

(No Model.)

2 Sheets—Sheet 1.

M. GLYNN.
SULKY PLOW.

No. 482,734.

Patented Sept. 20, 1892.

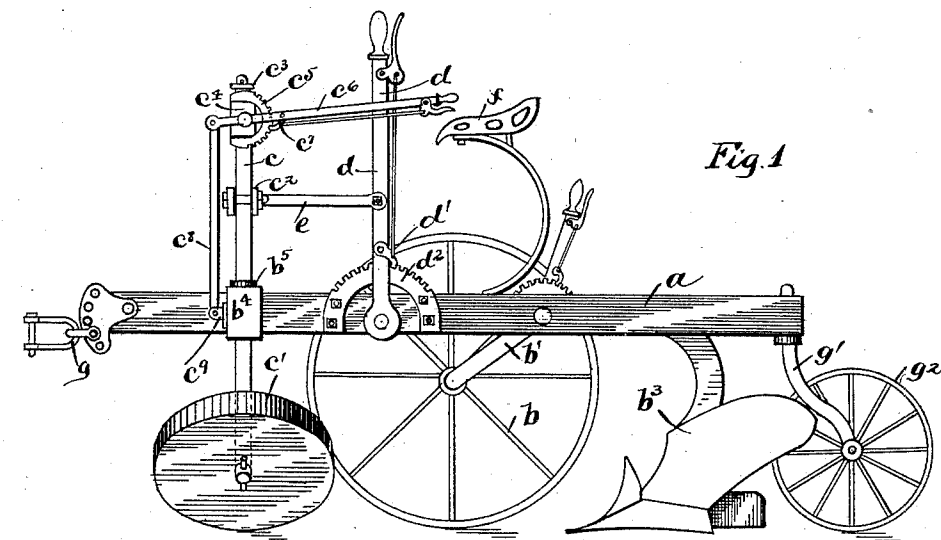


Fig. 1

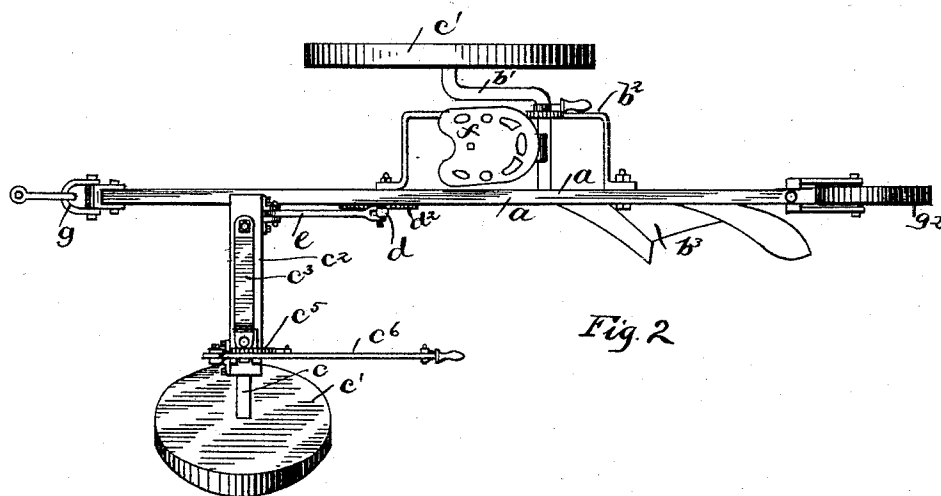


Fig. 2

WITNESSES:

H. B. Bradshaw
Colman A. Perry.

INVENTOR
Michael Glynn

BY
Staley & Shepherd
ATTORNEYS.

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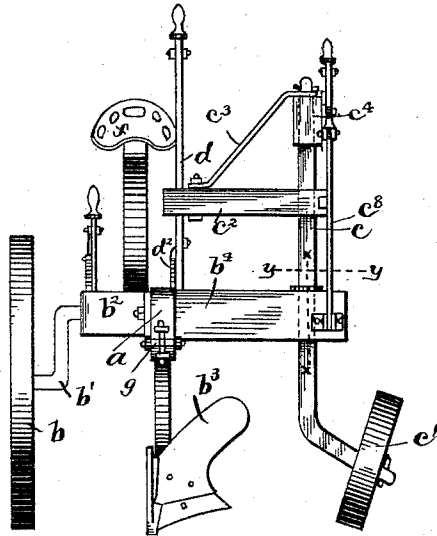


Fig. 3.

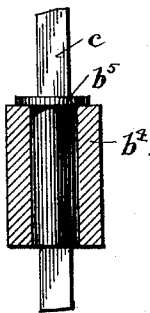


Fig. 4

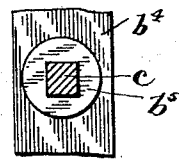


Fig. 5

WITNESSES:

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UNITED STATES PATENT OFFICE.

MICHAEL GLYNN, OF OTTERBEIN, INDIANA.

SULKY-PLOW.

SPECIFICATION forming part of Letters Patent No. 482,734, dated September 20, 1892.

Application filed May 9, 1892. Serial No. 432,371. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL GLYNN, a citizen of the United States, residing at Otterbein, in the county of Benton and State of Indiana, have invented a certain new and useful Improvement in Sulky-Plows, of which the following is a specification.

My invention relates to the improvement of sulky-plows, and has particular relation to the construction and arrangement of an improved steering-gear for said class of plows.

The objects of my invention are to provide an improved form of steering for plows of such superior construction and arrangement of parts as to facilitate the directing of the plow in the proper course, to obviate the necessity of employing a tongue and the usual tongue parts, and to produce other improvements, which will be more specifically pointed out hereinafter.

These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a plow having my improvements thereon. Fig. 2 is a plan view. Fig. 3 is a front end view. Fig. 4 is an enlarged sectional view on line *x x* of Fig. 3, and Fig. 5 is an enlarged transverse section on line *y y* of Fig. 3.

Similar letters refer to similar parts throughout the several views.

a represents a plow-beam, and *b* represents the large side wheel thereof, which is mounted on the outer end of a crank-shaft *b'*, the inner end of which has a bearing in a suitable frame *b²*, which projects laterally from the beam *a*.

b³ represents the plowshare, which depends from the rear portion of the beam *a* in the usual manner.

From the forward portion of the beam projects laterally an arm *b⁴*, the inner end of which is rigidly connected with said beam. The outer end portion of this arm *b⁴* has formed therein a vertical passage or opening, within which is pivotally supported a tubular bushing-thimble *b⁵*, the enlarged head of which bears upon the upper side of said arm *b⁴* and the central opening or hollow of which is square in cross-section.

c represents a rod or standard, which is square or angular in cross-section and which

passes, as shown, vertically through the thimble *b⁵*. Upon the rounded lower and outwardly-bent end of the rod *c* is mounted a front guide-wheel *c'*, which is adapted to bear upon the ground. At a point above the arm *b⁴* the rod *c* has secured thereto the outer end of an inwardly-extending lever-arm *c²*. The outer end of this arm *c²* is further connected with the rod *c* by a suitable brace-arm *c³*, which extends from said arm *c²* to the upper end portion of said rod.

Mounted upon the upper end portion of the rod *c*, beneath the outer end of the brace-arm *c³*, is a block *c⁴*, with the outer side of which is connected a semicircular and rearwardly-extending rack-plate *c⁵*. To the outer side of this rack-plate *c⁵* or block *c⁴* is pivotally connected a rearwardly-extending lever-arm *c⁶*, which is provided with a suitable pivoted pawl *c⁷* on its inner side, which is adapted to be brought into engagement with the teeth of the rack *c⁵*. The forward end of the lever-arm *c⁶* has pivotally connected therewith the upper end of a downwardly-extending arm *c⁸*, the lower end of which is fulcrumed to a lug *c⁹*, which projects from the forward side of the arm *b⁴*.

Rising from a pivotal connection with one side of the beam *a*, at a point near the center of the length thereof, is a lever-arm *d*, which, as shown at *d'*, is provided with a pawl, which is adapted to be brought into engagement with the upwardly-projecting teeth of a semicircular rack-plate *d²*, which rises from the beam *a*.

The lever-arm *d* has pivoted thereto the rear end of a connecting bar or rod *e*, the forward end of which is jointly connected with the inner end portion of the arm *c²*.

Rising from the framework adjacent to the beam *a* is a seat *f*. To the outer or forward end of the beam *a*, which terminates a short distance in front of the arm *b⁴*, is adapted to be connected, as shown, a whiffletree-clevis *g*. Depending from the rear end of the beam *a* is a suitable form of swivel-arm *g'*, which carries the rear ground or caster wheel *g²*.

In operating my improved steering-gear it is evident that the position of the forward wheel *c'* may be adjusted to change the direction of travel by raising the pawl *d'* out of engagement with the teeth of the rack *b²* and forcing the lever *d* forward or backward, as

- may be desired. This movement of the lever d will result through the connection therewith of the arm c^2 in a movement of the outer end of the latter in the arc of a circle and in a consequent partial rotation of the square rod c , which carries the wheel c' . It will thus be seen that a simple and reliable means is afforded of guiding or changing the direction of the plow without the use of a tongue.
- 10 It is evident that the plow-beam may be thrown upward or downward, as desired, by producing a disengagement of the pawl c^7 with the teeth of the rack c^5 and moving the lever c^6 upward or downward to the desired position.
- 15 This movement of said lever c^6 will result through the connection of the arm c^8 and arm b^4 and the connection of the latter with the beam in the desired movement of said beam.
- The construction and arrangement of parts
- 20 herein described and shown not only afford a simple and reliable steering-gear for plows of this class, but obviates the necessity of employing a tongue, and thus greatly lessens the expense of construction. It will also be seen
- 25 that by omitting the tongue from the construction of the plow the furrow produced by the share b^3 may be continued to within close proximity to the fence or other obstacle and still permit of the horses being turned. It will
- 30 also be observed that the construction of my improved steering-gear is such as to admit of its attachment to many of the ordinary forms of sulky-plows.

Having now fully described my invention,

what I claim, and desire to secure by Letters Patent, is—

1. In a plow, the combination, with the beam, side wheel b , and caster-wheel g^2 , of a rod c , supported in the forward portion of the framework, a guide-wheel on said rod, a lever d , and a connecting mechanism between said lever d and rod c , by means of which rotary motion is imparted to said rod through the motion of said lever, substantially as and for the purpose specified.

2. In a plow, the combination, with the plow-beam, its share and supporting wheels, and a lever d , rising from the framework, of beam-arm b^4 , rod c , journaled thereto and carrying wheel c' , arm c^2 , projecting from said rod c , and a connecting-piece e between said arm c^2 and lever d , substantially as and for the purpose specified.

3. In a plow, the combination, with the beam, share, and framework, supporting-wheels therefor, and a lever d , fulcrumed to said frame, of an arm b^4 , projecting, as described, from the beam, wheel-carrying rod c , journaled in said arm, rack c^5 on the upper end of said rod c , lever-arm c^6 , fulcrumed to said rack, arm c^8 , connecting said lever-arm and arm b^4 , and connecting-piece e between said arm c^2 and lever d , substantially as and for the purpose specified.

MICHAEL GLYNN.

In presence of—
S. T. BARNES,
H. A. LEACH.