

(No Model.)

L. C. WEST.
Spring Harrow Tooth.

No. 239,582.

Patented March 29, 1881.

Fig. 1

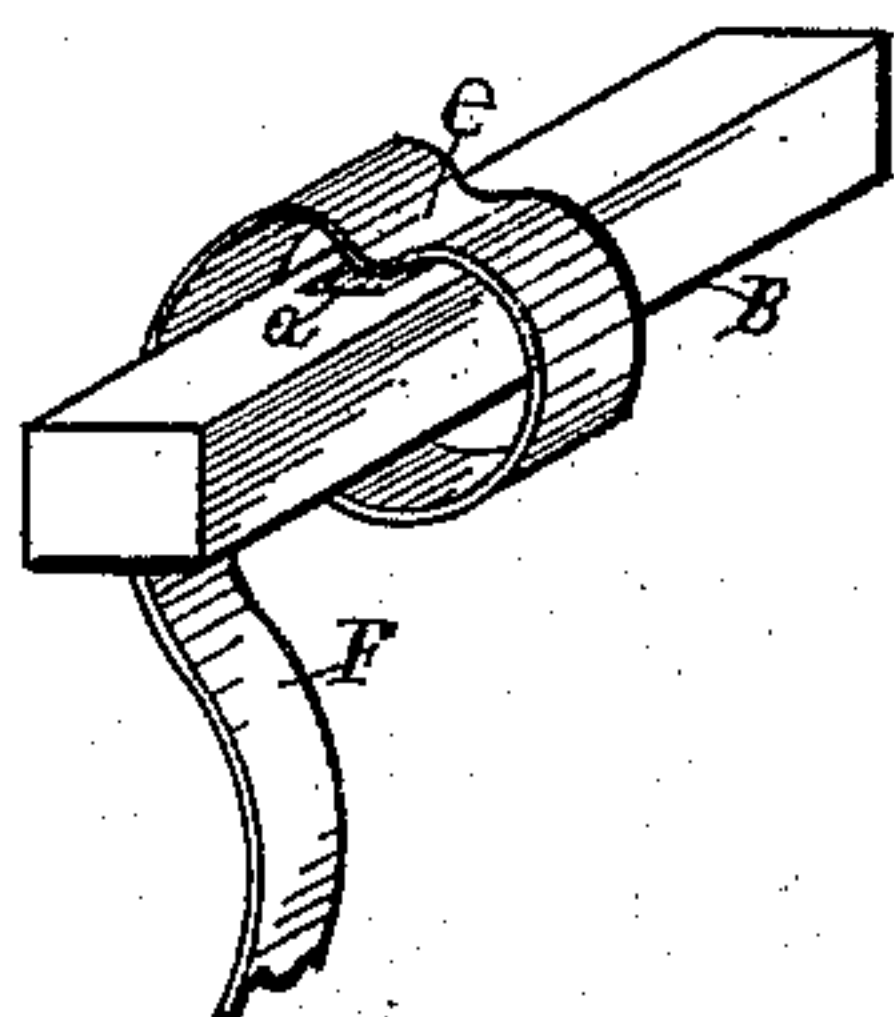


Fig. 2

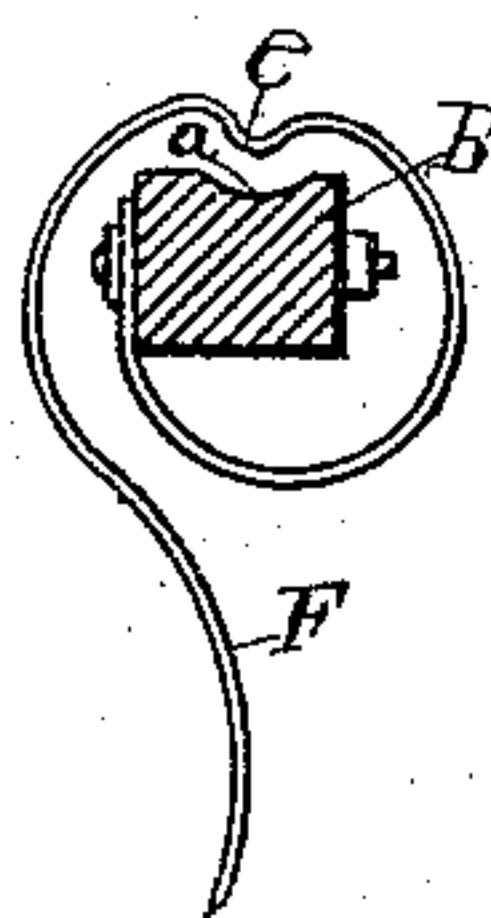


Fig. 3

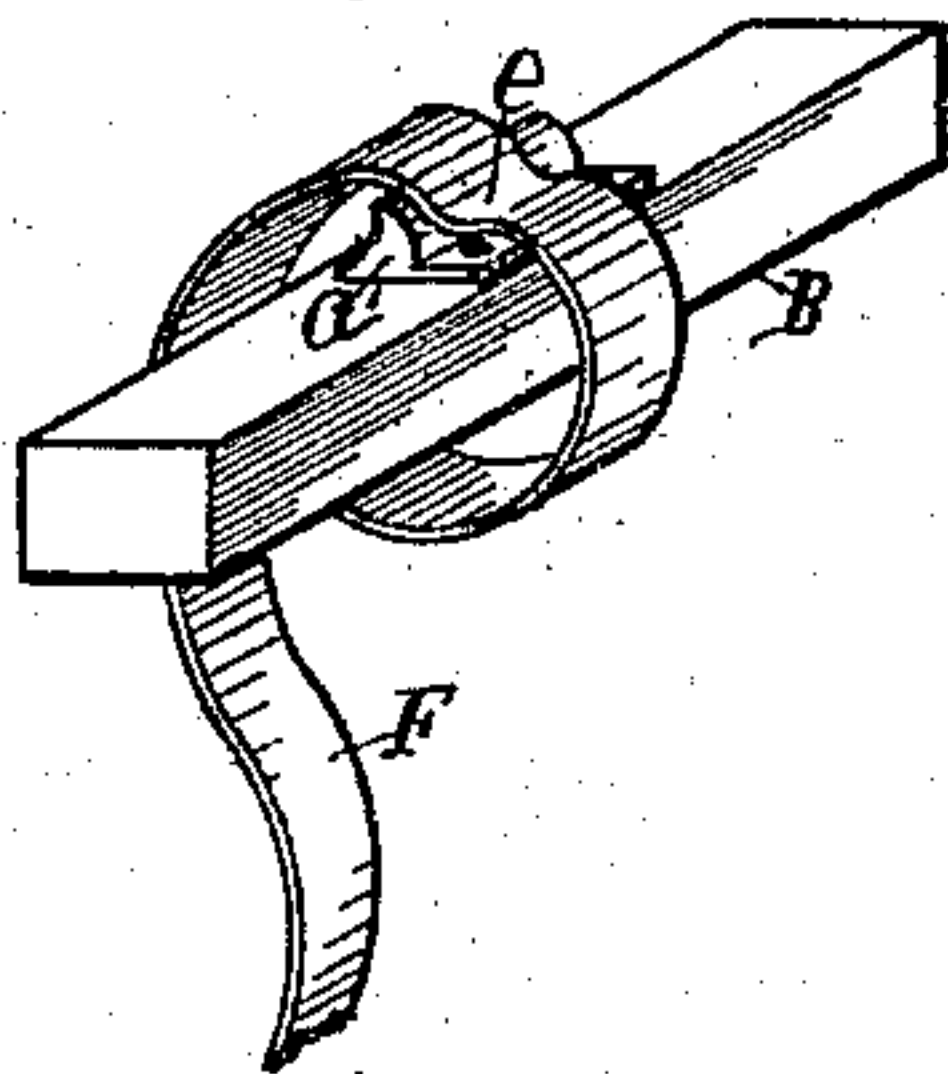
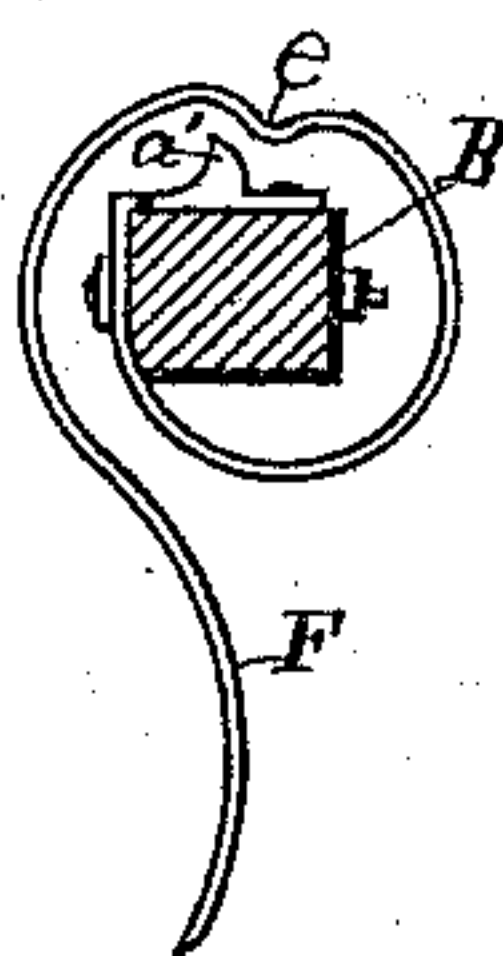


Fig. 4



Attest.

John C. Perkins

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UNITED STATES PATENT OFFICE.

LUCIUS C. WEST, OF KALAMAZOO, MICHIGAN, ASSIGNOR TO PHILLIP SCHAU
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SPRING HARROW-TOOTH.

SPECIFICATION forming part of Letters Patent No. 239,582, dated March 29, 1881.

Application filed November 13, 1880. (No model.)

To all whom it may concern:

Be it known that I, LUCIUS C. WEST, of Kalamazoo, Michigan, have invented new and useful Improvements in Spring Harrow-Teeth, of which the following is a specification.

My invention relates to spring harrow-teeth which coil around the beam to which they are secured, and the spring of which, when yielding to a resistance, is contractive. It has for its object certain improvements which will enable such teeth to automatically control their degree of elasticity in conformity to the degree of hardness of the soil.

The construction embodying my improvements consists in a beam having a mortise formed in its top face, or a block of wood or a casting secured thereon in lieu of said mortise, said beam having a tooth secured to its front face and circling around the beam. It is desirable that the working-point of the tooth should be located at a point perpendicularly beneath the front face of the beam. In the upper part of the circular body of the tooth I form a depression by bending in the desired shape when forming the tooth, the front shoulder of which depression automatically engages the mortise or block of the beam, as and for the reasons hereinafter further explained.

In the accompanying drawings, forming a part of this specification, Figure 1 is a rear perspective view of the beam with its mortise and tooth; Fig. 2, edge and cross-section of same; Fig. 3, rear perspective of the beam with its block or casting and tooth, and Fig. 4 edge and cross-section of same.

B is the tooth-beam, having a mortise, casting, or block.

F is the tooth, (which may be made of any dimensions and proportions desirable,) having the depression *e* formed in its upper curved portion.

It is found in harrowing a field composed of mellow soil interspersed with patches and strips of hard soil that an automatic variation in the degree of elasticity of the tooth is desirable, conforming to this variation of the soil. This result as produced by my construction is explained by the operation as follows: When the harrow is working in mellow soil the shoulder or depression *e* of the tooth never enters the mortise *a*, nor engages the block, which leaves all the elastic effect of the circle to the tooth; but should the tooth engage with a strip of hard soil the shoulder will enter the mortise *a*, (or engage the block *a'*), as seen in Figs. 1 and 3, which stiffens the tooth by depriving it of all its elasticity except what is located in the portion between *e* and the working end. Thus the tooth promptly and automatically adjusts itself to the varying conditions of the soil.

What I claim is—

In a harrow or cultivator, the tooth-beam having a mortise, *a*, or its equivalent, in combination with a spring-tooth having the depression adapted for automatic engagement with said mortise or equivalent, substantially as described and shown, to effect the objects set forth.

LUCIUS C. WEST.

Witnesses:

CHAS. L. SCHILLING,
I. L. WEST.