(No Model.)

R. S. CARR.

HORSE HAY RAKE.

No. 283,324. Patented Aug. 14. 1883.

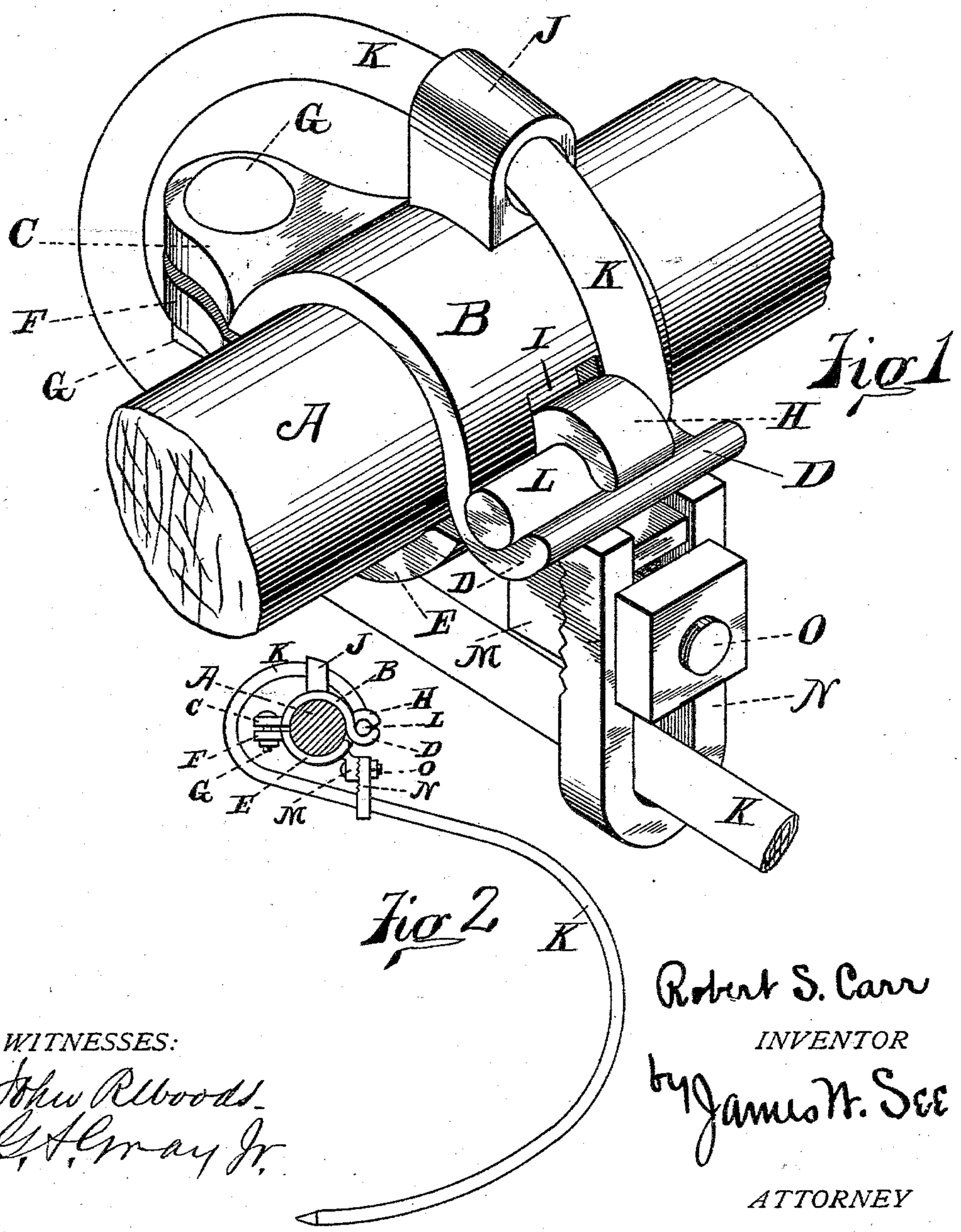

Fig 1

Fig 2

WITNESSES:

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HORSE HAY-RAKE.

SPECIFICATION forming part of Letters Patent No. 283,324, dated August 14, 1883.

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To all whom it may concern:

Be it known that I, ROBERT S. CARR, of Hamilton, Butler county, Ohio, have invented certain new and useful Improvements in Horse Hay-Rakes, of which the following is a specification.

This invention relates to devices for securing the rake-teeth to the tooth-holding bar, and will be understood from the drawings and description.

In the accompanying drawings, Figure 1 is a perspective of my improved device; and Fig. 2 is a side view, on a small scale, of a tooth and attaching device.

In the drawings, A represents the tooth-bar of a hay-rake, which bar is to have attached to it the usual series of flexible curved teeth, and which may be the axle of the rake, or a separate bar especially for holding the teeth; B, a half clasp band fitting bar A; C, an ear formed with clasp B; D, a lip formed on the rear edge of the clasp B in such manner as to produce a groove or channel behind the clasp, as shown; E, a second clasp, somewhat similar to clasp B; F, an ear on clasp E, similar to ear C; G, a clasping-bolt clamping the two ears; H, a curved lug formed on the rear of clasp E; I, a hole through rear of clasp B to permit the insertion of lug H, which projects, as shown, out through this hole and over the groove of clasp B; J, a perforated lug formed on the upper surface of clasp B; K, the rake-tooth, of steel wire, in the usual form, adapted for raking; L, a sharp bend at the butt-end of the tooth, arranged to project at right angle to the general vertical plane of the tooth; M, a pendent lug formed at the rear of clasp E; N, a stirrup secured against lug M and engaging the tooth, as shown; and O, a bolt securing the stirrup N to the lug M, and serving as a means for permitting the stirrup to be shifted vertically upon the lug M, the security of the juncture being further enhanced by serrated faces between the stirrup and lug.

The two clasps join with a hinge-like action, as will be understood from the drawings, the bend L of the butt of the tooth forming the pintle of the hinge, and the bolt G clamping the parts firmly to the bar. The tooth is inserted, point first, through lug J, and brought to proper position, with bend L in the lip of the clasp B. Clasp E is then hooked into position, with lug G over the bend of the tooth, the parts adjusted on the bar A, and then firmly clamped by bolt G.

The device forms a simple, cheap, and efficient means for fastening the teeth to the bar, and permits an adjustment of the teeth along the bar, and also an adjustment of the teeth into rank. The device may be arranged to engage bars having shapes other than cylindrical.

The stirrup N serves as a side support for the teeth, and also as a means for bringing a support under the teeth in case it is desired to strain the teeth to bring the points into rank or to lessen their elasticity. The stirrup N will be useful even if arranged to be open below the tooth, and if without any means of vertical adjustment. It may, if desired, be dispensed with entirely.

Rake-teeth have been heretofore pivoted to their individual holders, which were secured to the tooth-holding bar. I do not claim such construction as of my invention. In my device each tooth is unyieldingly secured in its individual holder, and the holder is adjustable upon the bar to which it is attached. After adjustment the holder is fixed to the bar. Each tooth is therefore independent of its fellows, there being no tooth-engaging devices separate from the tooth-holding clasps.

I claim as my invention—

1. In a hay-rake, a tooth supporting and actuating bar of uniform thickness, a tooth-holder clamped to said bar firmly, so as to move with the bar and be restrained against end displacement on the bar, and a flexible tooth attached by its butt to said tooth-holder, substantially as specified.

2. In a hay-rake, a cylindrical tooth-supporting and tooth-actuating bar, a tooth-holder adjustable around and along said bar and firmly clamped thereto, so as to move with the bar and be restrained against end displacement on the bar, and a flexible tooth attached by its butt to said tooth-holder, substantially as specified.

3. In a hay-rake, a tooth-supporting bar, a tooth-holder clamped to the bar and adjustable along said bar, a flexible tooth attached by its butt rigidly to the tooth-holder, and a rigid side support attached to the tooth-holder, and arranged to straddle the tooth at a flexible point and be adjustable with the holder, all constructed and combined substantially as specified.

4. In a hay-rake, a tooth-supporting bar, a tooth-holder clamped to the bar, a flexible tooth rigidly attached by its butt to the tooth-holder, and a vertically-adjustable side and bottom support attached to the tooth-holder and engaging the tooth at a flexible point, and adjustable along said bar with the tooth and holder, all constructed and combined substantially as specified.

5. The cylindrical tooth-supporting bar, the flexible teeth, and the tooth-holder formed in parts and adapted to secure each tooth rigidly and independently to said bar, whereby each tooth may be adjusted on said bar, and then be rigidly secured to the bar, so as to be actuated simultaneously with its fellow teeth by said bar.

6. In a hay-rake, the bar A, clasp B, having lugs H and J and ear C, clasp E, having ear F and lip D, tooth K, having bend L, and bolt G, combined substantially as specified.

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Witnesses:
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