(No Model.)

2 Sheets—Sheet 1.

A. F. CASS.

SULKY PLOW.

No. 334,348. Patented Jan. 12, 1886.

Fig. 1.

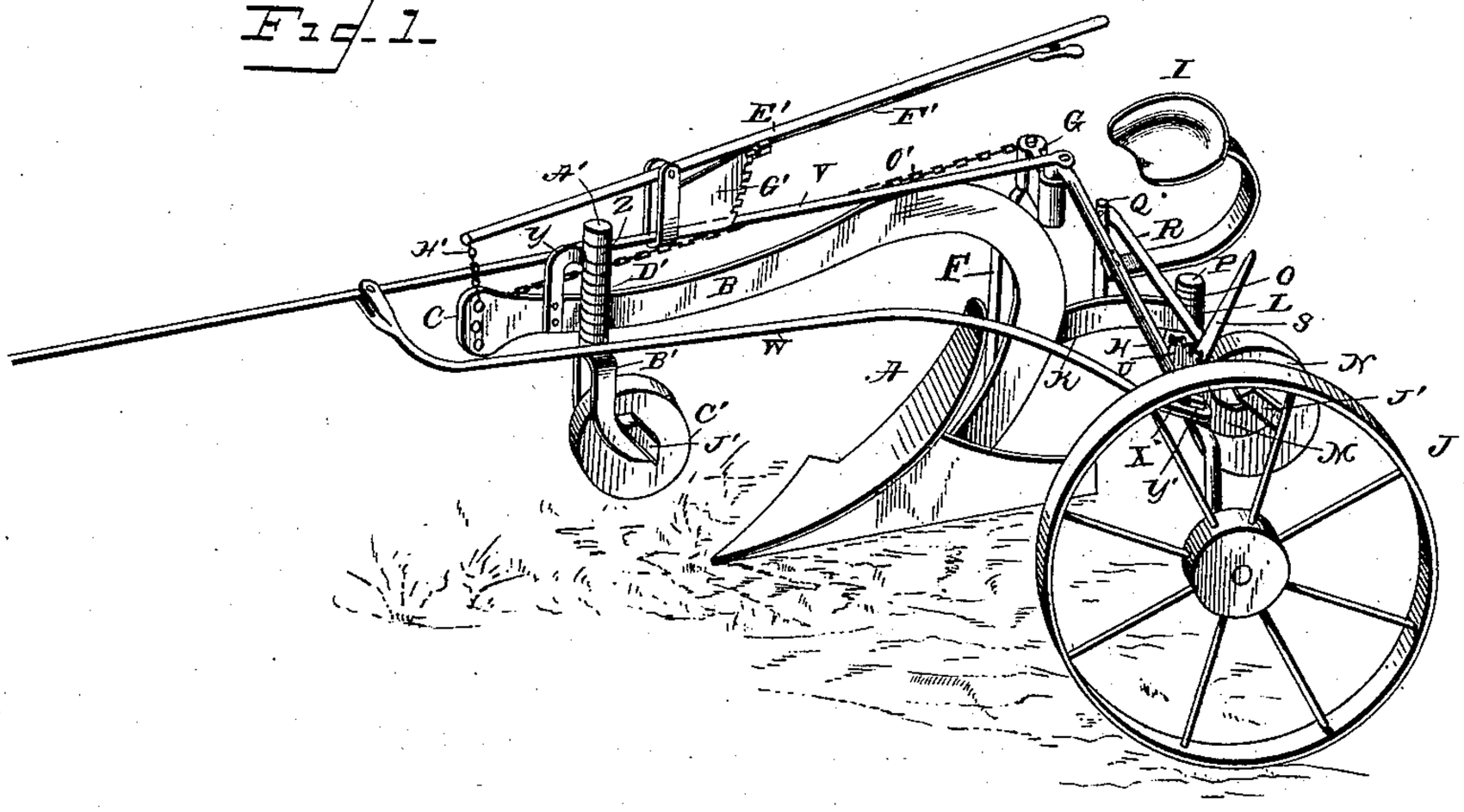


Fig. 2.

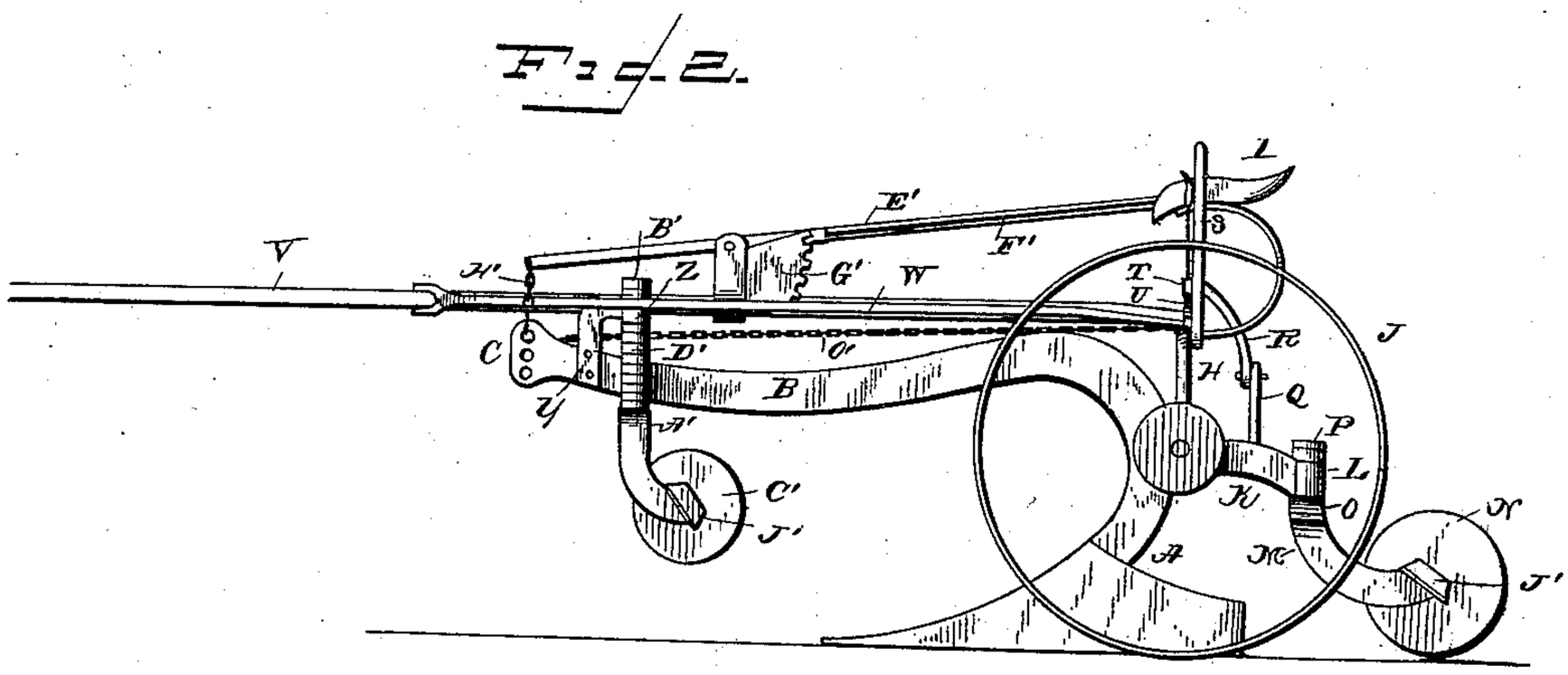
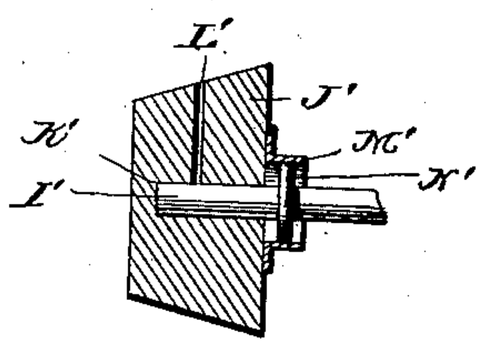


Fig. 5.



WITNESSES
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Edward Stanton

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(No Model.)

2 Sheets—Sheet 2.

A. F. CASS.

SULKY PLOW.

No. 334,348. Patented Jan. 12, 1886.

Fig. 3.

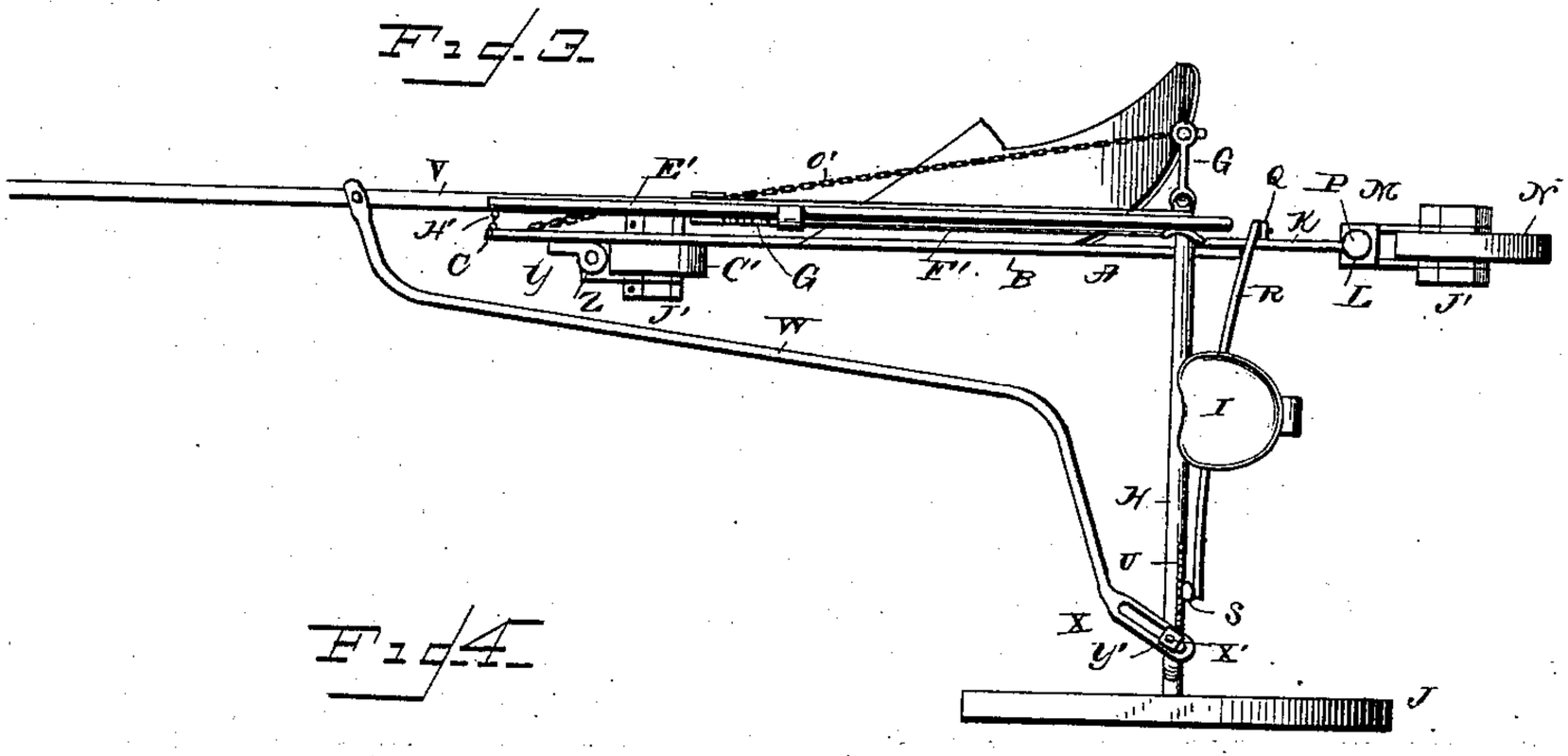


Fig. 4.

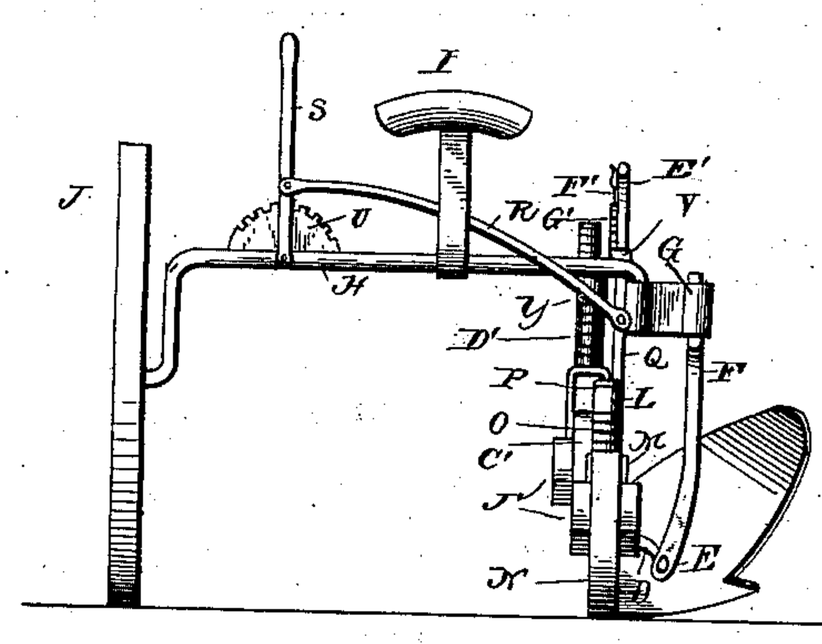
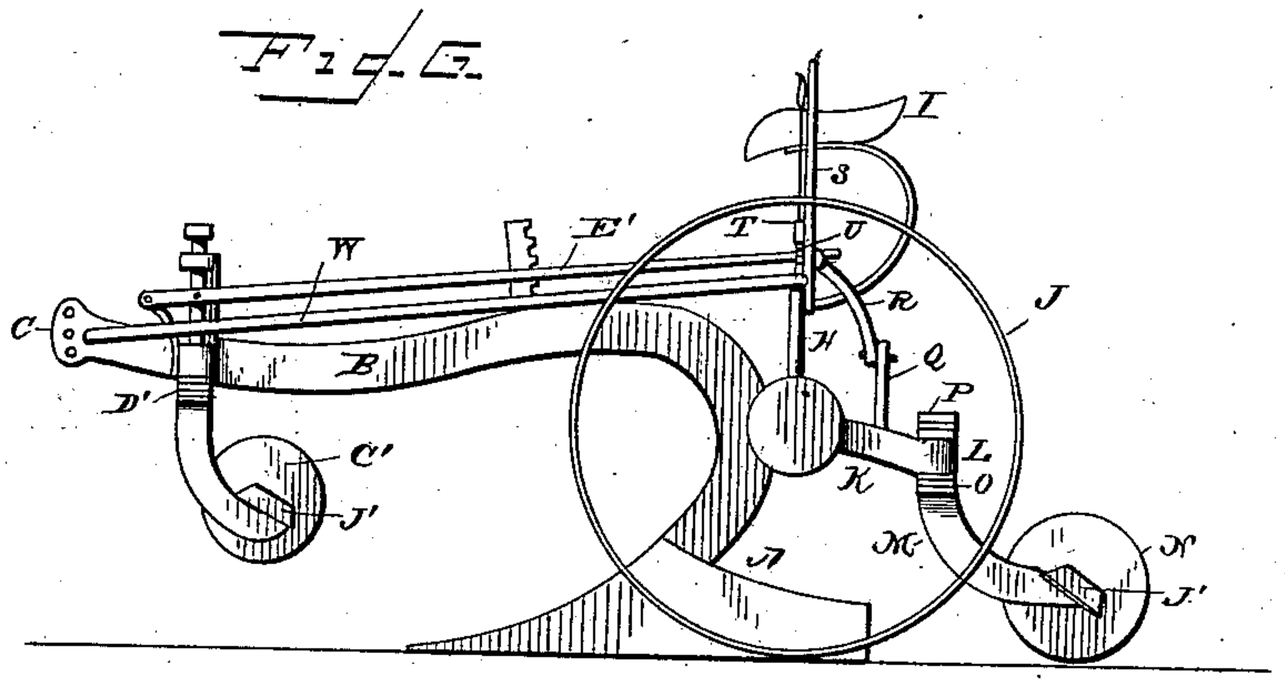


Fig. 5.



WITNESSES
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UNITED STATES PATENT OFFICE.

ARAD F. CASS, OF TWIN BLUFFS, WISCONSIN, ASSIGNOR OF ONE-HALF TO EUGENE M. CASS, OF SAME PLACE.

SULKY-PLOW.

SPECIFICATION forming part of Letters Patent No. 334,348, dated January 12, 1886.

Application filed October 12, 1885. Serial No. 179,572. (No model.)

To all whom it may concern:

Be it known that I, ARAD F. CASS, a citizen of the United States, and a resident of Twin Bluffs, in the county of Richland and State of Wisconsin, have invented certain new and useful Improvements in Sulky-Plows; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of my improved sulky-plow. Fig. 2 is a side view of the same. Fig. 3 is a top view. Fig. 4 is a rear view. Fig. 5 is a detail view of the boxes for the axles of the caster-wheels, and Fig. 6 is a side view of the plow used without a tongue.

Similar letters of reference indicate corresponding parts in all the figures.

My invention has relation to sulky-plows; and it consists in the improved construction and combination of parts of the same, as hereinafter more fully described and claimed.

In the accompanying drawings, the letter A indicates the plow-body, which is provided with the usual beam, B, having the usual clevis, C, at its forward end. A hook, D, having its end pointing upward, projects from the lower end of the plow-standard within the body of the plow, and an eye, E, at the lower end of an upright, F, fits upon the hook and rocks upon the same, and the upper end of this upright is swiveled in a vertical bearing, G, at the end of the axle H. The other end of this axle, which carries the seat I for the driver, has a wheel, J, journaled upon it, which wheel travels upon the land. A bracket, K, projects rearward from the standard of the plow, and is formed with a vertical bearing, L, at its rear end, in which bearing the upper end of the forked frame M of a caster-wheel, N, turns, the said end having washers O around its upper end, and a key, P, for retaining it. An arm, Q, projects upward from the rearwardly-projecting bracket, and has a connecting-rod, R, pivoted to its upper end, and the other end of this connecting-rod is pivoted to a lever, S, having its fulcrum upon the axle at the side of the seat for the driver, and the said lever is provided with a suitable spring-latch, T, which engages a segmental rack, U, upon the axle. The arm Q may project from any suitable point at the rear of the plow-body, if the bracket is dispensed with, and may either be connected to the connecting-rod or it may be sufficiently extended so as to reach near to the seat of the driver, when the driver may guide the plow directly through the arm Q, instead of through the hand-lever and the connecting-rod. The inner end of the tongue V is movably secured to the axle near the vertical bearing, and a diagonal brace, W, has its slotted end X playing upon the axle, sliding upon a bolt, X′, and adjustably secured upon the same by means of a nut, Y′, so that the axle may be adjusted at different angles to the tongue for the purpose of forcing the plow-body to take a wider or narrower furrow. The forward end of the plow-beam is formed with an upwardly-projecting and rearwardly-curved bracket, Y, the upper end of which is provided with a vertical bearing, Z, in which the upper end, A′, of the forked frame B′ of a caster-wheel, C′, turns, and the said upper end of the forked frame is provided with a number of washers, D′, placed above and below the bearing, for the purpose of adjusting the height at which the wheel is to travel, and consequently the depth of the furrow. The draft is applied to the end of the plow-beam at the clevis, and a lever, E′, is pivoted upon the tongue, and has its rear end projecting toward the seat of the driver and provided with a suitable spring-latch, F′, engaging a segmental rack, G′, upon the tongue, while a short chain, H′, is secured to the forward end of the plow-beam and to the forward end of the lever, so that the said end of the lever may be raised by tilting the rear end of the lever downward. The axles I′ for the caster-wheels are journaled in wooden boxes J′ upon the ends of the forked frames, and the bearings or bores K′, in which the ends turn, extend a distance into the blocks, and are provided with suitable perforations, L′, for applying lubricants, and with short sleeves M′, projecting inward. Washers N′ are secured upon the ends of the axle and fit and turn within the sleeves, closing the bores and preventing

any dirt from entering into the same. A chain, O′, is secured to the forward end of the plow-beam and near the vertical bearing at the end of the axle, serving to bring the draft from the forward end of the plow-beam directly upon the sulky-frame. When the tongue is dispensed with, the diagonal brace is secured to the forward end of the beam, and the lever for raising and lowering the forward end of the beam is fulcrumed upon the bracket carrying the forward caster-wheel, and is pivotally connected to the upper end of the forked frame, which end slides in the vertical bearing, so that by raising or lowering the lever the said frame may be raised or lowered, and consequently the forward end of the beam lowered or raised.

By tilting the lever upon the axle the plow may be tilted to one side or the other, causing it to take a wider or narrower furrow, as desired, the plow-body rocking with its hook in the eye at the lower end of the swiveled upright, the said lever guiding the plow in the same manner as a plow is guided by the handles.

By adjusting the washers upon the upper end of the forked frame for the forward caster-wheel the forward end of the plow may be raised or lowered, placing the washers upon the said end below the bearing raising the end of the beam, and placing them above the bearing lowering the end of the beam, causing a shallower or deeper furrow to be taken, and by means of the hand-lever the end of the beam may be so raised that the plow is raised out of the ground and will travel upon the rear caster-wheel, when the plow may be transported from one place to another.

The plow will run independently of the sulky-frame by reason of its only being connected to the frame by the chain and the swiveled upright, and the axle may be adjusted so as to stand at different angles to the tongue by adjusting the slotted cross-brace upon the bolt upon the axle, so as to cause the point of the plow to be pointed more to land or more to the furrow, so as to take a wider or narrower furrow, as desired, this adjustment, together with the hand-lever upon the axle communicating with the upright at the rear end of the plow, serving to guide the plow in the soil in regard to the width of the furrow.

The forward caster-wheel may be small when used in ground not unusually rough; but in very rough and uneven ground a larger caster-wheel may be used, the upright and rearwardly-curved bracket allowing a large wheel to be used.

When the plow is used without the tongue, suitable brakes may be applied to either of the caster-wheels for retarding the plow in going down a hill when not in use and traveling upon the caster-wheels.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The combination, with the axle having the wheel at one end and formed at the other end with the vertical bearing, and the plow having the upwardly-pointing hook projecting from its standard within the plow-body, of the upright secured at its upper end in the vertical bearing on the end of the axle, and having an eye at its lower end in which the upwardly-pointing hook at the rear end of the plow-standard rocks, for the purpose set forth.

2. In a sulky-plow, the combination of a wheeled axle having an upright secured at its upper end to the end of the axle, said upright having an eye at its lower end, a plow-body having an upwardly-pointing hook projecting from the standard within the plow-body and rocking in the eye of the upright, an arm projecting upward from the rear portion of the plow, a hand-lever fulcrumed upon the axle and having means for adjusting it, and a connecting-rod pivoted at its ends to the lever and to the upwardly-projecting arm, as and for the purpose shown and set forth.

3. In a sulky-plow, the combination of a frame having a wheel at the end of the axle, a plow swiveled to the other end of the axle by means of an upright movably secured at its lower end within the body of the plow, and having a rearwardly-projecting bracket provided with a vertical bearing at its rear end, and having an upwardly-projecting rearwardly-curved bracket at the forward end of the beam provided with a vertical bearing at its end, a caster-wheel having its frame swiveled in the bearing of the rearwardly-projecting bracket, and a caster-wheel having the upper end of its forked frame swiveled in the bearing of the forward bracket and adjustable in the same by means of washers, as and for the purpose shown and set forth.

4. In a sulky-plow, the combination of a frame having one wheel at one end of its axle and having the other end of the axle formed into a vertical bearing, an upright swiveled at its upper end in the said bearing, a plow movably attached with its body to the lower end of the upright, and a chain secured to the forward end of the plow-beam and to the end of the axle, as and for the purpose shown and set forth.

5. The combination of the forked frame for the caster-wheel, wooden boxes secured at the lower ends of the said frame and having bores extending a distance into the boxes formed with lubricating perforations, sleeves secured at the outer ends of these bores, and the axle provided with washers secured upon it and fitting and turning within the sleeve, as and for the purpose shown and set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

ARAD F. CASS.

Witnesses:
B. W. POOLE,
J. H. BERRYMAN.