

(No Model.)

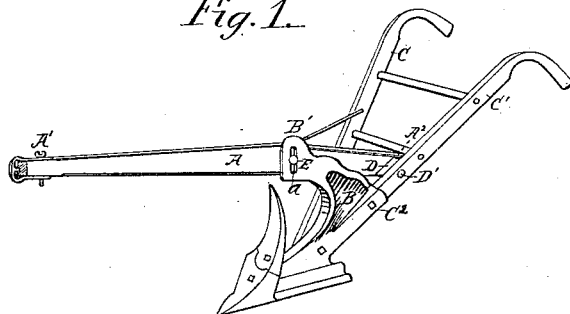
J. B. BROWN.

PLOW.

No. 342,896.

Patented June 1, 1886.

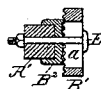
*Fig. 1.*



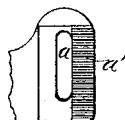
*Fig. 3.*



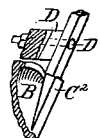
*Fig. 2.*



*Fig. 4.*



*Fig. 5.*



Witnesses:

*W. B. Dodge.*

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# UNITED STATES PATENT OFFICE.

JAMES B. BROWN, OF NEW YORK, N. Y.

## PLOW.

SPECIFICATION forming part of Letters Patent No. 342,896, dated June 1, 1886.

Application filed August 27, 1885. Serial No. 175,416. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES B. BROWN, a citizen of the United States, residing in the city of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Plows, of which the following is a specification.

My invention relates to that class of plows in which the beam is vertically adjustable; and the invention consists in an improved adjusting plate and standard-head, as hereinafter described.

Hitherto adjusting-plates have been made with ratchet or saw-shaped teeth which extend across the plate. The sharp angles of the base of these teeth are objectionable, as it is well known that iron castings are defective and apt to break at all sharp or V-shaped angles, which defect is cured by changing to a U shape. Again, said teeth project from and extend all the way across the plate. This gives to the plate a series of alternate thickness and thinness in the metal, with the result of unequal contraction in cooling and hardness of the plate where it is the thinnest. Thus such plates, on account of the unequal contraction, will be warped, and when forced against the standard-head take an uneven bearing and break at the base-angle of the teeth.

The object of my invention is an adjusting-plate and standard-head which will be free from these defects, and durable. I attain this object by constructing the adjusting-plate and plow-standard head as shown in the accompanying drawings, in which I have also shown it as applied to the improved plow for which Letters Patent were granted to me on the 24th day of March, 1885, No. 314,425.

Figure 1 is a perspective view of a plow in which my invention is embodied. Fig. 2 is a sectional detail of the plow-beam, adjusting-plate, and standard-head, taken on line *x x* of Fig. 1. Fig. 3 is a front view of the adjusting-plate. Fig. 4 is a back view of standard-head, showing slot through which the connecting-bolt passes, and a series of corrugations located on one side of the slot, corresponding to the ones in Fig. 3. Both Figs. 3 and 4 are correspondingly enlarged from Fig. 2. Fig. 5 is a sectional detail of the plow-beam, taken on line *y y* of Fig. 1.

Similar letters refer to similar parts in the views.

A is the plow-beam.

A' is the plow-head.

A<sup>2</sup> is the rear end of the plow-beam, pivoted to the handle C'. 55

B is the standard, which terminates in an enlarged head or plate, B'. This head has a wide vertical slot, *a*, at its center, and on its back face a series of horizontal corrugations, *a'*, on one side of the slot—say that toward the plow-head. The ridges of these corrugations project above the other side of the plate *a'*, which is a flat surface and gives a bearing to a similar surface on the adjusting-plate, as hereinafter set forth, all of which is shown in Figs. 2, 3, and 4. 65

B<sup>2</sup> is a plate, which fits on the front side of that portion of the plow-beam opposite the standard-head. It has top and bottom flanges projecting from its rear face, so as to fit on or clasp the beam A between them. In its center it is pierced by a bolt-hole, *b'*, which is a little less in diameter than the width of the slot in the standard-head B'. One side of the front face of this plate—say that toward the plow-head—has a series of corrugations which correspond to those on the rear face of the standard-head B', so that the ridges of the one will enter the hollows of the other. These corrugations are formed in the plate—that is, the tops of their ridges are even or a little below that portion of the plate on the opposite side, *b'*, which is a flat surface and corresponds to the surface before mentioned on standard-head B'. It will be seen that by this construction the plate is much stronger than if the corrugations were carried all the way across the plate and standard-head, as the plate would be deficient in strength at the bottom of its hollows and be apt to break, as is proved by adjusting-plates which are cut across by a series of ratchet or saw teeth. When the plate B<sup>3</sup> is brought into connection with the head B', the two surfaces *a'* and *b'* bear the one on the other, and thus prevent any irregular bearing of the corrugations and consequent breakage of the plate when the parts are forced together by the bolt and nut, as hereinafter described. 75 80 85 90 95 100

D is a block interposed between the handle C' and the beam end A<sup>2</sup>.

D' is a bolt, which connects the beam end A<sup>2</sup> to the handle C' and forms a pivot for the beam to turn on, as is shown.

E is a bolt, which passes through the slot a in the standard-head, the bolt-hole b in the plate, and the beam A, and is provided with a nut for securing all of these parts together. It will be seen that the beam is pivoted to the handle C' at A<sup>2</sup>, and that its free end or plow-head A' can be raised or lowered.

When it is desired to make the plow cut deeper, the nut on the bolt E is loosened sufficiently to allow the corrugations on the plate B<sup>2</sup> and those on the standard-head B' to clear, and the plow-head is raised to the required position and secured by again tightening the nut. In making this adjustment the corrugations at the bottom of the plate B<sup>2</sup> will mesh into the corrugations at the top of the standard-head B'. When it is required to cut a shallower furrow, the nut is loosened and the

above operation is reversed, when the corrugations at the top of the plate B<sup>2</sup> will mesh into the ones at the bottom of the standard-head B'.

What I claim is—

The combination of the standard-head having bearing-face divided into two parts, one of which is provided with teeth or corrugations and the other has a flat surface depressed below the teeth, and the plate having its face divided into two parts, one part having teeth or corrugations and the other part plain and above the teeth, the plain surface bearing on the plain surface of the standard-head and the teeth interlocking with the teeth on the same, substantially as set forth.

JAMES B. BROWN.

Witnesses:

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J. W. DOUGLASS.