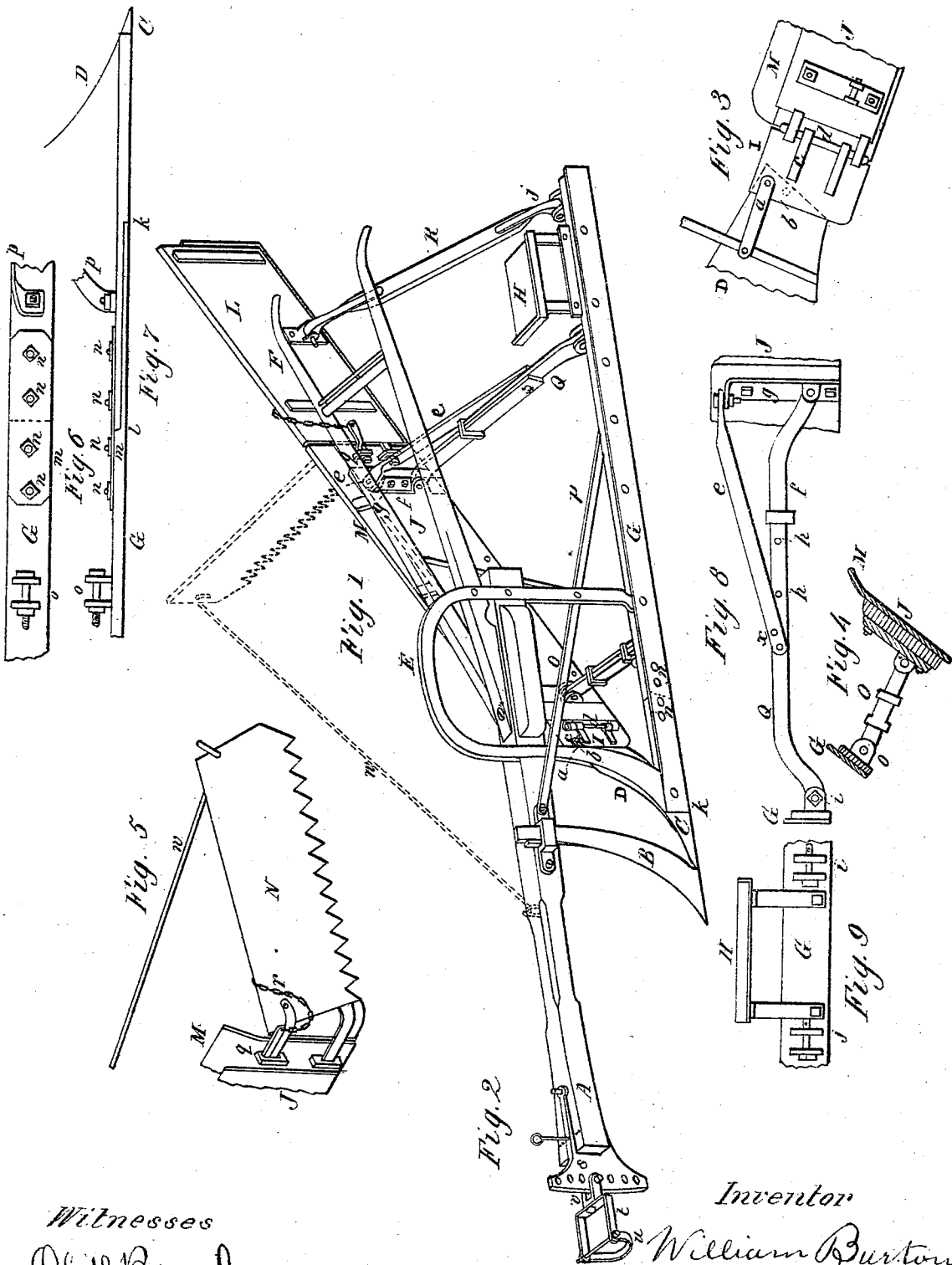


WILLIAM BURTON.

Improvement in Ditching Plows.

No. 123,613.

Patented Feb. 13, 1872.



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UNITED STATES PATENT OFFICE.

WILLIAM BURTON, OF LAKE, INDIANA.

IMPROVEMENT IN DITCHING-PLOWS.

Specification forming part of Letters Patent No. 123,613, dated February 13, 1872.

SPECIFICATION.

I, WILLIAM BURTON, of the town of Lake, in the county of Newton and State of Indiana, have invented certain new and useful Improvements in Grading and Ditching Plows, of which the following is a full description, reference being had to the accompanying drawing making a part of this specification, in which—

Figures 1 and 2 represent, in perspective, the ditching-plow with clevis attachment; Fig. 3, section showing the adjustable and hinged connection of the mold-board; Fig. 4, cross-section, showing the front brace of the adjustable mold-board; Fig. 5, section of rear end of the adjustable mold-board with harrow attachment; Figs. 6 and 7, details, showing the mode of attaching and detaching the land-side; Fig. 8, cross-section, showing the rear brace of the adjustable mold-boards; and Fig. 9, section of land-side with platform attached.

The object of my invention is to construct a plow with an adjustable extension to the mold-board, so that it can be used for grading or ditching without carrying belts or gearing of any kind; and its nature consists in the application of two or more adjustable extensions to the mold-board so that they can be adjusted toward or from the land-side, and with reference to the front or fixed mold-board; and also so that they will yield or move up and down to conform to the cutting of the plow; in the application of a platform to the land-side to enable the operator to ride and keep the extended land-side down; in the application of a harrow or finisher to the rear end of the adjustable mold-board; and in an improvement in the clevis, so that the tipping of the plow sidewise will not affect the draft.

In the drawing, A represents the beam; B, colter or small front plow; C, plowshare; D, mold-board; E, curved brace; F, plow-handles; G, extended land-side; H, platform mounted thereon; I, front section of the adjustable mold-board; J, main section; L, additional section, to be used or not, as occasion requires; M, upper section or part of mold-board J to give said mold-board a concave face; N, harrow or smoother; O, front face of the adjustable mold-board; P, land-side brace extending forward to the beam; Q, rear brace of mold-board; R, detachable brace for supporting the additional section when used; a, brace for support-

ing the connection between the mold-boards D and I; b, pivotal bolt or pin; c d, hinged connection between the mold-boards I and J; e, upper arm of the rear brace Q; f, lower arm; g, hinged connection for attaching the brace Q to the rear end of the mold-board J; h, holes, by means of which the brace Q f can be extended or contracted; i, hinge on land-side; j, hinge on land-side for brace R; k, joint in the facing of the land-side; l, joint in the body of the land-side; m, plate over said joint; n, bolts; o, land-side hinge for brace O; p, permanent brace between the land-side and mold-board D; q, hooks and eyes for connecting additional mold-board L or harrow N with the mold-board J; r, key for locking the same; s, clevis; t u, links on clevis; v, swivel-coupling; w, brace-rod, connected with the beam for holding the outer end of the harrow N in position; x, holes at the inner end of the brace-rod e, by means of which the vertical position of the mold-board j is regulated. As I use from six to eight horses to operate this plow, all of its parts are necessarily made strong. The plow C D is made somewhat larger than ordinary plows, and is strongly braced. The curved brace E, to which the beam is attached, passes from the front of the plow around to the back end of the beam, and from there to the land-side, which gives a strong connection for the beam and a strong support for the extended land-side. I also apply an additional brace, P, from the beam to the land-side back of E, as shown in Fig. 1. The first section of the adjustable mold-board, as shown, is made short; but it may be made longer, if desired, and, if made longer, an additional brace will be needed. I prefer to make it short, as shown. It is connected with the mold-board D by the single bolt b, supported at its inner end by the brace a so as to give the adjustable mold-board an easy vertical movement. It is adjustable up and down relative to the mold-board D by holes, shown in dotted lines at Fig. 3. The mold-board J is attached to I by means of the hinge c d, shown also at Fig. 3, by means of which said hinge the board J may be swung in or out by the adjustable braces O Q. I usually give the board J a backing of wood so as not to make it heavy, and at the top I apply a separate section, m, or curve over the top of the face-plate, as shown at Fig. 4, to pre-

vent the dirt from falling over when the mold-board is in an elevated position. The braces O Q are made adjustable by means of clasps and pins, as shown. The brace Q is provided with an upper arm, *e*, and a series of holes, *x*, by means of which the position of the board J is regulated so as to insure its proper operation when the plow is worked on the surface or down in a deep ditch. When an unusual width of ditching or grading is required I attach an additional mold-board, L, to J by means of the hooks and eyes *g* and key *r*, which is supported from the land-side by the brace R, which said brace is not adjustable in length, but may be made so, if desired. When grading for hedge, roads, &c., or finished work is required, in place of L, I attach the harrow or smoother N, and support it from the beam by the brace-rod *w*. Its position, as shown at Fig. 5, is at or nearly at right angles with the board J, and its lower edge is inclined backward so as to neatly finish the work. It will not be necessary to attach this smoother, except at the last round of the plow. The platform H is attached near the rear end of the land-side; and it not only supports the operator, but is very important in holding the land-side down so as to afford a proper support for the braces Q or R, and insure the proper carrying out of the dirt by the mold-boards. The part *s* of the clevis is attached to the beam in the usual manner, and is provided with the usual means for regulating the line of draft. The coupling *v* is attached to this by a bolt, and its front end made to swivel with the link *t*. The links *t u* are connected together by a bolt, shown at Fig. 2, so as to make them flexible. By this construction of the clevis and its connections with the

double tree or draft-bar the draft is not affected by any rocking movement of the plow. The braces O, Q, and R are connected with the land-side and mold-boards by hinged connections *o*, *i*, *j*, and *g*, as shown, so that the vertical movements of the mold-boards shall not affect the land-side.

By making and attaching the share C in the usual way it can be changed or sharpened at pleasure; and by making the extended land-side in two or more sections it is easily repaired when broken, as it can be taken apart at the joints *l* and *k*.

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

1. An adjustable mold-board composed of three or more sections, substantially as and for the purposes specified.

2. The combination of the extended land-side with the adjustable mold-board, made in two or more sections, and the braces O, Q, and *e* for adjusting the vertical and lateral pitch of the mold-board, substantially as specified.

3. The combination of the mold-board I with the fixed mold-board D, when connected by a single pivot or pin, *b*; so that the rear mold-board may follow the inequalities of the ground without disturbing the plow C D, substantially as described.

4. The harrow or finishing section N in combination with the adjustable board J, substantially as and for the purposes specified.

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mark.

Witnesses:

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