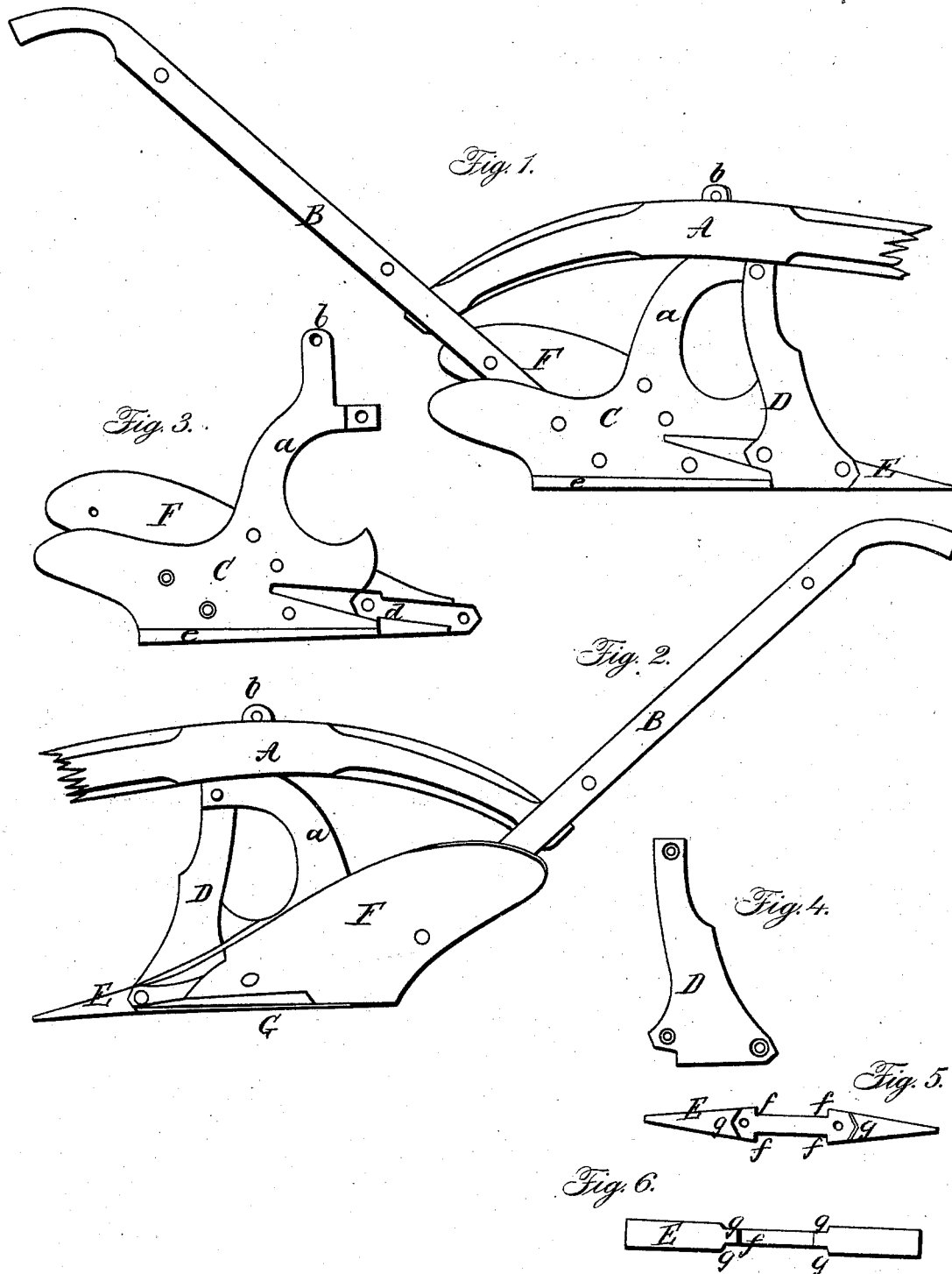


E. BALL.

Plow.

No. 3,918.

Patented Feb. 20, 1845.



# UNITED STATES PATENT OFFICE.

E. BALL, OF GREENTOWN, OHIO.

## IMPROVEMENT IN PLOWS.

Specification forming part of Letters Patent No. 3,918, dated February 20, 1845.

*To all whom it may concern:*

Be it known that I, EPHRAIM BALL, of Greentown, in the county of Stark and State of Ohio, 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 construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a geometrical elevation of the landside of the plow; Fig. 2, an elevation of the opposite side of the plow; and Figs. 3, 4, 5, and 6, details.

The integral parts forming my plow are those generally found in other plows—viz., the beam A, the arms B, the landside C, the colter D, the point E, the mold-board F, and the share G—not claiming any improvement on the beam, arms, mold-board, or share, and, as the same are of the usual shape and make, further description of them is superfluous.

The stock *a* of the landside rises from about midway of the top of said landside, when it immediately assumes a graceful curve in the direction of the plow-head. At its meeting with the under side of the beam a vertical tenon, *b*, rises from it and passes through a corresponding mortise in the beam, on the top of which it is secured by a pin.

At the upper and forward extremity of the stock there is a sunk notch, *c*, for the reception of the upper corresponding end of the colter.

The lower and front part of the landside is made in such a manner as to form a socket, *d*, of a corresponding shape to the hereinafter-described point E, to be inserted therein. On the under side of the landside there is the sole-piece *e*, which is furnished with ears or flanges lapping upon the inner side of the said landside, and by means of which and screw-bolts with sunk heads it is attached thereto.

The point E, in its general shape, resembles two arrow-heads, one on each end of a common shaft. It is made of a square bar of iron, the upper and lower side of each end of which being made into a wedge form for about one-third of the whole length, the remainder being reduced in such a manner as to form a shoulder, *f*, on top and bottom at the termination of each of the wedges. The middle part is also re-

duced the other way, but for a greater length than the former—say about one-half of the whole length—forming similar shoulders, *g*, on the sides. A hole is drilled horizontally through the reduced part at or near each shoulder *g*, through which screw-bolts pass into holes in the back of the socket *d*, by means of which the point is fastened to the landside. The inclination of the point is at about an angle of about ten degrees (more or less) with the horizon. The colter D is made of a plate of iron narrower at the top than at the bottom. The back edge, after leaving the beam for a short distance vertically, assumes a gentle curve in a forward direction, then, reversing the curve, turns backward until it reaches the middle of the back shoulder, *g*, when it takes such other (rectangular) turn as to fit said shoulder. The front edges, after receding from the beam, run parallel with the back edge to about one-third the length of the colter. Then by a sudden curve toward the front of the plow the colter increases to about double its width above, and the edge, continuing downward in a forwardly-curved direction, finishes at the front shoulder, *g*, of the point, fitting said shoulder. The upper end of the colter is fitted in the notch *c* and fastened by a screw-bolt. At the lower end of it there are two holes corresponding to those in the point and those in the socket of the landside, the same two bolts fastening the three parts together. Thus fastened together, great strength in the whole fabric is obtained, the colter, from its shape and position, serving as a brace thereto.

The plow may be wholly constructed of cast or of wrought iron, or of both, its peculiar construction and arrangement being favorable to both.

Operation: The operation of the plow itself being so generally and well understood, any comment thereon seems unnecessary in this place. All that need be said under the above head may be comprised in the following few lines. In consequence of the peculiar construction of the whole, or the shape of the individual parts, each and any of said parts may easily be detached in case of their wearing out or requiring sharpening, and as easily attached again or replaced by others without disturbing the whole or affecting the strength of the

fabric. The point, being a double one, may be turned around in such a manner as to present a new edge.

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

The manner in which I have combined the colter, the landside, and the self-sharpening

point so that the three may be secured together by two bolts, giving at the same time great strength to these, as hereinabove described.

E. BALL.

Witnesses:

D. M. SECHLER,  
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