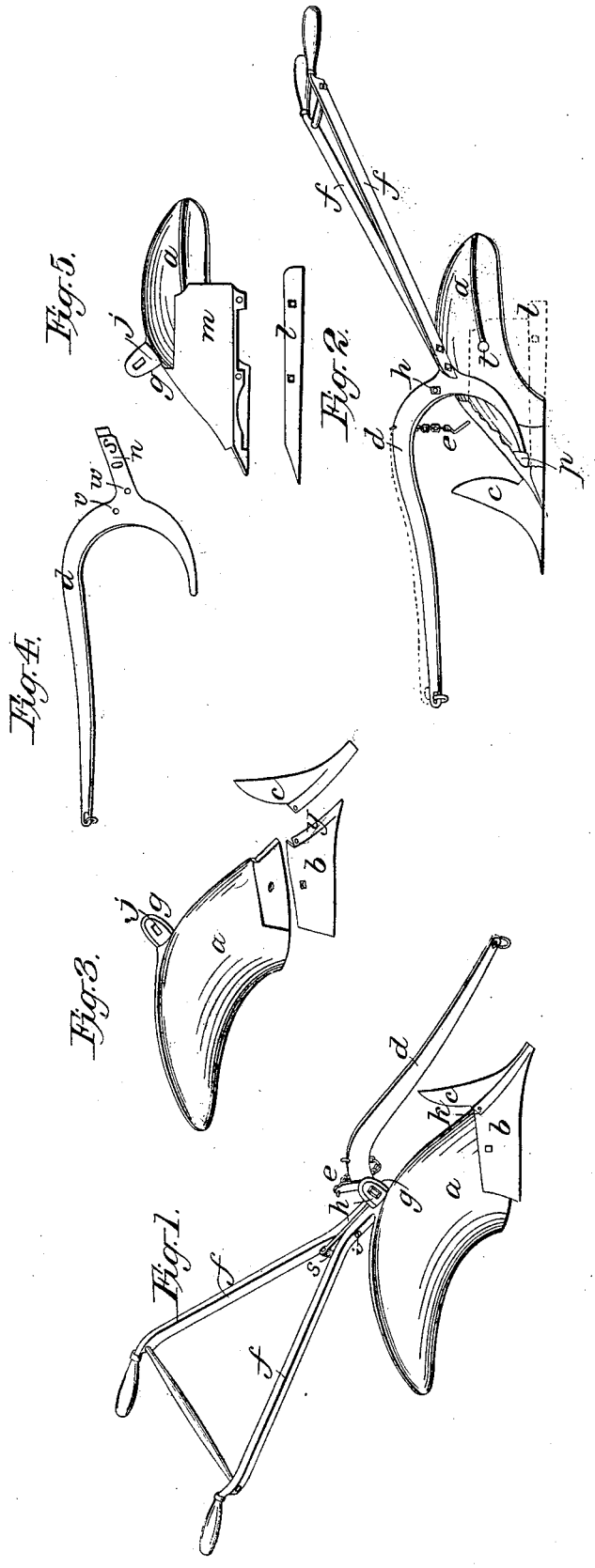
S. HALL.

PLOW.

No. 5,529. Patented Apr. 25, 1848.



UNITED STATES PATENT OFFICE.

SAMUEL HALL, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN PLOWS.

Specification forming part of Letters Patent No. **5,529**, dated April 25, 1848

To all whom it may concern:

Be it known that I, SAMUEL HALL, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and Improved Center-Draft Iron Plow; and I do hereby declare the following to be a full, clear, and exact description of the construction and operation thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view; Fig. 2, a side elevation, with a part of the landside broken away; and Figs. 3, 4, and 5 are parts of the plow detached.

Similar letters refer to corresponding parts in all the figures.

The nature of my invention consists, first, in combining the beam to the body of the plow in such a manner that the draft shall be exerted at the center of resistance whether the furrow be wide or narrow, deep or shallow, and also enabling the position of the beam to be so adjusted as to cause the plow to form a deep or a shallow furrow without varying the base or shoe of the same from a horizontal position; and, second, in the peculiar manner of uniting a wrought point and cutter to a wrought share without injury to the thinner parts thereof by the process of welding.

a is the mold-board. *m* is the landside. These are cast in one piece with each other and the cross supporting-brace *t*. At the junction of the mold-board and landside, and centrally between the two, a few inches above their lower edges, is cast a socket, *p*.

g is an ear cast with and projecting from the top of the mold-board, having a slot, *j*, through the same.

d is the metallic beam, either cast or wrought, terminating in a descending curve or hook at its rear end, of the form represented in Figs. 2 and 4. The beam is secured to the body of the plow by inserting the point of the curve at its rear end into the socket *p* and confining the beam to the ear *g* by means of the screw-bolt *h* passing through the bolt-hole *v* in the beam and the slot *j* in the ear. The slot *j* in the ear *g* affords sufficient play to the beam to allow its front end to be raised or lowered and adjusted to deep or shallow furrows. The position of the beam is so adjusted as to cause the plow to form a wide or a narrow furrow by means of the wedge *c*. By inserting the wedge between the ear *g* and the beam in front or in the rear of the bolt *h* it will readily be perceived that the front end of the beam may be thrown to the right or left, as may be desired, thereby causing a wide or a narrow furrow to be formed by the plow.

s is an arm projecting from the rear side of the curve of the beam, to which the handles *f f* are confined by means of the screw-bolts *i i* passing through the bolt-hole *w* and the slot *n* in the arm. By means of the slot *n* in the arm *s* the extremities of the handles can be preserved at a uniform height as the position of the front end of the beam is raised or lowered. The position of the beams can also be adjusted to suit the different height of persons guiding the plow.

l is a shoe-piece, secured to the base of the landside by means of bolts.

The wrought share and point and cutter I construct and unite as follows:

The share *b* and the point and cutter *c*, I forge respectively of the form represented in Fig. 3. I then place the base of the point and cutter upon the beveled edge *y* of the share, and secure the heel of the point to the share by means of the rivet *k*, Fig. 1. I then secure the front portion of the point to the share by welding. A strong and perfect union of these parts is thus accomplished without burning or injuring their thin edges. The point and cutter cannot be perfectly secured to the share by the welding process alone, nor can they be united by the welding process without burning and injuring their thin edges.

The share, point, and cutter I shall sometimes cast in one piece from a pattern corresponding in form with the wrought share, point, and cutter herein described and represented, to be used in light soils.

It will readily be perceived that the beam can be so adjusted as to cause the plow to form a deep or a shallow furrow without varying the base of the plow from a horizontal position, which is a very important feature, as it prevents trembling and vibration and insures a steady movement. The power is applied also at the point where the resistance is the greatest, which is another very valuable feature that distinguishes my improved plow from all others.

Having thus fully described the construction

and operation of my improved center-draft iron plow, what I claim therein as new, and desire to secure by Letters Patent, is—

1. The manner of securing the beam to the body of the plow by means of the curved termination of the rear end of the beam, the socket *p* between the mold-board and landside, the ear *g* projecting from the mold-board, with the slot *j* in the same, and the screw-bolt *h*, the whole combined and operating substantially in the manner and for the purpose herein set forth.

2. In combination with the foregoing-described method of confining the beam to the body of the plow, the manner of giving a lateral adjustment to the front end of the beam by means of the wedge *e*, substantially as herein set forth.

3. In combination with the method of securing the beam to the body of the plow, the manner of combining the handles with the beam by means of the projecting arm *s*, the aperture *w* and slot *n* in the same, and the screw-bolts *i i*, combined and operating with the front end of the beam, substantially as herein set forth.

4. The manner of forming and uniting the wrought share with the point and cutter by the combination of riveting and welding, substantially in the manner and for the purpose herein set forth.

SAML. HALL.

Witnesses:
LEONARD S. JOHNS,
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