(No Model.)

E. J. ETZLER.

PLOW.

No. 266,121. Patented Oct. 17, 1882.

Fig 1

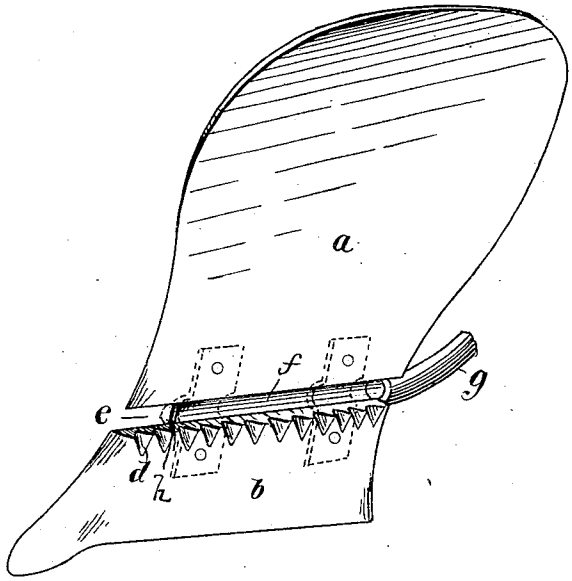
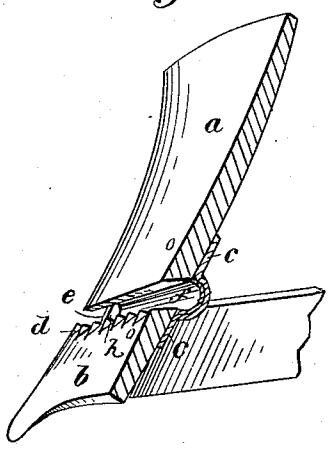


Fig 2



WITNESSES:

J. D. Garfield

B. G. Underwood.

INVENTOR

E. J. Etzler

BY Munn & Co

ATTORNEYS.

N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

EDWIN J. ETZLER, OF TYRONE, PENNSYLVANIA.

PLOW.

SPECIFICATION forming part of Letters Patent No. 266,121, dated October 17, 1882.

Application filed June 3, 1882. (No model.)

To all whom it may concern:

Be it known that I, EDWIN J. ETZLER, of Tyrone, in the county of Blair and State of Pennsylvania, have invented certain new and useful Improvements in Plows, of which the following is a full, clear, and exact description.

This invention consists of an improvement in the construction of plows for venting the surface of the share and mold-board to relieve the atmospheric pressure and enable the plow to run easier. The said construction consists of an open space along the joint between the share and the mold-board, or it may be along the share near the joint, together with notches in the surface of the share at the margin of the open space for enabling the air to circulate, and also with a tubular air-conductor so applied as to discharge air into the air-space, if it may be desired to force the air by means of a fan to be applied to the plow, together with a wheel to roll along the ground and give motion to the fan, as hereinafter described.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a side elevation of a mold-board and share of a plow, showing an arrangement of the character which I propose; and Fig. 2 is a section of Fig. 1.

In this example the mold-board *a* and the share *b* are connected by bars *c*, by which they are separated from each other a short distance, leaving a space, *e*, between them from front to rear, over which the furrow-slice will pass with sufficient freedom for air to enter along the surface of the mold-board to prevent suction. The margin of the share *b* is serrated at *d* to facilitate the entry of air from the space toward the point, and the mold-board may be similarly notched or serrated.

Instead of making the space between the share and mold-board, it may be located lower down in the share by making the share in two parts, or by suitably grooving it.

Under the share and mold-board there is a half-tube, *f*, closed at its inner end by the transverse head *h*, that may be applied, as shown, for conducting air in case it may be desired to force it in through a tube, *g*, from a fan-blower to be applied to the plow, and having a wheel to run along the ground to give motion to the fan; or, in the case of a sulky-plow, the motion may be taken from one of the sulky-wheels.

The air thus forced through the tube *g* into the half-tube *f* is prevented from passing through the latter by its inner head, *h*, and passes partly through the serrations *d*, over the top face of the share, and between the bottom of the furrow-slice and the mold-board, thus preventing suction.

I propose in practice to arrange the surface of the mold-board a little back of the surface of the share—that is to say, a little lower than the plane of the surface of the share—which will facilitate the circulation of air under the furrow-slice. When the conductor *f* is employed the connecting-bars *c* will be suitably curved to receive and hold the conductor between the mold-board and share and hold it under them, as shown in the drawings; but in case the conductor is not to be used the said bars may be straight or in conformity to the curve of the share and mold-board.

The conductor will be required most in hard or moist soil, but will not probably be needed in light dry soil. It may therefore be detachably applied, so that it can be taken off when not wanted.

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

1. A plow having its mold-board and share separated from each other from front to rear and connected together by the half-tube *f*, supported by the curved bars *c*, substantially as herein shown and described, whereby a continuous air-space, *e*, entirely open at top, is formed between the mold-board and share, as set forth.

2. A plow having an air-space, *e*, along the joint between the mold-board and share, and a notched or serrated margin of the share along the space, substantially as described.

3. The combination, with the mold-board *a* and serrated share *b*, provided with an air-space, *e*, between them, of the half-tube *f*, having an inner head, *h*, tube *g*, and means, substantially as described, for forcing air through said tube, as specified.

EDWIN JENKINS ETZLER.

Witnesses:
HENRY VIEL,
JACOB S. KAUP.