

## Plow-Cleaner.

Patented Sept. 28, 1858.



# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN PLOWS.

Specification forming part of Letters Patent No. **21,598**, dated September 28, 1858.

*To all whom it may concern:*

Be it known that I, DAVID COCKLEY, of the city of Lancaster, county of Lancaster, and State of Pennsylvania, have invented new and useful Improvements in Plows, which I style the "Self-Sharpening Plow;" and I do hereby declare that the following is a full and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification and to the letters of reference marked thereon.

The nature of my invention consists in attaching the mold-board, the cutter, the landside-point, and share by means of dovetailed clutches and one short bolt underneath for the purpose of preventing holes being made through the cast-iron mold-board, so as to allow the mold-board to be chilled on its whole surface, thus making it susceptible of a higher polish, and consequently of lighter draft and of greater durability.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

Figure 1 represents a view of plow with its improvements. Fig. 2 represents an under side view of plow, so as to show the manner in which the several parts are attached together.

A shows the handles of the plow; B, a square flat wrought-iron brace, which keeps the plow and plow-handles firmly in their position.

C is that part of the regulator which is attached to the handle A, and through which a joint-bolt, D, passes. The nut end of the bolt D operates in a slotted plate, E, up or down according to the set of the beam F, and corresponding with the vertical slot G in front. The head of the bolt D is in the other or beam part of the regulator C, (the regulator being in two divisions,) and operates in a horizontal slot, H, which allows the beam F to be moved or adjusted to the right or left, when required, and by this adjustment of the beam F the plow can be changed for the use of two or three horses abreast, or two or four horses in line. The joint I of the regulator C is corrugated in grooves fitted into each other, formed in a proper radius, so as to correspond with the upward, downward, or side adjustment of the beam F. The beam end of the regulator C is fastened to the beam by a screw-bolt, J.

K is an adjustable cutter, which is set at an angle, with point curved front, and is adjusted up or down at the side of the beam upon a screw-bolt in the slot L. The cutter K is held and braced in its position by a grooved plate, M, attached to the side of beam by projections cast on the back side of the plate M below and forward side above.

N is the wheel, with a cutter attached to its outer periphery, for the purpose of cutting sod, roots, briars, or running vines, and assists in keeping the plow clean and free from choking, and marks the width of furrow and lines with the landside of the plow, and which in its rolling motion cuts the sod and relieves the draft of the horses. It is attached to the beam by a double adjustment or double-slotted plate, O, which allows the wheel to be raised or lowered or set in or out of land. The main bolt P (which holds the mold-board) passes through the one end of the draw-rod R, which rod extends to the front end of beam F, where it is firmly held by an eyebolt and nut, S, which operates in a slotted plate, T. The plate T is held to beam firmly by two projections and screw-bolt U, and has grooves underneath to change the position of the draw-rod R.

V is the connecting-rod, attached to wheel N to operate the cleaner or knife W, and the combination of these devices V N W prevents the plow from choking, and is self-acting while attached to the wheel, and when the wheel operates the cleaner W must be disconnected from and work independent of the upper lever, X. By detaching the connecting-rod V from the knife W and wheel N the device is then changed to a hand or foot-cleaner by the plowman drawing the upper lever X, toward him or pressing his foot upon the end of lower lever, Y, which operate the cleaner W, while the spiral spring Z (which is attached to lever Y) and beam F draw the cleaner W back to its place. The curved shape of the cleaner W and the position of it as attached to the beam F gives the edge of the cleaner a forward and downward motion, and thus throws the stuff that accumulates and chokes up the plow down, so that the furrow-slice will take hold of the stuff and turn it under the furrow.

Fig. 2 represents the under side of plow. a is the sole or heel of the plow, which is slid into



the landside and fastened by a dovetail wedge, *b*, and secures it to its position. The point *c* and shade *d* are made to reverse, which makes them self-sharpening, and they are made fast to the bottom of mold-board by a projection, *e*, on the mold-board by means of a groove, *f*, on the point *c* and a slot, *g*, in the share. The mold-board *h* and post or sheth *i* are cast in one piece. The cutter *j* and landside are let into the post *i* and mold-board *h* by means of dovetails. The whole are held and bound together by means of one short screw-bolt, *k*, and plate *l* underneath. This screw-bolt *k* is made with a square head, which is fitted into a corresponding groove in the bottom of mold-board or post, and the back part of plate *l* rests upon two lugs, *m n*, one, *m*, upon the landside and the other, *n*, upon the mold-board. On the forward end of plate *l* is a lip which drops into the groove *f* in the point *c*, and by screwing

down the nut on the plate *l* all the pieces of the plow are drawn and held tightly together.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The adjustable cutter-wheel *N*, cleaner *W*, and devices *V X Y Z*, when arranged with the regulator *C*, in combination with the beam *F*, and the whole constructed for operation conjointly, as and for the purpose set forth.

2. The manner of arranging and fastening the points *c*, share *d*, and landside, with its cutter *j*, so as to hold them, with the short screw *k* and plate *l*, in combination with the mold-board *h* and beam *F*, substantially as described.

DAVID COCKLEY.

Witnesses:

M. CARPENTER,

I. FRANKLIN REIGART.