

W. H. PLATT.  
Harrows.

No. 137,569.

Patented April 8, 1873.

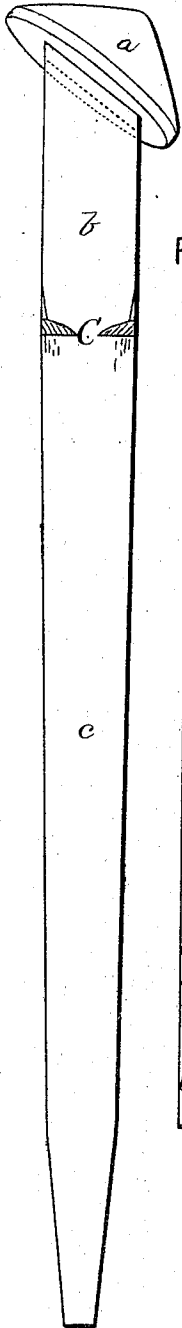


Fig. 1.

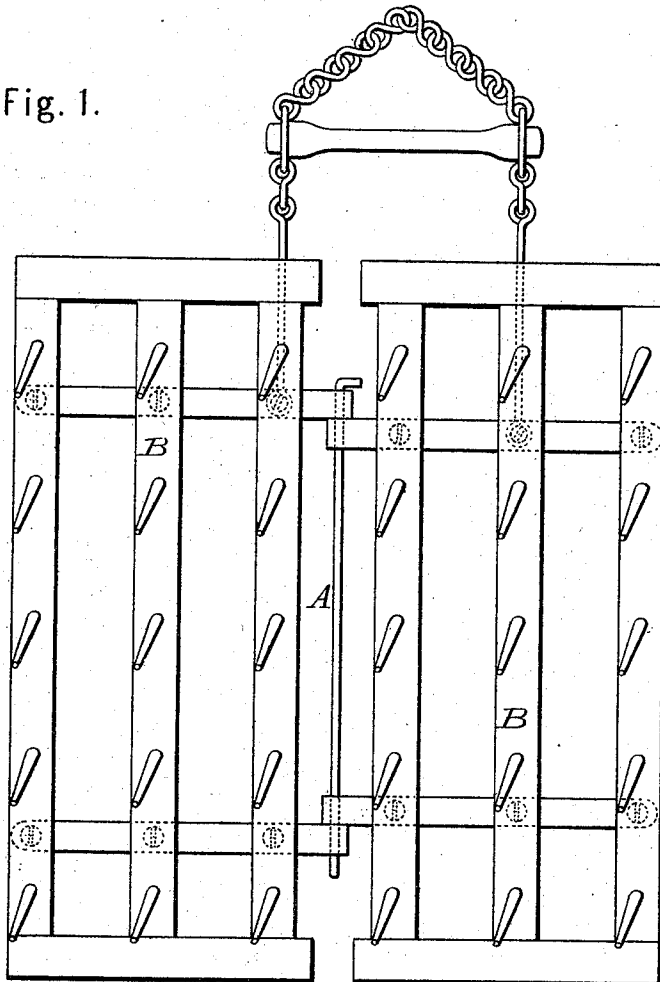


Fig. 3.

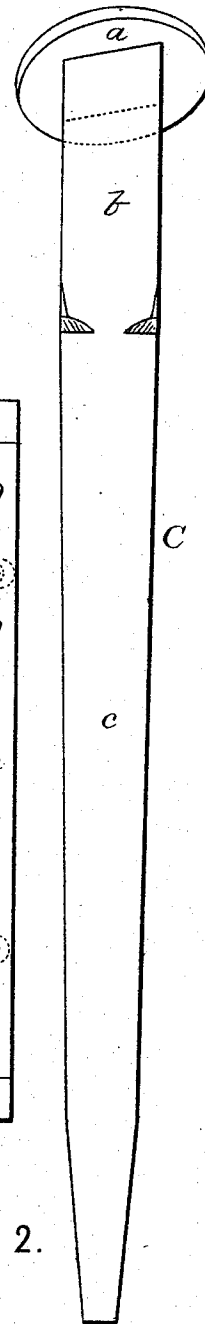


Fig. 2.

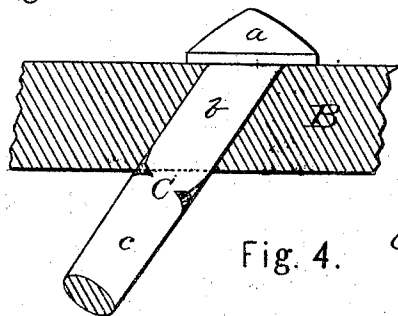


Fig. 4.

WITNESSES.

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# UNITED STATES PATENT OFFICE.

WILLIAM H. PLATT, OF DAYTON, OHIO.

## IMPROVEMENT IN HARROWS.

Specification forming part of Letters Patent No. **137,569**, dated April 8, 1873; application filed November 9, 1872.

*To all whom it may concern:*

Be it known that I, WILLIAM H. PLATT, of Dayton, in the county of Montgomery and State of Ohio, have invented a new and valuable Improvement in Harrows; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a side view of the harrow-tooth. Fig. 2 is a front view of the same. Fig. 3 is a bottom view of a harrow-frame with teeth in position. Fig. 4 is a central vertical longitudinal section of a harrow-beam with tooth in position.

This invention has relation to harrow-teeth; and it consists in the peculiar form of the teeth, whereby their efficiency and the durability of the harrow-beam are promoted.

The rough nature of the service performed by the harrow-tooth as it is dragged over the uneven surface of the soil, often indurated and obstructed by sticks, trash, and rocks, in order that the teeth and wooden frame shall serve their purpose efficiently and at the same time withstand this rough usage for a reasonable period, it is requisite that these teeth shall be made of the best steel and according to the form below described.

In the accompanying drawing, the letter A designates a harrow-frame having the ordinary longitudinal bars B B for the attachment of the teeth. C designates the form of harrow-tooth which I have devised. It consists of a gently-tapering conical point, *c*, a rectangular shank, *b*, and an obliquely-arranged dome-like or convex head, *a*. It is found in practice that unless the tooth is slender it will not operate satisfactorily, clogging will take place and the draft will be increased, as well as the strain upon the frame where the tooth is inserted. My tooth has sufficient body at its upper part for strength, while its gently-tapering point gives it all the advantage of a slender tooth, as well as enabling it to shed the soil rather than carry it. The shank *b* is an upward pro-

longation of the point *c*, extending from the thickest part of the latter to the head *a*. This shank is rectangular in form with parallel sides situated at a distance from each other about equal to the diameter of the uppermost portion of the conical point. Therefore while the sides of the shank are flush, or nearly so, with the point, the corner edges extend a little outward therefrom, and forcing their way into the wall of the auger-hole, made in the beam for the reception of the shank, serve to render it rigidly secure in its seat. The tooth is arranged to be placed in the beam with two of the flat sides of its shank parallel with the wood fibers, while the other two sides are at right angles therewith. In this manner the full benefit of the elasticity and strength of the wood, in resisting the wearing effect of the direct and vibratory straining movements of the tooth, is obtained. The head of the tooth *a* is obliquely arranged upon the shank in such a manner that while the tooth has a raking position to the rear and a little to one side, with reference to the direction of the beam in which its shank is seated, the lower or contact face of the flange of the head will be horizontal and flush with the upper surface of the beam. Therefore the head is obliquely placed with reference to all of the faces of the rectangular shank. The upper surface of the head is convex or conical, and rises sufficiently high in the center to render its forward side perpendicular or nearly so in position to the axis of the tooth, to form a driving face.

What I claim as my invention, and desire to secure by Letters Patent, is—

A tapering harrow-tooth having the square neck and the dome-like or convex head, having its under face oblique to two adjacent sides of said neck, as herein described and shown.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

W. H. PLATT.

Witnesses:

D. D. KANE,  
GEO. E. UPHAM.