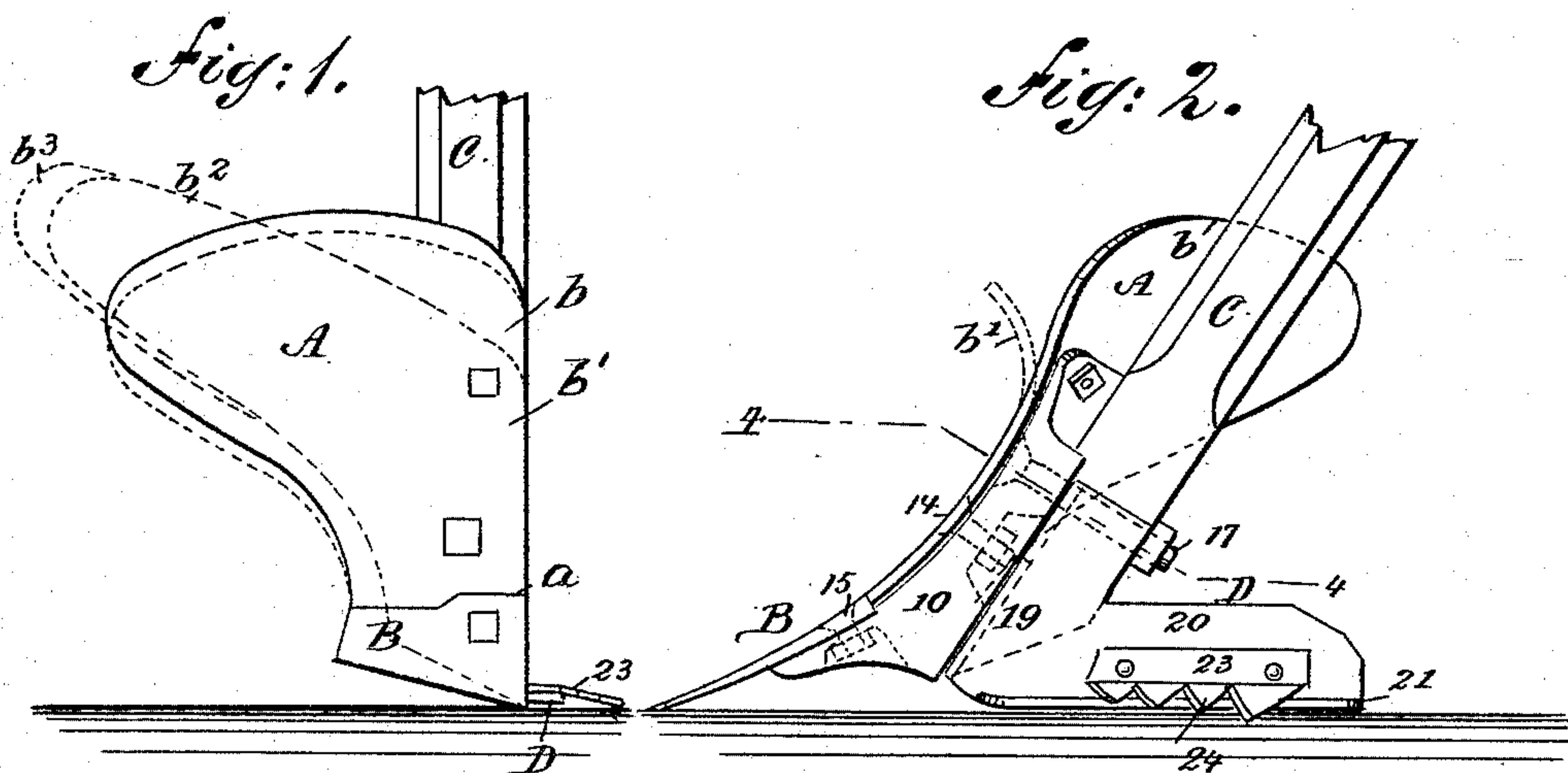


(No Model.)

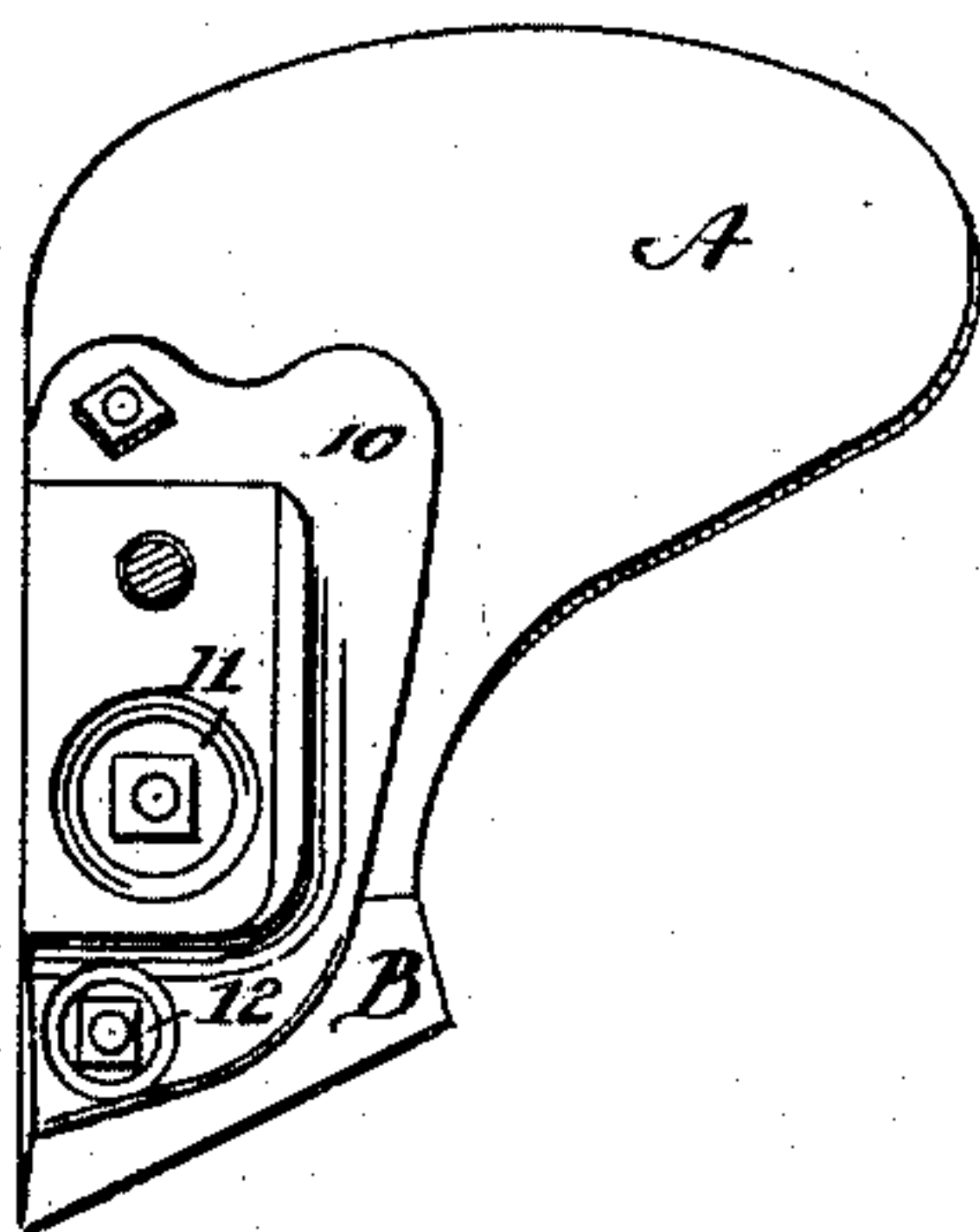
M. L. BATTLE.  
PLOW.

No. 486,021.

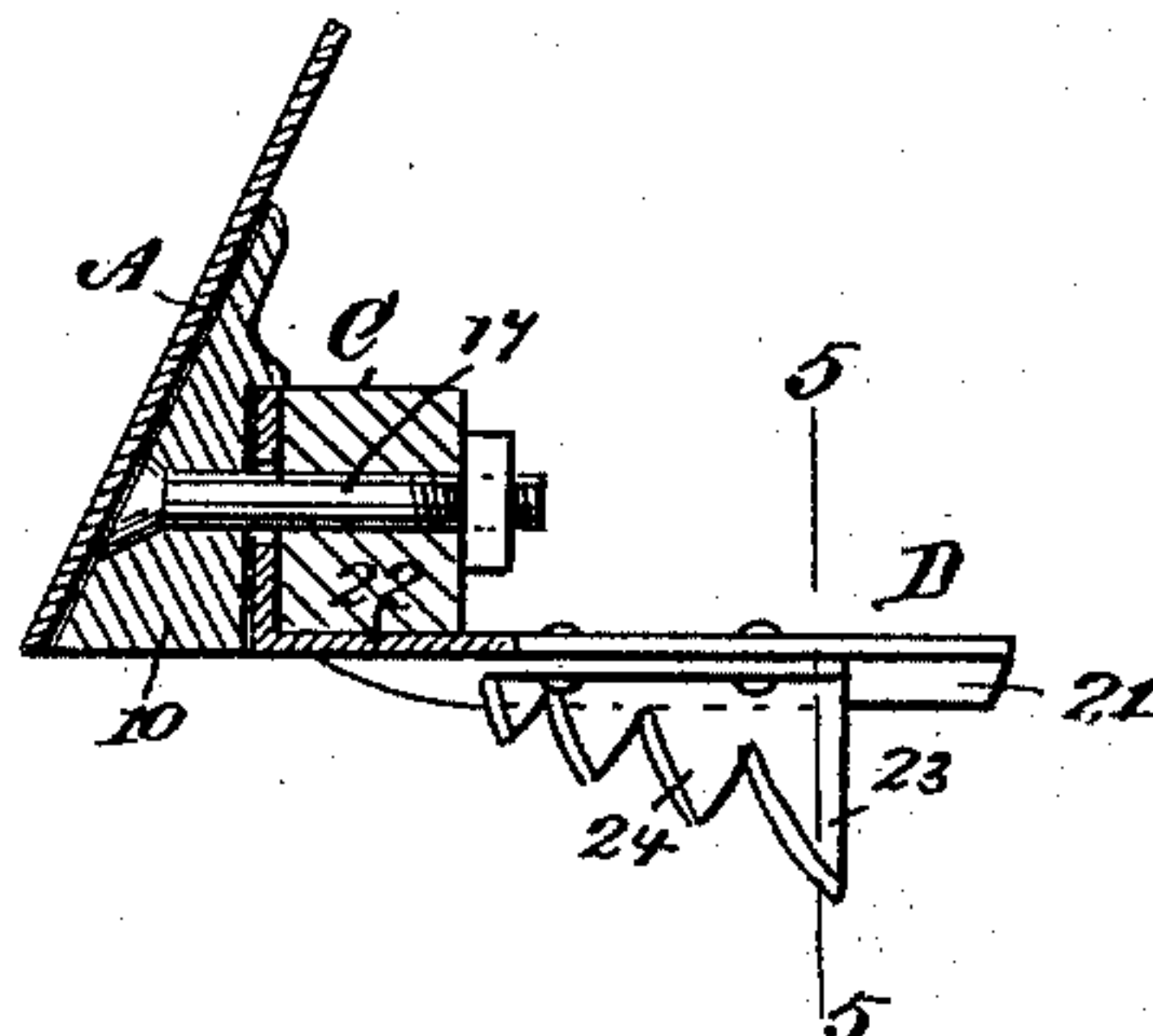
Patented Nov. 8, 1892.



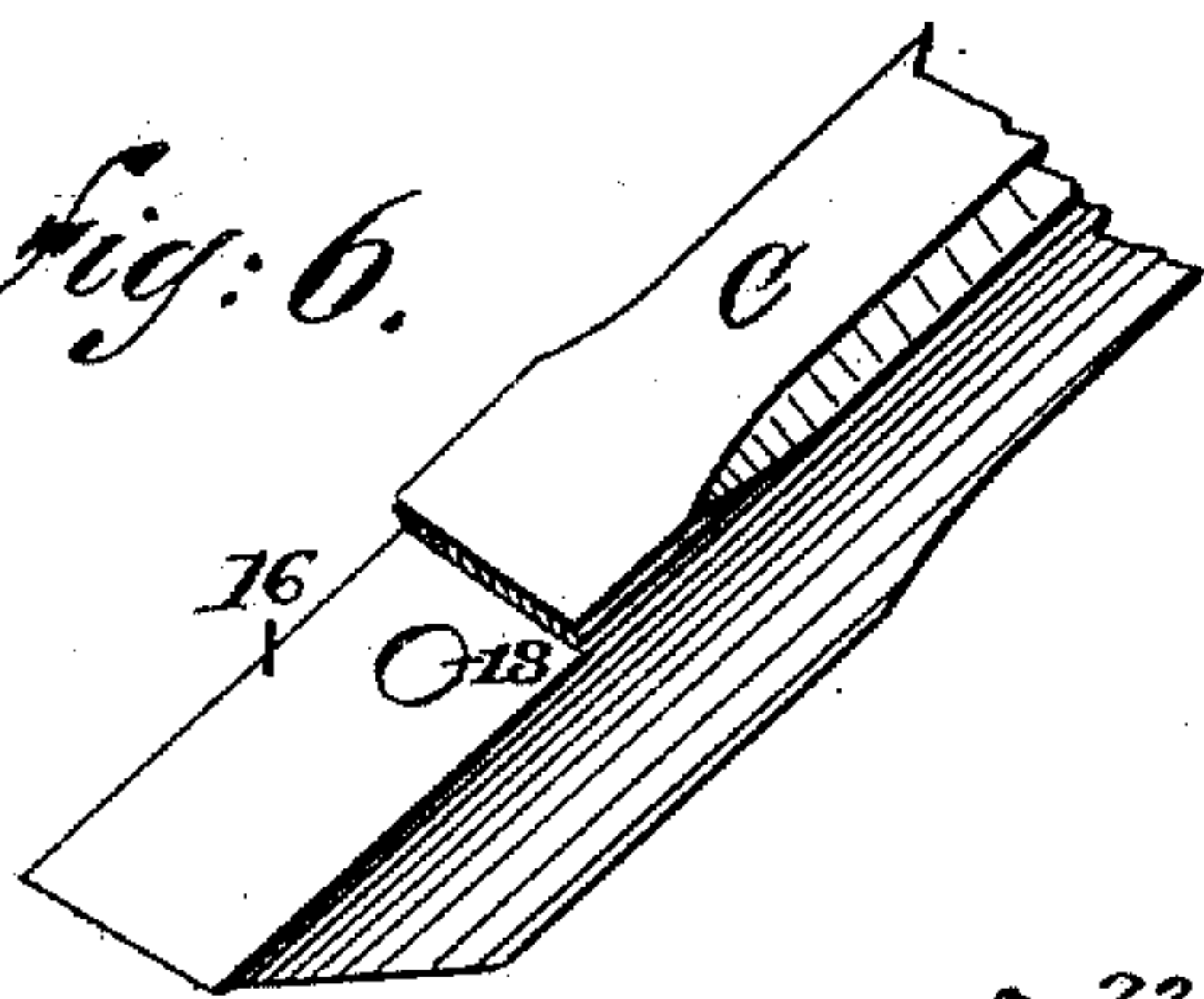
*Fig: 3.*



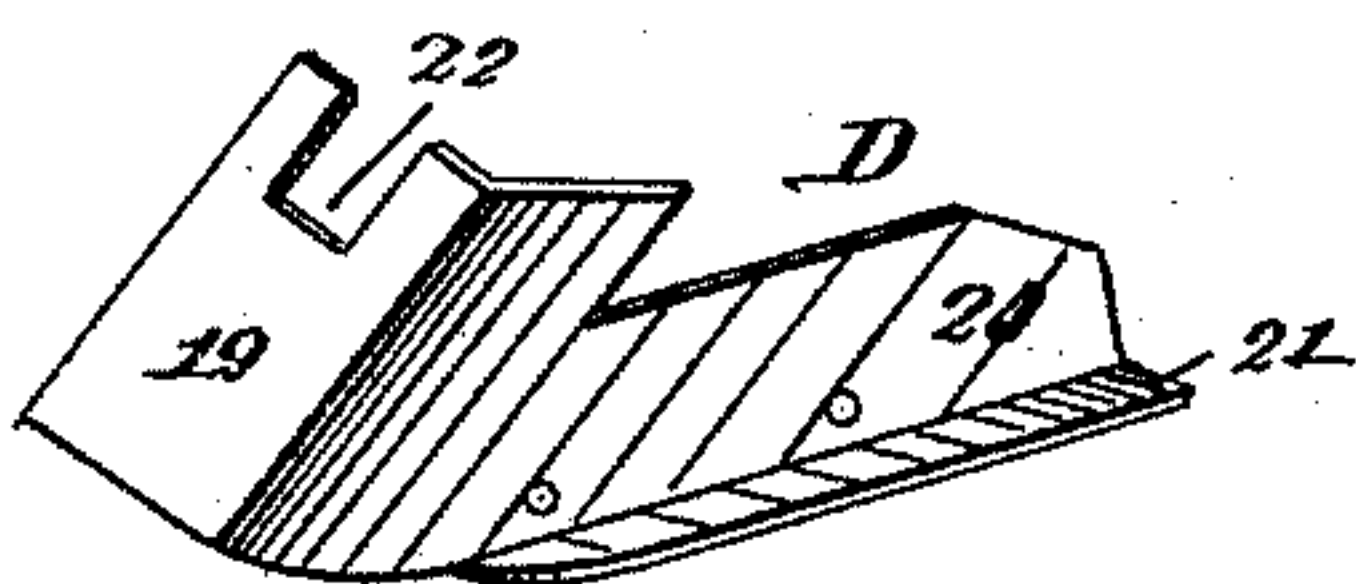
*Fig: 4.*



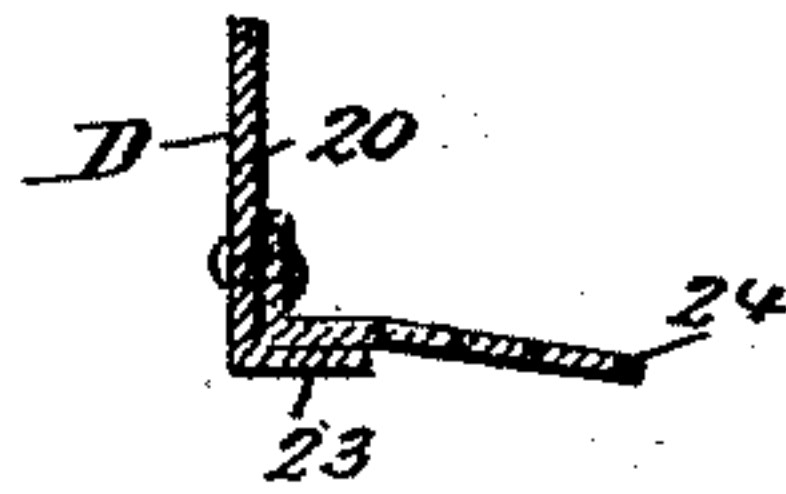
*Fig: 6.*



*Fig: 7.*



*Fig: 5.*



WITNESSES:

*Chas. Nida.*  
*C. Sedgwick*

INVENTOR:

*M. L. Battle*  
BY *Munn & Co*  
ATTORNEYS



# UNITED STATES PATENT OFFICE.

MARCUS LAFAYETTE BATTLE, OF CAIRO, GEORGIA.

## PLOW.

SPECIFICATION forming part of Letters Patent No. 486,021, dated November 8, 1892.

Application filed December 11, 1891. Serial No. 414,733. (No model.)

*To all whom it may concern:*

Be it known that I, MARCUS LAFAYETTE BATTLE, of Cairo, in the county of Thomas and State of Georgia, 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 has for its object to provide a share comprising an independent blade and point and to provide a shoe for connecting the two sections and to so construct the shoe that blades of different widths and degrees of curvature may be employed in the formation of the completed share to turn the earth more or less over.

Another object of the invention is to provide, in connection with the share, an adjustable landside and to provide the landside with cutters adapted to cut under plants or weeds and sever their roots.

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 figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a front elevation of a plowshare and illustrates in dotted lines the formation of different blade-sections, which may be employed in the construction thereof. Fig. 2 is a perspective view of the share and a side elevation of the landside. Fig. 3 is a bottom plan view of the share and its heel. Fig. 4 is a transverse section taken practically on the line 4 4 of Fig. 2. Fig. 5 is a transverse section through the landside, taken practically on the line 5 5 of Fig. 4. Fig. 6 is a detail view of the lower portion of the plow shank or stock, and Fig. 7 is a detail perspective view of the landside.

The plowshare is made in two sections—a blade or wing A and a point B—and the upper end of the point and the lower end of the wing or blade are cut transversely upon irregular lines, so as to form an interlocking connection, as shown at *a* in Fig. 1. The wing or blade and the point are connected by a heel 10. The upper or outer face of this heel is decidedly curved, as shown in Fig. 2, and the blade and point conform to this curva-

ture. The back of this heel is straight, and its upper and lower ends are more or less beveled.

In the straight portion of the back of the heel a cavity 11 is formed, and a similar cavity 12 is made in the lower portion of the heel, also at the back. After the blade or wing and point have been brought together and placed in engagement with the forward curved face of the heel the two sections of the share are connected to the heel through the medium of two bolts 14 and 15. The bolt 14 is passed through the wing-section into the cavity 11 of the heel, and a suitable nut is screwed thereon, while the bolt 15 is passed through the point into the lower cavity 12 of the heel and is likewise provided with a nut.

It will thus be observed that the nuts of both bolts are thoroughly protected and that when the heel is placed in engagement with the plow shank or stock C the nut of the bolt 14 will be perfectly concealed, and by reason of the cavity 12 at the lower portion of the heel the nut of the lower bolt 15 is protected and prevented from being turned by obstacles that may be met with in the process of plowing.

The plow shank or stock C may be of any suitable or approved construction and may be made of any desired material, and upon its forward face, upon its lower end, a recess 16 is produced, as shown in Fig. 6, and when the heel is to be attached to the plow shank or stock the back flat portion of the heel is made to enter the recess 16 of the stock, as is shown in Fig. 2, and the heel and stock are held in positive engagement through the medium of a bolt 17, passed through a suitable aperture in the upper portion of the heel from the front and through a registering aperture 18 made in the recessed portion of the stock. The bolt extends beyond the rear face of the stock and is provided with a suitable nut. The heel and blade or wing may be further secured together by a second and upper bolt, as shown in Figs. 1 and 2.

It will thus be observed that the point of the share may be removed without the necessity of removing the heel from the plow-stock. By making the share in two sections, as above described, blades or wings of different formations and adapted for different purposes may be used in connection with the point. Several modifications of the blade or wing sec-



tion of the share are illustrated in dotted lines in Fig. 1.

The wing-section shown in positive lines in Fig. 1 and designated as *b* is the second size, and the upper extremity of the wing is made quite broad, while the top portion is forwardly curved to a slight extent, as shown in Fig. 2. The first size of wing *b'* is substantially the same as the second size with the exception that the curve at the top is more pronounced, as shown in dotted lines in Fig. 2. The first size of wing *b'* is designed for pulverizing the soil, as it turns the earth over during the process of plowing and mashes or crushes it while being turned. The second size *b* of the wing does not turn over the soil to as great an extent as the first size, and the third and fourth sizes *b<sup>2</sup>* and *b<sup>3</sup>* differ from the first and second sizes in that the upper extremity of the wing is narrower and the upper portion of said wing longer than in the first sizes, while the forward inclination is not so great. These latter sizes of wing are adapted for use in sticky soil for throwing up terraces or "laying by" corn, last plowing, and these narrow wings are also adapted for use where a large amount of vegetation is to be turned under. The gradual curve given to the wings of the plowshare renders the passage of the soil from the plow regular, and "pitching" of the soil is prevented. The first size of the share-wing will turn the soil entirely over and may be adopted with good effect in the planting of small grain and in broadcast sowing, obviating the necessity of using a harrow.

The landside *D* is illustrated in detail in Fig. 7 and is of angular contour, comprising a forward member 19 and a side member 20, the forward member, and likewise the side member at the front, having a downward and outward inclination. The side member 20 is provided at its lower edge with a flange 21, extending outward at an angle therefrom, preferably a right angle, and at the upper edge of the front section 19 of the landside a recess 22 is produced. The attachment of the landside to the plow shank or stock *C* is effected by loosening the bolt 17, connecting the shoe with the stock, and passing the forward portion of the landside up between the stock and the shoe, the front member of the landside engaging with the recessed portion of the stock, and the landside is carried upward until the recess 22 shall have received the bolt 17, at which time the nut upon the bolt is tightened up and the landside held to the stock by frictional engagement with the latter and with the shoe. The adjustment of the landside is effected by loosening the bolt 17 and raising or lowering the landside to the required degree, its slot 22 admitting of this movement. This adjustment is provided for, as the landside regulates the depth that the point of the plow shall enter the soil. A cutter 23 is attached to the side member 20 of the landside to extend outward at an angle therefrom. This

cutter may be removed whenever it is desirable and is in the form of a series of teeth 24, graded in length, the forward tooth being the shortest and the rear tooth the longest. The forward edges only of the teeth are shaped as cutting-edges. Owing to the gradation of the teeth, but one tooth cuts at a time, hence relieving the landside from undue strain. The cutter is especially adapted for use in cutting under cotton-stalks or undercutting turf land and in heading-up cotton land upon which old cotton-stalks are standing, as the cutter passes under the stalk, cutting half of the roots when one furrow is made, while the remaining half of the roots is cut when the next furrow is being executed. The cutter is adapted to be made of steel tempered to the required degree, and the landside, when the plow-stock is of wood, thoroughly protects the stock from wearing by frictional engagement with the soil or with the stones contained in the soil.

It will be observed that the improvement in plows above set forth is extremely simple and may be conveniently and expeditiously adapted to various kinds of work. Further, that the landside carrying the cutters is of decided importance in the treatment of soil in certain characters of fields.

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

1. In a plow, the combination, with the stock, a shoe removably secured to the stock, and a plowshare comprising a point-section and a blade or wing section, the latter section being more or less curved at the top, and a removable connection between both sections of the share and the shoe, of a landside held in adjustable and frictional engagement with the shoe and the stock, the said landside being provided with removable teeth graduated as to length, substantially as shown and described.

2. In a plow, the combination, with the stock having its lower end recessed, a heel secured to the stock, and a share secured to the heel, of the landside *D*, provided with the forward-inclined member 19, having the recess 22 in its upper edge, and the side member 20, having the flange 21, and the toothed cutter 23, secured to the member 20 of the landside, substantially as herein shown and described.

3. In a plow, a landside provided with a blade removably attached thereto and extending outward at a right angle therefrom, which blade is in the form of a series of teeth graduated as to length, the forward tooth being the shortest and the rear tooth the longest and the cutting-edge of all the teeth being the forward edge, as and for the purpose specified.

MARCUS LAFAYETTE BATTLE.

Witnesses:

A. L. HAND,  
E. M. SMITH.