(No Model.)

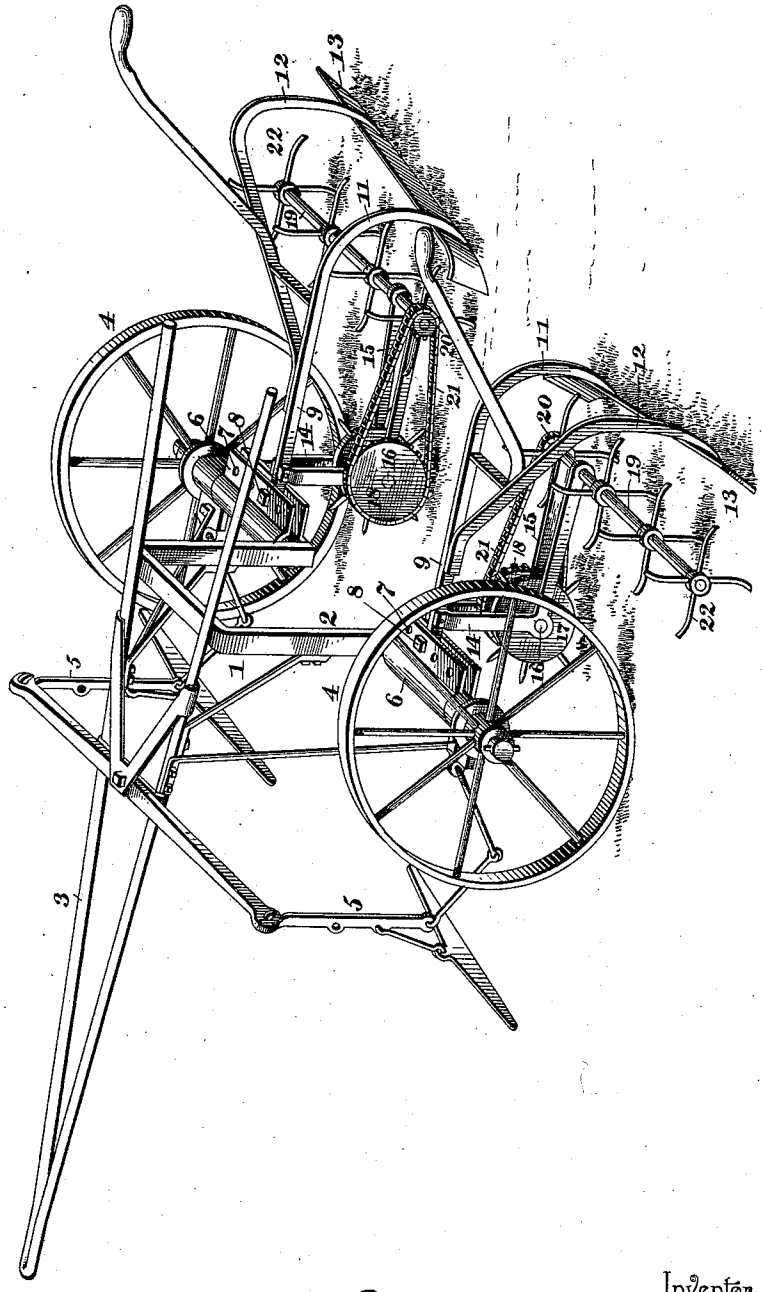
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L. H. WHITMAN.

CULTIVATOR.

No. 429,668. Patented June 10, 1890.

Fig. 1



Witnesses
Chas. H. Durand.
Wm. Bagger.

Inventor
Levi H. Whitman
By his Attorneys,
C. A. Snow & Co.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

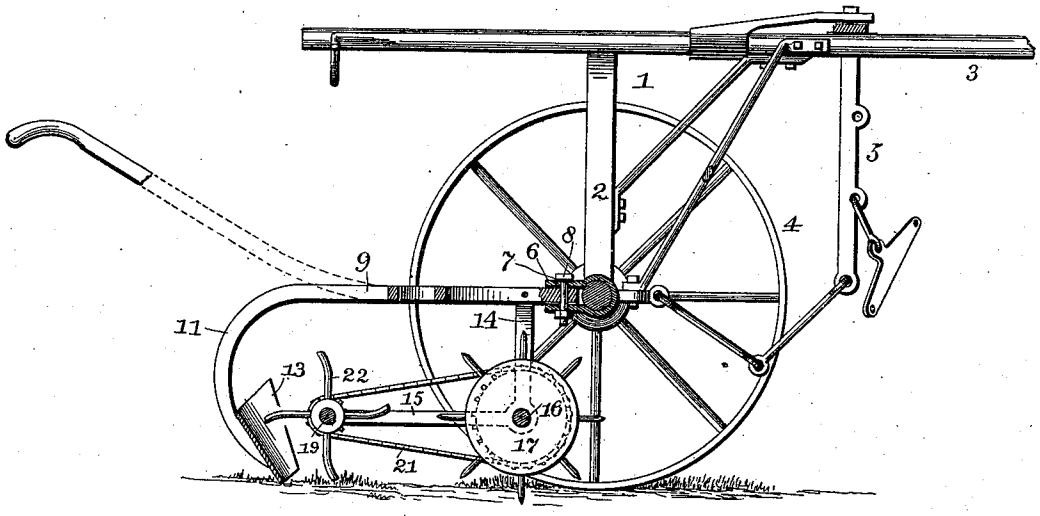
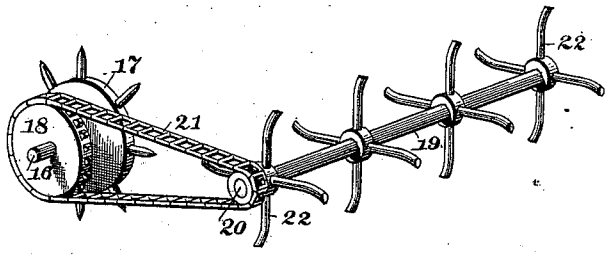


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

LEVI H. WHITMAN, OF HAWK EYE, NEBRASKA.

CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 429,668, dated June 10, 1890.

Application filed February 13, 1890. Serial No. 340,357. (No model.)

To all whom it may concern:

Be it known that I, LEVI H. WHITMAN, a citizen of the United States, residing at Hawk Eye, in the county of Dixon and State Nebraska, have invented a new and useful Corn-Cultivator, of which the following is a specification.

This invention relates to corn-cultivators; and it has for its object to construct a device of this class which shall possess superior advantages in point of simplicity, durability, and general efficiency.

The invention consists, mainly, in the combination, with a cultivator-frame, of rotary shafts arranged in front of the inclined shears or scrapers and having radially-extending arms forming stirrers or agitators, and operating mechanism for the said shafts, the whole being arranged and combined to operate substantially as and for the purpose hereinafter set forth.

In the drawings hereto annexed, Figure 1 is a perspective view of a cultivator embodying my improvements. Fig. 2 is a longitudinal sectional view taken through one of the cultivator-beams. Fig. 3 is a detail view, on a larger scale, of one of the rotating shafts and its operating mechanism.

Like numerals of reference indicate like parts in all the figures.

1 designates a straddle-row cultivator-frame of ordinary construction, comprising the arched axle 2, the tongue 3, the wheels 4, and the draft attachment 5, all of which are of the usual or of any well-known construction. Upon the ends of the axle are mounted the coupling-plates 6, the rear ends of which have series of vertical perforations 7 to receive the bolts 8, by means of which the cultivator-beams 9 are attached to the frame. This, it will be seen, is the usual mode of attachment of the cultivator-beams, whereby the latter are universally jointed to the frame and enabled to be hung upon the supporting-hooks 10 at the rear ends of the tongue-bars when they are not in actual use.

The cultivator-beams are each provided with two standards 11 and 12, to the lower ends of which are attached the blades or scrapers 13. Each of the cultivator-beams is also provided near its front end with a downwardly-extending frame 14, having rearwardly-extending arms 15. In the lower end of the frame 14 is journaled a shaft 16, upon which is mounted a walking-wheel 17. The outer end of the shaft 16 also carries a chain-wheel or sprocket-wheel 18. The rear ends of the arms 15, which extend rearwardly from the frame 14, are provided with bearings for a transverse shaft 19, having a sprocket-wheel 20, which is connected by means of a chain 21 with the sprocket-wheel 18 upon the shaft 16. The transverse shaft 19 is also provided with a series of radially-extending arms 22, which are curved slightly in a rearward direction, so as to avoid picking up weeds and becoming entangled therewith during the operation of the device. The sprocket-wheel 18 upon the shaft of the walking-wheel is of larger diameter than the sprocket-wheel 20 of shaft 19, which latter makes from five to six revolutions to each revolution of the shaft 16.

The operation of this invention will be readily understood from the foregoing description, taken in connection with the drawings hereto annexed. When the machine progresses over the field, it is made to straddle the row of growing plants. The walking-wheel 17 on each side will take into the ground, and rotary motion will thus be communicated, through the medium of the sprocket-wheels 18 and 20 and the chain 21, to the shaft 19, the radially-extending arms of which will stir and agitate the ground very thoroughly. The blades or scrapers 13 will serve to throw the dirt in the direction of the growing plants or away from the same, as may be desired, according to the side of the machine on which each cultivator-beam is adjusted, said cultivator-beams being mounted detachably and interchangeably.

Each of the cultivator-beams is provided in the usual manner with a handle, by means of which it may be conveniently manipulated and guided by the operator, and the beams, when the machine is to be transported over the rows or while turning corners, may be supported upon the hooks 10 at the rear end of the tongue-bars.

Having described my invention, what I claim is—

1. In a cultivator, the combination, with the beams having the standards carrying the blades or scrapers, of the frames extending downwardly from the beams and having rearwardly-extending arms, the transverse shafts journaled in the rear ends of said arms and having radial arms or agitators, the walking-wheels, and means for transmitting rotary motion from the shafts of the latter to the transverse agitator-shafts, substantially as set forth.

2. In a cultivator, the combination, with the beams having the standards carrying the blades or scrapers, of the downwardly-extending frames, the shafts journaled in the lower ends of said frame and having the walking-wheels, the arms extending rearwardly from said frames, the transverse shafts journaled in the rear ends of said arms and having radially-extending stirrers or agitators, the chain-wheels mounted upon the shafts of the agitators and of the walking-wheels, and the chains connecting the said chain-wheels, substantially as and for the purpose set forth.

3. In a cultivator, the combination, with the beams having the standards carrying the blades or scrapers, of the rotating shafts arranged transversely in front of said blades or scrapers, the walking-wheels, mechanism for transmitting rotary motion from the latter to the transverse shafts, and the rearwardly-curved arms extending radially from said transverse shafts, substantially as and for the purpose set forth.

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

LEVI H. WHITMAN.

Witnesses:
W. J. WHITE,
GUS. A. FRAZER.