M. SATTLEY.

Gang Plow.

No. 51,358. Patented Dec. 5, 1865.

Fig. 1,

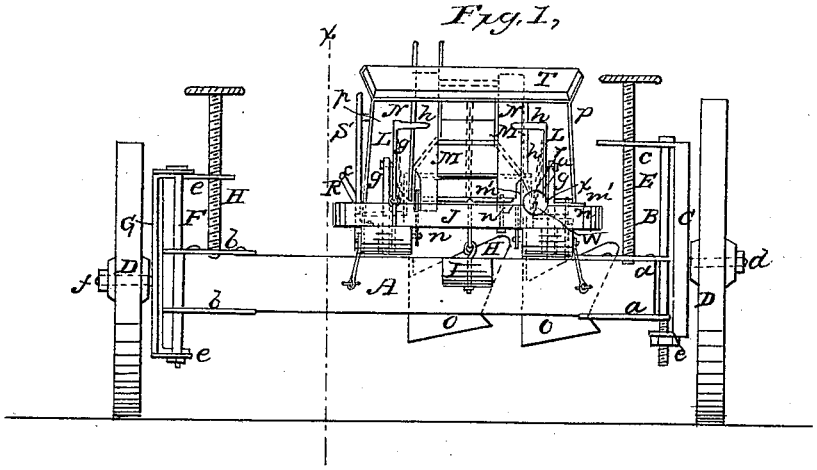


Fig. 2,

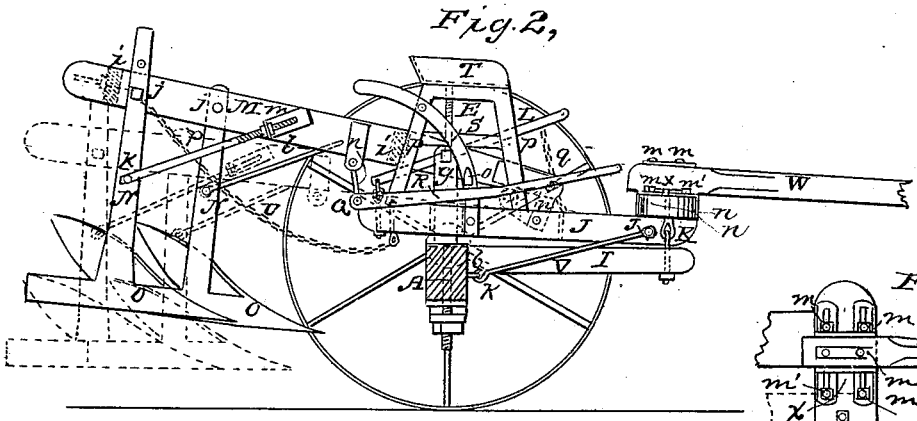
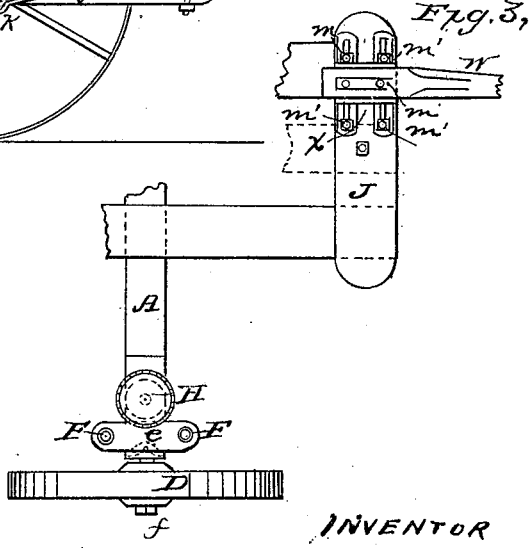


Fig. 3,



WITNESSES:

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MARSHALL SATTLEY, OF TAYLORSVILLE, ILLINOIS.

IMPROVEMENT IN GANG-PLOWS.

Specification forming part of Letters Patent No. **51,358**, dated December 5, 1865.

To all whom it may concern:

Be it known that I, MARSHALL SATTLEY, of Taylorsville, in the county of Christian and State of Illinois, have invented a new and Improved Gang-Plow; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a front view of my invention; Fig 2, a side sectional view of the same, taken in the line *x x*, Fig. 1; Fig. 3, a plan or top view of a portion of the same.

Similar letters of reference indicate like parts.

This invention relates to a new and improved gang-plow; and it consists in a peculiar construction and arrangement of the parts, as herein fully shown and described, whereby the plows may be graduated to penetrate into the earth at a greater or less depth, as may be desired, and also readily raised and elevated above the surface of the earth when required, and the draft-pole regulated so as to set the plows more or less toward or from the land, according to the desired width of furrow-slice.

A represents the axle of the device, the ends of which have metal plates, *a*, attached to its upper and under surfaces at one end and metal plates *b* attached to its upper and under surfaces at its opposite end.

The plates *a a* have a vertical rod, B, passing loosely through them, said rod being fitted in horizontal arms *c* at the upper and lower ends of a vertical bar, C, to which the arm *d* of one of the wheels D of the machine is secured. A screw, E, passes through the upper arm, *c*, of the bar C, having its lower end fitted in the upper plate, *a*, on the axle, and by turning the screw E the end of the axle A, having the plates *a a* secured to it, may be raised or lowered as desired.

The plates *b b*, at the opposite end of the axle, are of T-form, and have two rods, F F, passing loosely through them, one at each side of the axle, said rod being attached at their upper and lower ends to arms *e e*, which are at the upper and lower ends of a vertical bar, G, to which the arms *f* of the other wheel D of the machine is attached. This end of the axle is raised or lowered by means of a screw, H, arranged like the screw E at the opposite end.

The axle A has a bar, I, projecting at right angles from its front side, and to the front end of the bar I a rectangular frame, J, is attached by a universal joint, K, which may be formed of two eyes fitted one into the other. This frame J extends back of the axle A, and it has two upright bars, *g g*, passing up through it, one at each side, said bars being attached to the axle A and each having a lever, L, pivoted to its upper end. The back ends of the levers L are connected to the rear end of the frame J, and the front end of the levers L are bent inward or toward each other, as shown at *h h* in Fig. 1, to form footholds for the feet of the driver to press against. By pressing down the front parts of the levers L L the back of the frame J may be raised free from the axle A.

M M are two parallel beams connected by cross-bars *i i*, and having plow-standards N N secured to them by pivot-bolts *j*. These standards have plows O attached to their lower ends, one plow being slightly in advance of the other.

Each standard N has a rod, P, secured to it by a pivot, *k*, and the front ends of these rods pass through brackets *l* on the sides of the beams M M, and have screws cut on them to receive nuts *m*. (See Fig. 2.) By screwing up these nuts *m* the points of the plows O may be raised and lowered as desired.

The plow-beams M M are attached to the upper ends of arms *n*, the lower ends of which are connected by pivots or joints to the frame J, to admit of a longitudinal movement of the beams, and said beams may be thus adjusted by having the rear arms, *n*, connected to a shaft, Q, having a lever, R, at one end of it, which is held downward by a stop, *o*, attached to a segment-bar, S, on frame J.

T is the driver's seat, which is on the upper end of supports *p*, attached to the frame J; and U is a chain, one end of which is attached to the back cross-bar, *i*, of the beams M, and the opposite end is attached to the rear end of the frame J, to serve as a stop for the plow-beams. The frame J is braced by rods V V, one at each side, the front ends of the rods being connected by pivots *j* to the frame J, and the back ends of said rods being connected to the axle A by universal joints formed of hooks

k at the ends of the rods V and eyes *l* in the axle. (See Fig. 2.)

W is the draft-pole, the back end of which has a metal plate, X, secured to its under side by bolts *m m*. This plate X has slotted arms *n n* projecting from it, two at each side of the draft-pole, and bolts *m'* pass through these slotted arms into the front end of the frame J. By this arrangement it will be seen that the draft-pole may be shifted laterally on the frame J, and the plows consequently set more or less to "land," as it is commonly termed, in order to gage the width of the furrow-slice as desired.

The plows may be set to penetrate the earth at a greater or less depth by adjusting the screws E H, which raise and lower the axle A, and the plows may, at any time when desired or necessary, be raised out of and above the surface of the ground by depressing the front ends of the levers L L, and these levers may be retained at any desired point by chains *q*, so as to regulate the depth of the penetration of the plows.

By connecting the frame J to the bar I by a universal joint, K, said frame is allowed to move up and down and sway or surge laterally to a certain extent, so that the plows may conform to the inequalities of surface they pass through or over, the braces V preserving the frame from any undue strain.

By shoving the plows O a trifle backward, through the medium of lever R and the adjustable beams M, they may be more readily lifted out of the earth.

The following is what I claim as new and desire to secure by Letters Patent:

1. The frame J in the described combination with the axle A, plow-beams M M, levers L L, and uprights *g g*, all constructed and operating as described.

2. The attaching of the draft-pole W to the frame J by means of the slotted plate X and bolts *m' m'*, for the purpose of admitting of the lateral shifting of the pole and the setting of the plows more or less to land, as described.

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Witnesses:
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