

(No Model.)

R. K. SWIFT.
DISK CULTIVATOR.

No. 535,309.

Patented Mar. 5, 1895.

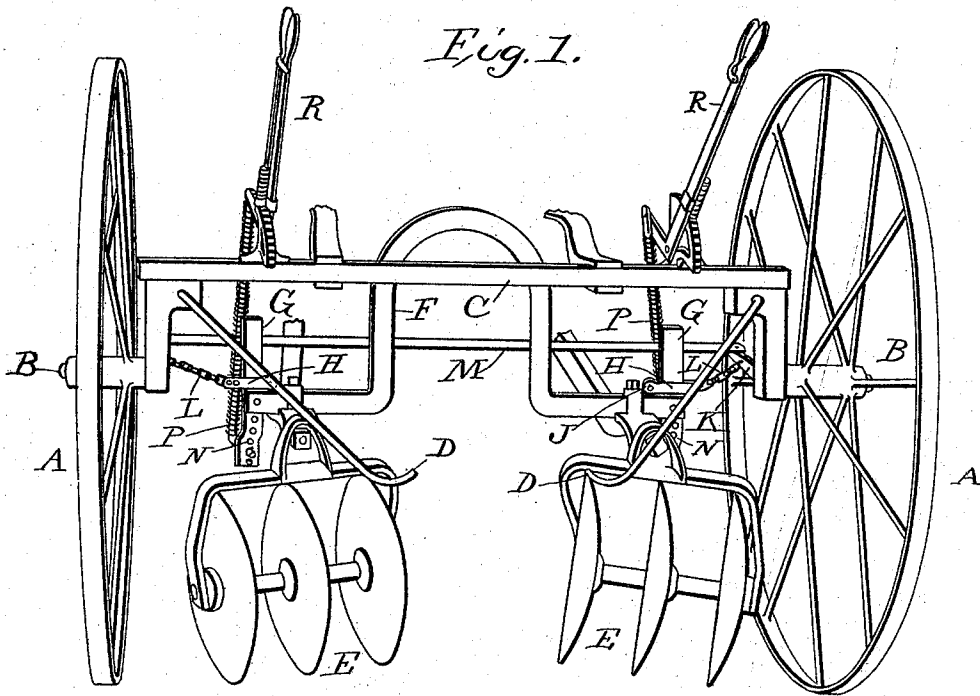


Fig. 2

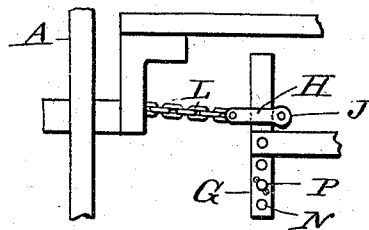
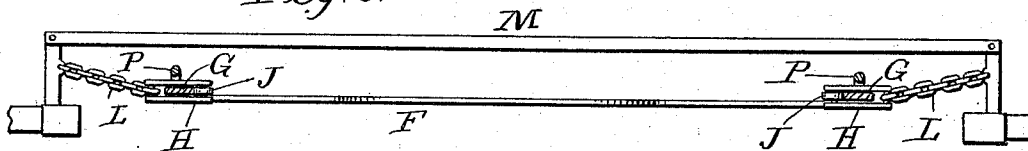


Fig. 3.



Attest
C. E. Burdick
R. V. Bacon

Inventor
R. K. Swift.
by John G. Manahan
his Atty

UNITED STATES PATENT OFFICE.

R. K. SWIFT, OF STERLING, ASSIGNOR TO THE GRAND DETOUR PLOW COMPANY, OF DIXON, ILLINOIS.

DISK CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 535,309, dated March 5, 1895.

Application filed November 6, 1894. Serial No. 528,063. (No model.)

To all whom it may concern:

Be it known that I, R. K. SWIFT, a citizen of the United States, residing at Sterling, in the county of Whiteside and State of Illinois, have
5 invented certain new and useful Improvements in Disk Cultivators; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable
10 others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention has reference to improvements in disk cultivators, and more particularly to that class in which the disk gangs are deflected laterally by a previous or coincident
15 change in the direction of the carrying wheels.

In ordinary shovel cultivators as the side
20 movement of the beams simply moves the shovels edgewise through the earth, such lateral movement can be practically accomplished, but nevertheless with some labor.

In disk cultivators substantially, the broad
25 side of each disk is presented against the earth at each attempt at lateral movement thereof. The resistance is too great for the operator to instantly move said gangs with his foot any appreciable distance. To aid
30 therefore in such lateral movement, which is often necessary to avoid running over the corn or other plants then being cultivated, in this class of disk cultivators, the direction of the disk gangs is governed by carrying
35 wheels, which being seated on pivoted spindles are easily deflected laterally, the draft of the team being thus utilized to carry the disk gangs in or out as the case may be.

My invention in this case has reference to
40 means of attaching the deflecting spindles more directly to the disk gangs so as to communicate the lateral movement of said spindles immediately to the disk gangs, and my invention has the further scope of so connecting
45 said attachments to the disk gangs that the same may be automatically vertically adjustable so as to permit the disks the necessary movement vertically to adjust themselves to the unevenness of the ground. I attain these advantages by the use of the con-

struction shown in the accompanying drawings, in which—

Figure 1 is a perspective of a machine embodying my invention. Fig. 2 represents details of the aforesaid connection between the
55 carrying wheels, spindles and disk gangs. Fig. 3 is a detail, in plan, of the forward mutual connection of the disk gangs.

Similar letters refer to similar parts throughout the several views. 60

The machine is of the same general construction as that for which I have been granted United States Letters Patent No. 310,475,
65 dated January 6, 1885, and therefore will require a less special description here.

A. A. are the carrying wheels supporting short spindles B. B. which near their inner ends are suitably pivoted, in a horizontal
70 plane to the respective ends of a transverse axle C.

D. D. are the foot levers for deflecting the carrying wheels A coincidentally, to laterally
75 move the disk gangs.

E. E. are the disk gangs with a suitable interval between them for the passage of a row
80 of plants.

F. is the arch or yoke connecting the respective disk gangs so that motion imparted to one of such gangs will be immediately communicated to the other. At each extremity
85 of the arch F is attached a vertical pull bar G seated at right angles on the horizontal portion or outer ends of said arch F.

A collar H is loosely seated on the bar G above the horizontal portion of the arch F and
90 a friction roller J seated in the inner end of said collar, to bear against the bar G and permit the ready movement vertically on said bar of said collar H, as hereinafter described.

K. K. are short bars projecting horizontally
95 forward from the spindles B at about the pivotal seats of the latter.

L. L. are chains fastened at their outer extremities to the front ends of the bars K, and at their inner ends to the collar H. 95

M is a transverse bar connecting the forward ends of the bars K, whereby the motion of one spindle B is communicated to the other.

The chains L are quite taut when the machine is in normal working condition. There- 100

fore the instant either spindle B is deflected laterally, the arch F with its disk gangs E is in condition to take such new direction at once. The chains L can be used quite taut
 5 by reason of the collar H automatically traversing the bar G, vertically, and not interfering with the disk gangs in their necessary vertical movements.

The bars G extend a sufficient distance
 10 above the end of the arch F to afford sufficient play for the disk gangs E as aforesaid. The bars G also extend a short distance below the arch F in which lower portion of said bars G. are formed a vertical series of open-
 15 ings N for the reception of the lower ends of the rods P which latter, through the medium of the levers R. R., are utilized to raise the disks E or adjustably hold them down to their work as is more fully explained in the
 20 aforesaid patent.

The advantages of my invention are that by the use of the collar H, I can make the connection between the arm K and bar G quite
 25 taut in normal condition without interfering with the vertical changes of the disk gangs, and thereby have no lost motion between the lateral change in direction of the carrying wheels and the lateral draft of the disk gangs E. The connection of the rod P to the bar G
 30 is also very simple and efficient and at the same time adjustable in the several openings N.

What I claim as my invention, and desire

to secure by Letters Patent of the United States, is—

1. In a disk cultivator, the combination, 35
 with pivoted spindles, each of which is provided with an arm, a bar connecting said arms, an arch, a disk gang secured to each end of the arch, a bar projecting upwardly from each
 40 end of the arch, and a link flexibly connected with each arm of the spindle, and fitting loosely over the projecting bar above the end of the arch, and means for raising and lowering the gangs, substantially as set forth. 45

2. In a disk cultivator, the combination, 45
 with pivoted spindles, each of which is provided with an arm, of a bar for connecting the arms and moving the spindles in unison, an arch, a disk gang at each end of the arch, an
 50 upwardly projecting bar, in each end of the arch, the lower end of which is provided with a series of openings, a link loosely mounted upon the upper end of the bar above the arch, and a chain for connecting the link with its
 55 respective arm of the spindle, a rod for engaging with the lower end of the bar at the end of the arch, and a handle for operating each rod, substantially as set forth.

In testimony whereof I affix my signature 60
 in presence of two witnesses.

R. K. SWIFT.

Witnesses:

ISABEL MANAHAN,
 JOHN G. MANAHAN.