

R. W. O'NEAL.

Improvement in Harrows.

No. 123,193.

Patented Jan. 30, 1872.

Fig. 1.

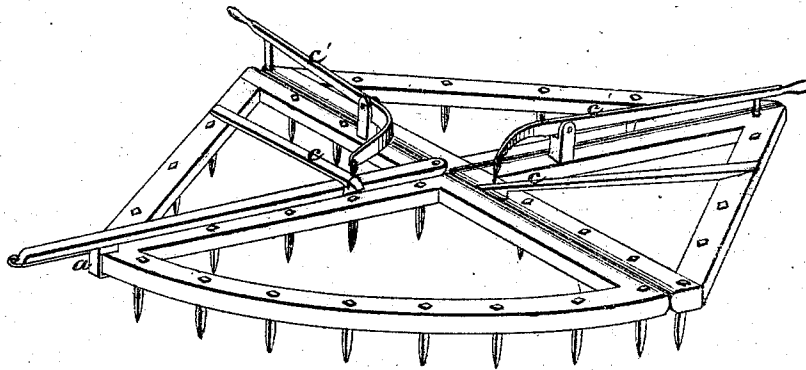
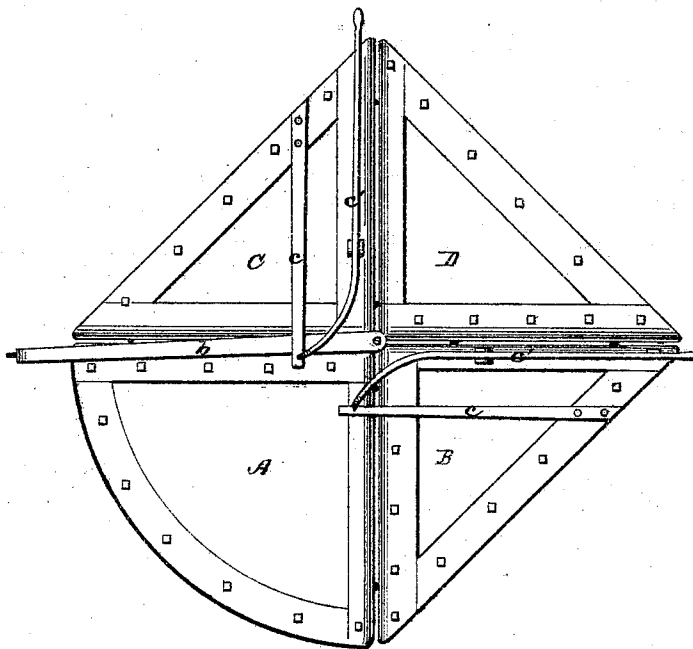


Fig. 2.



Witnesses.

C. F. Brown.
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Inventor.

R. W. O'Neal

by H. W. Beadle,

Att'y

UNITED STATES PATENT OFFICE.

RAYMOND W. O'NEAL, OF PUNTA ARENAS, CALIFORNIA.

IMPROVEMENT IN HARROWS.

Specification forming part of Letters Patent No. 123,193, dated January 30, 1872.

To all whom it may concern:

Be it known that I, RAYMOND W. O'NEAL, of Punta Arenas, in the county of Mendocino, State of California, have invented a new and useful Improvement in Harrows, of which the following is a full and accurate description, reference being had to the drawing and figures hereunto annexed and making part of this specification, in which—

Figure 1 is a perspective, and Fig. 2 a plan view of my said improved harrow.

The nature of my invention consists in an improved method of hinging the parts of the harrow, and in the arrangement of the pivoted tongue or draw-bar; and, further, in certain details, all of which improvements are fully set forth in such manner that any one skilled in the manufacture of such implements may be able to make and use the same.

My harrow is composed of four main parts, marked in the drawing A, B, C, and D. These parts are shaped as shown. The edges or sides which join each other are rounded, and the parts are hinged to each other in any suitable manner to permit the parts to rise or fall. It will be observed that the harrow is divided into halves by two straight lines of intersection. To the center is pivoted a swinging bar, *b*, which is connected to the segmental bar of the section A by a bent clip, *a*, so that the bar may swing from one end of the segment to the other and be held at the ends by suitable catches *c c* having handles *c' c'*.

The operation of the device is as follows: The team being attached to the end of the bar *b*, the bar being held by one of the catches *c*, the harrow may be drawn as usual. The right or left hand half, on the sides of the bar, may drop or rise to suit inequalities of the surface, or may be raised to disengage any clogging object; or, if the teeth are clogged with grass or similar material, the attendant may lift the catch which holds the bar and allow the harrow to swing, thus clearing itself. The bar swings, striking the beveled end of the catch, which rises and automatically catches and retains it in place. In this position the action is the same, the sections forming the half harrow on either side of the bar in its new position being the same in shape and arrangement.

I do not claim either a swinging or sectional hinged harrow; but

Having thus fully described and limited my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

The sections A B C D, in combination with the swinging tongue C, levers *c' c'*, and catches *c c*, substantially as and for the purpose set forth.

RAYMOND W. O'NEAL.

Witnesses:

J. M. HALL,
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