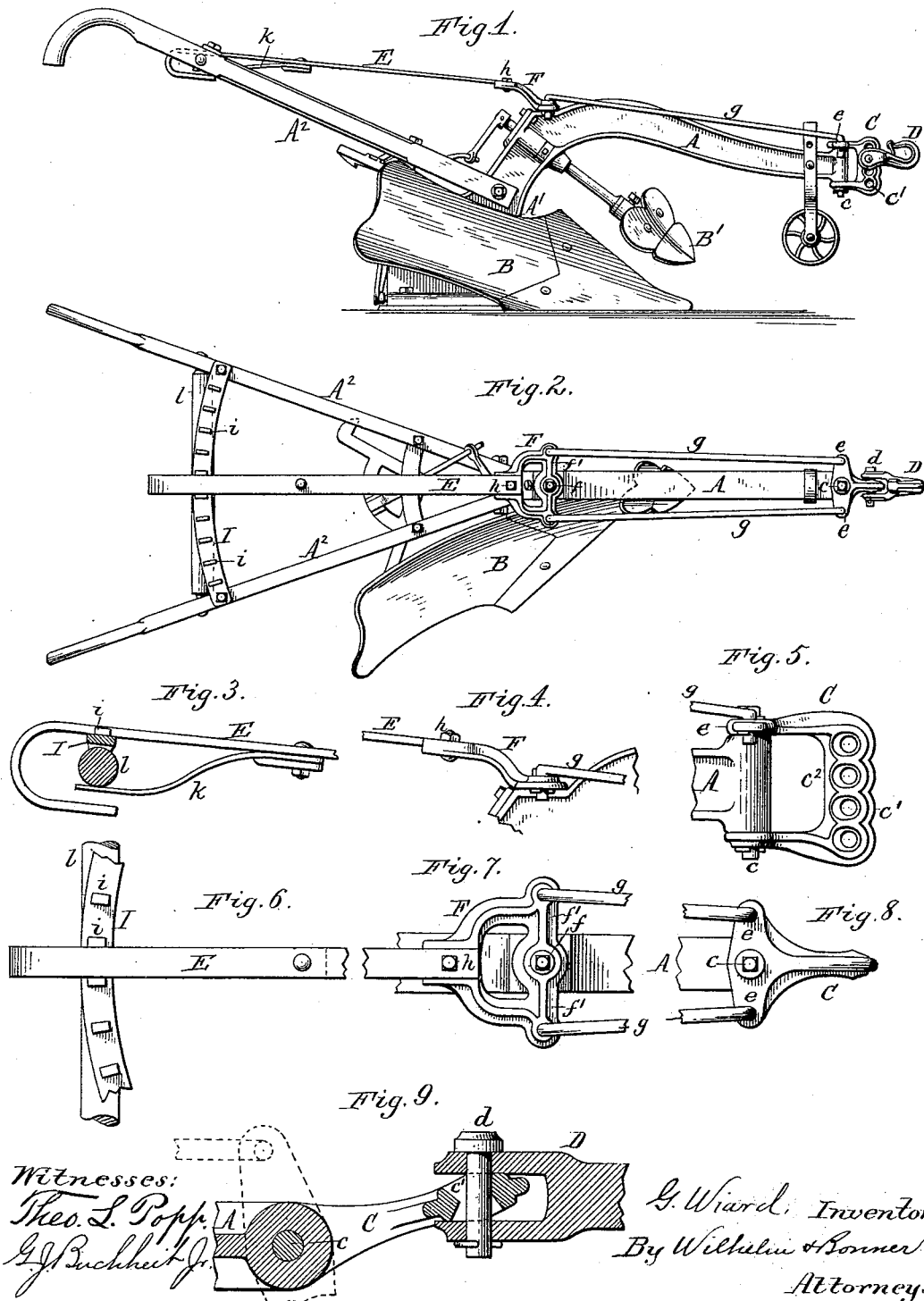


(No Model.)

G. WIARD.
PLOW.

No. 386,443.

Patented July 17, 1888.



UNITED STATES PATENT OFFICE.

GEORGE WIARD, OF BATAVIA, NEW YORK, ASSIGNOR TO THE WIARD
PLOW COMPANY, OF SAME PLACE.

PLOW.

SPECIFICATION forming part of Letters Patent No. 386,443, dated July 17, 1888.

Application filed November 22, 1887. Serial No. 255,881. (No model.)

To all whom it may concern:

Be it known that I, GEORGE WIARD, of Batavia, in the county of Genesee and State of New York, have invented new and useful Improvements in Plows, of which the following is a specification.

This invention relates to a device whereby the draft of the plow can be quickly and conveniently changed as circumstances may require. If often becomes desirable, especially in side-hill plows, to change the draft from one side to the other in accordance with the breadth of land required, the dryness or moisture of the soil, the greater or less inclination of the hillside on which the plow is used, and other circumstances affecting the working of the plow.

The object of my invention is to provide simple and convenient means for rendering the draft-clevis easily adjustable, so that the draft can be readily changed from the center to either side, as may be required.

The invention consists of the improvements which will be hereinafter fully set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of a plow provided with my improvements. Fig. 2 is a top plan view thereof. Fig. 3 is a side elevation, on an enlarged scale, of the rear portion of the shifting-lever whereby the draft-clevis is adjusted. Fig. 4 is a side elevation of the front portion of the shifting-lever. Fig. 5 is a side elevation of the draft-clevis and the front portion of the beam. Fig. 6 is a top plan view of the rear portion of the shifting-lever and connecting parts. Fig. 7 is a top plan view of the front portion of the shifting-lever. Fig. 8 is a top plan view of the draft-clevis. Fig. 9 is a fragmentary horizontal section of the clevis and draft-hook.

Like letters of reference refer to like parts in the several figures.

A represents the plow-beam, A' the standard, and A² the handles.

B represents the mold-board, and B' the colter, which are both made reversible in any suitable or well-known manner, so that they can be arranged to work on either side of the standard. The construction of the mold-board and colter shown in the drawings is in ac-

cordance with Letters Patent of the United States No. 346,879, granted to me August 3, 1886; but my invention is equally applicable to swivel-plows of different construction.

C represents the clevis pivoted to the front end of the beam A by a vertical bolt, *c*, and provided with a vertical series of eyes, *c'*, in the usual manner, in either of which the fastening-bolt *d* of the draft-hook D can be placed. The clevis C is provided at its upper rear end with two arms, *e e*, projecting laterally on opposite sides of the pivot-bolt *c*.

E represents the shifting-lever extending rearwardly from the rear portion of the plow-beam and terminating between the plow-handles in convenient reach of the operator. The shifting-lever E is provided at its front end with a cross head or frame, F, which is pivoted at its center to the rear portion of the beam by a vertical bolt, *f*. The cross-head F is provided with two arms, *f' f'*, which project laterally on opposite sides of the pivot *f*, and are connected with the lateral arms *e e* of the clevis by rods *g*, arranged on both sides of the beam, so that a swinging movement of the shifting-lever E produces a corresponding swinging movement of the clevis C on its pivot. The cross head or frame F is preferably constructed of cast-iron, while the main portion of the shifting-lever is constructed of wrought-iron and secured to the frame F by a vertical bolt, *h*, the frame F being formed with a depression, in which the front end of the lever is seated.

I represents a segment secured transversely to the rear portions of the handles A², and provided on its upper side with a series of stops or projections, *i*. The rear portion of the shifting-lever E rests upon the segment I, and is locked against lateral movement by the stops *i*, the lever being confined between two of these stops. It is obvious, however, that the segment I may be provided with notches or recesses instead of projections, if desired. The elasticity of the shifting-lever permits the same to be raised sufficiently to disengage it from the stops *i* preparatory to shifting the lever.

k is a flat spring secured to the under side of the shifting-lever E and bearing with its free end against a cross-bar or round, *l*, con-

necting the rear portions of the handles A² below the segment I. The spring *k* tends to draw the shifting-lever E downwardly and hold the same in contact with the segment I.

5 The rear end of the shifting-lever is bent downwardly and forwardly around the cross-bar *l*, and terminates at a short distance below the rear end of the spring *k*, as represented in Fig. 3, so as to limit the movement of the latter and avoid excessive straining or deflection of the spring in disengaging the lever from the segment. This bent portion of the shifting-lever also forms a handle for operating the lever. Upon raising the rear end of the lever the lower portion thereof strikes against the spring *k* and round *l* and arrests the upward movement of the lever before the spring has become excessively deflected.

10 In changing the line of draft the shifting-lever E is raised so as to clear the stops *i*, and the lever is then shifted, so as to adjust the clevis to the proper angle with reference to the beam, the movement of the lever being transmitted to the clevis by the connecting-rods *g*.
 25 When the clevis has been properly adjusted, the lever is engaged between two of the stops *i*, the spring *k* holding the lever against the segment I and preventing the same from being accidentally misplaced.

30 The rear portion of the draft-hook is bifurcated in the usual manner and bears against opposite sides of the clevis. The vertical bar *c*² of the clevis containing the eyes *c'* is beveled or tapered on both sides from the center of the eyes toward the front and rear edges of the bar, as represented in Figs. 2, 8, and 9, so

that when the clevis is adjusted laterally the beveled or tapering sides of the clevis will permit the draft-hook to stand in a plane parallel with the beam A, and at the same time form a flat bearing-surface for the hook. 40

The eyes *c'* of the clevis are made flaring outwardly, as shown in Fig. 9, to allow of the required swiveling movement of the bolt *d* of the draft-hook in adjusting the hook. This construction of the clevis and draft-hook relieves the latter from side strains when the draft is sidewise or out of center. 45

I claim as my invention—

1. The combination, with the beam, of the clevis pivoted thereto and provided with lateral arms *e e*, a shifting-lever, E, pivoted to the beam and provided with lateral arms *f' f'*, rods *g*, connecting the arms *e* and *f'*, and a locking device whereby the shifting-lever is held in position, substantially as set forth. 55

2. The combination, with the beam and the clevis pivoted thereto, and the rods *g*, of the locking-bar I, the shifting-lever E, provided with cross-head F, and having its rear portion bent around the locking-bar, and a spring secured to the shifting-lever and having its free end between the bent end of the shifting-lever and the locking-bar, whereby the deflection of the spring is limited, substantially as set forth. 65

Witness my hand this 31st day of October, 1887.

GEORGE WIARD.

Witnesses:

J. J. WASHBURN,
C. W. HOUGH.