(No Model.) 2 Sheets—Sheet 1.

M. H. WEBER.

SULKY PLOW.

No. 344,070. Patented June 22, 1886.

Fig. I

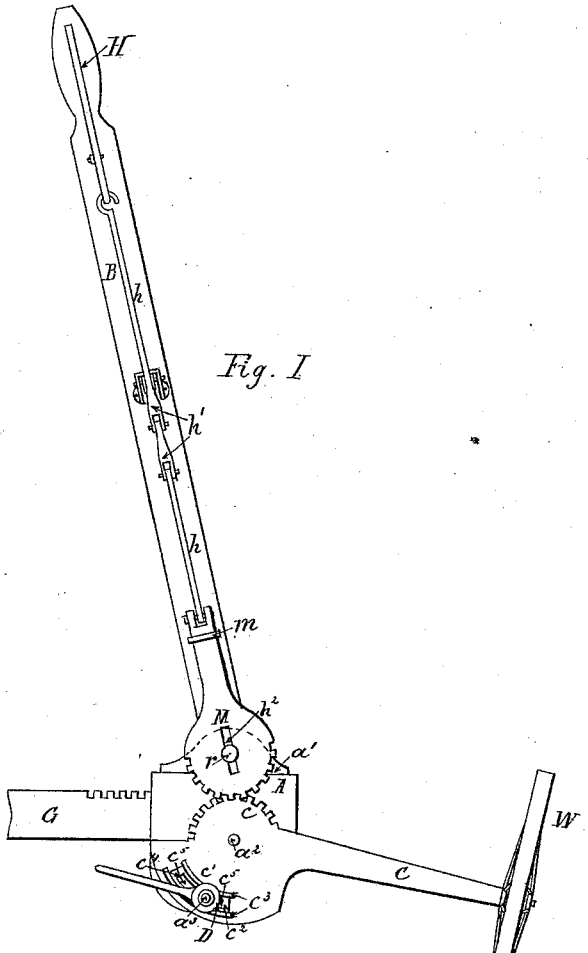
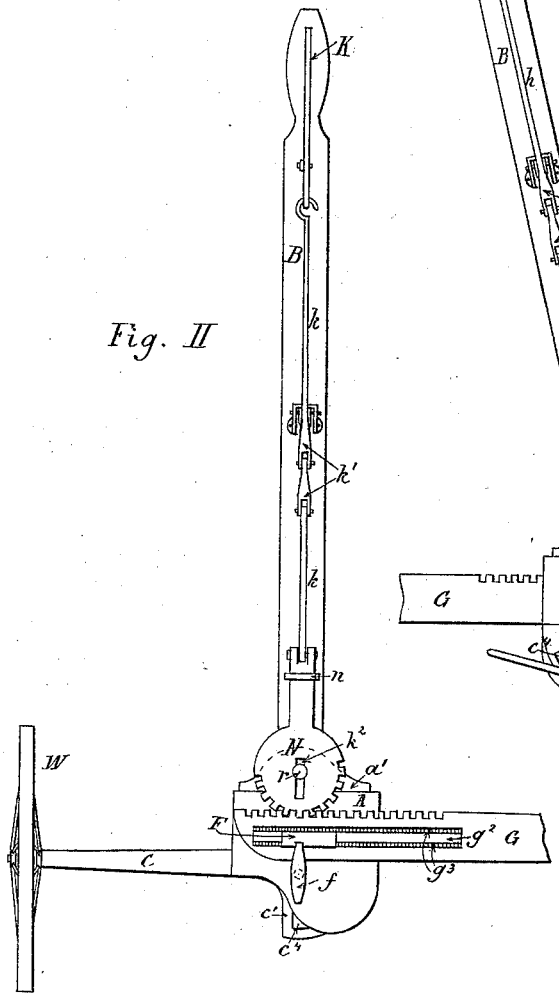


Fig. II



WITNESSES:

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(No Model.) 2 Sheets—Sheet 2.

M. H. WEBER.

SULKY PLOW.

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Fig. III.

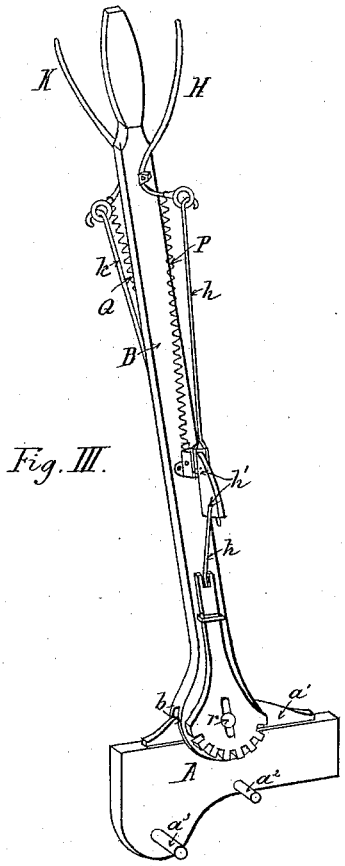


Fig. IV.

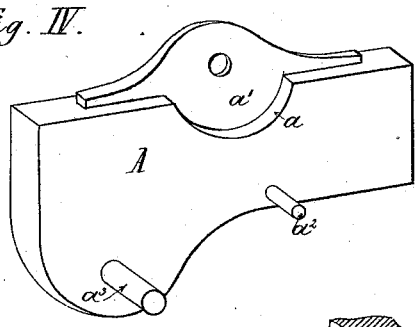


Fig. V.

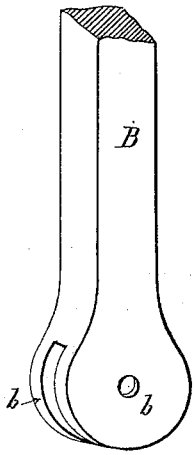


Fig. VI.

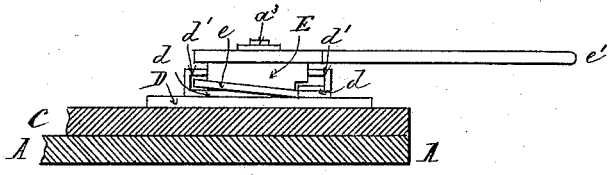


Fig. VIII

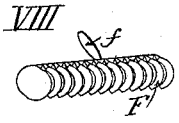
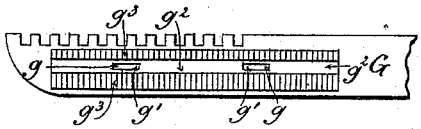


Fig. VII



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UNITED STATES PATENT OFFICE.

MOSES H. WEBER, OF EARL, LANCASTER COUNTY, PENNSYLVANIA.

SULKY-PLOW.

SPECIFICATION forming part of Letters Patent No. 344,070, dated June 22, 1886.

Application filed September 5, 1885. Serial No. 176,832. (No model.)

To all whom it may concern:

Be it known that I, MOSES H. WEBER, a citizen of the United States, residing in Earl township, in the county of Lancaster, State of Pennsylvania, have invented a new and useful Improvement in Sulky-Plows, of which the following is a specification.

My invention relates to improvements in sulky-plows, the object being to connect the furrow-side wheel with the plow-frame in such manner that the distance between the two may be varied, and to vary the position of the said wheel, so that it may be made to revolve in a plane at an angle with the plane in which the land-side wheel revolves. I accomplish this by means of the mechanism illustrated in the accompanying drawings, in which—

Figure I shows an elevation of my device on the side on which the wheel is connected; Fig. II, an elevation on the side on which the plow-frame is connected. Fig. III is a perspective of the device with the axle and plow-frame connections removed. Fig. IV is a perspective view of the connecting-plate. Fig. V is a perspective of the lower end of the main lever. Fig. VI is a top view of the brake used with the axle; Fig. VII, a side elevation of the bearing connecting the plow-frame, and Fig. VIII a perspective of the cam-brake used with it.

Similar letters refer to similar parts throughout the several views.

The plate A, having semicircular recesses *a* on each side of the upper edge and a circular flange, *a'*, projecting from the center of the top of said edge, serves to connect the various parts of the mechanism. The main lever B has circular jaws *b* at its lower end. These jaws embrace the circular flange *a'*, and are journaled on studs *r*, placed on both sides of said flange.

The axle C, to which the furrow-side wheel W is attached, is journaled on the stud a^2, projecting from the rear side of and integral with the plate A, and has a semicircular rack, *c*, formed in its top edge. There is a circular lobe, *c'*, rigidly attached to the lower edge of the inner end of the axle, having a recess, c^2, sunk in its face parallel with its periphery, and two projecting flanges, c^3, parallel with the recess. There is a slot, c^4, extending through the center of the recess, between the sides and ends of which slot and recess there is a bearing-surface, c^5. The lobe is concentric with the rack *c*. There is a short sliding block, D, seated in the recess c^2 between the flanges c^3, having arms *d*, projecting from the ends, with bosses *d'* at their extremities. These bosses engage the worm *e* of the cylindrical worm-brake E, having a handle, *e'*, by which it is operated. The brake E is journaled on a stud, a^3, which is secured in the side of the plate A and passes through the slot c^4. By loosening the brake the axle can be revolved about the stud a^2, and after its position is regulated it is secured by again tightening said brake. The axle-bearing G, connecting the shifting device with the plow-frame, rests against the front of the connecting-plate, and is supported by two lugs, *g*, projecting from the side of the said plate and passing through a slot, g^2, in the bearing. These lugs have arms *g'*, projecting toward each other, on which is journaled a cam-brake, F, having a handle, *f*. The face of the bearing just above and below the slot is a serrated surface, g^3, constructed to engage with the serrated periphery of the cam-brake F when said brake is locked against the face of the plate. When the pressure of this brake is removed, the bearing G can be moved back and forth horizontally, regulating the distance between the plate A and the plow-frame, and after it is in the required position it is secured there by again tightening the brake. The main lever B is provided at its upper extremity with two hand-levers, H K, connected by means of wires *h k* and intermediate levers, *h' k'*, with the dogs M and N, held to the front and rear faces of the lever B by and operating vertically in the collars *m* and *n*. The lower ends of the dogs M and N are circular, and are provided with cog-teeth constructed to engage the one in front with the rack-bar of the bearing G, and that in the rear with the circular rack of the axle C. These dogs have vertical slots h^2 k^2, through which the rod *r* of the flange *a'* passes and about which the dogs oscillate with all the oscillating movements of the main lever. One end of the springs P Q is attached to the lower arms of the hand-levers and the other to the face of the main lever some distance below

the said hand-levers. These springs exert a constant effort to keep the dogs in engagement with the racks of the bearing G and axle C.

In operating to change the plane in which the furrow-side wheel revolves, the brake is loosened, the dog meshed with the rack of the bearing G is raised by means of the hand-lever with which it is connected, in order that the movement of the main lever may not affect the said bearing G, and the main lever is moved back or forth, acting, by means of the cogged dog which engages the circular rack *c*, to raise or lower the outer end of the axle. After the position of the axle is regulated the dog is allowed to re-engage with the rack of the bearing G, and the brake F is again locked.

To vary the distance between the plow-frame and the plate A, the action of the parts is reversed, the dog engaging the rack of the axle is raised, the brake F loosened, and the position of the bearing G regulated through its connections with the main lever by the movement of said lever.

As has been seen, the regulation of the distance between the plow-frame and the wheel and changing the angle of the plane in which the furrow-wheel revolves is accomplished by the use of one lever and its connecting mechanism. Of course the plate A may be made integral with either the end of the bearing or that of the axle, and the main lever supplied with but one hand-lever and its connections, so that but one of the two movements herein described could be made, or the end of said bearing or axle with which the one is connected with the other may be so formed as to do away with the plate altogether. If preferable, the levers may be omitted and the movements of the axle and bearing made directly by hand.

I am aware that there are various devices for attaining the results accomplished by my invention. I do not, therefore, broadly claim the changing of the distance between the plow-frame and the wheel, or the varying of the angle of the plane in which the wheel revolves; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. In a sulky-plow, the combination, with an axle-bearing, the outer end of which is constructed to connect with an oscillating lever and axle, of the said lever, having a hand-lever and a cog-toothed dog so connected that the hand-lever may raise and lower the dog, and the said axle having a circular rack adapted to engage with the cogs of said dog, and a brake for securing the axle in a fixed position, substantially as specified.

2. In a sulky-plow, the combination, with a connecting-plate constructed to connect an oscillating lever and axle, and a movable axle-bearing, of the said lever, having two hand-levers and cog-toothed dogs, each of the hand-levers so connected with one of the dogs that it can raise and lower the same, the said axle having a circular rack adapted to engage with the cogs of one of said dogs, and a brake for securing the axle in a fixed position, and the said axle-bearing having a rack adapted to engage with the cogs of the other of said dogs, and a brake for securing the bearing in a fixed position, substantially as set forth.

3. In a sulky-plow, the combination, with an axle-bearing, the outer end of which has studs on one face, of an axle journaled to one of said studs, and having a slot cut through it concentric with said journal-stud, and a brake supported by a stud passing through said slot and constructed to secure the axle in a fixed position, substantially as specified.

4. In a sulky-plow, the combination, with an axle, the inner end of which has studs on one face, of an axle-bearing having a horizontal slot through which said studs pass and support said bearing, and upon which the bearing is moved back and forth, and a brake supported by said studs and constructed to secure the bearing in a fixed position, substantially as specified.

5. In a sulky-plow, the combination, with a connecting-plate constructed to connect an oscillating axle and a movable axle-bearing, of the said axle, journaled to a stud in one side of said plate, and having a slot cut through it concentric with said journal-stud, and a brake supported by a stud passing through said slot and constructed to secure the axle in a fixed position, and the said axle-bearing having a horizontal slot through which studs on the other side of the plate pass and support said bearing, and upon which the bearing is moved back and forth, and a brake supported by said studs and constructed to secure the bearing in a fixed position, substantially as specified.

MOSES H. WEBER.

Witnesses:
WM. R. GERHART,
H. CARPENTER.