

A. C. BELT.

Plow.

No. 68,032.

Patented Aug. 27. 1867.

Fig 1

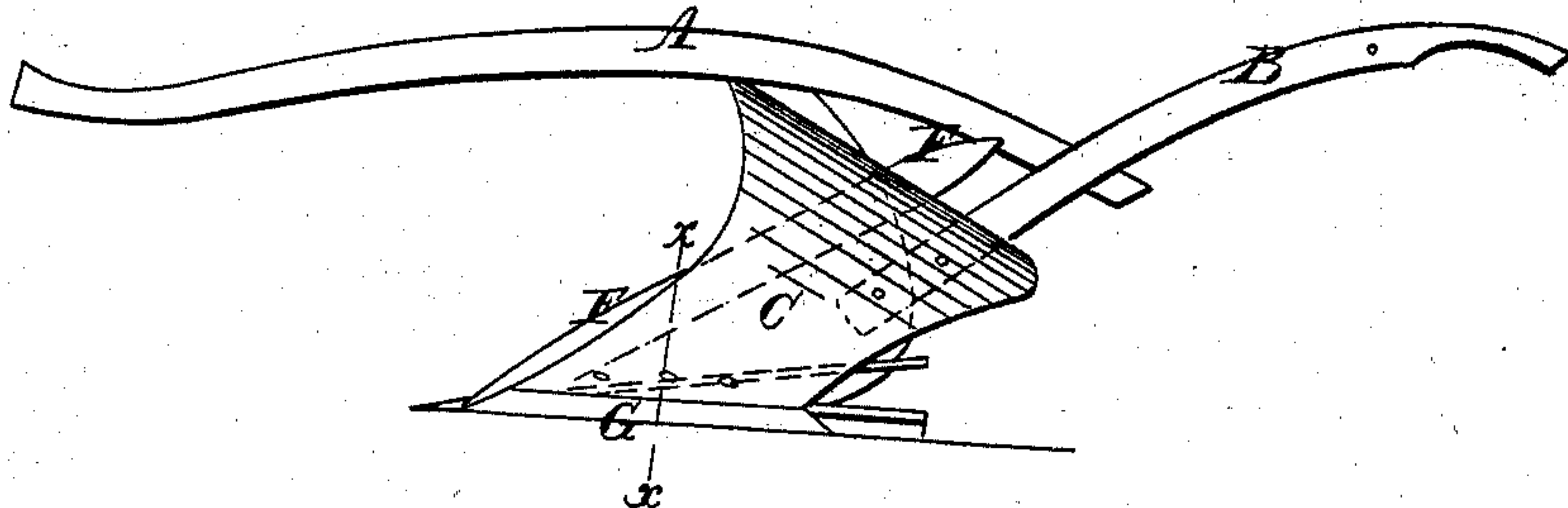


Fig 2

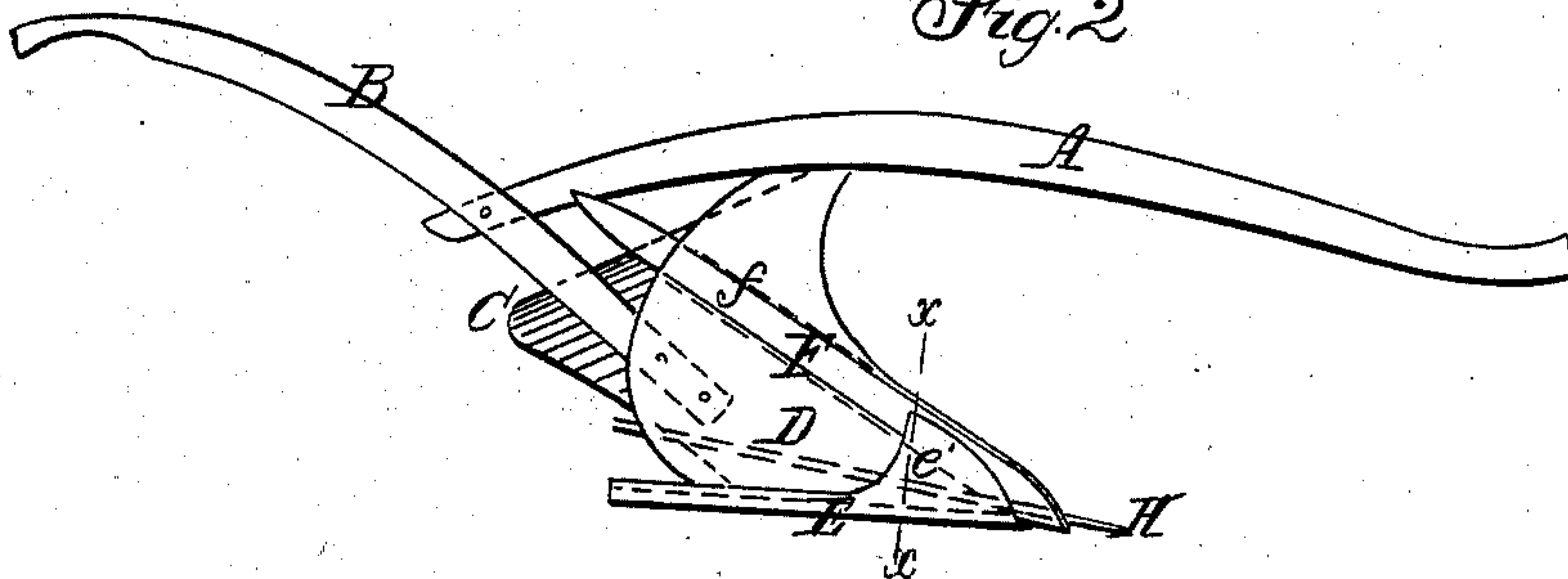


Fig 3

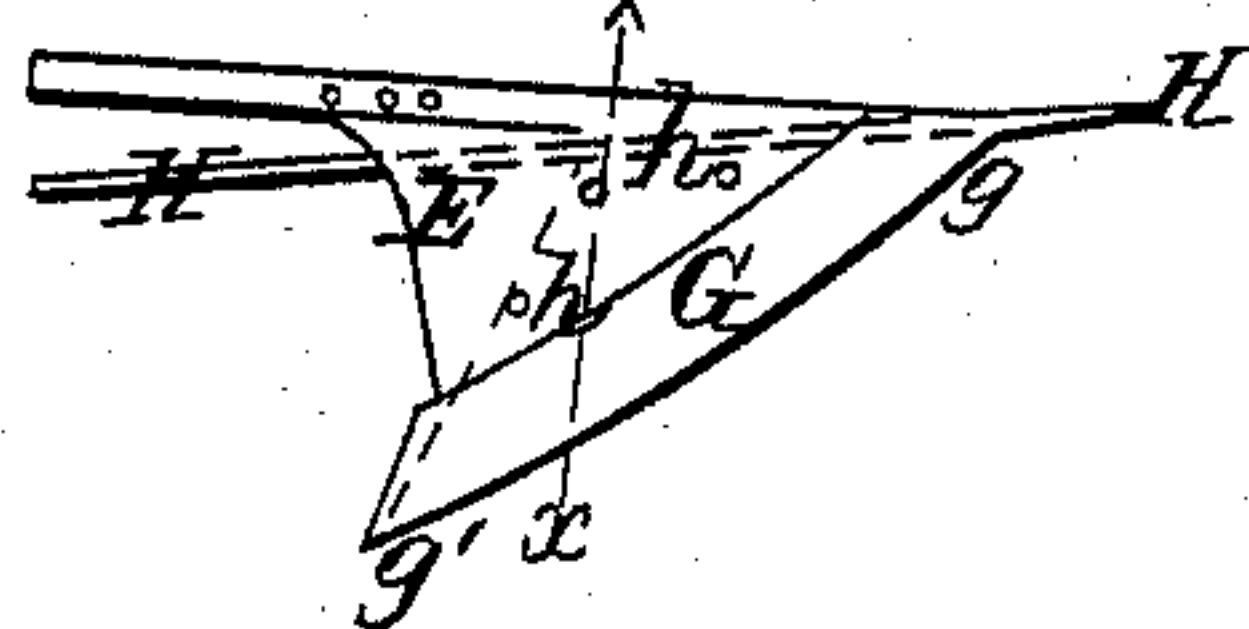
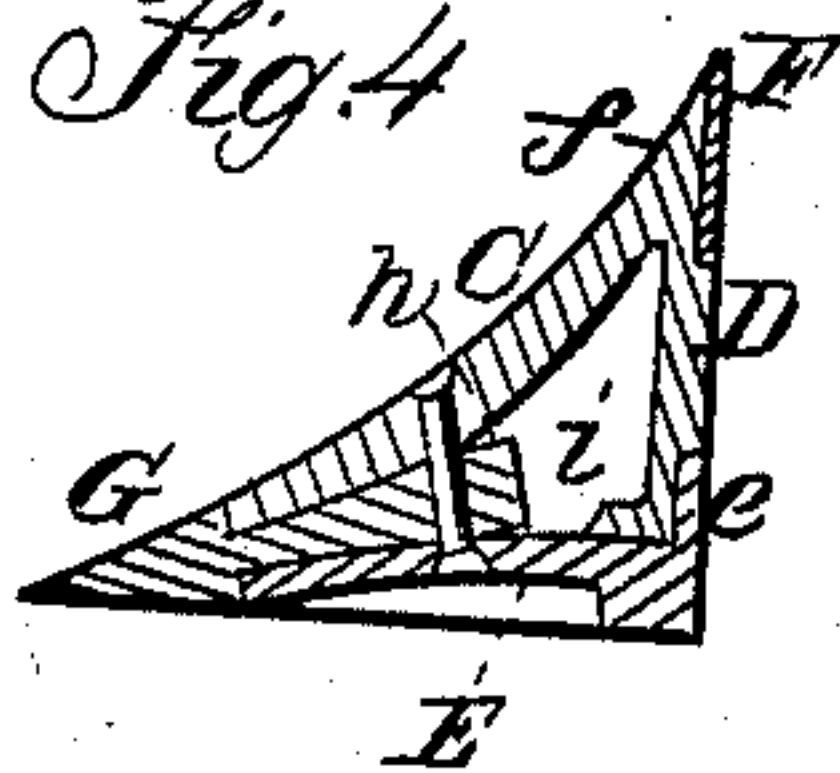


Fig 4



Witnesses;
W A Bennett
W G Cranch

Inventor;
Alfred C Belt
by his attorney
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United States Patent Office

ALFRED C. BELT, OF GORESVILLE, VIRGINIA.

Letters Patent No. 68,032, dated August 27, 1867.

IMPROVEMENT IN PLOUGHS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, ALFRED C. BELT, of Goresville, in the county of Loudon, and State of Virginia, have invented a new and useful Improvement in Ploughs; and I do hereby declare the following to be 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 elevation, taken from the mould-board side, of a plough-constructed in accordance with my invention.

Figure 2 is an elevation taken from the opposite or land-side.

Figure 3 is a bottom view, and

Figure 4 is an enlarged transverse section, taken in the lines *x x*, figs. 1, 2, and 3.

Similar letters of reference denote corresponding parts in all the figures.

My invention consists in a novel construction and arrangement of the mould-board of the plough, whereby the curved edge, at the junction of said mould-board with the land-side, is extended up to the plough-beam, and such curvature is given to the mould-board as, in connection with the curved cutting edge, to entirely obviate all danger of the choking of the plough, as hereinafter explained. It further consists in the employment of a grooved reversible share; an extension double reversible cutter; a round adjustable extension-point, and a false share, through which, by means of bolts or their equivalent, the several parts are firmly secured in place in their proper relation to each other, as hereinafter explained.

To enable others to construct and use my invention, I will describe it with reference to the drawings, in which—

A represents the plough-beam, and B the handles, which may be of any desired form, and applied in the usual manner. C is the mould-board, made in the form shown in the drawing, fig. 1, that is to say, in such manner as to extend its forward or cutting edge from the plough point or share rearward and upward to the plough-beam A, and so that lines drawn upon its surface from its forward or cutting edge to its heel or rear edge, in a direction parallel or nearly parallel with its base, or with the surface of the ground, shall be straight, or nearly straight, while all lines intersecting the share and cutting edge, or share and top of the mould-board, shall be in the arcs of circles, as shown in fig. 4, and at the same time giving to said mould-board a spiral form or twist, so that it may pass readily underneath the surface to be ploughed, and will then raise the same and roll it over and away from the plough in a manner effectually avoiding its choking. By this construction the mould-board is made to curve upward and forward to the plough-beam, and the cutting edge thereon is extended to any desired height, avoiding the formation of any concavity or lodging place upon the surface of the board in the line of its resistance to or action upon the soil, thus improving the space usually left open between the mould-board and plough-beam. D is the land-side, which may be formed or cast in one piece with the mould-board, as shown in fig. 4, and provided at its lower edge with an angular projection or flange, *d*, forming a means of attachment, by bolts or otherwise, of what I term the "false share" E. The land-side D has a groove, *f*, formed in it, of a dove-tail shape to receive the reversible cutter-blade hereinafter described. The false share E is made in form shown in figs. 2, 3, 4, slightly concave on its under surface, so as to leave room for the bolt-head or nuts hereafter referred to, and thereby prevent them from obstructing the free passage of the plough, and is provided with the flange or lip *e*, fitting into a rebate of corresponding shape, formed in the lower edge of the land-side, for the purpose of receiving said lip, and thereby giving strength and stability to the attachment of the share E thereto. The lip *e* is expanded in width near its forward end, as shown at *e'*, to form a stay or support to the reversible cutter or cutter-blade F. The cutter-blade F is made symmetrical in form, as shown in figs. 2 and 4, so that it may be reversed in position, that is, turned either edge up or either end forward, and in such manner that it may be extended or adjusted further forward or backward in the groove *f*. By this construction of the cutter, which is sharpened on both edges, and pointed or sharpened at both ends, should the cutter become dulled or broken when in operation, it may be turned over, or end for end, without seriously interfering with or delaying the working of the plough, and the cutter can be readily adjusted or set more or less in advance of the cutting edge formed on the mould-board to adapt it to the character of soil in which it is to operate, or as the judgment of the operator may dictate. The cutter is

intended to fit sufficiently close in the groove in the land-side to be held thereby without further fastening or support than that afforded thereby, and by the overlapping lip *e'* of the false share *E*, but if desired other means of securing, such as a set-screw passing through the land-side from the inner side, and bearing against the inner face of the cutter, or working into perforations therein, may be used in connection with the groove. *G* is the grooved reversible share, made in the form of an obtuse-angled triangle in its ground plan, (see fig. 3,) and in the form of a spear-head or double wedge, in its cross-section, (see fig. 4.) The ends of the share or sides of the triangle adjacent to the obtuse angle have each a half round groove formed in them, to receive and properly support the extension-point hereafter described. Said share, like the cutter-blade *F*, is made symmetrical in form, and may be reversed in position, so that when the point *g* becomes worn or broken in use the share may be reversed and the point *g'* substituted therefor, and *vice versa*. The share *G* is secured in place by means of through-bolts or rivets *h*, as shown in figs. 3 and 4; said bolts passing through the mould-board *C*, share *G*, and false share *E*, and serving to firmly and securely hold the parts in place. *H* is the extension-point, made round, and tapered or sharpened at one or both ends, and located in the angle *i*, between the mould-board and land-side, in the groove formed in one side of the reversible share, in such manner as to be firmly grasped and held thereby. Said point is made round that it may be turned in its seat as it becomes worn, and is thereby to a considerable extent made self-sharpening. It may be set further in or out, as desired, according to the character of the ground in which it is to operate. The extension-point *H* is held clamped in the groove in the share, and between said share and the land-side and cutter, with sufficient firmness for ordinary work, but at the same time in such manner that, in the event of striking against a large stone or other obstacle, it will be driven backward out of the way, thereby obviating to a considerable extent the danger of its breaking.

The several parts above described may be made of any of the usual or known materials, as cast or wrought iron or steel. Their operation will be readily understood without further description.

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

1. The mould-board *C*, made in the form shown and described, and provided with a cutting edge, extending up to or nearly to the plough-beam, in the manner and for the purpose set forth.
2. The grooved reversible share *G*, constructed and operating substantially as described.
3. The extension double reversible cutter *F*, arranged and operating as described.
4. The round, adjustable self-sharpening extension-point *H*, operating as described.
5. The false share, for securing the removable cutter, share, and point in place, as described.
6. The combination of the reversible cutter, reversible share, and adjustable extension-point, with the false share and mould-board, in the manner and for the purpose substantially as described.

In testimony whereof I have hereunto subscribed my name this 19th day of July, 1867.

ALFRED C. BELT.

Witnesses:

EDM. F. BROWN,
A. M. SMITH.