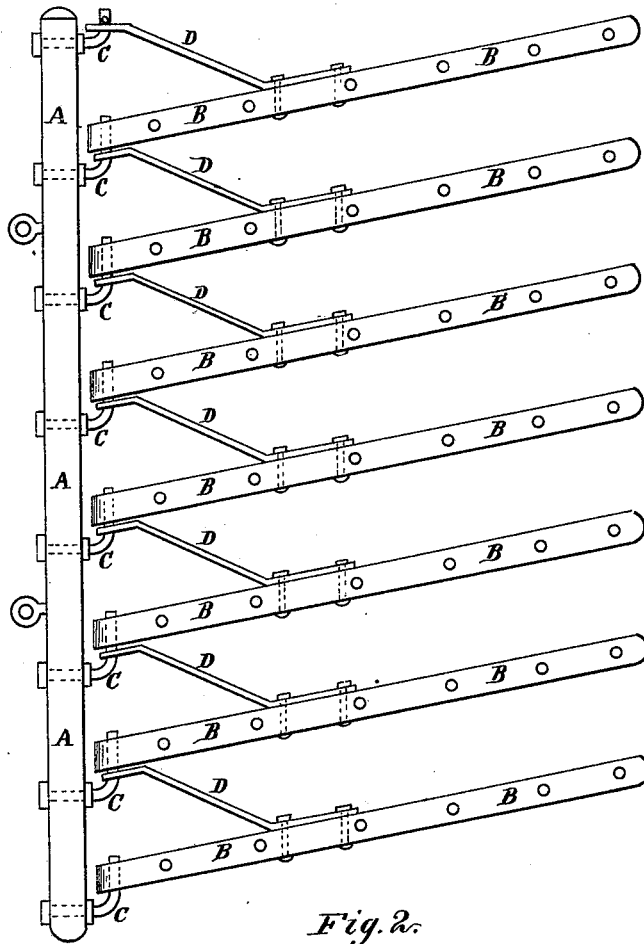


J. A. PLATT.  
Harrow.

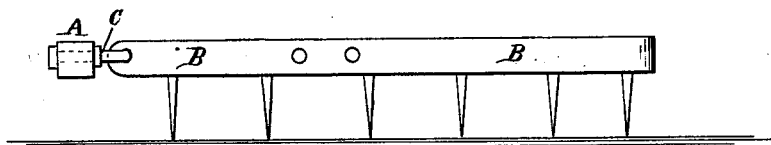
No. 206,039.

Patented July 16, 1878.

*Fig. 1.*



*Fig. 2.*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JULIUS A. PLATT, OF WARREN, ILLINOIS.

## IMPROVEMENT IN HARROWS.

Specification forming part of Letters Patent No. **206,039**, dated July 16, 1878; application filed May 2, 1878.

*To all whom it may concern:*

Be it known that I, JULIUS A. PLATT, of Warren, in the county of Jo Daviess and State of Illinois, have invented a new and useful Improvement in Harrows, of which the following is a specification:

Figure 1 is a top view of my improved harrow. Fig. 2 is a side view of the same.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved harrow, which shall be so constructed that the tooth-bars may each be free to move up and down independently, while at the same time the said tooth-bars are held firmly in their proper relative positions.

The invention consists in the combination of the hook-bolts and the inclined braces with the transverse draw-bar and the inclined tooth-bars, as hereinafter fully described.

A is the draw-bar, which may be made in one piece, or in two equal pieces, hinged to each other at their inner ends, as may be desired. B are the bars to which the harrow teeth are attached, and which are placed parallel with each other and in an inclined position, as shown in Fig. 1.

The forward ends of the tooth-bars B have holes formed in them to receive the hooks of the hook-bolts C, which pass through the draw-bar A, and are secured in place by nuts, as shown in Fig. 1. To one side of each of the bars B, at a little distance from the forward end, is attached the rear end of a brace-bar, D. The brace-bars D incline outward, and in their

free ends are formed holes to receive the hooks of the hook-bolts D, so that the said ends of the braces may rest against the ends of the adjacent tooth-bars, and thus hold the said tooth-bars in their proper relative position.

In putting the harrow together the end of the first bar B is placed upon the first hook C, and the end of its brace D is placed upon the next hook C. Upon the latter hook is then placed the end of the second tooth-bar B, the brace-bar D of which is placed upon the third hook C, and so on, the end of the last brace-bar D being placed upon the last hook C, and secured in place by a spring-key or other suitable means.

With this construction the tooth-bars B are free to play up and down to accommodate themselves to an uneven surface of the ground, and at the same time are firmly supported in their proper relative position. This construction also enables the harrow to be conveniently taken apart and packed in small compass for storage or transportation.

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

The combination of the hook-bolts C and the inclined braces D with the transverse draw-bar A and the inclined tooth-bars B, substantially as herein shown and described.

JULIUS A. PLATT.

Witnesses:

WM. C. DE LONG,  
S. C. TEEFT.