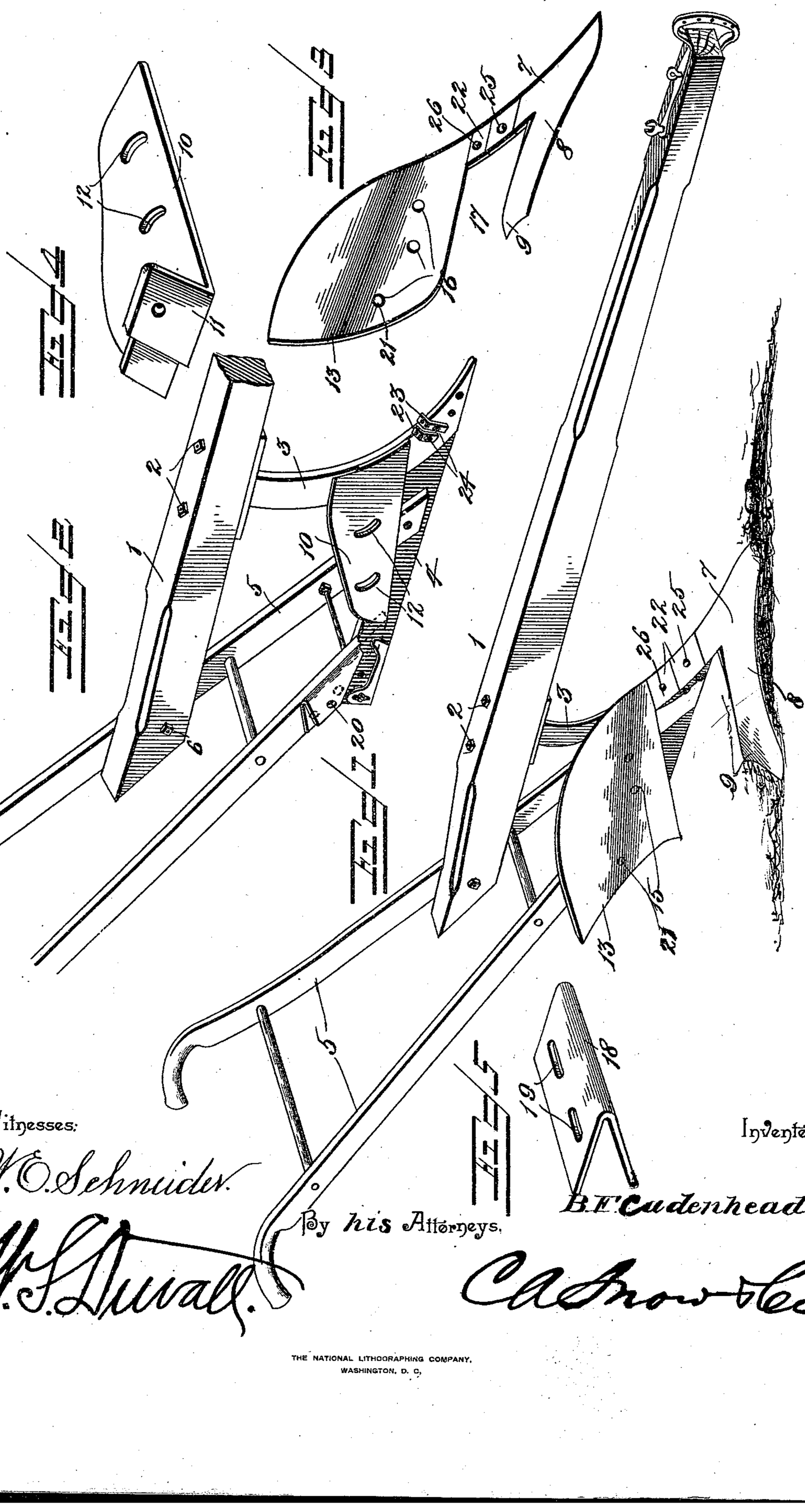
(No Model.)

B. F. CADENHEAD.

PLOW.

No. 512,678. Patented Jan. 16, 1894.



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PLOW.

SPECIFICATION forming part of Letters Patent No. 512,678, dated January 16, 1894.

Application filed June 5, 1893. Serial No. 476,637. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. CADENHEAD, a citizen of the United States, residing at Union Grove, in the county of Marshall and State of Alabama, have invented a new and useful Plow, of which the following is a specification.

My invention relates to improvements in plows, and especially to that class thereof known as subsoilers.

The objects of the invention are to produce a plow which will thoroughly pulverize and stir up the subsoil without danger of intermingling the same with the upper soil; to provide for a renewal of certain portions of the plow subjected to excessive wear, and for an adjustment of the moldboard, whereby it may be adjusted with relation to its depth of penetration toward the subsoil.

With these and other objects in view, the invention consists in certain features of construction hereinafter specified and particularly pointed out in the claims.

Referring to the drawings:—Figure 1 is a perspective view of a plow embodying my improvements. Fig. 2 is a similar view, the moldboard and point removed. Fig. 3 is a detail in elevation of the moldboard and point. Fig. 4 is a perspective view of the casting for supporting the moldboard at the inner edge thereof. Fig. 5 is a similar view of a second casting employed to support the outer edge of the moldboard.

Like numerals of reference indicate like parts in all the figures of the drawings.

The plow stock 1 is of the usual construction, and has bolted as at 2 or otherwise secured the standard 3, which curves forward at its lower end to form a foot. To one side of the standard is secured the land-side 4, or this feature may be omitted if so desired.

A pair of handles 5 is secured to the land-side or it may be any other portion of the plow, said handles diverging toward their ends in the usual manner, and having bolted to one of the same the rear end of the plow-stock as indicated at 6.

The point 7 is bolted securely to the foot or lower end of the standard 3, and is provided with a wing 8, which extends rearward and to one side and has a final point 9 at its rear end, which is slightly depressed, the depression occurring from the juncture of the wing with the point proper, and gradually being increased toward the final point 9, so that as a result the wing 8 is almost flat.

Secured above the point 7 to the standard 3 is an angular casting 10, the same having an inner securing flange 11 having a bolt hole through which a bolt is passed for the purpose of securing said casting in position. The opposite branch of the casting simulates in cross-section a moldboard and is provided with a plurality of slots or elongated openings 12, clearly shown in Figs. 2 and 4.

A moldboard 13 is applied to the face of the casting and bolts 15 pass through openings 16 in the moldboard and through the slots 12 in the casting. The moldboard is curved in cross-section, its lower edge being forwardly extended rather abruptly and beveled upon its under side to form a cutting edge 17 which overlaps, it might be said the wing 8 of the point 7, though as shown in Figs. 1 and 2, it is spaced therefrom, thus producing the intermediate opening. This opening may be increased or decreased by moving the moldboard up or down upon the casting 10 loosening, and resecuring the bolts 16 for the purpose of effecting adjustability. The outer edge of the moldboard is supported through the medium of a second angular casting 18, the same having its inner branch provided with elongated bolt-holes 19, and its outer branch provided with ordinary bolt-holes 20. A bolt 21 passes through the outer bolt-hole 16 of the moldboard, and through the opening 20 of the said casting 18. As shown by dotted lines in Fig. 2 bolts 22 pass through the inner flange or branch of the casting 18 and through perforations in the adjacent handle 5, so that as the moldboard is movable up and down upon the casting 10 so also is the casting 18 movable up and down upon the aforesaid handle.

Heretofore in this class of plows it has been customary to extend a shank from the lower front portion of the moldboard 13 to the upper edge of the point 7 and this is the portion subjected to the excessive wear during

the operation of the plow, so that as a result not only would the point 7 become impaired but also the shank-portion of the moldboard, whereby the point and the moldboard would have to be replaced before the moldboard proper actually became worthless. As before indicated it is one of the objects of my invention to overcome this disadvantage and permit of the moldboard being used long after its shank has become worn, or in other words, to provide for a replacement of the shank. This I accomplish by letting the moldboard terminate along its straight edge, and by filling the intervening space between said edge and the upper end of the point 7 with one or a series of plates 22 and securing the same in position through the medium of in this instance a corresponding pair of L-shaped clips or straps 23, through which bolts 24 pass and into the standard 3, and similar bolts 25 are received which pass through openings 26 formed in the said plates 22. By this latter arrangement it will be seen that as the point 7 and the plates wear they may be removed and replaced by new ones, leaving the old moldboard to be continued in use, whereby I effect a considerable saving and also loss of time. As before stated, either one or a series of these plates may be employed, though I prefer the series, in that it permits of an adjustment of the moldboard in the manner before stated. However, should the adjustable feature of the moldboard be omitted, which may be the case, but one plate 22 would be employed.

A plow constructed with the peculiar shape of subsoil point described is capable of being drawn through the soil with great facility, and with comparatively small power or labor, or in other words, the plow is rendered very light of draft and at the same time the subsoil is thoroughly pulverized, but not turned up or over as is the case with other plows whose wings 8 are not flattened toward their rear ends and arranged so as to permit the soil to pass thereover without coming in contact with the lower edge of the moldboard 13.

It is to be understood that changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having described my invention, what I claim is—

1. In a plow, the combination with the stock and standard, of a subsoil point arranged upon the standard at the lower end thereof and merged into a rearwardly disposed wing gradually flattened and declining from its point of juncture with the point to its rear and outer end, and a moldboard arranged above the wing forming an intervening space and having its lower edge disposed out of a plane with said wing, substantially as specified.

2. In a plow, the combination with the beam, standard, landside, and handles, of a subsoil point arranged at the lower end of the standard, slotted flanged angle-castings secured to the standard and to a handle above the point, the latter casting having adjustable connection with said handle, and the former having slots, a moldboard arranged upon said castings, and bolts passed through the moldboard into the slots of one casting and the hole of the other, substantially as specified.

3. In a plow, the combination with a beam and a standard, of a subsoil point arranged at the lower end of the standard, a moldboard arranged above said point and secured to the standard, and an intermediate removable shank connecting the moldboard and point, substantially as specified.

4. In a plow, the combination with a beam and the standard, of a lower subsoil point, an upper moldboard spaced therefrom, an L-shaped clip, and a removable plate secured to the clip and arranged between the point and moldboard, substantially as specified.

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

BENJAMIN F. CADENHEAD.

Witnesses:
HARLEN F. HEWETT,
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