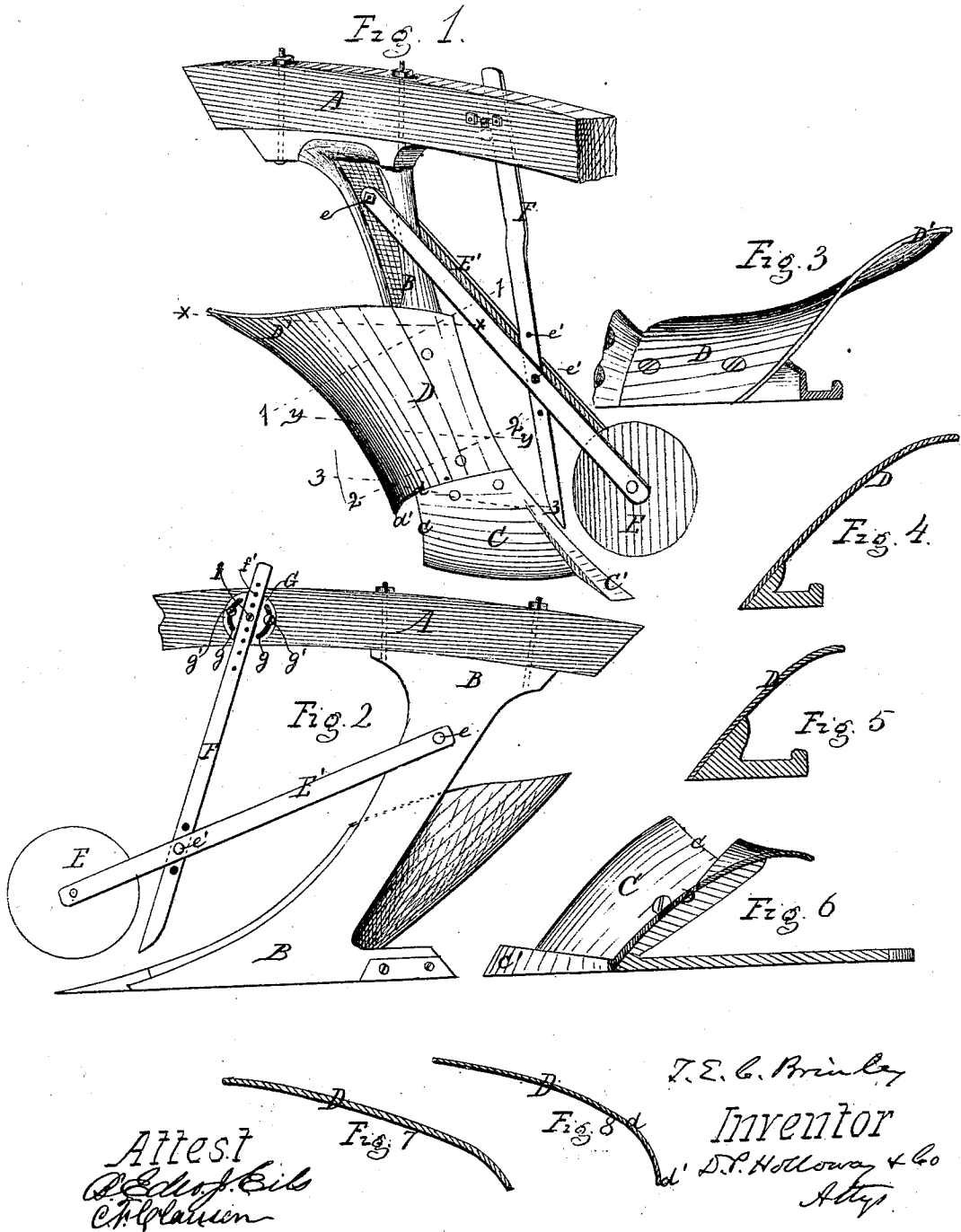


T. E. C. Brinley,

Flour.

No. 109,290.

Patented Nov. 15. 1870



UNITED STATES PATENT OFFICE.

THOMAS E. C. BRINLY, OF LOUISVILLE, KENTUCKY.

IMPROVEMENT IN PLOWS.

Specification forming part of Letters Patent No. **109,290**, dated November 15, 1870.

To all whom it may concern:

Be it known that I, THOMAS E. C. BRINLY, of Louisville, in the county of Jefferson and State of Kentucky, have invented certain Improvements in Plows; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawing, making a part of this specification, in which—

Figure 1 is a perspective view of a portion of a plow embodying my improvements. Fig. 2 is an elevation thereof, seen from the land-side. Fig. 3 shows a top view of the mold-board as it appears when attached to the plow-standard. Figs. 4 to 6, marked respectively *x x*, *y y*, *z z*, are horizontal sections of the mold-board on the lines in Fig. 1 indicated by corresponding letters. Figs. 7 and 8, marked respectively 1 1, 2 2, are sections of the mold-board on lines drawn at right angles to its land-side edge, and indicated by corresponding numerals in Fig. 1.

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

This invention relates to a plow which is more especially designed for work in what is termed "putty-land." As its name indicates, this land or soil is very tenacious, and at the same time so sticky that not one of the very many styles of plows now in use in various sections of the country can be successfully employed in it, because their mold-boards are not adapted to relieve themselves of the tenacious and sticky slice, and soon become choked or clogged by it, necessitating a frequent stoppage of the work for the purpose of scraping and cleaning the mold-board.

The main object of this invention is to provide a plow with a mold-board which, by reason of its peculiar shape, will relieve itself and scour as well in this sticky land as in ordinary soil; and my improvement consists, therefore, principally in the contour given to such mold-board. It consists, also, in peculiarities of arrangement of other devices used in connection with a plow, all as will be more specifically indicated in the subjoined description and claims.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

In the annexed drawing, A represents the beam of a plow, and B its standard. The flanges on the latter for the support of the share and mold-board are constructed to conform to their curvatures. The share C is provided with the point *C'*, as usual, and is jointed to the standard at the land-side hook fashion, in the manner shown in Fig. 2. Its forward or cutting edge forms an acute angle with the land-side, and may be slightly rounded, as shown, which rounded form is found to be of advantage in this sticky soil. From this line it curves gently upward to its junction with the lower edge of the mold-board, conforming at that line with the convexity of the latter. Its edge *c* leaves the cutting-edge at nearly a right angle, so as to converge toward the land-side in the manner shown.

The inclination of the mold-board D with reference to the line of draft does not differ materially from that in other plows, and its section in a vertical plane parallel to the land-side will show a regular concavity of its upper or outer surface from top to bottom, about like that of some mold-boards now in use.

I do not therefore claim any novelty of construction of my mold-board in these particulars. The point of difference between mine and all that have preceded it consists in the contour of the same in cross-section, which, on the line 2 2, drawn at right angles to its land-side edge, near its junction with the share, approaches the curve of a semi-parabola, which general contour is maintained up to its top, though that portion of the curve from *d* to *d'*, Fig. 8, is gradually flattened from the line of greatest convexity at the bottom toward the top of the mold-board, as clearly indicated by the various sections shown in the drawing.

It will be observed that the greatest convexity at the bottom or lower end of the mold-board begins at the point where the outer edge *c* of the share joins it, and that there the point marked *d'* is bent down to nearly touch the bottom of the furrow, which will cause it to leave a clean furrow behind.

The mold-board is gradually increased in width from bottom to top, and arranged at the usual angle to the land-side. Its upper edge, being made convex, by preference, in outline, gives to that part marked *D'* a pecu-

liar twist, which will permit the slice turned up to pass off gently without any pitching. The decided convexity of the mold-board near its outer edge permits the slice, on leaving the share, to drop on its edge, the mold-board pushing it up meanwhile until it reaches the pitching-point, when it is gently turned over upon the preceding slice.

E represents a revolving colter, and F an ordinary upright one, both of which I propose to use at the same time where it may be desirable or circumstances require it. Where both are employed the upright one will serve as a support to the bar or bars E', which carry the revolving colter. These bars will be pivoted by a bolt, *e*, to standard B, and supported by an adjustable bolt, *e'*, on the upright colter, to assume the inclined position clearly shown in Figs. 1 and 2, for the purpose of giving a shoving or pushing action to such revolving colter. This disposition makes it much more effective than one attached in the ordinary manner to an arm depending from the beam.

By shifting the bolt *e'* from one hole to another of the series provided in the upright colter the depth to which the revolving colter shall cut the soil can be regulated.

The upright colter F is adjustably secured to the beam of the plow on a circular disk, G, by a bolt, *f*, passing through the center of the disk, and one or another of a vertical series

of holes, *f'*, in the colter. The disk has a recess in its face for the reception of the colter, and a concentric slot, *g*, upon each side of this recess for the passage of bolts or screws *g' g'*, by which the disk is firmly clamped to the beam. By loosening them and turning the disk on the center bolt *f* the colter may be inclined more or less, as may be necessary to its proper operation.

Either one of the colters may be used separately on removing the other, a short bar or brace being provided to take the place of the upright one as a support for the revolving one when the latter only is employed.

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

1. The mold-board D, the cross-section of which approaches on line 2 2 of Fig. 1 in contour the curve of a semi-parabola, substantially as shown and described.

2. The combination and arrangement of the revolving colter E, bar or bars E', and upright colter F, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

T. E. C. BRINLY.

Witnesses:

JOHN WOLPERT,
WM. STINETT.