No. 662,275. Patented Nov. 20, 1900.

L. KIRLIN.

DISK CULTIVATOR.

(Application filed Sept. 25, 1900.)

(No Model.)

Fig. 1.

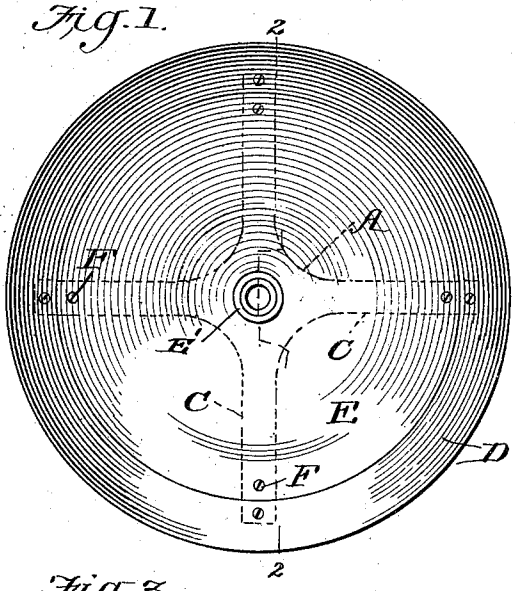


Fig. 2.

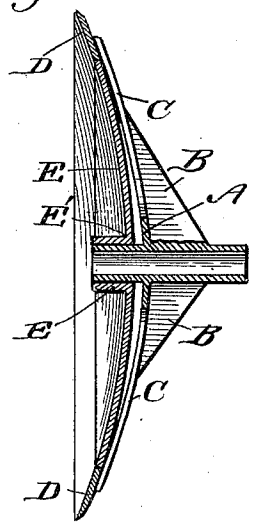


Fig. 3.

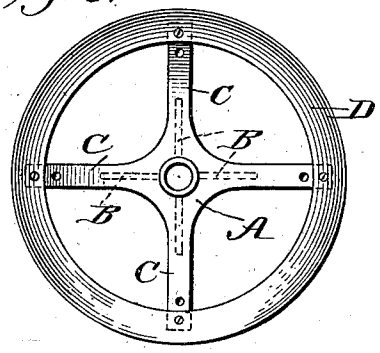


Fig. 4.

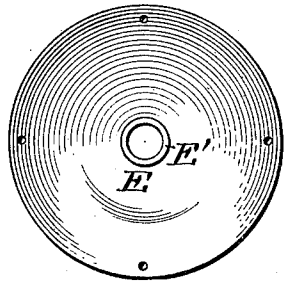


Fig. 5

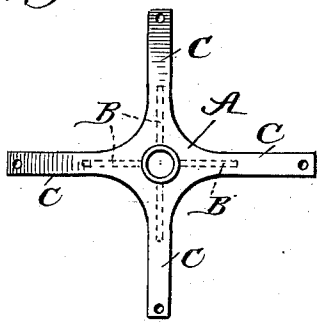
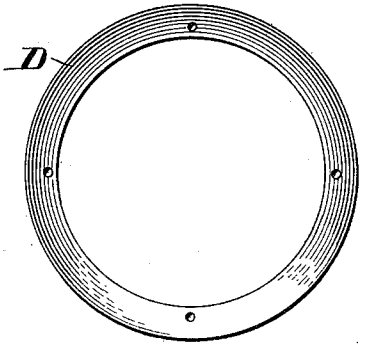


Fig. 6.



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DISK CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 662,275, dated November 20, 1900.

Application filed September 25, 1900. Serial No. 31,020. (No model.)

To all whom it may concern:

Be it known that I, LINDEN KIRLIN, a citizen of the United States, residing at Beattie, in the county of Marshall and State of Kansas, have made certain new and useful Improvements in Disk Cultivators, of which the following is a specification.

This invention is an improvement in disks for use on cultivators and harrows, and has for an object to provide a novel construction of disk which can be readily converted from a closed to an open disk, or vice versa, to adapt the disk to the special purpose for which it may be desired to use it.

The invention consists in certain novel constructions and combinations of parts, as will be hereinafter described and claimed.

In the drawings, Figure 1 is a face view of the disk complete looking toward the concave side thereof. Fig. 2 is a cross-sectional view thereof on about line 2 2 of Fig. 1. Fig. 3 is a face view on a reduced scale, showing the open ring and its supporting-frame, the body-plate being removed. Fig. 4 is a face view of the body-plate on a reduced scale, and Figs. 5 and 6 are respectively detail views of the frame and open ring.

As shown, the disk comprises a central frame, an open ring and a body-plate, which may be applied to the frame to close the opening in the ring. The supporting-frame includes the central portion A, from which extend the arms C, which, with the portion A, forms the supporting-frame for the open ring D, which is secured to the outer ends of the arms C, as shown. The portion or plate A is provided in line with the arms C with the brace-ribs B, which strengthen the device at the points where the strength is most needed. This construction (shown in Fig. 3) will be found useful in cultivating corn and the like, as it will permit a portion of the loose dirt to fall back through the disk, so it will not scrape off all the loose dirt from the middle of the row of corn when set to throw dirt toward the corn. The disk thus operates to leave sufficient dirt in the middle of the row to prevent the ground from drying out too rapidly.

The body-plate E, which is shown in Figs. 1 and 2 and in detail in Fig. 4, is formed to fit within the ring D and against the supporting-frame and to be secured detachably thereto by the bolts F or other suitable fastenings, so it can be readily applied to and removed from the supporting-frame to convert the disk into a closed disk or an open-ring disk, as may be desired. This body-plate E is dished or concaved correspondingly to the ring D, so it will coincide therewith when applied, as shown in Figs. 1 and 2, and form with the ring a closed disk for use as may be desired. By preference the body-plate E is provided at its center with a tube E′, which fits over the supporting-shaft and operates to brace the body-plate in position.

It will be noticed that the arms C are properly curved or inclined to support the open ring D in such manner that it will properly receive the concaved body-plate E in the application of the latter to form a closed disk, and it will also be seen that the body-plate when applied as shown in Figs. 1 and 2 braces the disk in such manner as to give it the desired increase of strength necessary in a closed disk over a disk of the open-ring form, such as shown in Fig. 3. I thus not only construct the supporting-frame and the open ring to receive the body-plate for converting the device into a closed disk, but I also construct the entire device so that the body-plate when applied to close the ring will operate to give the increased strength necessary by reason of closing the disk.

It should be understood that by providing means for closing the disk it may be closed, as shown in Figs. 1 and 2, in going over the corn the first time, the disk being set to throw the dirt away from the corn and being solid, so that it will move all dirt away from the corn, but the second and third time over the corn the dirt is thrown toward the corn, and it is better to have the disk open, as shown in Figs. 2 and 3, to let a portion of the dirt drop through.

What I claim is—

1. A disk comprising the supporting-frame having a central portion, arms projecting therefrom and brace-ribs in line with said arms, the open ring, and the body-plate substantially as set forth.

2. A disk for cultivators and harrows comprising the open rim or ring, the supporting-frame therefor, and the body-plate held detachably in the rim or ring whereby it may

be removed and applied to convert the disk into an open or closed one, substantially as set forth.

3. A disk for cultivators and harrows comprising an open ring dished or concaved, a supporting-frame therefor, and a dished body-plate applicable to the supporting-frame and arranged to coincide with the rim or ring when applied to the supporting-frame, substantially as set forth.

4. A disk for cultivators and harrows comprising the supporting-frame having a central portion and arms extending outwardly therefrom and curved or inclined laterally, the open ring supported at the outer ends of said arms and the concaved or dished body-plate fitted in said ring, substantially as set forth.

5. A disk for cultivators and harrows comprising the hub having a central portion, the arms extending outwardly from said portion, the open ring supported at the outer ends of said arms, and the body-plate fitted within the open ring and secured to the said arms and provided at its center with a tube arranged to fit over the supporting-shaft, substantially as and for the purpose set forth.

LINDEN KIRLIN.

Witnesses:
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