(No Model.)

M. J. TODD.

SPRING TOOTH HARROW.

No. 438,123. Patented Oct. 7, 1890.

Fig. 1.

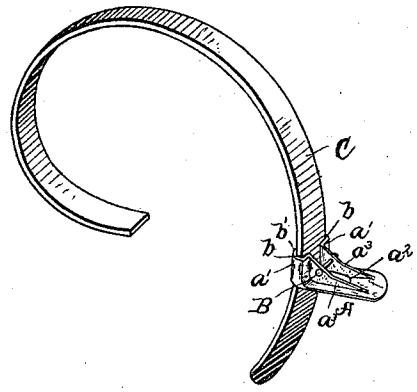


Fig. 2.

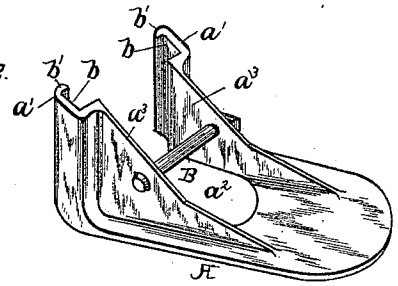
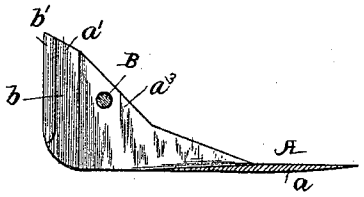


Fig. 3.



Witnesses.
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

MARQUIS J. TODD, OF CORNING, NEW YORK.

SPRING-TOOTH HARROW.

SPECIFICATION forming part of Letters Patent No. 438,123, dated October 7, 1890.

Application filed April 21, 1890. Serial No. 348,782. (No model.)

To all whom it may concern:

Be it known that I, MARQUIS J. TODD, a citizen of the United States of America, residing at Corning, in the county of Steuben and State of New York, have invented certain new and useful Improvements in Spring-Tooth Harrows, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention pertains to certain new and useful improvements in spring-tooth harrows having for its object the production of an individual tooth-gage for each tooth, to which it is secured at a point near the outer free end for regulating the depth of the tooth's penetration of the soil.

The invention consists in an individual shoe having parallel arms adjustably secured against the side of a curved or arched harrow-tooth at a point between the inner secured and outer free ends thereof, substantially as hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in perspective illustrating my invention. Fig. 2 is a similar view showing the same detached from a harrow-tooth. Fig. 3 is a vertical longitudinal sectional view.

Referring to the drawings, A designates a shoe, having a lower flat slightly-curved portion a and two forward parallel arms a' a', between which is an opening a^2, extending into the body portion of the shoe, as shown. Two vertical webs a^3 serve to brace or support the arms, with which and the body of the shoe they are made integral. The vertical parallel arms a' have opposite grooves or recesses b formed in their inner faces, the outer edges b' of said arms being bent or hooked, as shown.

B is a nutted bolt passed through coincident apertures of webs a^3 of arms a', whereby said arms can be drawn toward each other and made to firmly bind the longitudinal edges of a harrow-tooth C, which is inserted in the grooves or recesses b, as shown.

In practice an additional shoe is placed on each harrow-tooth by passing the latter down through the grooved or recessed arms of the shoe, which can be firmly secured at the desired point by tightening the arms through the agency of the nutted bolt. In this manner the shoe can be adjusted and rigidly secured at any desired point on the harrow-tooth, according to the depth it is desired the working or free end of each tooth should extend below the surface of the soil.

In addition to their serving as an individual depth-gage for each tooth, the shoes serve to hold the harrow-frame elevated out of contact with the soil, the shoes readily riding thereover, permitting the easy passage of the harrow.

I claim as my invention—

1. In a harrow having curved spring-teeth, the individual depth-gages herein described, having parallel arms adjustably secured against the sides of said teeth, which are placed between said arms, as set forth.

2. In a spring-tooth harrow, an individual depth-gage for each harrow-tooth, having a rearwardly-projecting portion and parallel arms formed therewith rigidly secured to said tooth, which is placed between said arms, substantially as set forth.

3. In a spring-tooth harrow, an individual depth-gage for each harrow-tooth, consisting of a shoe having parallel arms provided with opposite grooves or recesses and a nutted bolt for binding said arms on said tooth, substantially as set forth.

4. As an improved article of manufacture, an individual depth-gage for harrow-teeth, having a lower flat or curved portion, forward parallel arms, apertured connecting-webs, and a nutted bolt for binding said arms laterally against the side edges of a spring harrow-tooth, substantially as set forth.

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

MARQUIS J. TODD.

Witnesses:
JOHN B. OLMSTED,
HARRY HICKMAN.