

No. 692,517.

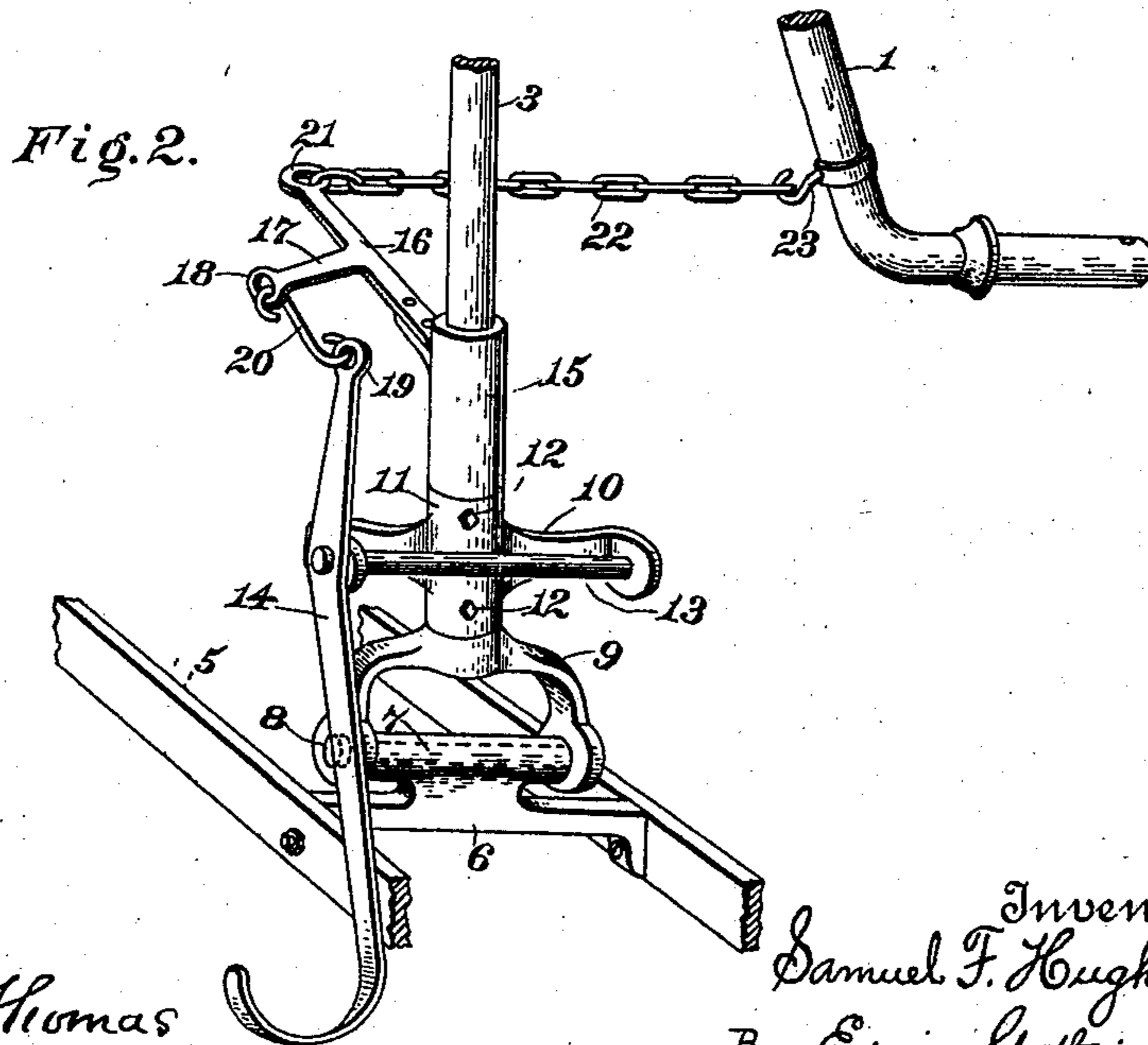
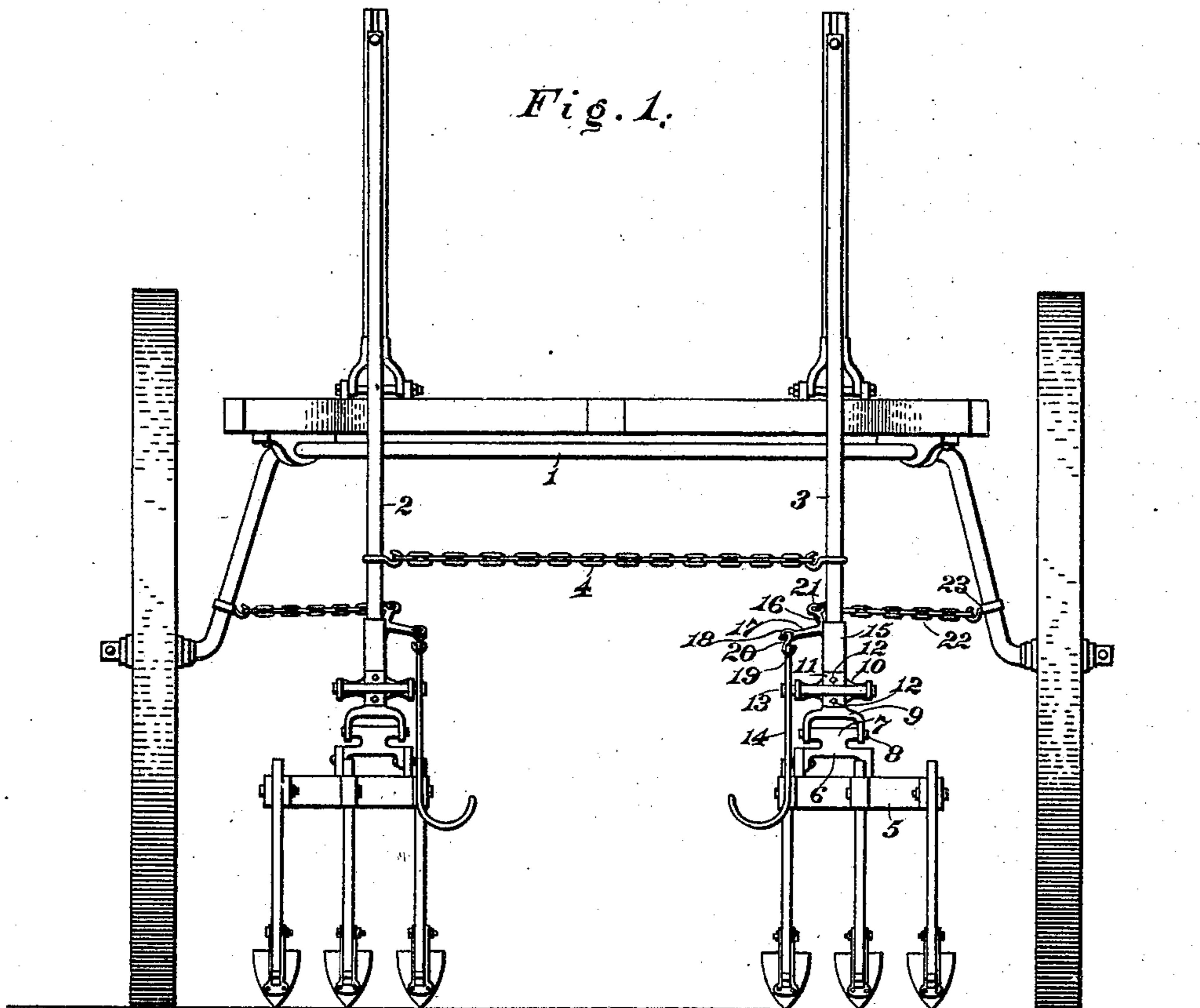
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S. F. HUGHES.

TREADLE GUIDE FOR CULTIVATORS.

(Application filed Sept. 16, 1901.)

(No Model.)



Witnesses

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SAMUEL F. HUGHES, OF FORT MADISON, IOWA.

TREADLE-GUIDE FOR CULTIVATORS.

SPECIFICATION forming part of Letters Patent No. 692,517, dated February 4, 1902.

Application filed September 16, 1901. Serial No. 75,475. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL F. HUGHES, a citizen of the United States, residing at Fort Madison, in the county of Lee and State of Iowa, have invented certain new and useful Improvements in Treadle-Guides for Cultivators; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to treadle-guides for cultivators, and has for its object the provision of a special combination and peculiar arrangement of lever-operated connections for directing the beams or gangs of plows, with which the usual form of cultivator is equipped, to one side or the other of the direct line in which the machine is being drawn.

My present invention is a further development and improvement of the treadle-guide for cultivators described and claimed in Letters Patent of the United States No. 678,736, dated July 16, 1901, granted to me.

Each constituent element of this invention is set out in detail and its individual office, together with the mode of operation of the whole, fully explained hereinbelow.

Of the accompanying drawings, throughout which like numbers refer to like parts, Figure 1 represents a rear view of a cultivator with my invention applied and shown in its proper location, and Fig. 2 is an enlarged detached detail view of the particular parts constituting my present invention.

Considering the drawings, numeral 1 marks the arched axle of a cultivator, and numerals 2 and 3 refer to the hanging rods or standards, supported in the customary manner at their topmost extremities. The manner of supporting these hanging rods 2 and 3 and the frame, running-gear, and other body mechanism of the cultivator not being included or concerned in my invention are not shown or described. A chain 4 or a bar connects the two hanging rods in order that the gangs of plows may be compelled to move together.

Fig. 2 most clearly illustrates my present invention. Numeral 5 designates the plow-

beams, provided with any number of cultivator-plows and having any selected form. Beam 5 possesses a cross-brace 6, which has an upwardly-projecting T-shaped extension 7. The uppermost cylindrical and horizontal portion of this extension is either provided with end trunnions or bored longitudinally. The figure shows the latter construction, and a pivot-bolt 8 passes through the bore mentioned. Bolt 8 pivotally connects the pronged casting 9 with the extension 7 of the cross-brace 6 relating to the plow-beams, as above described. The pronged casting 9 may be fixed in any manner to the lower end of the hanging rod 3. When these hanging rods are metal pipes, a common method of constructing them, the pronged casting 9 is provided with a cylindrical shank, (not shown,) which is passed upward within and secured to the hanging pipe. Immediately above the pronged casting 9 is situated another pronged casting 10, which has a hollow cylindrical portion 11, perpendicular to the plane of the prongs and located at the rear, as drawn. This second pronged casting has its hollow cylindrical portion 11 sleeved upon the lower end of the hanging rod 3, to which it is screwed or fixed by rivets 12 12. It is believed to be within the scope of my invention to make the two pronged castings 9 and 10 in one piece as a matter of economy. Through the ends or eyes of the pronged casting 10 passes the pivot-bolt 13, and at the inner end of this bolt just outside the prongs is attached the lower or foot lever 14, the pivot-bolt 13 being its fulcrum, as illustrated. Next above the pronged casting 10 and resting movably upon it is the cylindrical hub or support 15 of the forwardly-projecting arm 16, which has a laterally and usually rearwardly extending branch 17. An eye at the outer extremity of branch 17 is marked 18, and a similar eye at the top of foot-lever 14 is designated by number 19. These two eyes are movably shackled together by means of the link 20. It is now clear that a forward or backward movement of the lower end of the foot-lever will result in an oppositely-directed movement of the branch arm 17 and a lateral partial revolution of the arm 16, with the hub 15 as the center. At its outermost extremity the arm 16 is provided with an eye 21, and a chain 22 connects the eye 21 with a

hook-ring 23, attached to the bend of the arched axle 1. It is to be understood that each of the hanging rods 2 and 3 is equipped with the combination of levers, link, chain, and arms above described and as set out in Fig. 1.

Let it be assumed that the rider of the cultivator pushes the lower end of the foot-lever 14 forward. The branch 17 is drawn to the rear and the arm 16 to the left. The chain 22, being connected with a relatively stationary part of the machine, does not move, and the foot-lever, arms, hanging rod, and plow-beams must move to the right, drawing the left-hand plow-beam, hanging rod 2, and its attachments in the same direction. When the left-hand foot-lever is pushed forward, the plows are returned toward the left as far as may be desired.

Having thus described my invention, what I claim, and seek to secure by Letters Patent of the United States, is—

1. In a treadle-guide for cultivators, the combination of a hanging rod, plow-beams pivotally joined to the lower end of the said rod, a vertically-disposed foot-lever pivotally supported upon the said rod, a horizontally-disposed arm pivotally supported upon the

said rod, the said arm having a branch arm, a link pivotally coupling the said branch arm and foot-lever, and a chain connecting the said pivoted arm and a relatively-fixed part of the cultivator, substantially as described.

2. In a treadle-guide for cultivators, the combination of the plow-beams, a hanging rod, a pronged casting 9 secured to the lower end of the said rod, the said plow-beams having a cross-brace pivotally joined to the said pronged casting, a second pronged casting 10 having a vertical portion secured to and inclosing the said rod, a vertically-disposed foot-lever pivotally supported upon the said pronged casting 10, a horizontally-disposed arm pivotally supported upon the said rod, the said arm having a branch arm, a link pivotally coupling the said branch arm and foot-lever, and a chain connecting the said pivoted arm and a relatively-fixed part of the cultivator, substantially as described.

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

SAMUEL F. HUGHES.

Witnesses:

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