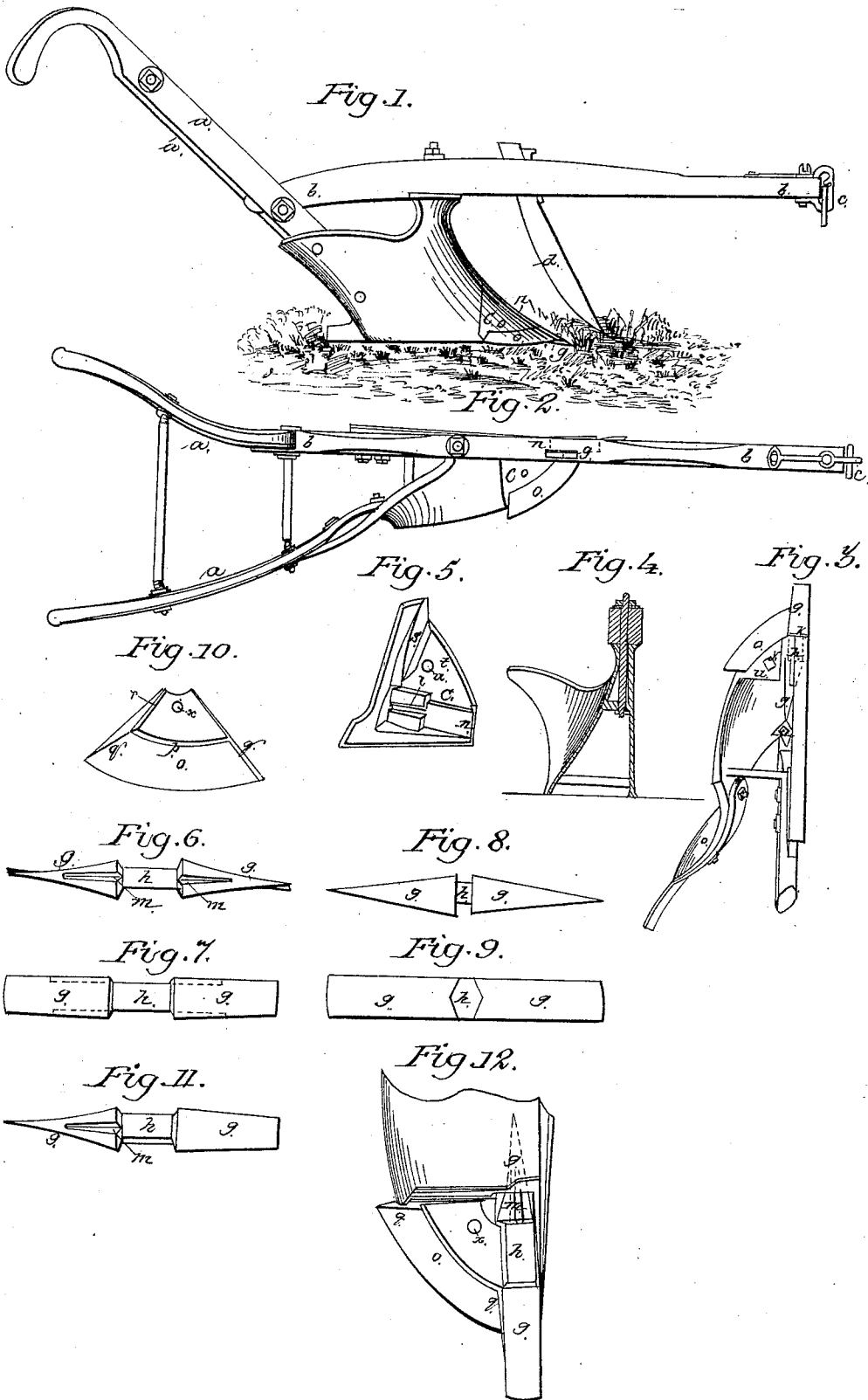


PROUTY & MEARS.

Plow.

No. 2,132.

Patented June 16, 1841.



UNITED STATES PATENT OFFICE.

DAVID PROUTY, OF BOSTON, AND JOHN MEARS, OF DORCHESTER, MASS.

IMPROVEMENT IN THE CONSTRUCTION OF PLOWS.

Specification forming part of Letters Patent No. **2,132**, dated June 16, 1841.

To all whom it may concern:

Be it known that we, DAVID PROUTY, of Boston, in the county of Suffolk and State of Massachusetts, and JOHN MEARS, of Dorchester, in the county of Norfolk and State aforesaid, have invented new and useful Improvements in Plows and the Teeth of Cultivators; and we do hereby declare that the following is a full and exact description of the same. The said description, taken in connection with the accompanying drawings, hereinafter referred to, composes our specification, setting forth and exhibiting the principles of our invention, by which it may be distinguished from others of a like character, and such parts or combinations therein as we claim, and for which we solicit an exclusive property to be secured to us for fourteen years by Letters Patent.

Figure 1 is a front elevation of our improved plow. Fig. 2 is a plan; Fig. 3, a plan of the under side of the plowshare. Fig. 4 is a transverse vertical section taken near the center of the plow, Figs. 5, 6, 7, 8, 9, 10, 11, 12 being detailed views of some of the parts, which will be hereinafter explained.

The imperfection in plows that are now in use, which our improvements are intended to remedy as effectually as possible, is the tendency of the friction on the point and wing of the plow to wear the same or form a bevel, and by so doing to prevent the plow from forming and retaining its proper depth of furrow.

Our improvements are in that class of plows denominated "self-sharpening," in which the point or nose and wing are made in separate pieces, and are capable of being inverted, &c., until they are nearly used up.

The points have been made of wrought-iron and steel, or of cast-iron, of a wedge form, with a long shank, which, with the shares, were secured to the landside and mold-board by bolts, grooves, or rabbets, and being arranged on the under side of the mold-board, they are extremely liable to become loose and break, even with ordinary usage, notwithstanding the bolts by which they are confined or connected together.

In our improved plow we have given such form to the point and wing as to permit them to be inverted, and have so arranged these parts that they shall be constantly sharp, and

when worn up or unfit for use there shall be as little waste of iron or material as is possible to attain by any conceivable construction.

In the drawings, *a a*, Figs. 1 and 2, represent the handles of the plow, constructed and arranged in the usual manner, so as to guide or wield the machine.

b b is the beam or tongue, to the end of which an adjusting-shackle, *c*, is attached, which will be readily understood by inspection of Figs. 1 and 2.

The colter *d* is attached to the tongue in front of the plowing apparatus, which latter is likewise secured to the tongue by means of the standard-bolt *e*, Fig. 4.

The "landside" of the plow, as it is technically called, is beveled, as shown in section in Fig. 4, so that the center line of the tongue, or line of traction, may be over and parallel to a line drawn through the center of resistance on the plowshare.

The above-mentioned parts are now in use, our improvements being in the parts hereinafter specified.

The nozzle or point *g g*, Figs. 1, 3, 11, 12, is separate and distinct from the share and wing. It consists of two double-concave wedges, (the concavity being spiral, as shown in Figs. 11 and 12,) connected together by a neck, *h*, the section of which, as well as that of the bases of the wedges, being rhomboids. This oblique-angled form of the neck adapts it more conveniently to the beveled form of the landside and exposes the greatest quantity of metal on the lower side, where most of the wear occurs. The point or nozzle rests or is placed in a socket formed by the landside and mold-board, the side of the front wedge being vertical, while that of the back wedge is horizontal. The point is held firmly in position by the bases of the wedges, (which operate as shoulders resting against proper projections or edges on the mold-board, as shown at *i k*, Fig. 3,) and also by the cap *C*, a projection, *l*, from which fits into one of the grooves *m m* on the sides of the wedges, and the end *n* of which, Fig. 5, fits against the edge of the base of one of the wedges, as shown in Figs. 1 and 2. The point, constructed as above set forth, it will readily be seen, admits of being changed four times, and the wedges may be worn up to the end of

the mold-board, and then another set substituted in their places.

The wing *o*, Figs. 1, 2, 3, 10, 12, is also a separate and distinct part of the plow, capable of being removed, inverted, and replaced at pleasure. Its shape is nearly like that of a sector of a circle with the angular part at the center cut off, as shown in Fig. 10. It has a wedge shape in its transverse section, so as to present a cutting-edge to the earth in front of the same. It rests on or has under it the bottom of the mold-board, and its lower surface is in the same plane with the under side of the mold-board, the end of which fits against a proper shoulder, similar to that shown on the upper side of the wing at *p*. One of the angular sides, *q q*, of the wing fits into the adjacent groove *m* of the point or nozzle *g*, and the cap *C*, before described as confining the point in position, performs the same office to the wing, an angular projection, *r*, Fig. 10, from which fits into a corresponding groove, *s*, Fig. 6, on the cap, and the end *t* of the cap fitting against the shoulder *p* of the wing. The cap is rabbeted to the main plowshare, so that its upper surface may form a continuation of the curved face of the plowshare, and all the separate parts are by the above arrangement so fitted as to leave no space or crack between them for the admission of dirt, weeds, &c., which would tend to loosen them and render them unfit for use. A bolt, *u*, with a rivet-head, *v*, Figs. 1 and 2, passes through holes *w x*, Figs. 5 and 10, in the cap and wing and one in the bottom of the mold-board, and is confined by a nut, *y*, on the under side of the latter, thereby serving to hold the separate parts firmly together.

We do not confine ourselves to the precise form of nozzle or point above specified, as others may be devised of the shapes represented in elevation and section in Figs. 6, 7, 8, and 9, all of which have been used by us in our experiments.

It should be particularly noted that the wing and point rest on the mold-board, instead of being attached to the under side of the same, which was found to wear greatly upon these parts and soon unfit them for use.

Having thus described our improvements, we shall claim as our invention—

1. Arranging or connecting the invertible nose and wing together by means of suitable grooves on the side of the former, and the corresponding angular or wedge-shaped sides of the latter fitting into the grooves, as described.

2. Embedding the invertible wing and nose or point upon the mold-board and confining them in their positions by means of a cap having projections and grooves corresponding with those of the said invertible parts, the cap being rabbeted to the plowshare, so as to have its upper face a continuation of the curved surface of the same, the whole being confined together by a bolt or bolts and nuts, substantially as hereinbefore described.

In testimony that the above is a true description of our said invention and improvements we have hereto set our signatures this 13th day of April, in the year 1841.

DAVID PROUTY.
JOHN MEARS.

Witnesses:

EPHM. B. McLAUGHLIN,
GEORGE W. WOOD.