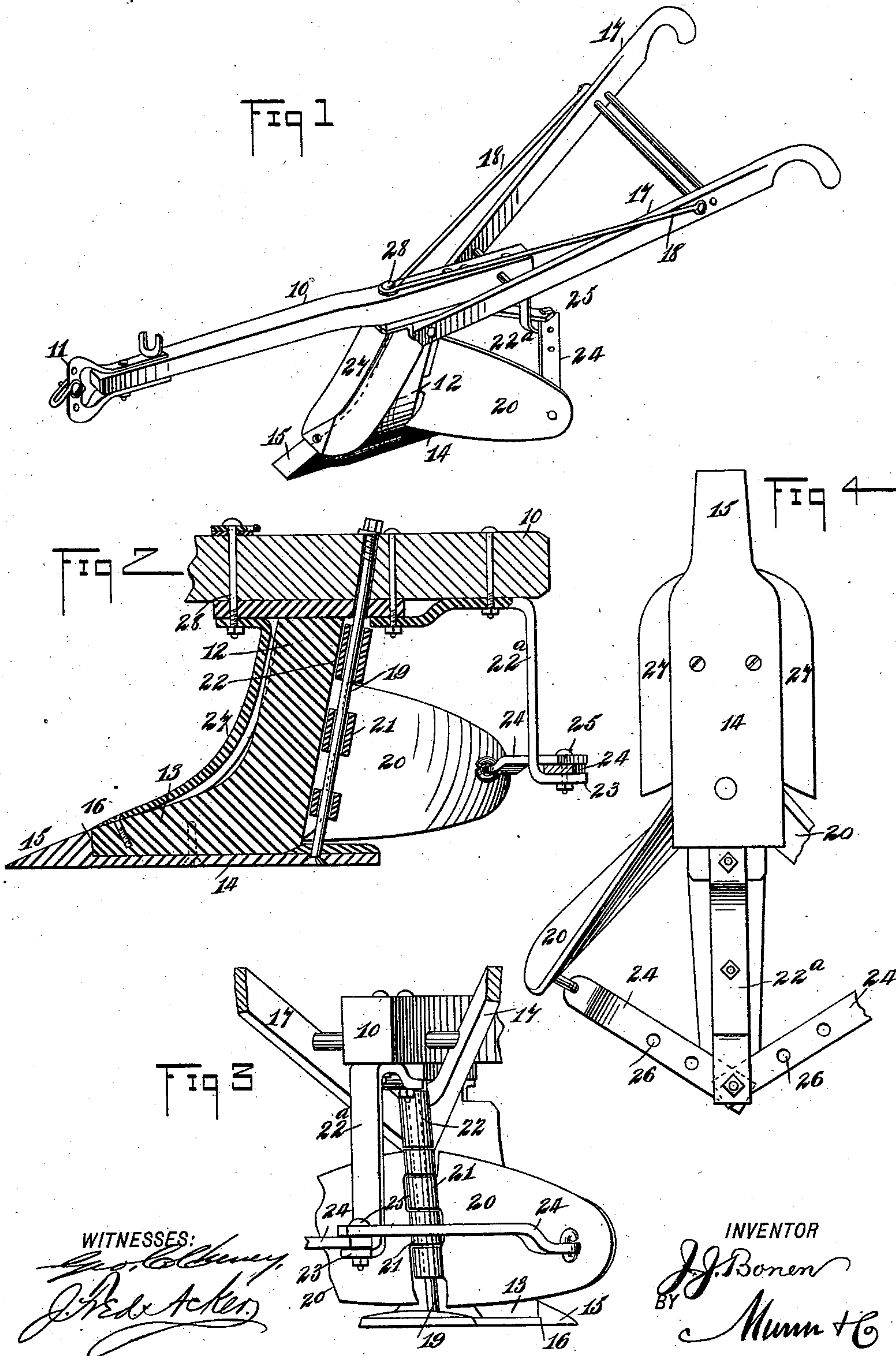


(No Model.)

J. J. BONEN.
PLOW,

No. 556,247.

Patented Mar. 10, 1896.



WITNESSES:
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JOSEPH J. BONEN, OF IRON MOUNTAIN, MICHIGAN.

PLOW.

SPECIFICATION forming part of Letters Patent No. 556,247, dated March 10, 1896.

Application filed August 2, 1895. Serial No. 558,037. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH J. BONEN, of Iron Mountain, in the county of Dickinson and State of Michigan, have invented a new and useful Improvement in Plows, of which the following is a full, clear, and exact description.

My invention relates to an improvement in plows, and especially to a plow adapted for the cultivation of the potato-plant, or for drilling for the planting of the same, or for digging the potatoes; and the object of this invention is to provide a plow fitted with adjustable wings or moldboards, so that it may be accommodated to growing plants, and, furthermore, to provide for a shovel which will be detachable from the share and stock of the plow, so that the plow may be used for ordinary purposes when desired.

Another object of the invention is to construct the share and stock in such manner that in new ground the weeds will be cut or severed as the plow is drawn forward.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of the plow. Fig. 2 is an enlarged sectional view through the stock, the foot and moldboard and a portion of the beam, one of the wings being shown in side elevation. Fig. 3 is a partial rear view of the plow, and Fig. 4 is a bottom plan view of the foot and parts connected therewith.

In carrying out the invention the beam 10 of the plow may be of any approved construction and is provided with an adjustable clevis 11. The stock 12 of the plow is bolted or otherwise secured to the beam near the heel, and it is flaring at the base and somewhat horizontal, forming a share 13; and in the further construction of the stock, the stock including its share is provided with a front central cutting-edge, in order that any weeds that may be encountered in the process of plowing may be readily severed.

The foot 14 is bolted or otherwise secured to the bottom of the share of the stock and

extends a predetermined distance at the rear of the stock on its share and in front of the same, the forward portion of the foot of the plow being beveled upon its upper face, forming a point 15 and a shoulder 16 back of the point, against which the forward end of the share of the stock has bearing; but the top of the point forms a continuation of the forward incline of the share, and instead of being pointed it is flattened and sharpened at its forward end.

The handles 17 are bolted or otherwise secured preferably to the upper portion of the stock and are likewise supported from the beam by means of suitable braces 18. A pin or post 19 is passed through the beam and through the projecting rear portion of the foot of the plow, following the lines of the rear edge of the stock. This pin is adapted to carry two wings or moldboards 20, and the wings or moldboards are provided with knuckles 21, whereby they are pivoted on the said pin or post, and above the pivotal connection of the moldboards or wings with the said post a roller 22 is mounted on the said pin or post, which effectually prevents the wings or moldboards from riding upward. These wings or moldboards extend outward in opposite directions and are adjustable to and from one another. The adjustability of these moldboards is accomplished preferably by securing to the under face of the heel of the plow-beam 10 a bracket 22^a, the said bracket being an angular one, and the vertical member is carried downward and is provided with a foot 23 at its lower end extending in a rearwardly direction.

A link 24 is attached to the inner face of each wing or moldboard near its outer end, and these links are carried over the foot 23 of the bracket 22^a, and a bolt 25 is passed downward through aligning apertures 26 in the said links, the links having any desired number of these openings or apertures 24 made therein, as shown in Fig. 4.

A shovel 27, which is curved substantially the same as the curvature of the front of the plow-stock and the share, is adapted to be located in front of the cutting-edges of the latter parts when the plow is adapted to be used for digging potatoes. The shovel is inclined transversely in opposite directions

from the center and is secured to the under face of the beam by means of a bolt 28 or its equivalent, and the said bolt may be employed as one of the attaching mediums for the stock of the plow. The lower end of the shovel is provided with a seat on the share immediately back of the point, and when the shovel is in position on the plow there will be a gradual ascent from the point to the upper end of the shovel.

Thus it will be observed that by removing the wings or moldboards the plow may be used advantageously for many purposes, or may be used in the usual manner by simply removing the left-hand moldboard, and by reason of the adjustment of the wings or moldboards the plow may be used for the cultivation of potato-plants or the like and accommodated to different widths of rows or to different sizes of plants, whereas when the potatoes are to be dug the shovel may be expeditiously and conveniently added, and as the shovel constitutes virtually a portion of the point of the plow the potatoes when being dug will not be liable to be cut or marred, the potatoes being received on the shovel and conducted to the right and to the left of the plow to an engagement with correspondingly-located moldboards. The shovel is of such width, as shown in Fig. 4, as to extend appreciably beyond the side faces of the stock of the plow.

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

1. In a plow, the combination with a beam, of a stock having a forwardly-projected lower portion, a foot secured to said forwardly-projected portion and having a point terminating in a shoulder, the shoulder lying against the front extremity of the stock, a shovel removably secured to the stock above the point of the foot, a post extending from the foot to the beam and at the rear of the stock, two wings formed with knuckles pivotally mounted on the post, a bracket depending from the beam, and an orificed plate carried by each wing and adjustably connected with the bracket, substantially as specified.

2. In a plow, the combination with a beam, of a stock, a foot secured to the stock and formed with a point, a post held vertically at the rear of the stock, two wings pivoted to the post, an orifice-plate pivoted to each wing, and a bracket depending from the beam and to which the plates are adjustably connected, substantially as described.

3. In a plow, the combination with a beam, of a stock having a forwardly-projected lower portion terminating in a plane vertical face extending at approximately right angles to the bottom of the lower portion, and a foot secured beneath said forwardly-projected portion and having a point at its front end terminating in a shoulder lying closely against the front extremity of the stock, the inclined surface of the said lower portion of the stock and the upper side of the point of the foot forming an unbroken line substantially as described.

4. In a plow, the combination with a beam, of a stock held thereto, a foot projecting rearward from the stock a post held vertically at the rear of the stock and out of contact therewith, the post being supported on the beam and on the projected foot, two wings pivoted to the post and projecting oppositely therefrom, a plate pivoted to each wing, and a bracket to which the plates are adjustably connected, substantially as described.

5. In a plow, the combination of a beam, a stock having a forwardly-projecting lower portion terminating in a vertical face, a foot secured to the bottom of the stock and having a point at its front end contiguous to a shoulder lying closely against the vertical face, the rear portion of the shoe projecting rearward from the stock, a post held at the rear of the stock and supported on the rear portion of the shoe and on the beam, wings pivotally mounted in the post and means for locking the wings at various adjustments, substantially as described.

JOSEPH J. ^{his} X BONEN.
mark

Witnesses:

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