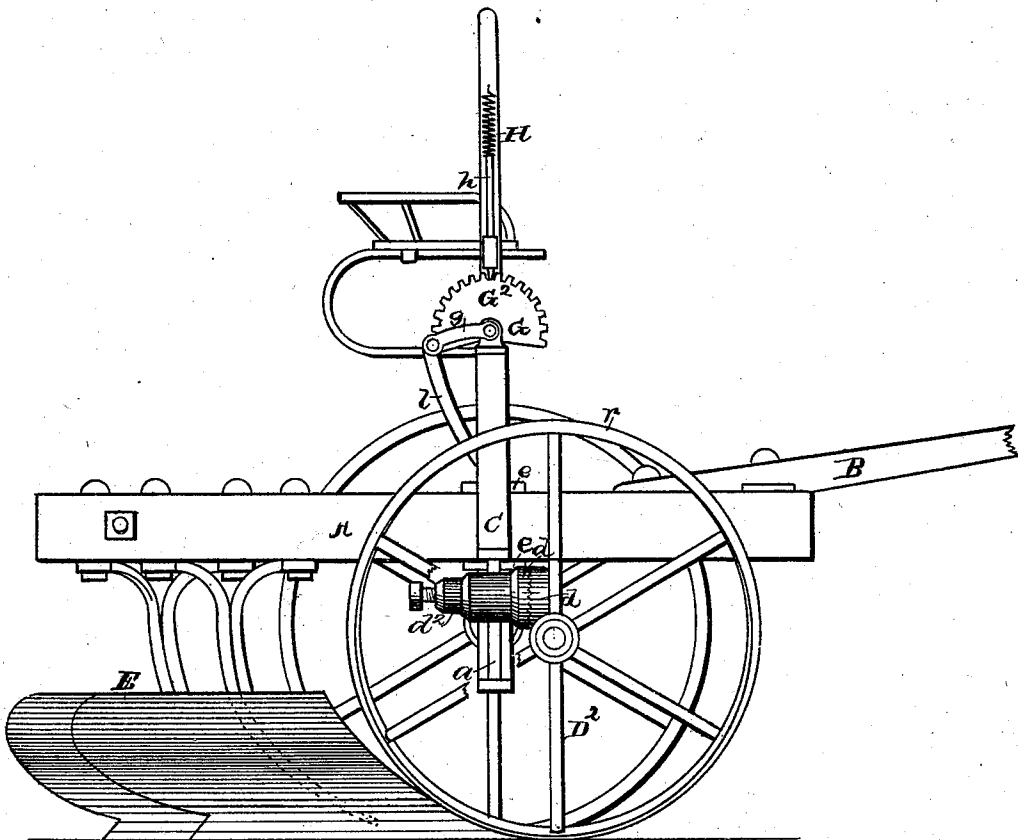


W. L. CASADAY.
SULKY-PLOW.

No. 176,836.

Patented May 2, 1876.

Fig. 1.



WITNESSES:

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Thomas Byrne,

INVENTOR

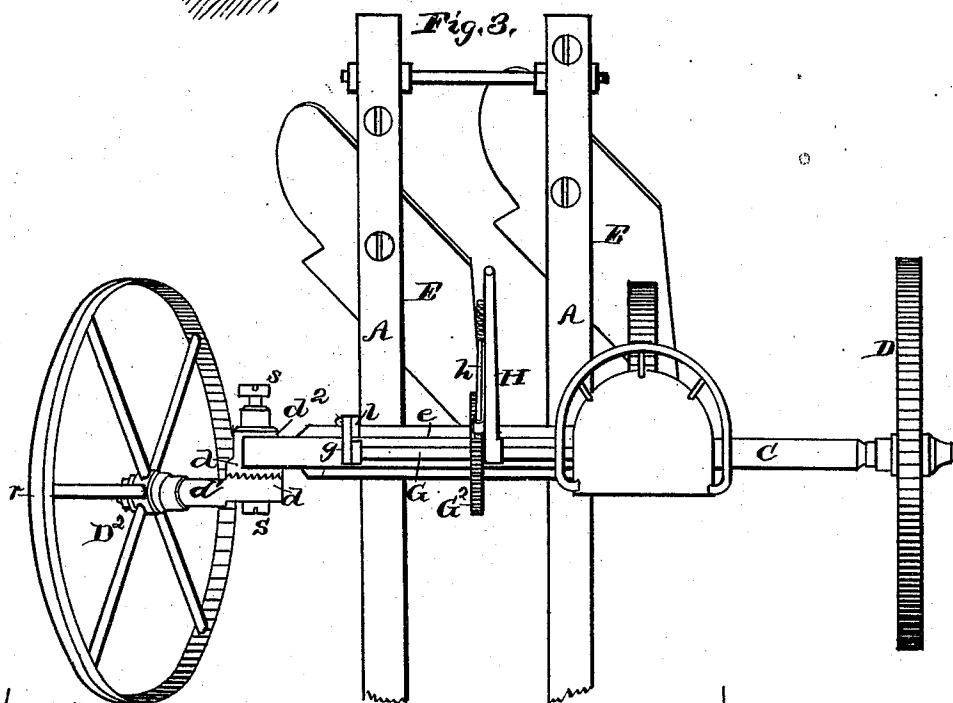
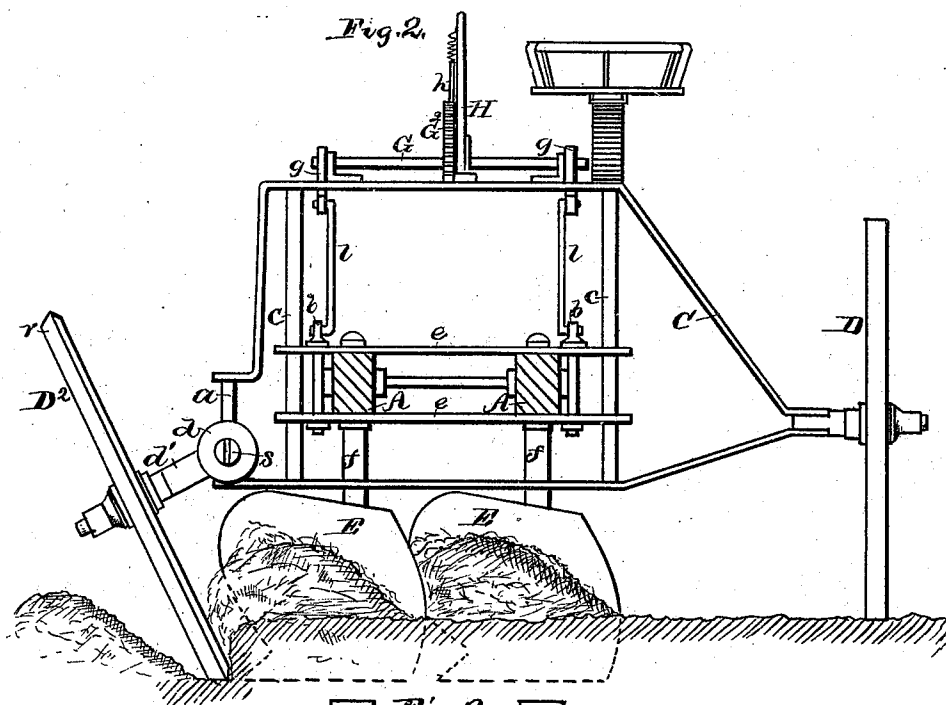
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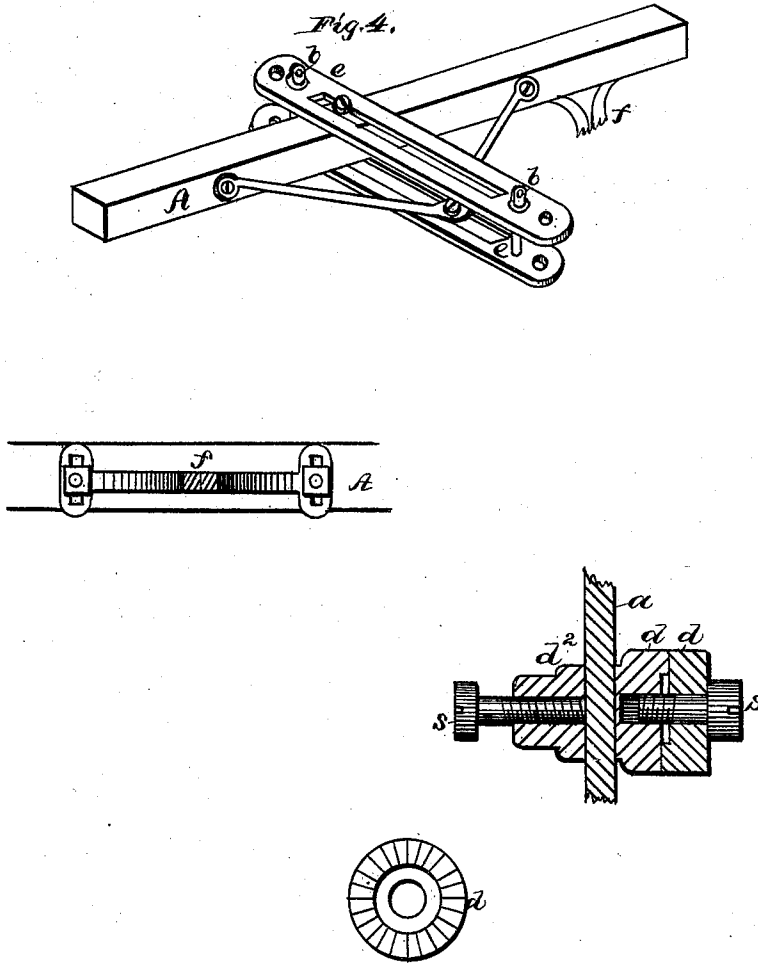
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UNITED STATES PATENT OFFICE.

WILLIAM L. CASADAY, OF NEW CARLISLE, INDIANA.

IMPROVEMENT IN SULKY-PLOWS.

Specification forming part of Letters Patent No. **176,836**, dated May 2, 1876; application filed January 21, 1876.

To all whom it may concern:

Be it known that I, WILLIAM L. CASADAY, of New Carlisle, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Sulky-Plows, of which the following is a specification:

This invention consists of a sulky-plow, provided with two wheels, whose axle-tree is composed of a skeleton frame which spans the plow-beams, to which, at their rear ends, are attached the plows proper, or cutters. The driver's seat is mounted upon the top of the skeleton frame, and the depth of furrow to be cut is regulated by a hand-lever near the seat.

The details of this invention will now be described.

In the drawing, forming part of this specification, Figure 1 is a side elevation of the plow. Fig. 2 is a front elevation. Fig. 3 is a plan, and Fig. 4 is a view of a detached plow and single beam, to be used singly in place of the two plows and beams shown attached to the plow in the preceding figures.

In these figures, A A are the beams of the plow. B is its tongue, and C the skeleton axle-tree, terminating at one end in a vertical rod, which I call the axle *a*. D is an ordinary wheel, and D² a wheel attached to a wheel-spindle d¹, having its axle inclined downwardly from the horizontal, which inclination consequently gives said wheel an inclination from the vertical. It can, however, be adjusted to any degree of angularity by means of the block d², ratchet-disks d d, and set-screws s s. The rim of the wheel D², instead of having an ordinary flat tire, is provided with an angular pointed rim, *r*.

E E are the plows proper, or cutters, attached by slotted standards to the rear ends of the beams A A. The axle-tree C is braced by two rod-braces, *c c*, which serve as guides for the slotted plates *e e*, to which are bolted the beams A A. To the top of the axle C is secured in bearings a shaft, G, extended through a sector G². To the shaft G is secured a hand-lever, H, provided with a spring-clutch, *h*, which holds the lever H at any desired point by meshing into teeth on the circumference of the sector G².

Two arms, *g g*, on the ends of the shaft G, are connected by rods or links *l l* to eyes in the bolts *b b*, which clamp the slotted plates

e e together. It can now be readily seen that, by the traverse of the lever H, the beams A A will be either elevated or depressed, thus regulating both the depth and width of the furrows to be cut by the plows E E. Any suitable mold-boards or cutters may be attached to the beams A A, and no land-side is required.

The object of giving an angular shape to the rim *r* of the wheel D² is in order that said wheel, as it runs in the furrow, may present a square surface to the land-side or wall of the furrow. The angle at which the wheel D² is set opposes the plows' angular determination of cut, and also diminishes the friction of said plows E E against the earth on the land-side. The resultant force between these opposing forces causes the plow, when drawn, to cut a furrow in a right line forward.

The object of making the plow-standards *f f* slotted is in order to allow the plows or mold-boards E E to be set at different angles on the beams A A, such changes being desirable for plowing different kinds of soils. For plowing mellow ground, the points of the plow should be more nearly in line with the centers of the beams A A than when plowing through sod. In the latter case the point of the plow should be farther out from the line of the center of said beam.

In order to convert this double plow into a single one, the two beams A A are removed, and also the tongue B, and the single plow shown in Fig. 4 is substituted for the double beams A A. Said plow is secured by the same bolts used for the double plows, one bolt passing through the single beam and the other through its brace, as clearly shown in the drawing. The tongue B is then secured to the single beam.

This whole machine is light and simple in construction, and the skeleton axle-tree, securely braced as it is, binds the whole machine together, forming a durable, light, and strong combination of parts.

Having thus fully described this sulky-plow, as of my invention, I claim—

1. The skeleton axle C, united by the vertical posts *c c*, and having a fixed wheel-spindle at one end, and at the other end a spindle capable of oblique vertical adjustment, whereby the wheel is adjusted to stand vertically,

or at an inclined angle from the other, substantially as shown and described.

2. The skeleton axle-tree C, provided with the guide-braces *c c*, in combination with the slotted plates *ee* sliding thereon, and with the plow beam or beams A, whereby the plows are adjusted to any desirable depth and width of furrow, substantially as shown and described.

3. The combination of the beam or beams A, plates *e e*, axle-tree C, links *l l*, shaft G, provided with arms *g g*, and lever H, whereby the said axle-tree is operated, substantially in the manner hereinbefore described, for the purposes set forth.

4. The block *d*² swiveled vertically upon the axle *a*, and held at any adjustment thereon by set-screw *s*, in combination with the

wheel-spindle *d*¹ placed at right angles therewith, the two adjustably connected by the ratchet-disks, whereby the wheel D² may be adjusted to various angles to the axle, substantially as shown and described.

5. In a sulky-plow, the wheel D² provided with an angular pointed rim, *r*, in combination with the frame C C, having the adjustable spindle and axle *a*, and the wheel-spindle *d*¹, substantially as shown and described.

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

WILLIAM LEWIS CASADAY.

Witnesses:

J. H. SERVICE,
JOB CRANMER.