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Patented Apr. 17, 1900.

L. TOILLION.

CULTIVATOR.

(Application filed Feb. 3, 1900.)

(No Model.)

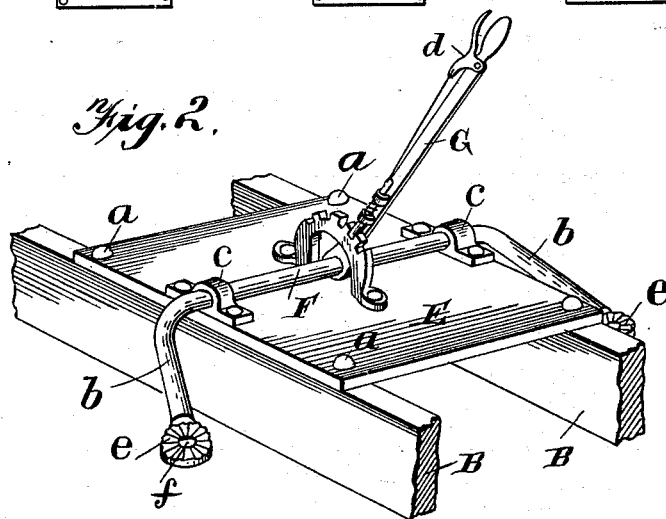
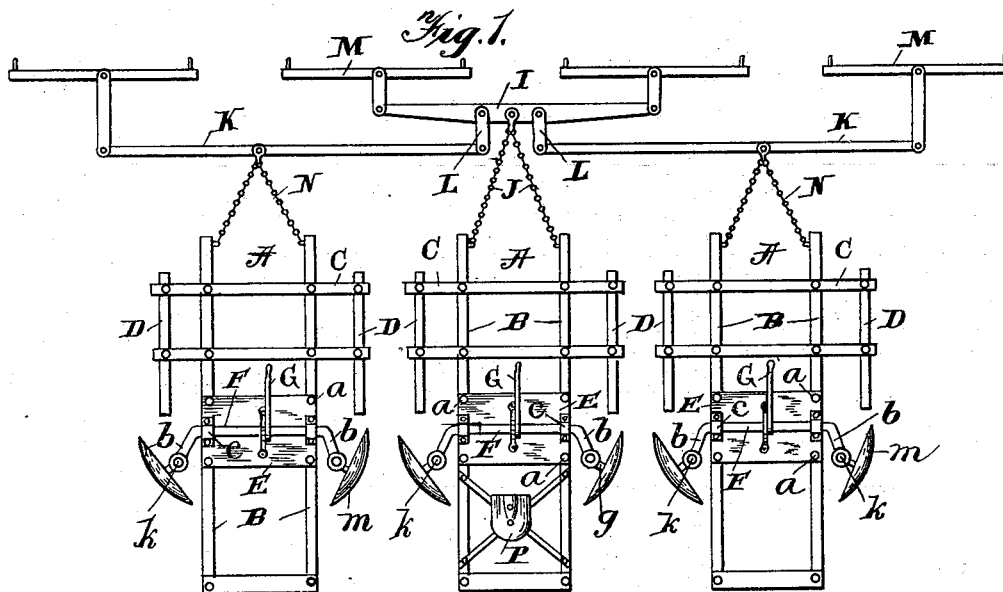
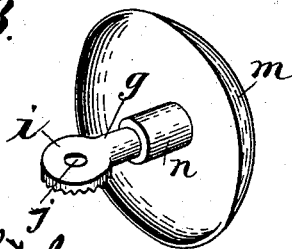


Fig. 3.



Witnesses
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LOUIS TOILLION, OF HERSHEY, NEBRASKA.

CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 647,771, dated April 17, 1900.

Application filed February 3, 1900. Serial No. 3,882. (No model.)

To all whom it may concern:

Be it known that I, LOUIS TOILLION, a citizen of the United States, residing at Hershey, in the county of Lincoln and State of Nebraska, have invented new and useful Improvements in Cultivators, of which the following is a specification.

My invention relates to improvements in cultivators, and pertains to a cultivator which is intended for a two or three row corn-lister cultivator, all of which will be fully described hereinafter and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a top plan view of a cultivator embodying my invention. Fig. 2 is an enlarged detached view of the disk attachment. Fig. 3 is an enlarged detached perspective view of one of the disks and its short spindle.

From the accompanying drawings it will be seen that my invention is particularly adapted to be combined in a plurality of cultivators, and, as will hereinafter appear, these cultivators are adapted to automatically follow the furrows, and that it also pertains to other details of construction wherein the cultivating-disks may be adjusted to the desired angle and thrown into and out of operative position as desired.

Referring to the drawings, the cultivators proper consist of the sleds A, each of which comprises the two parallel runners B, having near their forward ends the transversely-extending beams C, which carry at their outer projecting ends the parallel extending short runners D. Attached to the runners B, approximately at their centers and just in rear of the runners D and the transverse beams C, is a platform E. This platform E is an attachable and detachable platform through the medium of the bolts a, which pass through the platform and into the runners. Extending across this platform E is a shaft F, which has its ends bent laterally and rearwardly, as shown at b, the said shafts being approximately U shape in plan view. This shaft F is journaled in suitable boxes c, carried by the said platform, and secured to the shaft F at a point intermediate its ends is a lever G, the said lever G being provided with the usual ratchet-lever d, which is adapted to en-

gage a notched sector which extends over the central and straight portion of the shaft and has its ends suitably attached to the platform. By means of this lever and notched sector the shaft can be oscillated as desired and locked in its adjusted position, for a purpose which will be explained hereinafter. The extremities of the laterally-turned portions of the shafts are provided with horizontally-arranged enlarged portions e, which are preferably circular in form and provided with projections. This enlarged portion e has a central bolt-opening f and a short spindle or shaft g, which has its inner end enlarged, as shown at i, and also provided with projections to engage the projections upon the shaft enlargement e, and the enlarged portion i of the short spindle or shaft is provided with a centrally-arranged bolt-opening j, adapted to register with the bolt-opening in the enlarged portion e of the said shaft and through which a clamping-bolt k passes for the purpose of clamping and locking the short shaft or spindle to the end of the shaft F at the desired angle for the purpose of cultivating as required. Journaled upon the short shafts or spindles g are the cultivator-disks m, which are provided with hubs n, adapted to freely rotate upon the said spindles. From this description it will be seen that the cultivator-disks through the medium of their adjustable shafts or spindles are adapted to be adjusted at any desired angle in relation to the shaft F or the runners of the sled portions of the cultivators and that the disks are readily and quickly thrown into or out of operation by oscillating the shaft F through the medium of the operating-lever G. Through the medium of this operating-lever the disks can also be made to cut the desired depth in the soil, according to the adjustment of the shaft, as will be readily understood.

While a cultivator comprising a sled and the disk attachment just described is adapted to be used singly, yet I prefer to use these cultivators in plurality and preferably three in number side by side, as illustrated in Fig. 1. When used in series, as there shown, it is desirable and, indeed, necessary to provide a draft arrangement which will permit the cultivators to automatically follow the fur-

rows in which they are placed. This I accomplish by the draft-evenner, which I will now describe.

The evenner consists of an ordinary double-tree I, which is directly connected with the central cultivator through the medium of the flexible-chain connection J. Situated just in rear of this doubletree I are the two elongated draft-bars K, which have their inner ends connected, by means of suitable links L, with the doubletree at opposite sides of its center, and these draft-bars K have connected with their outer ends the singletrees M. The two outside cultivators are connected with the draft-bars K at points near their outer ends by means of the flexible-chain draft connection N. By means of this construction the cultivators will automatically follow the furrows of the rows, the links L permitting the draft-bars K to separate and approach or to relatively expand or contract in opposite directions, whereby the uneven movement of the horses will not tend to cause the cultivators to be displaced from the furrows.

By the above arrangement a boy and four horses can do the work of three men and six horses when cultivating corn in the usual way.

It will be noticed that the central cultivator is provided with a seat P just back of the platform for the driver.

In operation the short runners D ride on the ridges or edges of the furrows and constitute guides to make the sled run level and serve also to keep the sled from rockingside-wise. These runners also serve to cause the disks to cut an even depth on either side, and therefore serve very important functions.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A cultivator comprising a supporting-frame, a transversely-journaled and vertically-oscillating approximately U-shaped shaft, a lock for said shaft adapted to lock it firmly at various points of its oscillation, short spindles carrying cultivator-disks horizontally adjustably connected with the ends of said shafts, and a lock for said short spindles for locking them at various points in their horizontal adjustment, substantially as described.

2. A cultivator comprising a sled, a transversely-arranged shaft carried by a supporting-frame, the ends of the shaft turned rearwardly, short disk-carrying spindles horizontally adjustably connected with the extremities of the rearwardly-turned ends of the shaft, and a lever connected with the said shaft at a point intermediate its end for the purpose of oscillating the shaft and thus throwing the cultivator-disks in or out of operation for causing them to cut in the soil

any desired distance, substantially as described.

3. A cultivator comprising a supporting-frame, a shaft having a straight central portion extending transverse the frame and journaled thereto, the ends of the shaft turned rearwardly, short shafts carrying cultivator-disks adjustably connected to the ends of the rearwardly-extending portions of the shafts, and an adjusting-lever connected with the central straight portion of the shaft, substantially as described.

4. A cultivator comprising a supporting-frame, a shaft having a straight portion transversely journaled upon the supporting-frame, the ends of the shaft turned rearward, short cultivator-disk-carrying shafts horizontally adjustably connected with the rearwardly-turned ends of the said shafts, an operating-lever connected with the straight central portion of the shaft, a notched sector extending over the shaft with its ends connected with the supporting-frame, and the lever having a locking member adapted to engage the notched sector, substantially as described.

5. A cultivator comprising a supporting-frame, an oscillating shaft supported by the said frame and having laterally-turned ends, the ends of the shafts having horizontally-enlarged portions, short disk-carrying shafts with corresponding enlarged horizontal portions, the enlarged portions having registering bolt-openings, bolts passing through the said openings, and the engaging faces of the enlarged portions of the shafts having a clutch-like structure whereby the disk-carrying shafts may be oscillated, and the disk-shafts adjusted, substantially as described.

6. A cultivator comprising parallel runners, a detachable disk-carrying platform having a transversely-journaled oscillating shaft, means for oscillating the shaft, the ends of the shaft turned rearwardly and short disk-carrying shafts horizontally adjustably connected with the rearwardly-turned ends of the oscillating shaft, substantially as described.

7. A cultivator comprising parallel elongated runners B, transversely-extending bars C having their ends extending to opposite sides of the said parallel runners, short parallel runners D connected to the outer ends of the bars C, and a transversely-extending disk-carrying shaft supported by the elongated runners at a point in rear of the short runners, substantially as described.

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

LOUIS TOILLION.

Witnesses:

WILLIAM T. MILLER,
GRANT W. BARE.