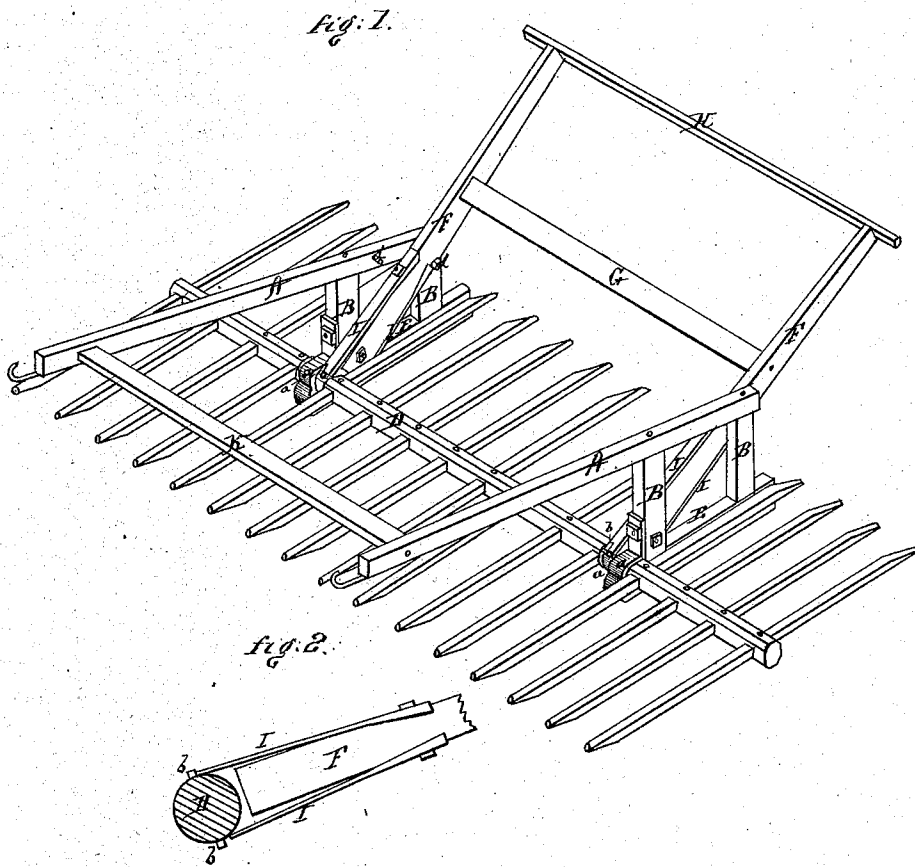


N. M. BARNES.
Horse Hay Rake.

No. 105,542.

Patented July 19, 1870.



Witnesses
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United States Patent Office.

NEWCOMB M. BARNES, OF TIFFIN, OHIO.

Letters Patent No. 105,542, dated July 19, 1870.

IMPROVEMENT IN HORSE HAY-RAKES.

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

To all whom it may concern :

Be it known that I, NEWCOMB M. BARNES, of Tiffin, in the county of Seneca and in the State of Ohio, have invented certain new and useful Improvements in Horse Hay-Rake; 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 "revolving horse hay-rake," as will be hereinafter 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 perspective view of the entire rake; and

Figure 2 is a section through the rake-head.

The main frame of my rake is composed of draw-bars, A A, upright posts, B B, and shoes or runners, E E.

The front ends of the draw-bars A A are held the proper distance apart by a girt, K. These draw-bars are supported at the rear end by four upright bars, B B. The first one, on each side, of these posts sits just immediately in the rear of the revolving rake-head D. These posts are supported at the bottom by two shoes or runners, E E, one on each side of the frame, and on the front end of said shoes or runners rest and revolves the rake-head D, it being held firmly down to the same by a cap, a, made of metal or other suitable material, which is bolted fast to the front upright-posts B B.

Inside of this main frame work two arms, F F, pivoted at the lower ends to the front posts B B, immediately in rear of, and just above, the center of the head D. These arms extend backward, and are connected in the middle by a girt, G, and, at the rear ends, by a handle, H, thereby holding them rigid with each other, and the handle is made use of to operate the arms F F.

The arm-frame, F G H, is held in position by four springs, I I, made of metal or other suitable material, attached respectively to the upper and under sides of said arms.

The upper ends of the springs I I are secured or made fast to said arms by a bolt or pin, and extend down the lower ends, resting or operating against lugs

b b, on the head D, in such a manner that, by raising the handle H, the springs on the upper sides of the arms will operate on the lugs on the upper side of the head, rotating the head forward, depressing the teeth on front part of head to any desired position without revolving the rake.

By reversing this motion, bearing down on the handle H, the springs on the lower sides of arms will operate against lugs on under side of head, and cause the head to rotate backward, throwing front teeth upward, so as to ride over obstructions.

Now, when it is desired to revolve the rake, raise the handle H until the front teeth enter the ground, when the springs on lower sides of arms will relieve themselves from the lugs on the lower side of head, and allow the head to revolve, when both springs on upper and lower sides of each arm assume their original position, and hold the rake-head firmly in the desired position until the rake is to be revolved again.

By raising the handle H a certain distance, the rake is not revolved, the arms being pivoted in such a manner to the front posts B B, that the springs I I, on the lower sides of arms, do not relieve until the arms are raised clear up, so that the front teeth will enter the ground, when the springs will relieve, and the rake will revolve as before stated.

On the main frame are placed four lugs, d d, two on each side, one above and one below each arm, and prevent the arms working too far, so as to put undue strain on the springs.

Having thus fully described my invention,

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

1. The head D of a revolving rake, mounted on a frame, composed of the draw-bars A A, upright-posts B B and shoes or runners E E, the several parts being constructed and arranged substantially as specified.

2. In combination with the head D, and the frame composed of the bars A A, uprights B B, and shoes E E, the arms F F, provided with the upper and lower springs I I, and pivoted to the frame, so that the springs act upon the pins b b, on the rake-head, all substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 21st day of May, 1870.

NEWCOMB M. BARNES.

Witnesses :

ANSON C. BARBER,
ROBERT LYSLE.