(No Model.)

N. F. REED.

POTATO DIGGER.

No. 543,702. Patented July 30, 1895.

Fig. 1.

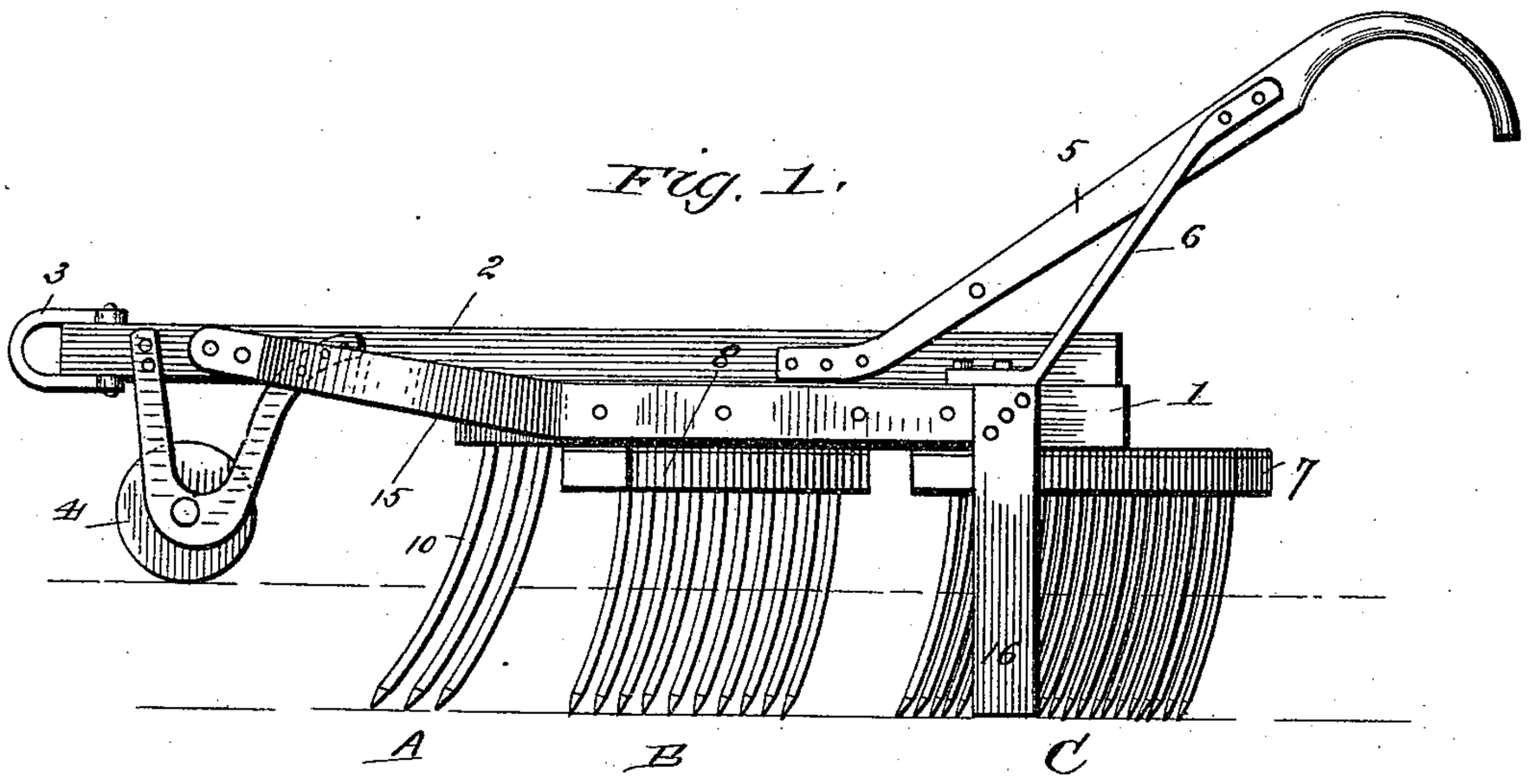


Fig. 2.

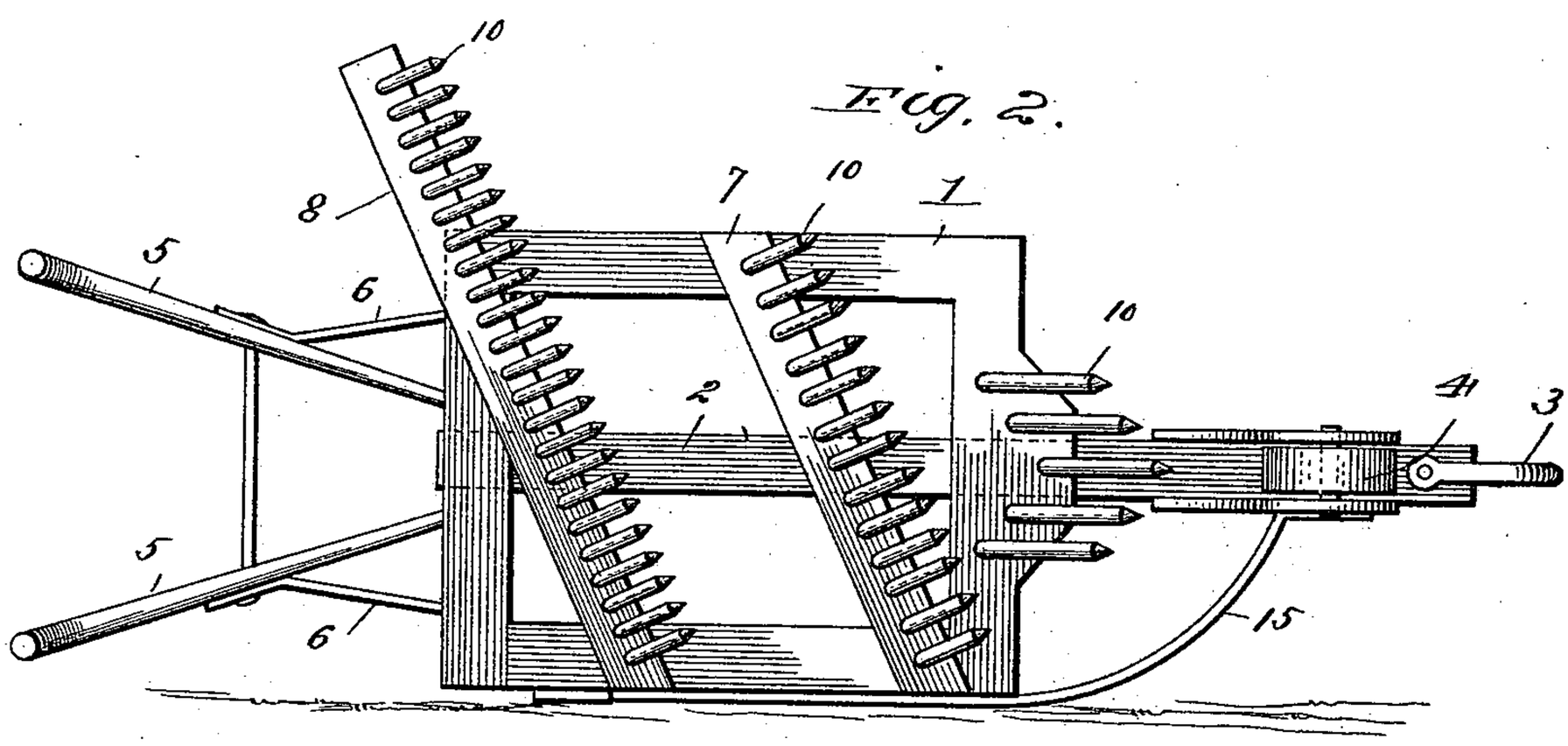
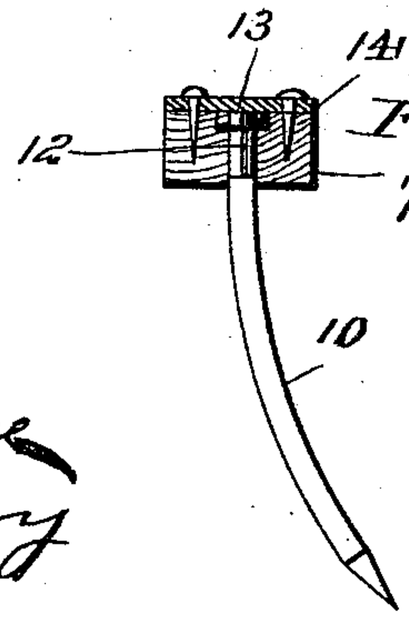


Fig. 3.



WITNESSES

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NATHAN F. REED, OF JOHNSON, ASSIGNOR OF ONE-HALF TO ALBANUS EARLE, OF EDEN, VERMONT.

POTATO-DIGGER.

SPECIFICATION forming part of Letters Patent No. 543,702, dated July 30, 1895.

Application filed March 16, 1895. Serial No. 542,024. (No model.)

To all whom it may concern:

Be it known that I, NATHAN F. REED, a citizen of the United States, residing at Johnson, in the county of Lamoille and State of Vermont, have invented certain new and useful Improvements in Potato-Diggers, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

Figure 1 is a side elevation showing the machine in position for operation. Fig. 2 is a view showing the machine in position for transportation from the field. Fig. 3 is a vertical section showing the manner of securing the teeth in the tooth-bars.

This invention relates to new and useful improvements in potato-diggers; and it has for its objects to provide a device of simple construction by means of which the potatoes will be taken from the earth and be distributed in a row at one side of the machine free from dirt and ready to be gathered, to provide means for the easy removal of the machine from one field to another, and to provide other features of construction which hereinafter appear.

Referring to the various parts by letters and numerals, 1 designates the frame of the machine, which is substantinlly rectangular in form and has secured to its upper side, in the center thereof, the draft-pole 2. This pole extends from the rear end of the frame to a suitable point forward of the machine, and secured to the forward end thereof is the clevis 3 and the gage-wheel 4.

Extending upwardly from the rear part of pole 2 are the handles 5, by which the machine is guided, said handles being suitably braced to the frame by braces 6.

Secured to the under side of the frame are the teeth 10, which are arranged in three seats, A, B, and C. The teeth of the forward set A are arranged in the form of a wedge or > shape, the front tooth of the set being in the center of the machine, the others diverging from it on each side and extending rearwardly a short distance. These teeth are equal distances apart and curve forwardly and serve to open and loosen up the ground for the next set. Directly in the rear of set A is set B, which extends diagonally across the frame 1 and inclines rearwardly, preferably from the left to the right side of the machine. The teeth in this row or set are carried by a tooth-bar 7, which extends across the frame and is secured to the under side thereof, said teeth also curving forwardly. In plan view these teeth stand at right angles to their oblique tooth-bar and therefore are oblique to the draft-line of the machine, as clearly shown in Fig. 2. There are more teeth in this set than in the forward set and they are nearer together, and the set extends entirely across the frame, as shown. At a suitable distance in the rear of set B is the set C, which extends across the frame 1 parallel with set B. The teeth of this latter set are slightly closer together than the teeth in the set B, but they extend in the same direction. These teeth are carried by a tooth-bar 8, which extends from the left side of the machine out beyond the right side thereof a suitable distance and carries a greater number of teeth than the tooth-bar 7.

The teeth 10 are each formed with a square shank 12 and a square head 13, which fit in a square socket formed in the upper side of the tooth-bars, and they are all secured in place by a metal bar 14, which extends the full length of the tooth-bar and is secured over the heads of the teeth to securely hold them in position. This forms a simple and efficient fastening device for the teeth, it being simply necessary to slip the teeth in position through the apertures in the tooth-bars and then secure the bar 14 in place over their heads, as shown.

Secured to and extending along one side of the frame is a metal bar 15, which extends beyond the forward end of the frame and is curved inwardly, its forward end being secured to the draft-pole at the forward end thereof. This bar forms a runner on which the machine is supported when it is desired to transport it from the field.

Secured to the left side of the machine is a vertical flat tooth 16. This tooth is arranged in the rear of the rear tooth-bar and is designed to counteract the tendency of the machine to move toward the left, which tendency is occasioned by the manner of mounting the two tooth-bars in the frame.

In operation the forward set of teeth break up the ground and prepare it for the set B,

which gathers the largest potatoes and moves them to the right side of the machine. All the potatoes not taken up by this second set of teeth will be caught by the teeth of the set C and will be moved to the right; and this last set of teeth will take up the potatoes on the right of the machine where they are deposited by the set B and will move them farther to the right and deposit all of them at the end of this last set of teeth free from dirt and ready to be gathered. It will therefore be seen that the operation of taking out the potatoes is progressive and will require little power.

It will also be observed that by arranging the teeth in inclined rows at right angles to the line of draft the action of the teeth will be to push everything to the right side of the machine.

Having thus fully described my invention, what I claim is—

1. A potato digger comprising a frame, a plurality of sets of teeth carried by said frame, the forward set being in the center of the machine and arranged to open the ground, the other sets being arranged in parallel rearwardly-inclined lines or rows across the frame, the teeth of each set being closer together than the teeth of the set in front of it, and the teeth of the inclined rows extending at right angles to the line of the row and obliquely to the line of draft, substantially as described.

2. A potato digger comprising a frame, a plurality of sets of teeth carried by said frame, the forward set being in the center of the machine and arranged to open the ground, the other sets being arranged in parallel, rearwardly-extending lines or rows across the frame, and a vertical flat tooth carried by the frame adjacent the forward ends of the inclined rows of teeth, substantially as described and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

NATHAN F. REED.

Witnesses:
CARLOS S. NOYES,
ARTHUR C. NOYES.