

M. Spencer, Jr.,

Gang Plow.

No. 107,829.

Patented Sept. 27, 1870.

Fig. 1.

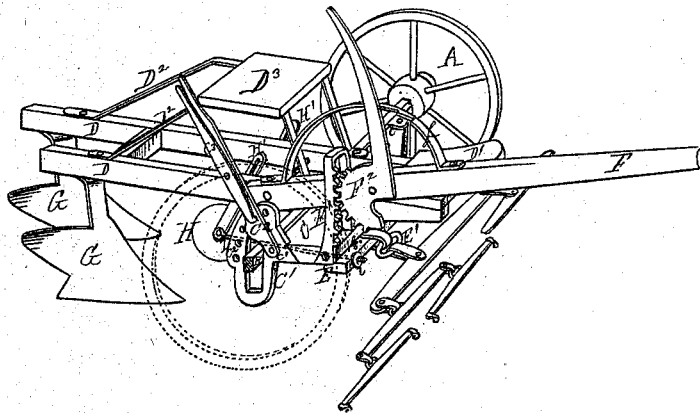


Fig. 2.

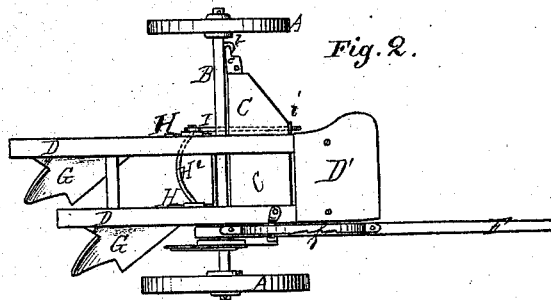
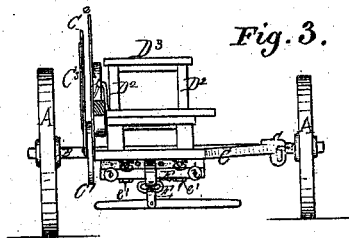


Fig. 3.



Witnesses.

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NAAMAN SPENCER, JR., OF EAGLE POINT, ILLINOIS.

IMPROVEMENT IN GANG-PLOWS.

Specification forming part of Letters Patent No. 107,829, dated September 27, 1870.

To all whom it may concern:

Be it known that I, NAAMAN SPENCER, JR., of Eagle Point, county of Ogle, State of Illinois, have invented certain new and useful Improvements in Gang-Plows, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, making a part of this specification, in which—

Figure 1 is a perspective view of my improved plow, with one of the carrying-wheels removed for the purpose of showing some of the adjusting devices. Fig. 2 is a plan or top view with the seat removed, and Fig. 3 is a front view.

The invention relates to that class of plows known as "gang" or "sulky" plows; and consists in, first, a certain new construction and adaptation of the devices by means of which the plow-beams are supported and adjusted upon the axle; secondly, making the draft beam or plank, to which the horses are attached, adjustable; and, thirdly, in a novel construction of the devices by which the colters are supported and operated, whereby certain advantages are gained and certain adjustments provided for, as will be fully explained.

In the drawing, A A are the carrying-wheels, and B the axle, upon which the working parts of the plow are supported. C is the platform, made substantially in the form shown in Fig. 2, and provided at one end with an eye or link, *c*, by means of which said platform is hinged to the axle B, as at *b*, Figs. 2 and 3. C¹ is a slotted sector-plate, attached to the free end of platform C, and as the axle B is thrust through the slot in sector-plate C¹, as shown in Fig. 1, it is apparent that platform is connected with the axle at both ends, but is free to vibrate vertically, its throw being limited only by the slot in plate C¹. C² is a lever, pivoted to plate C¹ at *c*¹, and provided with a spring-latch, C³, which engages with a series of holes, *c*², arranged in an arc of a circle, the center of which is at the pivot *c*¹. D D are the plow-beams, two or more in number. They are rigidly attached to platform C, and extend in front of it far enough to afford a support for the foot-board D¹, and to the rear to such distance as may be necessary to accommodate the plows and colters, as will hereinafter be explained.

D² D² are arched seat-supports or brackets, upon which is mounted the driver's seat D³. E, Figs. 1 and 3, is a draft plank or beam, to which the whiffletrees are attached by means of clevis E'. This clevis can be moved from right to left as required, a number of perforations, *e*, being provided for that purpose.

The draft-plank E is attached to platform C by bolt-standards *e*¹, and may be adjusted vertically upon said bolts by means of nuts above and below the plank, as is plainly shown in Fig. 3.

F is the tongue, hinged either to the platform C directly or to one of the plow-beams, as shown in the drawing. The tongue passes through a toothed strap or tongue-loop, F¹, which is attached to and moves with the platform C. The loop F¹ forms an arc of a circle, and is attached to platform C in such position that the center of the circle, of which the loop forms a part, shall be coincident with hinge which connects the tongue F with the platform.

F² is a cogged segment-lever, pivoted upon the tongue F, so that its teeth will engage with the toothed face of loop F¹. *f* is a curved ratchet-standard, with which lever F² is made to engage when desired. G G are plowshares, of any usual or desired construction, and attached to beams D, by bolts or their equivalent, in such manner that they can be readily removed. H H are revolving or disk colters, mounted in the forked standards H¹. These standards are slotted at their upper ends, and are bolted to the plow-beams D a short distance in front of and in line with the points of the plows.

H², Fig. 2, is a curved connecting-rod, connecting the lower ends of standards H¹, and keeping colters H at a fixed distance apart. I usually prefer to extend rod H² through standard H¹ and colter H, in such manner that the bar forms bearings for the colter, as this is a simple arrangement, requiring but few pieces, and giving great stiffness to the parts.

I, Figs. 1 and 2, are draft-rods, attached to the lower ends of colter-standards H¹, and extending forward to draft-beam E, through which they pass, and to which they are attached by nuts *i*. The front ends of draft-

rods I are provided with a long screw, so as to allow a nut to be placed upon each side of the draft-beam, in order to effect certain adjustments, which will soon be explained.

From the above description of my improved plow it will be seen that by means of the nuts upon the bolt-standards *e* the draft-beam E can be raised or lowered, to correspond with the depth at which the plows are running, thus enabling me to obtain a more direct draft than could be had without this adjustable beam.

Another improvement is that the draft-clevis E' can be moved laterally upon the draft-beam, by which means the plow can be made to run to or from the land, as desired.

It is also apparent that by connecting the disk-colters by the rod H² they mutually support each other, and will run much truer and steadier than if they were not so connected. This arrangement allows me to use much lighter standards, H, than I could otherwise do, as it relieves them (the standards) almost entirely from torsional or twisting strain.

When plowing, the platform C is free to rise and fall relative to wheels A and axle B, in order that the parts may adjust themselves readily to the inequalities of the ground; but

when moving the machine from the field, the platform C can be made rigid with the axle by depressing lever C², and the plow and colters can be elevated by tilting platform C, through the action of tongue-loop F¹ and segment-lever F², the axle B serving as a fulcrum for that purpose.

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

1. In a gang-plow, the vibrating platform C, in combination with draft beam or plank E, bolt-standards *e'*, and adjusting-nuts, substantially as set forth.

2. The combination of the adjustable draft-beam E, disk-colters H, standards H¹, and draft-rods I, substantially as set forth.

3. The combination of the colters H, standards H¹, connecting-rod H², and draft-rods I, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

NAAMAN SPENCER, JR. [L. S.]

Witnesses:

J. H. ELWARD,

JOHN ANDERSON.