

(No Model.)

J. N. PROCTER.

CULTIVATOR.

No. 351,465.

Patented Oct. 26, 1886.

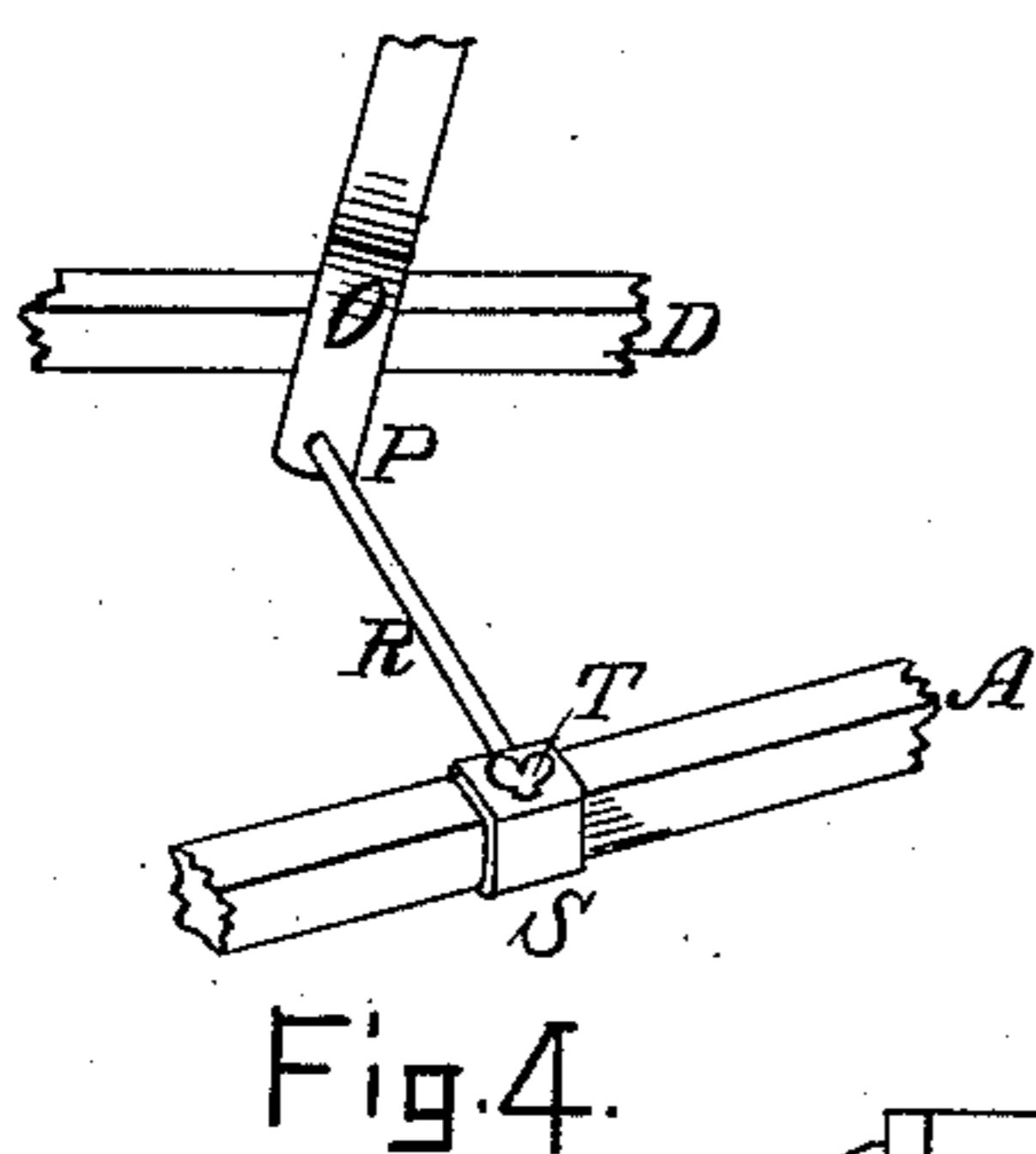
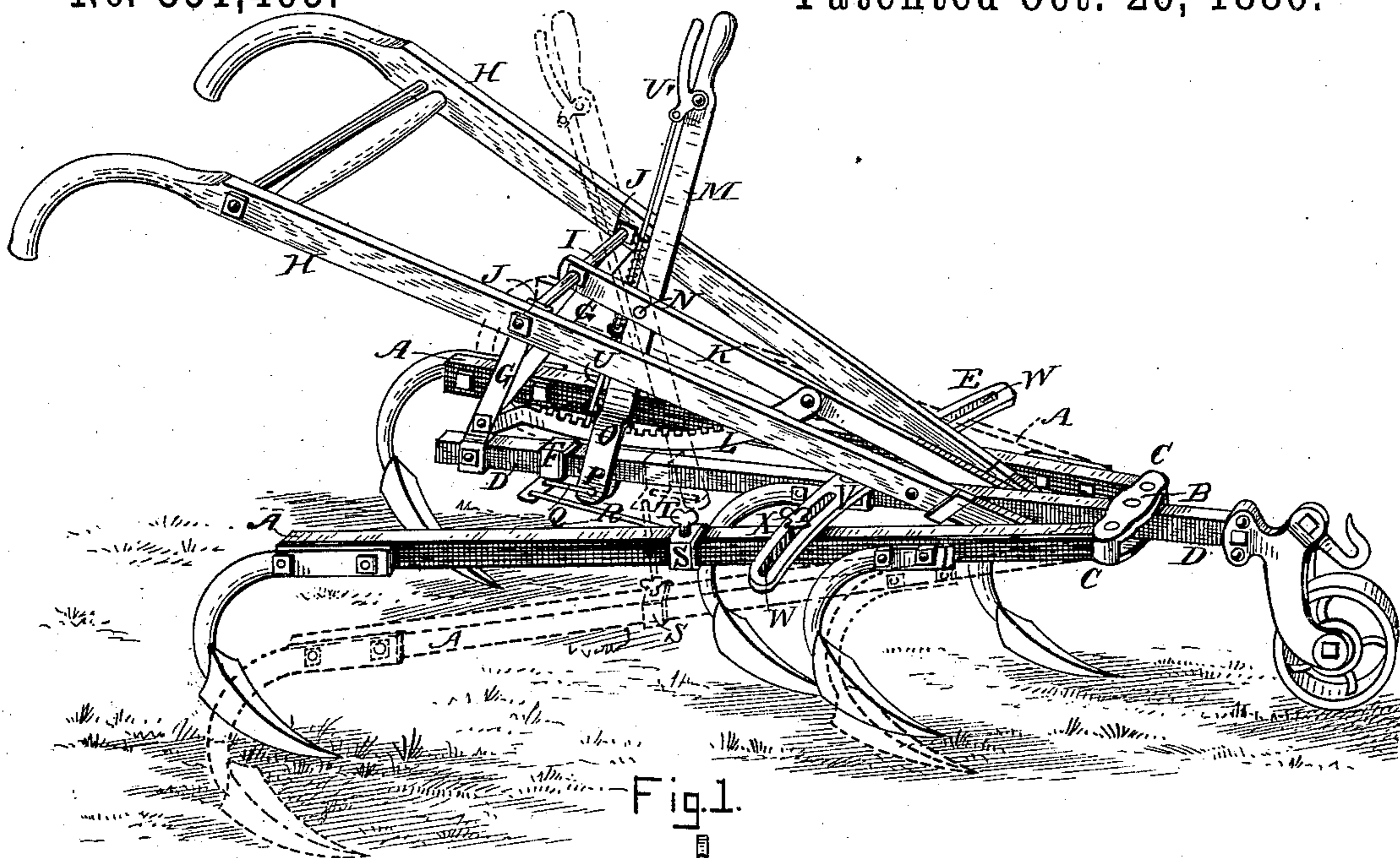


Fig. 4.

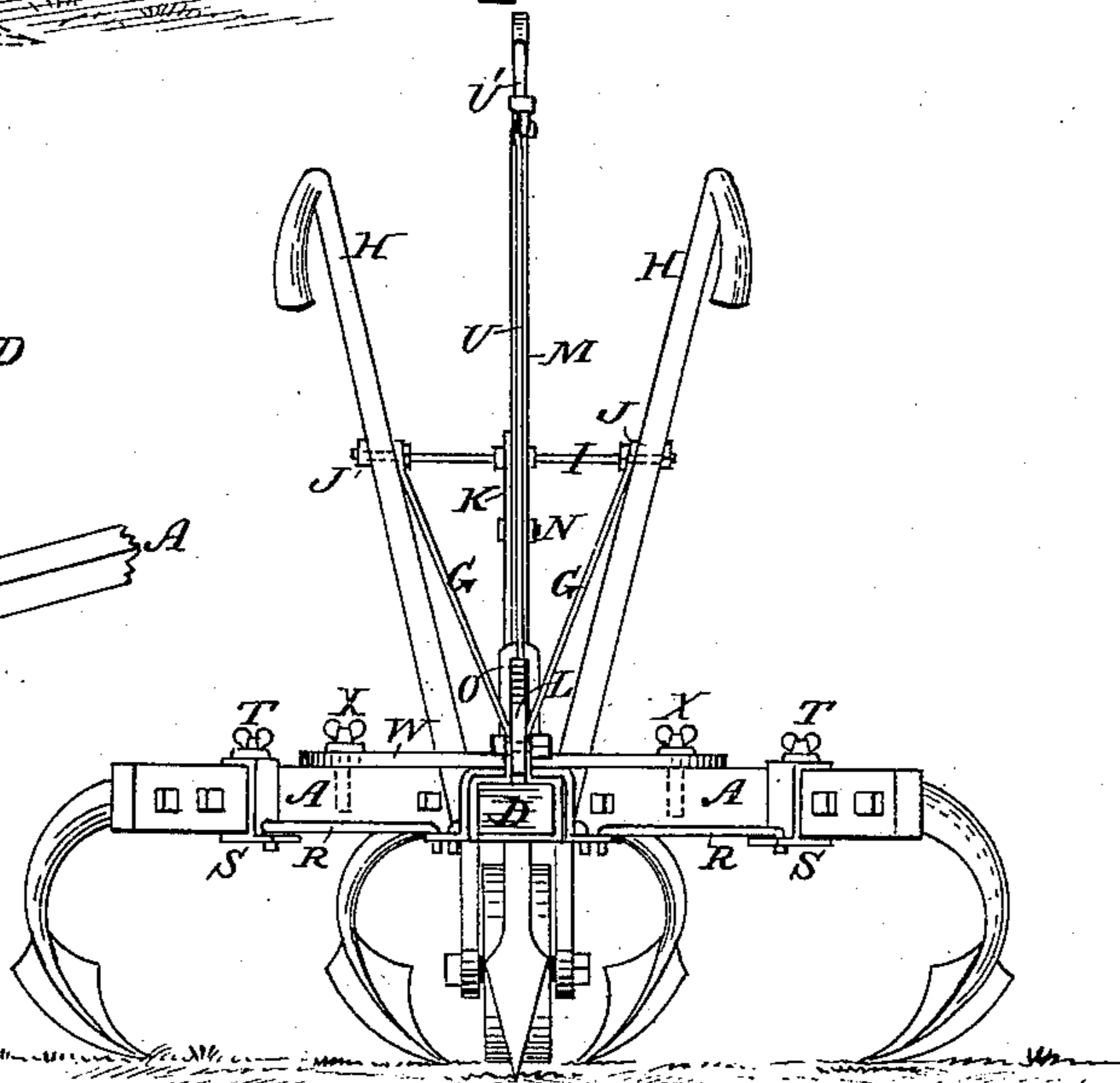


Fig. 2.

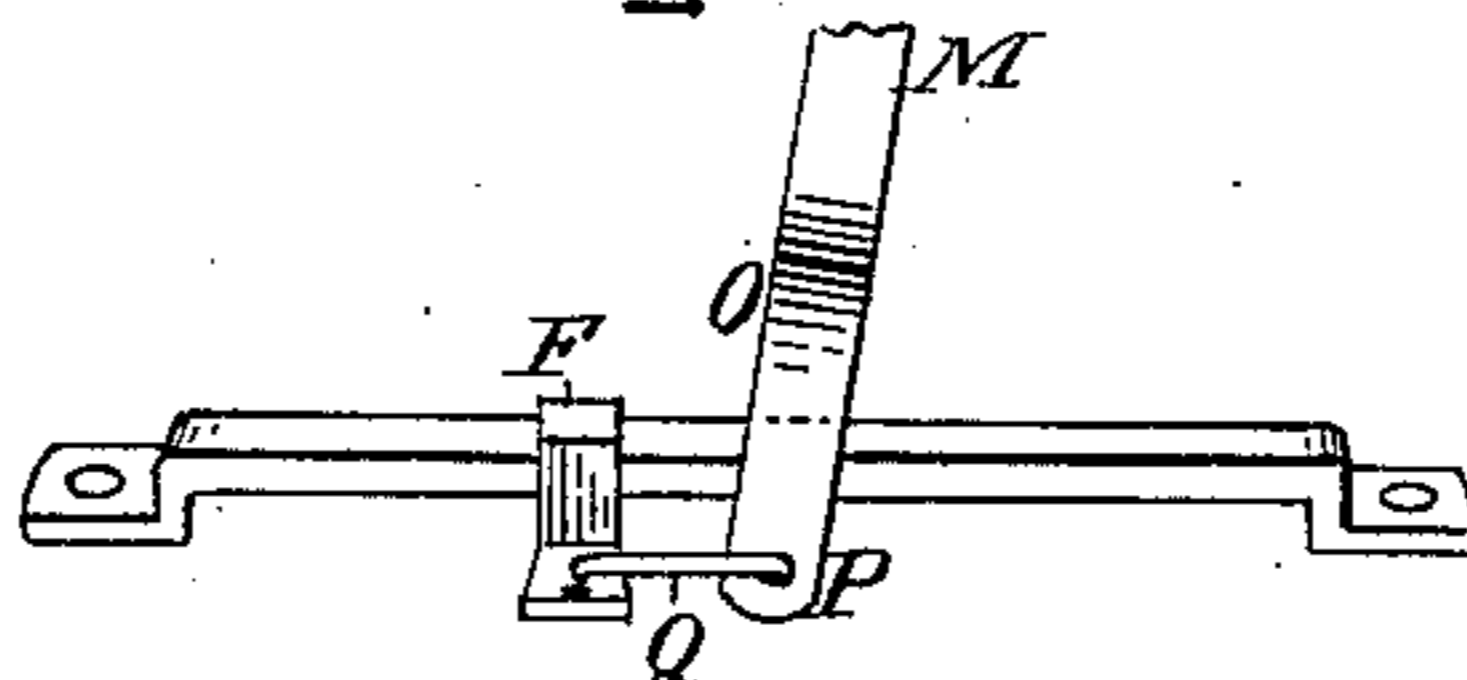


Fig. 3.

Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN N. PROCTER, OF NORFOLK, ASSIGNOR OF THREE-FOURTHS TO CHARLES H. THOMPSON & CO., OF BOSTON, AND GEORGE GARDNER PROCTER, OF SOUTH BOSTON, MASSACHUSETTS.

CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 351,465, dated October 26, 1886.

Application filed March 5, 1886. Serial No. 194,166. (No model.)

To all whom it may concern:

Be it known that I, JOHN NEWHALL PROCTER, a citizen of the United States, residing at Norfolk, in the county of Norfolk and State of Massachusetts, have invented a new and useful Improvement in Cultivators, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to cultivators having adjustable side frames, and is equally adapted to horse or hand machines.

The object of the invention is to adjust said side frames bearing the teeth equally and readily, and to adjust them, when desired, while the cultivator is in motion.

My invention consists in the devices and combinations hereinafter set forth, and specifically pointed out in the claims.

In the drawings, Figure 1 is a perspective view of a horse-cultivator embodying my invention. Fig. 2 is a rear elevation of the same. Figs. 3 and 4 illustrate modifications.

The side frames, A A, bearing the teeth and pivoted to a cross-head, B, at C C, the center bar, D, to which said cross-head is fastened, and the handles H H, fastened to the center bar, D, are of the ordinary construction. These parts, located with reference to each other and joined substantially as shown, form the body of the common horse-cultivator.

It has been customary to adjust the side frames of the cultivator, in order to set the teeth at the required distance apart, by means of two straps, the outer end of each of which is fastened to a side frame, A, and the inner portions of which overlap on the center bar, D. A pin or bolt is put through said straps and center bar, by which the side frames are held fixedly in the desired position. Such adjustment requires considerable time, and can only be done when the cultivator is at rest and the teeth are out of the ground. I connect each of the side frames, A A, with a slide, F, at the center bar, D, by means of a rod, R, which is pivoted to the slide and side frame, A. I prefer to pivot the outer end of each rod R directly to a clasp, S, which is made adjustable on the side frame, A, and may be secured rigidly thereto by a thumb-screw, T.

The slide F may have combined therewith a clasp which embraces the center bar, D, as shown in Fig. 1, or embraces a guide on this center bar, as illustrated in Fig. 3.

Conveniently located and pivoted to an inclined bar, K, at N, is a hand-lever, M. This lever might be pivoted directly on a tie-rod, I. It is pivotally connected at the lower end with the slide F, preferably by means of two links, Q Q, one at each side of the center bar, the lever being forked, as at O.

The rods R R might be pivoted directly to the parts P of the lower end of the lever, the slide F, as a separate piece, being dispensed with, as illustrated in Fig. 4, though I prefer to employ the slide F.

Located longitudinally with the center bar, D, is a rack, L, curved, as shown, or of other suitable shape. It is preferably placed between the parts P of the lower end of the lever, and fastened at one end to the inclined bar K and at the other end to the sustaining-straps G G. A spring-actuated pawl, U, operated by a hand-piece, U', is connected with the lever M in such a manner as to engage, as desired, with any one of the teeth of the rack L. A gage-bar, E, is fastened to the center bar, D, at the part V, and extends over each side frame, A. It has slots W W, admitting thumb-screws X, by which the side frames may be fastened rigidly thereto.

Ordinarily it is intended to have the thumb-screws X loose, so that the side frames may be swung outwardly or inwardly and fixed in any desired position by manipulating the lever M and hand-piece U'. Swinging the lever will cause the slide F to be moved forward and backward on the center bar, which slide, by means of the rods R, will cause the side frames to swing on their pivots C. This operation may be easily and quickly performed while the cultivator is in motion and the teeth are in the ground. This is a great convenience for many reasons. For instance, the cultivator may be readily gaged while in operation, according to the varying distance between rows of cultivated crops and to avoid obstructions.

When it is desired to fix the side frames

rigidly and permanently in position with reference to the center bar, it may be done by simply tightening the thumb-screws X.

I claim as my invention—

- 5 1. In an improved cultivator, the bar K, bifurcated lever M, and rack L, in combination with slide E, rods R R, and adjustably-secured clasps S S, to increase and diminish the distance between the side frames, A A, substantially as shown and described.
- 10 2. In a cultivator, and in combination with

a hand-adjusting lever, M, sustaining-bar K, elliptic rack L, slide E, rods R, and adjustable clasps S, the slotted screw-confined gage-bar E, operating in conjunction with the side frames, A A, substantially as and for the purpose specified.

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Witnesses:

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