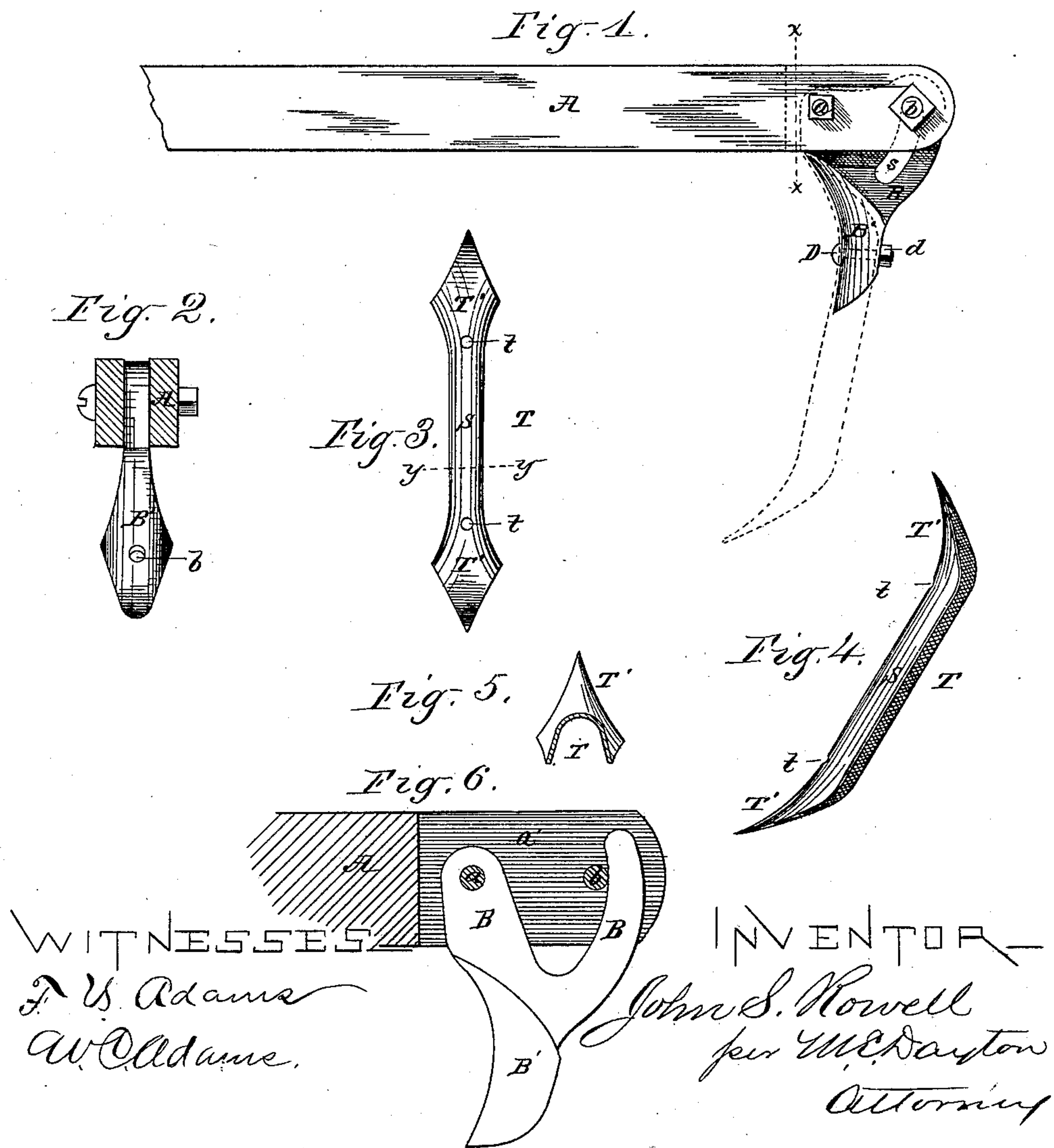


(No Model.)

J. S. ROWELL.
SEEDER OR CULTIVATOR TOOTH.

No. 256,922.

Patented Apr. 25, 1882.



UNITED STATES PATENT OFFICE.

JOHN S. ROWELL, OF BEAVER DAM, WISCONSIN.

SEEDER OR CULTIVATOR TOOTH.

SPECIFICATION forming part of Letters Patent No. 256,922, dated April 25, 1882.

Application filed October 12, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. ROWELL, of Beaver Dam, in the State of Wisconsin, have invented certain new and useful Improvements in Seeder-Teeth and their Connections; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to double-pointed teeth for seeders or cultivators, and to the combination of such teeth with a friction "slipping" plate and beam of a seeder or cultivator.

It consists, first, in a double-pointed tooth, which, as distinguished from the ordinary double or reversible tooth-point, comprises a shank provided with a point at each end, the whole being made of the usual length of a seeder-tooth and shank, and shaped from a strip of sheet-steel by being folded to form a central or shank portion of great strength, and by being flared and curved forward at its ends to form the shovel-points, as will be hereinafter more fully set forth.

It consists, second, in the combination, with the beam and with a double-pointed tooth, of a plate having a friction or slipping connection with the beam, said plate being extended below the beam and there rigidly connected with the tooth in such manner as to bring the upper or unused point of the tooth beneath the beam.

It consists, third, in a special form of the lower extension on the slipping plate, whereby the same is adapted to be secured to the swaged tooth described, as will be further explained.

In the drawings, Figure 1 shows a seeder-beam and slipping plate, with tooth (in dotted lines) attached thereto, in side elevation. Fig. 2 is a vertical section of the beam at *xx* of Fig. 1, showing the slipping plate in front view. Fig. 3 is a front view of the tooth constructed as herein described. Fig. 4 is a perspective view of the tooth constructed as herein described. Fig. 5 is a transverse section of the tooth shown in Figs. 3 and 4 through *yy* of Fig. 3. Fig. 6 is an alternative form of the slipping plate.

A is the beam, B is the slipping plate, and T is the tooth. The tooth here shown is substantially of the full, usual length of seeder-

teeth, and is struck up or swaged from a single piece or strip of sheet-steel to form the relatively-straight middle portion or shank S and the two similar broad, curved, and pointed shovels T' on opposite ends of the shank. In thus swaging the tooth the edges of the strip in their middle portion are folded backward to give the U-shaped section shown in Fig. 5, while both the ends are less bent or curved backward and form the broad shovel-teeth T' T'. Both shovels are curved outward on the same or front side of the tooth, and are of any desired shape at their extremities, but usually of the pointed form, more or less, as shown.

The slipping plate as here illustrated is pivoted at *a* in the vertical slot *a'* of the beam A, which slot *a* is open at its rear end, so that by means of the bolt *b* passing transversely through the beam near its end and through the slot *s* in the plate B said plate may be clamped as tightly as may be desired. The plate B is mainly a broad web of uniform thickness and shaped to extend below the beam, when clamped to hold the tooth in proper position, as shown, so that when required to slip and rotate on the pivot-bolt *a* it may do so freely. At its lower margin the plate is modified in form to adapt it to be rigidly secured to the tooth, and any suitable fastening is employed for securing the tooth thereto, according to the form of the tooth used. In the present instance it is adapted for attachment with the swaged sheet-metal tooth above described by being provided with the broad curved front face, B', which fits the inner curved face of the tooth, and said tooth is held in place thereon by means of a bolt, D, passing from front to rear through the tooth and through said projection B', holes *t* and *b* being provided in the respective parts for this purpose. Both ends of the tooth having the same curvature, either end of the tooth is thus attachable to the plate B B'.

In place of the bolt a yoke-clamp may be used, if preferred, though as at present advised the simple bolt is better.

The projection B extends a sufficient distance below the bolt D to give the necessary support to the tooth, as shown, and while a bearing of the face of the projection B' to the extreme point of the tooth is not necessary to the security of the latter, I prefer to provide

such bearing as indicated in Fig. 1. In the case of a solid-shanked tooth of the character shown in patent to me, No. 232,850, the lower end of the plate B or the projection B' may be recessed in its front or in its lateral face to receive the tooth-shank, and any desirable fastening, as an L-headed bolt, may be used to hold the tooth in place.

Of course the slot s of plate B may be open at either end, and if desired the upper central part of the plate B may be entirely cut away or broadly notched, as seen in Fig. 6, without modifying its principle of action. It is, however, more satisfactory in the form shown (partly in dotted lines) in Fig. 1.

By arranging the connection of the slipping plate with the double-pointed tooth so as to bring the point of the latter beneath the beam said point is wholly guarded, and when used in a seeder cannot interfere with the handling of bags of grain, which are usually lifted over the rear ends of the beam to the feed-box or do other injury.

The slipping plate may of course be rearwardly extended, so as to bring the tooth-point back of the beam without departure from my invention.

I am aware that single-pointed teeth and that double-ended tooth-points have been struck from sheet metal, and also that the latter have been reversibly attached to a tooth-shank. These are not my invention. The tooth shown dispenses with a separate shank-piece and with welding or other connection for joining the points to the shank, while at the same time it is of ample strength and much cheaper than other forms of reversible teeth.

I claim as my invention—

1. The double-pointed reversible seeder-tooth described, having its opposite ends similarly shaped and its intermediate portion or shank bent to the form shown, said tooth being struck from a single piece of sheet metal, substantially as described.

2. In combination with the beam and with a plate having a slipping connection therewith, a double-pointed tooth consisting of a shank having a blade at each end, and being, as a whole, detachably and reversibly secured to the slipping plate, the elevated unused point being arranged beneath and near the beam, so as to be guarded thereby, substantially as described.

3. In combination with the beam having an open vertical slot at its rear end, the slipping plate B, connected to slip in said slot, and provided with an extension on its lower margin, a double-pointed tooth, and a means, substantially as described, for securing the tooth directly to and beneath the lower projection of the slipping plate, substantially as and for the purposes set forth.

4. Combined with the beam and with the bent sheet-metal double-pointed tooth described, a slipping plate having a projection thereon shaped to fit the rear concave face of the tooth, and a bolt, D, or its equivalent, for securing the tooth to said projection, substantially as described.

In testimony that I claim the foregoing as my invention I affix my signature in presence of two witnesses.

JOHN S. ROWELL.

Witnesses:

H. W. KEYES,
L. W. BARBER.