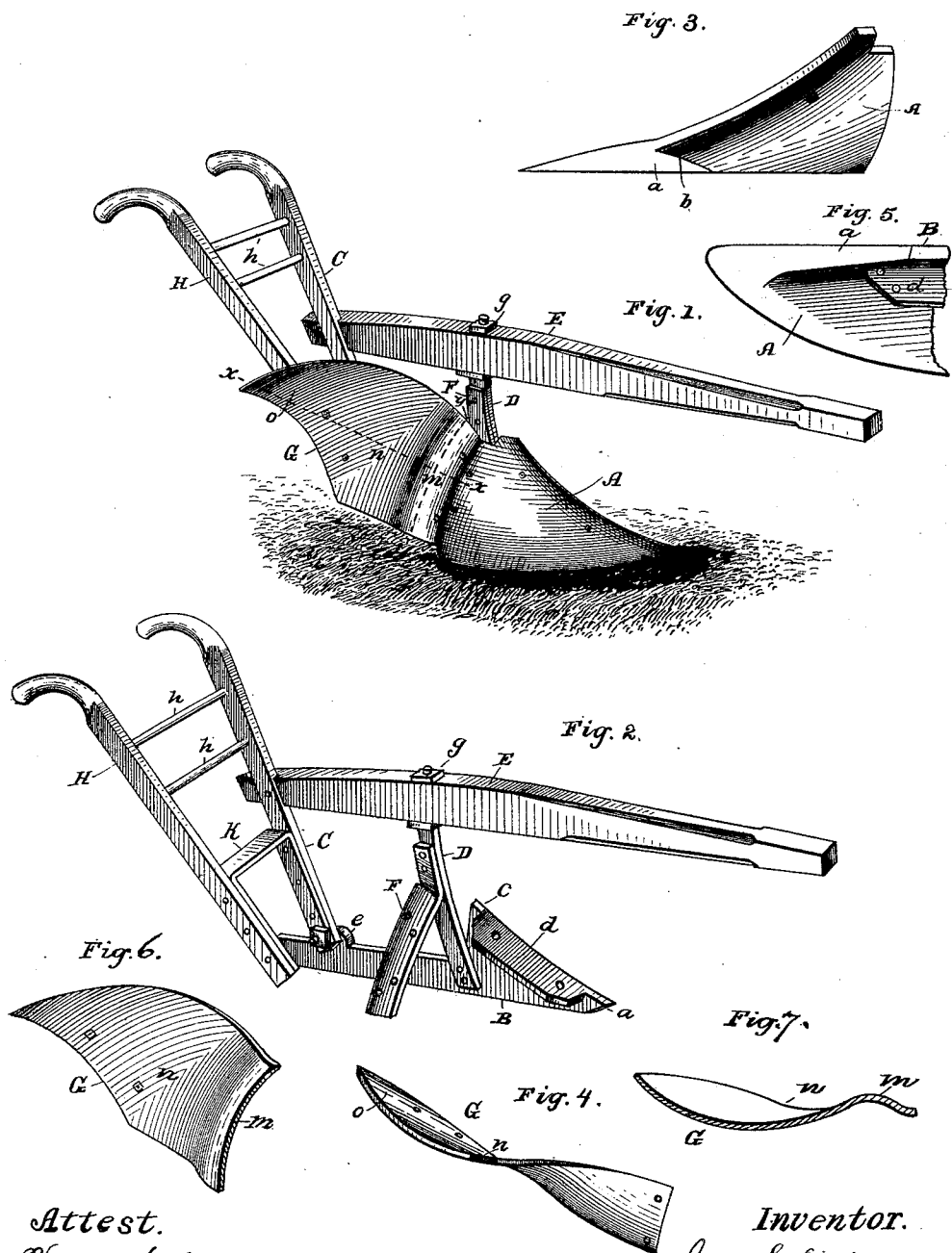


(No Model.)

J. L. DYKES.  
PLOW.

No. 415,409.

Patented Nov. 19, 1889.



Attest.  
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Att'y

# UNITED STATES PATENT OFFICE.

JAMES L. DYKES, OF UNIONTOWN, ALABAMA, ASSIGNOR OF ONE-HALF TO  
BEVERLY F. HARWOOD, OF SAME PLACE.

## PLOW.

SPECIFICATION forming part of Letters Patent No. 415,409, dated November 19, 1889.

Application filed April 19, 1889. Serial No. 307,815. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES L. DYKES, a citizen of the United States, residing at Uniontown, in the county of Perry and State of Alabama, 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.

This invention relates to improvements in plows; and it has for its object to provide a plow peculiarly adapted to break up the ground thoroughly, particularly tough black prairie soil and waxy land; and it consists of the parts and combinations of parts hereinafter described and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a perspective view of my improved plow; Fig. 2, a perspective view of the frame of the same; Fig. 3, a side elevation of the point, taken from the landside; Fig. 4, a view of the mold-board, taken from its bottom edge; Fig. 5, a view from the bottom of the plow-point; Fig. 6, a sectional view on the line  $y y$ , Fig. 1, and Fig. 7 a longitudinal section on the line  $x x$ , Fig. 1.

Similar letters refer to similar parts throughout the several views.

A represents the point of the plow, on the landside of which is formed an extension  $a$ , having a flat under surface, and which extends rearward from the extreme front end of the point a suitable distance to meet the landside-bar B. The extension  $a$  is formed with a flat under surface and tapers off toward the front end of the point A, and finally merges in the same at the extreme front end or edge, while the rear end of the extension, which is of the same thickness as the landside-bar, is cut away, so as to form a V-shaped notch  $b$  between the body of the plow-point and the end of the extension, into which the front end of the landside-bar B fits. The landside-bar is tapered off or brought to a wedge-shaped end, as at  $a'$ , in order to fit in the notch  $b$  accurately, thus practically making the bar and extension as strong as though made of one piece of metal. The front end of the landside-bar is also widened to form a comb  $c$ , the

upper edge of which curves upward to conform to the shape of the under surface of the plow-point which rests on said comb. The landside-bar extends rearward beyond the point of attachment of the landside-handle C, and is made longer by six or eight inches than the landside-bar of any type of plow with which I am familiar. The object of this lengthening of the bar is to facilitate the working of the plow in prairie land, make the plow run easy and true, and reduce the strain on the operator. To the upper edge of comb  $c$ , at one side thereof, is welded or otherwise rigidly secured a flange  $d$ , which follows the curve of the under surface of the point and projects from the comb at an acute angle, and at a suitable distance from the rear end of the landside-bar an ear  $e$  is formed, to which the lower end of the landside-handle  $f$  is securely bolted.

The beam-bar D is securely bolted or welded to the landside-bar B just in the rear of the comb  $c$ , and extends upward, curving slightly forward to the beam E of the plow, through which it passes and is secured by a tap-nut  $g$ , run on its screw-threaded end.

To the beam-bar D the upper end of a brace F is rigidly secured, either by bolts or welding, and then is bent outward from the beam-bar at an acute angle and bent or inclined forward—that is, its face is inclined on one side edge (the rear) higher than the other. To this brace the front end of the mold-board G and the rear end of the point A are bolted, with their edges joining, said brace being provided with a suitable number of bolt-holes, and said point and mold-board having countersunk openings corresponding thereto drilled therein. The point is also rigidly bolted through countersunk openings along upper its edge to the inclined flange  $d$ .

The mold-board handle H is securely bolted to the under side of the mold-board, and it and the landside-handle are joined by a couple of rungs  $h$  near their upper ends, while an inverted-U-shaped brace K is bolted between its lower ends by the bolts which secure the handles to the landside-bar and mold-board. Thus it will be seen that the plow is entirely clear beneath, there being no obstruction of any kind beneath the plow to

clog and cause the plow to run unevenly or throw it out of the ground, as plows having straight braces are liable to do.

The mold-board is of a peculiar construction, in order to thoroughly break up the furrow-slice and throw up a high bed. Immediately at the rear of the front edge of the mold-board, where it joins the point, my mold-board is formed with a bulged or convex surface *m*, which is bulged transversely to the surface of the mold-board, or parallel to the front edge of the same, upon a vertical or inclined axis, as well as longitudinally to the mold-board or upon a horizontal axis, said bulge *m* having thus a double or combined convexity, being bulged transversely to the mold-board and bulged outward at its middle. From the bulge *m* the mold-board has a sweep down, as at *n*, which causes the furrow-slice to break, and a rising twist upwardly and outwardly, as at *o*, which catches the slice, and as it forces it on the bed pulverizes it thoroughly.

In operation the furrow-slice is forced up the plow-point and reaching the center of the bulge or convexity of the mold-board the latter then, owing to its downward sweep, breaks the slice, and it is caught by the rising twist, which, as it forces it on the bed, pulverizes it thoroughly.

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

1. In a plow, a mold-board formed with a transverse or vertical convex bulge near its front edge, a concave depression to the rear of said bulge, and a rising twist which extends upward and outward from said depression, substantially as described.

2. In a plow, a mold-board formed with a bulged or convex surface *m* at or near its

front portion, said bulge or convexity being formed sloping to the front and rear, and elongated, or with a more gradual slope in a vertical direction, a depression to the rear of said bulged or convex surface, and a rising twist which extends upward and outward from said depression, substantially as described.

3. In a plow, the combination of a landside-bar having the curved comb *c* formed on its front end, forming a seat for the point of the plow, an upright beam-bar secured at its lower end to said landside-bar, a curved brace secured at its upper end to the upper portion of said beam-bar, and extending from and downwardly at an angle thereto, and having its upper surface inclined forwardly, and a mold-board and point secured to said brace at their meeting edges, substantially as described.

4. The combination, in a plow, of the point provided with the extension *a*, said extension having a V-shaped notch at one end, the landside-bar having the curved comb and tapered front end, the curved flange rigidly secured to said comb, the upright beam-bar, the brace having one end secured to said bar and its other end extending outward therefrom at an acute angle, and its upper face inclined from side edge to side edge, the mold-board, the beam, the handles secured to said landside-bar and mold-board, and a U-shaped brace secured between the lower ends of said handles, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES L. DYKES.

Witnesses:

BERNARD HARMOND,  
J. P. HALE.