(No Model.)

J. W. DUNBAR.

ROTARY PLOW.

No. 526,806. Patented Oct. 2, 1894.

Fig. 1.

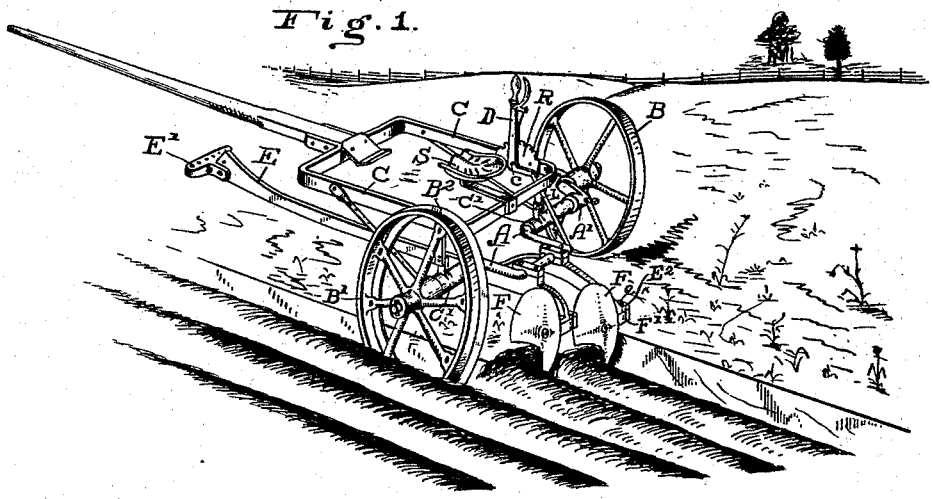


Fig. 2.

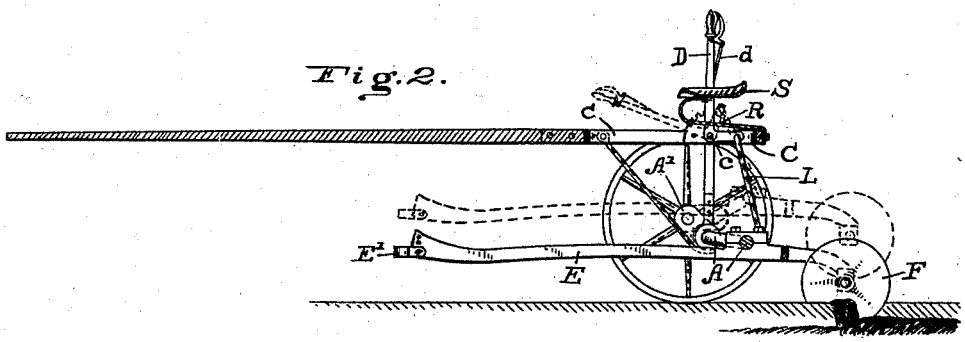


Fig. 3.

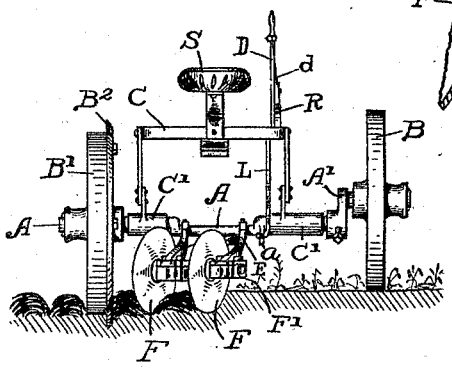


Fig. 4.

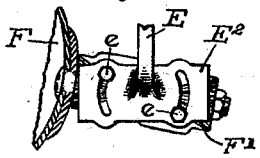


Fig. 5.

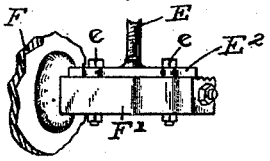


Fig. 6.

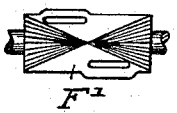
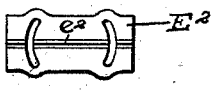


Fig. 7.



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ROTARY PLOW.

SPECIFICATION forming part of Letters Patent No. 526,806, dated October 2, 1894.

Application filed January 16, 1894. Serial No. 497,020. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. DUNBAR, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Rotary Plows, of which the following is a specification.

My said invention relates to that class of plows known as sulky plows, and is especially designed for use where rotary plowing disks are employed.

Said invention will be first fully described, and the novel features thereof then pointed out in the claims.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is a perspective view of a plow embodying my said invention, as it appears in operation; Fig. 2, a sectional view, showing the plow-beam in side elevation, with one branch and the plow carried thereby broken away; Fig. 3, a rear elevation of said plow; Fig. 4, a detail view showing more clearly the form of the attaching devices whereby the plow-disk bearing is attached to the plow-beam; Fig. 5, a detail elevation of the same; Fig. 6 a plan view of the bearing separately, and Fig. 7 an under side plan of the plate on the plow-beam which comes in contact with said bearing.

In said drawings the portions marked A represent the axle of my improved plow; B B′, the wheels thereon; C, the frame-work mounted on said wheels; D, a lever mounted on said frame-work; E, the plow-beam, and F the plowing disks.

The axle A is a crooked axle having a bend in the center to which the plow-beam E is attached, and upon one end it is provided with a crank A′, which carries the spindle for the wheel B, while the wheel B′ is on a spindle which is in line with, or forms the other end of, said axle. By means of the crank A′ the wheels are enabled to be manipulated so as to carry the general structure level, while one wheel rides upon the unplowed surface of the field and the other rides in the bottom of a furrow, during the plowing operation; while, when the plow is raised out of the ground, the wheels will be level. The raised position of the plow-beam and plow is illustrated in Fig. 2, where the crank is shown as in a horizontal position, by means of dotted lines, which, of course, brings the spindle to the same level as the spindle on the opposite end of the axle.

The wheels B and B′ are ordinary carrying wheels for the plow, except that the wheel B′ has a flange B^2, which cuts into the ground at the bottom of the furrow in which it is traveling, as shown most plainly in Fig. 3, and thus resists side draft of the plowing disks F.

The frame C is substantially rectangular in form, and is provided with standards and braces by which it is attached to the axle, as shown, which extend down and are connected to the sleeves C′ on said axle, which sleeves are upon the straight portions thereof, and are thus not raised or lowered by any manipulation of the mechanism. A seat S is secured thereon, as shown.

The lever D is mounted on the frame C, and is pivoted thereon at *c*. Its horizontal arm is connected by means of a link L with the axle A or an arm *a* thereon, while its upright arm extends up along side the seat S, and is provided with the usual latch *d* which engages with a segmental rack R. By means of this lever, and the described arrangement of crooked axle and crank-arm, the wheels B and B′ are brought to a level simultaneously with the raising of the plow out of the ground, while the wheel B′ and the plow are simultaneously lowered below the wheel B when adjusted for work. In other words the level position of the structure as a whole is always maintained, whatever relative positions the parts are adjusted to.

The plow-beam E is mounted upon the axle A, as shown most plainly in Fig. 2, and preferably is branched or bifurcated at the rear end, in order to carry two plowing disks, as shown in the drawings; although, of course, a plow having a single disk, or one having more than two disks, is equally within the scope of my invention. This plow-beam, with the plows or plowing disks thereon, is raised and lowered by means of the lever D and its connections with the axle A, as indicated by the dotted and full lines in Fig. 2. A clevis E′ is attached to the front end, upon which to secure the usual double-tree or single-tree.

The plowing disks F are in themselves of an ordinary construction. They are secured to the plates E^2 upon the rear ends of the plow-beam E by means of the boxes or bearings F′ and bolts *e* which secure the parts together. The surfaces of these two parts E^2 and F′ where they come together are peculiarly formed, for the purpose of securing any desired adjustment. One of them is provided with a single rib e^2, as shown in Fig. 7, while the other is provided with a considerable number of grooves, crossing each other at various angles, as shown in Fig. 6. One of said parts is provided with longitudinal slots, and the other with transverse slots; and thus, by loosening the bolts, and shifting the parts one upon the other, any desired adjustment can be secured. The box F′ may be slipped longitudinally of the part E^2 by means of the longitudinal slots therein, and it can be pivoted upon said part E^2 by means of the transverse slots in said part, and secured in any adjusted position by the rib e^2, fitting into one of the several grooves in the part F′. The plows can thus be shifted in position nearer to or farther from each other, and can be swung to any desired angle with the line of draft, and thus all kinds of work can be provided for.

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

1. The combination, in a rotary plow, of the axle, the carrying wheels, the plow-beam having flattened attaching ends E^2 provided with a rib e^2 running longitudinally thereof and curved slots running transversely thereof, the plowing disk F, and the spindle-box F′ provided with several grooves crossing in the center and running at different angles and also with longitudinal slots parallel with the spindle, and bolts passing through said curved transverse slots in the plow-beam ends and said longitudinal slots in the boxing, whereby the relative positions of said two parts may be varied and secured and the angle of the plowing-disk to its work thus adjustably determined, substantially as set forth.

2. The combination, in a rotary sulky plow, of the bent axle A having a crank-spindle upon one end and a straight spindle upon the other end, a land wheel B upon the crank spindle, and a furrow wheel B′ having the flange B^2 upon the straight spindle, a frame C supported by standards extending from sleeves C′ on the straight portions of the axle, a tongue extending out from said frame, braces extending back from said frame to the sleeves on the axle, a plow-beam carrying the plowing disks mounted upon the bent portion of the axle, a crank-lever mounted on the frame C and provided with the usual latch, a segment on said frame for said latch, and a link L running from the point of the angle lever D to the bent portion of the axle, said several parts being arranged and operating substantially as set forth.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 13th day of January, A. D. 1894.

JOHN W. DUNBAR. [L. S.]

Witnesses:
CHESTER BRADFORD,
JAMES A. WALSH.