P. M. GILBERT.

Wheel-Plow.

No. 47,942.

Patented May 30, 1865.

Fig. 1.

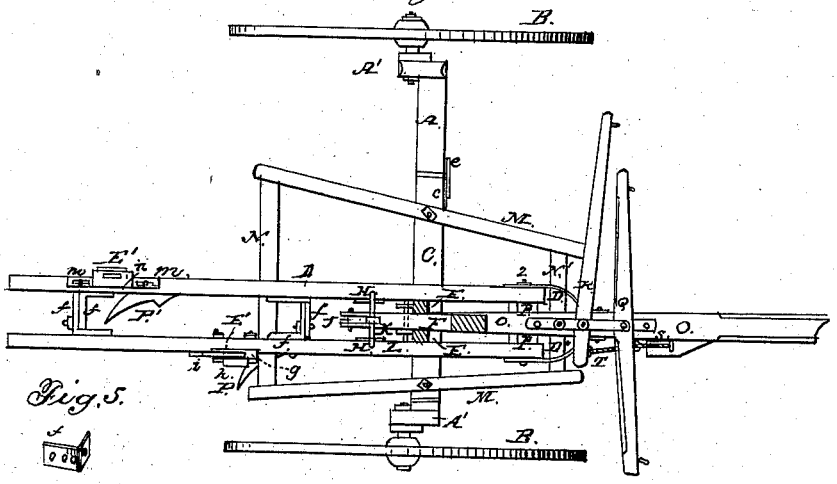


Fig. 5.

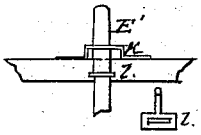


Fig. 4.

Fig. 2.

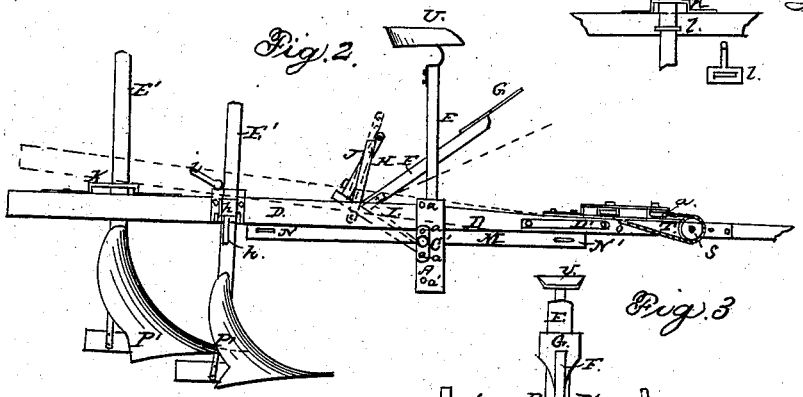
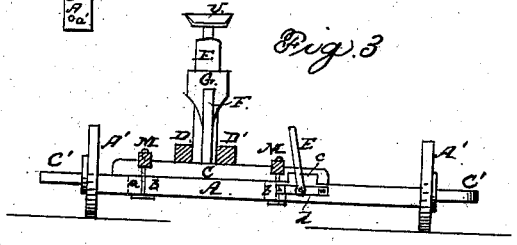


Fig. 3.



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UNITED STATES PATENT OFFICE.

PHILO M. GILBERT, OF KEWANEE, ILLINOIS.

IMPROVEMENT IN GANG-PLOWS.

Specification forming part of Letters Patent No. **47,942**, dated May 30, 1865.

To all whom it may concern:

Be it known that I, PHILO M. GILBERT, of Kewanee, in the county of Henry and State of Illinois, have invented a new and useful Improvement in Gang-Plows; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings and the letters and figures marked thereon, which form part of this specification.

In said drawings, Figure 1 represents a plan or top view of my invention in section at the line *x* in Fig. 2. Fig. 2 is a side view of the same. Fig. 3 is an end view thereof in section at the line *y* in Fig. 2. Fig. 4 is a side view of the device for attaching and adjusting the plow upon the beam opposite that shown in Fig. 2; and Fig. 5 represents the device for adjusting the plow-beams at different distances apart, as hereinafter specified.

Similar letters of reference in the several figures denote corresponding parts of my invention.

To enable those skilled in the art to understand how to construct and use my invention, I will describe the same with particularity, reference being made to the aforesaid drawings.

A represents the axle of the machine, upon the ends of which are fastened the upright standards A′, which are provided with a vertical series of holes, (marked *a*′,) for the purpose of adjusting the bearings for the wheels at different heights by means of the lugs upon said bearings C and the holes therein, this adjustment being desirable for the purpose of keeping the machine level while one wheel is in the furrow, which may be of different depths.

B represents the wheels upon which the machine is supported, and C is a short reciprocating beam lying upon A and sliding longitudinally thereupon, being fastened to the same by means of the bolt-rods *b*, passing through C and through the slots *a* in the axle A, which admits of said reciprocating motion. This reciprocating motion is for the purpose of throwing the plows attached to the plow-beams D D, which are supported upon C, to and from the land to regulate and control the width of the furrows, and is effected by means of the rack *c* upon said reciprocating beam C, and the pinion or spur-wheel marked *d* and the lever *e*, which may be long enough to allow the operator upon the seat U to move the same, the lever *e* being rigidly attached to the spur-wheel *d*, so that the movements of the lever operate the wheel, and thus the beam C moved either way, as desired.

D D represent the plow-beams, which rest upon the said adjustable beam C, the front ends extending forward and being pivoted to the tongue O by the rod Z passing through said plow-beams and the blocks P P and tongue O, as shown. The said beams are braced to the tongue by the straps D′ D′.

M N N′ represent a frame lying firmly upon the adjustable beam C, and upon the bar N′ the tongue rests, while the bar N supports the plow-beams D D, extending back of the axle, as shown.

E represents a vertical standard, upon the top of which is arranged the seat U, the lower end being firmly attached to the beam C, and provided with a longitudinal slot, in which the rear end of the tongue O lies and moves up and down, the only attachment of the tongue to the machine being the pivoted one to the plow-beams at Z. The said slot also extends up far enough to admit the lever F to pass through the same and have a vibrating movement therein, upon the end of which lever is fixed the foot-rest G for the operator, enabling him to operate said lever F with his feet, for the purposes hereinafter described.

H represents two short standards or arms, attached one to each plow-beam, as shown; and I J represent a jointed lever, the lower end of which is attached by a pivoted connection to the center of the beam C, and the upper end thereof is fastened by the rod K passing through the upper ends of the said arms H. To the part I of the said jointed lever, and near the joint therein, the lower end of the lever F is attached by a jointed or movable connection. Thus it will be observed that by a downward pressure upon the foot-rest G the lever F is moved downward and the jointed lever thereby raised, thus elevating the rear ends of the plow-beams D D, when desired, as shown by the red lines in Fig. 2.

By means of the straps marked *f*, and shown detached in Fig. 5 arranged upon the plow-beams, as shown, it is evident that by remov-

ing the bolts passing through and holding them together the said beams may readily be adjusted at different distances apart, when the bolt may be replaced and the adjustment secured at the required position, thus enabling the plows to be adjusted so as to plow furrows of any required width. When any adjustment is made with the devices *f f* in the manner described the blocks P P at the front end of said beams should be changed, always inserting blocks of the proper thicknesses to keep the beams parallel.

Q represents the ordinary double-tree by which the machine is drawn when two horses are used. To enable three horses to be used I employ the lever R, pivoted at *r*, its long arm extending beyond the end of the double-tree, so as to allow the horse attached thereto to walk beside the horse at the end of the double-tree. To the other and short arm of the lever I attach the cord T, which passes around the pulley S, as shown, and goes to be attached to the double-tree, as shown. Thus the reaction of the force applied to the end of the lever R comes upon the double-tree Q and is neutralized, leaving the whole active force applied at the end of the lever R available for the purposes designed.

E′ E′ represent the standards to which the plows P′ P′ are attached, and each is attached to and adjusted upon the beams D by different devices. In the one the standard slips loosely up in the clasp *g*, at the lower part of which is a cam-shaft, *h*, provided with the handle *h′* for operating the same, as shown. When the standard E′ is adjusted at the proper position the handle *h′* is brought up to a perpendicular position, by which movement the cam is pressed against the standard, firmly holding it in place. To give the plow-point the proper pitch or inclination, I employ the cam *i′*, provided with the handle *i*, to throw the upper end of the standard forward or back, as may be desired. In the other method, as shown in Fig. 4, the standard passes up through a box fastened to the top of the plow-beam, (marked *k*,) which is attached to the plow-beam by set-screws passing through slots *m m* in the said box, so that by unloosing the screws and sliding the box back or forward the desired inclination to the plow-point and the vertical attachment is effected by passing the standard up through the slot in *l*, which passes through the beam laterally and is confined by a nut on the opposite side, as shown.

Having described the construction and operation of my invention, I will describe and specify what I claim as new and desire to secure by Letters Patent:

1. The combination and arrangement of the plow-beams D D, the connecting adjustable straps *f f*, and the removable pivoted connection Z with the tongue O, as and for the purposes herein specified and described.

2. The combination of the plow-beams D D, the jointed lever I J, the supports H, the lever F, and the standard E, arranged and operating substantially as and for the purposes specified and shown.

3. The combination of the plow-beams D D, the reciprocating beam C, the rear supports, N, and the tongue O, pivoted to said beams, arranged and operating as and for the purposes shown and set forth.

4. The combination of the plow-beams D D, reciprocating beam C, the axle A, provided with the slots *a a*, the bolts *b b*, rack *c*, pinion-wheel *d*, and lever *e*, arranged and operating as and for the purposes specified.

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