(No Model.)

E. A. DE WITT.

SULKY PLOW.

No. 347,472. Patented Aug. 17, 1886.

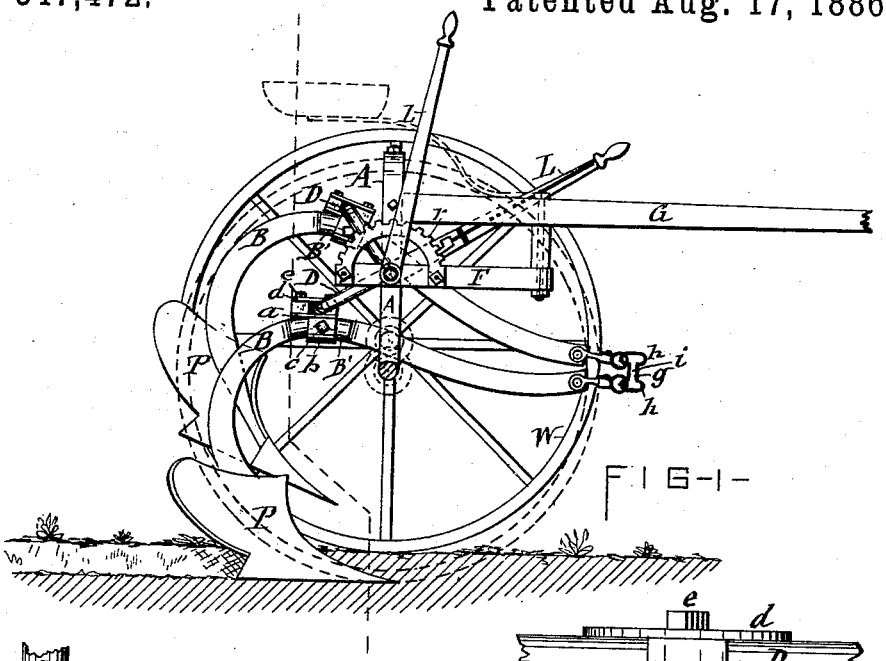

FIG-1-

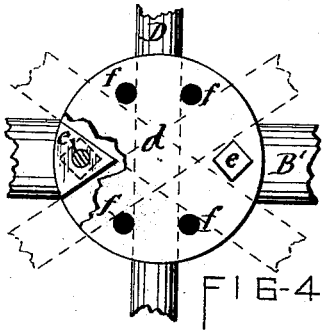

FIG-4-

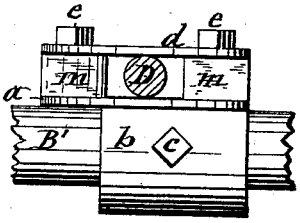

FIG-5-

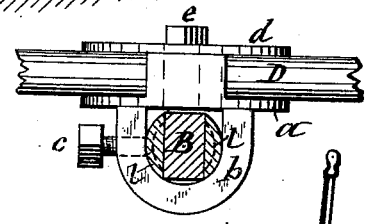

FIG-6-

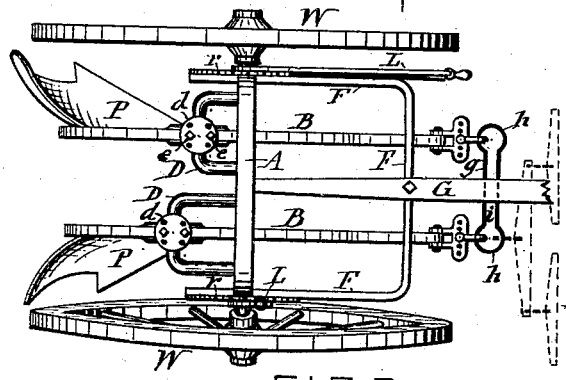

FIG-2-

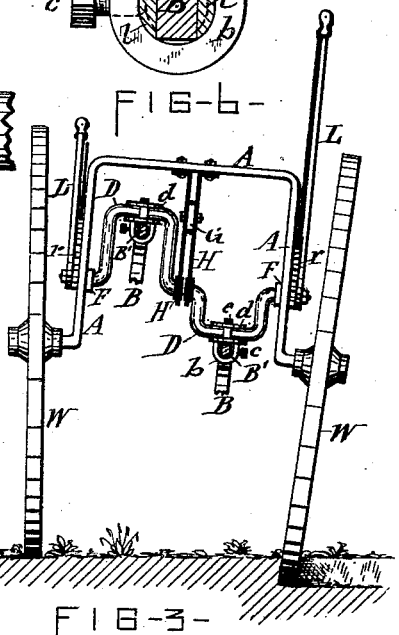

FIG-3-

ATTEST

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UNITED STATES PATENT OFFICE.

EDWARD A. DE WITT, OF ODESSA, NEW YORK.

SULKY-PLOW.

SPECIFICATION forming part of Letters Patent No. 347,472, dated August 17, 1886.

Application filed August 27, 1884. Serial No. 141,535. (No model.)

To all whom it may concern:

Be it known that I, EDWARD A. DE WITT, of Odessa, in the county of Schuyler, in the State of New York, have invented new and useful Improvements in Sulky-Plows, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates partly to sulky-plows in general, and partly to the particular class in which two plows are hung on the sulky in such a manner as to allow them to be alternately brought into operation, and thus admit of casting successive furrows toward one and the same side and obviating dead furrows and ridges.

The invention consists in improved means for connecting the plow to the sulky, which allows the sulky to be shifted forward or backward, and to either turn freely in a horizontal plane, so as to relieve the draft and to afford to the plow an easy and natural passage through stony or hard ground, or to be set at different angles in a horizontal plane, according to the width of furrow to be cut, all as hereinafter more fully described, and specifically set forth in the claims.

In the annexed drawings, Figure 1 is a side elevation of a sulky-plow embodying my invention. Fig. 2 is a plan view of the same. Fig. 3 is a rear end view of the sulky with portions of the plow-beams broken away to better illustrate the connection of the plows with the sulky; and Figs. 4, 5, and 6 are enlarged detail views of said connection, and representing, respectively, plan, side, and end views of the same.

Similar letters of reference indicate corresponding parts.

The sulky consists, mainly, of an axle, A, having the carrying-wheels W W mounted loosely thereon. At the inner end of the wheel-hubs the axle is cranked upward to form an elevated central portion of the axle. A horizontal frame, F, is attached to the vertical portions of the axle, and extended forward from the same, and the pole G is secured to the forward portion of said frame, and to hangers H H, which depend rigidly from the elevated central portion of the axle. The spindles of the axle I deflect downward, so as to cause the wheels W W to stand convergent toward the bottom. The effect of this is that the land-wheel stands nearly or quite perpendicular when the other wheel runs in the furrow, as illustrated in Fig. 3 of the drawings. The advantages derived therefrom have already been herein stated.

P P denote the two plows, and B B the plow-beams. Said plows are connected to and supported by two independent crank shafts or yokes, D D, the inner ends of which are pivoted in the lower end of the hangers H H, and the outer ends of said yokes are journaled in and project through the vertical portions of the axle A, and at the outside of the latter each of the yokes D D has affixed to it a separate lever, L, by which to turn the said yokes, so as to lower and raise the plows into and out of their operative positions, the levers being provided with the usual dog which engages with the semicircular rack *r*, attached to the frame F of the sulky, by which devices the levers are retained in their required position in the manner common to other sulky-plows and other agricultural machines. The two plows have their mold-boards respectively toward opposite sides of the sulky, so that in turning about at the end of the furrow and raising the last operating plow out of the ground and depressing the other plow the latter can be made to cut the succeeding furrow adjacent to the preceding one and cast the soil toward the same.

By the attachment of the plow-supporting yokes D D direct to the single axle A, which is extended from wheel to wheel, as shown, I simplify and cheapen the construction of the sulky-frame and apply the strain direct to the axle.

The connection of the plow-beam with the yoke D, I construct as follows: Between the plow-beam and yoke I interpose a horizontal plate, *a*, which has affixed to its under side a sleeve, *b*, through which the plow-beam is extended, the latter being provided with a cylindrical portion, B′, in the sleeve, so that the plow-beam can turn as well as shift longitudinally in said sleeve. A set-screw, *c*, passing through the sleeve and engaging the plow-

beam, serves to retain the latter in its required position. Said arrangement allows the plow to be set at different angles vertically, so as to tip it either to the landside or to the mold-board, and also allows it to be set back or forward, as may be desired.

When applying my aforesaid improvement to an ordinary plow-beam of rectangular form in cross-section, I apply to the sides thereof segmental cheek-pieces *l l*, as shown in Fig. 6 of the drawings. The top of the plate *a* is provided with two bosses, *m m*, forming between them a radially-enlarged passage for the yoke D, which lies between said bosses. Another plate, *d*, is placed over the yoke, and by means of bolts *e e*, passing through said plate and into the bosses *m m* the two plates *d* and *a* can be clamped together to confine the yoke between them. The two plates can turn horizontally as well as vertically on the yoke, and consequently the plow is allowed to swing freely in horizontal and vertical planes, thus enabling the plow to pass more easily through stony or hard ground.

In order to admit of securing the plow in its position so as to take more or less land, I provide the plates *a* and *d* with holes *f f f f* for the reception of pins, (not shown in the drawings,) which pins are adapted to either hold the yoke *d* between them, so as to maintain the same at right angles to the plow-beam, as represented by full lines in Fig. 4 of the drawings, or to lock the yoke between the pins and the bosses *m m*, to hold the plow-beam obliquely in relation to the yoke, as indicated by dotted lines in the aforesaid figure.

It will be observed that aside from the aforesaid advantages the plow is readily detached from the sulky by removing the plate *d*.

g represents the shackle by which to connect the double-tree or whiffletree to the two plow-beams. Said shackle I form of an endless bar of iron or steel bent into the shape of two draft-eyes at opposite ends of a slot, *i*, the draft-eyes being a proper distance apart to hold the plow-beams parallel to each other when the shackle is connected therewith, as illustrated in Fig. 2 of the drawings. Said shackle allows the clevis of the whiffletree to shift automatically from one draft-eye through the slot *i* to the other draft-eye during the operation of turning the sulky with its plows around at the end of the furrow.

Having described my invention, what I claim as new is—

1. In a reversible sulky-plow, two independent plow-supporting yokes and separate levers for operating said yokes, in combination with a single axle extending from wheel to wheel and having downwardly-deflected spindles to incline the wheels convergently toward the bottom, substantially in the manner shown and set forth.

2. In combination with the plow and its supporting-yoke, a sleeve secured to the yoke, the plow-beam having a cylindrical portion by which it slides longitudinally and turns in said sleeve, and a set-screw on the sleeve engaging the plow-beam to confine it in its position, substantially as described and shown.

3. In combination with the plow and its supporting-yoke, a sleeve secured to the yoke, the plow-beam extended through said sleeve, segmental cheek-pieces on the sides of the plow-beam in the sleeve, and a set-screw on the sleeve for retaining the plow-beam in position, substantially as set forth and shown.

4. In combination with the plow and its supporting-yoke D, the horizontal plate *a*, between the yoke and plow-beam, and provided with the sleeve *b*, the plow-beam B, having the cylindrical portion B′ in the sleeve, the set-screw *c*, the plate *d* over the yoke, clamping-bolts *e e*, and pin-holes *f f* in the plates, all constructed and combined to operate substantially in the manner shown and set forth.

In testimony whereof I have hereunto signed my name and affixed my seal, in the presence of two attesting witnesses, at Odessa, in the county of Schuyler, in the State of New York, this 21st day of August, 1884.

EDWARD A. DE WITT. [L. S.]

Witnesses:
GEO. W. PAINE,
DEALSTON SHELTON.