK.

IMPROVEMENT IN HORSE HAY-RAKES.

Specification forming part of Letters Patent No. **193,205**, dated July 17, 1877; application filed May 31, 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-Rakes, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a vertical cross-section of a rake-head containing my improvement. Fig. 2 is a plan or top view thereof when the upper section is removed. Fig. 3 is a rear view of the same.

Similar letters indicate corresponding parts.

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

My rake-head is provided with vertical recesses in its rear surface for the reception of the inner ends of the rake-teeth, which said ends of the teeth are bent so as to catch round a metallic rod which is passed lengthwise through the rake-head, whereby the teeth are firmly held in place and the strain is equally distributed throughout the rake-head, while the teeth, moreover, are allowed to play in a vertical direction, and hence are adapted to clear any obstructions that may present themselves thereto in the passage of the rake over the ground.

In the drawing, the letter A designates a rake-head, in the rear surface of which are formed vertical recesses *b*, and through which is passed lengthwise a metallic rod, C, this rod being made to extend across the recesses *b*. D designates rake-teeth, the inner ends of which are inserted in the recesses *b*, and which are bent so as to catch round the rod C.

The inner ends of the rake-teeth are bent downwardly to form curved hooks G, and the lower edges of the recesses *b* are curved to correspond to such shape of the hooks, as at H.

It will be noticed that the rod C takes the whole strain of the rake-teeth D, so that this strain is equally divided throughout the head, while the teeth are allowed the requisite play to clear obstructions.

The extent of motion of the rake-teeth D is regulated by an ordinary slotted bar, E, through the slots of which the teeth are passed, and which is firmly connected to the rake-head A by means of arms F.

In order to permit of removing either of the rake-teeth D or the rod C with facility, I divide the rake-head A at the point of the rod C into two sections, being fastened together by screws or rivets *f*, which latter may be arranged to hold also the rod C against a longitudinal movement.

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

1. The combination, with a rake-head, A, having vertical recesses *b* in its rear surface, and a rod, C, extending longitudinally through the same, of the rake-teeth D, having downwardly-projecting inner ends, forming hooks G, resting over the longitudinal rod, and adapted to have a vertical movement thereon, substantially as and for the purpose described.

2. The rake-teeth D, having their inner ends bent in a curved downward direction to form curved hooks G, in combination with the rake-head A, provided with the longitudinal rod C and recesses *b*, having curved lower edges H, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 23d day of May, 1877.

WALTER ADRIANCE. [L. S.]

Witnesses:
W. HAUFF,
E. F. KASTENHUBER.