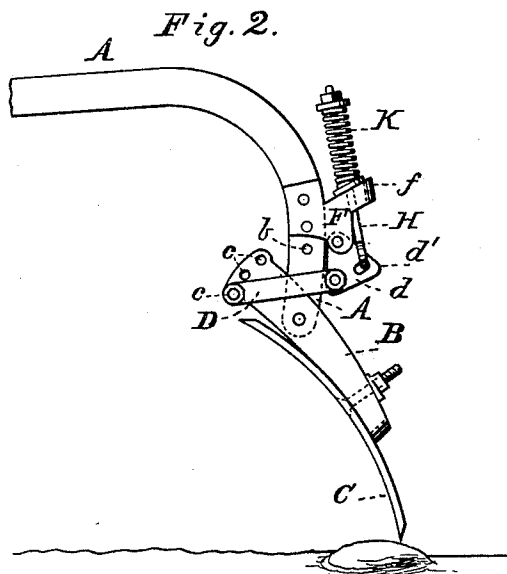
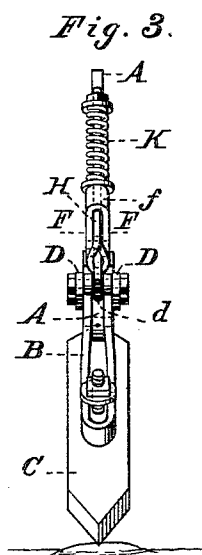
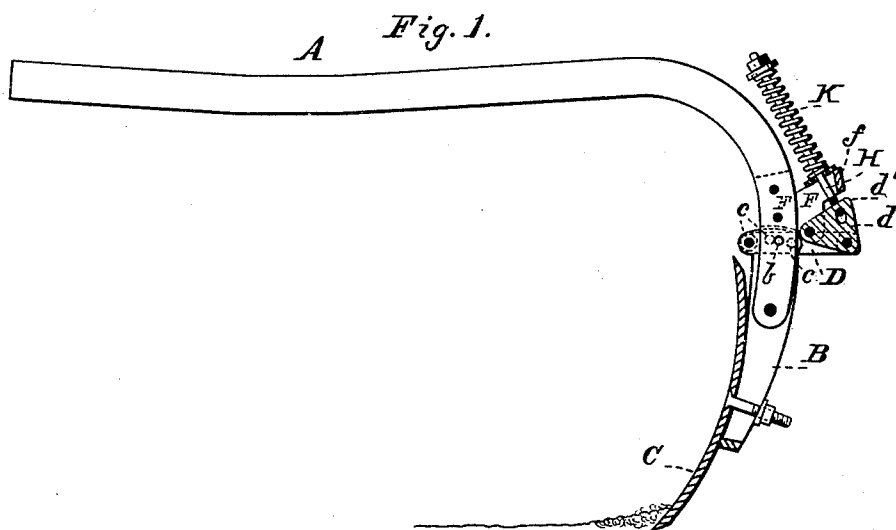


(No Model.)

J. W. KRAUS.
CULTIVATOR TOOTH.

No. 460,828.

Patented Oct. 6, 1891.



WITNESSES

Villette Anderson,
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INVENTOR

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UNITED STATES PATENT OFFICE.

JACOB W. KRAUS, OF STERLING, OHIO.

CULTIVATOR-TOOTH.

SPECIFICATION forming part of Letters Patent No. 460,828, dated October 6, 1891.

Application filed April 22, 1891. Serial No. 389,976. (No model.)

To all whom it may concern:

Be it known that I, JACOB W. KRAUS, a citizen of the United States, and a resident of Sterling, in the county of Wayne and State of Ohio, have invented certain new and useful Improvements in Cultivator-Teeth; 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 letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of this invention and is a vertical section. Fig. 2 is a side view, the beam being broken. Fig. 3 is a rear view.

This invention relates to improvements in cultivator-teeth; and it consists in the novel construction and combination of parts, as hereinafter set forth.

In the accompanying drawings illustrating the invention, the letter A designates the beam, to the lower curved end or standard of which is pivoted the shovel-plate B. This plate is bifurcated or longitudinally slotted, as shown, the lower end of the beam extending into said slot to the point where it is pivoted. The tooth or shovel proper C is held to this plate by a bolt extending through said slot and held by a nut, rendering the tooth adjustable for a greater or less depth. To the upper end of these plates is pivoted the link or shackle D, which at its opposite end is pivoted to one angle of a V-shaped toggle-piece *d*. The link or shackle may be pivoted in any one of the holes *c* of the shovel-plate B to give the desired adjustment. This toggle is pivoted at its point between the arms or loop of a plate F, secured one to each side of the beam. To the outer angle *d'* of the toggle-piece is connected a rod H, which passes up through a lug or ear *f* on the plate F, and around the upper portion of which is coiled a spring K. The lower end of this spring is seated on the lug *f*, and its upper end is held by a nut or washer on the upper end of the rod.

It will be seen that when the tooth encounters an obstacle its lower portion will be pressed rearwardly and upwardly, which will, by means of the link and toggle, draw downwardly on the rod H, thereby compressing the spring K. The tooth in this position will pass over the obstacle, the expansion of the spring causing it to resume its normal position.

In case the spring should become broken or disabled, the link or shackle D may be removed and a wooden pin driven through one of the holes in the plate B and a hole *b* formed for the purpose in the standard or beam, making what is commonly known as a "pin-breaker." When the tooth is resisted in its operation, the wooden pin will break, allowing the tooth to swing back. Another pin is then inserted. By this arrangement the operator is not obliged to cease work until a new spring can be obtained.

By making the shovel adjustable in its holding-plate and also providing for the adjustment of the link or shackle with relation to said plate, it will be seen that the tooth can be readily set to all kinds of soil and to the required depth.

By means of a small nut on the upper end of the rod H the tension of the spring K may be properly adjusted.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination, with the beam or standard having the brake-pin hole therein and the bifurcated shovel-plate pivoted thereto, of the shovel adjustably held to said plate, the adjustable links, the V-shaped toggle, and the draw-rod and spring connected to said toggle, substantially as specified.

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

JACOB W. KRAUS.

Witnesses:

FRANKLIN A. HOUGHTON,
JOHN LEE, Jr.