

(No Model.)

P. F. WELLS.
SPRING TOOTH.

No. 280,104.

Patented June 26, 1883.

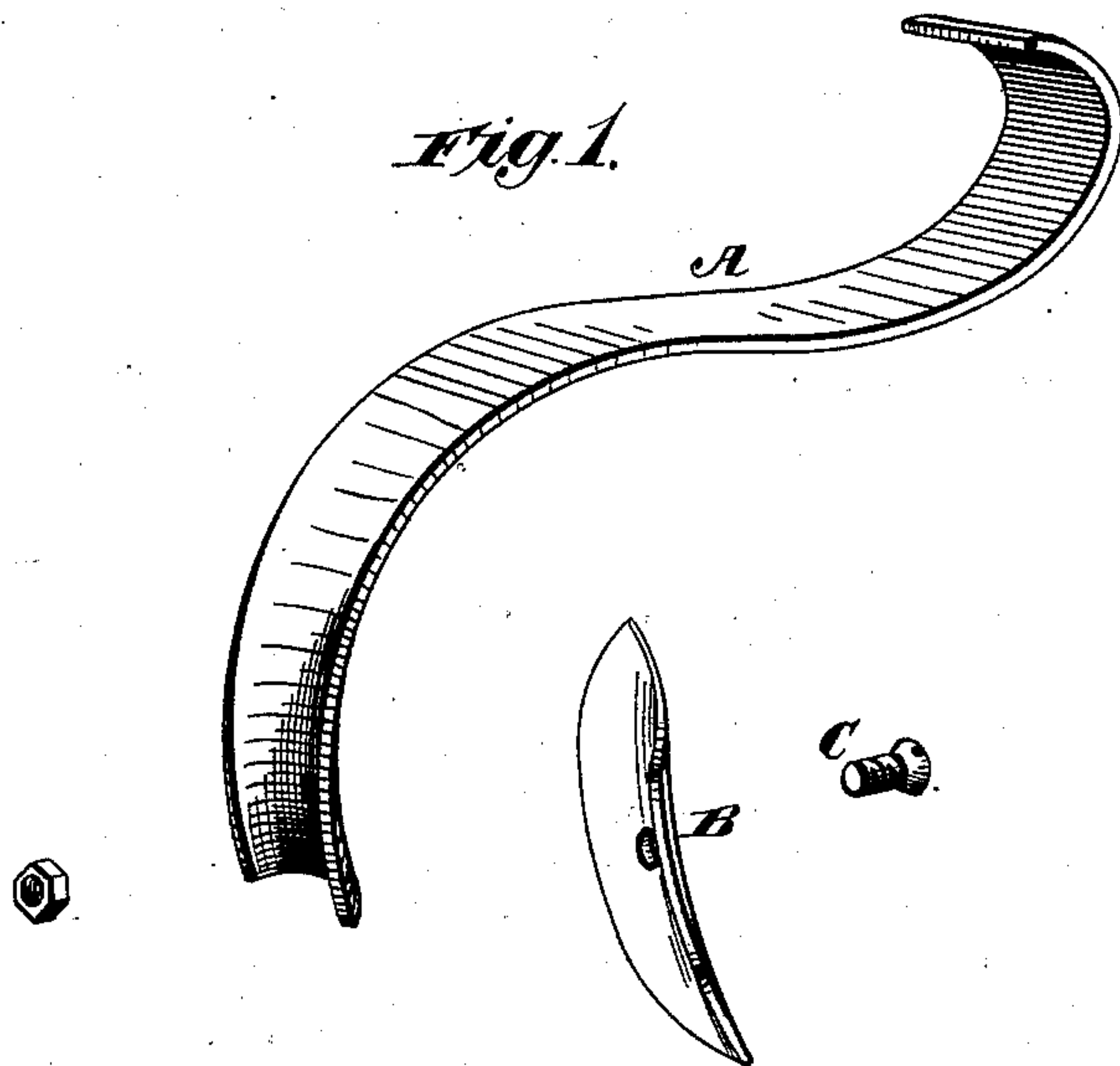
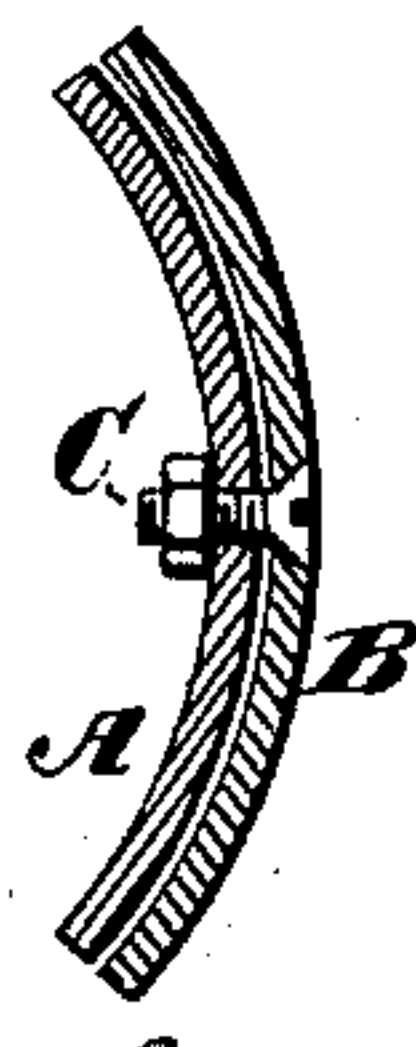


Fig. 2.



Witnesses.

Robert Emmett.

J. A. Rutherford

Inventor.

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By

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Atty.

UNITED STATES PATENT OFFICE.

PHILIP F. WELLS, OF MILFORD, MICHIGAN, ASSIGNOR OF ONE-HALF TO
H. A. KIPP, OF SAME PLACE.

SPRING-TOOTH.

SPECIFICATION forming part of Letters Patent No. 280,104, dated June 26, 1883.

Application filed December 19, 1882. (No model.)

To all whom it may concern:

Be it known that I, PHILIP F. WELLS, of Milford, county of Oakland, State of Michigan, have invented a new and useful Improvement in Spring-Teeth; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to improvements in that class of vibratory spring-teeth for harrows and cultivators which are provided with attached points constituting supplemental teeth; and the object of my invention is to provide an improved construction of the vibratory spring-tooth and its separate point, that the latter can be simply attached by a single bolt, and yet be incapable of turning sidewise on such single point of attachment. This object I accomplish in the manner hereinafter described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 represents perspective views of the parts detached, and Fig. 2 is a cross-sectional view through the point where the attaching-bolt is arranged.

The vibratory spring-tooth A is composed of a thin plate of spring metal, rolled or otherwise formed so that its lower end is concavo-convex, or so that the front side of its lower end is convex, as shown in Fig. 2. The point B is preferably a reversible point adapted to fit upon and be firmly secured to the lower part of the spring-tooth, and for this purpose it is shaped in a manner similar to that of the lower end of the tooth—that is to say, the point is formed of a concavo-convex plate of metal, the rear concave surface resting upon the front convex surface of the tooth.

C is a bolt passing through the point and lower end of the tooth. Said point and tooth may be provided either with one or a series of bolt-sockets for the purpose of securing them properly together. It is evident that when constructed and bolted together in the manner described, the point cannot turn sidewise, but will be held firmly to its work. It is obvious, also, that such a construction stiffens both the tooth and the point, so that a much lighter point can be used without danger of breaking.

The flexibility necessary in the tooth necessarily prevents its being too highly tempered; but it is found very advantageous and desirable to temper the point to such a degree that it will readily polish in various kinds of soil.

By my invention this can readily be secured without diminishing the flexibility of the tooth.

What I claim is—

1. The flat spring-tooth formed with a transverse curve at its lower end to provide a front convex surface, combined with a point having a transverse curve to form a rear concave surface, the parts being connected substantially as described.

2. The flat spring-tooth formed with a transverse curve at its lower end to provide a front convex surface, combined with the reversible point having a transverse curve to form a rear concave surface, the parts being detachably connected by a bolt, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

PHILIP F. WELLS.

Witnesses:

N. S. WRIGHT,
N. M. PORTER.