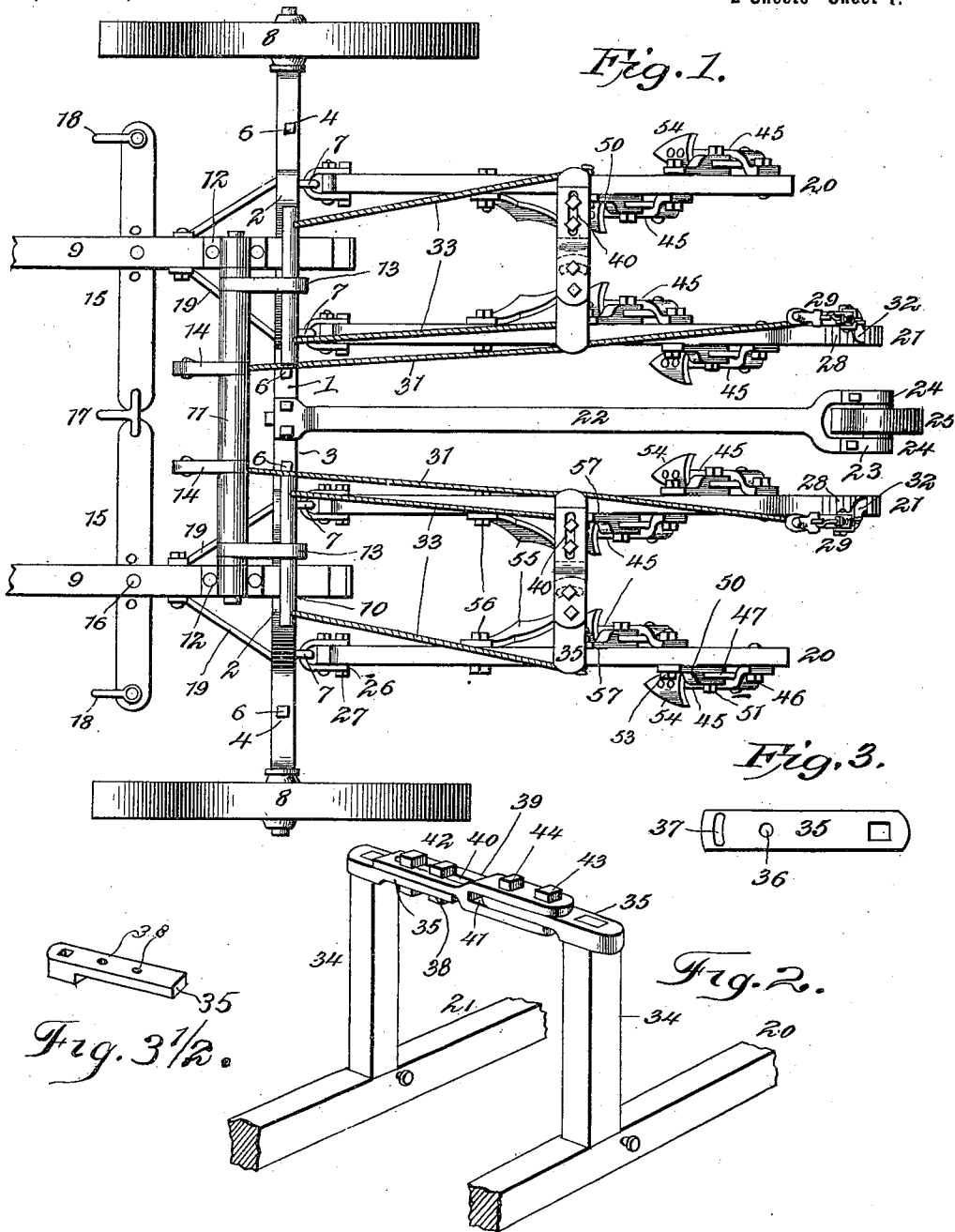


J. JELEN.
WALKING SULKY CULTIVATOR.

(Application filed Aug. 3, 1900.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses
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J. Warner

Josef Jelen,
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Inventor.
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No. 662,195.

Patented Nov. 20, 1900.

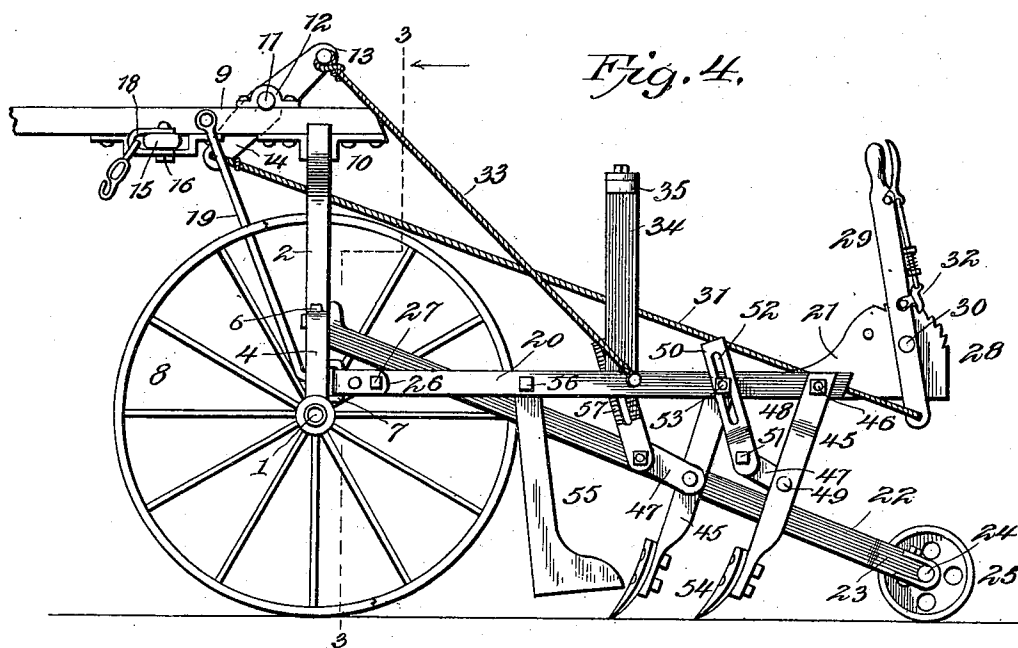
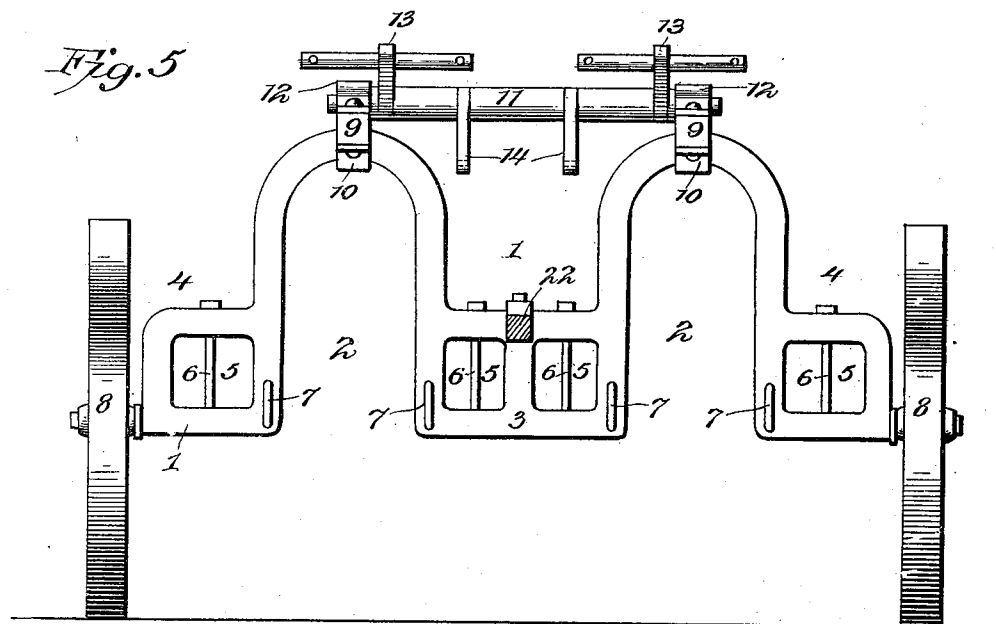
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(Application filed Aug. 3, 1900.)

(No Model.)

2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

JOSEF JELEN, OF NORFOLK, NEBRASKA.

WALKING SULKY-CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 662,195, dated November 20, 1900.

Application filed August 3, 1900. Serial No. 25,813. (No model.)

To all whom it may concern:

Be it known that I, JOSEF JELEN, a citizen of the United States, residing at Norfolk, in the county of Madison and State of Nebraska, have invented a new and useful Walking Sully-Cultivator, of which the following is a specification.

My invention is an improved walking sully-cultivator, the object of my invention being to provide an efficient walking sully-cultivator which is adapted for the lateral adjustment of the plow-beams, whereby the cultivating-shovels may be caused to operate at any desired distance apart, according to the width between the rows, and whereby the shovels may be set at any desired angle and raised and lowered as may be required.

My invention consists in the peculiar construction and combination of devices herein-after fully set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a top plan view of a walking sully-cultivator embodying my improvements. Fig. 2 is a detail perspective view of the connections between a pair of the plow-beams. Fig. 3 is a detail plan view of one section of said connections. Fig. 3½ is a detail perspective view of another section of said connections. Fig. 4 is a side elevation. Fig. 5 is a vertical transverse sectional view taken on the line 3 3 of Fig. 4.

The axle 1 is of the form shown in Fig. 5, provided with the arches 2, which are open at their lower side, the intermediate portion 3 between the arches, and the angled portions 4 at the outer sides of the arches. Said intermediate and angled portions of the axle are provided with openings 5, adapted to receive the front ends of the clevises attached to the front end of the plow-beam, and bolts 6 are vertically disposed centrally in said openings and adapted to extend through the front ends of said clevises, and thereby secure the front ends of the plow-beams in said openings 5. U-shaped coupling-bolts 7 are further provided, which are attached to the axle at the sides of the arches and at the lower sides thereof, as shown in Fig. 5, said coupling-bolts also serving for the attachment of the clevises of the plow-beams to the axle, and hence by securing the clevises of the plow-

beams either to the said coupling-bolts 7 or the coupling-bolts 6 the plow-beams may be spaced at any desired distance apart, as will be readily understood. Supporting-wheels 8 are journaled on the spindles of the axle in the usual manner.

A pair of draft-tongues 9 are attached at their rear ends on the upper sides of the arches 2 of the axle, as at 10, and a rock-shaft 11 is transversely disposed on the said draft-tongues and journaled in bearings 12, which are bolted on said tongues, as shown. Rock-arms 13 project upwardly from said rock-shaft 11 near the ends thereof, and rock-arms 14 project downwardly from said rock-shaft near the center thereof.

Doubletrees 15 are pivotally connected to the draft-tongues, as at 16, without the centers of said doubletrees, the latter being longer on their inner sides between the draft-tongues than they are on the outer sides thereof, and the inner ends of said doubletrees are connected together by a link 17, which serves also for the attachment of a singletree for the draft-animal to walk between the rows, the outer ends of the said doubletrees being provided with the usual clip-bolts 18 for the draft-animals on the outer sides of the tongues. The doubletrees being pivoted out at their centers serve to equalize the draft, as will be readily understood. Brace-rods 19 connect the draft-tongues with the axle, as shown.

A trail-bar 22 is bolted at its front ends to the depressed central portion of the axle and extends rearwardly and downwardly therefrom, said trail-bar being forked or bifurcated at its rear end, as at 23, and provided with bearings 24 for a trail-wheel 25, which is journaled therein and which supports the axle in an upright position and prevents the same from tilting or inclining, as will be readily understood.

The plow-beams 20 21 are arranged in pairs and provided at their front ends with the clevises 26, which serve to attach the plow-beams either to the bolts 6 or the bolts 7 at the required lateral adjustments on the axle, as hereinbefore stated, the said plow-beams having their front ends attached between the rear extending arms of the clevises by the pivotal bolts 27. Beams 21 are provided at their rear ends with segment-plates 28, on

which are fulcrumed hand-levers 29, as at 30, the lower ends of said hand-levers being connected to the rock-arms 14 by means of cords or rods 31. Said hand-levers are provided with spring-pressed pivoted keepers 32, which are adapted to engage the notched edges of the segment-plates, and thereby secure said hand-levers at any desired adjustment. Said plow-beams 21 and also the plow-beams 20 are connected to the rock-arms 13 by means of cords or links 33.

Each plow-beam 20 21 is provided with a vertically-extending arm 34 at a suitable distance from its rear end, horizontally-disposed arms 35 being secured to the upper ends of said vertical arms 34 and extending toward each other in pairs, as shown. One of the arms 35 is provided with a pivotal opening 36 and a curved slot 37, which is concentric therewith, and the other arm 35 of each pair is provided with bolt-holes 38, two or more. A link-plate 39 is provided at one end with a longitudinal slot 40, and its opposite end is bifurcated horizontally to form an open slot 41. Bolts 42 in the adjusting-slots 40 and in the openings 38 in one of the arms 35 secure said link-plates adjustably on said arms and are connected to the opposite arm of the respective pairs by means of pivotal bolts 43 in the pivotal openings 36 and adjusting-bolts 44 in the curved slots 37.

It will be understood from the foregoing and from the drawings, more especially by reference to Figs. 1 and 2 of the drawings, that the arms 34 35 and link-plates 39 serve as connections between the pairs of plow-beams, whereby the latter may have the spaces between their rear ends widened or narrowed, as may be required, to the end that the cultivating-shovels attached to said beams may be adjusted laterally.

On opposite sides of each plow-beam are plow-standards 45, the upper ends of which are pivotally connected to the plow-beams by means of the bolts 46, whereby the standards are adapted to be adjusted to any desired inclination, and said standards are further connected to the plow-beams and supported at any desired inclination by means of brace-links 47, each of which comprises the section 48, pivotally bolted to the standard, as at 49, and the section 50, pivotally connected by a bolt 51 with the section 48 and provided with the longitudinal adjusting-slot 52, in which operates a bolt 53, that serves to secure said section 50 to the plow-beam and to permit the adjustment thereof, and hence permit the plow-standards to be adjusted and securely braced at any desired angle. Shovel-plows or other suitable cultivating attachments 54 may be secured to the standards 45 in the usual manner. To the inner side of each

plow-beam, at a suitable distance from the front end thereof, is secured a wing 55 by means of a bolt, as at 56, the function of said wing being to fend or guard the young plants from being covered by the loose soil thrown up by the cultivating-shovels. The plow-beams 20 21, being connected together in pairs, as hereinbefore described, it follows that they are adapted to be lowered and raised in unison, this raising and lowering of the plow-beams being accomplished by means of the levers 29, rock-arms 13 14, and cords or rods 31 33, which serve to connect said levers and said plow-beams to the said rock-arms.

The inner sides of the link-sections 50, which contact with the sides of the plow-beams, are roughened or corrugated, as at 57, and thereby adapted to bite into the sides of the plow-beams when the bolts 53 are tightened, and hence strengthen the connection between said link-sections and the plow-beams.

Having thus described my invention, I claim—

1. In a sulky-cultivator, the combination of a supporting-frame, a rock-shaft thereon having oppositely-extending rock-arms, plow-beams, adjusting-levers on said plow-beams and connections between said levers and said plow-beams and said oppositely-extending rock-arms, for the purpose set forth, substantially as described.

2. In a sulky-cultivator, the pairs of plow-beams having the vertically and inwardly extending arms, in combination with the link-plates, adjustably secured to one of said inwardly-extending arms and pivotally secured to the other, substantially as described.

3. The combination of the plow-beams, the vertical arms projecting from the upper side thereof, the horizontally-disposed inwardly-extending arms at the upper end of said vertical arms, and link-plates adjustably secured to one of said horizontally-disposed arms and pivoted to the other, substantially as described.

4. The combination of the plow-beams having the inward-extending arms, one of which has the pivotal opening 36 and the concentric slot 37, the slotted link-plate secured to one of said arms by bolts in said slots, said link-plate having a pivotal bolt at one end in the pivotal opening 36 of the other arm and further provided with an adjusting-bolt in said concentric slot 37, substantially as described.

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

JOSEF JELEN.

Witnesses:

JAKE KOENIGSTEIN,
S. L. GARDNER.