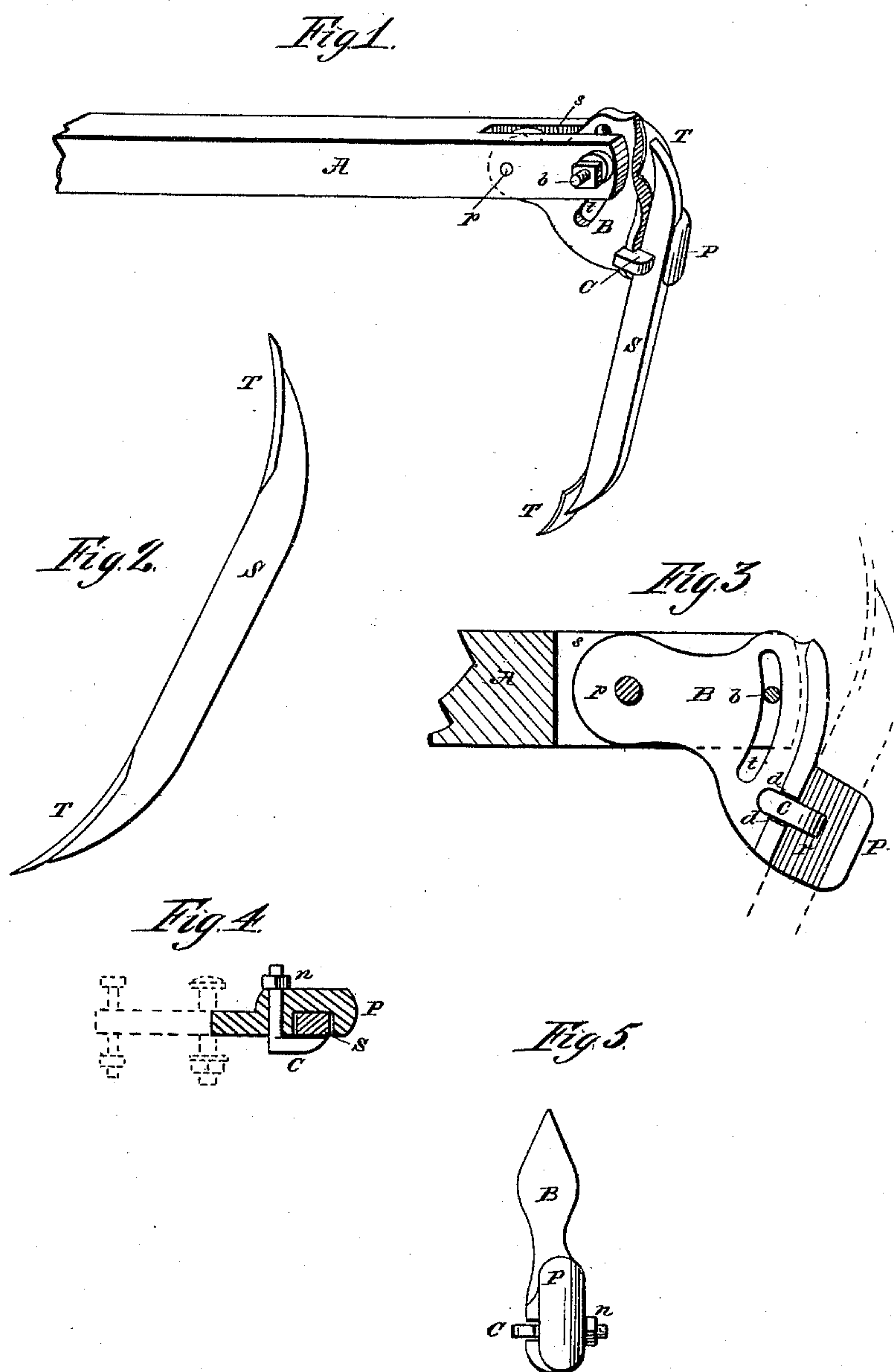


(No Model.)

J. S. ROWELL.
Cultivator Teeth.

No. 232,850.

Patented Oct. 5, 1880.



WITNESSES.

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JOHN S. ROWELL, OF BEAVER DAM, WISCONSIN.

CULTIVATOR-TOOTH.

SPECIFICATION forming part of Letters Patent No. 232,850, dated October 5, 1880.

Application filed March 15, 1880. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. ROWELL, of Beaver Dam, in the county of Dodge and State of Wisconsin, have invented certain new and
5 useful Improvements in Cultivator-Teeth; 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
10 thereon, which form a part of this specification.

The invention consists in the combination of a reversible double-pointed tooth with an intermediate slipping-plate, by which plate
15 the tooth may be detachably held at any desired length, and at the same time set at any desired angle with the beam, subject to yield when it strikes an obstacle.

Figure 1 of the drawings shows the cultivator-beam having the double-pointed reversible
20 tooth secured thereto by an intermediate slipping-plate. Fig. 2 shows the double-pointed tooth detached. Fig. 3 is a side elevation of the slipping-plate in place. Fig. 4 is a horizontal section of the slipping-plate and the
25 tooth-shank in place thereon in the line *xx* of Fig. 3, showing more clearly the clamping-bolt by which the latter is detachably held. Fig. 5 is a rear elevation of the slipping-plate.

30 A is a wooden cultivator-beam having an open slot, *s*, at its rear end.

B is a broad flat plate set in the slot and pivoted at *p*. Said plate has the slot *t* concentric with the pivot *p*, through which slot
35 passes the bolt *b*, serving to compress the divided parts of the beam against the flat and parallel sides of the plate.

S is the body or shank of the tooth, preferably of uniform size throughout its straight
40 portion, fitted to enter between the shoulders of the lateral recess *r* in the rear projection, P, of the plate B, as shown. The tooth-shank S is provided with the plow-teeth T at both ends, and is rigidly held within the recess *r* by
45 means of a clamping-bolt, C, which passes through the plate B at one side of the recess, and bears, by its head *c*, upon the outer face of the shank, being tightened by the nut *n*. Said bolt C is held from turning off the tooth
50 by means of the shoulders *d*, raised on the plate B; or it may have its tang squared for

a short distance beneath the head and enter a correspondingly-shaped hole in the plate. The tooth-shank S is curved at its ends to properly support the teeth T, which are made of steel, 55 usually in diamond form, and curved, as indicated in the drawings. These teeth may be rigidly secured to the shank, as shown, or they may be each double-pointed and reversibly secured to the shank. 60

By means of the fastening devices described the double or quadruple pointed tooth-shank S may be at any time turned end for end at will with the aid only of a suitable wrench fitted to the nut *n*. Not only will this be found 65 of great advantage in the field, where, at a distance from other means of repair, a tooth may break, but the capacity of the implement for wear is generally thereby doubled.

If desired, teeth of different shapes adapted 70 to different kinds of work or soil may be applied to the opposite ends of the shank, so that the cultivator, as a whole, is made changeable, at little increase of cost and with little trouble to the owner, from one use or kind of work to 75 another.

As compared with a reversible double-pointed tooth pivoted to one end of a shank, the double solid-pointed tooth illustrated has the advantage of greater simplicity and 80 strength in construction, of being more readily and conveniently reversed, and also of being free from liability to a break that may render both points of a pivoted tooth-blade useless.

In addition to the reversible feature mentioned, the double-pointed tooth described, 85 movably held, as shown, is readily adjustable to any desired length, whichever tooth is being used, without varying its angle with the beam, as is commonly done in the use of the 90 slip-tooth made of a single piece.

For the purpose of furnishing a guard to the upper point or tooth, the plate B is curved above the recessed or clamping portion to conform with the tooth curve, as seen in Fig. 1. 95 The shank S being made of the length usually preferred, the upper blade, T, will ordinarily set down with its curved face against the correspondingly-curved end of the plate B, and will be thereby prevented from doing or 100 receiving injury.

In Fig. 5 a rear view of a plate, B, is pre-

sented, in which the rear face is also widened to guard the edges, as well as the point of the tooth resting against it.

Having thus described my invention, I

5 claim—

1. The slotted beam A, the pivoted slipping-plate B, slotted to receive the binding-bolt *b*, and provided with the clamping-bolt C, and shoulders outside of the beam, combined with
10 the adjustable or reversible tooth S, rigidly but removably secured thereto, substantially as described.

2. The slipping-plate B, adapted to be pivoted at its front end by bolt *p*, provided with
15 slot *t*, curved about the axis of bolt *p*, whereby the clamping-bolt *b* may pass through said plate, combined with a hooking-shoulder, P, and hook-headed clamp-bolt C, whereby the shank S may be firmly held, but may be ad-
20 justed longitudinally as to said shank.

3. A slipping-plate, B, adapted to be located in a cleft in the beam A, provided with a hook-

ing-shoulder, P, offset laterally from said plate, and the clamp-bolt C, whereby the shank S will be held in line with said plate, but capa- 25 ble of adjustment up and down thereon, as shown in Fig. 4.

4. The slipping-plate B, constructed with laterally-projecting flanges along its rear edge, whereby the unused tooth is guarded while the
30 machine is in operation.

5. A slipping-plate, B, pivoted and clamped within a cleft in the beam A by separate bolts, combined with a holding-shoulder, P, and clamp-bolt C for the shank S, outside of the
35 beam, as set forth.

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

JOHN S. ROWELL.

Witnesses:

A. W. BURNS,
L. W. BARBER.