

*Patented Mar. 14. 1871.*

Ino. W. Barton.  
Thos Holmes  
per  
Alexander Mason  
attys.



# UNITED STATES PATENT OFFICE.

JOHN W. BARTON AND THOMAS HOLMES, OF EMPORIA, KANSAS.

## IMPROVEMENT IN ROTARY HARROWS.

Specification forming part of Letters Patent No. **112,676**, dated March 14, 1871.

*To all whom it may concern:*

Be it known that we, JOHN W. BARTON and THOMAS HOLMES, of Emporia, in the county of Lyon, and in the State of Kansas, have invented certain new and useful Improvements in Rotary 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 the letters of reference marked thereon, making a part of this specification.

The nature of our invention consists in the construction and arrangement of a revolving harrow, as will be hereinafter fully set forth.

In order to enable others skilled in the art to which our invention appertains to make and use the same, we 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 is a rear elevation, of our harrow.

A A represent two circular harrows of any suitable size and construction, each revolving around a bearing, B, which passes through the center of the harrow. A cross-bar, C, connects the two bearings B B, said cross-bar having at each end two strips, D D, of iron, firmly secured to it. These strips form a slot at the ends of the cross-bar sufficient to allow the bearings to pass between them and be bolted, or, rather, pivoted by bolts, the bearings being flattened for that purpose. In the upper end of each of the bearings is attached a rod, E, which is flattened and slotted at its other end, and fastened to the cross-bar C by means of a set-screw, G, passing through said slot.

By this means I am enabled to shift the rotation of the harrows in or out, as desired,

giving perfect control of the rotation, which is considered above all most essential.

The screws G G are tightened just sufficient to hold the harrows in the desired position to rotate either in or out while working, but still allow the harrows to turn on their bearing-pivots when a solid obstruction should happen to come between the harrows. In such case the slotted brace-rods E E will slide and allow the harrows to turn out and rotate over without straining on any part of the harrow.

In each of the bearings B, below the point where the same is pivoted to the bars D D, is inserted and fastened a draft-rod, H, which is without any joint where it enters the bearing, making it more substantial and less liable to break and get out of repair. The draft-rods H H are pivoted to the double-tree I, and the tongue J passes through a staple on the same and through a staple on the cross-bar C, as shown.

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

The combination of the harrows A A, bearings B B, cross-bar C, with iron strips D D, brace-rods E E, set-screws G G, and draft-rods H H, all constructed and arranged to operate substantially as and for the purposes herein set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 5th day of January, 1871.

JOHN W. BARTON.  
THOMAS HOLMES.

Witnesses:

ROBERT B. HUNT,  
HOWARD DUNLAP.