(No Model.)

T. R. CRANE.

SPRING TOOTHED HARROW.

No. 402,000. Patented Apr. 23, 1889.

Fig. 1.

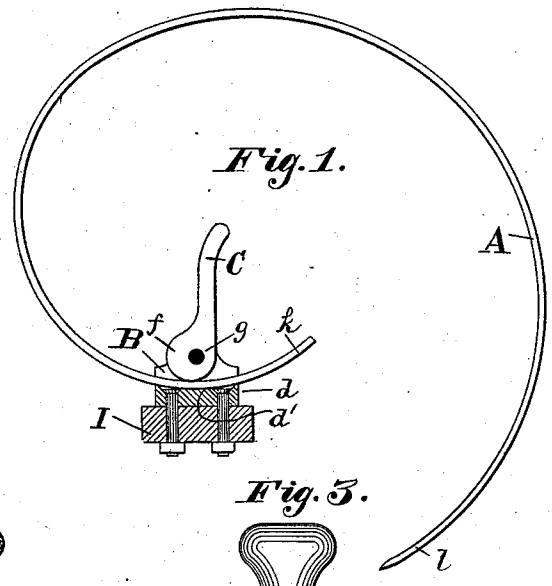


Fig. 2.

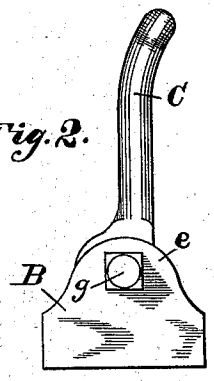


Fig. 3.

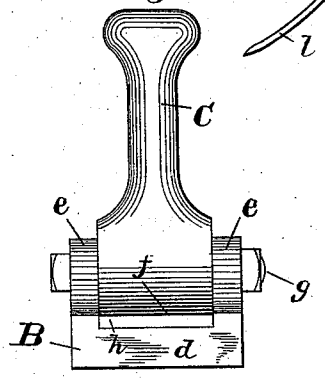


Fig. 4.

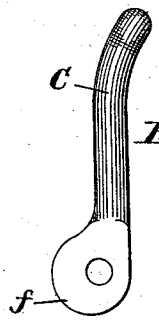
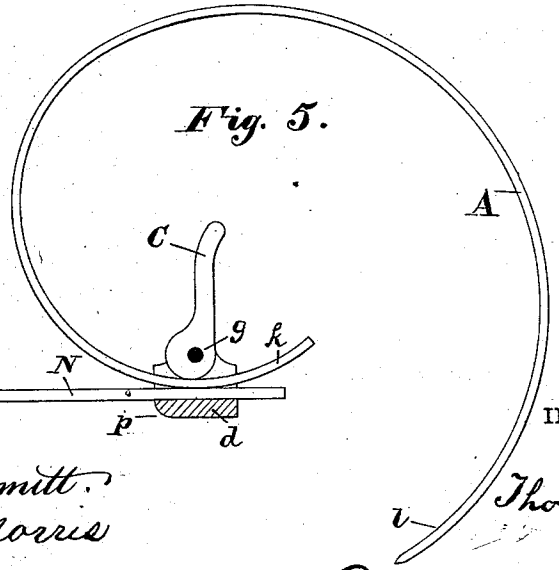


Fig. 5.



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THOMAS R. CRANE, OF HEATHSVILLE, VIRGINIA.

SPRING-TOOTHED HARROW.

SPECIFICATION forming part of Letters Patent No. 402,000, dated April 23, 1889.

Application filed December 20, 1888. Serial No. 294,141. (No model.)

To all whom it may concern:

Be it known that I, THOMAS R. CRANE, a citizen of the United States, residing at Heathsville, in the county of Northumberland and State of Virginia, have invented certain new and useful Improvements in Spring-Toothed Harrows, of which the following is a specification.

This invention relates to an improved holder or fastening for spring-teeth of harrows, and is illustrated in the accompanying drawings, in which—

Figure 1 shows a spring-tooth held by the fastening, the latter being in section and attached to a part of the harrow-frame. Figs. 2, 3, and 4 are detail views of the fastening. Fig. 5 is a view showing the fastening employed in attaching a spring-tooth to a drag-bar of a harrow.

The letter A designates a spring-tooth of any well-known form, such as are used on harrows for land. The object of this invention is to provide a holder or fastening device by which these spring-teeth may be secured and may be readily adjusted, so that the point of the tooth may take into the ground more or less, as desired.

The holder comprises a box, B, and a cam-lever, C. The box has a base, *d*, and two ears, *e*, attached to the base. The lever C is pivoted to the box, and has a cam-face, *f*, which confronts the said base *d*. In the present instance a bolt, *g*, passes through the two box-ears *e*, and also through the cam-lever. It will thus be seen that anything placed in the space *h* between the cam-face *f* and box-base *d* may be tightly clamped and held.

In Fig. 1 the box B of the holder is shown bolted to a beam, I, which is part of the harrow-frame, and the top surface of the base *d* is concave, as at *d'*, and the shank end *k* of the spring-tooth is clamped by the cam-lever C. By simply tilting the cam-lever C the tooth A may be shifted one way or the other in the box B, and thereby cause the point *l* of the tooth to take into the ground more or less.

In Fig. 5 a drag-bar, N, is shown attached to part of a harrow-frame, *o*, and the spring-tooth A is secured to the said drag-bar by the improved holder. In this instance the cam-lever C not only grips the shank end *k* of the tooth, but also grips the drag-bar N.

The lower front edge of the box-base *d* is beveled, as at *p*, to prevent it from catching the earth when being dragged along.

This device is simple and cheap and more convenient than any hitherto used for this purpose.

Having described my invention, I claim—

In combination with the box having a base with upwardly-extending vertical ears formed integral with the base, a cam-lever pivoted between said ears, a space between the lever and base, and a spring harrow-tooth secured in said space, substantially as specified.

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

THOMAS R. CRANE.

Witnesses:
JNO. T. MADDOX,
A. O. BABENDREIER.