(No Model.)

R. P. MORTON.

WHEEL CULTIVATOR.

No. 466,421. Patented Jan. 5, 1892.

Fig. 1.

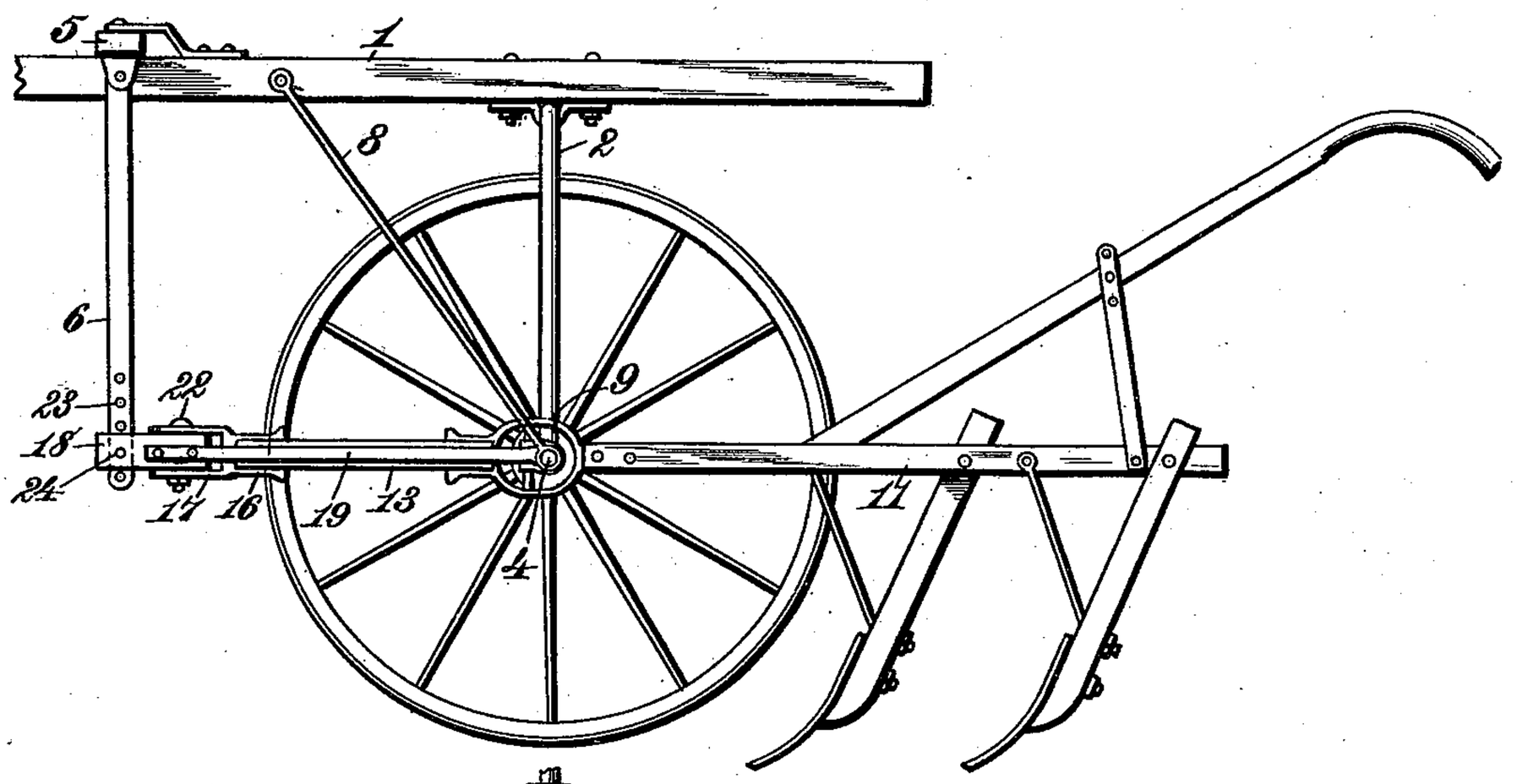


Fig. 2.

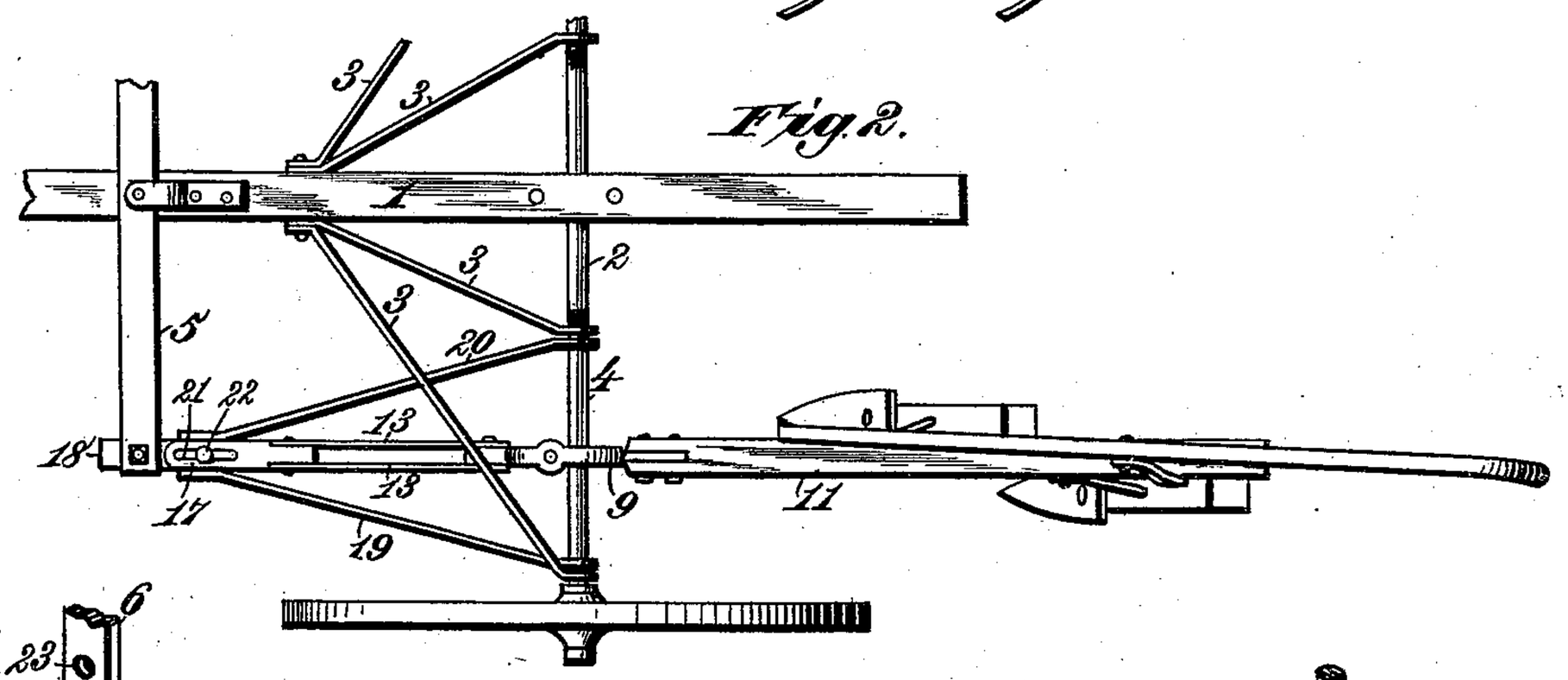
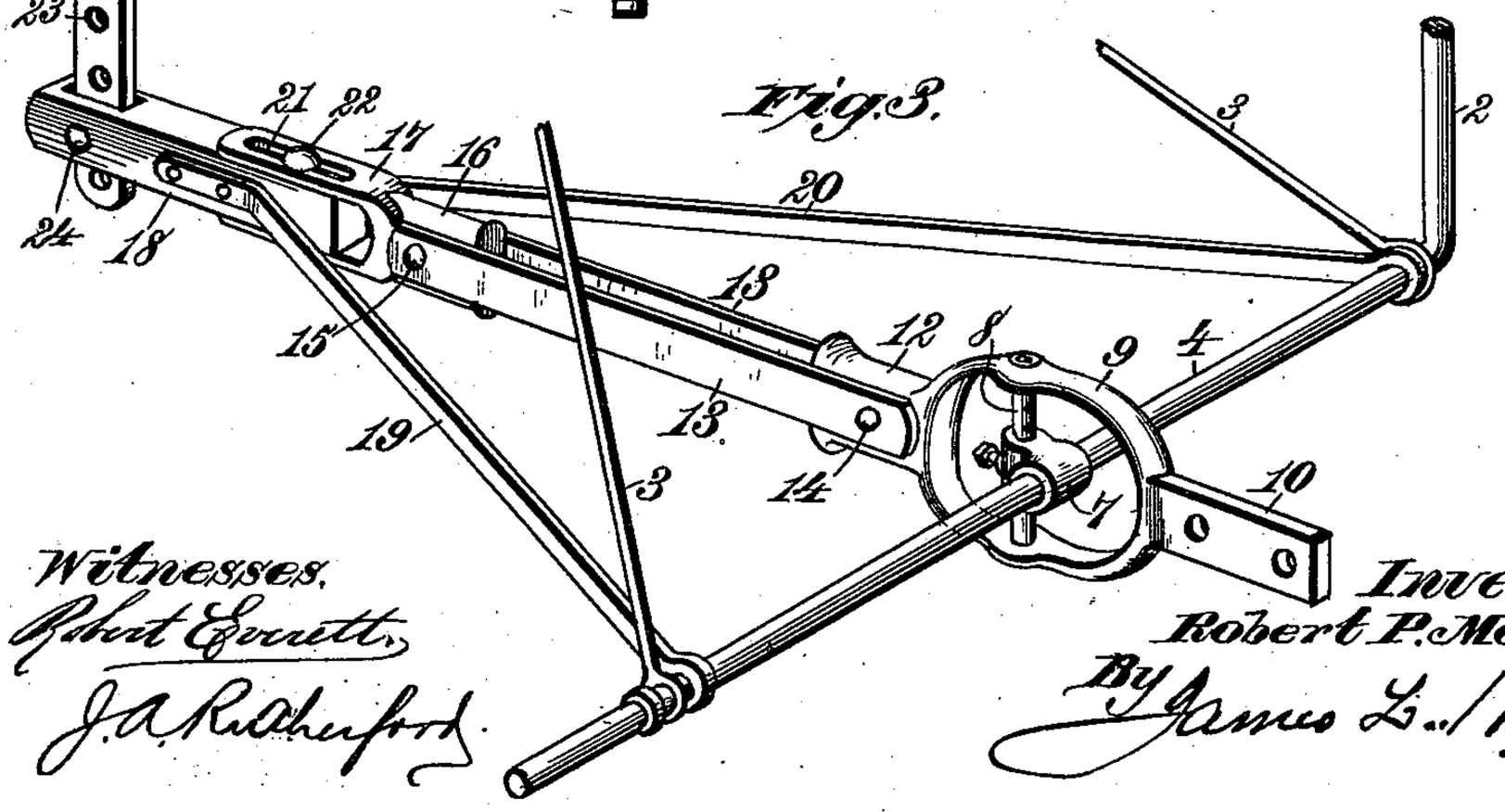


Fig. 3.



Witnesses,
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UNITED STATES PATENT OFFICE.

ROBERT P. MORTON, OF LIBERTY, INDIANA.

WHEEL-CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 466,421, dated January 5, 1892.

Application filed February 24, 1891. Serial No. 382,570. (No model.)

To all whom it may concern:

Be it known that I, ROBERT P. MORTON, a citizen of the United States, residing at Liberty, in the county of Union and State of Indiana, have invented new and useful Improvements in Wheel-Cultivators, of which the following is a specification.

This invention relates to improvements in the gang-coupling and the hitch in that class of cultivators in which parallel cultivator-beams are constructed and arranged to shift on the axle in moving the gangs from right to left, or vice versa, the beams remaining in line as well as the shovels.

The object of my invention is to provide improved means for running a cultivator-beam in line with the draft in any required direction, so that by taking hold of the handle of the left gang, for instance, and moving it to the right the front end of the beam will be shifted to the right near to or against the perpendicular part of the arched axle, or by moving the handle to the left the front end of the beam can be shifted to the left near the wheel, the front end of the beam having precisely the same lateral movement as the rear end.

My invention consists in the construction and combination of parts in a cultivator, as hereinafter described and claimed.

In the annexed drawings, illustrating the invention, Figure 1 is a side elevation of a cultivator embodying my improvements. Fig. 2 is a plan view of one-half of the cultivator. Fig. 3 is a detail view.

Referring to the drawings, the numeral 1 designates the pole, which is mounted on the top of the arch 2 in any suitable manner and is braced by rods 3, extended from said pole to the base of the arch and to the axle-arms 4, which project from opposite sides of said arch.

Attached to the pole 1 in any suitable manner is an evener 5, from which the pendent hitch-standard 6 is suspended.

On the axle 4 is mounted a slide 7, of any suitable construction, adapted to be moved laterally on the horizontal arm of said arched axle, and if preferred the said slide may be provided with anti-friction rollers having their bearings on the axle, so as to enable the slide to be shifted with the least possible friction.

Through a suitable aperture in the forward portion of the slide 7, in front of the axle-arm 4, is inserted a vertical rod or sleeve 8, provided with means for vertical adjustment, such as a pin carried in the slide to engage one of a vertical series of perforations in the rod or sleeve, so that the gang of shovels or plows can thereby be adjusted to run deep or shallow, as may be desired.

Around the axle-arm 4, and pivotally attached to the ends of the rod or sleeve 8, is arranged a metal loop or casting 9, having a rear projection 10, to which is secured the cultivator-beam 11, that is provided with a gang of shovels or plows of any desired construction. On the forward end of the loop-casting 9 is a lug or projection 12, that is so shaped as to form an extended bearing for the rear ends of the connecting draft-bars 13, that have their bearings against the opposite sides of said projection and are pivotally attached thereto by means of a horizontally-arranged bolt 14, forming a joint that permits a vertical swinging movement of the connected parts, but allows no lateral movement whatever. The forward ends of the bars 13 are pivoted on a bolt 15, supported horizontally in a lug or projection 16 on the rear end of the slotted fork 17, between the prongs of which is received a block 18 of wood or other suitable material, which is adjustably supported by the pendant 6 and braced by braces 19 and 20, extended rearward to the axle-arm. Through the slot 21 of the fork 17 is passed a vertical bolt 22, that secures the block 18 in the fork 17 and permits a forward and backward sliding or yielding of the fork, which becomes necessary when the gang is raised or lowered, the said bolt 22 also forming a pivot for the lateral movement of the gang, while the pivot for the vertical movement of the gang is on the axle-arm, thus allowing the gang to be shifted to the right or left without throwing the gang so oblique to the line of direction, as is the case with cultivators of ordinary construction. It will be seen that the slide 7, sleeve 8, and loop 9 form a laterally-movable and vertically-adjustable coupling that enables the beams and

attached gangs to be readily shifted and permit the shovels or plows to be operated at any desired depth. The advantages of this construction will thus be obvious. It will be observed that the lug or projection 16 of the fork 17 forms extended bearings for the forward ends of the connecting-bars 13, and that by providing the pendant 6 with a vertical series of perforations 23 to engage a transverse pin 24 in the block 18 any desired vertical adjustment can be given to the forward ends of the said connecting-bars.

In a cultivator of this construction the beams and gangs of shovels or plows can be readily kept nearly straight with the corn row, thereby enabling the operator to manage the machine with ease, while the construction of the several parts is strong, simple, and durable and not liable to get out of order.

By constructing and arranging the various parts in the manner described the strain is taken off the joints to a great extent, and for this reason the gangs are very easily shifted to right or left, and when shifted to either position will follow the draft without requiring the operator to hold them in position. The shovels are thus kept nearly parallel with the corn row, thereby doing uniform work without requiring the constant attention of the operator.

By providing the plow-beam 11 with attached handles and connecting it to the sliding-loop casting or coupling 9, it is possible to quickly and conveniently shift the loop casting or coupling along the length of the axle at the will of the attendant while the cultivator is in operation, because the lateral sliding of the casting or coupling 9 will correspond with the lateral motion imparted to the plow or cultivator handles, thereby transmitting the desired lateral motion to the gang of cultivators or plows at the will of the attendant while they are acting upon the soil. It will thus be obvious that the cultivators or plows can be easily maintained nearly straight with the corn row, whereby the attendant can manage and control the machine with great ease. In this respect my invention differs from prior constructions wherein castings or couplings can be adjusted along the length of an axle, but are held in fixed positions after adjustment.

What I claim as my invention is—

1. In a cultivator, the combination of the following elements, to wit: the arched axle, the pendent hitch-standard, the draft-bar having a laterally-yielding connection with the pendent hitch-standard, a slide movable along the length of the axle at the will of the attendant while the cultivator is in operation, a loop casting or coupling having a pivotal connection with the slide and attached to the rear portion of the draft-bar, and the cultivator-beam having suitable handles and secured to the rear portion of the loop casting or coupling, so that while the cultivator is in operation upon the soil the attendant can at will shift the loop-casting and slide along the length of the axle, and thereby instantly adjust the gang of cultivators or plows laterally, substantially as described.

2. In a cultivator, the combination, with the arched axle and the pendent hitch-standard, of a laterally-movable and vertically-adjustable coupling mounted on the axle-arm, the cultivator-beam connected with the rear end of said coupling, a block supported by the pendent hitch-standard, a slotted fork that receives said block, a bolt that connects said fork and block through the slots of the fork and permits the fork to have a sliding and yielding movement, and connecting draft-bars pivoted to said fork and to the coupling on the axle-arm, substantially as described.

3. In a cultivator, the combination of the arched axle having arms 4, the pendent hitch-standard 6, the slide 7, the sleeve 8, the loop 9, the cultivator-beam 11, the block 18, the sliding or yielding fork 17, and the draft-bars 13, having pivotal connection with said loop and fork, substantially as described.

4. In a cultivator, the combination of the pole, the arched axle, braces between said pole and axle, a laterally-movable and vertically-adjustable coupling on the axle-arm, the cultivator-beam connected with said coupling, a block supported by the pendent hitch-standard, a fork having a yielding connection with said block, braces for said fork and block, and connecting draft-bars pivoted to said fork and to the coupling on the axle-arm, substantially as described.

In testimony whereof I have hereunto set my hand and affixed my seal in presence of two subscribing witnesses.

ROBERT P. MORTON. [L. S.]

Witnesses:
SAMUEL HULL,
JOHN HEWITT.