J. LANE.
Plow.

No. 209,174. Patented Oct. 22, 1878.

Fig. 1.

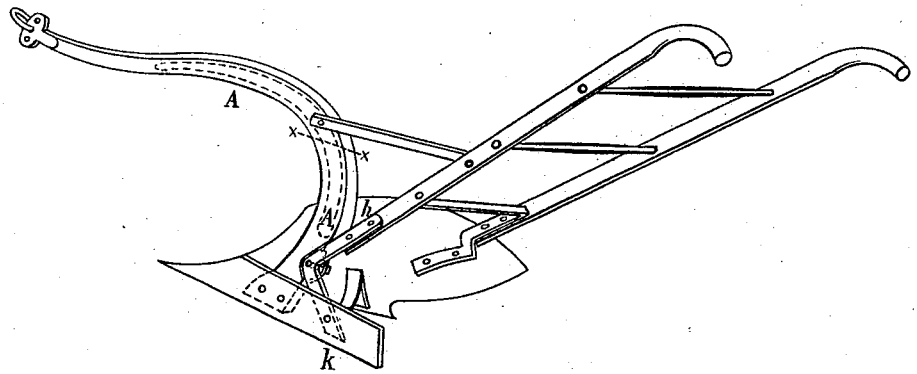


Fig. 2.

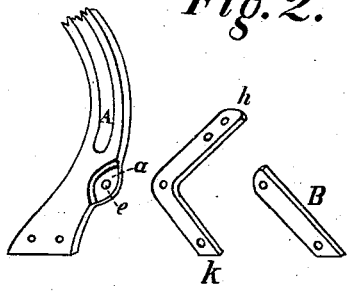
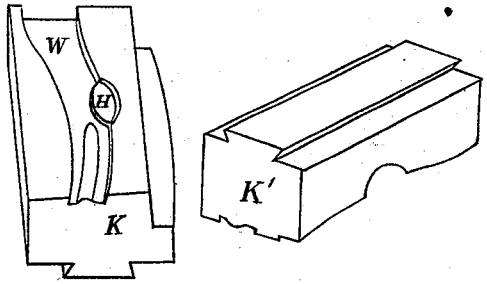


Fig. 3.



Witnesses,

William Ottman

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UNITED STATES PATENT OFFICE.

JOHN LANE, OF HYDE PARK, ILLINOIS.

IMPROVEMENT IN PLOWS.

Specification forming part of Letters Patent No. **209,174**, dated October 22, 1878; application filed June 27, 1878.

To all whom it may concern:

Be it known that I, JOHN LANE, of Hyde Park, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Plows, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a perspective view of a plow having my improvement attached. Fig. 2 is a view of my improved plow-beam A, of the bar *h k*, and of the bar B. Fig. 3 is a view of dies with which my improved beam A is forged and shaped.

My invention relates to plows having a wrought-iron beam or standard; and consists in forming on the beam or standard, a few inches above the bottom end, a shouldered recess, in which a brace is secured with bolts bracing from the rear part of the land-bar the beam or standard in its upright position, as hereinafter described.

A is a plow-beam of ordinary wrought-iron, having my improved shouldered recess formed thereon, as shown. *a* is the recess formed on the rear edge, and outside, a few inches above the bottom end, I make it about six inches, but it may be more or less.

The recess is formed by swaging down between properly-constructed dies a shoulder and driving out the metal as a lip or recess, as shown in the drawings at *a* in Fig. 2.

The lip or recess *a* is perforated for a bolt-hole, *e*, as shown.

I sometimes cut off the beam at dotted line *x x* and use the upright part as a standard, in connection with a wood beam secured to the upright part in the usual manner of securing plow-standards to wood-beam plows.

In connection with my improved beam A I use a brace-bar, *h k*, which is formed of a single bar bent near its center of length at right angles, and the angle perforated and fitted to the shoulder and recess *a*, to which it is bolted with a bolt in the hole *e*. The bottom end or part *k* is bolted to the rear part of the land-bar, and the top end or part *h* is bolted to the handle, making a bracing to the plow of great strength.

In some plows, as sulky-plows, in which handles are dispensed with and bar *h* is not required, I use the bar B instead of the bar *h k*. The bar B is a straight bar, having one end perforated and fitted to the shoulder and recess, and secured to the recess by a bolt in the hole *e*, and the rear end of the bar is bolted to the rear part of the land-bar.

In Fig. 1 is seen my improved beam A, having the shouldered recess *a*, with the bar *h k* attached, and both beam A and bar *h k* bolted to the plow, showing how the part *k* braces the land-bar, and how the part *h* supports the handle and braces the plow.

The recess *a* is shouldered down the thickness of the bar *h k*, as when it is bolted to the lip the outside of the beam and bar are level and smooth, affording no obstruction or roughness to gather trash clogging on the standard.

K K′ are a pair of dies for a drop-press, used in the ordinary manner with which I forge and form my improved plow beam or standard. W shows a groove or channel in the bottom die, K, of a shape desired for the beam, and H shows a swage-step on the groove W.

The beam is first curved to shape by a former on the side of the die K, and is then placed in the groove W, when the upper die, K′, is let fall upon the beam, when the step H is driven into the metal, forming a shoulder and swaging the lip and recess *a*.

The upper die, K′, is of a proper form to give shape to the curve and inside of the beam.

Having thus set forth my invention, I claim—

1. The plow beam or standard A, having a shouldered recess, *a*, and consisting of a wrought-metal bar forged and formed in dies, which give shape to the bottom end of the beam or standard and swage the lip forming the shouldered recess *a* on the rear side of the beam or standard, substantially as and for the purpose shown.

2. The combination of plow beam or standard A, having shouldered recess *a* and bolt-hole *e*, with the bar *h k*, in which the bar *h k* is made of a single piece, bent curved to fit the shouldered recess *a*, upon which it is secured by a bolt through the hole *e*, substantially as and for the purpose set forth.

JOHN LANE.

Witnesses:
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