

A. GOODYEAR.  
Plow.

No. 218,517.

Patented Aug. 12, 1879.

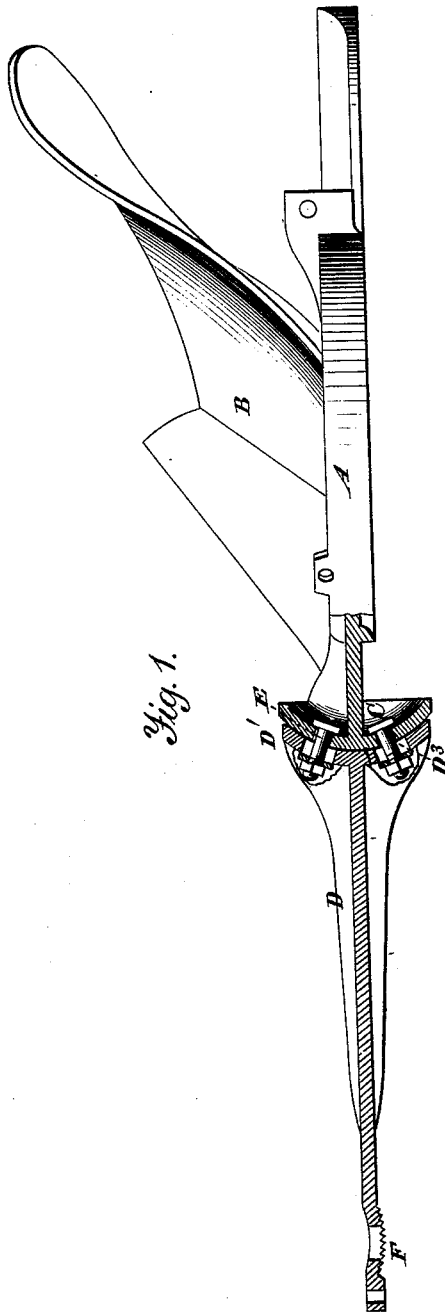


Fig. 1.

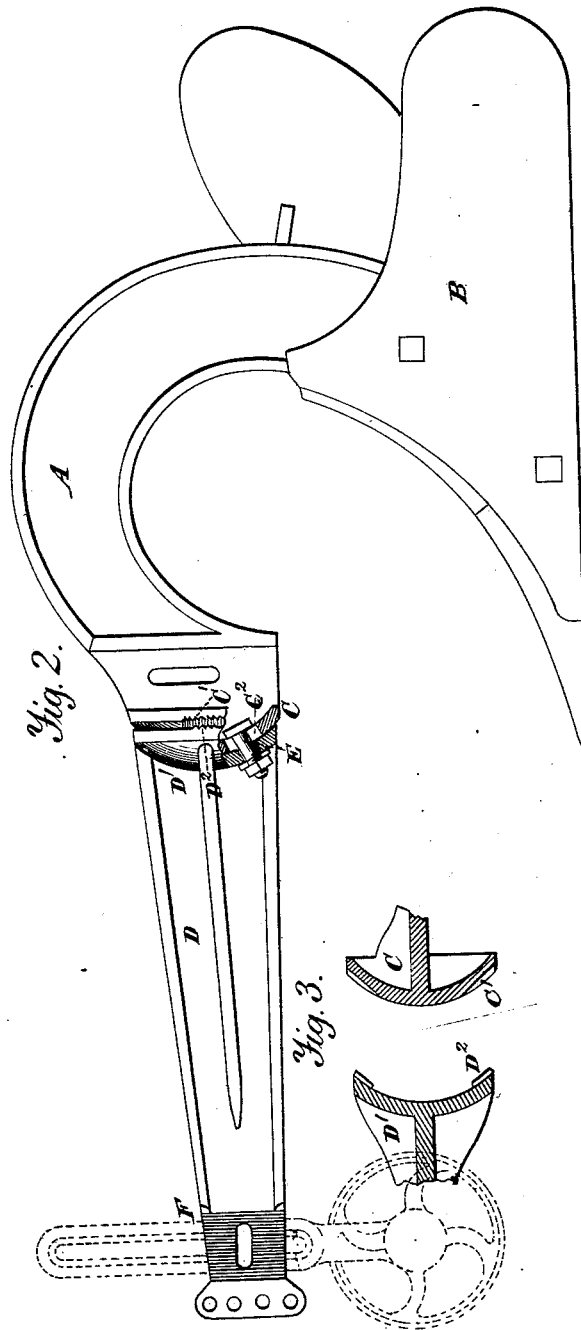


Fig. 2.

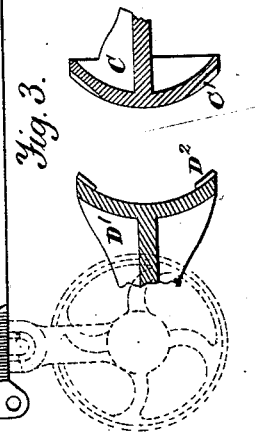


Fig. 3.

Witnesses.  
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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN PLOWS.

Specification forming part of Letters Patent No. **218,517**, dated August 12, 1879; application filed  
March 14, 1878.

*To all whom it may concern:*

Be it known that I, ANDREW GOODYEAR, of Albion, in the county of Calhoun and State of Michigan, have invented certain new and useful Improvements in Plows; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention relates to that class of plows in which the beam and standard are made in separate parts; and consists in a plow-standard having a concave or convex vertically-slotted spherical head or flange, in combination with a plow-beam having a convex or concave laterally-slotted spherical rear end and connecting-bolts, as hereinafter set forth.

In the annexed drawings, making a part of this specification, Figure 1 is a plan view of the plow, partly in section. Fig. 2 is a side elevation, partly in section. Fig. 3 is a section, showing the manner of forming the joints between the standard and beam.

The same letters are employed in all the figures in the indication of identical parts.

A is the standard, curved as shown, and carrying at one end the plow B, and on the other the jointer. (Not shown.) On the end of the standard, beyond the shank of the jointer, is a flange, C, which is in form a segment of a sphere, having perpendicular slots C<sup>2</sup> on each side for the reception of the bolts.

D is the beam proper, having at the rear end a flange, D<sup>1</sup>, concave in form, the curvature of which corresponds to that of the spherical flange C on the front end of the standard. This concave flange may have a series of parallel corrugations, D<sup>2</sup>, corresponding with the corrugations C<sup>1</sup> on the flange C, the purpose of the corrugations being to aid in holding the surfaces rigidly in relation to one another

when the parts are bolted together. It also is formed with slots D<sup>3</sup>, which are horizontal, the purpose being that when the joints are formed by bolts E passing through the flanges C and D<sup>1</sup>, the slots shall be at right angles to one another, thereby permitting the beam to be deflected vertically or laterally, as desired.

In order that the shank of the shackle-wheel may be adjustably attached, so as to give a proper direction to the line of the wheel in relation to the draft and plow, a curved surface may be formed on the side of the beam, as shown at F. The shank of the shackle is attached to the beam by means of a headed bolt passing through a vertical slot in the shank of the shackle and a horizontal slot near the outer end of the beam, through the grooved portion F, as shown.

The wheel may be thus raised or lowered, and by setting it forward or back on the curved surface the axle of the wheel may be inclined to the line of the beam, as required.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In combination with the parts of a sectional plow-beam, the ball-and-socket joint formed by the converse and concave flanges, fitted with corresponding corrugations and oppositely-inclined slots, substantially as set forth.

2. A plow-standard having a concave or convex vertically-slotted spherical head or flange, in combination with a plow-beam having a convex or concave laterally-slotted spherical rear end and connecting-bolts, substantially as specified.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

ANDREW GOODYEAR.

Witnesses:

W. R. BABCOCK,  
JAS. S. MILLER.