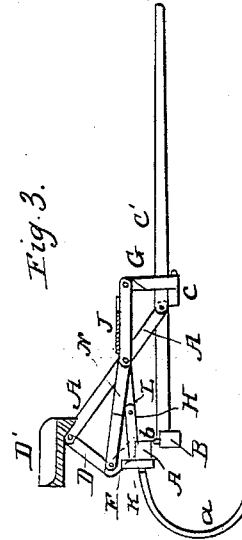
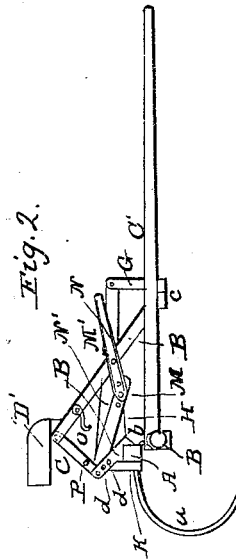
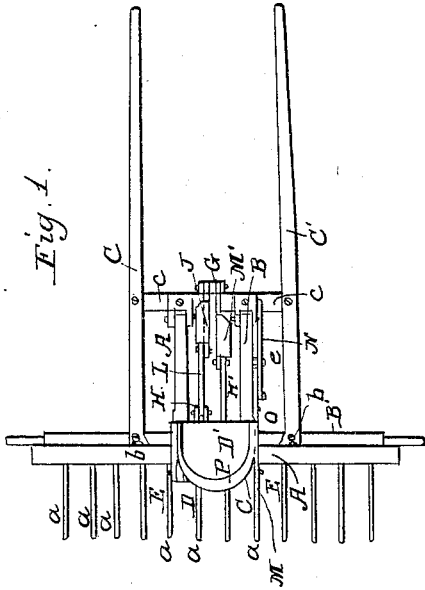


W. H. JOHNSON.

Horse Rake.

No. 50,363.

Patented Oct. 10, 1865.



Witnesses:
Friedrich Custer
C. H. Swadkins

Inventor:
W. H. Johnson
by his attorney
R. W. Eddy

UNITED STATES PATENT OFFICE.

WILLIAM H. JOHNSON, OF NORTHBOROUGH, MASSACHUSETTS.

IMPROVEMENT IN HORSE-RAKES.

Specification forming part of Letters Patent No. 50,363, dated October 10, 1865.

To all whom it may concern:

Be it known that I, WILLIAM H. JOHNSON, of Northborough, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Horse-Rakes; and I do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a top view, Fig. 2 a side elevation, and Fig. 3 a longitudinal section, of a horse-rake provided with my invention, the latter figure having its plane of section going through the arm K, hereinafter described.

In such drawings, the rake head or bar from which the teeth *a a a*, &c., are projected is exhibited at *A'*, it being connected to the axle *B'* by hinges, as shown at *b b*. The thills *C' C'* proceed from the axle, and are further connected by a cross-bar, *c*, arranged in advance of the axle. To this cross-bar are hinged two inclined bars, *A B*, which serve to support the driver's seat *D'*. Each of the said bars *A B* is connected by a link, *e* or *d*, with a forked arm, *E* or *F*, projecting from the rake-head in manner as represented in Figs. 2 and 3, the link being jointed both to its bar and the arm. Furthermore, the said arm has a series of holes, *d d*, made through it for reception of the pin of its joint. The pin of the joint of the arm *E* goes through another connecting-link, *M*, which is jointed to a lever, *N*, whose fulcrum, *e*, projects from the outer side of the bar *B*. Besides the arms *E F*, there are two other furcated arms, *H* and *K*, extending from the rake-head *A'*, they being disposed near to and at a right angle with each other. These arms are connected to two treadles, *J M*, by bars *L N'* jointed to each arm and treadle, and such treadles are jointed to the top of a post, *G*, extending upward from the cross-bar *c*. There is a hook, *o*,

applied to the outer side of the seat-bar *B*, and there is also a staple, *P*, projected from the link *C* and for reception of the hook, each hook and staple being for the purpose of holding the rake-head in its highest position.

By having the seat *D'* connected with the rake-head in manner as described, I am enabled to throw the weight of the driver, or more or less thereof, on the rake-head in order to keep the rake-teeth firmly in contact with the ground while the rake may be in use.

By means of the treadle *M* and the lever *N* the driver can effect the elevation of the rake-head into its highest position, and when in such position he, by means of his left foot on the treadle *J*, can raise the arm *H* so as to force the rake-head backward sufficiently to enable the gravitating power of the rake-head to come into action in a manner to depress the rake-head to the ground.

I claim—

1. The combination and arrangement of the treadles *J M*, the arms *H K*, and their connecting links *L N'* with the rake-head, the thills, and the mechanism as described, for connecting the seat with the thills and the rake-head, and for enabling the weight of the driver to be employed for pressing the rake downward, as and for the purpose set forth.

2. The combination and arrangement of the lever *N* and its link *M* with the above-described mechanism for so connecting the seat with the rake-head and the latter with the thills as to enable the rake-head to be raised or depressed and receive the weight of the driver, in manner substantially as hereinbefore explained.

W. H. JOHNSON.

Witnesses:

WARREN T. BUSH,
JOHN F. JOHNSON.