(No Model.)

A. B. CLARK.

SPRING HOE FOR CULTIVATORS.

No. 275,146. Patented Apr. 3, 1883.

Fig. 1.

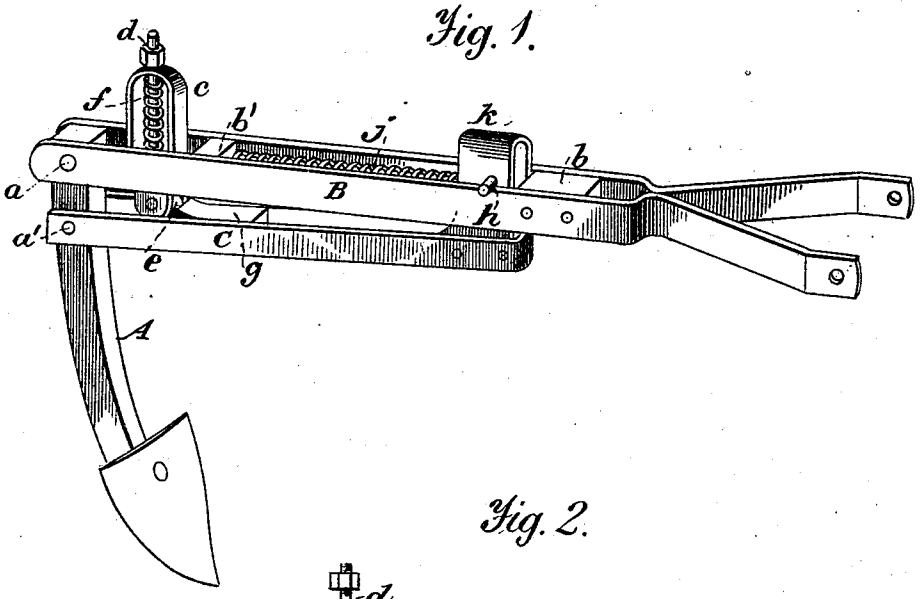
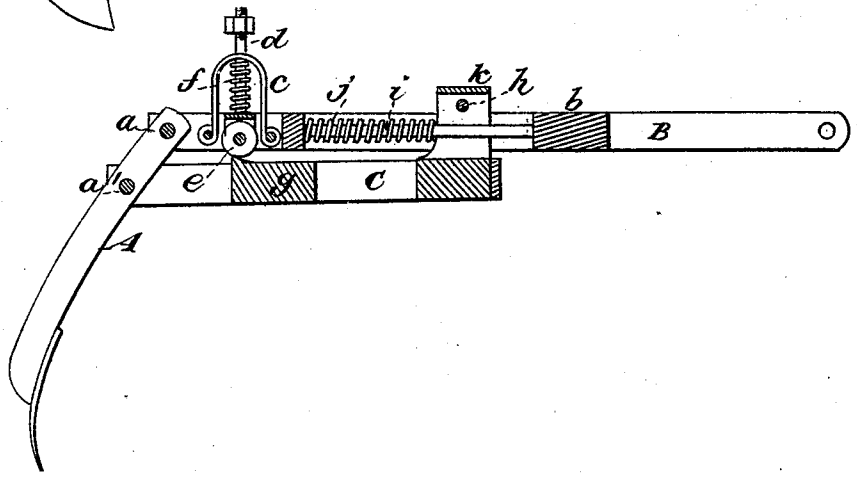


Fig. 2.



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UNITED STATES PATENT OFFICE.

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SPRING-HOE FOR CULTIVATORS.

SPECIFICATION forming part of Letters Patent No. 275,146, dated April 3, 1883.

Application filed December 7, 1882. (No model.)

To all whom it may concern:

Be it known that I, ALVIN B. CLARK, a citizen of the United States, residing at Richmond, in the county of Wayne and State of Indiana, have invented certain new and useful Improvements in Spring-Hoes for Cultivators; 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 the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in plows, more particularly to that class known as "cultivators," "sulky-plows," "double-shovel plows," and the like.

The object of my invention is to construct a plow-standard that will, when the point or sides of the plow strike an obstruction, readily yield to a certain extent, to prevent breakage, until the obstruction is passed, when it will again assume its normal position. I accomplish this object by means of the following construction, which will be more fully pointed out in the specification and claim.

Similar letters of reference refer to similar parts of the drawings.

Figure 1 represents a perspective view of my improved plow standard and beam. Fig. 2 is a sectional longitudinal view of the same.

A is an ordinary plow-standard, formed either curved or straight, as desired. Its lower extremity is shod with a V-shaped shovel or any other suitable device for turning the soil. Its outer end is perforated at two points, through which pins *a a'* pass.

Beam B is formed of two strips of metal held about the same distance apart as the thickness of the standard A by cross-bars *b b'*. These cross-bars are held in place by pins passing through the strips and cross-bars. Between the cross-bars *b'* and the standard A is secured a metal loop, *c*, that rises above the beam B. The center of this loop *c* is perforated to receive a pin, *d*. This pin *d* has on its outer end an adjustable nut. On the opposite end of said bolt or pin *d* is secured, by means of ears having perforations, a roller, *e*. Said roller is mounted on a shaft that passes through the perforations in the ears of the pin *d*. Between the center of the loop *c* and the ears of pin *d* is secured a coiled spring, *f*, that presses at one end against the shoulder above the roller *e*, and at the other end against the center of the loop *c*. The outer ends of beam B are perforated to receive the pin *a*, and the inner ends are perforated and spread outward.

A supplemental beam, C, is formed of two strips of metal with perforations in their outer ends to receive pin *a'*, on which it is pivoted. Between said plates or strips is secured by means of pins (or otherwise) a cross-bar, *g*. This cross-bar is formed at one end the same thickness as the width of the strips, and at the other end is thrown up above the edge of the strips, by this construction forming an inclined surface on which the roller *e* is caused to traverse. The point of contact by the roller *e* in front of the incline stops the movement of the roller *e* until by a sudden jerk or strain the roller is moved upward above the point, and is carried forward along the surface of the incline, while the point of the shovel or plow is retarded.

At the inner end of beam C, and between the strips, is secured a metal loop, *k*, that is formed to pass between the metal strips of beam B. The outer portion of this loop is perforated to receive a pin, *h*, the outer ends of which rest on the upper edges of the beam B. Lengthwise through this loop passes a rod, *i*, on which is loosely slipped a coiled spring, *j*. One end of this spring presses against the inner edge of the loop *k* and the opposite end presses against inner face of the cross-bar *b'*. The rod *i* is secured at one end to cross-bar *b'* and at the opposite end to cross-bar *b*.

The operation of my device is as follows: Draft is attached to beam B at the perforated ends shown diverged at an angle outward; the plow or shovel point is inserted in the soil, when all the parts remain in position, as shown in Fig. 1. When the point of the plow or shovel strikes an obstruction, the roller *e* is raised above the edge of cross-bar *g* and caused to travel on the inclined surface of said cross-bar

compressing springs *f* and *j*. Said springs draw the parts back to their normal position when the obstruction is passed.

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

In a plow or cultivator, the standard A, beam B, having loop *c*, roller *e*, pin *d*, spring *f*, rod *i*, and spring *j*, in combination with the beam C, having loop *k*, pin *h*, and cross-bar *g*, having inclined upper surface, as shown and specified.

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

ALVIN B. CLARK.

Witnesses:
W. E. BELL,
IDA M. BELL.