R. JONES.

Plow.

No. 37,626

Patented Feb. 10. 1863.

Fig. 1

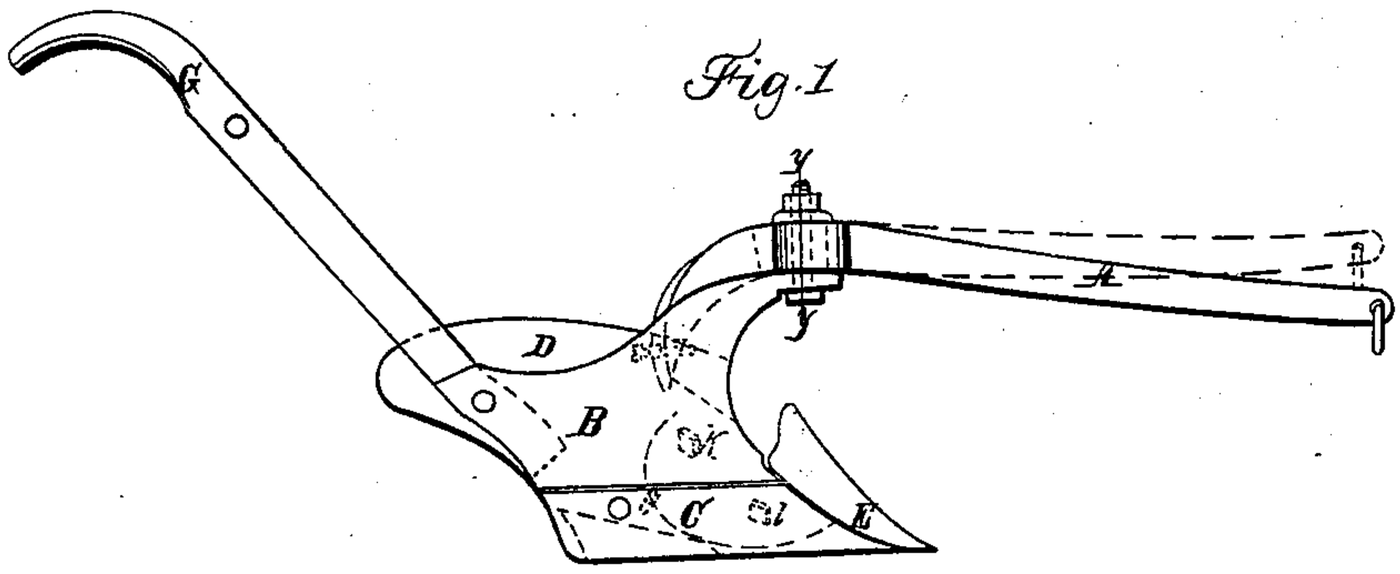


Fig. 2

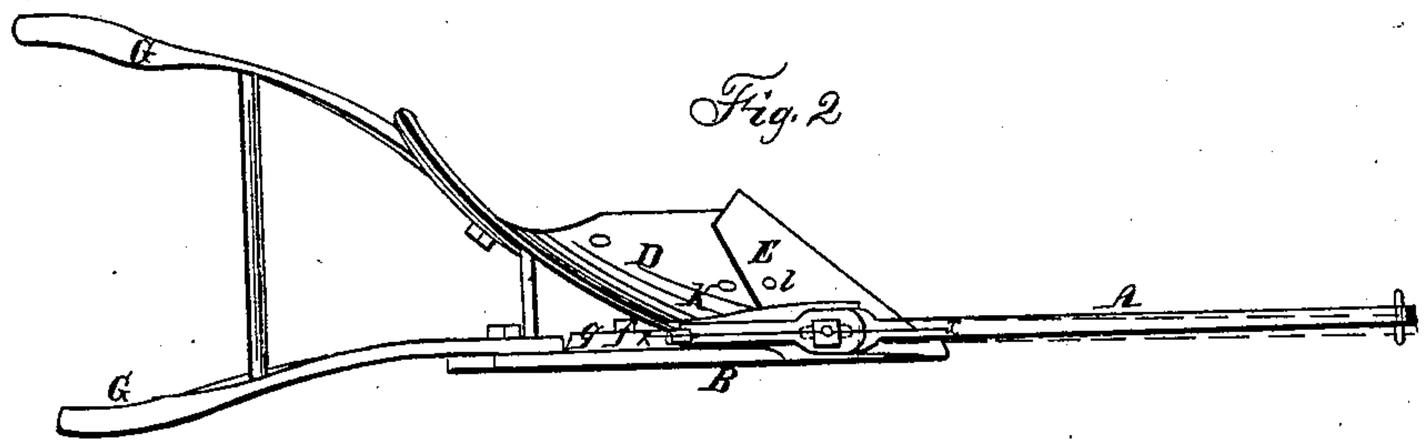


Fig. 3

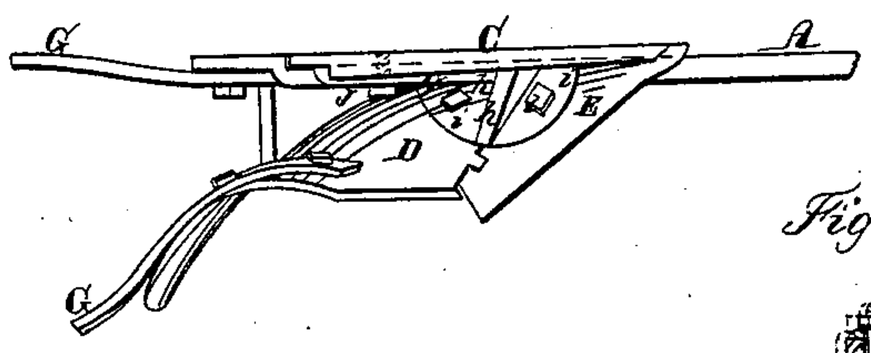


Fig 5

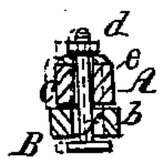


Fig. 4

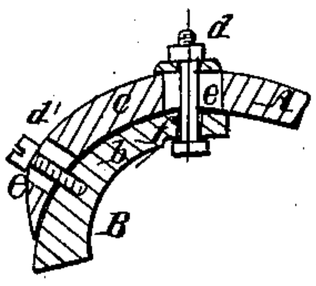
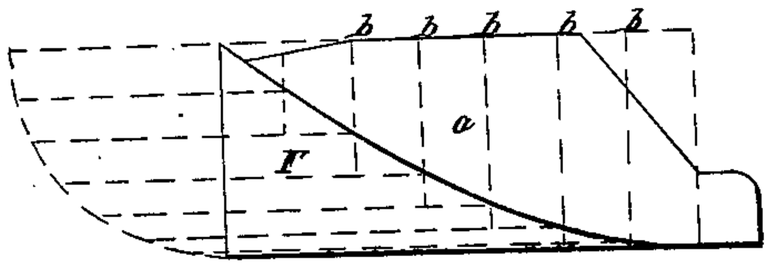


Fig 6



WITNESSES

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UNITED STATES PATENT OFFICE.

ROBERT JONES, OF WAYNESBURG, OHIO.

IMPROVEMENT IN PLOWS.

Specification forming part of Letters Patent No. **37,626**, dated February 18, 1863.

To all whom it may concern:

Be it known that I, ROBERT JONES, of Waynesburg, in the county of Stark and State of Ohio, have invented a new and Improved Plow; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side view of my invention; Fig. 2, a plan or top view of the same; Fig. 3, an inverted plan of the same; Fig. 4, a longitudinal vertical section of a part of the same, taken in the line *x x*, Fig. 2; Fig. 5, a transverse section of a part of the same, taken in the line *y y*, Fig. 1; Fig. 6, a diagram showing the manner in which the pattern for molding the mold-board is formed.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to a new and improved plow of that class which are provided with mold-boards for turning a furrow-slice.

The invention consists in a novel and improved manner of attaching certain parts of the plow together—to wit, the mold-board to the shank and the beam to the shank, as hereinafter set forth, whereby the mold-board may be readily detached, when necessary, and either a cast-iron or steel mold-board used on one and the same plow, and the beam rendered capable of being adjusted so that its front end may be more or less elevated in a vertical plane, and also capable of being adjusted laterally or in a horizontal plane, for the purpose of regulating the direction of the draft and adapting the plow to one, two, or three horses, as may be desired.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the beam of the plow, B the shank, C the landside, D the mold-board, and E the share. The mold-board D and share E may be considered as forming a continuous piece, and comprising a section or portion of a screw-thread or flange.

In order to explain clearly the form of the mold-board and share a plan or diagram of the pattern is shown in Fig. 6.

F represents a wooden semi-cylinder, or what was originally a semi-cylinder, with a spiral section removed or cut out its entire length, leaving a curved surface, *a*, which forms a perfect spiral, and will have, when a straight-edge is applied to it transversely at right angles to the axis of a cylinder of which F is a part, every point of its surface underneath the straight-edge in contact with it. In Fig. 6 the dotted lines *b* are drawn to show the application of the straight-edge, which may be applied to any part of the surface *a*, between its two ends, with the result above specified. After this spiral surface *a* is obtained the superfluous portions of the semi-cylinder F are cut away and the pattern is formed by which the mold is made for casting. By having the mold-board and share of this form the furrow-slice is cut and loosened and turned with the least possible degree of friction, and without breaking the same, as the slice has a very gradual and easy turning movement communicated to it by the passage of the plow through the soil.

The shank B of the plow has a curved ledge or shoulder, *b*, at its upper part, said shoulder being a part of a circle, as shown clearly in Fig. 4. The back part, *c*, of the beam A is also of curved form corresponding to the curvature of the shoulder *b*, and the part *c* of the beam A is placed on the shoulder *b* of the shank, and secured thereto by two bolts, *d d'*, as shown in Fig. 4, said bolts passing through oblong longitudinal slots *e e* in the beam A. By this method of attaching the beam to the shank the former may be moved on the shoulder *b*, and adjusted thereto more or less forward or backward, and as the shoulder *b* is a portion of a circle, and the back part, *c*, of the beam of the same form, it will be seen that by thus adjusting the beam its front end may be more or less elevated and the direction of the draft regulated as may be desired. (See Fig. 1, in which an elevated adjustment of the beam is shown in red outline.) The bolt *d* passes entirely through the upper part of the shank B, and through an oblong transverse slot, *f*, therein, as shown clearly in Fig. 5. This slot *f* admits of the beam A being adjusted laterally, so that its front end may be more or less to the right or left. (See Fig. 2, in which a right-hand adjustment of the beam is shown in red outline.) By this adjustment the plow may have more or less "land" given it and the beam adapted for the attachment of one, two, or three horses, as may be desired.

The inner side of the shank B is cast or

formed with a flange, *g*, which projects down below its lower edge, and has an arm, *h*, at its front end, which is provided with projections or ears *i i'*, the ear *i* being at the upper end of the arm and the ear *i'* at the lower or rear side. (See Fig. 3.)

The landside C is secured to the shank B by a bolt, *j*, which passes through the flange *g*, and the mold-board D is secured to the shank by a bolt, *k*, passing through the projection or ear *i* and the share E by a bolt passing through the ear *i'*. By this arrangement or means the mold-board D may be readily attached to and detached from the plow. This is an important feature, as it admits of either a steel or cast-iron mold-board being applied to one and the same plow. In fact any of the parts—to wit, the mold-board, shank, landside, or share—may be readily detached and new ones substituted when necessary.

The handles G G may be of the usual form, and are connected to the shank and mold-board as shown in Fig. 2.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. While disclaiming the general principle of effecting the vertical or horizontal adjustment of the beam by means of bolt and slot attachments, I claim the particular combination of the curved inner end, *c*, of the beam A, the curved shoulder *b* of the shank B, the bolts *d d'*, the longitudinal slots *e e*, and the transverse slot *f*, when the said parts are constructed and arranged in the manner and for the purposes herein specified.

2. The particular construction of the flange *g* with the arm *h*, and ears *i* and *i'* permanently attached to a standard, B, having a curved shoulder, *b*, when used in the described combination with the landside C, mold-board D, and share E, all arranged and connected in the manner and for the purpose set forth.

ROBERT JONES.

Witnesses:
I. N. Ross,
J. F. May.