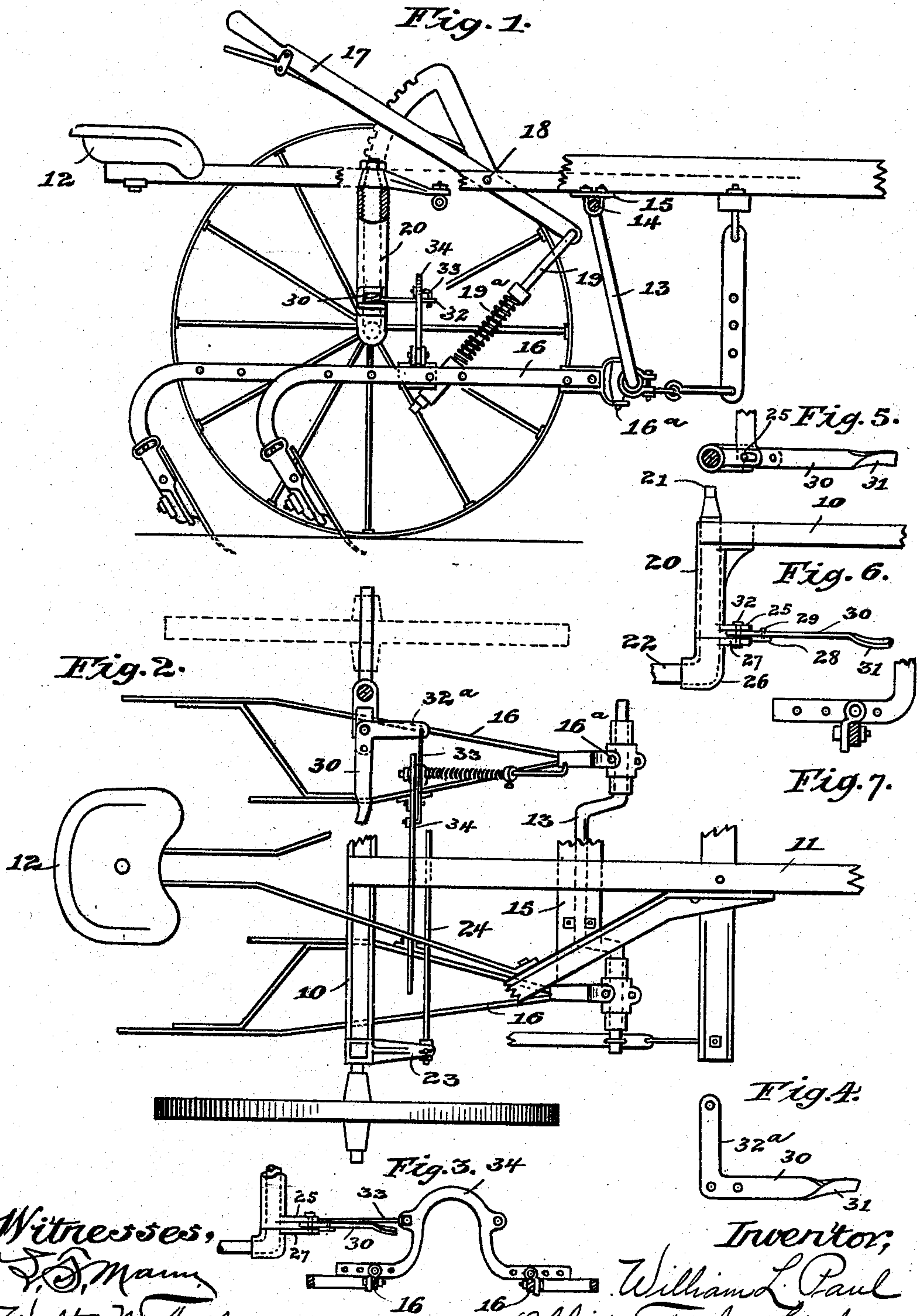


No. 885,079.

PATENTED APR. 21, 1908.

W. L. PAUL.
PIVOTED AXLE CULTIVATOR.
APPLICATION FILED MAR. 25, 1907.



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UNITED STATES PATENT OFFICE.

WILLIAM L. PAUL, OF PERU, ILLINOIS, ASSIGNOR TO PERU PLOW & WHEEL COMPANY, OF PERU, ILLINOIS, A CORPORATION OF ILLINOIS.

PIVOTED-AXLE CULTIVATOR.

No. 885,079.

Specification of Letters Patent.

Patented April 21, 1908.

Application filed March 25, 1907. Serial No. 364,257.

To all whom it may concern:

Be it known that I, WILLIAM L. PAUL, a citizen of the United States, residing at Peru, in the county of Lasalle and State of Illinois, have invented certain new and useful Improvements in Pivoted-Axle Cultivators, of which the following is a specification.

My invention concerns improvements in straddle-row wheel cultivators, and more particularly relates to improvements in that class of cultivators in which the carrying wheels are mounted on axles turning on vertical pivots. Instead of turning these axles by foot-actuated simple levers, I employ compound levers whereby a greater leverage is secured, and a long swing of the foot-operated lever causes but a comparative slight angular turning of the wheel axles. It is desirable to shift the gangs carrying the shovels with the wheels and to effect this result I connect them to one or both of the pair of wheel-controlling levers or arms.

When using my improved pivoted axle cultivator, the operator through his feet has complete control of the carrying wheels whereby he is enabled to easily compel the machine to travel in any path desired and by turning these wheels on their axles he at the same time shifts the gangs and shovels laterally whereby crooked rows may be readily cultivated, misplaced hills dodged, and the shovels made to approach or recede from the row.

In the accompanying drawing which forms a part of this specification, Figure 1 is a side elevation of my improved cultivator certain parts being broken away; Fig. 2 is a plan view of the same machine with parts also broken away to more clearly show the construction; and Figs. 3, 4, 5, 6 and 7 are detail views of various parts of the machine.

The cultivator illustrated includes besides other parts the frame member 10, tongue or longitudinal draft bar 11, and seat 12 suitably supported. The arch or yoke 13, rotatably mounted in suitable bearings 14 on the cross-plate or bar 15, at its lower ends is pivotally connected at 16^a to the front ends of gangs 16 whereby the latter members may be shifted laterally or sidewise. The raising or depression of the shovels is controlled by hand levers 17 pivoted at 18 and connected at one end to the gangs by rods 19 pivoted thereto and coil springs 19^a which, by their tendency to elongate axially, hold the plows

or shovels in the ground. At each end of the transverse frame member 10 and rigidly fixed thereto is a depending bearing or sleeve 20 adapted to receive the upright portion 21 of a right-angle axle 22. Extended forwardly from the top end of each of the shafts 21 and mounted to turn therewith is an arm 23, the two arms 23 being connected together by a rod 24 whereby the wheel axles are compelled to turn in unison in their bearings or socketed brackets 20. Projecting inwardly from each bearing 20 at its lower end is a longitudinally slotted lug 25 and on the angle part of axle 22 is fitted a right-angle casing or elbow sleeve 26 equipped with an inwardly extended arm 27 located beneath lug 25. An extension plate 28 is riveted to each arm 27 and has an upstanding pivot pin 29 on which foot lever 30 is pivoted. Lever 30 is bent at one end at 31 to accommodate the operator's foot, and at its opposite end has a pin 32 which extends up through the slot of lug 25. These parts in combination form a compound lever whereby the wheel and its axle is readily turned by foot. Both sides of the machine are formed as described above whereby pressure on one lever 30 turns the wheels in one direction, while actuation of the other foot lever 30 compels the wheels and their axles to turn in the opposite direction.

Each lever 30 has a forwardly projecting integral arm 32^a which is connected by a link 33 to the adjacent leg of a yoke or bail 34 secured to the two gangs. The gangs and shovels are, therefore, shifted with the foot levers simultaneously with the turning of the carrying wheels and their axles. It will be readily understood from the illustration and description of this device that the operator has the turning of the wheels, their axles and the gangs wholly under his control through the foot-operated levers 30.

It should be understood that various minor changes may be made in the cultivator illustrated and described without departing from the substance or sacrificing any of the advantages of my invention.

I claim:

1. In a cultivator, the combination of pivoted gangs, means connecting said gangs together to compel them to turn in unison, carrying wheels, pivoted axles for said wheels, means connecting said axles to cause them to turn together, compound levers for turning

said axles and wheels, and means connecting said levers with said gangs whereby the latter are shifted at the same time that the wheels and axles are turned, substantially as described.

2. In a pivoted-axle cultivator, the combination of pivoted gangs, means connecting said gangs together to compel them to turn in unison, carrying wheels, pivoted axles for said wheels, means connecting said axles to cause them to turn together, a pair of operating levers each having a fixed pivot and also a pivotal connection with a part turning with one of said axles, and means connecting said operating levers to said gangs whereby said axles and gangs are shifted simultaneously, substantially as described.

3. In a pivoted-axle cultivator, the combination of pivoted gangs connected together to move in unison, carrying wheels, pivoted axles for said wheels connected together to turn simultaneously, bearings for said axles each having a lug rigid therewith, bracket

members turning with each of said axles, an operating lever pivoted to each of said lugs and to one of said bracket members, and means connecting said operating levers with said gangs, substantially as described.

4. In a pivoted-axle cultivator, the combination of pivoted gangs connected together to move in unison, carrying wheels, pivoted right-angle axles for said wheels connected together to turn simultaneously, bearings for the vertical portions of said axles each having a lug rigid therewith, a bracket member turning with each of said axles, an operating lever having a pin and slot connection with each of said lugs and pivoted to one of said bracket members, and means connecting said operating levers with said gangs, substantially as described.

WILLIAM L. PAUL.

Witnesses:

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