L. J. LOWE.

Plow.

No. 199,558. Patented Jan. 22, 1878.

Fig. 1.

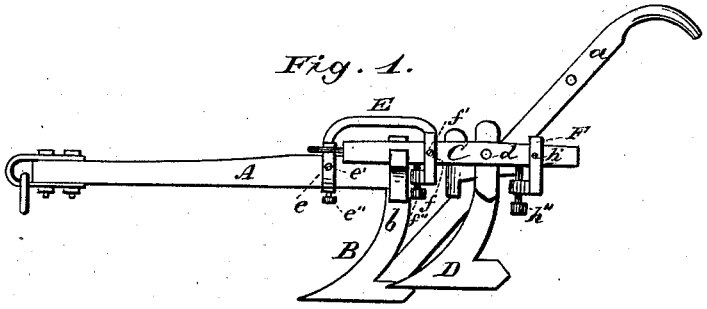



Fig. 3.

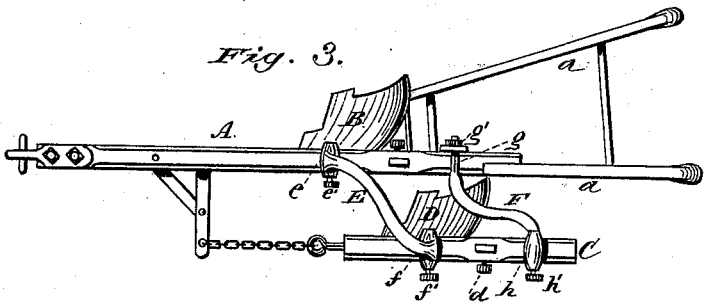



Fig. 2.

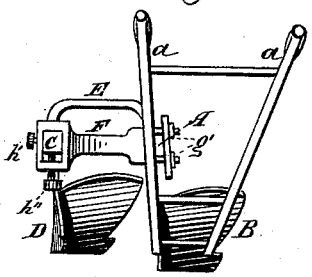
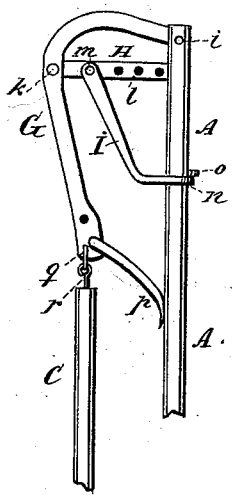



Fig. 4.

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# UNITED STATES PATENT OFFICE.

LEONARD J. LOWE, OF ASHLAND CITY, TENNESSEE.

## IMPROVEMENT IN PLOWS.

Specification forming part of Letters Patent No. **199,558**, dated January 22, 1878; application filed September 1, 1877.

*To all whom it may concern:*

Be it known that I, LEONARD JOHN LOWE, of Ashland City, in the county of Cheatham and State of Tennessee, have invented certain new and useful Improvements in Plows; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention consists, first, in the improved mode of combining two or more plows set at different depths, so that, in plowing, the forward or deeper plow shall on each successive round deepen the furrow made on the preceding round by the supplemental plow; and, second, in the construction and arrangement of a device for regulating and adjusting the lateral draft, so that the plow may be used in plowing between fruit and other trees without danger of barking the trees, all substantially as I shall now proceed to explain more fully by reference to the drawings, in which—

Figure 1 is a side elevation of my improved double plow. Fig. 2 is a rear elevation. Fig. 3 is a top plan; and Fig. 4 is a similar view of the plow-beam, with its attachment for regulating the lateral draft.

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

A is the plow-beam or tongue, having handles *a a* and plow B. The shank *b* of the latter passes through a vertical slot in beam A, so that its "set" may be adjusted by means of a suitably-arranged set-screw. C is the beam of the supplemental plow D, which is similarly adjustable in a vertical slot in beam C by means of a set-screw, *d*.

The plows B and D may be of any suitable kind or construction, according to the nature of the work to be done, and both alike or differing from each other. Thus, for instance, one may be a shovel-plow and the other a "bull-tongue," or both may be shovel-plows.

Beam C is secured parallel to A by the side braces E F, the first of which consists of an obliquely-curved beam, having two slots or openings, *e f*, through which pass the plow-beams A and C, respectively, each of said openings being provided with two set-screws, (denoted by *e' e''* and *f' f''*, respectively,) which work against the sides and under each beam, so that by adjusting these screws not only the distance between beams A and C may be regulated, but their relative height may be adjusted. The rear brace F is also provided with two slots, *g* and *h*, each of which is similarly constructed with a double set of set-screws, *g' g''* and *h' h''*, by means of which the rear part of beams A C may be adjusted so that the beams shall always be parallel to each other, whatever their elevation in relation to or distance from each other may be.

By this combination of beams A and C with their respective plows the supplemental plow D may—in breaking land, for instance—be adjusted relative to the main plow B, according to the nature of the land to be broken.

In breaking a stiff sod, plow D should be so adjusted as to cut just deep enough to turn the sod into the deeper furrow cut by the main plow B. Again, in plowing in fertilizers, the supplemental plow should be so adjusted by the set-screws as to cover the manure to the exact depth desired. This combination also allows one plow to be set a greater or lesser distance forward or backward of the other, so as to allow the earth to pass between the two plows.

In the drawing I have represented the supplemental plow arranged on the left side of the main plow; but this arrangement may be reversed. In using a left-handed turn-plow, the supplemental plow should, of course, be placed on the right.

The advantage of this combination of two or more plows set at unequal depths consists in the reduction of power required to operate the plow, and in the facility with which the plows may be adjusted relatively to each other. To accomplish the latter result, wedges or other equivalent devices may be used in the slotted braces E F instead of set-screws.

The second part of my invention consists in an attachment which is secured upon the main beam A, for the purpose of regulating or adjusting the line of draft. To use this attachment, the clevis (which, in operating my double plow, should be turned to one side of the tongue) is removed, and in its place is inserted a curved bar, G, pivoted in the end of the tongue by a bolt, *i*, and projecting out to one side.

H is a lever-arm, pivoted in bar G at *k*, and

provided with a series of perforations, *l*, in any one of which the double-tree is secured. I is an arm, having its fulcrum in the lever H at *m*, which terminates in a clamp or slotted plate, *n*, through which beam A is passed. Plate *n* is retained rigidly in position upon the beam by a pin or bolt, *o*, or in any other suitable manner. The rear part of bar G is bent to form a shoulder, *p*, which abuts against the side of beam A; and *q* is a hook, which takes with the eye or clevis *r* in the front end of beam C. When used with this attachment for plowing fruit or other trees, the supplemental plow D shown on the drawing is removed, and in its place is inserted a bull-tongue, or other small plow of any kind, and as the team draws, the lever H, upon which the double-tree is secured, will force the shoulder *p* of the bar G against beam A, tending to keep it to the right, this tendency being further increased by the action of the bull-tongue, which, as it were, crowds the main plow to the right, which enables the operator to plow up to the trees without danger of barking them.

In operating the double-plow, it may sometimes be convenient to secure a short handle to the end of beam C, and another short handle projecting from the left handle of beam A, for the purpose of better controlling the course of the plow; but this is not always necessary.

It is obvious that my improvement may be applied to steam-plows or gangs of steam-plows, as well as to ordinary plows, and also that sulky or wheel plows may be constructed with my improvement.

My device for adjusting and regulating the line of draft may also be used with advantage upon harvesting-machines, canal-boats, and for many other purposes.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The combination of the beam A, having the vertically-adjustable plow B, beam C, having the vertically-adjustable plow D, and slotted braces E F, provided with the set-screws *e' e''*, *f' f''*, *g' g''*, and *h' h''*, substantially as and for the purpose herein shown and described.

2. In combination with the plow-beam A, the device for adjusting and regulating the line of draft herein described, consisting of the curved bar G, pivoted at *i*, and having shoulder *p*, lever H, and arm I, all constructed and combined to operate substantially as and for the purpose herein shown and specified.

3. The combination of plow-beam A, draft-regulating device G H I, and supplemental plow-beam C, substantially as and for the purpose herein shown and set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

LEONARD JOHN LOWE.

Witnesses:

JESSEE THOMAS EDWARDS,

GEORGE FREDERIC MURFF.