S. EMERY.

HARROW-TEETH.

No. 182,652. Patented Sept. 26, 1876.

Fig. 1.

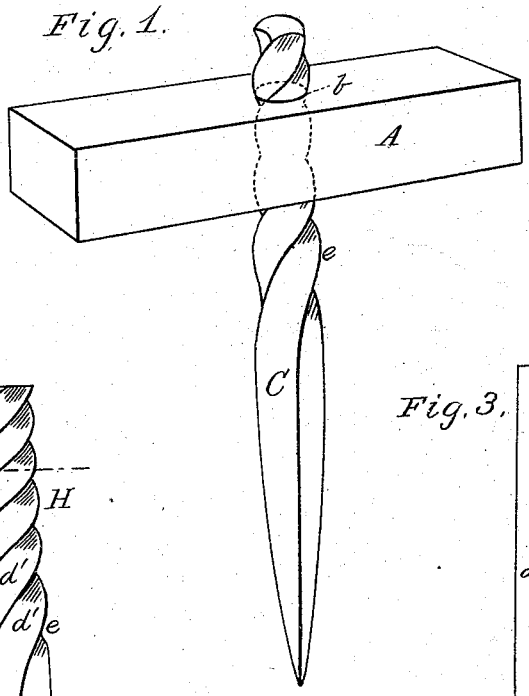


Fig. 2.

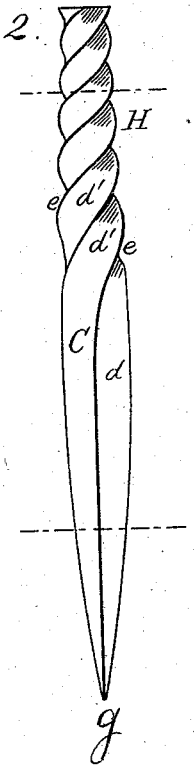


Fig. 3.

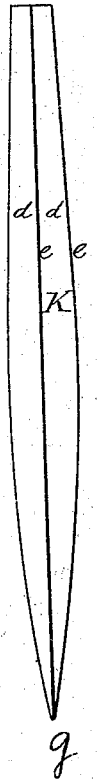


Fig. 5.

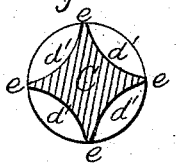
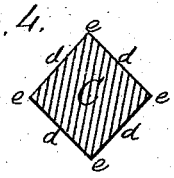


Fig. 4.



WITNESSES

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STEPHEN EMERY, OF CAMERON, MISSOURI.

IMPROVEMENT IN HARROW-TEETH.

Specification forming part of Letters Patent No. **182,652**, dated September 26, 1876; application filed August 12, 1876.

To all whom it may concern:

Be it known that I, STEPHEN EMERY, of Cameron, in the county of Clinton and State of Missouri, have invented a new and valuable Improvement in Harrow-Teeth; 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 drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a perspective view of the tooth and a portion of the frame. Fig. 2 is a side view of the tooth finished. Fig. 3 is a side view of the blank. Fig. 4 is a cross-section of the square body of the tooth, and Fig. 5 is a cross-section of its helical upper end.

This invention has relation to harrow-teeth; and it consists in a tooth constructed of a rectangular or prismatic blank, having its upper end twisted to bring its angles into helical form, as hereinafter shown and described.

The object of this invention is to provide a tooth which can readily be adjusted in the harrow-frame, either in the rotary direction or in the direction of the length of the tooth, and which will, at the same time, be firmly fixed in the frame, and not liable to be moved therein by the shocks from stones and other obstruction received in the course of its work.

In the accompanying drawings, the letter A designates a portion of the harrow-frame, in which a tooth is designed to be fixed. *b* represents a perforation in said portion of the frame, to receive the upper end of the tooth. C indicates the tooth, preferably made rectangular, as shown in the drawings, its sides *d* and angles *e* gradually converging to the point *g*. H designates the upper end of the tooth. This portion of the tooth is formed by twisting the upper end of a rectangular blank (indicated at K) one or more times, in which operation the angular edges *e* will be turned in spiral form around the tooth, forming threads of long or slow pitch, whose angular elevation from the body of the tooth will be increased by the twisting operation, as the sides *d* will become concave, as shown at *d'*.

The perforation *b* in the frame is designed to be made somewhat less in diameter than the tooth, and the helical end of the latter, which is usually drawn in somewhat tapering form toward the extremity, is inserted therein, and screwed up firmly by means of a wrench.

This tooth can be adjusted vertically, or in the direction of its length, to extend more or less from the frame, as may be desired, by turning it slightly to the right or left; and when the tooth becomes worn and dull, as it will by constant use, it can be turned around in such a manner as to bring a sharp edge and point to the front again. Because of the slow pitch of its spiral edges, it is not liable to become loose in its bearing after these adjustments; nor will it be loosened or rotated by casual shocks or concussions received in its course over the ground.

I am well aware that a harrow-tooth having a die-threaded shank of rapid pitch is not new. Hence I do not claim such invention.

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

A prismatic harrow-tooth having its upper end twisted to form spiral angular edges of slow pitch, substantially as specified.

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

STEPHEN EMERY.

Witnesses:

S. H. CORN,

THOS. E. TENNEY.