G. WIARD & C. W. HOUGH.

PLOW.

No. 189,885. Patented April 24, 1877.

Fig. 1.

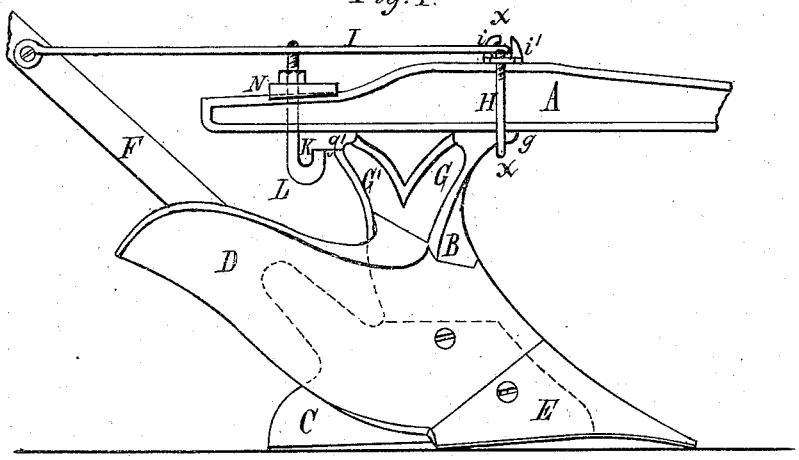


Fig. 5.

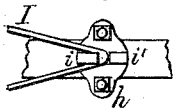


Fig. 2.

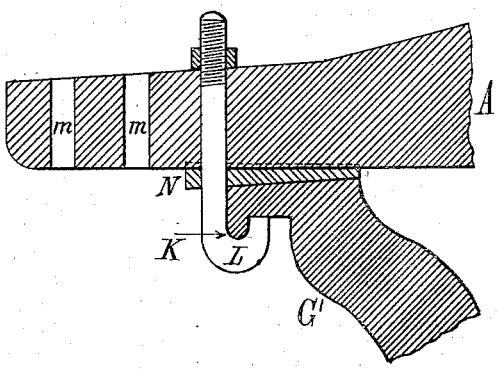


Fig. 3.

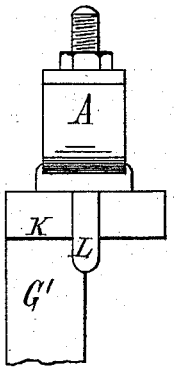
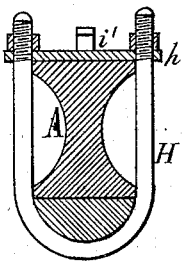


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE WIARD AND CHARLES W. HOUGH, OF EAST AVON, ASSIGNORS TO THE WIARD PLOW COMPANY, OF BATAVIA, NEW YORK.

IMPROVEMENT IN PLOWS.

Specification forming part of Letters Patent No. **189,885**, dated April 24, 1877; application filed July 17, 1876.

To all whom it may concern:

Be it known that we, GEORGE WIARD and CHARLES W. HOUGH, both of East Avon, in the county of Livingston and State of New York, have invented certain new and useful Improvements in Plows, which improvements are fully set forth in the following specification, reference being had to the accompanying drawing.

Our invention relates, principally, to the manner of attaching the beam to the standard of the plow, and its nature will be fully understood from the following description:

In the accompanying drawing, Figure 1 represents a side elevation of a plow provided with our improvements. Fig. 2 is a fragmentary view of the rear portions of the standard and beams. Fig. 3 is a rear view thereof. Fig. 4 is a vertical section in line *x x*, Fig. 1. Fig. 5 is a fragmentary plan view of the front portion of the handle-brace and connecting parts.

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

A represents the plow-beam, B the standard, C the land-side, D the mold-board, E the plow-point, and F the handles. The standard B is cast with two arms, G G′, curved, respectively, forward and backward, and provided at their upper ends with caps or flanges *g g′*, as clearly shown in Fig. 1.

The standard B, from the top of the mold-board down to the plow-point, is the same in form as that of an ordinary iron-beam plow, so that the wood pattern of such a plow may be employed for producing the iron pattern for our improved plow by detaching the pattern of the beam proper of the iron-beam plow from the standard, and attaching to the latter the pattern of the two arms G G′, thus enabling the same pattern of the standard, mold-board, point, and land-side to be used either for an iron-beam or wood-beam plow. The arms G G′ are arranged on the standard B, above the land-side C, as shown by dotted lines in Fig. 1. The land-side is made separate from the standard. This construction enables the standard B and its two arms G G′ to be made of soft iron, and the land-side to be made of hardened iron, the same as the other parts of the plow which are exposed to wear, thus forming all the parts of the plow of the material best suited to their function.

The beam A is secured to the cap *g* of the front arm G by a U-shaped clamp, H, engaging under the cap *g*, and provided above the beam A with a strap, *h*, held by screw-nuts, as clearly shown. The strap *h* is cast with two projecting hooks, *i i′*, forming a recess, in which the angular handle-brace I is firmly held. The cap *g′* of the rear arm G′ is made somewhat wider than the beam A, so as to enable the rear end of the latter to be adjusted laterally thereon. The cap *g′* is provided on its under side with a transverse rib, K, with which engages the hooked lower end of the bolt L, by which the rear end of the plow-beam is secured to the cap *g′*. The rear portion of the beam A is provided with a series of holes, *m*, arranged longitudinally at suitable distances apart, in either of which holes the fastening-bolt L may be placed.

By withdrawing the bolt L and loosening the clamp H, the beam A can be adjusted forward and backward, as may be desired, when, by tightening the clamp H and inserting the bolt L, the beam is firmly connected to the arms G G′ of the standard. By this means the length of the plow-beam from the plow-point to the clevis is readily increased or reduced, thereby regulating the depth of the cut, as the condition of the soil and the surface of the field to be plowed may require. The clamp H, instead of weakening the beam A, as a bolt passing through the same would do, increases the strength thereof at the point of its connection with the front arm of the standard, at which point the fracture of ordinary plow-beams generally occurs.

Upon loosening the bolt L the rear end of the beam A is readily adjusted laterally in changing the plow from a two-horse plow to a three-horse plow, or vice versa. As the projecting hooks *i i′*, which form the recess for the handle-brace, are formed with the strap *h*, they always remain in the same position with reference to the handles, whether the beam A be adjusted forward or backward. N represents a wedge interposed between the rear end of the plow-beam A and the cap *g′*, as clearly shown in Fig. 2. The wedge N is preferably

provided on its upper side with two longitudinal flanges fitting against the beam A, to hold it in its proper position. By applying the wedge N, as shown in Fig. 2, the front end of the plow-beam is lowered and the cut of the plow correspondingly decreased, while upon withdrawing the wedge, and permitting the beam A to rest directly upon the cap g', the forward end of the beam is correspondingly raised. When not used the wedge N may be placed on the upper side of the beam, under the nut of the bolt, L, as represented in Fig. 1.

The plow-beam A may be constructed of wood or iron, as may be preferred, according to the work for which the plow is designed, and the requirements of the localities in which it is to be used.

Having thus fully described our invention, what we claim as new, and desire to protect by Letters Patent, is—

1. The combination, with the rear standard G', cast with the transverse rib K, of the beam A, formed with two or more holes, *m*, adjustable hook-bolt L, and interposed wedge N, all arranged as shown, so that the beam can be adjusted longitudinally, laterally, and vertically from the same standard, as hereinbefore set forth.

2. The combination, with the standard B and beam A, made longitudinally adjustable, of the U-shaped clamp H and strap *h*, provided with hooks *i i'* for holding the handle-brace I, substantially as and for the purpose hereinbefore set forth.

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Witnesses:
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