

No. 692,410.

Patented Feb. 4, 1902.

S. L. ALLEN.
CULTIVATOR.

(Application filed Dec. 11, 1900.)

(No Model.)

2 Sheets—Sheet 1.

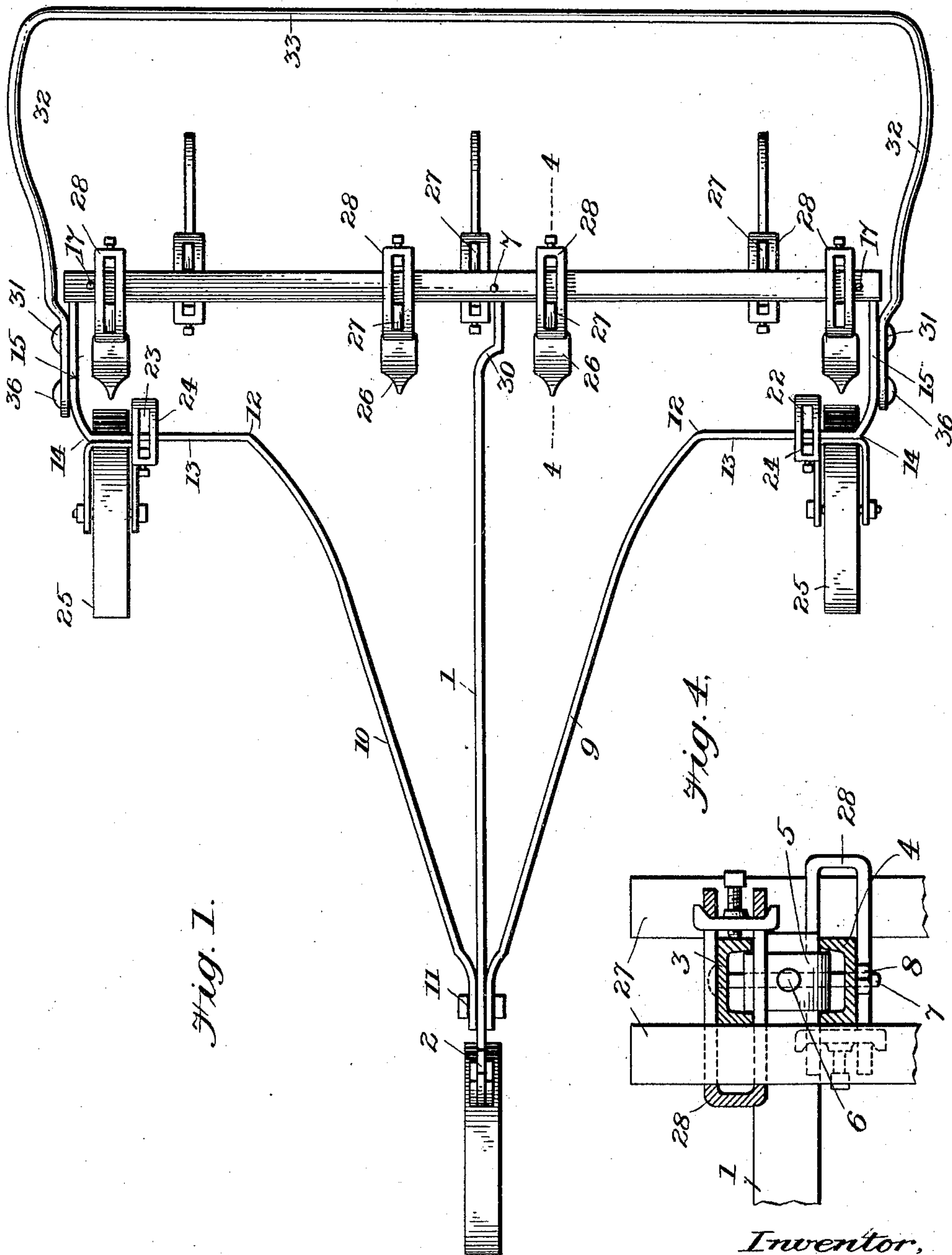


Fig. 1.

Fig. 4.

Witnesses.

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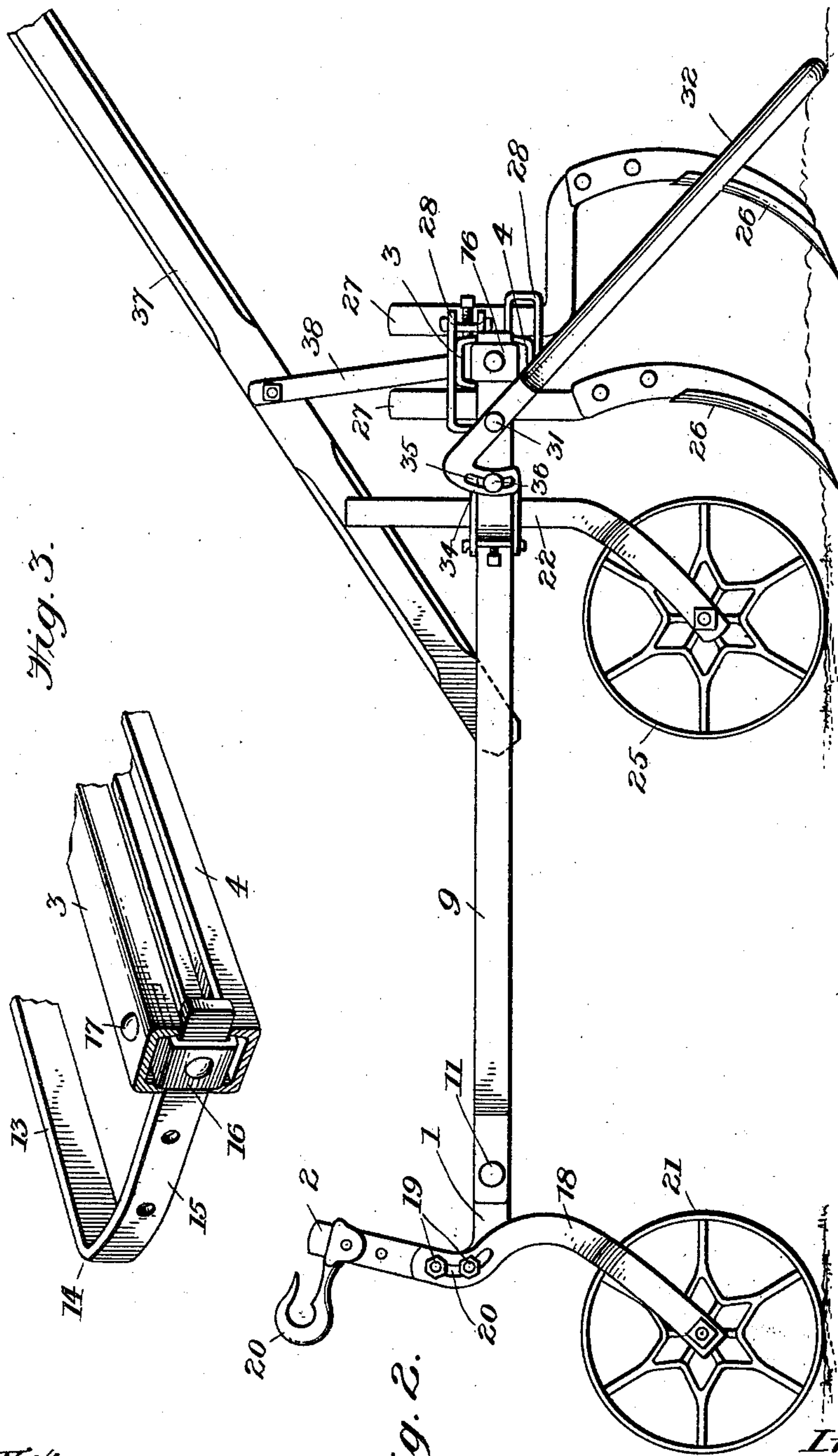
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Witnesses.
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UNITED STATES PATENT OFFICE.

SAMUEL L. ALLEN, OF MOORESTOWN, NEW JERSEY.

CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 692,410, dated February 4, 1902.

Application filed December 11, 1900. Serial No. 39,484. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL L. ALLEN, a citizen of the United States, and a resident of Moorestown, county of Burlington, State of New Jersey, have invented certain new and useful Improvements 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.

My invention relates to certain improvements in that class of agricultural implements known as "horse-cultivators;" and it consists in the structural features such as hereinafter fully set forth.

The object of my said invention is to generally improve, simplify, and strengthen the construction of devices of this character, particularly the form of the framework, so that the said device can be adapted to various kinds of work, thus greatly increasing the utility of the same.

A further object of my invention is to provide an improved leveling device, which is simple in construction and efficient in its operation.

In the accompanying drawings, which form a part of this specification, and in which similar numerals of reference are used to indicate similar parts, Figure 1 is a plan view of a cultivator embodying my improvements. Fig. 2 is a side elevation of the same, the upper portion of the handle-bars being broken away. Fig. 3 is a detail perspective of a portion of the side frame and tool-carrying frame. Fig. 4 is a sectional detail taken on the line 4 4 of Fig. 1 looking in the direction of the arrow.

In carrying out my invention I provide a centrally-disposed longitudinal bar 1, having its front end turned up, as at 2, to provide a place for securing the clevis-hook 20. The rear end of the bar 1 passes between a pair of transversely-disposed bars 3 4, arranged one below the other, the said bars being preferably made in the form of "channel-bars" and having their flanged faces opposing each other. The end of the central bar 1 is embraced by a U-shaped clip 5, secured thereto by means of a bolt or rivet 6, the said clip fitting in between the flanges of the bars 3 and 4, and the clip is secured to the channel-bars by means of the bolts 7, which pass through the said channel-bars and through

the ears of the clip 5, having a threaded nut 8 on the end of said bolt for securing the parts firmly together.

The side bars 9 and 10 comprise flat steel bars bolted to the central bar 1 at a point 11 near its forward end and diverging outwardly toward the rear end of the machine to a point 12, where they are then bent laterally, forming transverse arms 13, which run parallel with the transverse bars 3 and 4 to the points 14. From thence they are bent at substantially right angles to the portion 13 forming the arms 15, which extend rearwardly and have their free ends secured between the two transverse tool-carrying bars 3 and 4. The ends of these arms 15 are embraced by a clip 16, which is riveted to the said arms and fits between the flanges of the two bars 3 and 4 in the same manner as the central bar 1. A bolt 17 passes through the two bars 3 4 and through the ears of the clip 16.

Secured to the forward end of the central draft-bar 1 is a standard 18, adjustably secured to the said bar by means of the bolts 19, which pass through a slotted opening 20, provided in said standard, and in the lower forked end of this standard 18 is a draft-wheel 21. A clevis-hook of any suitable construction is secured to the bent-up portion 2 of the bar 1.

On the transverse portions 13 of the side bars 9 and 10 I secure the wheel-standards 22 and 23, each of said standards being secured to the said arms by the adjustable clamps 24. In the lower forked ends of these standards 22 and 23 are journaled the supporting-wheels 25, corresponding in size to the front wheel 21.

The two transversely-arranged bars 3 and 4 form the tool-carrying frame and are adapted to carry either cultivator-teeth, hoes, plow-blades, or other tools which it may be desired to use. In this instance I have shown a series of cultivator-teeth, such as 26, which are secured to the standards 27, which are secured to the tool-carrying bars 3 and 4 by means of the adjustable clamps 28, which clamps are substantially similar in construction to the clamps 24. These cultivator-teeth are in this instance shown as adapted to two rows of plants; but it will be readily seen that the relative positions of the teeth may be adjusted to suit the width of the rows or the character of the work to be cultivated. By having a pair of tool-carrying bars, as 3 and 4, arranged one

above the other and by arranging the teeth alternately on the upper and lower bars I am enabled to shift the said teeth past each other without removing the same from the clamps.

5 The wheel-standards 22 and 23 can also be adjusted along the straight portions 13 of the side bars by simply loosening up the clamps 24, so as to be adjustable to rows of different widths. The center bar 1 is provided with a
10 shoulder or offset 30 at the point near its connection to the bars 3 and 4 in order that a tool may be adjusted on the frame directly in the center thereof.

Pivoted at 31 to the portions 15 of each of
15 the side bars is a leveling-rod 32, which is preferably constructed of a single rod of metal bent to the form shown in Fig. 1 of the drawings, the transverse portion 33 being adapted to rest upon the ground, as will be described
20 hereinafter. The upper ends of the rod 32 are bent to form arms 34, which are curved on a radius struck from the pivoted point 31, and these bent arms 34 are each provided with a slot 35, through which the bolts 36
25 pass. The object of this construction is to allow of the adjusting of the rod 32, so as to either raise or lower the transverse rod 33 of the same, and this is accomplished by simply loosening up the bolt 36 and swinging the
30 said rod on its pivot 31 until the desired adjustment is accomplished.

The transverse portion of the leveling-rod normally rests upon the ground in the rear of the tools, and as the ground is broken by
35 said tools the said rod 33 smooths or levels the same off without pressing down the earth. This device is of special value in the preparation of ground for drilling.

The handle-bars 37 are of the usual construction and are secured at their lower ends to the central bar 1 and are braced by means of the braces 38, which are connected to the upper tool-bar 3.

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

1. In an agricultural implement, a frame comprising a centrally-disposed longitudinal draft-bar, transversely-arranged tool-carrying bars, to which the rear end of the draft-bar is secured, side bars bolted at their forward ends to the central draft-bar, said side bars diverging rearwardly and having their ends secured in the respective ends of the
55 tool-carrying bars, and supporting-wheels secured on said side bars slightly in advance of the tool-carrying bars, substantially as described.

2. In an agricultural implement, a rigid
60 frame comprising a transversely-arranged tool-carrying frame, a centrally-disposed draft-bar secured at one end to the tool-carrying frame, a pair of side bars secured at their forward ends to the central draft-bar,
65 said side bars diverging in V shape to within a short distance of the transverse tool-frame, then extending laterally toward the respec-

tive ends of said tool-frame and terminating in short arms parallel to the draft-bar, said arms having their ends secured to the tool-carrying frame, substantially as described. 70

3. In an agricultural implement, the combination of a transversely-arranged tool-carrying frame comprising a pair of channel-bars arranged one above the other, a central draft-bar having its rear end fitting between the channel-bars, a clip riveted to the end of said central bar adapted to fit between the channel-bars, a bolt passing through said channel-bars and through the ears of the clip, side
75 bars secured at their forward ends to the central draft-bar, said side bars diverging rearwardly in V shape to a point slightly in advance of the tool-bars thence running laterally toward the respective ends of the tool-bars having their free ends bent at substantially right angles and secured between the two transverse tool-bars, substantially as described. 85

4. The combination of a longitudinally-disposed central draft-bar, a pair of transversely-disposed tool-carrying bars, means for securing the draft-bar between the tool-carrying bars, side bars secured at their forward ends to the central draft-bar, said side bars diverging rearwardly to form a substantially V-shaped frame to within a short distance in front of the tool-carrying bars and then bent outwardly forming portions parallel with the tool-carrying frame and terminating in angularly-disposed arms which are secured between the tool-carrying bars, and supporting-wheels adjustably mounted upon the parallel portions of the side frames, substantially as described. 100

5. In an agricultural-implement frame, the combination of a pair of transversely-arranged channel-bars placed one above the other having their flanges oppositely disposed, a central draft-bar secured at its rear end between said channel-bars, side bars secured at their forward ends to the central bar and having their rear ends diverging and passing between the respective ends of the channel-bars, a U-shaped clip secured to the ends of the side bars having ears extending between the flanges of the channel-bars and a bolt adapted to pass through the channel-bar and through the ears of the clip for securing the parts together, substantially as described. 110

6. In a cultivator, the combination with a main frame, of a tool-carrying frame comprising twin bars, tool-holding clamps adapted to be adjustably secured on each of said bars, the said bars being so arranged with relation to each other as to admit of the clamps on one bar being adjusted laterally past those of the other bar, substantially as described. 125

In witness whereof I have hereunto set my hand this 8th day of December, A. D. 1900. 130

SAMUEL L. ALLEN.

Witnesses:

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CHARLES H. SPECKMAN.