

(No Model.)

A. BOSTICK.
SPRING TOOTH HARROW.

No. 470,390.

Patented Mar. 8, 1892.

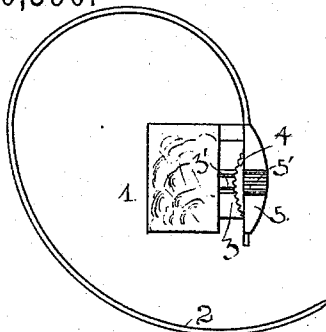


Fig. 1.



Fig. 4.

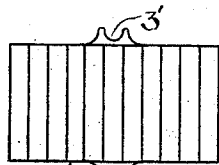


Fig. 5.

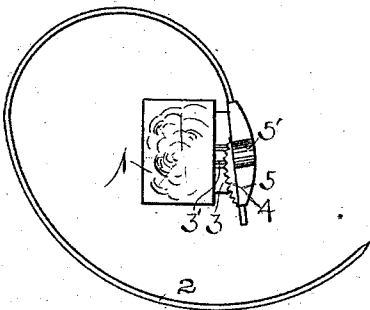


Fig. 2.

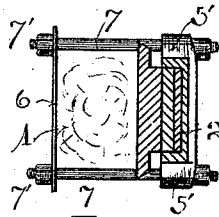


Fig. 6.

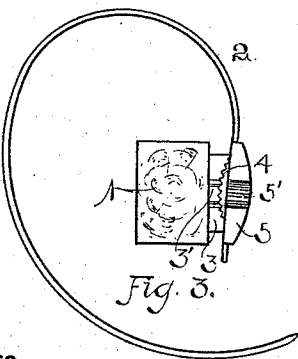


Fig. 3.

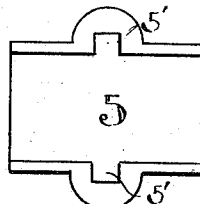


Fig. 7.

WITNESSES:

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UNITED STATES PATENT OFFICE.

ALONZO BOSTICK, OF MILLINGTON, MICHIGAN, ASSIGNOR TO THE NATIONAL HARROW COMPANY, OF JERSEY CITY, NEW JERSEY.

SPRING-TOOTH HARROW.

SPECIFICATION forming part of Letters Patent No. 470,390, dated March 8, 1892.

Application filed May 7, 1891. Serial No. 391,956. (No model.)

To all whom it may concern:

Be it known that I, ALONZO BOSTICK, a citizen of the United States, residing at Millington, in the county of Tuscola and State of Michigan, have invented certain new and useful improvements in Spring-Tooth Harrows; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to spring-tooth harrows; and its object is to provide an adjustment for the tooth that can be easily operated and yet effective in holding the tooth in the required position. This I accomplish in the following-described mechanism.

Figures 1, 2, and 3 are side views of the different adjustments of the tooth. Fig. 4 is a top view of the convex plate 4, showing transverse serrations. Fig. 5 is a top view of the concave plate 3, showing the transverse serrations. Fig. 6 is an end view showing the parts secured to frame 1. Fig. 7 is a top view of the lower clip or shoe 5.

1 is a part of the frame of the harrow.
2 is the tooth, being of the usual shape, but having a straight shank for engaging the tooth-seat.

3 is a plate flat upon its upper face and concave on its lower face and having across its concave face transverse corrugations.

4 is a plate convex on its upper side and having transverse corrugations across its convexity adapted to receive the serrations in plate 3. Its lower side is straight, and, together with the clip 5, forms the seat for the tooth. The plate 3 has on each side the ears 3', adapted to engage the bolts 7 7, that hold the parts in position. The clip 5 is provided with holes 5' 5' on each side to receive the bolt-heads. The lower surface of the clip 5 may be straight or convex. I prefer to make it convex. It forms a runner for the harrow and is a protection to the tooth from the wear consequent on its use.

6 is an ordinary straight clip across the top of the frame 1, through which the bolts 7 7 pass.

I place the tooth within the flanges of the clip 5, and upon the tooth the straight surface of the plate 4, and the plate 3 onto the plate 4, its concave surface down and the serrations filling into the serrations of the plate 4. In this position I secure the whole to the lower surface of the frame 1 by the bolts 7 7, one on each side of the frame and tooth-seat. By unscrewing the nuts 7' 7' the plate 4 may be moved front or back, so as to engage different serrations in the plate 3. It is obvious that this will throw the extreme end of the tooth up or down, as the case may be. Thus the tooth may be adjusted to the depth required.

It is the peculiar construction and arrangement of the parts that I claim as new and desire to secure by Letters Patent, viz:

In an adjustable harrow - tooth fastening, the combination, with a frame and a tooth having a straight shank, of the plate 3, having a straight upper surface and a lower concave surface, the concave surface being transversely serrated and provided with two ears, one on each side thereof, for engaging the bolts, and the plate 4, having its upper surface convex and transversely serrated and adapted to engage the serrations on plate 3 and its lower surface straight, forming the upper part of the seat for the tooth, and a clip adapted to receive and protect the tooth and having on each side sockets for receiving the heads of the bolts, and the bolts passing through the holes in sides of the clip, engaging the ears of plate 3 along the side of the frame, and through holes in the straight clip 6 across the top of the frame, and the clip 6, and the nuts 7' 7', engaging the bolts, whereby when the nuts are screwed down the tooth will be tightened and rigidly held in its seat and when loosened the serrated plates may be moved upon each other front or back, as desired, thereby when retightened adjusting the tooth, substantially as described, and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

ALONZO BOSTICK.

Witnesses:

A. H. SWARTHOUT,
L. C. SCHWABE.