

(No Model.)

J. A. PUBLLOW.

SPRING ATTACHMENT FOR SPRING TOOTH CULTIVATORS.

No. 565,505.

Patented Aug. 11, 1896.

Fig. 1.

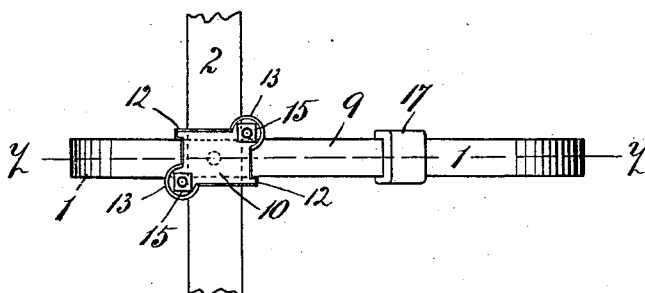


Fig. 2.

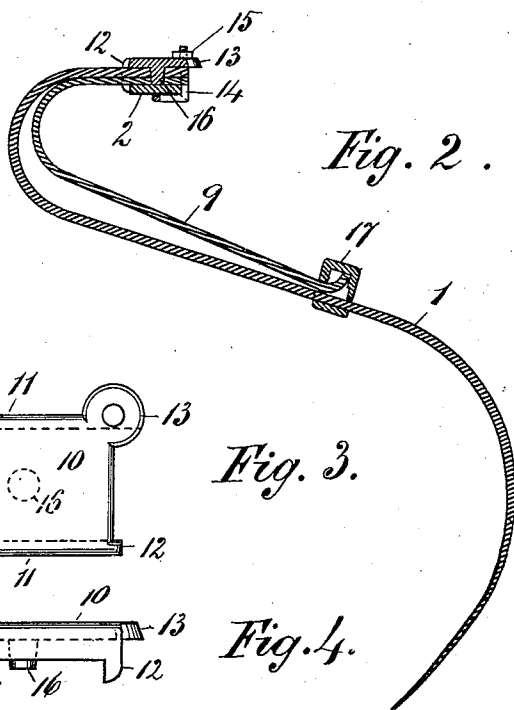


Fig. 3.

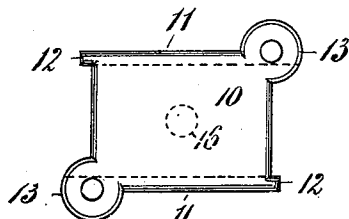
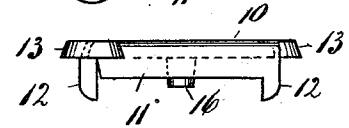


Fig. 4.



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UNITED STATES PATENT OFFICE.

JAMES A. PUBLOW, OF BROCKVILLE, CANADA.

SPRING ATTACHMENT FOR SPRING-TOOTH CULTIVATORS.

SPECIFICATION forming part of Letters Patent No. 565,505, dated August 11, 1896.

Application filed March 26, 1896. Serial No. 584,952. (No model.) Patented in Canada August 25, 1894, No. 46,891.

To all whom it may concern:

Be it known that I, JAMES ALFRED PUBLOW, a citizen of Canada, residing at Brockville, in the Province of Ontario, in the Dominion of Canada, have invented certain new and useful Improvements in Spring Attachments to Spring-Teeth of Cultivators, (for which the J. W. Mann Manufacturing Company, Limited, as my assignees, obtained a patent in Canada, No. 46,891, bearing date August 25, 1894,) of which the following is a specification.

My invention has for its object to reinforce spring-teeth of cultivators by a spring attachment secured to the upper part to prevent breakage by reaction when the point of the tooth is suddenly released from strain.

My invention consists of an auxiliary or supplemental flat spring conforming to the heel of a tooth and approximately conforming to the upper portion, and attached to the tooth by the clip which holds the tooth to the tooth-bar, so that the lower or free end of the spring will press against the back of the tooth.

Figure 1 is a top view of a spring-tooth reinforced by my attached spring and both clipped combinedly to the tooth-bar of a cultivator. Fig. 2 is a section of the same on line Y Y. Fig. 3 is a plan of the clip-plate enlarged, and Fig. 4 is an edge view of the same.

The spring-teeth 1 are reinforced at the heel by an auxiliary spring 9, back of the tooth, and said spring has approximately the configuration of the tooth at the heel for a portion of its length, and the ends of said spring and tooth are clipped to the top of the tooth-bar or bull 2 by a plate 10, having flanges 11, which fit against and cover the side edges of both the tooth and spring to keep them in alinement and together prevent them twisting out of position. Said plates have also solid lugs 12, extending downwardly from diagonally-opposite corners, to fit into the angles of intersection of the tooth and bull, and perforated lugs 13, extending outwardly from the two opposite corners, to receive the legs of a clip 14, passing under the bull, and said legs are provided with a nut 15, screwing thereon against the top of said lugs 13, to hold the tooth, spring, and plate firmly on the bull adjustably, so that by loosening the nuts said tooth, spring, and plate are movable along the bull to adjust the teeth at any desired distance apart, as circumstances may deem necessary.

The plate 10 is preferably provided at the center with a teat 16, which enters a hole provided for it in the tooth and a hole provided for it in the spring 9, to combine the parts firmly and to move unitedly.

The opposite end of the auxiliary spring is connected to the tooth at any point below the heel or top end by a sleeve or socket 17, which slips on the tooth, and said socket or sleeve receives the end of the spring, so that when the tooth and spring are clipped to the tooth-bar the sleeve or socket 17 will frictionally hold the end of the spring to the tooth and support the tooth when it flies forward after being suddenly relieved from a heavy strain. The end of the spring is slightly upset to fit into a corresponding recess in the sleeve or socket to prevent the sleeve sliding from the spring and down the tooth.

I claim as my invention—

1. In a cultivator, the combination with a curved spring-tooth and tooth-bar, of an attached spring 9, having one end uniform with the heel of the tooth, the middle portion approximately conforming to the curvature of the upper part of the tooth, and the lower end of said spring pressing against the back of the tooth, a socket 17, sleeved on the tooth and loosely retaining said lower end of the spring, and a laterally-adjustable clip clamping the heel of the tooth and the corresponding end of the spring to the tooth-bar, as set forth.

2. In a cultivator having spring-teeth substantially as shown and described, the combination with a tooth of an auxiliary or attachable spring having one end conforming to the heel of the tooth, the middle portion approximately conforming to the upper part of the tooth, the lower end pressing against the back of the tooth, and a clip securing the heel of the tooth and corresponding end of the spring to the tooth-bar, as set forth.

3. In a spring-tooth cultivator, the independently-formed auxiliary spring 9, of the conformation shown, one end of the spring and corresponding heel of the tooth clipped to the tooth-bar, and the other or lower end of the spring pressing against the back of the tooth, said spring being removably attached to the tooth and tooth-bar, as set forth.

JAMES A. PUBLOW.

Witnesses:

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