

W. A. HARRIS.

PLOW.

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1,002,841.

Patented Sept. 12, 1911.

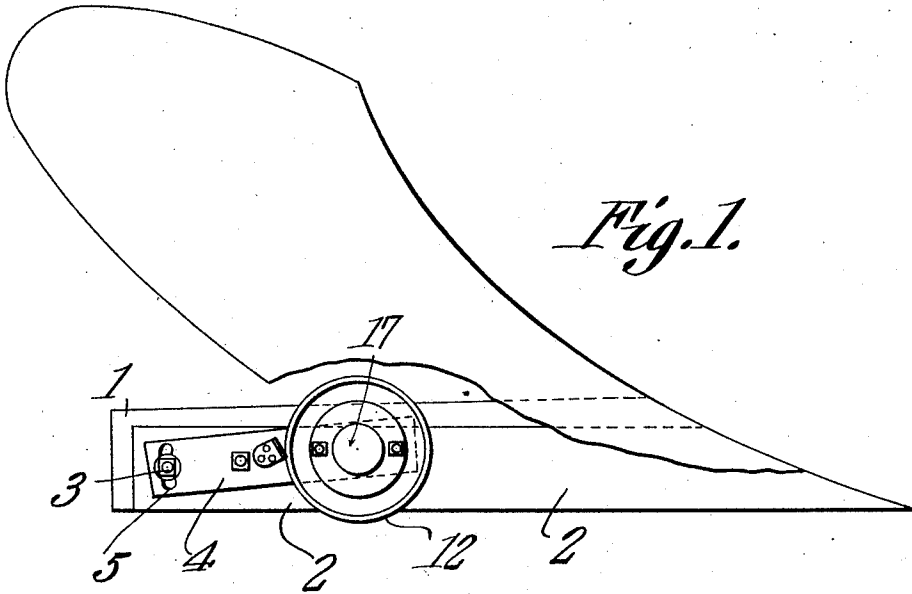


Fig. 1.

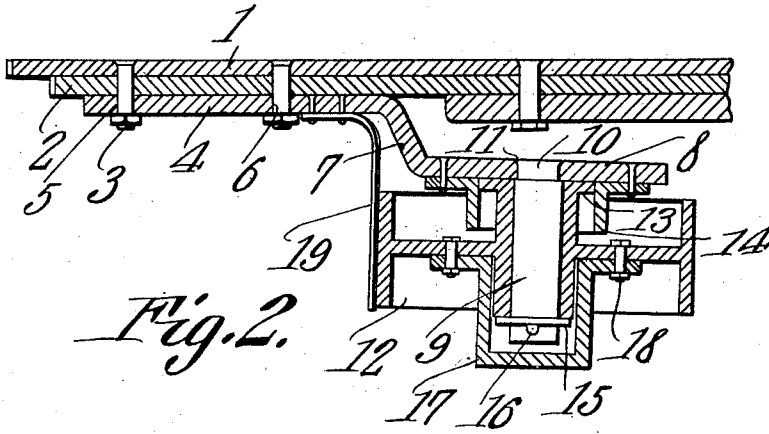


Fig. 2.

Inventor

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Witnesses

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UNITED STATES PATENT OFFICE.

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PLOW.

1,002,841.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM A. HARRIS, a citizen of the United States, residing at Greenville, in the county of Greenville and State of South Carolina, have invented a new and useful Plow, of which the following is a specification.

This invention relates to plows and consists in the novel construction and arrangement of its parts as hereinafter shown and described.

The object of the invention is to provide an attachment adapted to be applied to the foot or land side bar of moldboard plows and which attachment includes a plate or bracket adjustably mounted upon the said portion and having a journaled roller which is positioned at an angle to the line of draft of the plow. The object being that as the said roller moves along the bottom of a furrow which is being opened by the plow, the angular disposition of said roller with relation to the line of draft of the plow will have a tendency to pull the land side away from the vertical wall of the furrow and thereby reduce the friction at that part of the plow.

A further object of the invention is to provide means for supporting the weight of the plow on a roller and thereby prevent the land bar and other bottom portions of the plow from dragging and wearing on the bottom of the furrow. This practically relieves all of the bottom of the plow of friction, and at the same time lightens the draft required to pull the plow.

In the accompanying drawing;—Figure 1 is a side elevation of a moldboard furrow opener with parts broken away showing the landside portion and the attachment applied thereto. Fig. 2 is a horizontal sectional view of the attachment and adjacent parts of the plow.

As illustrated in the accompanying drawings the land side plate 1 of the plow is supported upon the land side bar 2 in the usual manner. It is usual to secure these parts together by means of bolts as for instance those shown at 3. The attachment includes a plate 4 having a shank portion provided with an arcuate slot 5 adapted to receive one of the bolts 3 and a bolt perforation 6 adapted to receive another of the bolts 3. The plate 4 is provided with a laterally disposed intermediate section 7 and terminates in a

forwardly disposed section 8 which lies in a plane at an acute angle to the vertical plane of the land side plate 1. A pin 9 is provided with a reduced portion 10 which passes transversely through the section 8 of the plate 4 and is upset at its end as at 11 whereby securing means is provided for attaching the said pin to the section 8.

A roller 12 is journaled upon the pin 9 and is provided at the end of its hub with an annular flange 13 which bears against the face of the section 8 of the plate 4. A collar 14 is attached to the section 8 of the said plate 4 and snugly receives the flange 13 upon the hub of the roller 12. A washer 15 is located upon the outer portion of the pin 9 and bears against that end of the hub of the roller 12 opposite the end thereof carrying the flange 13 and a pin 16 passes transversely through the outer portion of the pin 9 and serves as means for holding the washer 15 and the roller 12 in position upon the pin 9. A cap 17 receives the outer portion of the pin 9 and the outer end of the hub of the roller 12 and is secured to the web of the said roller by means of bolts 18 or other securing devices. A scraper 19 is fixed at one end to the plate 4 and has a laterally disposed portion which lies across the rear portion of the periphery of the roller 12. The pin 9 has its axis located at the right angle to the vertical plane of the section 8 of the plate 4 and inasmuch as the said roller is journaled upon the said pin the vertical plane of the said roller 12 is at an acute angle to the vertical plane of the land side plate 1.

Inasmuch as the roller 12 travels upon the bottom of a furrow opened by the plow and has its plane at an acute angle to the vertical plane of the land side plate 1, the said roller will have a tendency to pull the rear portion of the said land side away from the side or vertical wall of the furrow and thus reduce friction between the said plate and the furrow wall. This also reduces side draft on the part of the plow and preserves the land side plate from being worn thin. Also by reason of the fact that the said roller travels upon the bottom of the furrow, it will have a tendency to hold the extreme rear portion of the land side plate elevated above the bottom of the furrow, and consequently, the said plate will not wear at this point. By reason of the fact

that the plate 4 is provided with an arcuate slot 5 which receives one of the securing bolts 3, it is possible to loosen the said bolt and swing the said plate 4 upon the next adjacent bolt whereby the periphery of the roller 12 will be projected to a greater or less extent below the lower edge of the land side plate 1 of the plow structure. This may be resorted to to give the plow a desired pitch and also to compensate for wear which may occur at the periphery of the said roller. The scraper 19 will keep the periphery of the roller free from the accumulation of mud or other sticky material and consequently the said roller may have sufficient frictional contact with the bottom of the furrow to perform the above described functions.

By reason of the fact that the roller 12 travels upon the bottom of the furrow only the said roller and its supporting parts may be located between the landside and the moldboard of the furrow opener and consequently the parts are protected against portions of the furrow slice that may fall back into the furrow; also by reason of the

location of the roller 12 the furrow opener may be balanced thereon with more or less precision.

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

A plow attachment comprising a plate having its opposite end portions in different planes and non-parallel with relation to each other, securing devices carried by one end portion of the plate, a pin mounted upon the other end portion of the plate and having its axis at a right angle to the plane of the end portion of the plate upon which it is mounted and at an angle other than a right angle to the other end portion of the plate and a roller journaled upon said wheel.

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

WILLIAM ANDREW HARRIS.

Witnesses:

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