C. M. FRENCH.

Manufacture of Combined Plow Share and Point.

No. 200,707. Patented Feb. 26, 1878.

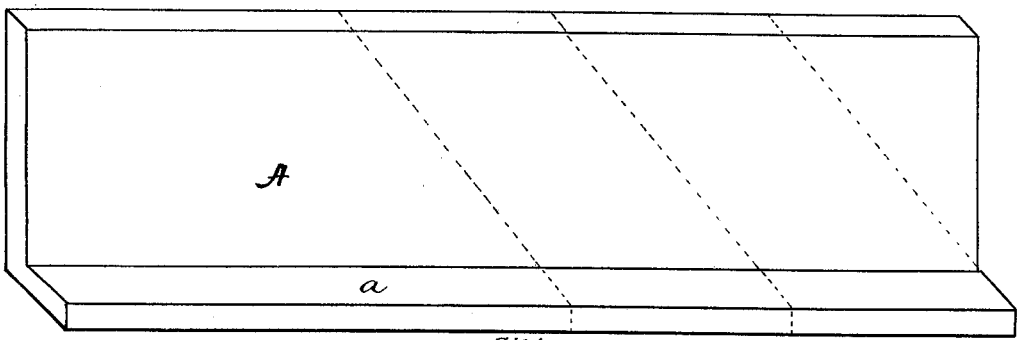

Fig. 1.

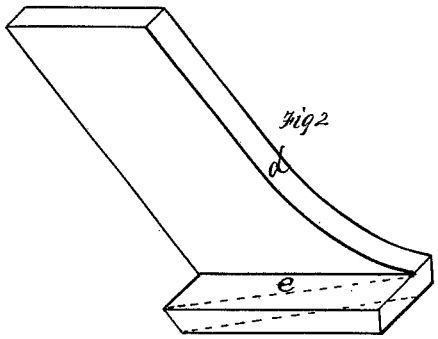

Fig. 2.

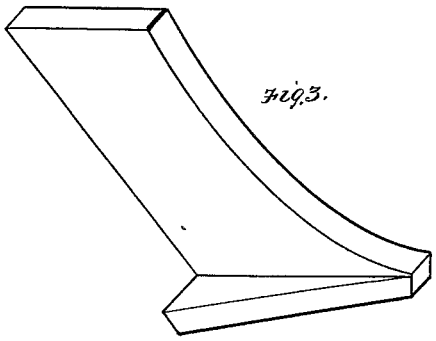

Fig. 3.

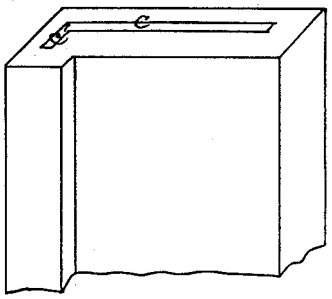

Fig. 5.

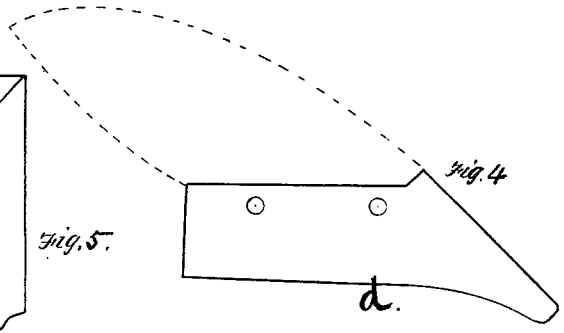

Fig. 4.

Witnesses.
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UNITED STATES PATENT OFFICE.

CHARLES M. FRENCH, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN THE MANUFACTURE OF COMBINED PLOW SHARE AND POINT.

Specification forming part of Letters Patent No. **200,707**, dated February 26, 1878; application filed November 3, 1877.

To all whom it may concern:

Be it known that I, CHARLES M. FRENCH, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Manufacture of Combined Plow Share and Point; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view of an angle-plate or flanged bar adapted to the purposes of my invention. Fig. 2 is a section cut therefrom and partially trimmed to form a share and point. Fig. 3 is a reverse side view of the completed combined share and point. Fig. 4 is a view of face side of share and point, the mold-board being indicated in dotted line. Fig. 5 is a view of a soft-center ingot especially adapted to form plate A.

Like letters refer to like parts wherever they occur.

My invention relates to the manufacture of combined plow shares and points from cast-steel, iron-center or soft-center steel, iron-backed steel, and like material not adapted to be successfully worked by bending or welding.

The present method of manufacturing combined plow shares and points is to cut the wing and bar for land-side separately from plate metal or suitable plate by appropriate dies, and subsequently to weld the two. The objection to such method is the difficulty of getting a good and durable weld and the great difficulty of repairing the plowshare with such means as are at the command of the ordinary blacksmith.

Attempts have been made to form a combined plow share and point by cutting a pattern corresponding to both share and point from a plate, and to subsequently bend or turn the land-side over into position with relation to the share; but this method has failed, owing to the nature of the material operated upon.

It is well understood in the trade that a plow, to give the best results, must have steel surfaces. Therefore plow shares and points are commonly made either of steel or what is termed "iron-center" or "soft-center" steel. As is well known, this material is extremely difficult to either bend or weld. Combined plow shares and points have also been formed by casting; but this method is only limitedly practiced, for the reason that steel castings of the general form of plowshares are very difficult to cast perfectly, and the percentage of imperfect castings renders such a method expensive, besides which the difficulty attendant on redressing the share unfits them for general use.

I will now proceed to describe my invention, so that others skilled in the art to which it appertains may apply the same.

The material used may be either cast-steel, iron-backed steel, or iron-center or soft-center steel, and is cast in the form of an L-shaped ingot.

With iron-center or soft-center steel the ingot should be formed especially therefor—that is to say, by inserting a narrow plate of iron or soft steel in the mold, as shown at *c'*, at right angles to *c*, Fig. 4, or by bending the center plate into an L form, as indicated by *c c'*, Fig. 4, said ingot being subsequently drawn, in properly-grooved rolls, to the form shown in Fig. 1.

Having obtained a flanged plate or bar in the manner specified, I cut the same transversely, preferably as shown by the dotted line, avoiding waste as much as possible, and trim the same, as indicated by the curved line *d*, Fig. 2, to form the wing, after which I cut away the flange *a*, as indicated by dotted line *e*, Fig. 2, thus forming the plow-point and land-side in a single piece without welding, and either from iron-backed plate-steel or soft-center steel, as desired.

The advantages of my invention are that a durable, serviceable, and easily-repaired combined plow share and point are obtained, and the cost of manufacture is materially reduced.

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

The method of forming a combined plow share and point of either cast-steel, iron-backed steel, or soft-center steel herein described, the same consisting in first forming a flanged bar from the ingot previously prepared, as described; secondly, cutting the flanged bar transversely into sections, substantially as specified; and, finally, trimming the flange obliquely to form the point and land-side, as and for the purpose specified.

In testimony whereof I, the said CHARLES M. FRENCH, have hereunto set my hand.

CHARLES M. FRENCH.

Witnesses:

JAMES I. KAY,

F. W. RITTER, Jr.