

J. A. SMITH.
Plow.

No. 209,779.

Patented Nov. 12, 1878.

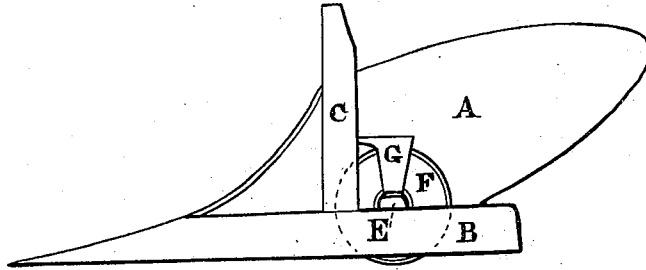


Fig. 1.

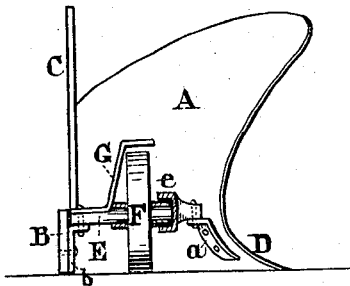


Fig. 2.

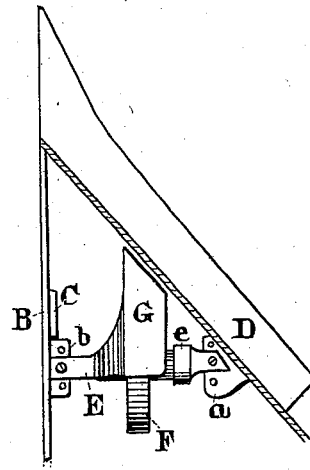


Fig. 3.

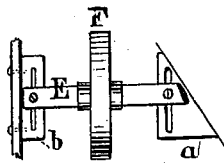


Fig. 4.

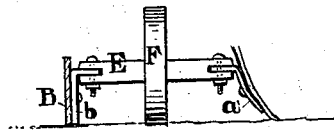


Fig. 5.

Witnesses.
John Stanley
Brother Thurlow

Inventor,
James A. Smith
by E. Thurston atty. in fact.

UNITED STATES PATENT OFFICE.

JAMES A. SMITH, OF WENONA, ILLINOIS.

IMPROVEMENT IN PLOWS.

Specification forming part of Letters Patent No. 209,779, dated November 12, 1878; application filed July 27, 1878.

To all whom it may concern:

Be it known that I, JAMES A. SMITH, of Wenona, in the county of Marshall, in the State of Illinois, have invented an Improvement in Plows; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawings, making a part of this specification, in which like letters of reference refer to like parts, and in which—

Figure 1 represents a longitudinal elevation of plow with center-wheel; Fig. 2, a rear view of same; Fig. 3, superficial view, with part of mold-board removed to show the wheel; Fig. 4, superficial view or plan of another form of axle adjustment or brackets; Fig. 5, rear view of the latter.

This improvement relates to that class of plows which have a vertical wheel or friction-roller between the land-side and the mold-board of a plow, for the purpose of bearing up or supporting the plow, and avoiding some friction of the plow in the soil or furrow, and also to supply the place, in some cases, of the brace connecting the land-sides and mold-board, the latter function (a brace) being accomplished by means of the axle of said small wheel, particularly if said axle be made a fixed one, the wheel revolving upon it. The wheel is intended to act in the same or a similar manner as a wheelbarrow-wheel does in supporting and balancing the barrow.

I make the wheel about six inches in diameter, more or less, mounted on an axle, with adjustable bearings or brackets at either end on the land-side, and upon the inner face of the mold-board or share, for the purpose of adjusting the wheel up or down, or more to the front or rear of the plow, as occasion may require. The vertical adjustment of the wheel is serviceable according to the nature or consistency of the soil.

The wheel may be covered with a canopy or shield, to exclude soil and prevent grit from clogging or wearing away the axle or parts which roll on each other.

The axle may be made rigid or fixed, and supply the place of a brace between the parts of the plow, the wheel revolving upon said axle.

One of the forms in which I construct my

improvement is as follows: In the drawings, A represents the mold-board; B, land-side; C, standard, all of the ordinary construction; D, share of mold-board; E, wheel-axle, not rolling, but adjustable farther forward or to the rear upon the respective adjustable brackets *a b* (the one on the land-side, the other upon the inner surface of the mold-board or share) by means of bolt or rivet holes. These brackets may be made adjustable higher or lower by means of adjusting holes and screws, (or slots in place of holes,) by which said brackets may be, respectively, adjusted upon the land-side or upon the mold-board or share, to raise or lower the axle E, carrying the wheel F.

I cover the wheel with a cap or canopy, G, the same being, in the drawing, attached to the axle, so as to be raised, lowered, or moved with said axle, and exclude dirt or soil, and prevent clogging the wheel; but the canopy need not be necessarily fixed to the axle, but to any convenient place, so as to cover the wheel.

I also cover the hub of the wheel with a collar, *e*, at the joint, to exclude grit, &c.

I prefer to split or slot the ends of the axle horizontally, or in a line with its axis, so as to embrace the brackets on their upper and lower sides, using bolts or screws passing through the axle ends and slots in the brackets *a b*.

What I claim as my invention is—

1. In a plow, the combination of supporting-wheel F, axle E, adapted to serve as a brace between the mold-board and land-side, with capability of horizontal adjustment along the supporting-brackets, the dirt-collar *e*, and canopy G, attached to said axle, substantially as described.

2. The combination and arrangement of the axle E, respective brackets *a* and *b*, with dirt collar or collars *e*, wheel F, and canopy G with the plow A B, as described.

In testimony that I claim the foregoing improvement in plows I have hereunto set my hand this 20th day of July, A. D. 1878.

JAMES A. SMITH.

Witnesses:

H. W. WELLS,
JAS. M. MORSE.