

(No Model.)

H. JOHNSTON.
PLOW.

No. 566,768.

Patented Sept. 1, 1896.

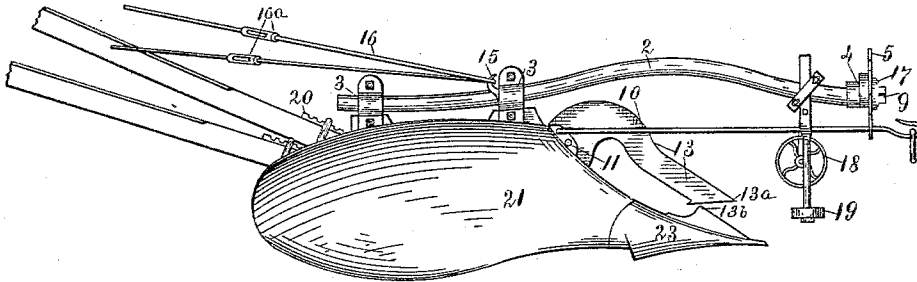


Fig. 1.

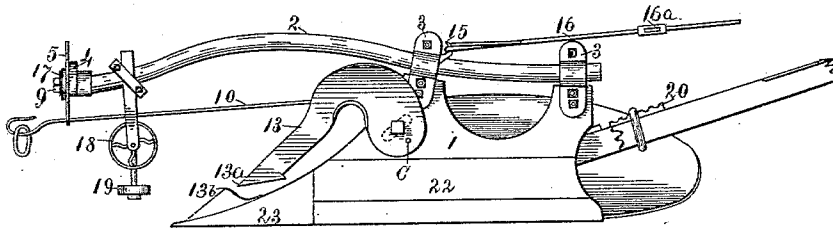


Fig. 2.

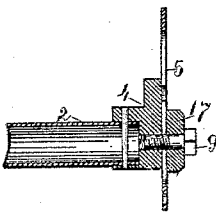


Fig. 3.

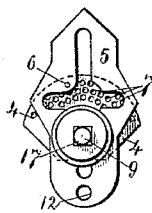


Fig. 4.

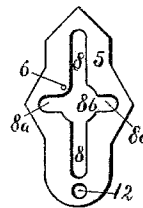


Fig. 5.

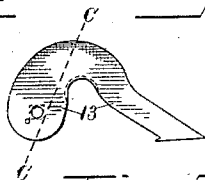


Fig. 6.



Fig. 7.

WITNESSES

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HUGH JOHNSTON, OF TORONTO, CANADA.

PLOW.

SPECIFICATION forming part of Letters Patent No. 566,768, dated September 1, 1896.

Application filed January 20, 1894. Serial No. 497,578. (No model.)

To all whom it may concern:

Be it known that I, HUGH JOHNSTON, residing in the city of Toronto, in the county of York and Province of Ontario, Canada, have invented new and useful Improvements in Land-Plows, of which the following is a specification.

The objects of my invention are to furnish a plow having an adjustable self-clearing colter leaning out from the line of the land-side, to which it is attached, and then curving in to said line, thus bringing the point of the colter into coöperation with the elevated guard and underscore on the plowshare, yet retaining the important feature of the required space for a way of escape of obstructing matter underground, also clearing itself of collecting obstruction aboveground. The colter being attached to the landside instead of to the beam and leaning outward provides room for the draw-rod to be brought to the breast of the plow, thus making the most direct line of draft to the body of the plow. The draft being thereby removed from the beam allows the beam to be raised, which assists in getting center adjustment of the clevis, and the beam bearing a guide-plate enabling the minute adjusting clevis to be adopted. The turnbuckle brace-rods and ratchet-wedges give portable and adjustable handles to height of plowman.

A further object of my invention is the gage-wheel to gage the width of furrow, which travels on the inner side of furrow and avoids friction against the land. Thus the introduction of my style of colter permits a continuous chain of novelties in my improved plow, which is plain, simple, and reasonable.

The following is a specification of the improvements on the land-plow, reference being made to the accompanying drawings, in which—

Figure 1 represents the moldboard side view of the plow. Fig. 2 represents the landside view of the same. Fig. 3 is an enlarged view in section of the beam-head and guide-plate. Fig. 4 is a front view of the said beam-head and guide-plate. Fig. 5 is a front view of the guide-plate alone. Fig. 6 is a separate view of the colter. Fig. 7 is a transverse sectional view of the colter on the line C C of Fig. 6.

The following numbers shown on the figures

aforesaid refer to the various points thereof. Number 1 is the head of the plow, to which the moldboard 21, the landside 22, the beam 2, the sole-plate, the plowshare 23, the draw-rod 10, one of the handles, and the colter 13 are fastened. The beam 2 is held rigid in the head 1 of the plow by means of clamps 3 and supports on its forward portion the clevis and gage-wheels 18 and 19 to regulate the depth of plowing and width of furrow, respectively. The wheel 19 is free from friction with the ground, because it works on the side of the furrow, while wheel 18 runs on the unbroken ground. The clevis is composed of a cap or head-block 4, secured to the beam 2 by a pin or any other suitable means. The under side of the cap 4 is cut away, as shown, to allow the draft-rod 10 to rise close to the beam 2. A guide-plate 5 is adjustable to vary the depth and width of the furrow by means of a vertical slot 8 and a cross-slot 8^a, also an enlarged opening 8^b. The guide-plate 5 is held rigid by a bolt 9 and a washer 17, also a stop 6, which engages the recesses 7 in the head-block 4. The draft-rod 10 has a hook on one end and passes through the opening 12, terminating in the lug 11 on the head of the plow, by which the strain comes more direct on the body of the plow.

The colter 13 is formed as shown, having its upper portion flared from the landside, as shown in Fig. 7, to give clearance for collecting stubble and liberty of motion to the draft-rod 10. The lower portion returns in the form of a curve until the point of the colter 13^a is in a direct line with the guard and underscore 13^b, (the underscore having been granted to me in a previous patent on the 16th day of August, 1887.) The colter 13 is adjustable on the head of the plow by means of a bolt and nut working in the slot, (indicated by dotted lines,) and also has a pin C, which enters indentation similar to the fastening described of the clevis, Fig. 4. The colter 13 when raised and back, as shown in Fig. 2, has the point 13^a back and in a line with the point and underscore 13^b, in which position it gives vent to grass, roots, and gathering substances and guards against obstructions, such as stones and wood-knots, between point and colter, but still retains the unbroken knife-edge from the lower point of the

plow to the surface of the ground. The colter 13 when down and out, as indicated in Fig. 1, in combination with the underscore, forms a draw or shearing cut. This form of cutting edge severs any hard substance and is used in breaking clean tough sod or prairie land. The colter 13 may be placed in any workable position between these extremes.

The handles of my improved plow are portable and can be removed at a moment's notice for storage or shipping purposes, and are adjustable to suit the height of the plowman by means of serrated wedges 20 and brace-rods 16, having turnbuckles 16^a. The brace-rods 16 are one continuous rod terminating in the handles, with the exception of the brake for the turnbuckles 16^a, while the center is bent short and dropped in the hook 15 on the head 1 of the plow.

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

1. In a plow a colter having the form of an inverted letter U its center portion flared out from the landside and its head or rear portion attached adjustable thereto in a line with the thrust, and the outer or forward portion drawn to a knife-edge, which as shown has an extremely-slanting draw cut; substantially as herein set forth.

2. In a plow the combination of a colter and guard and underscore, said colter having the

form of an inverted U, its center portion flared out from the landside, its head or rear portion attached adjustable thereto in a line with the thrust, and the outer or forward portion drawn to a knife-edge, which as shown has an extremely-slanting draw cut.

3. In a plow the combination of a colter with the draft-rod, the colter having the form of an inverted U, its center portion flared out from the landside and its rear portion attached adjustable thereto, which draft-rod is attached to the breast of the plow; substantially as herein set forth.

4. In a plow the combination with the plow-beam having a perforated or honey-combed head, of a cross-slotted guide-plate with inner corners rounded at the junction of slots and the draft-rod drawing from the breast of the plow and adjustable thereto; substantially as and for the purpose hereinbefore set forth.

5. The combination with the beam of a plow of a furrow gage-wheel arranged to travel horizontally on the inner wall of the preceding furrow, substantially as set forth.

6. The combination in a plow of the adjustable handles, serrated wedges, and the turnbuckle brace-rods, substantially as set forth.

HUGH JOHNSTON.

Witnesses:

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