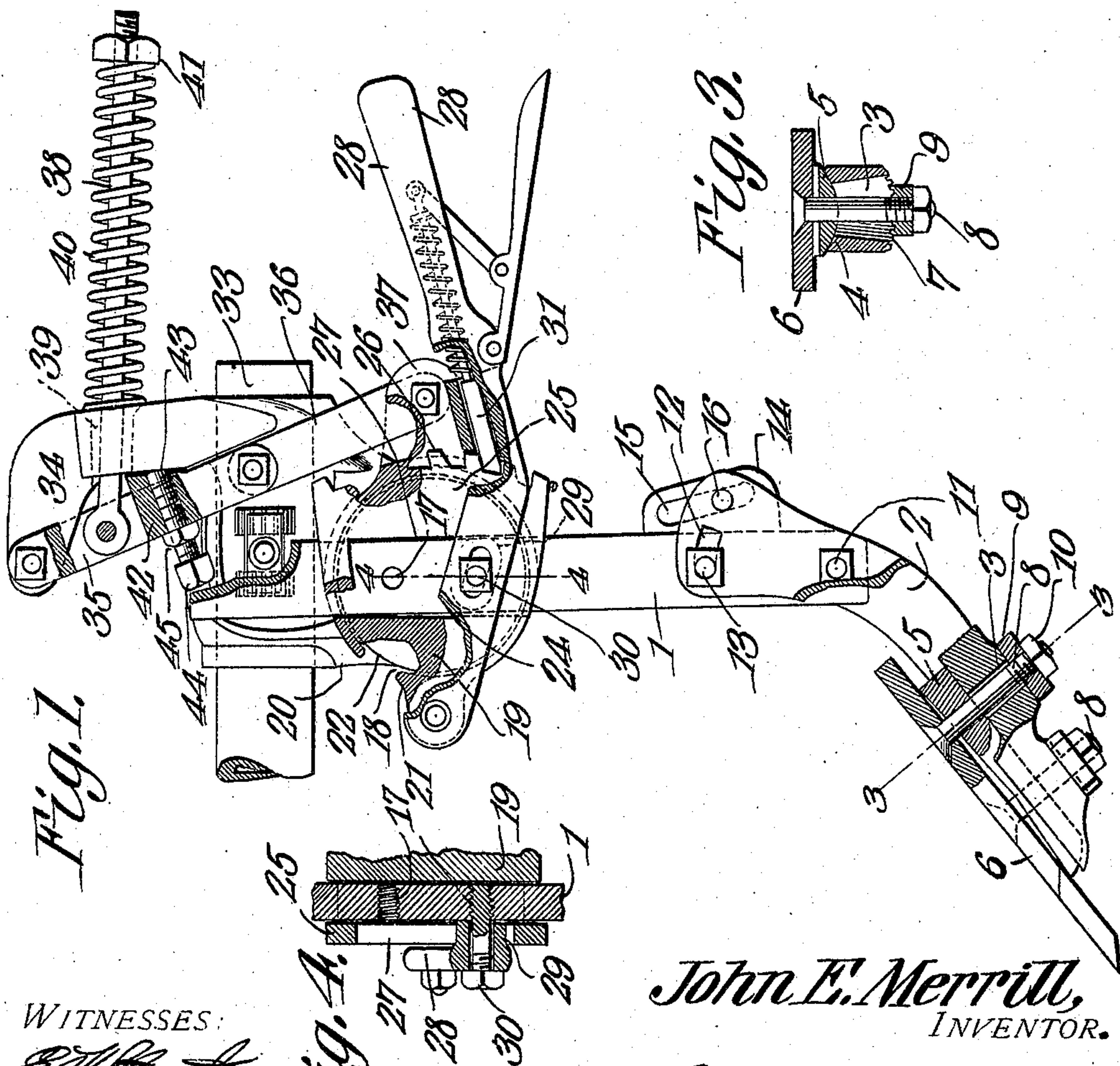
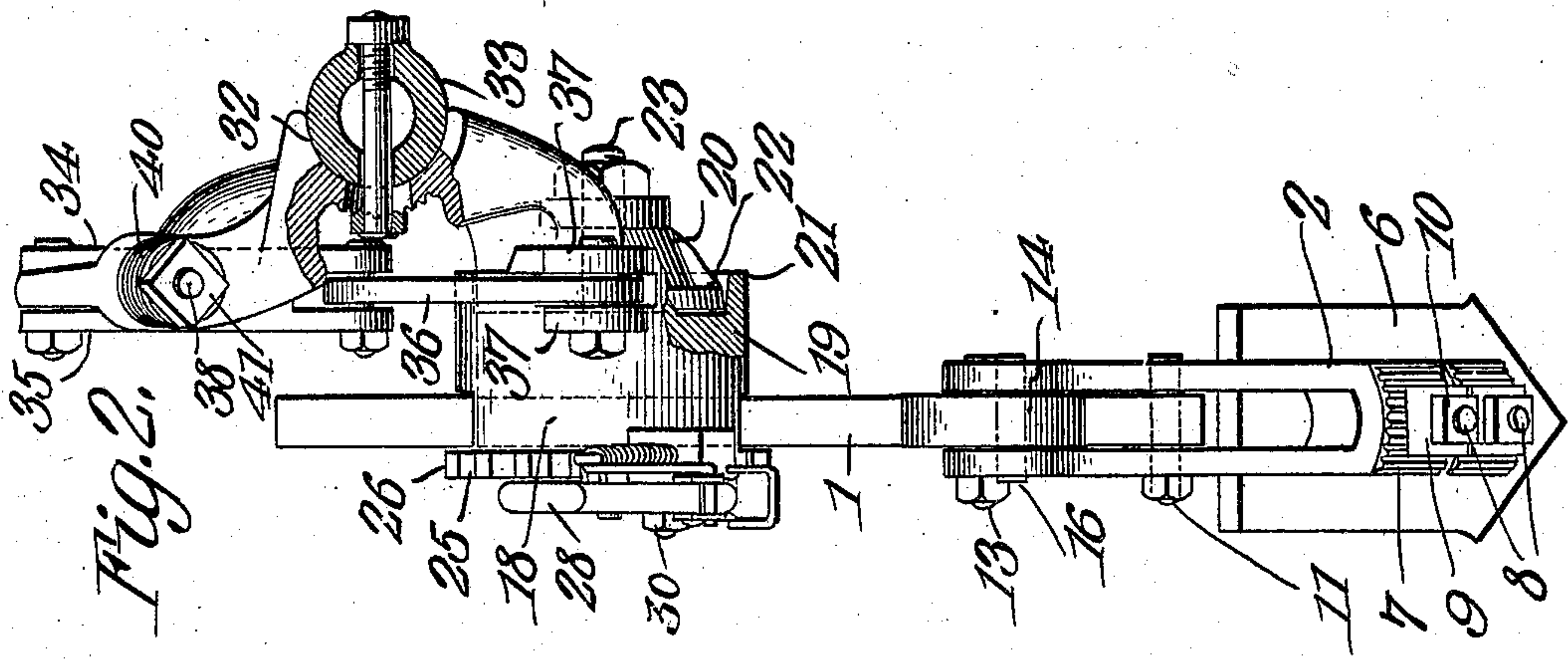


No. 848,115.

PATENTED MAR. 26, 1907.

J. E. MERRILL.
CULTIVATOR STANDARD.
APPLICATION FILED NOV. 20, 1906.



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UNITED STATES PATENT OFFICE.

JOHN ELIJAH MERRILL, OF GARLAND, TEXAS.

CULTIVATOR-STANDARD.

No. 848,115.

Specification of Letters Patent.

Patented March 26, 1907.

Application filed November 20, 1906. Serial No. 344,291.

To all whom it may concern:

Be it known that I, JOHN ELIJAH MERRILL, a citizen of the United States, residing at Garland, in the county of Dallas and State of Texas, have invented a new and useful Cultivator-Standard, of which the following is a specification.

This invention has relation to spring-jointed standards for cultivators; and it consists in the novel construction and arrangement of its parts, as hereinafter shown and described.

The object of the invention is to provide a standard of the nature indicated which is adapted to swing and give when the shovel comes in contact with tough roots or other obstructions, whereby the implement to which the standard is attached will ride over the obstruction without excessively shocking or jarring the draft-animals or the hand. Means is provided for adjusting the tension of the spring operating upon the jointed parts; also, means is provided for raising or lowering the cultivator-shovel and for canting the same axially with relation to the line of draft.

The standard consists of the special construction, as will be hereinafter pointed out.

In the accompanying drawing, Figure 1 is a side elevation of the standard with parts in section. Fig. 2 is a rear elevation of the same with parts in section. Fig. 3 is a transverse sectional view cut on the line 3 3 of Fig. 1, and Fig. 4 is a sectional view cut on the line 4 4 of Fig. 1.

The standard comprises the shin 1, to the lower end of which is pivoted the foot 2. Said foot is provided at its lower end with the horizontally-elongated slots 3 3 and in its forward portion with a concaved channel 4. The block 5 fits in the channel 4 and bears against the rear surface of the cultivator-point 6. The rear portion of the plow-foot 1 in the vicinity of the slots 3 is provided with the vertically-disposed serrations or corrugations 7. The bolts 8 pass through the plow-points 6, block 5, and slots 3 and are provided with washers 9, the inner faces of which are serrated or corrugated and which engage the serrated surfaces 7, provided upon the foot 2. The nuts 10 are screw-threaded upon the bolts 8. By reason of the horizontal disposition of the slots 3 it is obvious that the cultivator-point 6 may be adjusted axially with relation to the line of draft. The upper portion of the foot 2 is bifurcated, and the lower end of the shin 1 is pivoted be-

tween said bifurcations at the point 11. Each bifurcation of the upper end of the foot 2 is provided with an arcuate slot 12, and the bolt 13 passes through said slots 12 12 and a registering perforation provided in the shin 1. The wedge-shaped block 14 is located within the upper portion of the bifurcation of the foot 2 and bears against the rear edge of the shin 1. The said block 14 is provided with an elongated slot 15, which receives the cross-bolt 16, which in turn extends from one bifurcation to the other. The said block 14 is a trifle thicker in a transverse direction than the shin 1, and consequently when the nut is tightened upon the bolt 13 the upper ends of the foot 2 will grip the block 14. Thus it will be seen that the parts will be positively held in position when once adjusted.

The upper portion of the shin 1 is provided with a series of perforations 17 for the vertical adjustment of the said shin, as will be hereinafter explained. The knee 18 comprises two members 19 and 20, which are jointed together. The member 19 is provided on one side with an annular cup 21, in which an annular end 22 of the member 20 is concentrically pivoted upon the bolt 23. The member 19 is provided with a vertically-disposed slot 24, which receives the upper end of the shin 1, and the plate 25 is bolted or otherwise secured over the face of the member 19, provided with the slot 24. The rear edge of the plate 25 is provided with the gear-teeth 26, and the said plate is also provided with a vertically-disposed opening 27, which registers with the slot 24 in the member 19. The hand-lever 28 is fulcrumed at one end to the plate 25 and is provided with a lateral projection 29, which operates in the opening 27 of the plate 25. The pin 30 passes transversely through the lever 28 and projection 29 and one of the perforations 17 of the shin 1. Said lever 25 is provided with a spring-actuated pawl 31, which is adapted to engage the teeth 26.

From the above description it will be seen that a lever-operated means for adjusting the shin vertically is provided. Also means is provided for adjusting the said shin vertically with relation to the lever. The knee member 20 is provided with a horizontal groove 32 for the reception of the plow-beam 33. The said member 20 is also provided with the upwardly and forwardly extending portions 34, to the forward upper end of

which is pivoted the links 35. The link 36 is pivoted between the lower ends of the links 35 and at its lower end is pivoted between the lugs 37, provided at the rear of the knee member 19. The rod 38 is pivoted at its forward end between the links 35 and passes through a perforation 39, provided in the part 34. The coil-spring 40 surrounds the rear portion of the rod 38 and is interposed between the adjustable nut 41 and the rear side of the portion 34. The link-adjusting pin is screw-threaded in the block 42, which is secured between the links 35. The pin 43 is provided with the tap-head 44 and the jam-nut 45. The inner end of the pin 43 bears against the forward edge of the portion 34. By adjusting the pin 43 longitudinally it is obvious that the angle of inclination of the links 35 with relation to the link 36 may be adjusted, and also by adjusting the nut 41 upon the rod 38 the tension of the coil-spring 40 may be regulated.

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

1. A cultivator-standard comprising knee members jointed together, a spring exerting its tension upon said members to maintain the same in extended positions, a shin slidably located upon one of the knee members and a lever fulcrumed upon said knee member and engaging said shin.

2. A cultivator-standard comprising knee members jointed together, a spring exerting its tension upon said knee member to maintain the same in extended positions, a shin slidably mounted upon one of the knee members, a lever fulcrumed to the said knee member and engaging said shin and means for adjusting the shin vertically with relation to the lever.

3. A cultivator-standard comprising knee members jointed together, a spring exerting its tension upon said members to maintain the same in extended positions, one of said members having a vertical slot, a shin slid-

ably located in said slot, a plate having an opening which registers with said slot and gear-teeth, a lever fulcrumed to said plate and having a spring-actuated pawl for engaging the gear-teeth, said lever also having a lateral projection operating in the opening of the plate and a pin passing through said projection and the shin.

4. A cultivator-standard comprising knee members jointed together, a spring exerting its tension upon said members to maintain the same in extended positions, a shin attached to one of the knee members, a foot having a bifurcated end which receives said shin, the bifurcations of the foot having arcuate slots, a bolt passing through said slots and a registering perforation in the shin, a wedge-shaped block located between the foot bifurcations and having an elongated slot and bearing at its edge against the edge of the shin and a bolt passing through the foot bifurcations and the elongated slot of the wedge-shaped block.

5. A cultivator-standard comprising knee members jointed together, a spring exerting its tension upon said members to maintain the same in extended positions, a shin carried by one of the members, a bifurcated foot receiving the lower end of the shin, the bifurcations of the said foot having arcuate slots, a bolt passing through said slots and a registering perforation in the shin, a wedge-shaped block located between the bifurcations of the foot and having an elongated slot and bearing at its edge against the edge of the shin, said block being of greater transverse thickness than the shin and a bolt passing through the bifurcations and the elongated slot of said block.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN ELIJAH MERRILL.

Witnesses:

WILLIAM F. BANE,
THOMAS J. SWIM.