D. M. FUNK.

GANG-PLOWS.

No. 195,498. Patented Sept. 25, 1877.

Fig. 1.

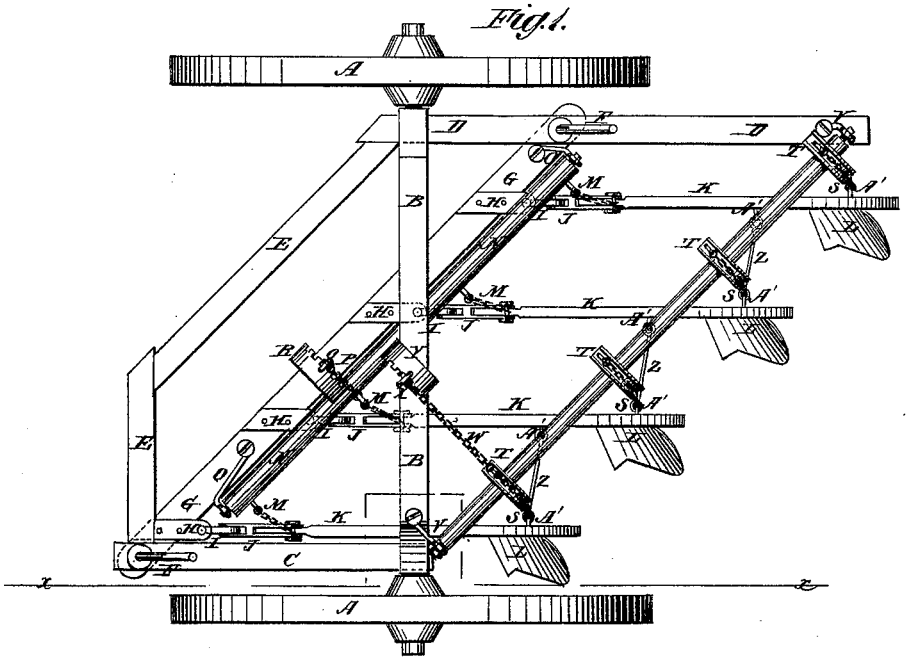
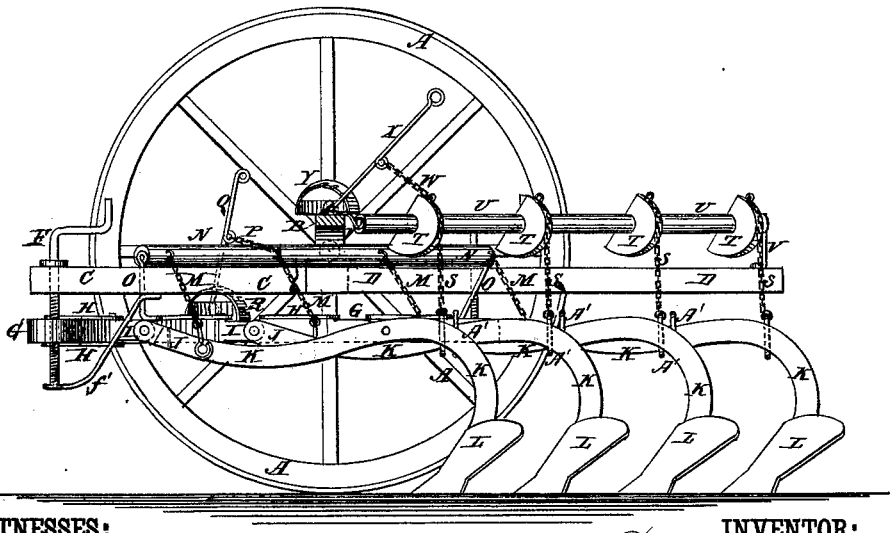


Fig. 2.



WITNESSES:

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DANIEL M. FUNK, OF HARRISBURG, OREGON.

IMPROVEMENT IN GANG-PLOWS.

Specification forming part of Letters Patent No. **195,498**, dated September 25, 1877; application filed July 30, 1877.

To all whom it may concern:

Be it known that I, DANIEL M. FUNK, of Harrisburg, county of Linn, and State of Oregon, have invented a new and Improved Gang-Plow, of which the following is a specification:

Figure 1 is a top view of my improved machine. Fig. 2 is a side view of the same, partly in section, through the line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved gang-plow, which shall be so constructed that it may be adjusted to work at any desired depth in the ground, which may have the pitch of the plows changed as hard and soft places occur without having its adjustment changed, which will enable the plows to be readily raised from the ground for convenience in passing from place to place, which will allow each plow to rise independently of the others to pass obstructions, and which shall be simple in construction, readily controlled, and may turn a square corner without having the plows raised from the ground.

The invention consists in the combination of the forwardly-projecting bar, the rearwardly-projecting bar, the cross-bar, the swiveled screws, and the lead-bar with each other, and with the wheels and axle for connecting the plow-beams with said wheels and axle; in the combination of the straps, the pivoted blocks, and the pivoted bars with the lead-bar and with the plow-beams, to enable the pitch of the plows to be temporarily changed without changing the position of the lead-bar; in the combination of the shaft, the chains, and the lever and catch-bar with the plow-beams, the pivoted bar, and the lead-bar; and in the combination of the shaft and pulleys, the chains, and the lever and catch-plate with the plow-beams, the frame, and the axle, as hereinafter fully described.

In the drawing, A A are the wheels, which revolve upon the journals of the axle B. To the axle B, near one end, is attached the rear end of a bar, C. To the axle B, near its other end, is attached the foward end of a bar, D. The forward ends of the bars C D are connected by an angular bar, E.

If desired, the bar D may project as far forward as the bar C, and the bar E may be straight.

To the forward end of the bar C, and to the bar D, at a suitable distance in the rear of the axle B, are swiveled two crank-screws, F, which pass through holes in the ends of the lead-bar G, so that the said lead-bar G may be raised and lowered by turning the said crank-screws F to adjust the plows to work at any desired depth in the ground. The lower ends of the screws F work in holes in the free ends of the braces *f'*, the other ends of which are attached to the bars C D. To the upper and lower sides of the lead-bar G are attached four (more or less) pairs of straps, H, the rear ends of which project, and to and between them are pivoted the blocks I, so that the plows may have a free lateral movement.

J J are short bars, the forward ends of which are notched to receive the blocks I, and are pivoted to said blocks. The rear ends of the bars J are notched to receive the forward ends of the beams K, and are pivoted to said beams. The forward ends of the beams K and the bottoms of the notches in the bars J are beveled, to prevent the said beams K from dropping below a straight line with said bars J. The rear parts of the beams K are curved downward, and to their ends are attached the plows L. To the forward ends of the beams K, at or near their pivots, are attached the lower ends of the short chains M, the upper ends of which are attached to a shaft, N. The ends of the shaft N work in supports O, attached to the lead-bar G, and to said shaft is attached the end of a short chain, P, the other end of which is attached to a lever, Q. The lower end of the lever Q is pivoted to the lead-bar G, or to a support attached to said bar. The lever Q moves along the notched edge of an arched plate, R, by which it is held in any position into which it may be adjusted. The ends of the notched catch-plate R are attached to the lead-bar G, or to a support attached to said bar.

By this construction, by operating the lever Q the forward ends of the plow-beams K may be raised and lowered to change the pitch of the plows as hard or loose soil is encountered in crossing the field.

To the rear parts of the plow-beams K are attached the lower ends of the short chains S, the upper ends of which are attached to the pulleys or segments of pulleys T, which are

attached to the shaft U. The journals of the shaft U revolve in bearings in the supports V, the rear one of which is attached to the rear end of the bar D. The forward support V is attached to the axle B, or to the rear end of the bar C. To one of the pulleys T is attached the end of a chain, W, the other end of which is attached to the lever X. The lever X moves along the notched edge of the arched plate Y, and its lower end is pivoted to the axle B, or to a support attached to said axle. The ends of the catch-plate Y are attached to the axle B, or to a support attached to said axle.

By this construction, by operating the lever X the plows can be raised from the ground, when desired, for convenience in passing from place to place.

The plow-beams K are connected and held at the proper distance apart by the rods or bars Z, the ends of which are connected with, and slide up and down upon, long keepers A′, attached to the said beams K, so that each beam K can move up and down freely while being kept in proper position laterally.

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

1. The combination of the forwardly-projecting bar C, the rearwardly-projecting bar D, the cross-bar E, the swiveled screws F, and the lead-bar G with each other and with the wheels and axle A B for connecting the plow-beams with said wheels and axle, substantially as herein shown and described.

2. The combination of the straps H, the pivoted blocks I, and the pivoted bars J with the lead-bar G and with the beams K, to enable the pitch of the plows to be temporarily changed without changing the position of the lead-bar G, substantially as herein shown and described.

3. The combination of the shaft N, the chains M and P, and the lever and catch-plate Q R with the plow-beams K, the pivoted bars J, and the lead-bar G, substantially as herein shown and described.

4. The combination of the shaft and pulleys U T, the chains S and W, and the lever and catch-plate X Y with the plow-beams K, the frame C D E, and the axle B, substantially as herein shown and described.

DANIEL M. FUNK.

Witnesses:
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