

UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN ADJUSTABLE LANDSIDES OF PLOWS.

Specification forming part of Letters Patent No. 7,994, dated March 25, 1851.

To all whom it may concern:

Be it known that we, GEORGE HEFFLEY, SAMUEL CONRAD, and JAMES WIGLE, of the town of Berlin, in the county of Somerset and State of Pennsylvania, have made certain new and useful Improvements in Plows, which are described as follows, reference being had to the drawings hereunto subjoined, and making part of this specification.

The nature of our improvements in plows consists in the arrangement, combination, and use of a separate adjustable heel and rest attached to the land-bar for the purpose of regulating and governing the depth of the furrow at pleasure with great ease and exactness, and which prevents the wearing away of the land-bar, as is experienced in the ordinary plow, and, in addition, entirely supersedes the necessity of the usual separate land-bar; also, in extending the mold-board on the inside thereof back to form a flange or support upon the reversible bar-point and landside, and to which they are secured; likewise, in forming upon the two sides of the reversible bar-point transverse long and short notches, into which fit corresponding long and short projections or locks formed on the upper side of the landside and under side of the flange or extension of the mold-board, for the purpose of more effectually locking, holding, and securing the reversible bar-point from moving in any direction after being adjusted.

A more particular description of the features above noticed will be found hereinafter.

Figure 1 is a perspective view of the inner, under, and front sides of the mold-board, the land-bar, reversible bar-point and share being removed. Fig. 2 is a perspective view of the land-bar, the reversible bar-point being in its proper position upon the land-bar. Fig. 3 is a perspective view of the land-bar, the reversible bar-point being removed and the adjustable heel and rest being lowered. Fig. 4 is an elevation of the inside of the land-bar, showing the adjustable heel raised. Fig. 5 is a view of the land-bar and adjustable heel and rest inverted. Fig. 6 is a perspective view of the share detached. Fig. 7 is a plan of the reversible bar-point. Fig. 8 is a view of the opposite side of the same. Fig. 9 is a perspective view of the adjustable heel and rest detached. Fig.

10 is an elevation of the landside of the plow with the parts combined.

The references used in the specification designate the same parts in the several figures.

The mold-board A, the land-bar B, the reversible bar-point C, cutter D, and share E are made and arranged in the manner represented in the drawings. The cutter D is fitted in a recess formed in the landside of the sheth D' and front edge of the mold-board, and secured by a screw-bolt, *d*, and nut *d'*, its inner edge resting against a shoulder, D², formed by the recess.

E is the share, its front end fitting into one of the oblong notches G in the reversible bar-point C, and its outer or back end resting upon and supported by a projection, E', cast on the lower corner of the mold-board, and secured by a screw-bolt and nut.

F is a flange cast on the sheth, by which it is bolted to the beam in the usual manner.

The reversible bar-point C is provided with oblong notches G near each end and equidistant from the center and on opposite sides, as represented, into which the lower corner of the cutter and inner front corner of the share respectively fit. This bar-point is also provided with oblong mortises I I on each side of its center, longitudinally through which the confining screw-bolt *b* passes, for allowing it to be moved forward as it wears away and reversed and inverted in its position when desired.

J is a depression formed in the land-bar, on the under side thereof, extending from near the point back beyond the confining screw-bolt, for reducing the draft of the plow or friction thereon.

K is a bead or rib cast on the upper edge of the land-bar, against which the edge of the bar-point rests, for keeping it in its proper position.

a is the opening in the land-bar through which the confining-bolt *b* passes.

c' is an opening or hole in the flange or projection of metal, U, through which the confining-bolt *b* also passes to receive the nut *f* on its upper end, which nut screws against and upon the flange or projection U, and thus confines the land-bar and bar-point to the mold-board.

L is the adjustable heel and rest, made of

steel or wrought-iron, for giving the furrow a greater or less depth. It is fitted to the rear portion of the land-bar in a recess, M, formed therein to receive the vertical side of the said heel, and secured by means of a screw-bolt, N, passed through a slit, N', in the land-bar, to receive a nut, o, on its inner end, and also by a hook, P, cast on its front end and projecting upward and hooking over a similar-formed hook, Q. The bottom or horizontal portion of this adjustable heel is made to taper from its rear end to the hook P, and is of a width at its rear end about twice the thickness of the land-bar, to form a proper support for the plow in elevating its rear end to increase the depth of the furrow. It is also turned at right angles and extends to near the top of the land-bar, and equal in length to its bottom, and serving the double purpose of saving the land-bar from wearing away by friction, and dispenses with the usual separate land-bar of the landside.

R is a plate, being a continuation of the heel L, and is secured in front thereof by dovetailing a portion or projection, R', of the land-bar in a notch or opening in said plate and securing it firmly by a screw, S. On the end of this plate R next to the hook P is cast another hook, Q, in a reverse position to the hook P, and over which the hook P catches or laps, and upon which the heel turns in elevating or depressing its rear end to govern the depth of the furrow.

T is a set-screw secured in a female screw formed in a lip or projection, T', on the inside of the land-bar, for the purpose of preventing the heel rising, in addition to the screw-bolt N, when depressed to elevate the rear end of the plow, by screwing the said set-screw upon and against the bottom or horizontal portion of the heel.

U is the flange or extension of metal, cast with the mold-board on the inside thereof, and projecting back, forming a support and seat for the mold-board upon the reversible bar-point and land-bar, and to which the latter are secured by the confining screw-bolt b.

ee are short notches near the ends of the bar-point and on both sides of the same, which ad-

mit the short projections t t formed on the front end of the land-bar, for preventing roots, &c., getting between the bar-point and point of the land-bar.

cc are long notches extending entirely across the bar-point, in the middle thereof, into which fit corresponding locks or projections, ww, on the upper side of the land-bar and bottom of the flange or extension U as the bar-point is moved forward or renewed, and which also hold the bar-point securely, in addition to the short notches e and projections t t.

When it is desired to deepen the furrow the screw-bolt N is loosened and the heel depressed by the set-screw T, which elevates the rear portion of the plow, and thus causes it to enter deeper into the soil. The screw-bolt N is then clamped, and the set-screw T, being in contact with the horizontal portion of the heel, prevents it rising.

Having thus described our improvements in the plow, we wish it to be understood that we do not claim the employment of an adjustable plate for elevating the rear portion of the plow to regulate the depth of the furrow; but

What we do claim as our invention, and desire to secure by Letters Patent, is—

Providing a right-angled heel-plate, L, with a hook, P, for the purpose of interlocking with a hook-shaped projection, Q, attached to the land-bar, forming a hook-joint, said heel-plate L forming the bottom and side of the land-bar, and having its rearward portion susceptible of vertical adjustment by means of a screw, T, and, when adjusted, being clamped by a horizontal screw-bolt, N, its shank being placed in a segmental slot to admit of its moving with the heel-plate, as described.

In testimony whereof we have hereunto signed our names this 26th day of June, in the year of our Lord 1849, before two subscribing witnesses.

GEORGE HEFFLEY.
SAMUEL CONRAD.
JAMES WIGLE.

Witnesses:

ANANIAS HEFFLEY,
AARON MILLER.