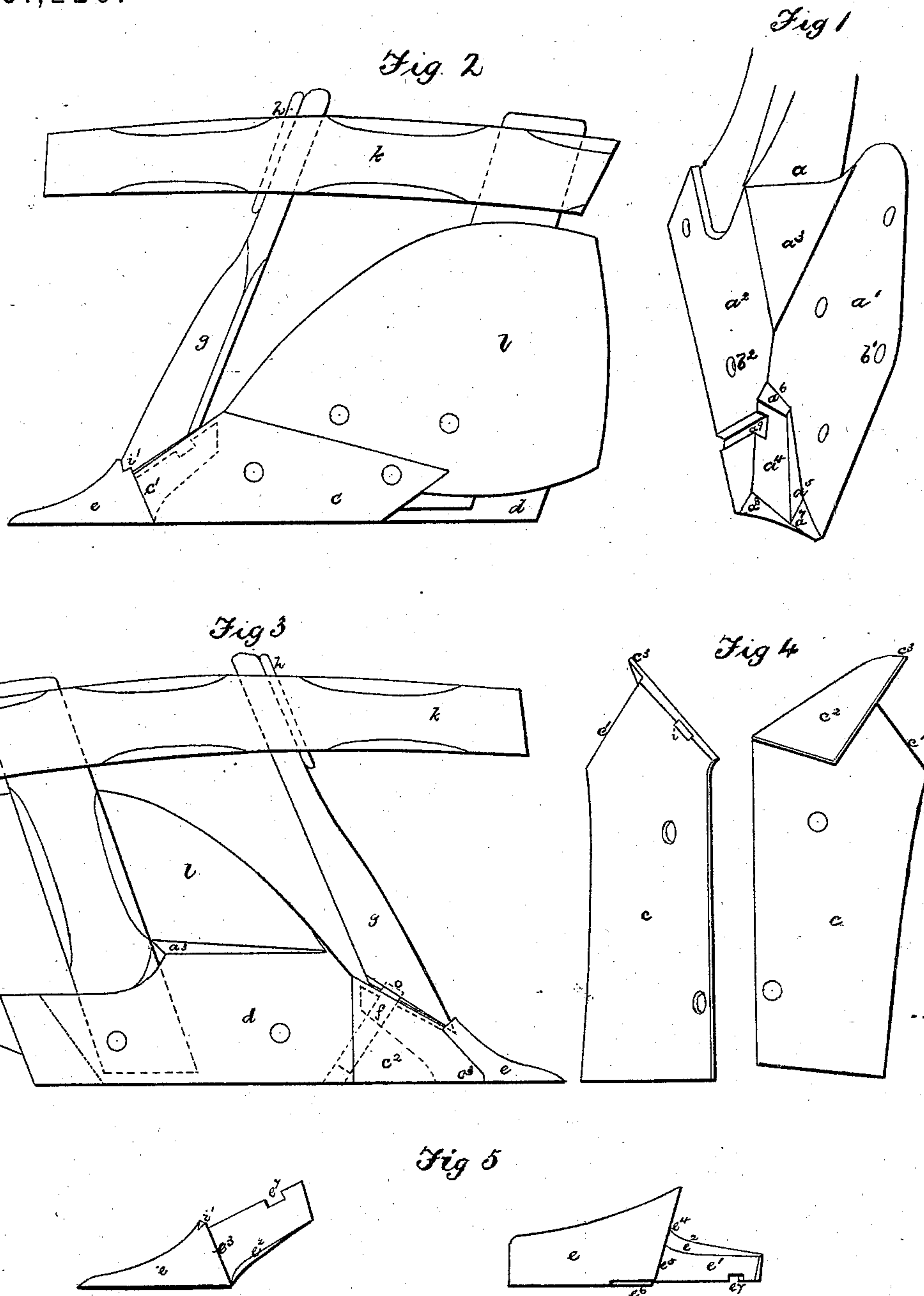


## Plows.

No. 151,229.

Patented May 26, 1874.



Witnesses

W. Morris

*Inventor.*

Jacob Kuenzel  
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# UNITED STATES PATENT OFFICE.

JACOB KUENZEL, OF NEWARK, OHIO.

## IMPROVEMENT IN PLOWS.

Specification forming part of Letters Patent No. 151,229, dated May 26, 1874; application filed April 17, 1874.

*To all whom it may concern:*

Be it known that I, JACOB KUENZEL, of city of Newark, in the county of Licking and State of Ohio, have invented certain new and useful Improvements in the Construction of Plows; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to improvements in mold-board plows, in which those parts which are subject to greatest wear and liability to be broken are made in separate pieces, so that when such parts are broken or worn they can be readily removed and replaced by new pieces at small cost; and it consists in connecting said pieces together, and to an under casting or saddle, as hereinafter described, so as to form a strong and substantial plow.

In the drawings, Figure 1 is a view of the casting or saddle. Figs. 2 and 3 are opposite side elevations of the plow with the pieces all attached, and Figs. 4 and 5 are detail views of the share and removable point.

*a* is a casting or saddle, which carries the several pieces. It has the wings *a*<sup>1</sup> *a*<sup>2</sup>, corresponding to the mold-board and land-side of a plow, which are joined together by the horizontal piece *a*<sup>3</sup>, forming a strong and substantial base, to which is bolted the standard of the plow, and the several pieces hereinafter described. *a*<sup>4</sup> is a half-mortise formed in the front end of the saddle *a*, having the sides *a*<sup>5</sup> *a*<sup>6</sup>. The front end of the saddle is made blunt and beveled by the faces *a*<sup>7</sup> *a*<sup>8</sup>. *a*<sup>9</sup> is a cross-mortise formed in the land-side *a*<sup>2</sup>, and connects with the mortise *a*<sup>4</sup>. *b*<sup>1</sup> *b*<sup>2</sup> are holes through which to pass the necessary bolts for securing the several pieces to the saddle. *c* is the share. It reaches high on the mold-board, and has the portion *c*<sup>2</sup> bent over the colter-edge of the plow, so as to form the front section of the land-side. It is cut away, as shown in Fig. 4, so as to form the triangular point *c*<sup>3</sup> and edge *c*<sup>1</sup>. When the share is bent over the crown or colter-edge of the saddle, it closes in the half-mortise *a*<sup>4</sup>, and forms

a complete sheath or mortise for the reception of the shank of the point, hereinafter described. *d* is the rear land-side plate. *e* is the point. It has the triangular shank *e*<sup>1</sup>, which has the side *e*<sup>2</sup> beveled or flattened to correspond to the side *a*<sup>5</sup> of the saddle. The shank is so attached to the point as to leave on said point the square shoulder *e*<sup>3</sup>, and on the under side rounded or beveled shoulders *e*<sup>4</sup> *e*<sup>5</sup>, which fit the faces *a*<sup>7</sup> and *a*<sup>8</sup> of the saddle, and it is provided with the side mortise *e*<sup>6</sup> and cross-mortise *e*<sup>7</sup>. *f* is a key which fits into the mortises *e*<sup>6</sup> and *a*<sup>7</sup>, and into the hole or mortise *i* cut through the crown of the share *c*. Its upper end is enlarged to prevent its passing entirely into the mortise, and sits up slightly above the crown of the share.

When it is desired to use the plow without the cutter, this key is so constructed as not to project above the share, being only slightly enlarged to prevent its passing entirely into the mortises.

*g* is the cutter. It passes through the beam *k*, in which it is secured by the key *h*. It has the notch or mortise *o* in its lower end, which fits over the upper end of the key *f*. Its point rests in the notch *v*, formed in the top of the point *e*. *l* is the mold-board, made in usual form, and so that it will fit to the share *c*. Its front edge laps slightly over the crown of the saddle, and down against the edge of the land-side plate *d*.

To remove the point *e*, the cutter *g* is first removed. Then the key *f* is knocked out, when the point is readily withdrawn. The mortise *e*<sup>6</sup> protects the projection *e*<sup>3</sup> from wearing rapidly, while, in turn, said projection supports the point *e*.

It will be seen that any one or all the parts of the plow may be removed, and new pieces substituted at pleasure.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The share *c*, constructed with the flange *c*<sup>2</sup> and triangular projection *c*<sup>3</sup>, as and for the purpose set forth.

2. The single plow-point *e*, provided with the shank *e*<sup>1</sup> and mortises *e*<sup>7</sup> *e*<sup>6</sup>, substantially as set forth.



3. The casting  $a$ , having the wings  $a^1 a^2$ , piece  $a^3$ , and mortises  $a^4 a^9$ , substantially as and for the purpose set forth.

4. The combination, with the casting  $a$  and point  $e$ , of the share  $c$  and key  $f$ , substantially as and for the purpose set forth.

In testimony that I claim the foregoing I

have hereunto set my hand this 19th day of March, 1874.

JACOB KUENZEL.

Witnesses:

SAML. M. HUNTER,  
ASBURY B. BARRICK.