(No Model.) 2 Sheets—Sheet 1.

J. G. TRUMP.

CULTIVATOR.

No. 342,401. Patented May 25, 1886.

Fig. 1.

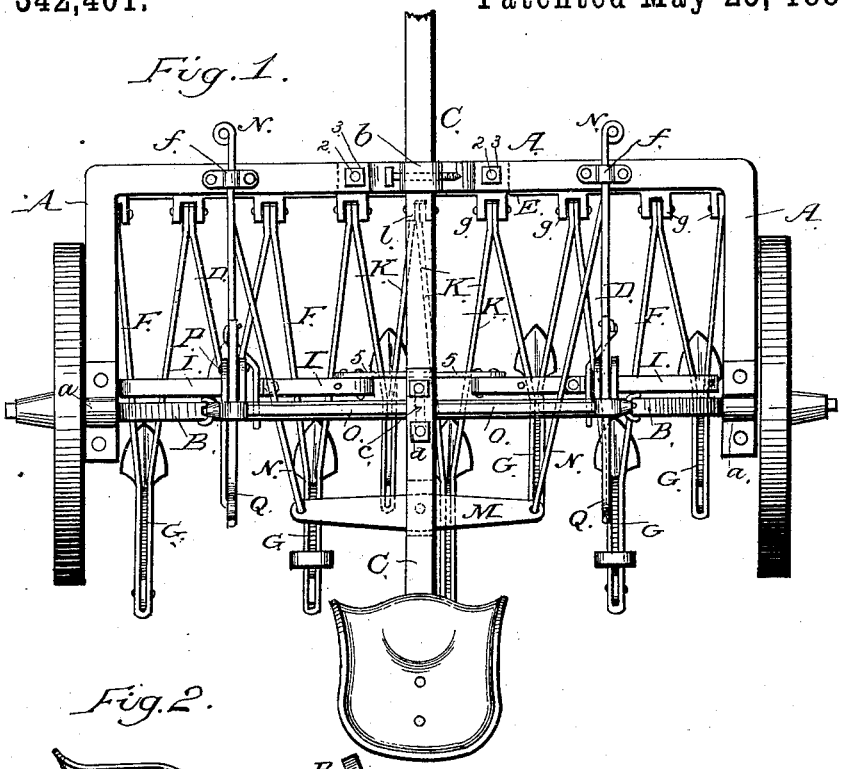
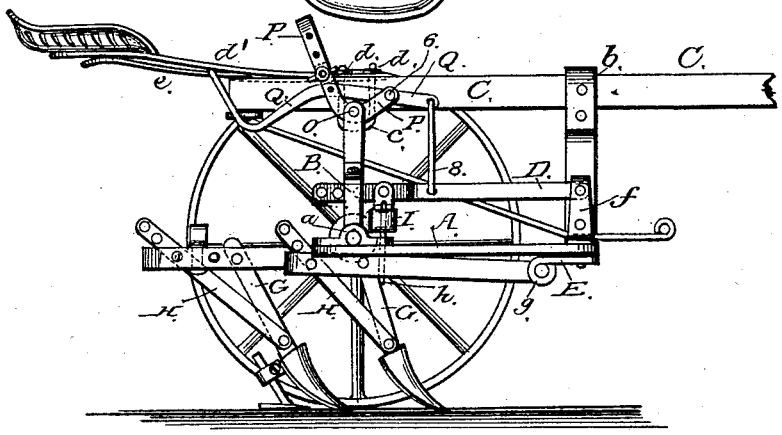


Fig. 2.



Witnesses
T. N. Fowler
H. B. Applewhaite,

Inventor
John G. Trump
By his Attorneys.
A. H. Evans & Co.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

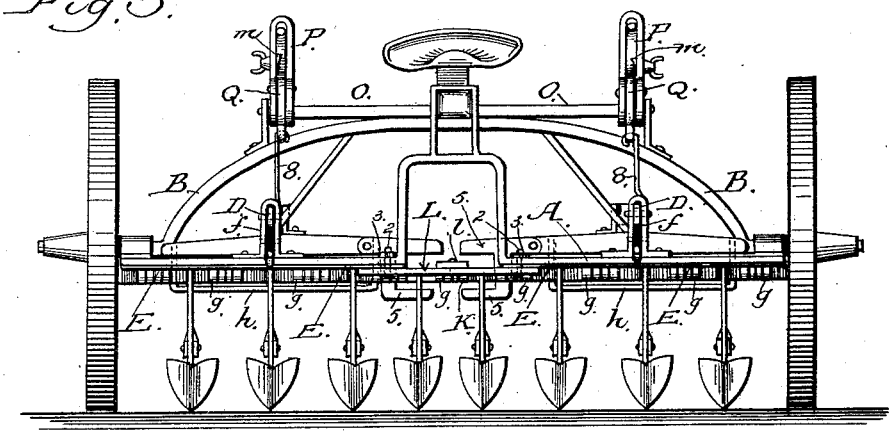


Fig. 4.

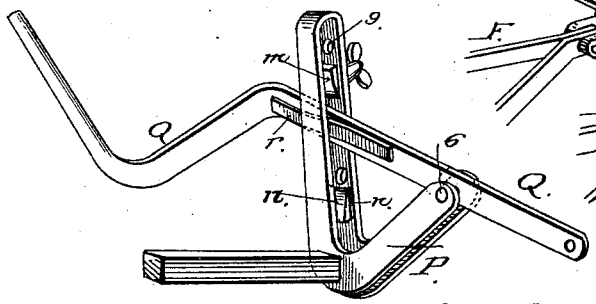


Fig. 6.

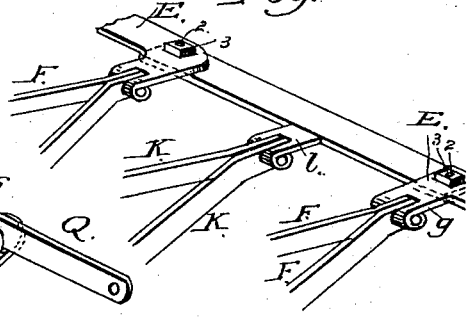
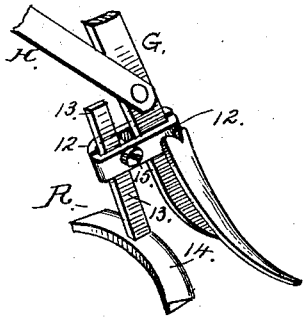


Fig. 5.



Witnesses

T. N. Fowler

H. B. Applewhite.

Inventor

John G. Trump

By his Attorneys

A. N. Evans & Co.

UNITED STATES PATENT OFFICE.

JOHN G. TRUMP, OF RICHVILLE, MICHIGAN.

CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 342,401, dated May 25, 1886.

Application filed March 2, 1886. Serial No. 193,734. (No model.)

To all whom it may concern:

Be it known that I, JOHN G. TRUMP, of Richville, in the county of Tuscola and State of Michigan, have invented a new and useful Improvement in Cultivators, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a plan view of the cultivator embodying my invention. Fig. 2 is a side elevation of the same with one of the supporting-wheels removed. Fig. 3 is a front elevation. Figs. 4, 5, and 6 are details to be hereinafter referred to.

This invention relates to wheel-cultivators; and the same consists in the peculiar construction and combination of devices hereinafter described and claimed, and it is an improvement on Letters Patent No. 287,196, granted to me October 23, 1883.

To enable others skilled in the art to which my invention appertains, I will now describe its construction and indicate the manner in which I have carried it out.

In the said drawings, A represents a suitable U-shaped frame composed, preferably, of steel and provided with means for supporting the various working parts of the machine. Within suitable journal-boxes, *a*, on the rear portion of the main frame is mounted the axle B, which in the present instance is arched and passes over the drag-bars, as I shall hereinafter describe.

The front portion of the frame A is struck upward and provided with a standard, *b*, wherein the forward portion of the tongue C is adjustably secured. The rear part of said tongue is rigidly secured to the center of the main axle by a U-shaped bolt, *c*, and securing-nuts *d*, as shown in Figs. 1 and 2. The ends of the bolts *c* pass through the tongue, and also through the spring-plates *d'* and *e*, to the former of which the seat is rigidly secured. Upon each side of the standard *b* are the standards *f*, within which are secured the forward ends of the levers D D, for raising the cultivator-teeth, in a manner to be hereinafter described.

Secured to the under side of the front portion of the main frame are the plates E, each of which is provided with a series of rearwardly-extending slotted arms, *g*, within which are secured the forward ends of the drag-bars F. These drag-bars F are of a construction similar to those shown and described in my former patent. They are made of flat metal bars, and are bifurcated or forked to form two legs, one of each bar being secured within one of the slotted arms *g*, as shown. To the rear or free ends of the drag-bars I secure by means of bolts or otherwise the standards G, having shovels or cultivator-teeth secured to their lower ends, these teeth being made adjustable by means of the standards H, having adjusting holes and pins, whereby the pitch of the teeth may be regulated. This construction of my cultivator enables me to locate the teeth in a line with the center of the supporting-wheels, thus giving a more uniform depth with the teeth at all times.

Attached to each lever D is a wooden bar, I, extending across each series of drag-bars to assist in holding the teeth in the ground, and provided with a metal rod, *h*, which is attached at each end of said bars, and passing around and under the drag-bars permits each series of drag-bars with their standards and teeth to be raised independently of the drag-bars attached to the other lever. It is evident by this construction either series of cultivator-teeth may be made to operate independently of the other, or they may all be brought into play at the same time, the particular advantage of this construction being set forth in my former patent.

The center drag-bars, K, are attached to a plate or bar, L, secured to the front of main frame and provided with a slotted arm, *l*, within which is pivotally secured the inner legs of the drag-bars K, the outer legs of these bars being attached to the inner arms, *g*, projecting from the plates E. The plate or bar L, which carries the center drag-bars, is secured to the main frame by the bolts 2 and securing-nuts 3, so that said bars may be readily attached or detached, as the circumstances require—such, as for fallow cultivating—they passing through and being guided in their movements by the slotted

plates 5, projecting from the inner ends of the wooden bars I, as shown in Fig. 3. At the rear and to the under side of the tongue is pivotally secured a double-tree, M, to the outer ends of which the draft-rods N are attached. These draft-rods pass through the standards on the forward part of the frame and are provided with means whereby the team may be attached. A straight bar, O, on the top of the main axle has mounted thereon the angular standards P, in the slotted portions of which are adjustably secured the bent levers Q, said levers being pivoted at 6 to the standards P and connected with the levers D by means of rods 8, (see Fig. 2,) whereby the operator by depressing the rear end of the levers Q elevates or depresses the drag-bars, in the manner before described.

Inside of the slots in the standards are suitable catches, *m* and *n*, for holding the levers in their adjusted position up or down. The upper catch is secured by a thumb-nut or equivalent device removably attached, whereby the catch *m* may be adjusted in the holes 9 to different heights, thus regulating the adjustment of the levers and securing said levers in their adjusted positions.

Suitable flat springs, *r*, on the bent levers Q, bear against the inside of the standards P, and are designed to force the levers into engagement with the catches, and also permitting them to be disengaged when it is desired to change the position of said levers. From this description it is evident if the levers Q be forced downward the drag-bars are elevated and the teeth raised from the ground. A reverse movement causes the teeth to be forced into the soil.

In addition to the cultivator-teeth the standards G may also be provided with an adjustable cutter, R, which is located slightly in the rear of the cultivator-teeth, and is designed to cut weeds, thistles, &c. This cutter consists, preferably, of the plates 12, which clasp the lower portion of the standards G, and between which the shank 13 of the blade 14 passes, the said plates being secured together and the shank made adjustable between the plates by a set-screw, 15, as shown in Fig. 5.

From the foregoing description I am enabled to construct a light substantial cultivator wherein the several mechanisms are detachably secured and their adjustments accomplished in a positive manner.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a cultivator, the arched main axle and the supporting-wheels mounted thereon, in combination with the U-shaped main frame extending forward in a plane with the wheel-spindles, and having the standard *b* and the tongue adjustably secured in said standard and to the arch of the axle, substantially as herein described.

2. In a cultivator, the main frame, the main axle, and the supporting-wheels, in combination with the plates or bars E, having rearwardly-extending slotted arms *g*, the drag-bars F, rods *h*, cross-bars I, levers D, and standards *f f*, substantially as herein described.

3. In combination with the frame A, plates E, and the two series of drag-bars F, the centrally-placed drag-bar attachment consisting of a plate or bar, L, having the slotted arms *l*, the drag-bars K K, and the slotted plates 5, the said drag-bars being secured to both plates E and L, substantially as herein described.

4. In a cultivator, the main frame, the axle, and the supporting-wheels, in combination with the bar O, the slotted standards P, the levers D and Q, the rods 8, bars I, and the drag-bars F, substantially as described.

5. In a cultivator, the means described for holding the drag-bars in their adjusted positions, consisting, essentially, of the slotted angular standards P, having the holes 9, the bent levers Q, fulcrumed in said standards, and the adjustable catches *m*, substantially as described.

6. In a cultivator, the combination, with the drag-bars, standards, and cultivator-teeth, of a weed-cutter consisting of the plates 12, secured to the standards, the shank 13, blade 14, and set-screw 15, substantially as described.

JOHN G. TRUMP.

Witnesses:
E. H. TAYLOR,
HENRY LUCHKERT.