

A. H. & M. S. WHITESIDE.  
Harrow.

No. 206,284.

Patented July 23, 1878.

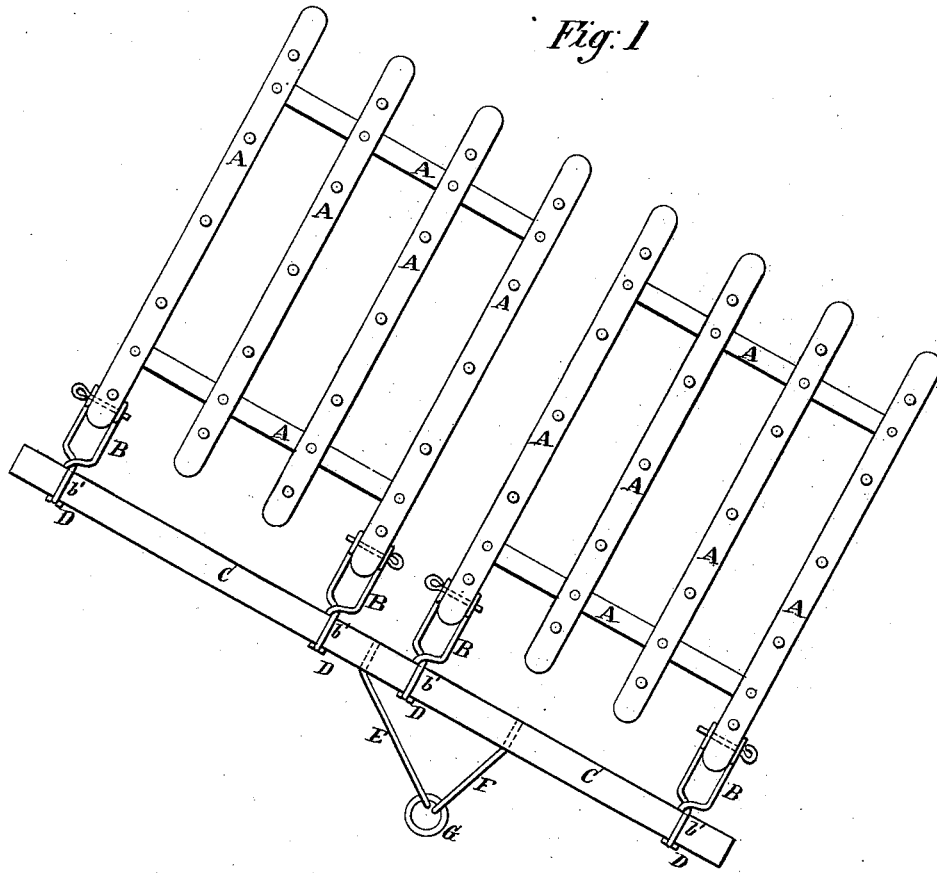
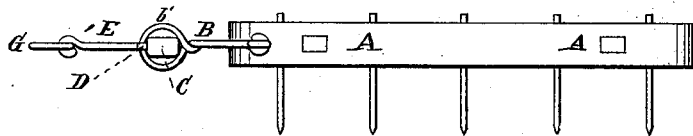


Fig. 1

Fig. 2.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN HARROWS.

Specification forming part of Letters Patent No. 206,284, dated July 23, 1878; application filed June 8, 1878.

*To all whom it may concern:*

Be it known that we, ADDISON HAYS WHITESIDE and MILTON STEWART WHITESIDE, of Onarga, in the county of Iroquois 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 our 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 means for connecting the sections of a harrow-frame with the draw-bar, so that the said sections will be held firmly in place laterally, while being free to move up and down to adjust themselves to the surface of the ground and to be cleaned.

The invention will first be described in connection with the drawing, and then pointed out in the claim.

A represents the sections of a harrow-frame, two or more of which may be used, and each of which is formed by connecting four (more or less) longitudinal bars by two or more cross-bars.

To the forward end of the side bars of each section A are attached the clevises B. Each clevis B is made long, and is then given a half-twist, forming a ring, *b'*, upon its forward part. The rings *b'* are made of such a size as to receive the draw-bar C, which is made of a length equal to the breadth of the sections A to be used.

The draw-bar C has its corners rounded off,

so that it may turn in the rings *b'* of the clevises B, and is kept from sliding longitudinally through said rings by pins or staples D attached to the forward side of the said draw-bar.

To the forward side of the draw-bar C, at or near its center, is attached the end of a rod, E, which is bent outward, so that its outer end may meet the outer end of the rod F attached to the draw-bar C toward one end. The rod E is made longer than the rod F, and the outer ends of the two rods are connected by a ring, G, through which the double-tree clevis is passed.

By this construction the harrow-sections will be drawn forward in inclined positions, and will always be held parallel with each other, while being free to play vertically, to accommodate themselves to the surface of the ground, and to enable each section to be raised and cleaned independently of the others.

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

The clevises B, made with a half-twist to form rings *b'* in their forward parts, in combination with the forward ends of the side bars of the harrow-sections A and with the long draw-bar C, substantially as herein shown and described.

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Witnesses:

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