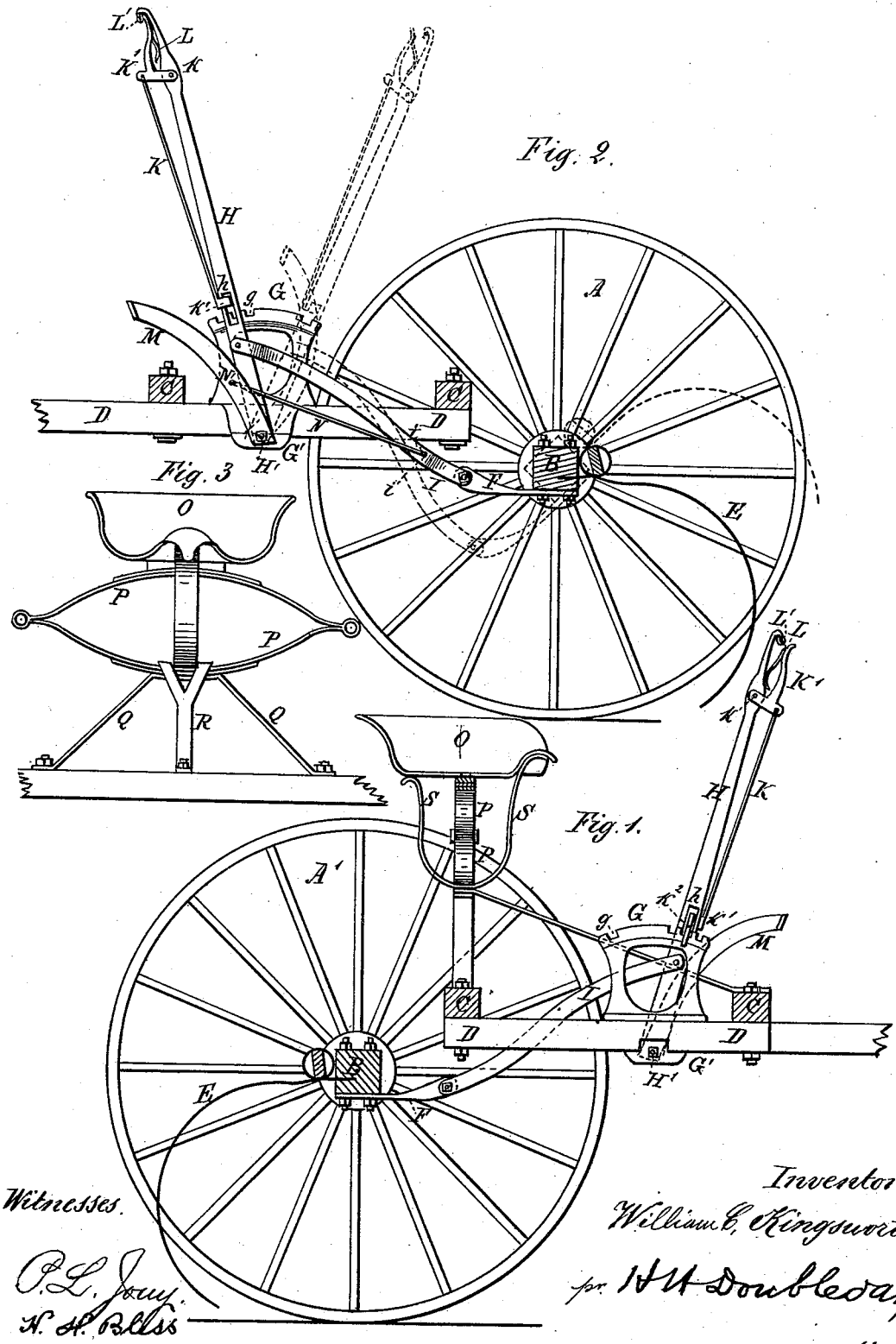
W. C. KINGSNORTH.

Horse Hay-Rake.

No. 215,939. Patented May 27, 1879.



UNITED STATES PATENT OFFICE.

WILLIAM C. KINGSNORTH, OF CANTON, OHIO, ASSIGNOR OF ONE-HALF HIS RIGHT TO MRS. J. B. WILSON, OF SAME PLACE.

IMPROVEMENT IN HORSE HAY-RAKES.

Specification forming part of Letters Patent No. **215,939**, dated May 27, 1879; application filed August 5, 1878.

To all whom it may concern:

Be it known that I, W. C. KINGSNORTH, of Canton, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Horse Hay-Rakes; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

In the drawings, Figure 1 is a vertical longitudinal section of my improved rake. Fig. 2 is also a vertical longitudinal section. Fig. 3 is an elevation of the seat and its supporting devices.

A A′ are the wheels of the rake, mounted upon the axle B. Upon the axle is mounted the frame of the rake, (represented in the drawings by the girts C C and the cross-piece D.) E E represent the rake-teeth, which may be of any desired shape and construction. They are attached to and are supported upon the axle B.

F is a short bar or lever bolted to the under side of the axle, and projecting forward. G is a standard fastened to the cross-piece D. Upon its upper edge it is provided with a series of recesses or notches, *g*.

H is a lifting-lever, pivoted at its lower end to an extension, G′, of the standard G at H′. I is a link, pivoted at one end to lever H, at a point above the pivotal point H′, and at the other end pivoted to the bar or lever F, so that by a backward movement of the lever H the forward end of lever F will be depressed, the axle will be rotated in the wheels, and the rake-teeth will be pushed upward.

K is a locking-rod, pivoted to a handle, K′, which is, in turn, pivoted to the lever H at *k*. At its lower end rod K carries a dog, consisting of the backwardly-projecting plate k^1 and the part k^2, projecting through a slot, *h*, in the lever H.

The dog k^1 k^2 engages with the ratcheted standard G, to hold the lever H in the desired position.

L is a spring, one end of which is attached to the handle K′, the other end bearing against the lever H, to press the dog k^2 into the ratchet. L′ is a ring pivoted to the upper end of lever H, for the purpose of holding back the handle K when it is desired to keep the dog k^2 disengaged from the ratchet. M is a foot-treadle, also pivoted to the standard at H′; or it may be pivoted to the girt C, or any other suitable part of the frame. It is connected to link I by means of a rod or link, N, pivoted to the treadle at N′, above the pivotal point H′, and to the link I at *i*.

By a forward motion of the treadle M, the operator is enabled to bring the rake-teeth back to their work after they have been elevated by the lever H.

By thus combining with the elevating-lever and the treadle the link I, pivoted to the lever H above the pivotal point H′, and the link N, similarly pivoted to the treadle, and securing the arm F to the under side of the axle, I am enabled to elevate and depress the rake through a single link, I, by the most available movements of the lever and the treadle—viz., a backward movement of the lever, and a forward movement of the treadle—and thus I avoid the necessity of the many additional parts commonly employed.

O represents the driver's seat. It is supported upon an elliptic spring, P P, which is, in turn, supported upon braces Q Q R, attached to the frame. I combine with the elliptic spring P P a U-shaped spring, S S, which rests upon the lower part of spring P P, its ends bearing against the bottom of the seat, near the front and rear sides, respectively. When supported upon these springs the seat has great flexibility of motion, and is, at the same time, prevented from turning too far in any direction.

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

The axle B, lever H, and treadle M, in combination with the bar F and links I and N, pivoted as described, the whole operating substantially as set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

WILLIAM C. KINGSNORTH.

Witnesses:

PETER CHANCE,

PAUL FIELD.