(No Model.)

F. W. UNTERILP.

PLOW.

No. 301,306. Patented July 1, 1884.

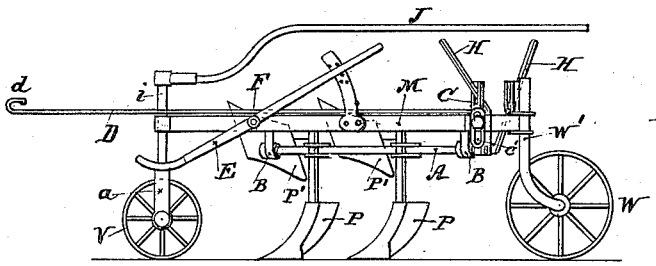


Fig. I.

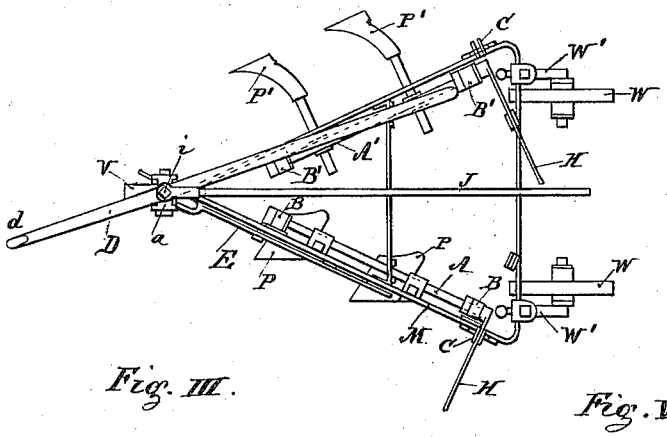


Fig. II.

Fig. III.

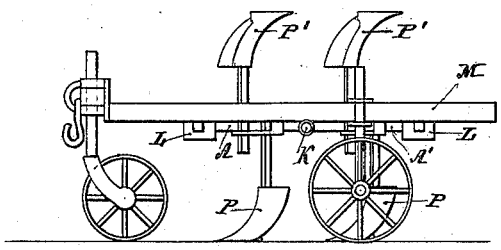


Fig. V.

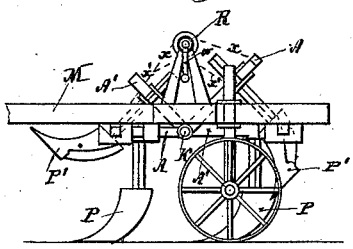


Fig. IV.

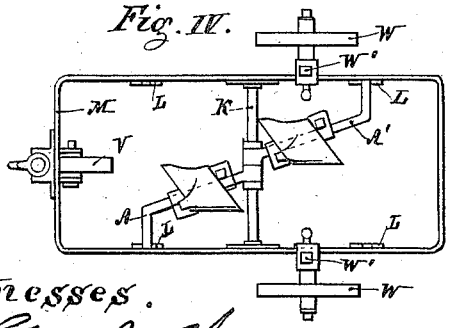
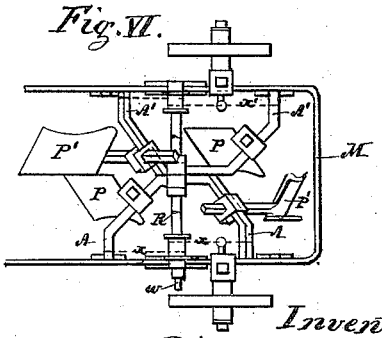


Fig. VI.



Witnesses.

Inventor.
F. W. Unterilp
per Henry E. Reader
Attorney.

UNITED STATES PATENT OFFICE.

F. WILHELM UNTERILP, OF DUSSELDORF, PRUSSIA, GERMANY.

PLOW.

SPECIFICATION forming part of Letters Patent No. 301,306, dated July 1, 1884.

Application filed August 28, 1883. (No model.) Patented in Germany November 16, 1881, No. 19,753; in England December 1, 1882, No. 5,728, and in Austria-Hungary January 12, 1883, No. 38,912 and No. 1,114.

To all whom it may concern:

Be it known that I, F. WILHELM UNTERILP, a citizen of Germany, residing in the city of Dusseldorf, in the Kingdom of Prussia, Germany, have invented new and useful Improvements in Plows, of which the following is a specification.

This invention has for its object to render plows having several shares capable of turning the earth at will either to the right or to the left side.

In the accompanying drawings, Figure I represents a side elevation of a plow embodying my invention. Fig. II is a plan of the same. Figs. III and V are side elevations showing modifications, and Figs. IV and VI are plans of the same.

Similar letters represent similar parts in all the figures.

In a suitable frame, M, the shares P P′ are mounted on horizontally-journaled shafts or beams A A′, one set of shares being right-handed and the other set left-handed. By turning either the beam A or the beam A′, the right or the left shares may be brought into working position, a reverse motion of the other beam or rock-shaft, A′ or A, serving to raise the other shares out of operative position.

In Figs. I and II the beam A carries the right-handed shares P, and the beam A′ the left-handed shares P′. The beams A A′ are journaled in the bearings B, attached to the frame M, and are provided with levers H, by means of which the beams may be turned, and thereby the shares attached to said beams set into and out of the working position.

For the purpose of placing the cutting-edges of the shares in a horizontal position when working on uneven soil, the holders C, in which the levers H are secured, are made adjustable on the frame M of the plow. This is effected by providing the lower part of the holder with a vertical slot, C′, through which the bolt passes for securing the holder to the frame. (See Fig. I.) The position of the shares can thus be changed according to the position of the holders C, and consequently of the levers H, fastened in said holders.

For easily regulating the depth of the furrows, the plow is provided with a hand-lever, E, pivoted at F to the frame M, and resting with its front end on the forked bearing *a* of the axle of the front wheel, V. By placing the lever E higher or lower, the plow is correspondingly raised or lowered.

The hind wheels, W W, are attached to the frame M of the plow by adjustable screw-clamps W′, allowing the same to be raised or lowered, as may be required.

The draw-hook D of the plow is mounted upon a vertical shaft, *i*, to the upper end of which a lever or arm, J, is attached for the purpose of turning the front wheel, V, of the plow, said front wheel being journaled in the bifurcated lower end of the said shaft. The hook *d* of said draw-bar may be placed either in front and in line of the left or of the right shares by turning it on said shaft. To facilitate this operation the said draft-bar is extended to the rear part of the frame, so that it may be easily grasped by the hand of the operator and turned as desired.

In Figs. III and IV one end of the beams A A′ is pivoted on an axle, K, their other extreme ends being secured by suitable pins or any other locking device to the bearings L, fast on the frame M. Each of these beams A and A′ carries a right and left share. If the beams are placed in the position shown in the drawings, the plows turn the soil to the left, and when the beams are turned so that the right-hand beam, A′, is placed in front and the left-hand beam, A, behind, the shares P′ P′ will come toward the bottom and in operation, and the plow will turn the soil to the right. The beams may also be arranged in such a manner that instead of pivoting forward and backward, as above described, they will pivot from right to left, and vice versa, for reversing the shares.

Instead of two beams, the plow may be provided with one beam only—that is to say, the two beams represented in Figs. III and IV may be connected at their axle-bearings, so as to form one beam, in which case, however, the plow must be raised higher for reversing the shares, because during this operation the shares swing through their vertical position.

In Figs. V and VI the beams A and A′ are

pivoted on a shaft, K, and each beam carries two shares, P and P′, the beams being bent in such a manner that when the hind share, P, touches the soil the front share, P′, is raised, and vice versa. In this case the right beam is raised or lowered in front simultaneously with the rear portion of the left beam, and the shares attached to the beams are correspondingly reversed.

For easily and rapidly turning the beams the plow carries an axle, R, provided with a crank-handle, *w*. This axle R is connected with the beams by means of chains *x x′*. On turning the axle these chains are wound on or off, whereby the shares are raised and lowered as desired. The crank and consequently the axle are locked in the required position by any suitable contrivance.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In combination with a V-shaped plow-frame, M, two rock-shafts or journaled beams, A A′, parallel therewith, supported in bearings in the sides of said frame, and provided, respectively, with right-hand and left-hand plows, levers for turning said shafts, so that the plow or plows on one side or the other may be turned out of operative position or into the same at will, and devices for locking either shaft in either position, substantially as set forth.

2. In combination with the V-shaped frame of a plow or cultivator and the rock-shafts parallel therewith, a draw-bar pivoted horizontally on the vertical wheel-post and extending back to the rear part of the frame, for the purpose set forth.

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Witnesses:
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