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C. J. SIMERAL & F. A. WIGGINS.

REAR WHEEL CONTROLLER FOR DISK PLOWS.

APPLICATION FILED APR. 17, 1903.

NO MODEL.

Fig. 1.

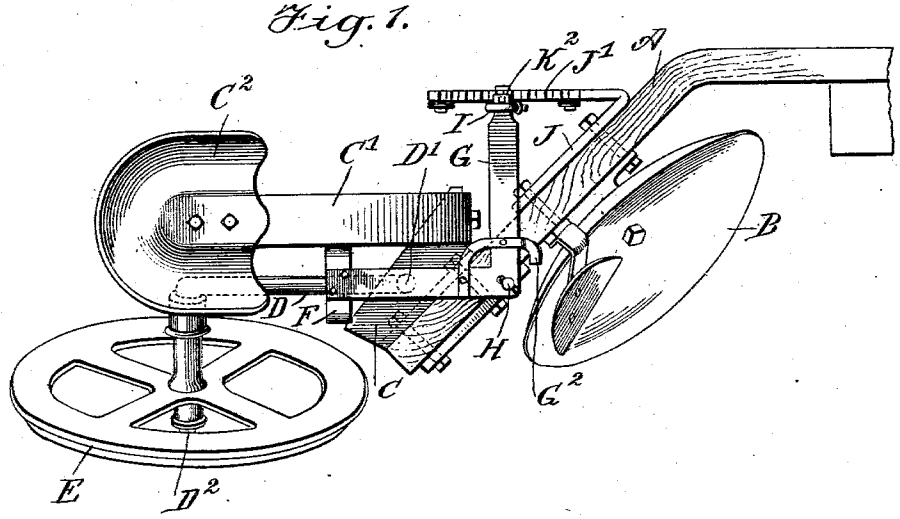


Fig. 2.

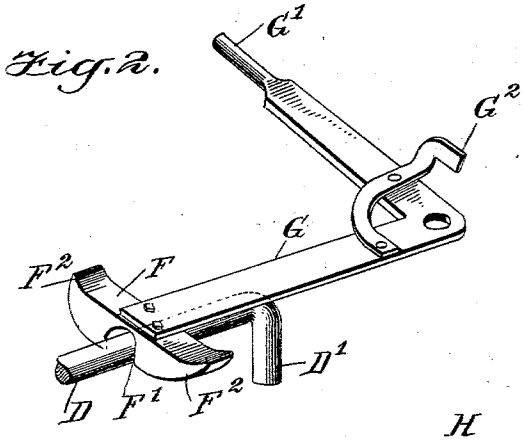


Fig. 3.

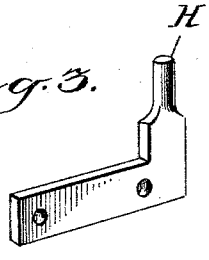
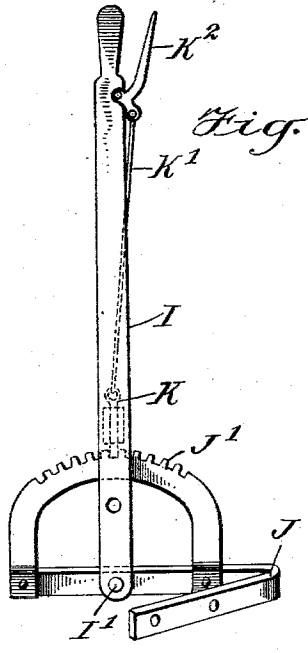


Fig. 4.



WITNESSES:

Geo. W. Maylott

Herbt. Howson

INVENTORS

Clarence J. Simeral

Frederick A. Wiggins

BY Munn & Co

ATTORNEYS.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 739,731. Patented September 22, 1903.

UNITED STATES PATENT OFFICE.

CLARENCE J. SIMERAL AND FREDERICK A. WIGGINS, OF SALEM, OREGON.

REAR-WHEEL CONTROLLER FOR DISK PLOWS.

SPECIFICATION forming part of Letters Patent No. 739,731, dated September 22, 1903.

Application filed April 17, 1903. Serial No. 153,049. (No model.)

To all whom it may concern:

Be it known that we, CLARENCE J. SIMERAL and FREDERICK A. WIGGINS, citizens of the United States, and residents of Salem, in the county of Marion and State of Oregon, have invented a new and Improved Rear-Wheel Controller for Disk Plows, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved rear-wheel controller for disk plows arranged to hold the rear wheel at all times firmly in the desired position, especially when plowing on hillsides or under any conditions tending to swing the plow out of line, thereby preventing variation in the width of the furrows.

The invention consists of novel features and parts and combinations of the same, as will be more fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of the improvement as applied to a one-disk plow. Fig. 2 is a perspective view of the bell-crank lever carrying the shoe for engaging the rear-wheel axle. Fig. 3 is a similar view of the pivot for the bell-crank lever, and Fig. 4 is a perspective view of the hand-lever for the bell-crank lever.

On a plow-beam A is mounted in the usual manner a disk B, and on the rear end of the plow-beam is fastened a block C, carrying the spring C′ of a seat C^2, and the said block C forms a bearing for the vertical pivot D′ of an axle D, having an angular spindle D^2, on which the rear wheel E of the plow is journaled. The axle D is normally engaged in a recess F′, formed in the under side of a shoe F, attached to the rear end of one arm of a bell-crank lever G, fulcrumed on a pivot H, attached to the plow-beam A, preferably by the same bolts which fasten the block C to the said plow-beam. The other arm of the bell-crank lever G terminates in a pin G′, engaging a hand-lever I, fulcrumed at I′ on a bracket J, secured to the plow-beam A, preferably by the same bolts which secure the mounting of the disk B to the said plow-beam.

The bracket J supports a notched segment J′, engaged by a locking-bolt K, mounted to slide on the hand-lever I and connected by a link K′ with a hand-lever K^2, fulcrumed on the handled end of the hand-lever I, so that both levers I and K^2 are within convenient reach of the operator seated on the seat C^2.

Now when the lever I is unlocked by the operator pressing the hand-lever K^2 to withdraw the bolt K from the segment J′ and the operator imparts a swinging motion to this hand-lever I then a swinging motion is given to the bell-crank lever G, which by the shoe F imparts a lateral swinging motion to the axle D, so as to move the rear wheel in any desired position, according to the nature of the ground on which the plow is used at the time, and when the wheel has been moved into the desired position the operator releases the hand-lever K^2, so that the bolt K engages the notched segment J′, and thereby locks the hand-lever I in place and with it the bell-crank lever G, shoe F, and axle D.

On the bell-crank lever G is also secured a foot-piece G^2 under the control of the foot of the operator seated on the seat C^2 to permit of imparting an up-and-down swinging motion to the bell-crank lever G to move the shoe F in or out of engagement with the axle D.

It is understood that the pivot-opening of the bell-crank lever G is sufficiently elongated to allow of imparting the double motion to the bell-crank lever G, as described—that is, to allow of swinging the bell-crank lever G laterally by the hand-lever I or to swing it up and down by the operator pressing and releasing the foot-piece G^2 for the purpose above described.

Setting the rear wheel E at any desired angle relative to the direction in which the plow is moved is for the purpose of steering the plow, thereby holding the plow in position at the time it would tend to ease away from the land or toward it, as the case may be.

Now by the use of the controller described the operator can control absolutely the width of the furrow on a hillside or on the level and at the same time can release the axle by press-

ing the foot-piece G^2 to enable the plow to make a very short turn in either direction, as the released wheel readily falls into line as the plow comes into the furrow, and the shoe F can engage the axle D.

In order to insure a ready engagement of the shoe with the axle, the ends of the under side are preferably curved or rounded off, as plainly indicated in Fig. 2.

It is expressly understood that when the foot-piece G^2 is pressed the shoe F is lifted sufficiently above the axle D to disengage the same and to allow the axle to swivel either to the right or to the left, as the case may be.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. A disk plow provided with a controlling device for the rear wheel, said device having means under the control of the hand of the operator for engaging the wheel-support to swing the wheel to the right or left, and means under the control of the foot of the operator for disengaging said controlling device from the wheel-support to permit the wheel to swivel independently either to the right or left.

2. A disk plow provided with a controlling device for the rear wheel and provided with a grooved shoe for engaging or disengaging the axle of the rear wheel in rear of the pivot of the axle, as set forth.

3. A disk plow having a controlling device for the rear wheel and provided with a lever, under the control of the operator and adapted to swing laterally and up and down, the said lever having a grooved shoe for engaging the axle of the rear wheel, to swing the axle sidewise or to release the axle, to permit it to swivel independently either to the right or to the left, as set forth.

4. A disk plow having a controlling device for the rear wheel, comprising a bell-crank lever having a shoe for engagement with the rear-wheel axle, and means under the control of the operator for imparting a sidewise swinging motion to the bell-crank lever, to swing the said axle laterally, as set forth.

5. A disk plow having a controlling device for the rear wheel and comprising a bell-crank lever having a grooved shoe for engagement with the rear-wheel axle, and means under the control of the operator, for swinging the bell-crank lever horizontally to move said axle to the right or left, and means for swinging said lever up or down, to disengage or engage the shoe and axle, as set forth.

6. A disk plow having a controlling device for the rear axle and comprising a bell-crank lever, mounted to swing laterally and up and down, a shoe on one arm of the said bell-crank lever, adapted to engage the axle of the rear wheel, a hand-lever connected with the other arm of the bell-crank lever and having locking means for locking the hand-lever in position, and a foot-piece on the said bell-crank lever, under the control of the foot of the operator, to swing the bell-crank lever up or down, as set forth.

7. A disk plow having a controlling device for the rear wheel, said device comprising an operating-lever having a free end adapted to rock laterally, and also up and down, said free end carrying a shoe provided with a groove for engaging the axle of the wheel to swing the same sidewise when the operating-lever is rocked laterally, and for disengaging said axle to permit the wheel to swivel independently of said controlling device when the rear end of the lever is rocked upwardly.

8. A disk plow having a controlling device for the rear wheel, comprising a bell-crank lever having a shoe on its free end for engagement with the rear-wheel axle, and means under the control of the hand of the operator for imparting a sidewise swinging motion to the bell-crank lever to swing the said axle laterally, and means under the control of the foot of the operator for swinging the free end of said lever up and down to disengage or engage the shoe and axle.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

CLARENCE J. SIMERAL.
FREDERICK A. WIGGINS.

Witnesses:
N. H. BURLEY,
E. R. WIGGINS.