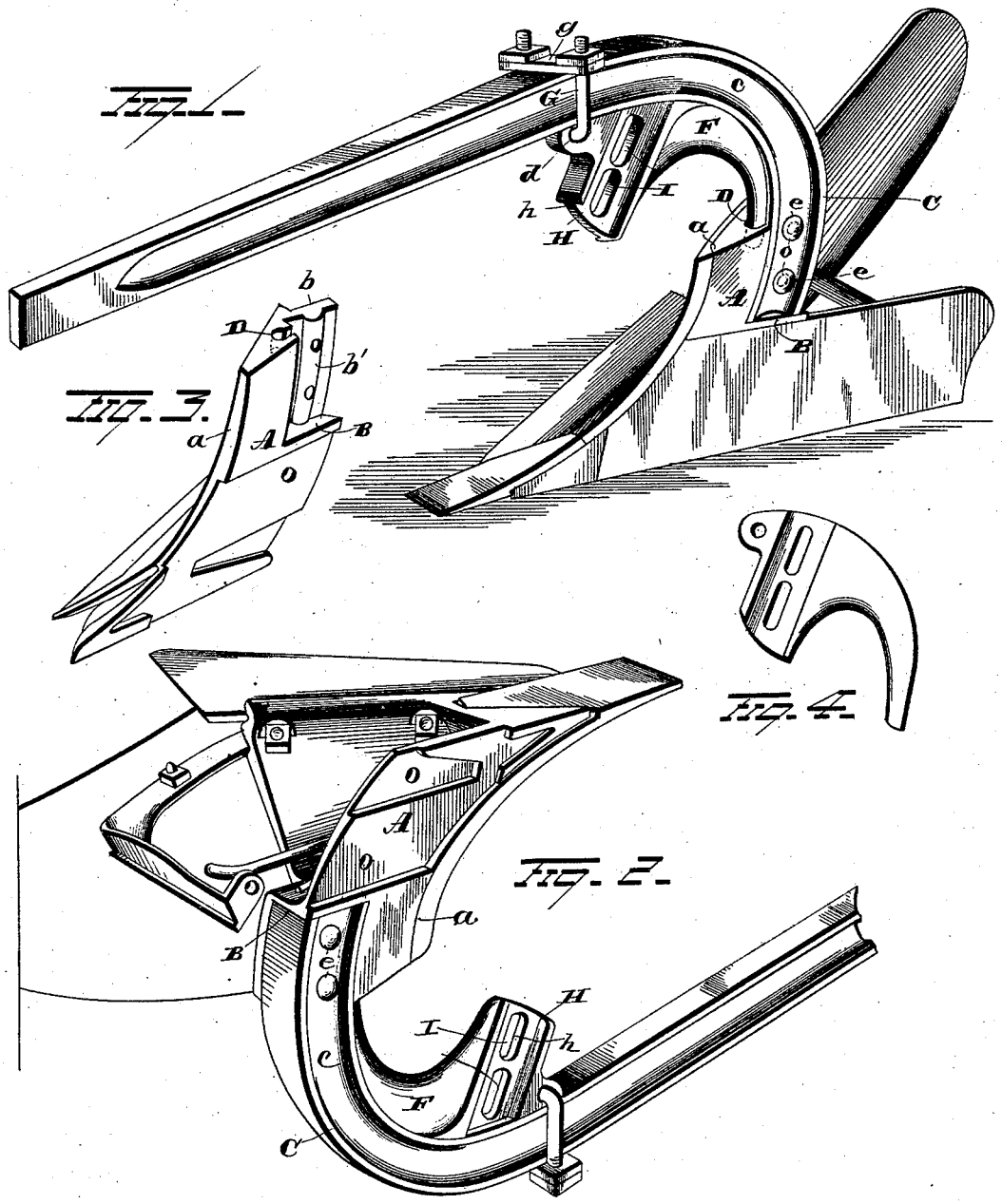
(No Model.)

C. ANDERSON.

PLOW.

No. 302,225. Patented July 22, 1884.



WITNESSES

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CHARLES ANDERSON, OF SOUTH BEND, INDIANA, ASSIGNOR TO THE SOUTH BEND IRON WORKS, OF SAME PLACE.

PLOW.

SPECIFICATION forming part of Letters Patent No. 302,225, dated July 22, 1884.

Application filed May 13, 1884. (No model.)

To all whom it may concern:

Be it known that I, CHARLES ANDERSON, of South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in 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 appertains to make and use the same.

My invention relates to an improvement in plows, the object of the same being to provide an improved construction of standard and beam, whereby the beam may be simply and securely locked to the standard; a further object being to provide a single piece of metal which shall serve to strengthen the beam and afford a seat for a colter-standard; a further object being to provide simple and effective means for holding the combined brace and colter-seat in contact with the beam.

With these ends in view my invention consists in certain features of construction and combinations of parts, as will be hereinafter fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in perspective with plow upright. Fig. 2 is a view in perspective with the plow inverted. Fig. 3 is a detached view of standard, and Fig. 4 is a detached view of brace.

A represents the standard, formed of a single piece of metal. The foot of the standard is provided with a seat for a reversible wing, and the nose of the standard with recessed seats for a reversible point, and the landside of the foot of the standard with a dovetail groove for the smaller section of the landside and seats for the forward end of the larger section of the landside and heel-brace, these several parts being preferably constructed in the manner fully set forth in Letters Patent No. 275,972, granted to myself and J. Oliver, April 17, 1883, and No. 277,185, granted to me May 8, 1883, and in a pending application filed by me February 14, 1884, said parts and their respective constructions forming no part of my present invention. The upper portion of the standard A consists of a solid wedge-shaped portion, *a*, one side of which is shaped to conform to the curve of the mold-board and lie snugly against it, while the other side, at the point where the standard reaches the upper edge of the landside, projects outward and extends upward from this point flush with the outer surface of the landside. The standard A terminates at the top, preferably on a line with the upper edge of the mold-board. The upper portion of the standard A is provided at its rear with a seat, B, on which the end of the beam C rests, and with a rearwardly-extending projection or flange, *b*, which extends from the seat B to the top of the standard and affords a means for locking the beam in position. The projection or flange *b* is provided on its face with an elongated rounded projection, *b'*, formed integral therewith, and constructed to fit in a groove or channel, *c*, formed in the side of the beam C. Instead of a continuous rounded projection, *b'*, a series of lugs may be formed, and the projection may be semicircular, semi-oval, or any angular shape desired in cross-section. The upper end of the standard A is further provided with the groove or recess D, the purpose of which will appear hereinafter.

The beam C is constructed of metal, and preferably provided with grooves or channels *c* on both sides. The beam is curved downward at its rear end, as shown, and rests on the seat B, as before observed. Two perforations, *o*, (more or less,) are formed in the beam C near its rear end, which perforations register with perforations in the flange *b*. Bolts *e* pass through these perforations from the landside of the beam, and are threaded to receive nuts on their ends, which project through the flange *b* between the mold-board and said flange. By means of these bolts the beam can be brought up snugly against the flange *b*, and the projection *b'*, which is constructed to conform to the groove in the side of the beam, will hold the beam securely in its position and lock it against vertical play. The beam C is provided with channels along its sides for the purpose of combining lightness with strength; but I am aware that it is not broadly new, and only claim it as far as it forms a factor in my devices for securing the beam to the standard.

A curved brace, F, wedge-shaped in cross-section, is cast or otherwise constructed to conform to the curve of the beam C, and is held snugly in contact with the front edge of the

beam, as follows: The lower end of the brace fits in the groove or recess D, and the upper end is provided with an eye, *d*, through which the bite of a U-shaped clamp, G, passes. The clamp G is provided with a yoke, *g*, which rests on the upper edge of the beam. The ends of the U-part of the clamp are threaded and provided with nuts, by means of which the brace F is drawn tightly against the beam. The upper or forward portion of the brace F is provided on the landside with a downwardly and forwardly extending groove, H, adapted to receive a colter-standard, and on the furrow side with a shouldered groove, *h*, adapted to receive a shouldered clamping-plate. The brace F is further provided with the elongated closed slots, I, extending transversely through the brace F along the central portion of the groove H, said slots being adapted to receive bolts for securing a colter-standard in the required vertical adjustment. By the use of this brace, which serves the double purpose of a colter-seat and strengthening device, I am enabled to materially lessen the weight of the beam, since the metal composing the brace is situated at the joint where the greatest strain will occur on the beam, and formed in such shape as to resist strongly any tendency the beam may have to spring upward.

It will be observed that the three parts—standard, beam, and combined brace and colter-seat—when set up for use, serve to mutually strengthen one another, the portion of the standard cut away being replaced by the rear end of the beam, and the part of the beam where the greatest strain comes being re-enforced by the combined brace and colter-seat, while the latter is held firmly in position by the beam and standard, the whole forming a neat, compact, and durable combination, which may be taken apart and set up without requiring the assistance of skilled workmen.

I do not wish to limit myself strictly to the form and arrangement of the several parts, as shown and described, but reserve the privilege of making such slight changes as fairly fall within the spirit and scope of my invention.

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

1. In a plow, the combination, with a curved beam provided with a groove, of a standard provided with a recessed seat for receiving the end of the beam, and with a projection adapted to engage the groove of the beam, and devices for securing the beam in the seat, substantially as set forth.

2. In a plow, the combination, with a channel-beam curved downward at its rear end, of a standard provided at its upper end with a recessed seat, which receives the end of the beam, and further provided with a curved projection which engages the channel in the beam, and devices for locking the end of the beam in the recess, substantially as set forth.

3. In a plow, the combination, with a standard provided with a recessed seat in its upper end, and a beam curved downward at its rear end and secured in said seat, of a combined brace and colter-seat locked to the beam by a socket and clamp, substantially as set forth.

4. In a plow, the combination, with a standard provided at its upper end with recessed seats for the beam and brace, and a beam curved downward at its rear end and secured in the said seat, of a brace conforming to the curve of the beam, having its lower end locked on said recessed seat and its upper end secured to the beam by a clamp, substantially as set forth.

5. In a plow provided with a beam curved downward at its rear end and secured in a recessed seat formed in the upper portion of the standard, a combined beam-brace and colter-seat provided with slotted grooves for holding a colter in any required vertical adjustment, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

CHARLES ANDERSON.

Witnesses:
H. B. SMITH,
F. C. NIPPOLD.