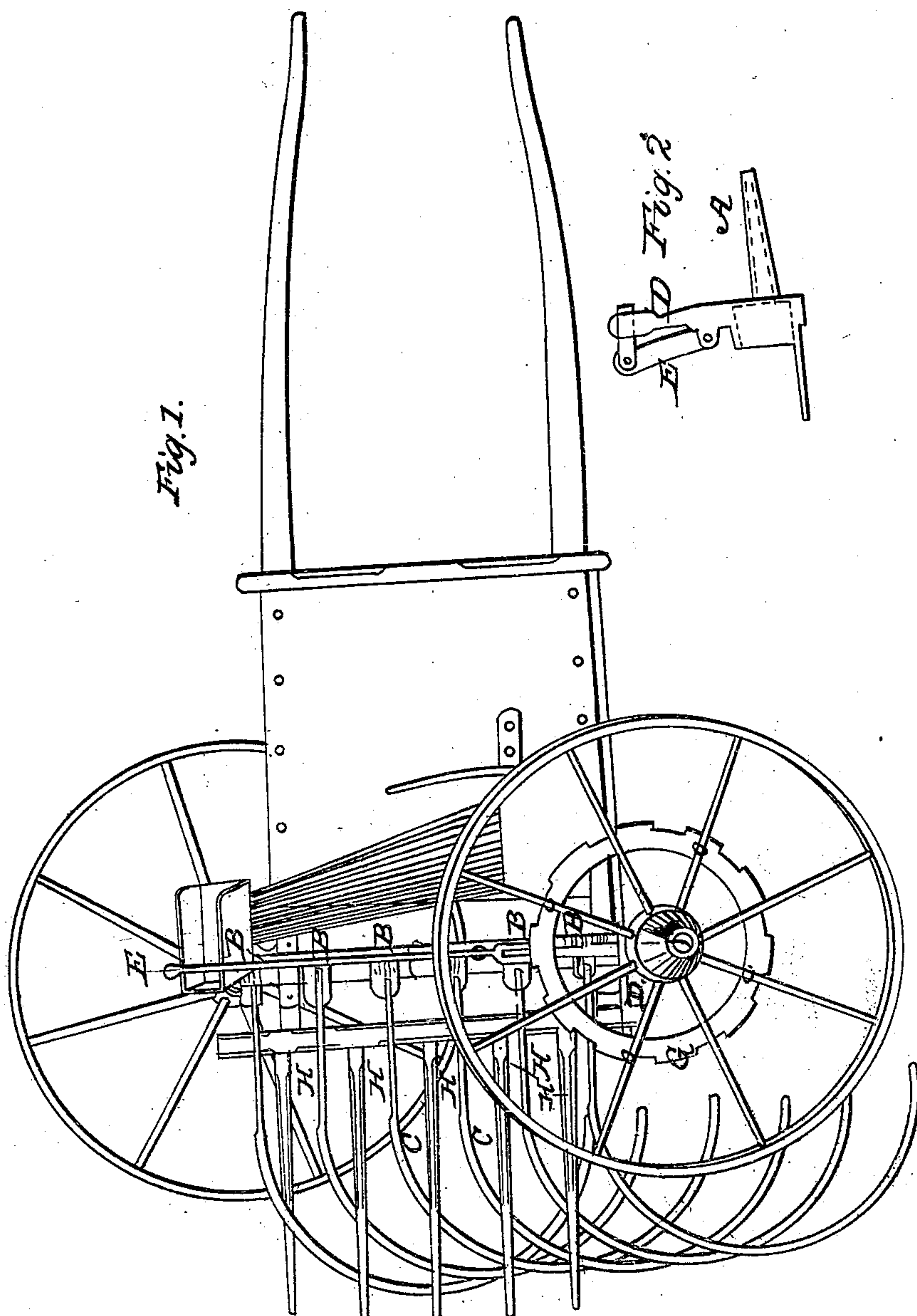


S. L. DENNEY.

Horse Rake.

No. 39,383.

Patented Aug. 4, 1863.



UNITED STATES PATENT OFFICE.

SAMUEL L. DENNEY, OF CHRISTIANA, PENNSYLVANIA.

IMPROVEMENT IN HORSE-RAKES.

Specification forming part of Letters Patent No. 39,383, dated August 4, 1863; antedated April 2, 1863.

To all whom it may concern:

Be it known that I, SAMUEL L. DENNEY, of Christiana, Lancaster county, State of Pennsylvania, have invented new and useful Improvements in Horse-Rakes for Raking Hay and Grain; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon—

Figure 1 being a side elevation; Fig. 2, a sectional view of the spindle detached.

Similar letters indicate like parts in all the figures.

The respective movements of my improved horse-rake are so combined as to receive its certain action, lessen the labor of the operator, and to enable him to discharge the load from it with accuracy and certainty at any desired place, substantially as hereinafter set forth.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

The axle R of my rake constitutes the rake-head, to which I secure, by means of my improved guards B, the rake-teeth C. I secure to the ends of my axle R my improved spindle A, which is cast hollow, thus forming a socket to inclose the ends of the wooden axle. Cast to and forming part of the same is an arm, D, having suitable lugs and a slot to receive the detent E, which, by means of its connection O with lever F, is made to move back and forth by the operator at pleasure, so as to be caught by the notches on the rim G, and the rake-teeth thereby raised above the clearer-fingers H, and thereby stripping the load from them, and simultaneously therewith the lever F, coming against the sword-shaped post I, releases the detent from the notch in the rim G, when the teeth instantly drop to the ground again, the axle being at liberty to move freely in its bearings in the hangers J J, which are secured to the shafts.

The stationary clearer is formed by securing to the head K a suitable number of fingers, H H H H, the head being secured to the rear ends of the shafts.

In point of simplicity and certainty of ac-

tion, as well as cheapness of construction, the hoisting arrangement here employed is believed to be much superior to either the clutch or the gearing arrangement employed for discharging the rake.

The spindle A, as shown in Fig. 2, is a combined spindle and arm, and, being cast hollow, forms a socket, which is driven onto the end of the wooden axle R, which binds the wood and thereby protects it from being split or injured. By thus constructing the spindle and arm in one piece considerable expense is saved. The labor of fitting both the spindle and the hoisting-rim is reduced to the drilling of a few small holes only. The detent E, at that point where it is caught by the rim G in raising the teeth, wears most; but this, being a casting of less than three pounds in weight, can be replaced at a very trifling expense.

It will be clearly seen that, from the number of notches in the serrated rim, the instant the operator presses the lever F in that direction the detent E will be certain to be caught by one of them and the rake discharged while the rake-wheels are performing only a quarter of a revolution. Thus the certainty with which the rake can be discharged at the desired point will be clearly seen. The spring S, which presses against the lever F, is to prevent the detent E from entering the notches only when the rake is wanted to be discharged, and is not intended to be so rigid as to release the detent after it has been entered and the pressure of the load comes upon it, so that the operator has not to keep his hand to the lever after he has put it in gear. It will release itself and drop back without further attention.

The guards B B B B B, by which the teeth are confined to the rake-axle, are made of that peculiar shape which admits of their being cast with a hole in them of such a shape as will fit any shaped tooth, thus saving the expense of making a hole in them after they are cast, which, to fit some shaped teeth, would be both difficult and expensive to do.

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

1. The cast hollow spindle A, with its arm D and detent E attached thereto, in combina-

tion with the connection O, lever F, spring S, releasing-sword I, and serrated rim G, when constructed and arranged in the manner and for the purpose set forth.

2. The guards B, constructed in the manner and for the object set forth.

The above specification of my new and use-

ful improvements in horse-rakes signed and witnessed this 21st day of September, A. D. 1861.

SAMUEL L. DENNEY.

Witnesses:

S. SLOKOM,

MARY W. SLOKOM.