

(No Model.)

E. S. BAILEY & J. M. COONS.
CULTIVATOR ATTACHMENT.

No. 445,871.

Patented Feb. 3, 1891.

Fig. 1.

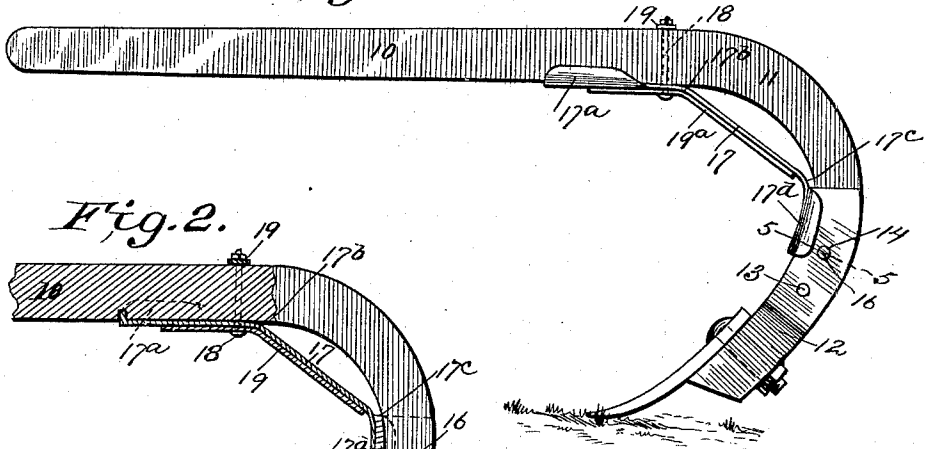


Fig. 2.

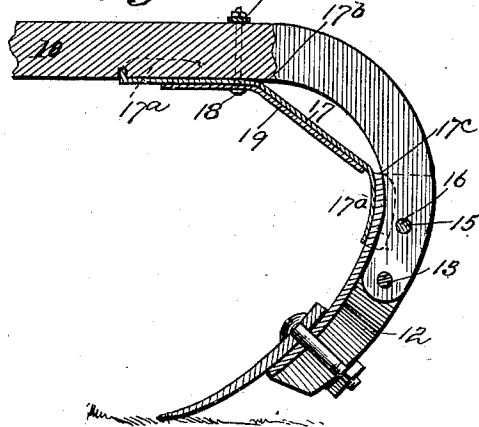


Fig. 5.

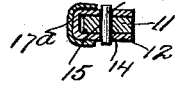


Fig. 3.

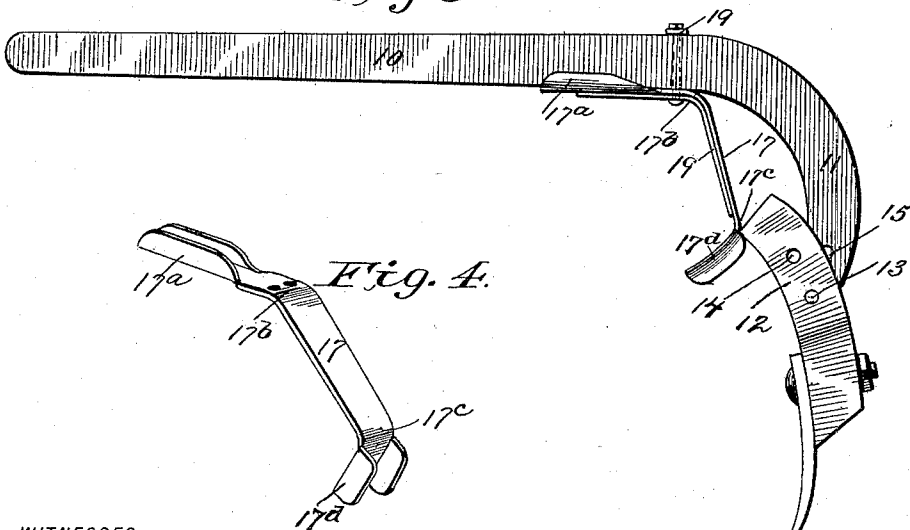
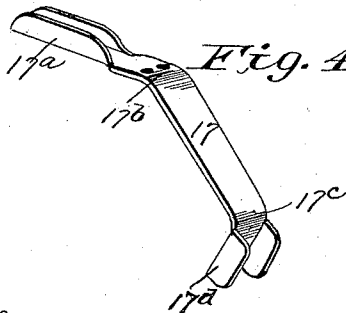


Fig. 4.



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EDWARD S. BAILEY AND JAMES M. COONS, OF ORRICK, MISSOURI.

CULTIVATOR ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 445,871, dated February 3, 1891.

Application filed September 26, 1890. Serial No. 366,275. (No model.)

To all whom it may concern:

Be it known that we, EDWARD S. BAILEY and JAMES M. COONS, of Orrick, in the county of Ray and State of Missouri, have invented a new and useful Improvement in Cultivator Attachments, of which the following is a specification.

Our invention relates to an improved cultivator attachment, and is designed to prevent accidents occurring to the plow or shovel by striking rocks, roots, or other obstructions; and with this object in view it consists of a shoe pivoted to the end of the plow-standard and a peculiarly-constructed spring adapted to bear upon the upper end of the shoe and hold the same in place, the shovel or plow being secured to the lower end of the shoe; and our invention consists, further, in certain details of construction and combination of parts whereby we produce an attachment which is simpler, cheaper, and more easily applied than similar devices now in use.

In the drawings, Figure 1 is a side view of our improved cultivator attachment. Fig. 2 is a detail view of the springs, and Fig. 3 is a view showing the position the parts assume when an obstruction is met.

Referring to the drawings, 10 indicates the plow or cultivator beam, and 11 the standard attached thereto. The standard and beam may be integral or separate, as desired, one of the chief points of our invention being its adaptability to all patterns of plows and cultivators now in use. A shoe 12 is pivoted near its upper end to the lower end of the standard 11 by means of the bolt 13. The shoe 12 is essentially U-shaped in cross-section, the closed side being placed foremost, and the upper end of said shoe is somewhat contracted, as shown, in order to fit more closely upon the end of the standard, and provide a broad base for the attachment of plows, shovels, &c.

Near the upper end of the shoe, in both sides of the same, are formed the apertures 14, which register with an aperture 15 in standard 11. A break-pin 16 may or may not be passed through these apertures, as desired. A leaf-spring plate 17 is secured at its upper end to the under side of beam, the lower end of said spring bearing upon the upper end of

shoe. The upper end of the spring has its edges bent up around the side of the beam, as shown at 17^a, and said spring is secured to the beam by means of bolts 18, passing through the spring 17, resting against the beam, and through a clip-plate 19, arranged upon the upper side of beam. At a point 17^b, just rear of the bolts 18, the spring-plate 17 is bent downwardly at an obtuse angle, and continued straight until within a short distance of the lower end of spring—say at 17^c—when said plate is bent outwardly and downwardly parallel with the shoe 12, the bent end bearing upon the upper end of shoe and holding the same in place. The edges of the lower end of spring-plate are bent rearward, as at 17^d, adapted to embrace the front side of shoe and act as a guide for the same.

The spring-plate 17 may be strengthened by any desired number of leaves 19, said leaves being secured at their upper ends by the bolts 18, and extend along the straight portion of the plate 17 down as far as the bend 17^c, each plate being bent at 17^b the same as the plate 17.

With a plate constructed and arranged as described the shoe is braced by the straight portion between 17^b and 17^c, and, if desired, the break-pin may be omitted, as any resisting force that will curve the straight portion of the plate 17 will break a wooden pin. The leaves 19, also sliding on the bent end of plate, tend to brace the shoe.

From the above it will be seen that we provide an attachment that is cheap, simple, and easily applied, and one that performs additional functions to those commonly in use by dispensing with the break-pin or extra springs.

Having thus described our invention, what we claim is—

1. In a cultivator attachment, the combination, with a beam and rigid standard, of a shoe pivotally attached to the lower end of said standard, and a leaf-spring the central portion of which is straight, the end portions bent at obtuse angles to the central portion, the upper end being secured to the under side of the beam, the lower end bearing upon the upper end of the shoe, the edges of the lower portion being bent rearwardly to partially em-

brace the front side of the shoe, all arranged and adapted to operate substantially as shown and described.

2. In a cultivator attachment, the combination, with a beam and rigid standard, of a shoe 5 pivotally attached to the lower end of said standard, a leaf-spring having a straight central portion, and the end portions bent at obtuse angles to the central portion, the upper 10 end portion being secured to the under side of the beam, the edges of said end portion being bent up around the sides of the beam, the lower end portion bearing upon the upper

end of the shoe, the edges of said lower end portion being bent rearwardly to partially embrace the shoe, and an additional leaf-spring 15 secured to the beam beneath the upper end portion and extending along the upper and central portions as far as the lower end portion, substantially as shown and described.

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