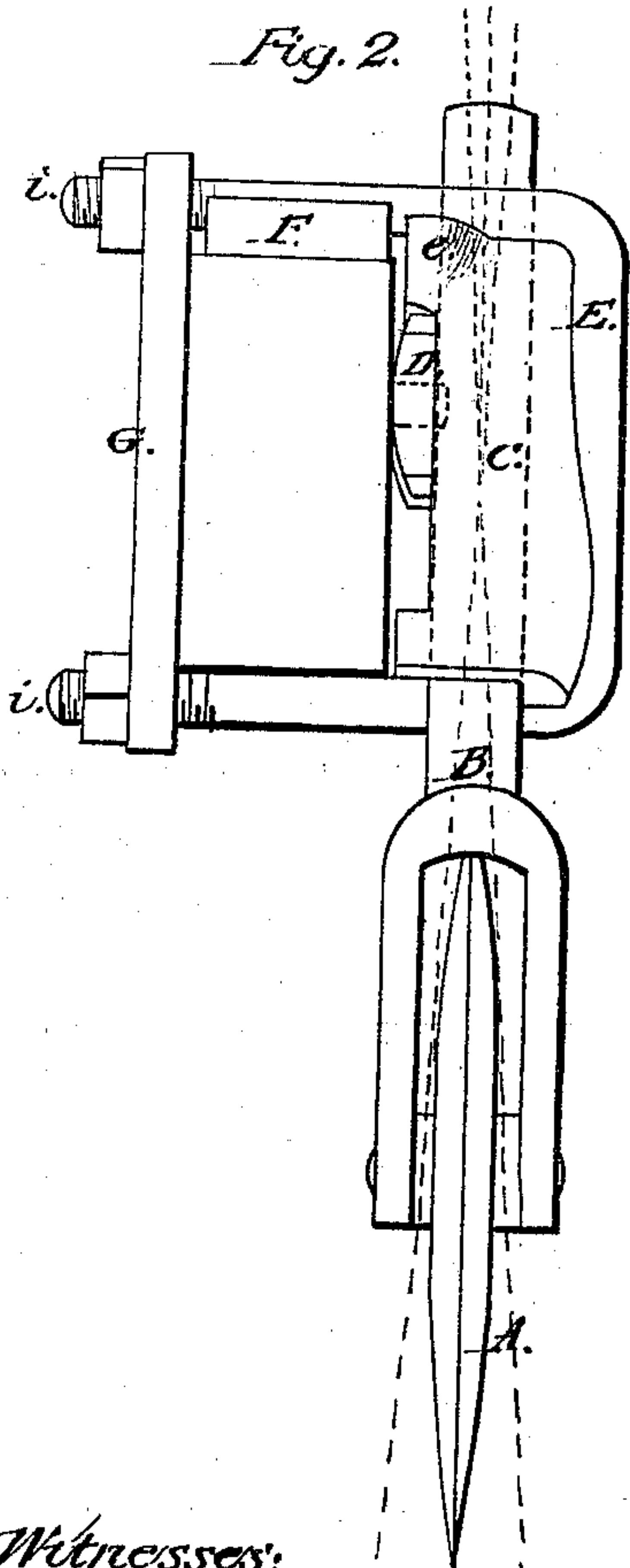
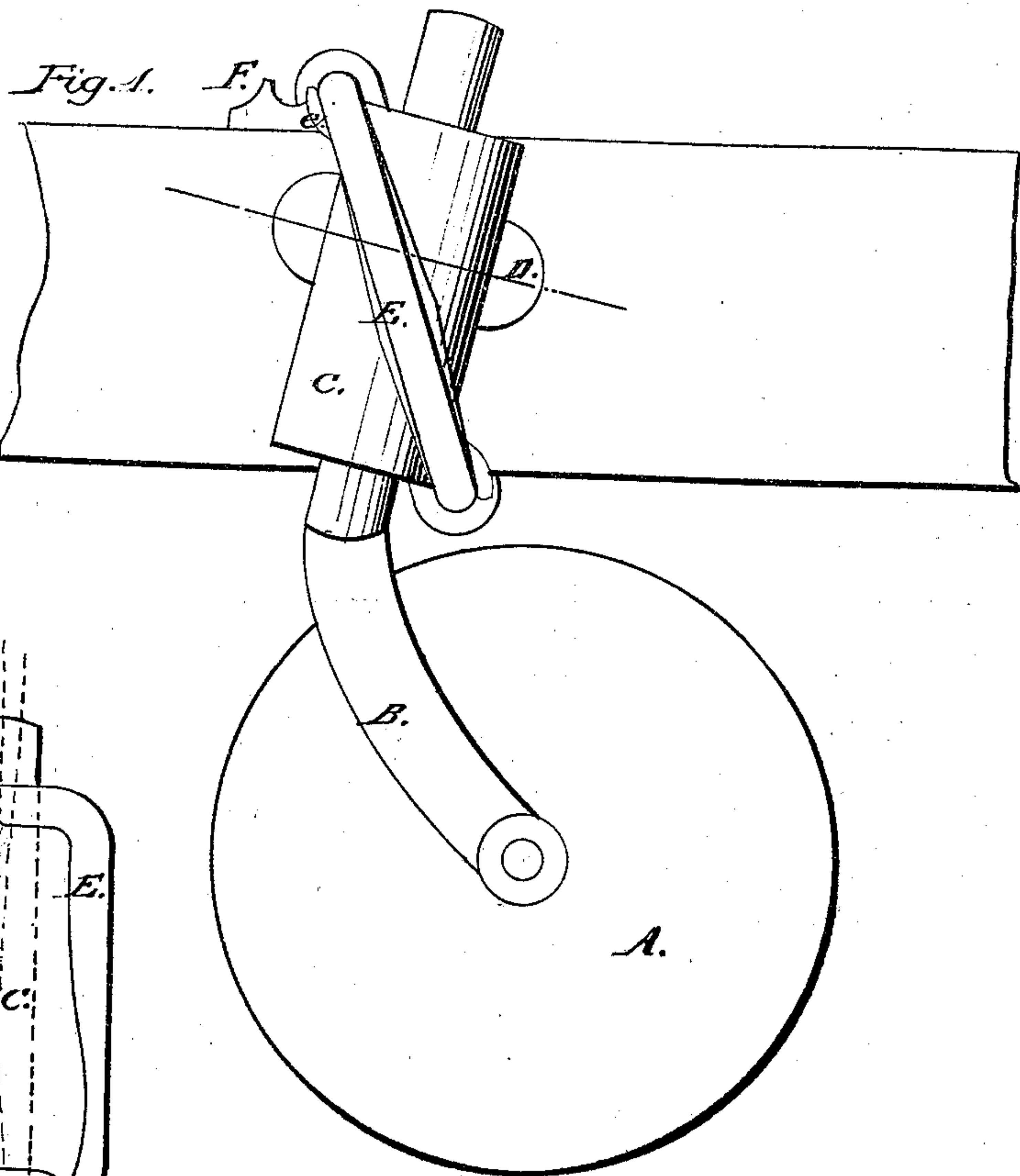


*J. Lane.*

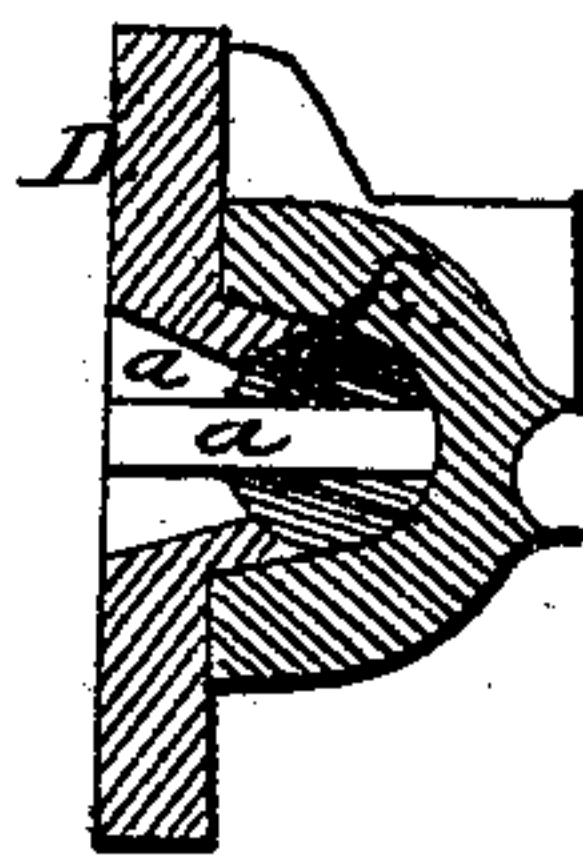
*Plow Coultter.*

*N<sup>o</sup> 88,309.*

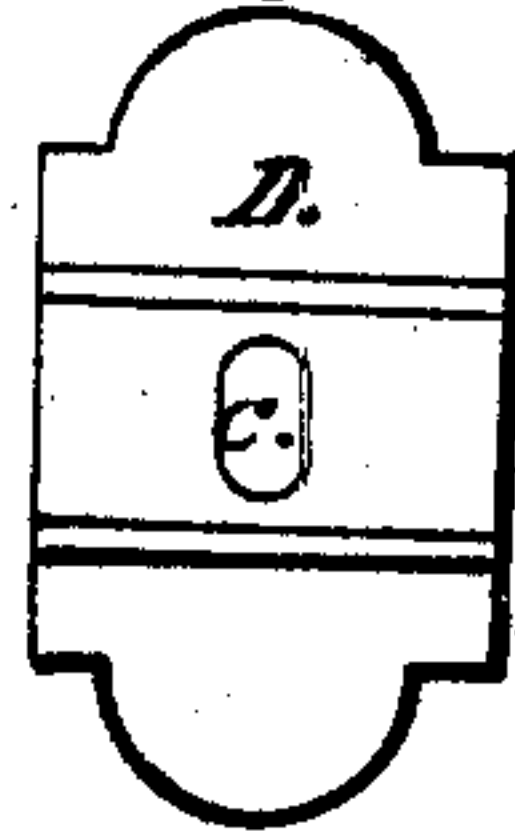
*Patented Mar 30, 1869.*



*Fig. 3.*



*Fig. 4.*



*Witnesses:*  
*P. J. Dodge.*  
*S. Hailer.*

*Inventor*  
*John Lane*  
*by Dodge & Mann*  
*his attys*



# United States Patent Office.

JOHN LANE, OF CHICAGO, ILLINOIS, ASSIGNOR TO HIMSELF, C. H. HAPGOOD, WILLIAM B. YOUNG, AND G. H. LAUGHTON, OF SAME PLACE.

Letters Patent No. 88,309, dated March 30, 1869.

## IMPROVEMENT IN PLOW-COULTERS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOHN LANE, of Chicago, in the county of Cook, and State of Illinois, have invented certain new and useful Improvements in Plows; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference marked thereon, like letters indicating like parts wherever they occur.

To enable others skilled in the art to construct and use my invention, I will proceed to describe it.

This invention consists in an improved easter-coulter for plows, which is adjustable vertically and laterally, and also back and forth along the plow-beam.

Figure 1 is a side elevation of a portion of a plow-beam with my coulter attached.

Figure 2, an end view of the same.

Figure 3 is a horizontal cross-section on the red line of fig. 1.

Figure 4, a face view of one of the pieces.

My coulter consists of a circular steel disk, or coulter, A, mounted in the lower, forked end of a stem, or standard, B, the upper portion of which is round, and is provided on one side with a short projecting pin, or lug, *a*, as shown in fig. 3.

I next construct a block, D, of the form shown in figs. 2, 3, 4, which is, with a projecting portion at the middle, equal in width to the diameter of the easter-spindle, and has across it a semicircular groove, so that it will fit to and around the said spindle.

This block is also provided with a slot, *c*, to receive the pin *a* on the stem, as shown in figs. 3 and 4, the said slot running at right angles to the direction of the semicircular groove in the block, also shown in figs. 3 and 4.

This block D, I place against the side of the beam, with the grooved face outward, and then place the coulter-stem in it, with the pin *a* projecting into the slot *c*, and place over them both a holder, or body, C, which body is, in cross-section, U-shaped, and the interior of which is of such size as to admit the stem of the easter, this body fitting over and holding the stem in place against the block, and bearing upon the projecting ends of the block, and holding it in place, as shown in fig. 3.

The body C has a portion cut away on each edge, at the back, as shown in fig. 2, thus leaving projecting lugs at each end, which serve to prevent the block D from working out from under the body C at the ends.

On the outside of the body C, and diagonally across it from corner to corner, I form a groove, and also extend it across the ends, and then place over the whole an iron band, or clamp, E, with its arms extending around over the beam, and having a plate, G, provided with a hole in each end, slipped over the ends of the said arms, and nuts placed on them, by means of which the whole apparatus may be held together, and the

holder of body C and the block D both securely fastened in place on the side of the beam, the stem B of the coulter being free to turn or oscillate in its bearings, but prevented from moving vertically by the pin *a*.

The distance between the arms of the clamp E is greater than the width of the beam, so that there is always a space between the beam and the arms, on the lower or upper side, according as the clamp is moved up or down, and greater or less, according to the angle at which the clamp stands across it.

To fill this space, and assist in holding the clamp in position, I provide a wedge-shaped block, F, having a series of grooves across it, as shown. This block is inserted under one of the arms of the clamp, between it and the beam, first placing the clamp so as to stand straight across the beam, and then slipping the block under and swinging the clamp around, until one of the arms rests in one of the grooves in the block, at the thick or thin end, according to the inclination it is desired to give the clamp. This adjustment of the clamp also moves the holder C and block D, and consequently the coulter itself.

The back of the block D, the side next the beam, is made rounding, as shown in fig. 2, and projects beyond the line of the lugs *s* on the holder C, so that the holder and block may rock upon the said rounded part, as one or the other arms of the clamp is shortened, by turning up the nut on it, thus throwing the coulter side-wise, in or out from under the plow-beam, as indicated by the dotted red lines in fig. 2.

By loosening the clamp E, so as to free the block D from the pressure of the holder C, the block may be moved up or down it, and thus vary the depth to which the coulter will cut.

It will be seen, that by the above arrangement of parts, provision is made for four different adjustments of the coulter, viz:

First, the vertical adjustment, by moving the block D up and down between the holder and the beam;

Second, the rocking motion of the holder and block, giving a lateral movement to the coulter, as shown in fig. 2;

Third, by changing the angle, or inclination fore and aft; and

Fourth, by moving the whole device along the beam, from one point to another.

Having thus described my invention,

What I claim, is—

1. Imparting to the coulter A, a lateral adjustment, by making that portion D of its bearing which comes in contact with the beam, rounded, substantially as described.

2. The combination of the holder C and slotted adjustable block D, for holding the coulter in position, and adjusting the same vertically, as set forth.

3. The corrugated, or grooved plate F, in combination with the holder C and staple E, for adjusting the

coulter, and adapting it to plows with different-sized beams, substantially as set forth.

4. The holder C, constructed as described, and having the diagonal groove for the staple, as set forth.

5. The combination of the holder C, adjustable slotted plate D, and standard B, with the pin *a*, all con-

structed and arranged to operate substantially as and for the purpose set forth.

JOHN LANE.

Witnesses:

JULIUS A. LANE,  
ERNEST J. LANE.