(No Model.)

2 Sheets—Sheet 1.

E. E. KRAUSE.

GANG PLOW.

No. 347,721.

Patented Aug. 17, 1886.

Fig. 1.

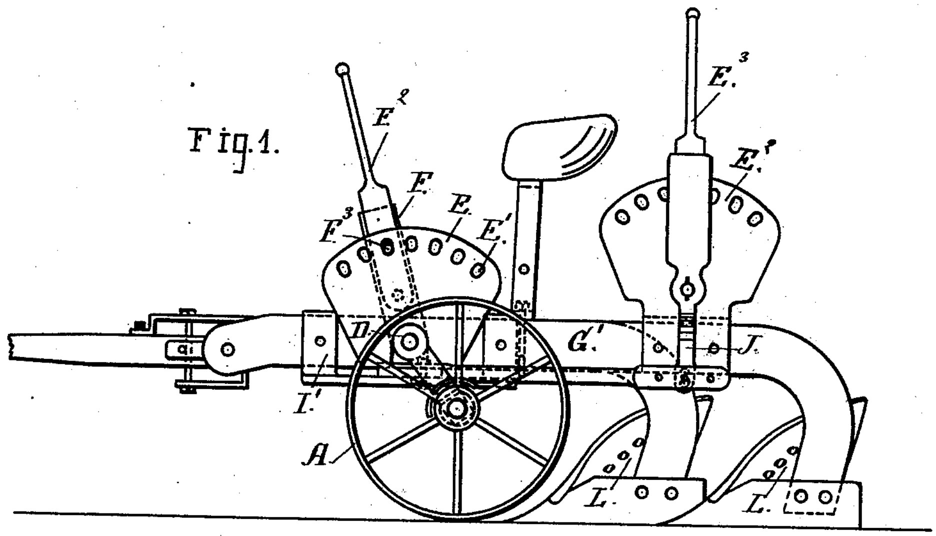
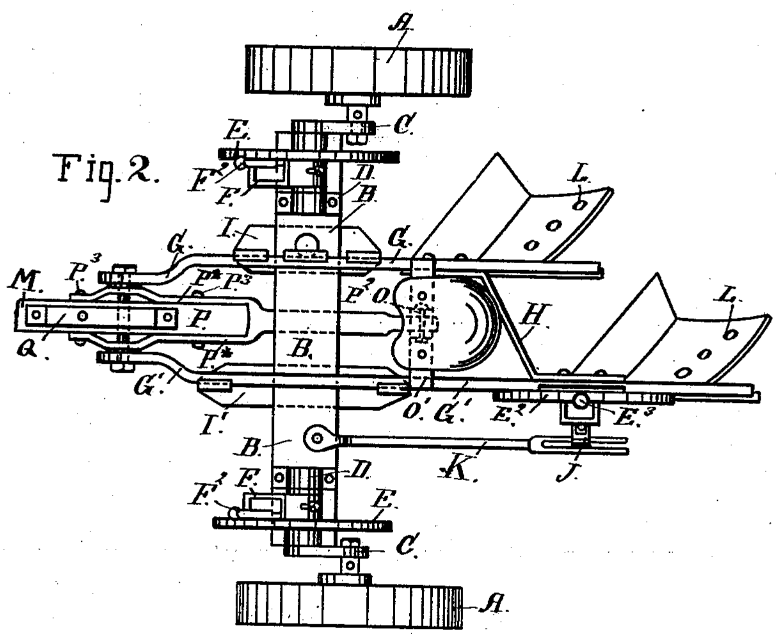


Fig. 2.



Witnesses:

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Ernest E. Krause

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(No Model.) 2 Sheets—Sheet 2.

E. E. KRAUSE.

GANG PLOW.

No. 347,721. Patented Aug. 17, 1886.

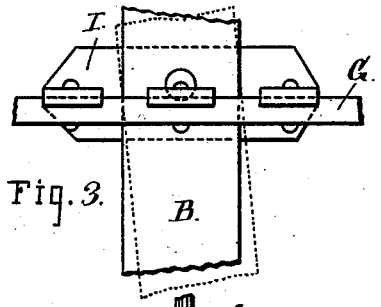

Fig. 3.

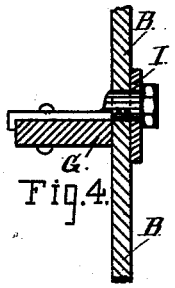

Fig. 4.

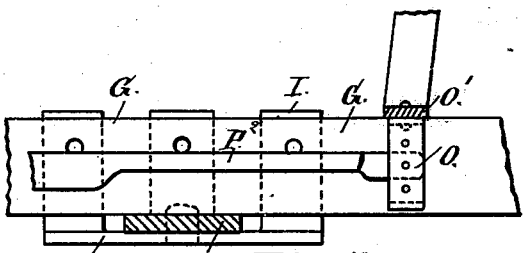

Fig. 5.

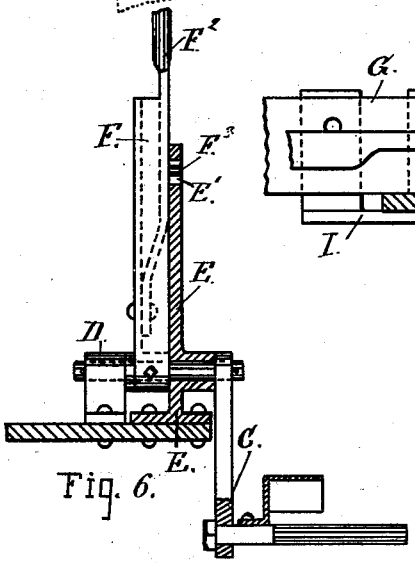

Fig. 6.

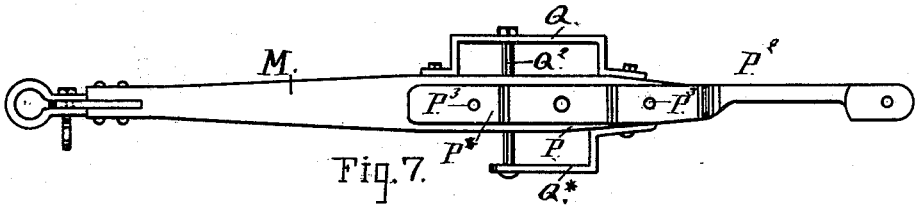

Fig. 7.

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UNITED STATES PATENT OFFICE.

ERNEST E. KRAUSE, OF RIO VISTA, CALIFORNIA.

GANG-PLOW.

SPECIFICATION forming part of Letters Patent No. 347,721, dated August 17, 1886.

Application filed October 12, 1885. Serial No. 179,732. (No model.)

To all whom it may concern:

Be it known that I, ERNEST E. KRAUSE, a citizen of the United States, residing at Rio Vista, in the county of Solano and State of California, have invented a new and useful Gang-Plow, of which the following is a specification.

The object of my invention is to provide a strong and durable gang-plow, the parts of which are composed entirely of iron or metal, and means for raising or lowering the plows or turning them to or from land with great ease and facility.

My invention consists in the following construction and arrangement of parts whereby the object of my invention is attained, and which will be first fully described, and points of novelty set forth in the claim. All this will be fully seen in the course of the following description and by reference to the accompanying drawings, in which—

Figure 1 is a side elevation of my gang-plow. Fig. 2 is a top view. Figs. 3, 4, 5, and 6 are views in detail. Fig. 7 is a side view of my draft-pole or draw-beam.

The driving-wheels A of my gang-plow are mounted upon a wide transverse beam, consisting of the flat iron plate B, through the medium of the crank-axles C. The inner ends of these crank-axles have their bearing in studs or posts D, clipped or bolted to the ends of the plate, and intermediate between these posts or studs is placed the circular rack plates or disks E, with perforations E′, the disk-plates being also rigidly connected to the cross beam or plate B.

To the crank-axles, intermediate between the inner studs or bearings and perforated disk-plates, is rigidly connected by a key or set-screw the casings F, which carry the spring-arm levers F^2, the latter being provided with pins, which enter the holes in the disk-plates, and when these levers are operated they cause the cranks to assume a vertical or horizontal position, and carry with them the driving-wheels to the right or left of the ends of the cross-beams, and consequently elevate or depress the plow-frame and raise or lower the points of the plows, causing them to cut a deeper or shallower furrow. The pins F^3 upon the spring-levers, entering the holes in the disk-plates, keep the driving-wheels in the desired position upon their respective axles.

The plow-carrying portion of my frame consists of two flat-iron bars, G G′, set edgewise, the outer ends of which are curved and scarfed to receive and hold the plows, the scarfed ends being bolted to the landside of the plows. The bar G′ of the frame extends backward a greater distance than its counterpart G, to provide space for the rear plow, and an angular brace, H, strengthens and supports the rear end of the frame, holding and keeping the two bars in a true vertical position edgewise. The frame is connected to the flat iron cross-beam by means of two stirrups, I I′, and a bolt-connection with the bar G passes through the beam B and stirrup I and pivots the frame at that point to the cross-beam B, by means of which the whole running-gear of the plow is changed from a direct or straight line to the right or left oblique line or course in the following manner and by the means hereinafter described.

To the rear end of the bar G′, I connect a perforated disk-plate, E^2, having a spring-lever arm, E^3, identical with the devices heretofore described and lettered E in the drawings. This plate is bolted to the bar G′ of the frame by the same bolt that connects the end of the brace H. The spring-lever arm is pivoted to the disk-plate, and from the lower end extends an arm, J, also pivoted to the split end of a horizontal connecting-rod, K, which connects with and is pivoted in turn to the beam B, so that when the pivoted lever of this disk-plate is moved backward or forward the end of the beam or plate B is moved with it by means of the jointed and pivoted connecting-rod, and permits the plow or machine to deviate from a right line to a right or left oblique. The stirrup I′, being a greater length than its counterpart I, permits the driving-wheel at that end of the beam or plate to describe a greater curve than the wheel at the opposite pivoted end of the beam. The upper points of the mold-boards are all pierced with a line of holes, L, extending from point to heel, so that in use the mold-boards will be self-cleaning and not be clogged by the adhering of clay or adobe thereto. The draw-beam or pole M extends backward to near the rear end of the frame, and is pivoted to the front ends of the frame or bars G G′, and enters a graduated rack-plate, O, connected to the seat-frame O*. The rack-plate is pierced with holes to receive a pin, which passes through the end of the pole. That portion of the pole

represented at P is composed of wood, the inner end of which is received between the stirrups or arms P^* of the metal beam or portion P^2, in which position the two parts are connected by the transverse bolts P^3. A strengthening-strap, Q, is bolted to the upper face of the pole. A strap, Q^*, is secured to its under side, and a bolt, Q^2, passes through the strap or clip and pole, to which the evener or double-tree and whiffletrees are pivoted in such a manner that the pull will be more nearly on the center or horizontal line of draft, and not have a tendency to drag the points of the plows downward. This, together with the inner end of the pole, elevates or depresses the machine to correspond with the position and the line of draft, the plow-points, and the driving-wheels.

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

The combination of the draw beam or pole M, straps Q and Q^* and bolt Q^2, the beam P^2, having arms P^*, the part P of pole M, located between said arms, the connecting-bolts P^3, the longitudinal bars G G', between whose forward curved ends the pole is pivoted, and the graduated rack-plate O, with which the rear end of the pole is connected, substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand and seal.

ERNEST E. KRAUSE. [L. S.]

Witnesses:
C. W. M. SMITH,
CHAS. E. KELLY.