Samuel S. Starnes

PATENTED
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Plow.

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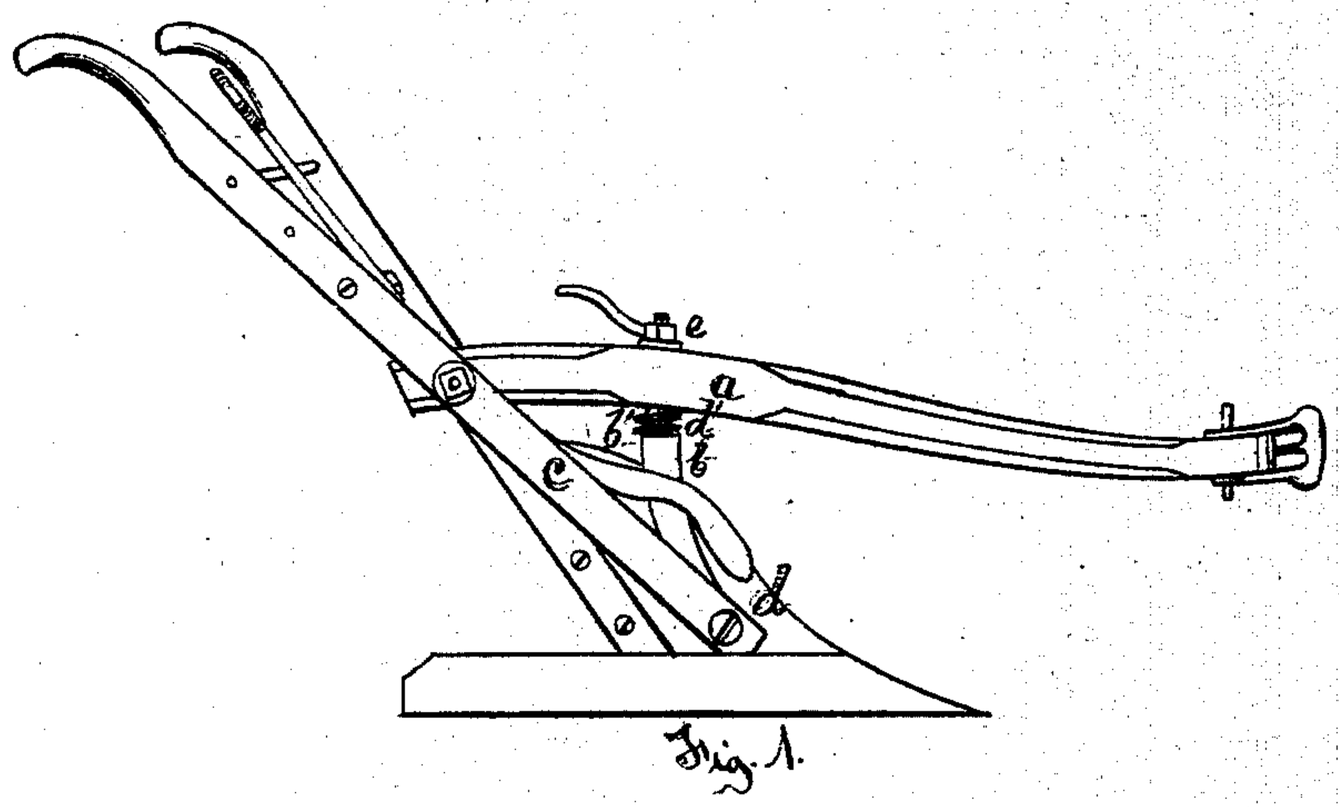

Fig. 1.

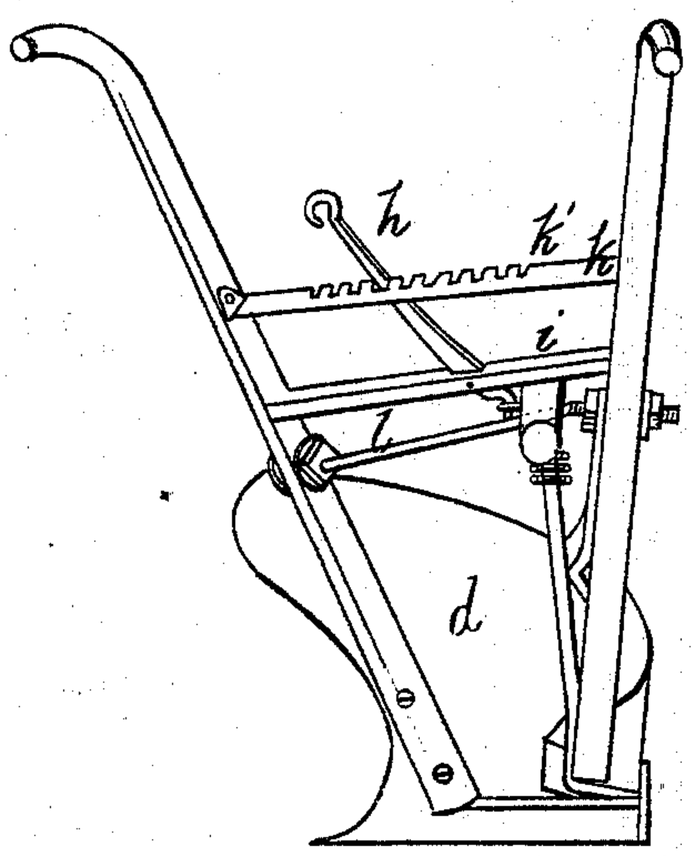

Fig. 2.

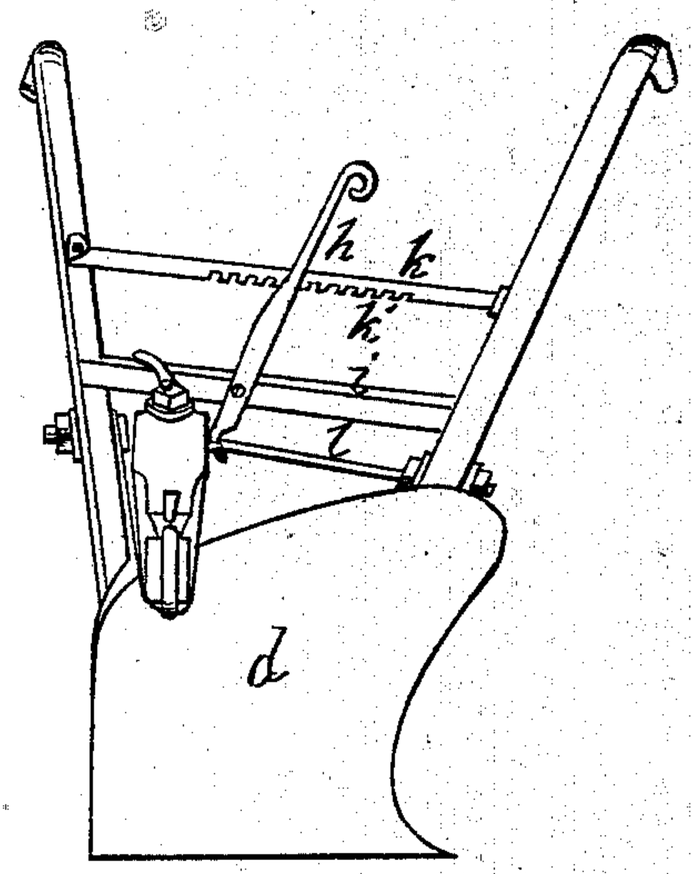

Fig. 3.

Witnesses.
Chas. M. Gay
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Brown & Beadle, Atty's

United States Patent Office.

SAMUEL S. STARNES, OF MACOMB, ILLINOIS.

Letters Patent No. 71,419, *dated November* 26, 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, SAMUEL S. STARNES, of Macomb, in the county of McDonough, and State of Illinois, have invented a new and improved Plough; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon. In the drawings—

Figure 1 represents a side view of my plough,

Figure 2 a back view, and

Figure 3 a front view.

This invention consists of novel devices for regulating the depth and width of the cut made by a plough; also, for adapting a plough to be drawn by a greater or less number of horses, and to be used as a subsoil-plough when desired, as will hereinafter more fully appear.

To enable others to make and use my invention, I will now proceed to describe its construction and operation.

A represents a plough of ordinary construction in nearly all of its parts. One feature, however, peculiar to this plough, is the pivoted beam *a*, which swings, to a certain extent, on the standard *b*, suitably supported by attachment to the handle *c* and the share *d*. The standard *b* is provided with a shoulder, *b'*, at a fit point, between which shoulder and the beam *a*, surrounding the standard, is a spiral spring, *d'*. The upper end of the standard *b* is provided with a screw-thread, on which, above the beam, works a nut, *e*, with a handle. By screwing the nut upward, the spring is left free to press the beam upward to a corresponding extent. The higher the beam, the deeper will be the cut. This arrangement thus furnishes the means for a cut of any desired depth within certain limits.

Another peculiar feature of my invention is the lever *h*, pivoted to the cross-beam *i*, and jointed, at its lower end, to the inner end of the plough-beam *a*. Above and parallel with the cross-beam *i* is a rack-bar, *k*, between the teeth *k'* of which the lever *h* is placed in various positions. By means of this lever the plough-beam may be set at any angle, relatively to the share, within certain limits.

In proportion as the point of the beam is more or less to the right of the share, the plough will make a narrow or wider cut. The rack-bar enables the beam to be fixed at the desired angle. By throwing the beam well to the right, three horses abreast can be used, one walking in the last furrow, and the other two on the unbroken soil. On arriving at the end of a furrow, if it be desired to run the plough back in the same furrow, and thus convert it into a subsoil-plough, it will only be necessary to suitably swing the beam, when this operation may be performed.

Through the inner end of the plough-beam passes the rod *l*, fixed between the plough-handles, below the cross-beam *i*. Along this rod the end of the beam slides, when moved from side to side, and when the beam is thrown upward, the rod prevents the inner end from partaking of this motion, whereby the outer end is raised higher.

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

1. The combination of the standard *b*, spring *d*, rod *l*, and beam *a*, substantially as and for the purpose described.

2. The combination of the lever *h*, rack-bar *k*, and plough-beam *a*, substantially as and for the purpose described.

SAMUEL S. STARNES.

Witnesses:

J. H. CUMMING,

CHAS. CHANDLER.