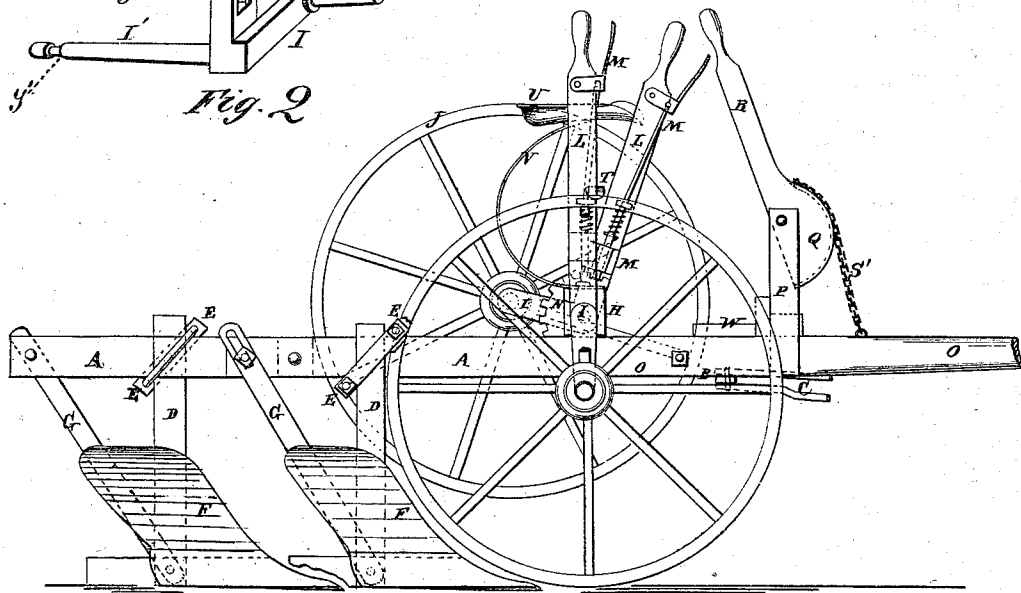
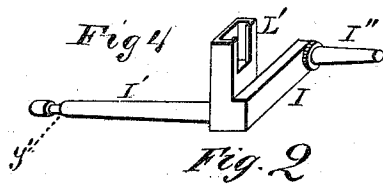
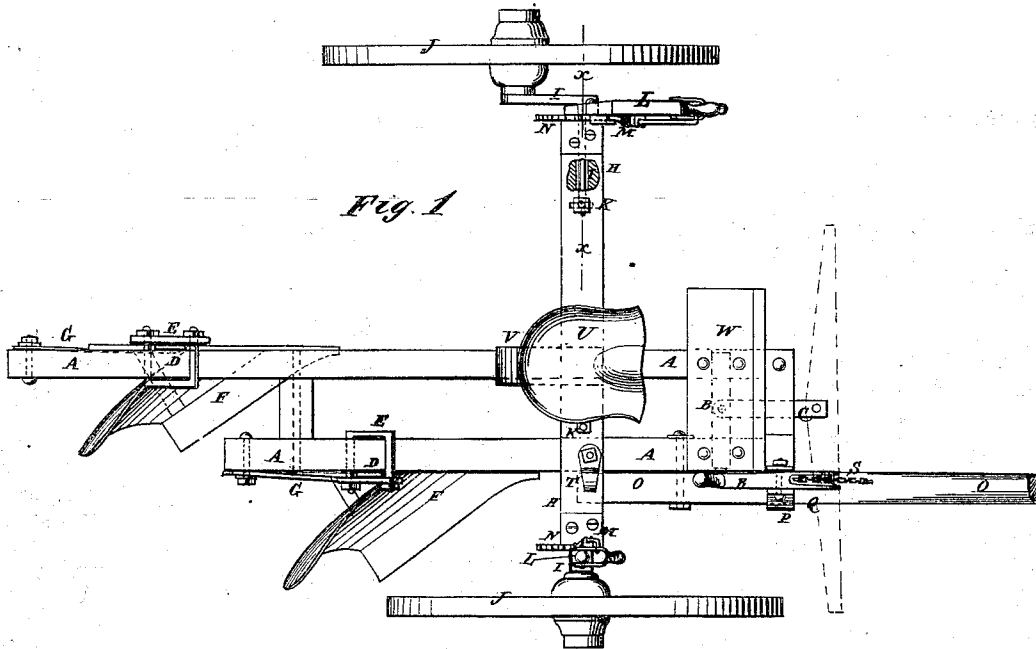


R. HANCE.
Gang-Plows.

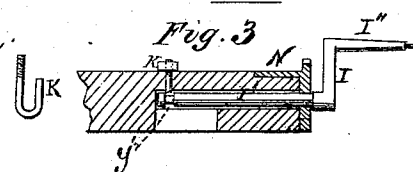
No. 158,069.

Patented Dec. 22, 1874.



WITNESSES:

A. W. Almquist
C. Edgwick



INVENTOR:

R. Hance

BY

ATTORNEYS.

UNITED STATES PATENT OFFICE.

ROYAL HANCE, OF PECATONICA, ILLINOIS.

IMPROVEMENT IN GANG-PLOWS.

Specification forming part of Letters Patent No. **158,069**, dated December 22, 1874; application filed July 11, 1874.

To all whom it may concern:

Be it known that I, ROYAL HANCE, of Pecatonica, in the county of Winnebago and State of Illinois, have invented a new and useful Improvement in Gang-Plow, of which the following is a specification:

Figure 1 is a top view of my improved gang-plow. Fig. 2 is a side view of the same. Fig. 3 is a detail section taken through the line *x x*, Fig. 1; also a detached view of the V-shaped bolt which secures the axle. Fig. 4 represents a detached view in perspective of one of the crank-axes and the lever-socket attached.

Similar letters of reference indicate corresponding parts.

The invention will first be fully described, and then pointed out in the claim.

A are the plow-beams, one of which is made longer than the other, and which are rigidly connected together by cross-bars and bolts. To the lower side of the forward ends of the beams A is attached a cross-bar, B, through which are formed a number of holes to receive the draw-bars or clevis C, to which the draft is attached, so that the point of draft attachment may be adjusted laterally, as required. D are the standards, which are secured to the beams A by yokes and bows E, or by other suitable means. F are the plows, which are attached to the lower ends of the standards D. The standards D and plows F are strengthened against the draft-strain by the inclined braces G, the lower ends of which are secured to the lower parts of the standards D and to the plows F, and their upper ends are secured to the rear ends of the beams A by bolts, which pass through holes in the said beams, and through slots in the said braces, so that the pitch of the plows may be readily adjusted, as required. The beams A are securely and rigidly bolted to the axle H.

The axle-arms are each bent in crank form, as seen in Figs. 3 and 4 at I I' I'', the outer arm I being that upon which the wheel is placed. The wood axle H is stationary, and is perforated at each end for the insertion of the arm I of the crank-axle. The inner end of this arm I' is provided with an annular groove, Y', around which is passed from an opening through the bottom of the wood axle

a V-shaped bolt, K. This bolt has a screw-thread on one prong, and after being around the groove in the axle-arm this prong projects through the top of the wood axle, where it is held by a nut. This connection allows the axle-arm to turn freely, and at the same time any longitudinal movement thereof, either in or out, is prevented.

To the crank-axle arms I are rigidly attached socket-castings L', to which are secured levers L, by which the said axle-arms are turned to raise and lower the wheels J. The lever L of the axle I of the furrow-wheel is arranged longitudinally with respect to the middle part of the axle-arm, so as to be vertical when said wheel is at its lowest point. The lever L of the axle-arm I of the wheel J, that runs upon the unplowed land, is arranged so as to project to the rearward horizontally when said wheel is at its lowest point. The levers L are held securely in the position into which they may have been adjusted by spring-pawls M connected with them, and the engaging ends of which enter notches in the edges of the angular plates N, attached to the ends of the axle H, and which form bearings for the inner arms of the crank-axes I. These plates protect the top and end of the wood axle, and, while forming a metal bearing for the axle-arms, also prevent the wood axle from splitting. O is the tongue, which is pivoted to the outer side of the forward part of the outer beam A by a bolt, and which passes through a keeper or slotted standard, P, attached to the forward end of the said beam A, so that the said tongue may be always parallel with the said beam. To the upper end of the keeper or guide-standard P is pivoted a segmental pulley, Q, which is provided with a lever, R, and to which is attached one end of a short chain, S, the other end of which is attached to the tongue O, so that, when the tongue is connected with the neck-yoke, by operating the lever R the plows may be raised from the ground. The plows may be held away from the ground when turning, and when passing from place to place, by catching the end of the lever R upon the spring-catch hook T, attached to the axle H. U is the driver's seat, which is attached to the upper end of the spring-standard V, the lower end of which is

attached to the axle H. To the forward ends of the beams A is attached a platform or board, W, to support the driver's feet.

It will be seen that either wheel can readily be taken from the wood axle H by releasing the nut which attaches the V-shaped bolt, and by then withdrawing the axle-arm I' through the perforation in the wood axle.

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

The combination of the stationary wood

axle H, with perforated end, the L-shaped notched plate N, protecting said end, the angular axle-arm I I' I'', with lever-socket L rigidly attached thereto, the annular groove Y in the axle-arm I, and the detachable V-shaped bolt K, passing around the axle-arm and through the wood axle, all substantially as and for the purposes set forth.

ROYAL HANCE.

Witnesses:

G. L. HOOKER,

A. A. GOLLY.