

J. B. WITTER.
Horse Hay-Rake.

No. 227,604.

Patented May 11, 1880.

Fig. 1

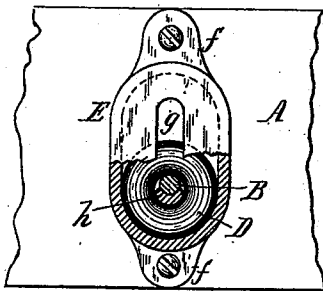


Fig. 3.

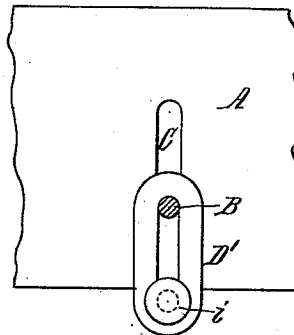


Fig. 2

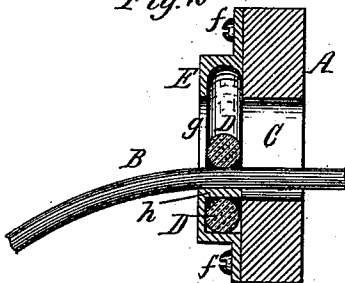
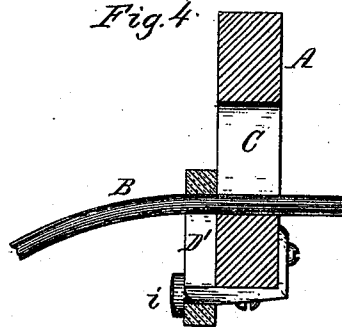


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOSHUA B. WITTER, OF FRIENDSHIP, NEW YORK.

HORSE HAY-RAKE.

SPECIFICATION forming part of Letters Patent No. 227,604, dated May 11, 1880.

Application filed November 7, 1879.

To all whom it may concern:

Be it known that I, JOSHUA B. WITTER, of Friendship, in the county of Allegany and State of New York, have invented a new and useful Improvement in Horse Hay-Rakes, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates more particularly to an improved device for rendering the teeth of horse hay-rakes self-adjusting.

The object of my invention is the construction of a simple, compact, and durable device, which will permit a tooth to be easily raised when striking an obstruction, and which will promptly return the tooth to its normal position when it has passed the obstruction.

My invention consists, principally, of an elastic ring or link, which is secured with its lower portion to a rigid support attached to the slotted pressure or guide bar, and which bears with its upper portion upon the rake-tooth, whereby the lower end of the link is firmly held in place, while the upper end bears upon the rake-tooth in its various positions; also, of the particular construction of the support to which the lower end of the elastic ring or link is secured, as will be hereinafter fully set forth.

In the accompanying drawings, Figure 1 is a partly sectional front elevation of a rake-tooth provided with my improved rubber spring. Fig. 2 is a vertical section thereof. Fig. 3 is a front elevation, showing a modified manner of applying the rubber spring. Fig. 4 is a vertical section thereof.

Like letters of reference refer to like parts in each of the figures.

A represents the pressure-bar, which is arranged in horse-rakes at a short distance from the inner ends of the teeth, for the purpose of holding the teeth in their proper relative position.

B represents a portion of a tooth, and C are the vertical slots formed in the pressure-bar A for holding the teeth laterally, while permitting the requisite vertical movement of the teeth.

In Figs. 1 and 2, D represents an elastic ring, made of india-rubber, and arranged on the face of the pressure-bar so as to surround the rake-tooth B.

The ring D is held in a casing, E, having semicircular ends and straight sides, and provided with ears *f*, through which pass screws by which the casing is secured to the pressure-bar.

The rear side of the casing E is open, and its face side is covered with a face-plate, which is provided with a central vertical slot, *g*, in which the tooth plays

The ring D is held in the bottom of the casing E by means of a flat stud or pin, *h*, which projects backwardly from the face-plate of the casing, between the lower part of the ring and the tooth, as clearly shown in Fig. 2.

The elastic ring D is made of such size as to hold the tooth firmly against the stud *h* when the tooth is in its normal position.

When the tooth is raised by an obstruction the ring D is elongated or distended until the obstruction is passed, when the tooth is returned to its normal position by the contraction of the ring D. The elastic ring D in distending approximates in form that of the casing E.

In the modified construction illustrated in Figs. 3 and 4 the expansible spring is made in the form of an elongated loop or link, D', which holds the tooth against the bottom of the vertical slot in the same manner as the ring D.

The elastic link D' is held at its lower end by a projecting stud, *i*, which is secured to the lower side of the pressure-bar, and provided at its front end with a head which holds the elastic link D' against the pressure-bar.

I claim as my invention—

1. The combination, with a rake-tooth and the slotted pressure-bar C, of an elastic ring or link, bearing with its upper portion upon the rake-tooth and surrounding with its lower portion a rigid support which is fastened to the pressure-bar and which confines the lower portion of the elastic ring or link, substantially as set forth.

2. The combination, with the elastic ring D, of the casing E, provided with stud *h*, which projects through the ring, substantially as and for the purpose hereinbefore set forth.

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Witnesses:

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