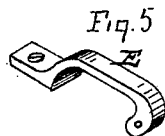
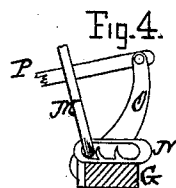
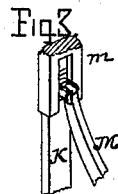
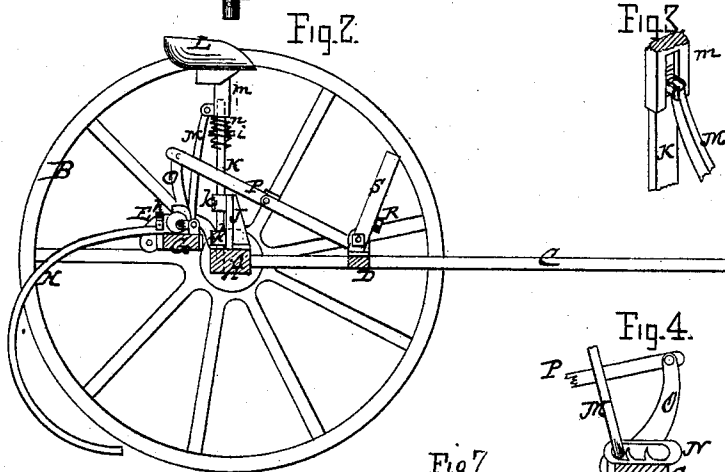
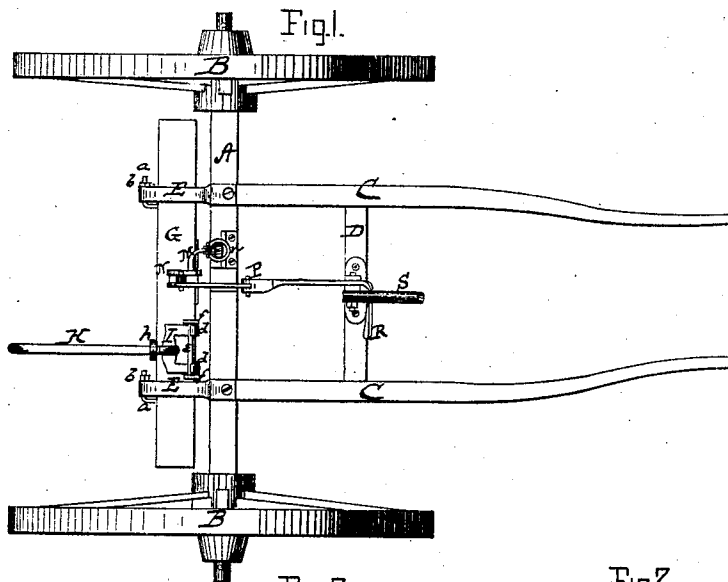


J. C. STODDARD.

Improvement in Horse Hay-Rakes.

No. 127,659.

Patented June 4, 1872.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOSHUA C. STODDARD, OF LOCKPORT, NEW YORK.

IMPROVEMENT IN HORSE HAY-RAKES.

Specification forming part of Letters Patent No. 127,659, dated June 4, 1872.

To whom it may concern:

Be it known that I, JOSHUA C. STODDARD, of Lockport, in the county of Niagara and in the State of New York, have invented certain new and useful Improvements in Horse Hay-Rakes; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a "horse hay-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, in which—

Figure 1 is a plan view, and Fig. 2 a longitudinal vertical section, of my hay-rake. Fig. 3 is an enlarged perspective view of a portion of the seat-supporting standard. Fig. 4 is a side view of the connection between the operating lever and seat and the rake-head. Fig. 5 is a perspective view of the bracket supporting the rake, and Figs. 6 and 7 are perspective views of the devices for fastening the rake-tooth.

A represents the axle with the wheels B B placed upon its ends to turn on the same. C C are shafts attached to the axle in any convenient manner, and connected together by a cross-bar, D, a suitable distance in front of the axle, to form a foot-rest for the driver. Upon the axle A are secured two brackets, E E, which extend toward the rear and are curved or angular, as shown in Fig. 5, so as to form on their under sides, as it were, recesses to receive the rake-head G when the rake is in operation. This rake-head is hung on the back center, or the middle of the back side by means of L-shaped hooks *a a* inserted in the same, and then passed through holes in the outer ends of the brackets E E, and fastened or held there by nuts *b b* on their ends. When the rake is not in operation the head hangs downward from the outer ends of the brackets throwing the teeth up from the ground; but for work the rake-head is, by means that will be hereinafter described, thrown forward and upward under and into the recesses on the under sides of the brackets. H represents one

of the rake-teeth, the upper end of which is turned under and around the center of a bar, I, which has an enlargement in the center with a circumferential groove for the upper end of the rake-tooth to lie in. At each end of the bar I is an open hook, *d*, which fastens on a rod, *e*, supported in ears *f f* on the upper front edge of the rake-head G. By this means the tooth is readily removed from the rake-head when for any cause the same may be desired. Each tooth is held by a hook, *h*, pivoted to the rear side of the rake-head, and having a notch in it so as to allow the tooth a loose movement up and down. To the axle-tree A is bolted or otherwise firmly attached a permanent standard, J, having sockets or guides *k k*, through which passes a perpendicular sliding bar, K, that supports the seat L. On the under side of this seat is attached or formed a socket, *m*, open on its rear side, and placed over the upper end of the sliding bar K. Through this bar is a pin, *i*, which supports a spiral spring, *n*, placed around the upper end of the bar, and upon which the socket *m* rests, thus forming a spring-seat for the driver, and allowing the socket *m* to slide on the bar K. To the rear side of the sliding bar K, near the upper end, is, by a hinge, attached a standard or brace, M, the lower end of which rests in a notched casting, N, attached to the upper side of the rake-head G. To the upper side of the rake-head is attached an arm, O, and to the upper end of said arm is pivoted one end of a jointed or lock-lever, P, the other end of which is pivoted in a casting or bracket on the cross-bar D. To this end of the lock-lever are attached the foot-lever R and hand-lever S. The construction and operation of this locking device has been fully explained in a former patent for hay-rake granted to me.

When the lever P is locked, and the driver holds his foot on the foot-lever R the rake will remain up ready for work, but as soon as the foot is removed, and the hand-lever S pulled far enough to break the joint in the lock-lever P, the weight of the driver throws the rake-head down. The casting N has several notches in it, as shown in Fig. 4, so as to change the point at which the standard or brace M shall rest on the rake-head, for the purpose of balancing the rake-head to any variable weight by placing the lower end of the brace either

forward or back according to the weight of the driver.

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

1. The seat *L* provided with the open socket *m* sliding upon the perpendicular sliding bar *K*, in combination with the spring *n* and standard or brace *M*, the upper end of which is by a hinge connected with said sliding bar *K*, and the lower end resting upon the rake-head, substantially as and for the purposes herein set forth.

2. The combination of the seat *L*, open socket *m*, spring *n*, perpendicular sliding bar *K*, brace *M*, notched standard *N*, rake-head *G*, and lock-lever *P*, when all of said parts are constructed

and arranged to operate, substantially as and for the purposes herein set forth.

3. The grooved bar *I*, provided with open hooks *d d*, in combination with the rake-tooth *H* and rod *e*, substantially as and for the purposes herein set forth.

4. In combination with the parts embraced in the preceding claim, the hinged hook *h*, constructed and arranged as described, so as to give the tooth a loose movement up and down.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 30th day of October, 1871.

J. C. STODDARD. [L. s.]

Witnesses:

M. SEAMAN,
JAMES W. REED.