E. J. FRASER.

SULKY PLOW.

No. 32,129. Patented Apr. 23, 1861.

Fig. 1.

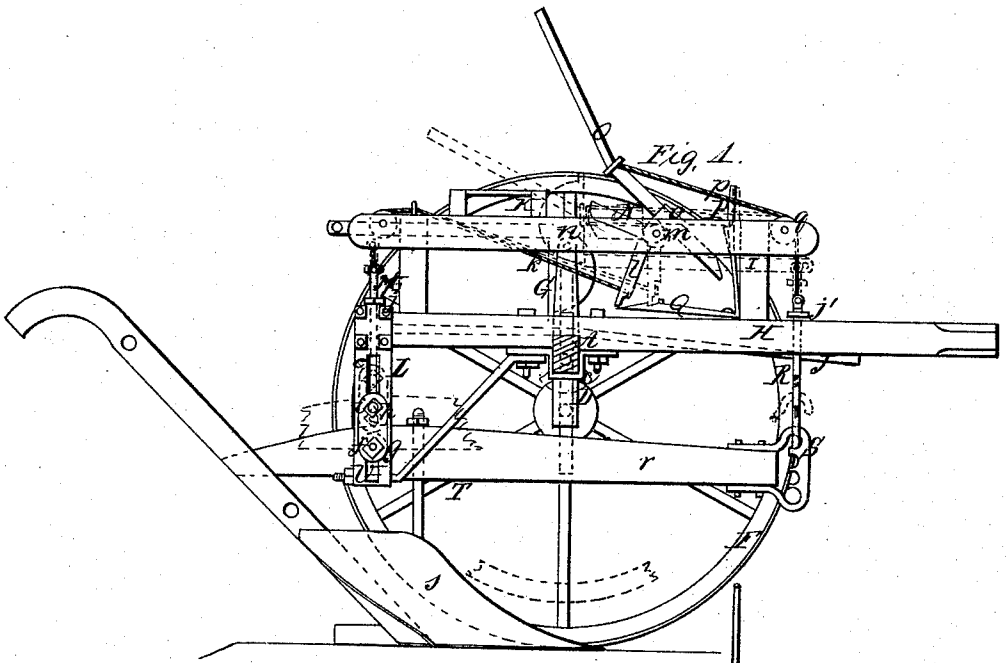


Fig. 3,

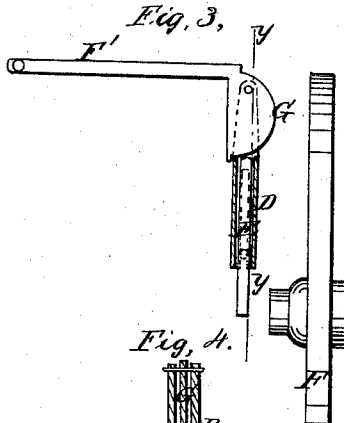


Fig. 2.

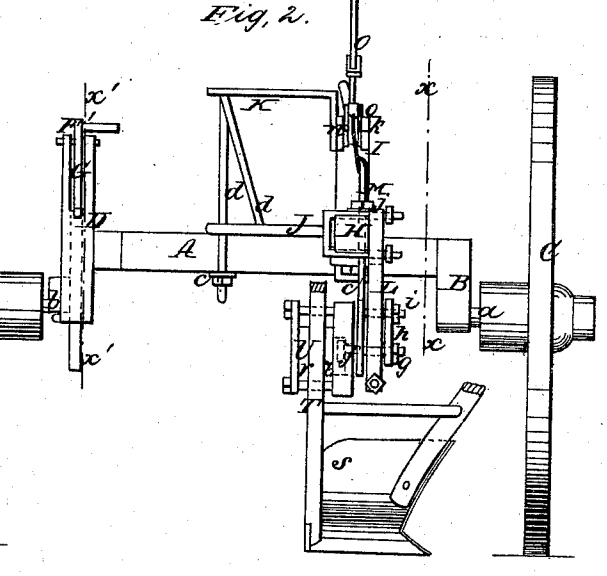
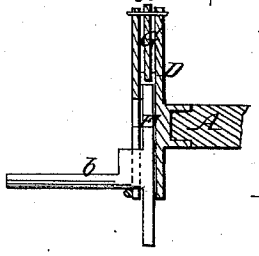


Fig. 4.



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UNITED STATES PATENT OFFICE.

EDWIN J. FRASER, OF KANSAS CITY, MISSOURI.

IMPROVEMENT IN PLOWS.

Specification forming part of Letters Patent No. **32,129**, dated April 23, 1861.

To all whom it may concern:

Be it known that I, EDWIN J. FRASER, of Kansas City, in the county of Jackson and State of Missouri, have invented a new and Improved Sulky-Plow; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a side sectional view of my invention, taken in the line *x x*, Fig. 2; Fig. 2, a back view of same; Fig. 3, a transverse section of the axle, taken in the line *x' x'*, Fig. 2; Fig. 4, a transverse section of Fig. 3, taken in the line *y y*.

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

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents an axle, one end of which has a pendent bar, B, attached with an arm, *a*, at its lower end, on which arm a wheel, C, is placed. The opposite end of axle A has a vertical guide or socket, D, attached to it, in which a slide, E, is fitted and allowed to work freely up and down. The slide E has an arm, *b*, attached to it at right angles, and on this arm the other wheel, F, is placed.

In the upper part of the guide or socket D there is placed an eccentric, G, which bears on the upper end of the slide E, and has a handle or lever, F', attached. By actuating the handle or lever F' the eccentric G is turned and the axle A rendered capable of being adjusted, so as to be retained in a horizontal position, and thereby compensate for the difference in the height of the two wheels when the wheel F is in the furrow. This will be fully understood by referring to Figs. 2, 3, and 4.

To the axle A there is attached at right angles a bar, H, having a small upright frame, I, on it. The bar H projects sufficiently in front of the axle A to form a draft-pole, and it is braced by a curved metal rod or bar, J. The bars H and J are secured to the axle A by clips *c*, which admit of the bars being adjusted on the axle at the points desired. K is the driver's seat, which adjoins the frame I, and is supported at one side by uprights *d d*.

To the back part of the bar H there is secured a vertical metal bar, L, which is slotted vertically, as shown at *e* in Fig. 1. M is a sliding rod, which passes through the back part of the bar H, and has a headed pin, *f*, projecting horizontally from it, said pin passing through the slot *e* and being connected by a nut, *g*, to a plate, *h*, at the opposite side of the bar L. A screw-bolt, *i*, also connects the rod M to the plate *h*. The pin *f*, screw-bolt *i*, and plate *h* serve as a guide for the rod M.

The upper end of the rod M has a screw-thread cut on it, and on the screw-thread a nut, *j*, is placed. The upper end of the rod M is connected by a cord, *k*, to the lower end of an arm, *l*, of a bent or right-angled lever, N, the fulcrum-pin *m* of which passes through the bar *n* of the frame I. (See Fig. 1.)

O is a lever, which is fitted in a socket, *o*, that is placed on the fulcrum-pin *m* of lever N. The lever O is secured in one position by having its front end catch into a recess in a spring, P, at the front part of the frame I, as shown in red in Fig. 1, and the lower arm, *l*, of lever N is secured in a vertical position when necessary by catching in a recess in a spring-plate, Q, which is on bar H.

To the lever O a cord, *p*, is attached. This cord passes over a roller, *q*, in the frame I, and is connected to a vertical rod, R, which is fitted loosely in the bar H, and has a nut, *j'*, on it, the lower end of which is attached to a plow-clevis, S.

T is a plow, which may be constructed in any of the known ways. This plow has a clip, U, placed on its beam *r* at a point directly over the mold-board *s*. The clip U has a slot, *t*, made in it (see dotted lines, Fig. 2) to receive the head of the pin *f*, and this slot has flanges at each side to retain the pin in the slot.

The pin *f*, it will be seen, connects the back part of the plow T to the rod M, and the pin *f* may fit loosely in slot *t*, so as to admit of a proper degree of play or movement of the plow. The plow is connected to the sulky by the pin *f* and rod R, and when the plow is at work the lever O is released from the catch or spring P and the arm *l* of lever N is released from the catch or spring Q. At any time when it is desired to elevate the plow above the ground the upper part of lever O is drawn back, and the cord *p* elevates the front end of the beam, and the share, being thereby directed upward, has an inclination to run out of the ground. The lever O then strikes the upper part or arm of the bent or right-angled lever N, and the lower

arm, *l*, of said lever is forced forward, drawing up by means of cord *p* the back part of the plow T, the arm *l* being retained by the catch or spring Q. When the plow T is allowed to descend lower or front end of the lever O, as the upper end of the latter is drawn back, strikes the catch or spring Q and releases the arm *l* of lever N.

The plow T, it will be seen by this arrangement, may be very readily attached to and detached from the sulky. The device is extremely simple and efficient, and any ordinary plow may be attached to the sulky and the plow used separately, when desired.

The depth of the furrow may be regulated as desired by adjusting the nuts *j j'* on the rods M R.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The arrangement of the lever N *l* O and detents P Q with each other and with the slotted bar L, rod M, cords *k p*, and plow, in the manner and for the purposes herein shown and described.

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