(No Model.) 2 Sheets—Sheet 1.

C. RUSS.

SULKY PLOW.

No. 343,071. Patented June 1, 1886.

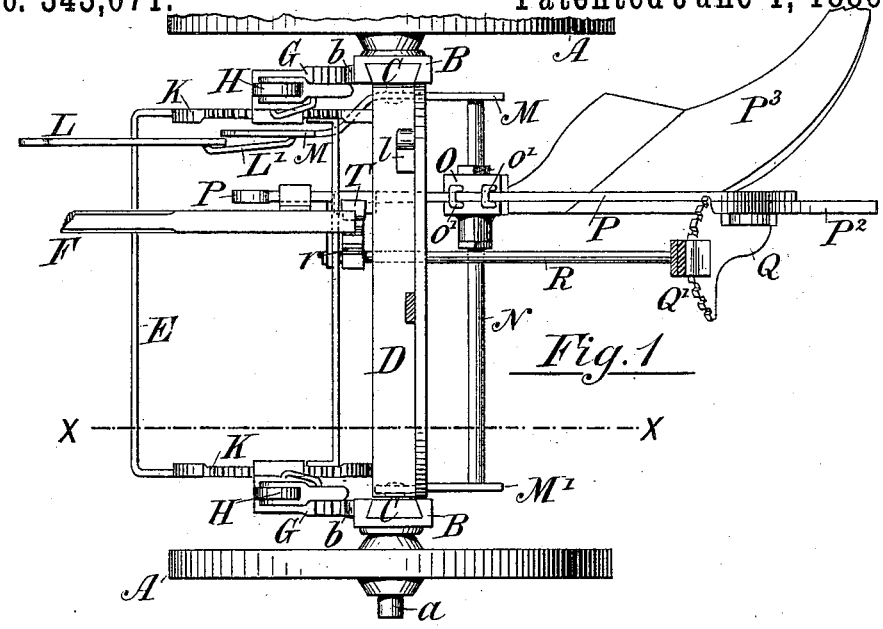

Fig. 1

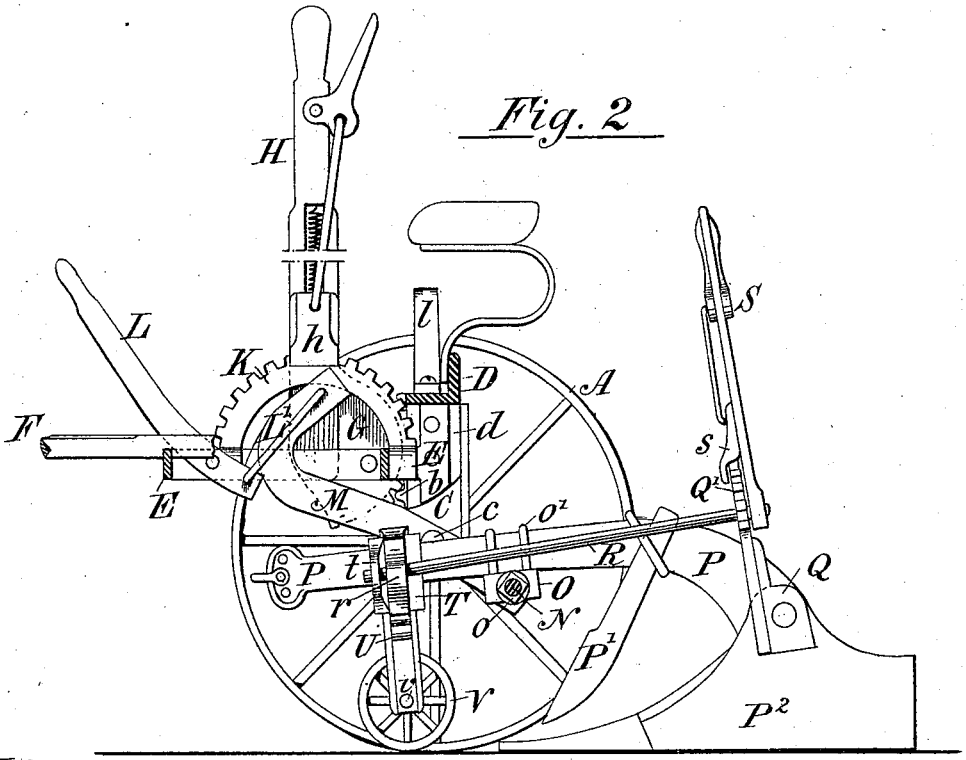

Fig. 2

Witnesses:
C. M. Dowell
John. W. Green.

Inventor.
Cyrus Russ,
Per Attys.
Reynolds & Kellogg.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 3

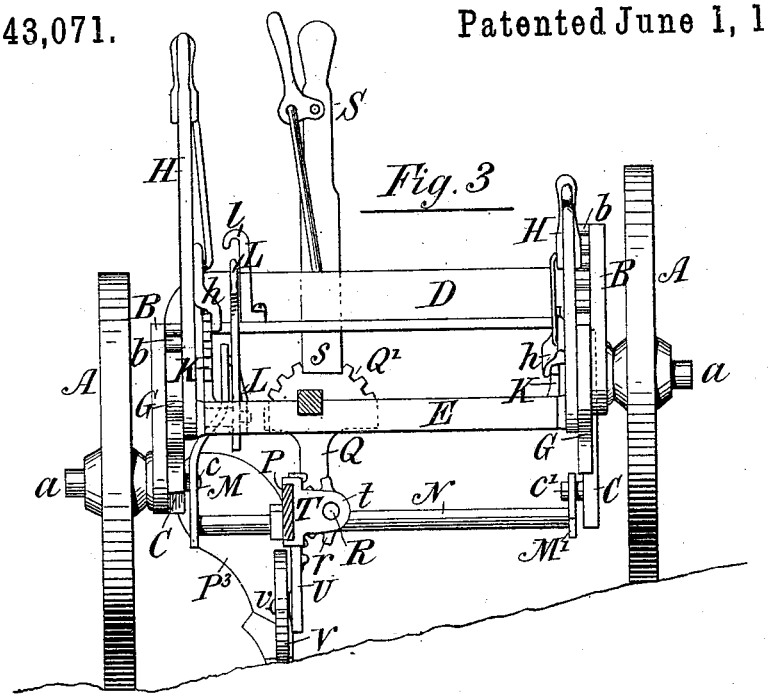
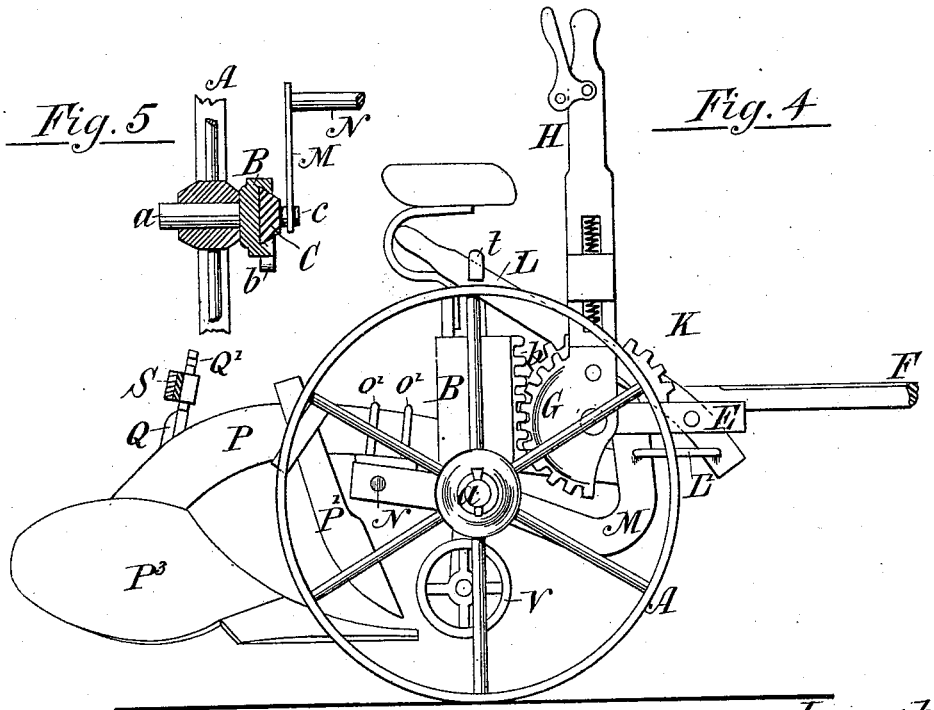


Fig. 5

Fig. 4



Witnesses:
Chm. Dowell
John. W. Treen

Inventor:
Cyrus Russ,
Per Attys.
Reynolds & Kellogg.

UNITED STATES PATENT OFFICE.

CYRUS RUSS, OF BEAMSVILLE, ONTARIO, CANADA.

SULKY-PLOW.

SPECIFICATION forming part of Letters Patent No. 343,071, dated June 1, 1886.

Application filed January 25, 1886. Serial No. 189,630. (No model.) Patented in Canada September 18, 1884, No. 20,206.

To all whom it may concern:

Be it known that I, CYRUS RUSS, of Beamsville, in the county of Lincoln and Province of Ontario, in the Dominion of Canada, 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 same.

This invention has for its object the production of a cheap, simple, and efficient sulky-plow, which shall be easily operated by the driver from his seat to change the position of the several movable parts without complicating mechanism or adding to the weight or cost of the implement.

The improvements consist, mainly, in the means for raising and lowering one or both of the wheel-axles and canting the plow, as may be required in working over uneven or slanting ground; devices for adjusting the share, mold-board, colter, &c., as to height, and adapting the plow for work or for road-traveling, and means for regulating the level of the front wheel, and consequently gaging the depth of the furrow. For full comprehension, however, of the invention, reference must be had to the annexed drawings, forming part of this specification, in which similar letters of reference indicate like parts, and where—

Figure 1 is a plan view of my sulky-plow; Fig. 2, a cross-section taken on line *x x*, Fig. 1, the parts being in position for work; Fig. 3, a front view with the wheel-axles at different levels; Fig. 4, a side view showing the parts in position for road-traveling; and Fig. 5 a detail sectional view showing one of the slides and axle-connection.

A A are the wheels mounted on short axles *a a*, which are carried by standards B B, these latter being grooved on their inner faces to receive tongues C C, (preferably of dovetail shape,) which in turn are fastened to or cast in one, with depending extensions or arms *d d* of a beam or rail, D, arranged transversely between the wheels. To these arms *d d* are also fastened the end bars of a horizontal rectangular frame, E, to which is attached the tongue F.

On the front edges of the standards B B are formed racks *b b*, into which mesh the teeth of quadrants G G, fastened to the lower ends of hand-levers H H, which are pivoted to the sides of the horizontal frame E, these hand-levers being provided with spring-latches *h h*, which lock into the teeth of segments K K, firmly fixed to the frame E. To one side of this frame E is also pivoted a lever, L, the longer arm of which is adapted to be locked under a stirrup, *l*, on the transverse beam D, and its shorter arm is connected by a link, L′, to the upwardly-curved front end of a bail or bar, M, pivoted at *c* to the inside of one of the tongues C. On the opposite side of the machine a shorter bail or arm, M′, is similarly pivoted at *c′* to the other tongue C, and both of these bails or bars extend back of their pivots the desired distance, and are firmly fastened to opposite ends of a horizontal shaft, N. Upon this shaft N is mounted a small casting, O, or similar device, adapted to be movable thereon and to be fastened by nuts *o o* or other suitable means at any desired point, straps *o′ o′* or like means serving to hold in connection with said shaft the plow-beam P. To the rear of this beam are fastened in any approved manner the colter P′, share P^2, and mold-board P^3, which are of any desired pattern, and to the rear end of the beam or to the share I fasten firmly a bracket, Q, the upper edge of which is in the form of a toothed segment, Q′, through a hole in which passes loosely a shaft, R, running parallel with the beam P, on the end of which shaft and close to the segment Q′ is firmly fixed the end of a vertical hand-lever, S, provided with a spring-latch, *s*, which locks into the teeth of the segment Q′. The front end of the shaft R is journaled in a lug, *t*, projecting from a casting, T, fixed upon the beam P, near its front end, a pinion, *r*, being fixed upon the shaft R at this point, so as to mesh with a rack, U, sliding vertically in ways formed for it in the casting T. The lower end of this rack U carries the axle *u* of a small guide-wheel, V, which runs in front of the share and regulates the depth of the furrow. This wheel V is raised and lowered by the driver, who simply operates the hand-lever S, and through the shaft R brings the pinion *r* and rack U into operation, as will be readily understood.

The plow is raised and lowered by operating the lever L, said lever, through the link L′ and pivoted bail M, causing the shaft N to rise and carry with it the plow-beam P, and thus raising the share and mold-board fast-

ened thereto, the locking of the lever L under the stirrups *l* retaining same clear of the ground. When it is desired to bring one wheel-axle higher than the other, as seen in Fig. 3, or to allow, say, one wheel to run in the next furrow, it is only necessary to raise the latch of that one of the levers H which is on the required side, and by pulling on such lever the tongue C on that side will be caused to slide in its standard, and in this manner alter the position of the wheel-axle on that side with relation to the rest of the implement and the opposite wheel. It will be seen that the bails M M′ and shaft N move together, and consequently the position of the plow proper is altered vertically, or canted to one side or the other, at the will of the operator.

It will be apparent to those skilled in the art that link-motions, bell-cranks, or levers of other descriptions may be substituted for the racks, toothed quadrants, and segments for the purpose of altering the positions of the wheel-axles in relation to each other and the rest of the implement without altering the action of my grooved standards and the tongues sliding therein, and I consequently do not limit myself to the precise arrangement shown.

What I claim, and desire to secure by Letters Patent, is as follows:

1. In a sulky-plow, the combination, with the standards B B, carrying the wheel-axles, transverse beam D, and tongues C C, of bails M M′, pivoted to said tongues, shaft N, plow-beam P, and carrying plow proper, and means whereby said plow-beam and plow may be canted in either direction and the wheel-centers adjusted by the sliding of said tongues in said standards, substantially as and for the purpose set forth.

2. In a sulky-plow, the combination, with the guide-wheel V and plow-beam carrying casting T and segment Q′, of the shaft R, having locking-lever S and pinion *r* mounted thereon, and rack U, sliding in said casting and carrying the wheel, substantially as and for the purpose specified.

Beamsville, 21st day of January, A. D. 1886.

CYRUS RUSS.

Witnesses:
E. A. LANCASTER,
W. F. LANCASTER.