(No Model.) 2 Sheets—Sheet 1.

G. WIARD.

PLOW.

No. 255,370. Patented Mar. 21, 1882.

Fig. 1.

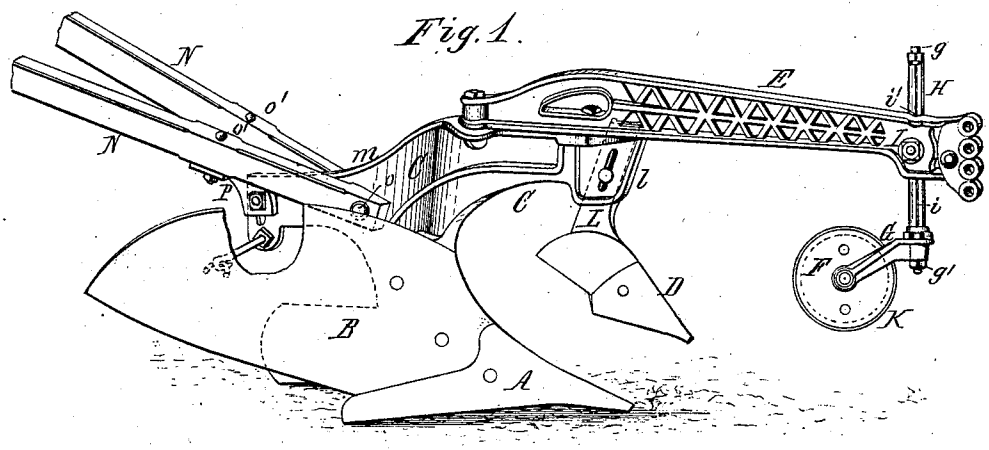


Fig. 2.

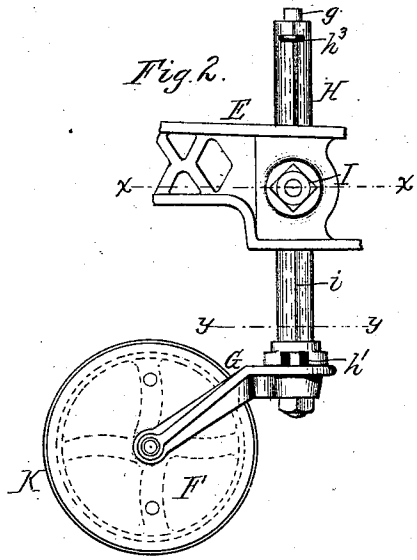


Fig. 3.

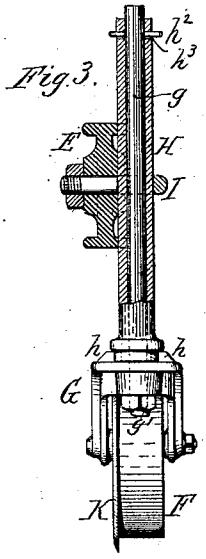


Fig. 4.

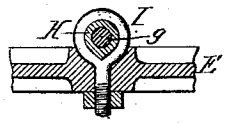


Fig. 5.

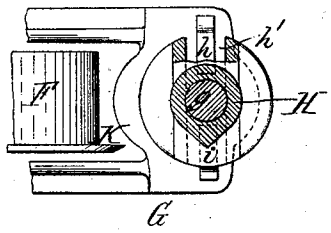
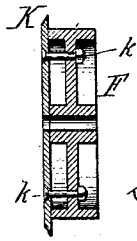


Fig. 6.



Witnesses:
Chas. J. Buchheit.
Edw. J. Brady.

George Wiard, Inventor:
By Wilhelm & Bonner
Attorneys.

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

(No Model.) 2 Sheets—Sheet 2.

G. WIARD.

PLOW.

No. 255,370. Patented Mar. 21, 1882.

Fig. 7.

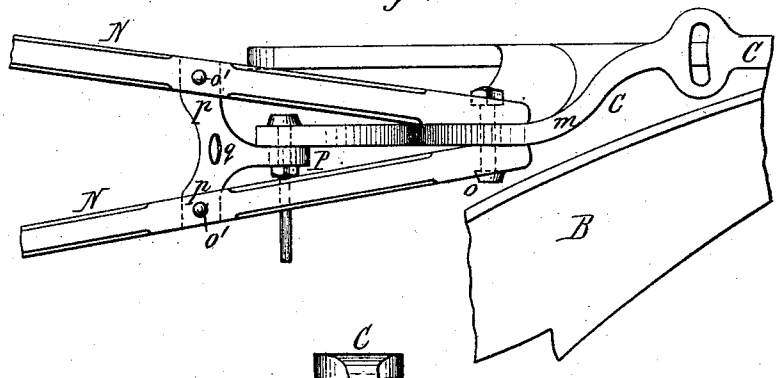
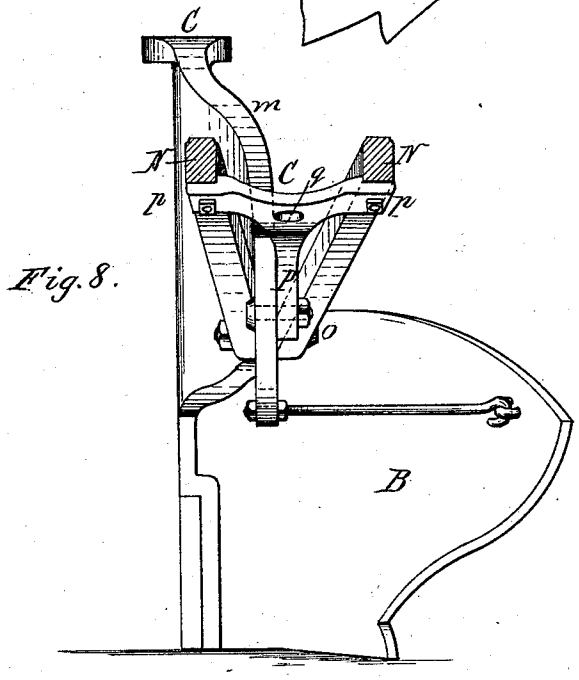


Fig. 8.



Witnesses.
Chas. J. Buchhurst.
Edw. J. Brady.

George Wiard Inventor.
By Wilhelm & Bonner
Attorneys.

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

UNITED STATES PATENT OFFICE

GEORGE WIARD, OF BATAVIA, NEW YORK, ASSIGNOR TO THE WIARD PLOW COMPANY, OF SAME PLACE.

PLOW.

SPECIFICATION forming part of Letters Patent No. 255,370, dated March 21, 1882.

Application filed August 24, 1881. (No model.)

To all whom it may concern:

Be it known that I, GEORGE WIARD, of Batavia, in the county of Genesee and State of New York, have invented new and useful Improvements in Plows, of which the following is a specification.

This invention relates to certain improvements in plows, which have for their object to better enable the plow to travel in the proper direction, and to more easily remove obstructions which retard the movement of the plow and interfere with its operation.

My invention consists of a caster-wheel which has a limited movement on its pivot, sufficient to enable the wheel to assume the positions in which it properly guides the plow when drawn by two or three horses, but which is prevented from swinging so far on its pivot that the wheel would tend to guide the plow in an improper direction; also, of a peculiar construction of the standard, whereby the handle-fastening is located entirely on one side of the beam, near the mold-board, as will be hereinafter fully described.

In the accompanying drawings, consisting of two sheets, Figure 1 is a perspective view of a plow provided with my improvements. Fig. 2 is a side elevation, on an enlarged scale, of the caster-wheel. Fig. 3 is a partly-sectional front elevation thereof. Fig. 4 is a horizontal section in line $x\,x$, Fig. 2. Fig. 5 is an enlarged horizontal section in line $y\,y$, Fig. 2. Fig. 6 is a sectional elevation of the caster-wheel. Fig. 7 is a top plan view of the plow with the beam removed. Fig. 8 is a rear elevation of the plow.

Like letters of reference refer to like parts in the several figures.

A represents the plow-point; B, the mold-board; C, the standard; D, the jointer; E, the beam, and F the caster-wheel. The latter is journaled in a bifurcated bearing, G, which is secured to the lower end of a vertical pivot-bolt, g, by a screw-nut, g'. The bolt g turns in a sleeve, H, which is fastened to the front end of the plow-beam by an eyebolt, I. The sleeve H is provided on its outside with an angular edge or rib, i, and the plow-beam is provided with corresponding notches, i', into which the angular edge or rib i of the sleeve is drawn by the eyebolt, which latter is shaped to correspond with the extension form of the sleeve H, as shown in Fig. 4. By this means the sleeve H is prevented from turning and retained in its proper position with reference to the beam. The sleeve is readily raised or lowered upon loosening the eyebolt. The eye of the bearing G, which surrounds the bolt g, is provided on its upper side with one or two projections, h, and the lower end of the sleeve H is provided with corresponding recesses, h', into which the projections h enter, and in which these projections move back and forth as the caster-wheel adjusts itself on its pivot. The recesses h' are made long enough to permit the caster-wheel to adjust itself for either two horses or three horses, and the stops h prevent the wheel from swinging farther on the bolt g than is necessary for this adjustment. By this means the wheel is prevented from swinging so far on its pivot as to deflect the plow from its proper course, while permitting the necessary play of the wheel. The bolt g is held in the sleeve H by a split bolt, h^2, which passes through the bolt and plays in elongated openings h^3 in the sleeve. It is obvious that the stops h may be formed on the sleeve and the recesses h' in the bearing G, whereby the same results will be obtained.

K represents a circular cutter secured to one side of the caster-wheel F, preferably by bolts k, so as to be removable from the wheel. The cutter K consists of a circular plate of steel having a sharp edge, which projects beyond the face of the wheel a sufficient distance to cut the stems of clover and other plants which sometimes cover the surface of the ground to be plowed. The face of the wheel prevents the cutter K, which forms a revolving colter, from entering the ground to an improper depth, and the cutter severs the vegetable matter which covers the ground, thereby enabling the jointer D, which follows in the track of the cutter K, to operate more effectively in opening the ground. When the plow is used on ground which renders the cutter K unnecessary, the latter is readily detached from the wheel.

L represents the standard by which the jointer D is secured to the front end of the plow-standard C. The faces or front sides of the upper portion of the standard L, and of

that portion of the standard C to which it is secured, are inclined downwardly and backwardly, so as to form an obtuse angle with the under side of the plow-bearing, as shown at *l*, whereby stalks, weeds, &c., which are caught by the standard L, are caused to work downward and brought within reach of the mold-board of the jointer D, which seizes such stalks, weeds, &c., and turns them aside, away from the standard. By this means weeds are prevented from accumulating under the beam in front of the jointer, and the draft of the plow is rendered easier, and the necessity of stopping the plow and removing the accumulated weeds is avoided. The rear portion of the standard C of the plow is turned toward the mold-board or provided with a shoulder or offset, as shown at *m*, whereby the rear portion of the standard, to which the handles N N are attached, is brought nearer the mold-board than the front portion of the standard, to which the beam E is attached. The lower or front ends of the handles N N are secured to the rear portion of the standard in rear of the bend *m*, about on a level with the upper edge of the mold-board, by a horizontal bolt, *o*. The handles are further supported by a bracket, P, which is secured to the rear end of the standard C preferably by a bolt passing through a vertical slot in the rear end of the standard, so that the rear ends of the handles can be raised or lowered by adjusting the bracket P on the standard. The bracket P is provided with two arms, *p p*, each supporting one of the handles N, which latter are secured to the arms *p* of the bracket P by upright bolts *o'*. The bracket P is preferably provided with a slot or opening, *q*, which is adapted to receive and hold a wrench such as is ordinarily carried with a plow. The bend *m* in the standard C locates the point at which the handles N are secured to the standard in a position in which the handles can be more conveniently held by the plowman walking in the furrow than heretofore, and permits the handles to be secured at such a height that none of the soil turned over by the mold-board is liable to fall on the handles and clog up the plow.

I claim as my invention—

1. The combination, with a plow-beam, of a caster-wheel journaled in a bearing, G, provided with one or more stops, *h*, a pivot-bolt, *g*, a sleeve, H, surrounding the bolt *g* and secured to the beam, and one or more recesses, *h'*, formed in the sleeve H, substantially as set forth.

2. The combination, with a standard, C, constructed with a lateral bend or offset, *m*, whereby the rear portion of the standard is located nearer the mold-board than its front portion, of a beam, E, secured to the standard in front of the bend *m*, and handles N, secured to the standard in rear of the bend *m*, substantially as set forth.

GEORGE WIARD.

Witnesses:
JNO. J. BONNER,
EDW. J. BRADY.