

(No Model.)

2 Sheets—Sheet 1.

C. E. SWANSON.  
DISK PLOW CULTIVATOR.

No. 547,744.

Patented Oct. 8, 1895.

Fig. 1.

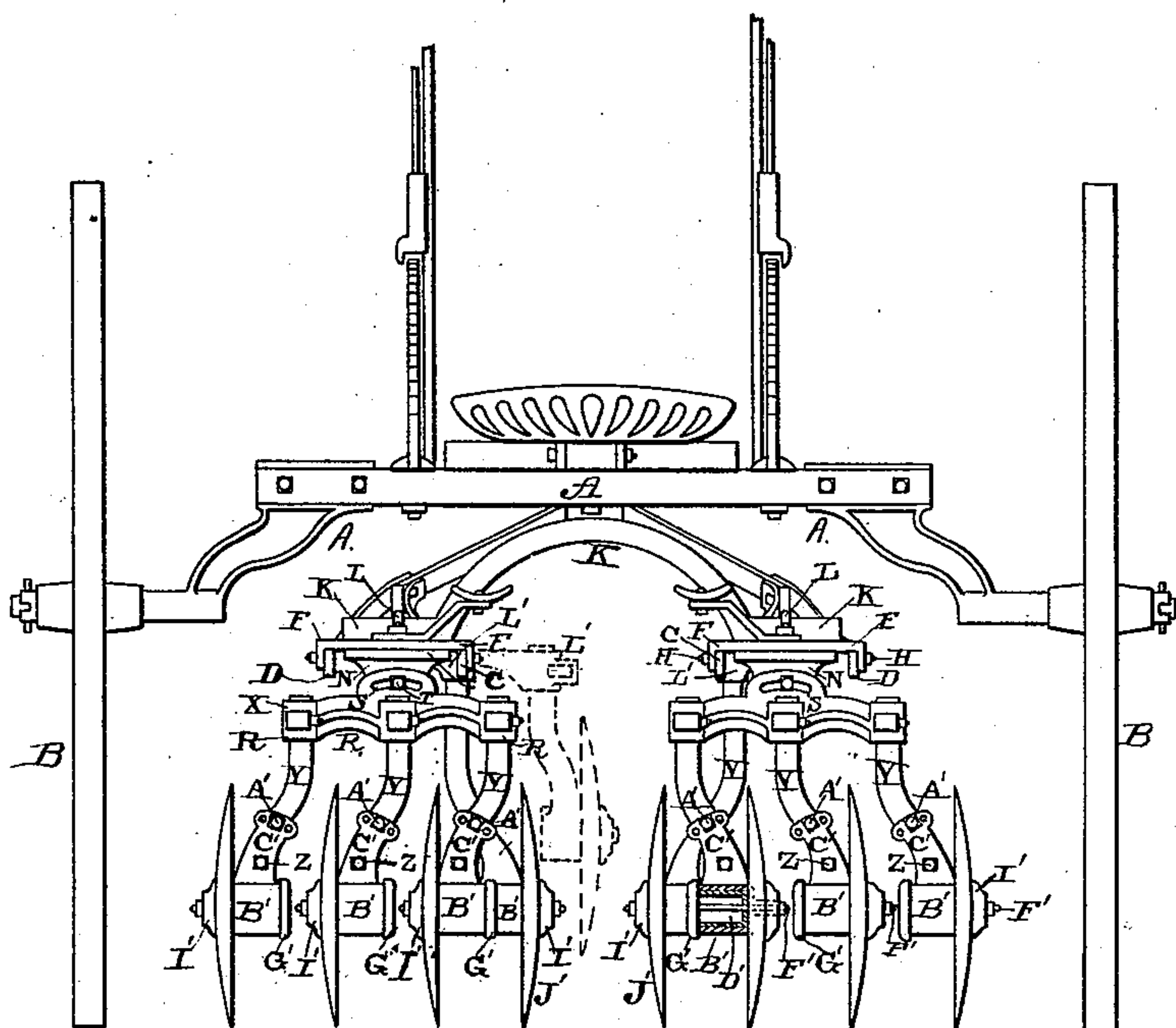


Fig. 4.

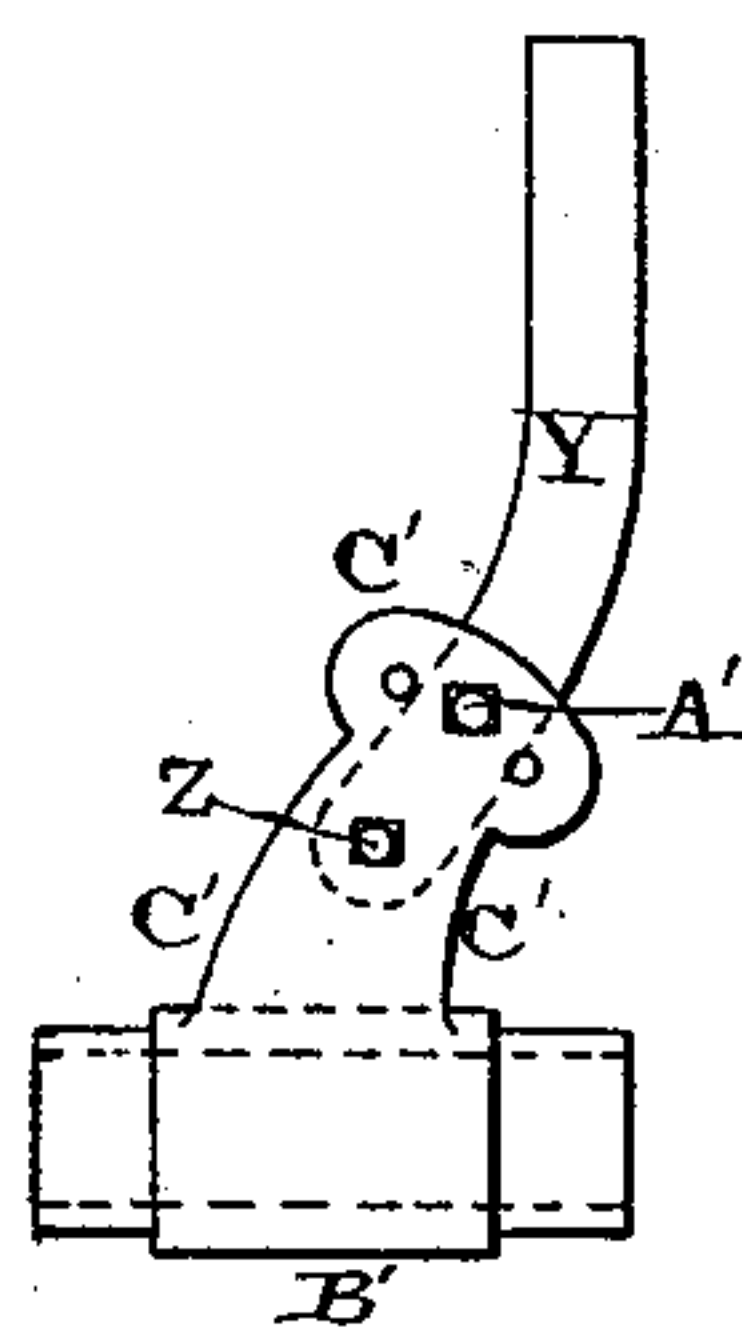
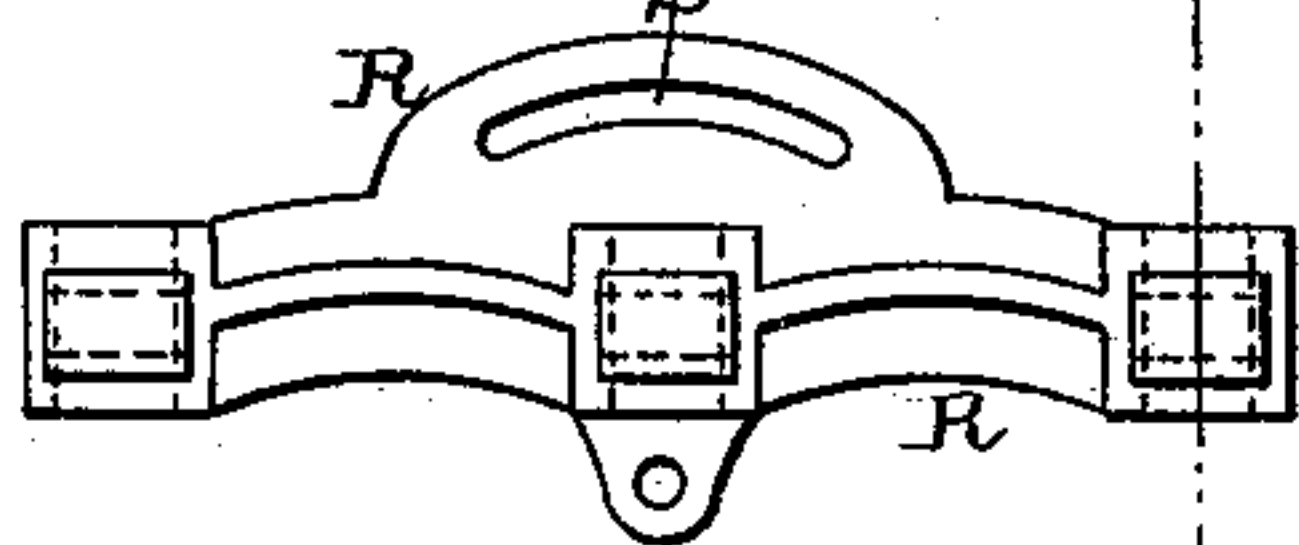
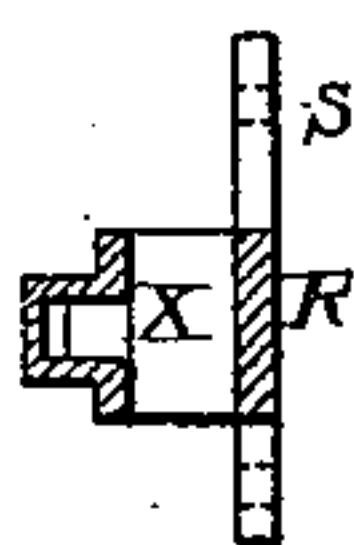


Fig. 2.



*Fig. 3.*



*FIG. 6.*

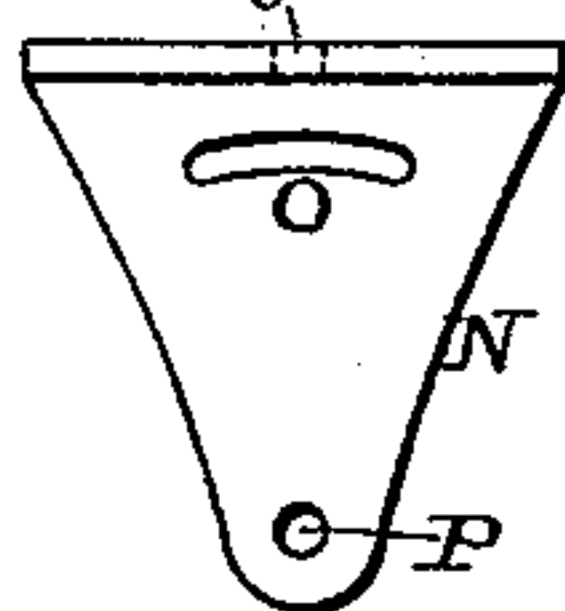


Fig. 5.

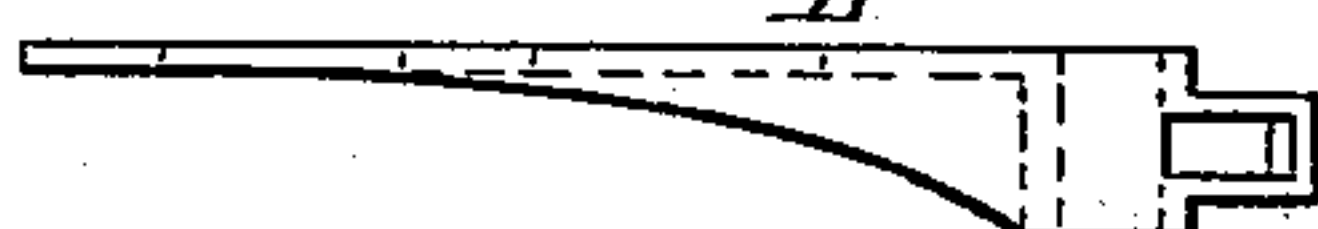
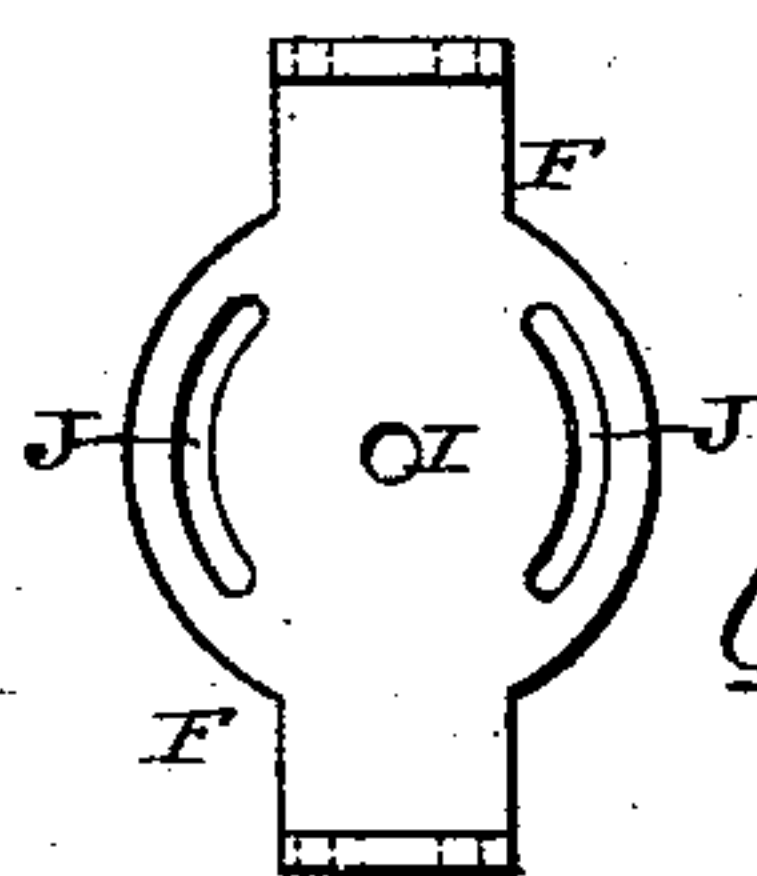


FIG. 7.



WITNESSES.

Chas. H. Gleason  
H. Chubb

*INVENTOR.*

Cornius Edward Swanson  
BY E. R. Gleason  
his ATTORNEY.

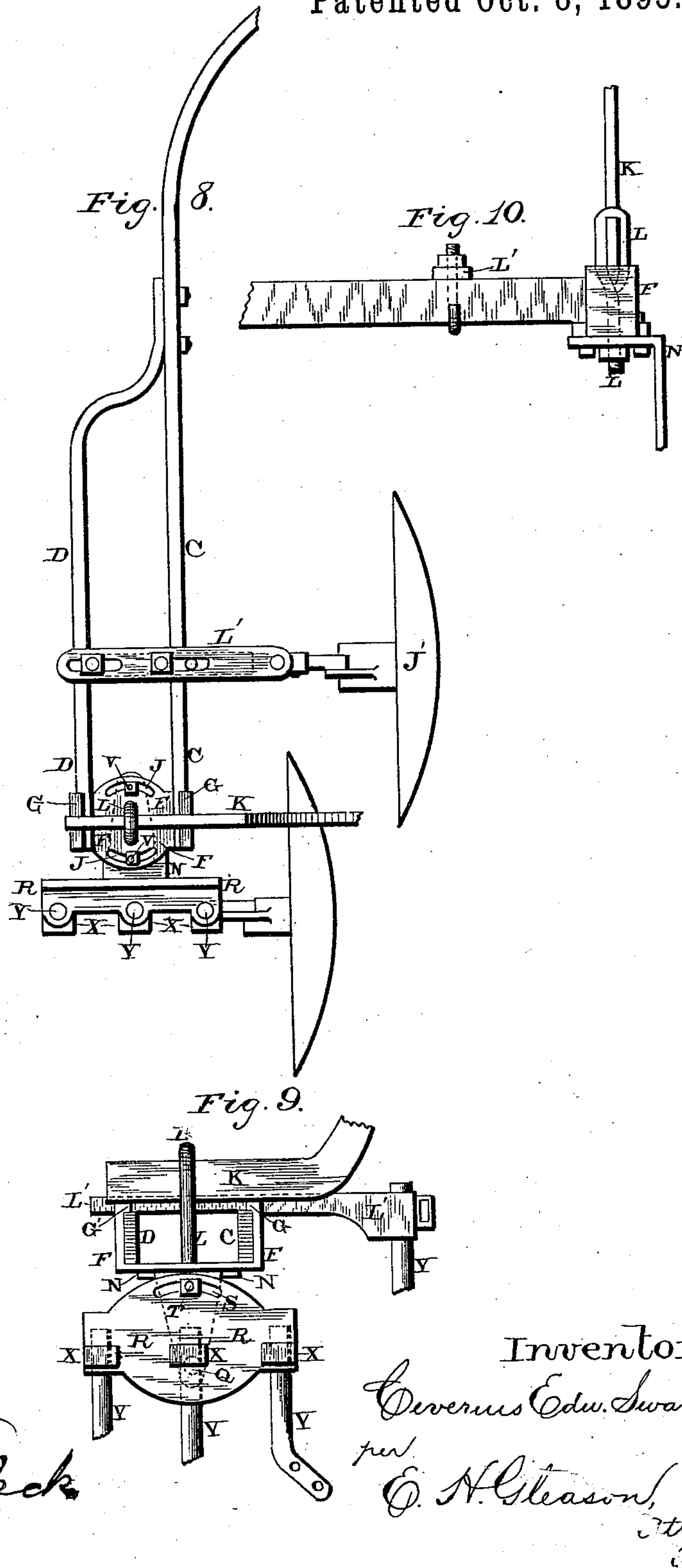
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Witnesses.

*Geoffrey*  
*Hubert & Peck*

Inventor.

*C. E. Swanson*  
per *C. H. Steason*  
*att'y*



# UNITED STATES PATENT OFFICE.

CEVERIUS EDWARD SWANSON, OF GENESEO, ILLINOIS, ASSIGNOR OF ONE-FOURTH TO ED PETERSON.

## DISK-PLOW CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 547,744, dated October 8, 1895.

Application filed April 25, 1895. Serial No. 547,078. (No model.)

*To all whom it may concern:*

Be it known that I, CEVERIUS EDWARD SWANSON, a citizen of the United States, residing at Geneseo, in the county of Henry and State of Illinois, have invented certain new and useful Improvements in Disk-Plow Cultivators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in gang-disk cultivators; and it consists in, first, a gang of three or more disks secured to a pivoted yoke which is capable of being adjusted so as to move the disks near together or far apart, and which disks are adapted to be turned at any desired angle, second, the combination of the standard provided with two holes in its lower end, the hub pivoted upon the standard and held in position by means of a wooden break-pin which can be adjusted from one hole to another, so as to cause the disk to stand at any desired angle, and a hollow lubricating-axle which is provided with a cap-plate at one end and has the disk secured to the other, and which axle in revolving in the hub keeps it constantly lubricated, third, in the arrangement and combination of devices which will be more fully described hereinafter.

In the accompanying drawings, Figure 1 is a rear view of a cultivator embodying my invention. Figs. 2, 3, 4, 5, 6, and 7 are detail views of different parts. Fig. 8 is a plan view of the beams detached from the cultivator and showing the manner of attachment of the different parts. Fig. 9 is a rear view of the parts shown in Fig. 8. Fig. 10 is a side view of one of the beams and the parts attached thereto.

A represents the axle and B the wheels. The beams consist of the two long beams C and the two shorter ones D, which are secured at their front ends to the longer ones, as shown in Fig. 8. Double beams are used, as shown, for the purpose of forming solid supports for the operating parts connected thereto. The rear ends of these beams are connected by means of the flanged plates F, which may either be applied to the tops of the beams, as shown in Fig. 1, and bolted in position, or the

plates may be formed as shown in Figs. 8 and 9 and applied to the under sides of the beams, as shown. If constructed as shown in Figs. 8 and 9, these plates F are provided with narrow flanges G, which catch over the top edges of the beams, and thus do away with the necessity of using the bolts H. (Shown in Fig. 1.) Each of the plates F is provided with a central opening I and two curved slots J, as shown fully in Figs. 7 and 8. The arch K, shaped as shown in Fig. 1, has its ends secured to the rear ends of the beams and to the plates F by means of the clamping-bolts L, which are more particularly shown in Fig. 10, and which bolts also serve to secure the right-angled pivotal plates N, which, in addition to having openings through their tops for the bolts L to pass through, are provided with the circular slots O near their upper ends and the bolt-holes P in their lower ends, as shown in Fig. 6. If the plates F are formed as shown in Fig. 1, these pivoted plates N are applied directly to the under sides of the plates in between the rear ends of the beams; but if the plates are formed and applied as shown in Fig. 9 the plates N are applied to the under sides of the plates F below the beams. Pivoted to the lower end of this plate N by means of the bolt Q (shown in dotted lines in Fig. 9) is the yoke R, provided with the slot S, through which and the slot O passes the clamping-bolt T, by which the yoke is held at any desired angle. As the plate F is provided with two circular slots J, and as the top portion of the plate N is provided with two corresponding holes U, through which the clamping-bolts V are passed, it will readily be seen that the plate N can be turned at any desired angle to the beams upon its pivotal bolt L, and then securely clamped in position by the two bolts V. This adjustment of the plate N causes the yoke R to stand at any desired angle to the beams for the purpose of regulating the angle that the disks W shall stand to the forward line of motion. By adjusting the yokes R upon their pivots Q the distance between the gangs is regulated. Through the yoke are formed suitable sockets X to receive the upper ends of the standards Y, which standards are round at their upper ends and can be turned freely in their sockets, and then secured in position by means of suitable clamp-



ing-bolts. These standards being round at their upper ends, the disks can be set at any desired angle to the forward line of motion.

The lower end of each standard Y is curved 5 or bent and provided with two openings, through the lower one of which passes the pivotal bolt Z and through the upper one the pin A', by means of which the disks are regulated in regard to the angle at which they 10 shall stand to the standards. The pin A' is made of wood and is intended to break in case any one of the disks should strike an obstruction. Each disk is provided with a sleeve B', which has the extension C' extending from 15 its top and which extension corresponds to the lower bent portion of the standard, as shown in Fig. 4. Through this sleeve is formed an opening through which the pivotal bolt Z passes, and through its upper end are 20 made three or more holes through which the break-pin A' is passed. Each disk is secured to one end of a hollow axle D' by means of a bolt F', which passes through the axle. One end of the axle is provided with a flange G', 25 which catches against or over one end of the sleeve, and then the disk bears against the opposite end and is secured to the end of the axle by a washer I'. The axle is hollow and provided with an opening near its center, 30 through which the lubricant with which it is filled is fed to the sleeve, so as to keep each axle constantly lubricated.

From the above description it will be seen that each gang of disks consists of but very 35 few parts which are not liable to get out of order, and that every possible adjustment necessary can be given to the disks. Each gang is provided with suitable braces, as shown in Fig. 1, and they are designed to be 40 raised and lowered by the levers mounted upon the axle in the usual manner. These gangs cultivate in the middle of the rows; but

pose there is clamped to the top of each pair of beams a casting L' by means of screw-hook bolts, which pass through slots in the casting, 50 as shown in Fig. 8. These castings L' are adjustable endwise back and forth across the tops of the beams C D, so as to bring the disks in any desired relation to each other. These disks are arranged, as shown, in advance of 55 the gangs of disks, and the distance in advance can be regulated at will by simply loosening the hooked bolts and sliding the casting L' either forward or back. As hereshown, the single disks overlap the front edges of the 60 gangs of disks; but this is matter of choice. These single disks can be given every adjustment of the disks in the gangs.

Having thus described my invention, I claim— 65

1. The standards, the sleeves pivoted thereon, the hollow axles passing through the sleeves, and the disks secured to the ends of the sleeves, substantially as set forth.

2. The standards, the sleeves adjustably 70 pivoted thereon, and the hollow axles passing through the ends of the sleeves, combined with the clamping bolts which pass through the axle, the disks, and the washers, substantially as specified. 75

3. The beams, the flanged plate or casting F, secured thereto, and provided with slots, the angular plate or casting N bolted to the under side of the casting F, and the yoke pivoted to the plate or casting N, and provided 80 with a series of disks, substantially as shown.

4. The pivoted slotted yoke and the standards carrying disks, combined with an angular plate upon which the yoke is pivoted, and which plate is clamped to the beams and 85 adapted to be turned upon its pivot carrying the yoke with it, substantially as described.

In testimony whereof I have affixed my signature in presence of two witnesses.