J. D. KNEEDLER.

Gang Plow.

No. 83,641. Patented Nov. 3, 1868.

Fig. 1.

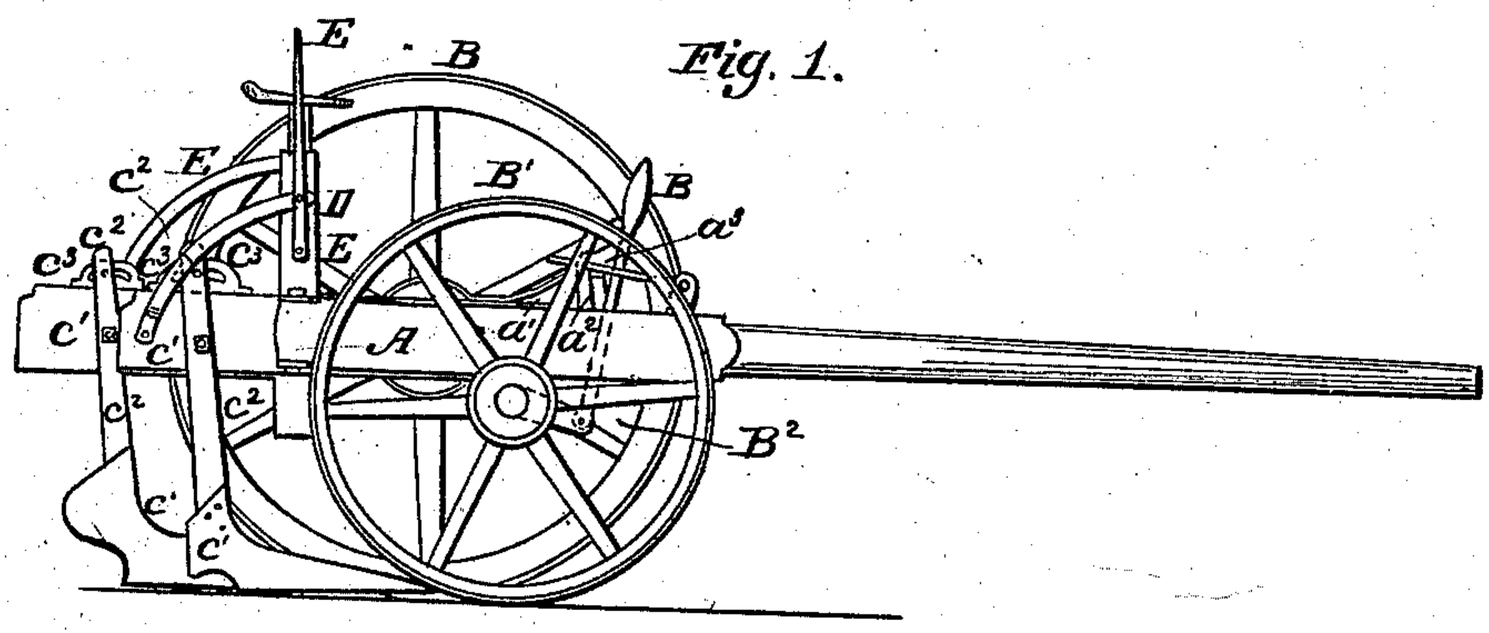


Fig. 2.

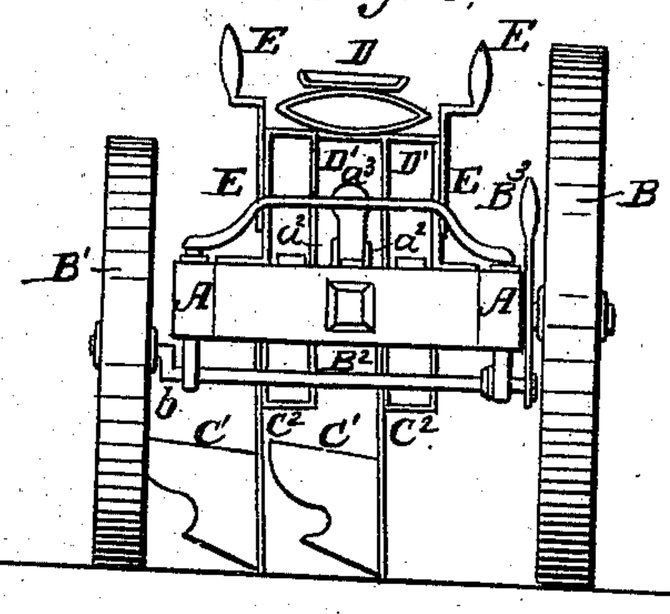
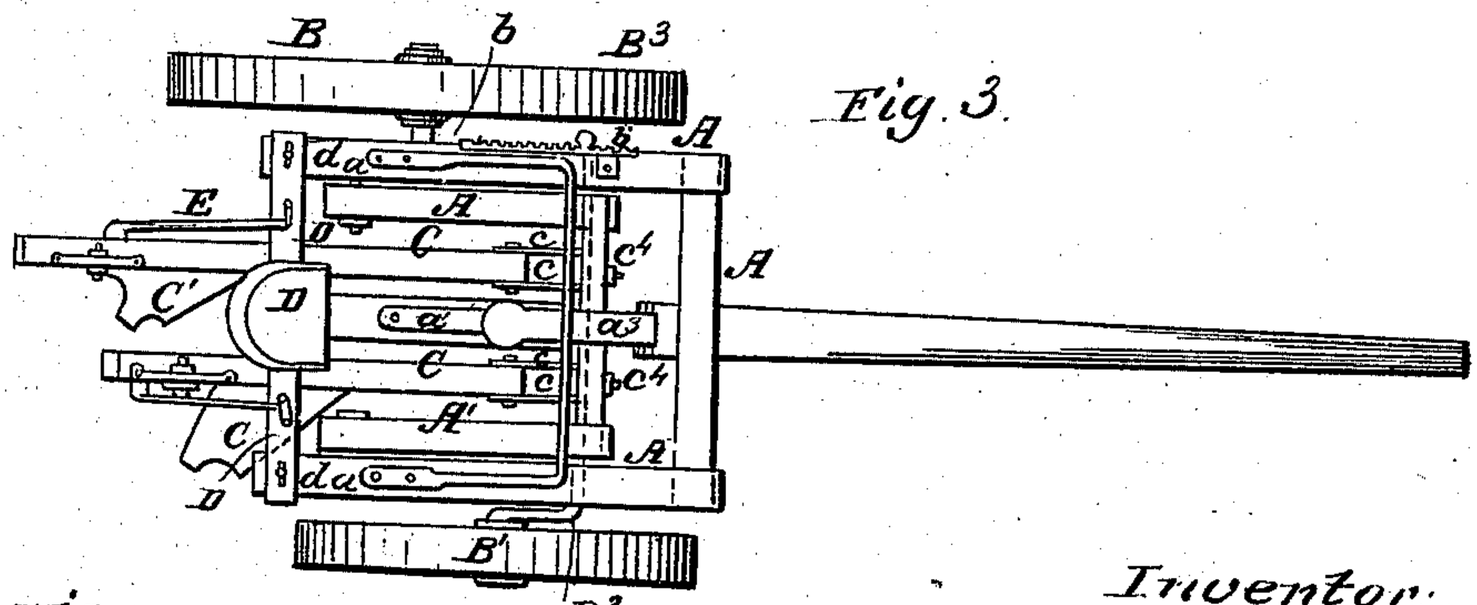


Fig. 3.



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Letters Patent No. 83,641, *dated November* 3, 1868.

IMPROVEMENT IN GANG-PLOW.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOHN D. KNEEDLER, of Collinsville, in the county of Madison, and State of Illinois, have made certain new and useful Improvements in Gang-Plows; and I do hereby declare that the following is a full and clear description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention relates to an improved frame-work for sustaining the operative parts of the plow-beams, levers, &c.; the arrangement of the wheels on which the plow-frame is mounted; the arrangement of a spring-treadle for regulating the depth of furrow cut; also, the plow-post attachments for the same purpose, and the seat-frame and devices for regulating the width of furrows.

To enable those skilled in the art to make and use my improved gang-plow, I will proceed to describe its construction and operation.

Figure 1 of the drawings is a side elevation of one of the improved gang-plows.

Figure 2 is a front end elevation, and

Figure 3 is a general plan.

The frame-work A, which sustains the operative parts of the machine, consists of three longitudinal beams and one front transverse beam. This frame is mounted on two wheels, B and B^1, the wheel B being about the size of an ordinary wagon-wheel, and attached to the landside of the frame by means of a short axle, while the wheel B^1 is but little more than half the size of the wheel B, and is placed upon the outer end of the crank-shaft B^2, so as to run in the furrow.

The wheel B^1 runs on an arm projecting from the crank *b*, and, as the said shaft B^2 may be turned over by means of the lever B^3 on its other end, it will be an easy matter to raise the said wheel B^1, more or less up, and thus partially regulate the depth of furrow cut in this manner.

The lever B^3 is arranged to catch in a serrated plate, *b'*, affixed to the top of one of the side beams of the frame A, and so held in any required position for the regulation of the position of the small wheel.

Inside of the frame A, and in the same horizontal plane with it, is another frame, A^1, pivoted to the outer beams of the outside frame by means of the bolts *a*, so as to allow the front end of the said inner frame to vibrate up and down about this pivot-point. The front end of this inner frame is held up to its proper position by the small spring a^1, pressing from the central beam of the frame A up against the bottom side of the loop a^2, attached to the front beam of the inner frame.

A spring-treadle, a^3, is also affixed to the front end of the frame A, and projects upward and backward therefrom, resting on top of the loop-piece a^2, and terminating in a foot-piece, in a convenient position for the driver's foot to rest upon.

The plow-beams C are attached to the front beam of the vibrating frame A^1 by means of the clevises *c*, and so arranged in said couplings as to permit of a vertical vibration of the parts.

In cultivating undulating ground, it will frequently be found convenient for the driver to press his foot on the treadle a^3, thereby lowering the front end of the frame A^1 and the front ends of the plow-beams, and causing the plows to run down into depressed portions of the field, so as to cultivate all portions at a uniform depth.

The plows C^1 are attached to the back ends of their beams C by means of the vertical posts C^2, the latter being arranged to allow their bottom ends to be thrown forward or backward, in order to turn the point of the plow more or less down, for the purpose of regulating the depth of furrow partially in this manner.

The attachment of the post C^2 to the beam C is constructed in this wise, viz: A pivot-pin, c^1, passes centrally through the post and beam, and assembles the parts together. The upper end of the post extends a few inches above the top of the beam, and another pin, c^2, passes through this upper projecting end of the post, and a metal lug, c^3, attached to the beam, a segmental slot being made in the said lug so as to allow the post to be swung back and forth about its pivot-pin c^1. The back side of the lug, and the contiguous side of the washer which intervenes between it and the head of the bolt or pin c^2, should be corrugated, so as to prevent slipping of the parts when the plow is in the ground.

The seat D, on which the driver rides, is placed on top of the frame D^1, which latter is attached to the back ends of the side beams of the frame A by means of the set-screws *d*, and so arranged as to be moved from side to side for the purpose of giving the plows more or less land, as may be required.

The front ends of the plow-beams C are also susceptible of a lateral adjustment by means of the clevises moving laterally in slots in the front beam of the frame A^1, and secured thereto by means of the set-nuts c^4.

The plows are raised up out of the ground by means of the levers E, fulcrumed to the sides of the frame D^1, and connected with the back ends of the beams C by means of the links *e*.

The pivot-point *e'* is so high up on the posts D^1, that when the levers are thrown forward, their longitudinal axis will fall below these points *e'*, thereby allowing the said levers to retain their depressed position by the simple action of gravitation.

Having described my invention,

What I claim, is—

The frame A and vibrating frame A^1, the spring a^1, loop a^2, and treadle a^3, all operated and combined substantially as set forth.

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Witnesses:

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