No. 733,516. PATENTED JULY 14, 1903.

C. L. SWANSON.

CULTIVATOR.

APPLICATION FILED AUG. 11, 1902.

NO MODEL.

Fig. 1.

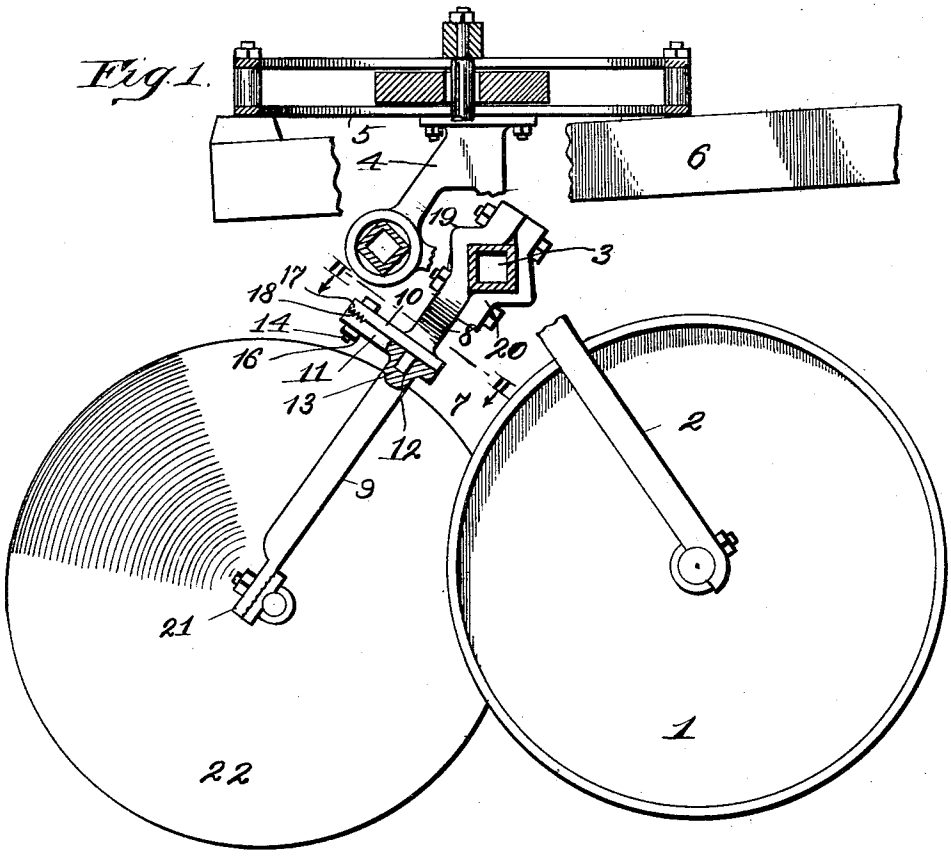


Fig. 2.

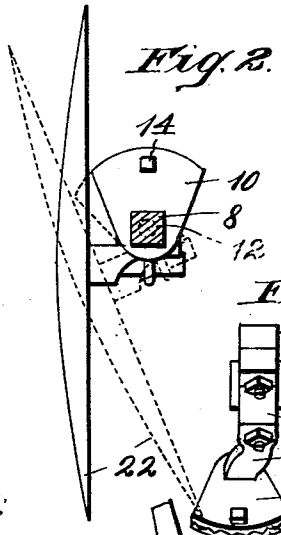


Fig. 3.

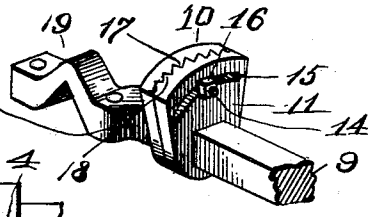
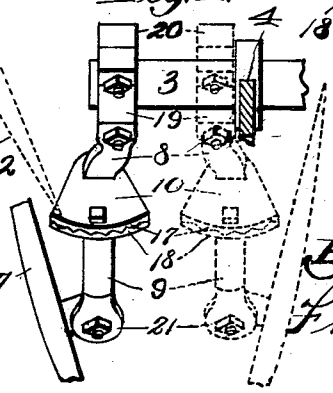


Fig. 4.



Witnesses:

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Attys.

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No. 733,516. Patented July 14, 1903.

UNITED STATES PATENT OFFICE.

CARL L. SWANSON, OF BLUE RAPIDS, KANSAS.

CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 733,516, dated July 14, 1903.

Application filed August 11, 1902. Serial No. 119,239. (No model.)

To all whom it may concern:

Be it known that I, CARL L. SWANSON, a citizen of the United States, residing at Blue Rapids, in the county of Marshall and State of Kansas, have invented certain new and useful Improvements in Cultivators, of which the following is a specification.

My invention relates to disk cultivators of that class wherein the disks can be shifted to accommodate listed furrows which vary in width and depth; and my object is to produce a disk-carrying arm of simple, practical, strong, and durable construction, whereby the disks may be rotatably adjusted concentrically of the axis of said arms with ease and convenience and reliably and quickly secured in the adjusted position, said adjustment enabling the operator to secure the disks vertically in line with or at any desired angle to the draft; and the invention consists in certain novel and peculiar features of construction and organization, as hereinafter described and claimed.

In order that the invention may be fully understood, reference is to be had to the accompanying drawings, in which—

Figure 1 represents a broken vertical section of a cultivator provided with my improvements. Fig. 2 represents a cross-sectional view of the improved adjustable arm, taken on line II II of Fig. 1. Fig. 3 is a broken detail perspective view of the arm, showing how the two sections composing it are secured together. Fig. 4 is a detail plan view showing the lateral adjustment of the interchangeable arm.

In the drawings, 1 indicates the ground-wheels; 2, the wheel-arms; 3, the transverse shaft to which the upper ends of the wheel-arms are secured; 4, the brackets carrying the shaft; 5, the ring carrying the brackets, and 6 the tongue by which the cultivator is drawn forward.

7 indicates the adjustable arm constituting my invention, which consists of two sections 8 and 9, respectively, arranged in axial alinement and provided with opposing integral segmental end portions 10 and 11, the former of which has an integral stud 12, projecting into a recess 13 in the opposing member, and both of which are in actual alinement with the sections of the arm to provide an axis on which section 9 may be rotatably adjusted without affecting its alinement with section 8. The segmental portion 10 is provided near its outer end with a centrally-disposed bolt 14, which extends through a curved slot 15, near the outer end of segmental portion 11, and is engaged by a clamping-nut 16 to hold the segmental portions together. In order to prevent one segment from slipping on the other while thus clamped, I provide their outer ends with engaging serrations 17 and 18, which in conjunction with the bolt and nut reliably hold said sections at any point of adjustment to which they may be set. The opposite curved end 19 of section 8 is shaped to fit on the transverse shaft 3, to which it is adjustably secured by a cap 20, while the opposite end 21 of section 9 is arranged to carry a disk 22 or other suitable cultivating device.

The upper ends of arms 7 are curved to give greater lateral adjustment to the disks. Thus when it is desirous to spread the latter far apart the arms are set as shown in Fig. 4, while they are interchanged to throw the disks closer together, as shown by dotted lines in said figure.

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

1. In a cultivator, a disk-supporting arm comprising two sections arranged end to end and longitudinally alined, one having an axial socket and the other a corresponding pin loosely and pivotally engaging said socket, and means separate and distinct from and out of axial alinement with the socket-pin for clamping the sections rigidly together.

2. In a cultivator, a disk-supporting arm, consisting of two longitudinally-alined sections, the abutting ends having a pin-and-socket connection, parallel portions projecting laterally from said arms, and means separate and distinct from the socket-pin, connecting said parallel portions and clamping them rigidly together.

3. In a cultivator, a disk-supporting arm, consisting of two longitudinally-alined sections, the abutting ends having an axial pin-and-socket connection, parallel portions projecting laterally from said arms, one having a slot concentric of said pin, and the other a

bolt projecting through said slot, and a clamping-nut engaging the projecting end of said bolt.

4. In a cultivator, a disk-supporting arm, consisting of two longitudinally-alined sections, the abutting ends having an axial pin-and-socket connection, parallel portions projecting laterally from said arms, and having engaging serrated faces, a bolt extending through said portions, and a clamping-nut engaging said bolt.

5. In a cultivator, a disk-supporting arm, consisting of two longitudinally-alined sections, the abutting ends having an axial pin-and-socket connection, parallel portions projecting laterally from said arms, and having engaging serrated faces and one of them a segmental slot concentric of the axis of said pin, a bolt carried by the other portion and projecting through said slot, and a clamping-nut engaging said bolt to clamp said portions rigidly together.

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

CARL L. SWANSON.

Witnesses:
O. H. CLOYD,
H. S. SWANSON.