

*John H. Schoonmaker, Albany, N.Y.*

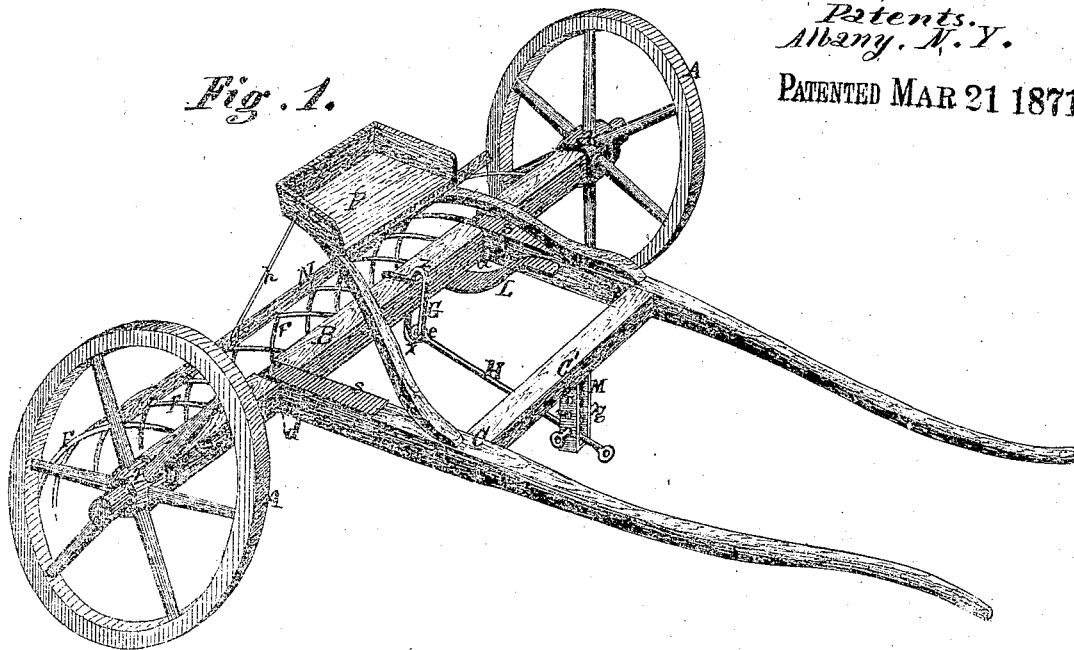
*Horse Hay-Rake.*

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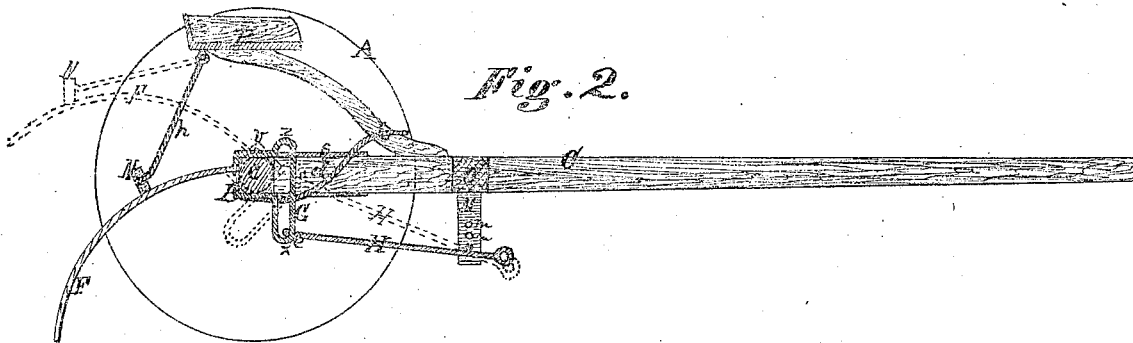
*Alex. Selkirk, Solicitor of  
Patents.  
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PATENTED MAR 21 1871

*Fig. 1.*



*Fig. 2.*



Witnesses

*Alex. Selkirk  
J. Buckbee Jr.*

*John H. Schoonmaker,  
Inventor.*

# United States Patent Office.

JOHN H. SCHOONMAKER, OF BETHLEHEM, ASSIGNOR TO HIMSELF AND  
ALEXANDER SELKIRK, OF ALBANY, NEW YORK.

Letters Patent No. 112,854, dated March 21, 1871; antedated March 10, 1871.

## IMPROVEMENT IN HORSE HAY-RAKES.

The Schedule referred to in these Letters Patent and making part of the same.

Be it known that I, JOHN H. SCHOONMAKER, of the town of Bethlehem, in the county of Albany, State of New York, have invented certain new and useful Improvements in Horse Hay-Rakes; and I do hereby declare that the following is a description thereof, reference being had to the accompanying drawing forming a part of this specification, in which—

Figure 1 represents a perspective view of a horse-rake embodying my invention.

Figure 2 is a side elevation of the same, and illustrates the manner of the operation of my improvements.

My invention consists in a certain combination and arrangement of an adjustable guide-clevis, draw-rod, and loop with a rake-head holding fingers, and a lever, by which the horse will, by his draft, be capable, at the will of the driver, of operating the rake-fingers either to throw them up or to press the same down, as hereinafter described.

To enable others skilled in the art to make and use my invention, I will proceed to describe it in reference to the drawing and letters of reference marked thereon, the same letters indicating like parts.

In the drawing—

A A represents the carrying-wheels.

B is the rake-head, (serving also as the axle,) having its bearings in the hubs of the wheels A.

C are the shafts.

To the rake-head B are attached the rake-fingers F in any of the usual ways, and at proper distances from each other.

The shafts C are attached to the rake-head B at the journals *c c*, by the bearings *d d*, formed by the ends of the shafts C and straps *s s*, in such a manner that the said rake-head can be revolved or rolled in the bearings so formed.

To the rake-head B, and about midway of its length, I attach securely the loop G, one end of which loop is dropped down below the rake-head B about eight inches, more or less, as at X, while the other end Z is raised to or above the top of the said rake-head.

To the said loop G I attach a draw-rod, H, by means of the eye *e*, into which eye the bar forming the said loop can slip.

I drop below the shafts C, from any suitable point, (the cross-bar of the shafts being preferred,) the adjustable guide-clevis M, or equivalent crotch-standard, in which are provided several pin-holes, *m*, into any of which may be inserted the pins *g*.

Into this guide-clevis M, and confined by one or more pins, *g*, to a certain place in the same, is placed the second end of draw-rod H, to which the whiffletree is to be attached.

By means of the said clevis M and the pin *g* the angle of the draft of the draw-rod H can be regulated so as to adapt this hay-rake to operate advantageously in light or heavy hay, according to the ele-

vation given to the end of the draw-rod H in the said clevis M.

To the rake-head B I attach the lever L, to be operated either by hand or the foot.

The manner in which this hay-rake operates is as follows:

The horse is placed between the shafts C and hitched to the whiffletree attached to the end of the draw-rod H, in the usual manner.

If the rake is to operate in heavy hay, the pin *g* will be placed in the lower hole *m*, (or a near hole,) with the draw-rod H below; or, if to operate in light hay, the said pin will be placed in some one of the upper holes.

The draw-rod H will, by its eye *e*, draw from the lower end X of the loop G, and the draft on the same will act to press the fingers F down to the ground; and as the hay accumulates against the fingers, to counteract the draft, the draft on the loop will be greater, and in proportion to the pressure or resistance of the hay against the fingers, so that in every condition of the resistance of the hay, be it more or less, the draft of the horse will be sufficient to keep the fingers down until it is desired to dump the hay, which is done by the driver pressing down the lever L slightly until the loop G takes a position that will bring it at less than a right angle with the draw-rod H, when the draft of the horse will cause the eye *e* of the draw-rod H to slip up, on the loop G, to the upper end Z of the same, and draw the said upper end Z over, and cause the rake-head to roll in such a manner as to throw the fingers F up and permit the hay to fall in its windrow.

When the horse has taken about a single step the driver releases the lever L and the fingers F will fall back on the ground, and the eye *e* of the draw-rod will also drop to the lower end X of the loop G for another operation.

A rake with these improvements, arranged as above described, is simple and not liable to get out of order, and also efficient to operate in every circumstance of hay.

I am well aware that horse hay-rakes have been constructed and arranged in such a manner that the horse would, by his draft, be capable of throwing up the fingers and depressing the same, thereby effecting results similar to those in my invention. I therefore do not claim, broadly, a rake thus operating.

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

In a horse hay-rake, the combination of the adjustable clevis M, draft-rod H, and loop G with the rake-head B, shafts C, and lever L, substantially as and for the purpose set forth.

Witnesses: JOHN H. SCHOONMAKER.

ALEX. SELKIRK,  
J. A. BUCKBEE, Jr.