

WILLIAM RENNYSON.

Improvement in Harrows.

No. 121,003.

Patented Nov. 14, 1871.

Fig 1.

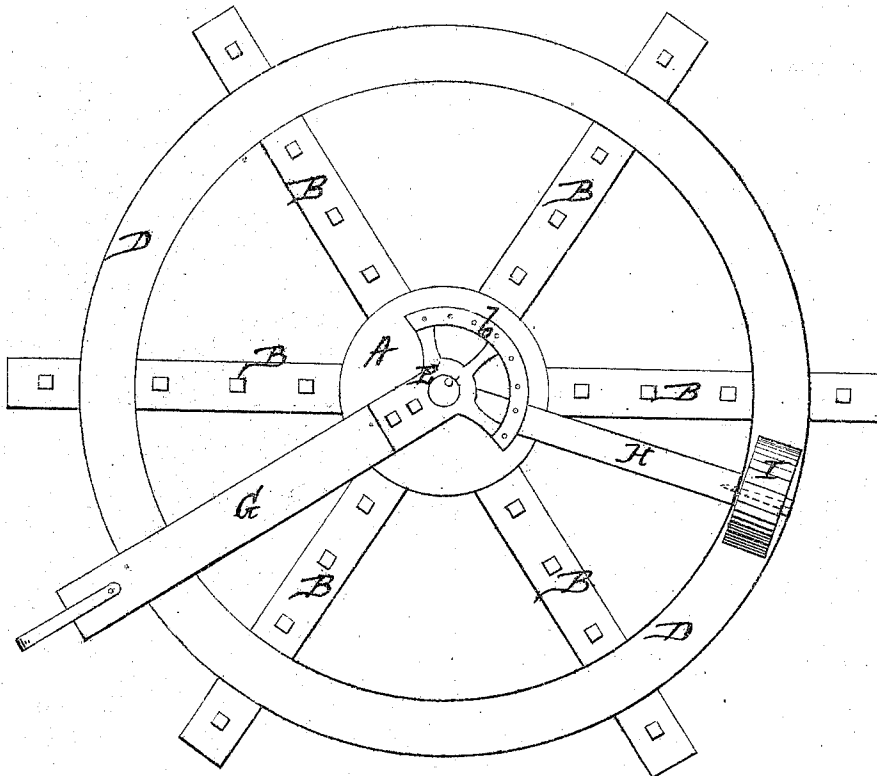
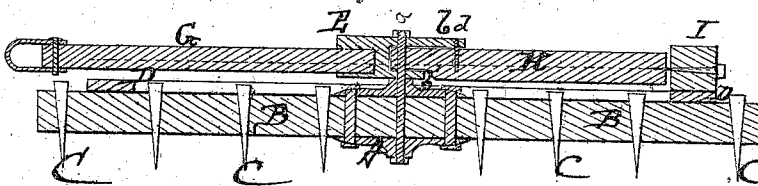


Fig 2.



Witnesses:

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per
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UNITED STATES PATENT OFFICE.

WILLIAM RENNYSON, OF NORRISTOWN, PENNSYLVANIA.

IMPROVEMENT IN HARROWS.

Specification forming part of Letters Patent No. 121,003, dated November 14, 1871.

To all whom it may concern:

Be it known that I, WILLIAM RENNYSON, of Norristown, in the county of Montgomery and in the State of Pennsylvania, have invented certain new and useful Improvements in Harrows; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to letters of reference marked thereon making a part of this specification.

The nature of my invention consists in the construction and arrangement of the device whereby the rotation of a rotary harrow may be changed in either direction or entirely stopped, as will be hereinafter more 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 plan view, and Fig. 2 a longitudinal vertical section of my harrow.

The harrow is composed of a hub, A, with radial arms B B having teeth C C, and a metallic circle, D, laid on top of or let into the upper sides of the arms B B. Through the center of the hub A passes a pin or bolt, *a*, which also passes through a casting, E, placed on top of the hub A, and secured by a nut on the upper end of the bolt *a*. The hole in the casting E, through which the bolt *a* passes, must be of somewhat larger diameter than that of the bolt itself, so as to allow the casting to tilt slightly, for a purpose that will be hereinafter described. One side of the casting E forms a socket, in which the draft-bar G is inserted and firmly secured. The other side of the said casting forms two segmental flanges, *b b'*, between which the end of an arm, H, is inserted and pivoted by means of the bolt *a* passing through its inner end. The upper flange *b* extends further or has a greater radius than the lower flange *b'*, as shown in Fig. 2. Upon the outer end of the arm H is a wheel or roller, I, which rests on the metallic circle D. The arm H may be turned on its pivot *a* independent of the casting and draft-bar, and held either on a line with said draft-bar or at any desired angle with the same, on either side, by means of a pin, *d*, passing through holes in the upper flange *b* into the arm. When the harrow is standing still and the traces slack the draft-bar G and arm H will be on the same horizontal plane; but as soon as the traces are tightened

the outer end of the draft-bar is raised up, which causes the flange *b* to press down upon the arm, and hence the wheel I will press with considerable force upon the circle D. The wheel I of itself may have more or less weight to press upon the harrow, but by the raising of the draft-bar, as described, considerable additional force is given to said pressure; and at whatever point the wheel may be placed the harrow-teeth immediately under the same will sink deeper into the ground than the others. If, therefore, the wheel, or, in other words, the point of pressure, is out of the line of draft the harrow will necessarily revolve, while if it is in the line of draft the harrow will not revolve.

By changing the arm H from one side to the other, so as to bring the point at which the pressure operates on the harrow to one or the other side of the line of draft, the direction of the revolution of the harrow is easily regulated.

It will be seen that the draft-bar G extends only as far as the socket in the segmental casting E, and that the rear portion of the frame is entirely unobstructed, so that the arm H with its wheel can be freely moved from one side of the frame to the other, which would not be the case if the draft-bar extended to the rear of the central pivot.

I am aware that a rotating harrow with its draft-bar extending entirely across the harrow-frame, and provided with an adjustable arm having a wheel at its extremity, is not new; hence I do not broadly claim such under this specification.

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

The draft-bar G, the casting E with its segmental flanges *b* and *b'*, and the arm H provided with a roller on its outer end, when the same are so arranged and constructed that by the raising of the draft-bar pressure is thrown upon the arm H in whatever position it is placed, thus using a pressure from said bar as an auxiliary to the weight for revolving the harrow, substantially as herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 22d day of September, 1871.

WILLIAM RENNYSON.

Witnesses:

C. L. EVERT,
JAMES PATTERSON.

(73)