

J. K. McLENNAN.

Gang-Plows.

No. 135,654.

Patented Feb. 11, 1873.

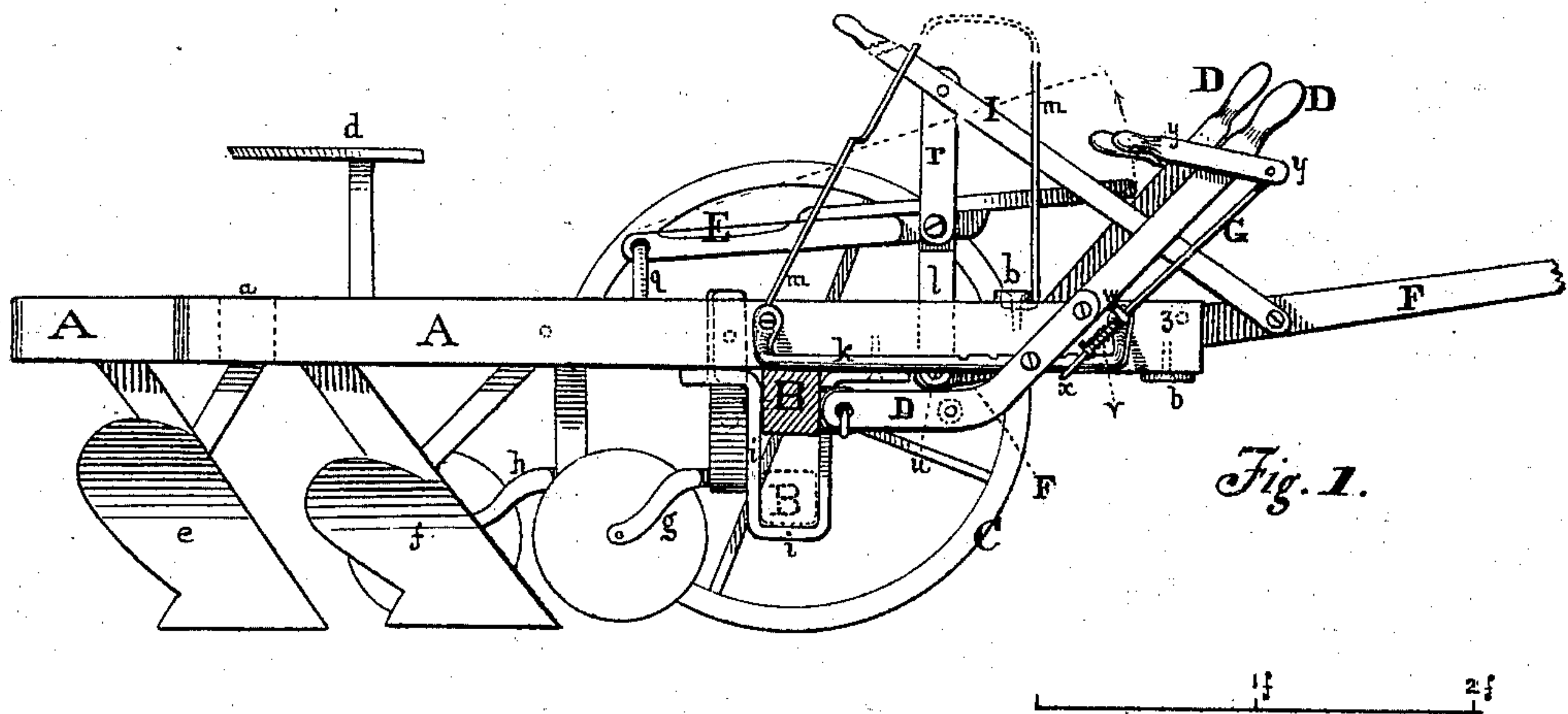


Fig. 1.

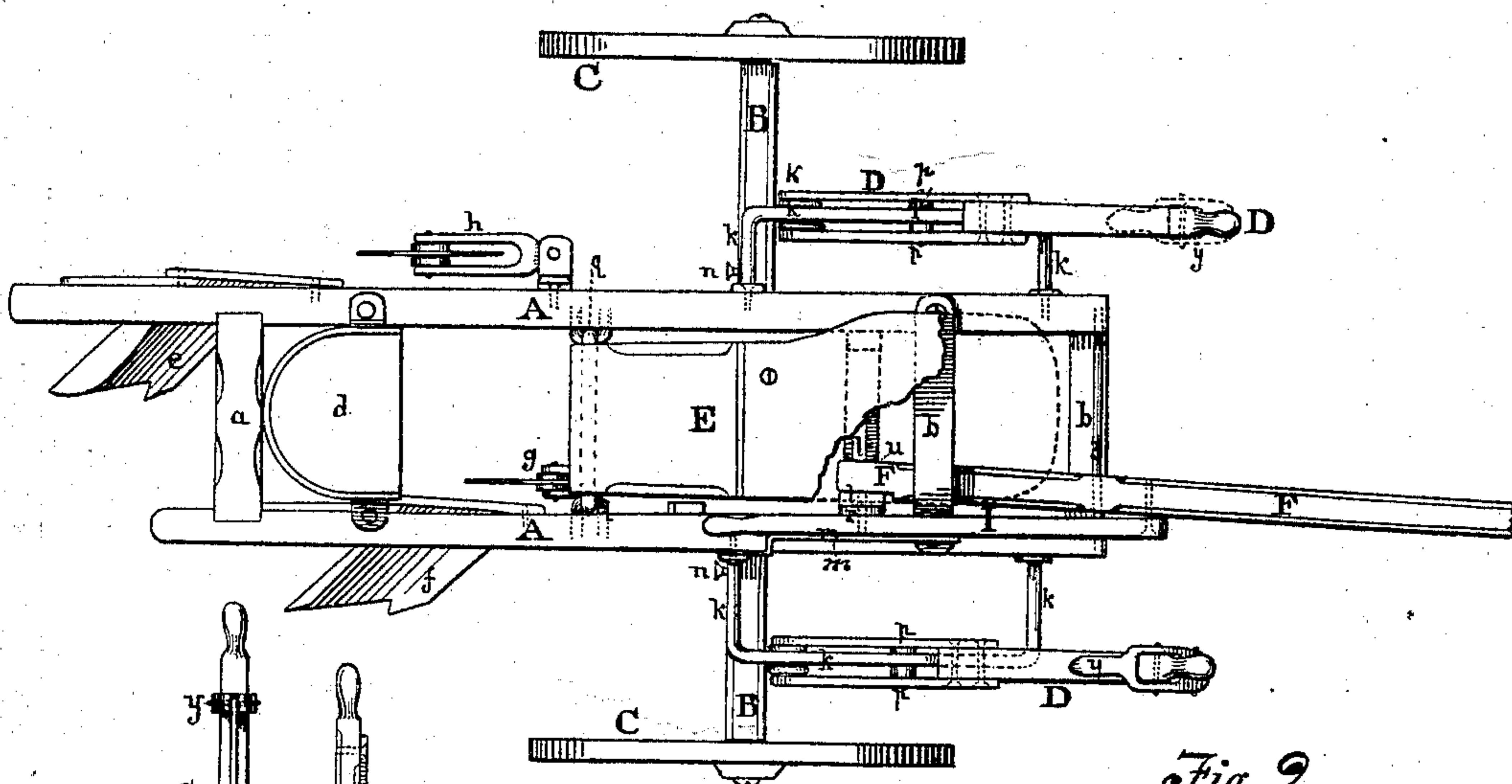


Fig. 2.

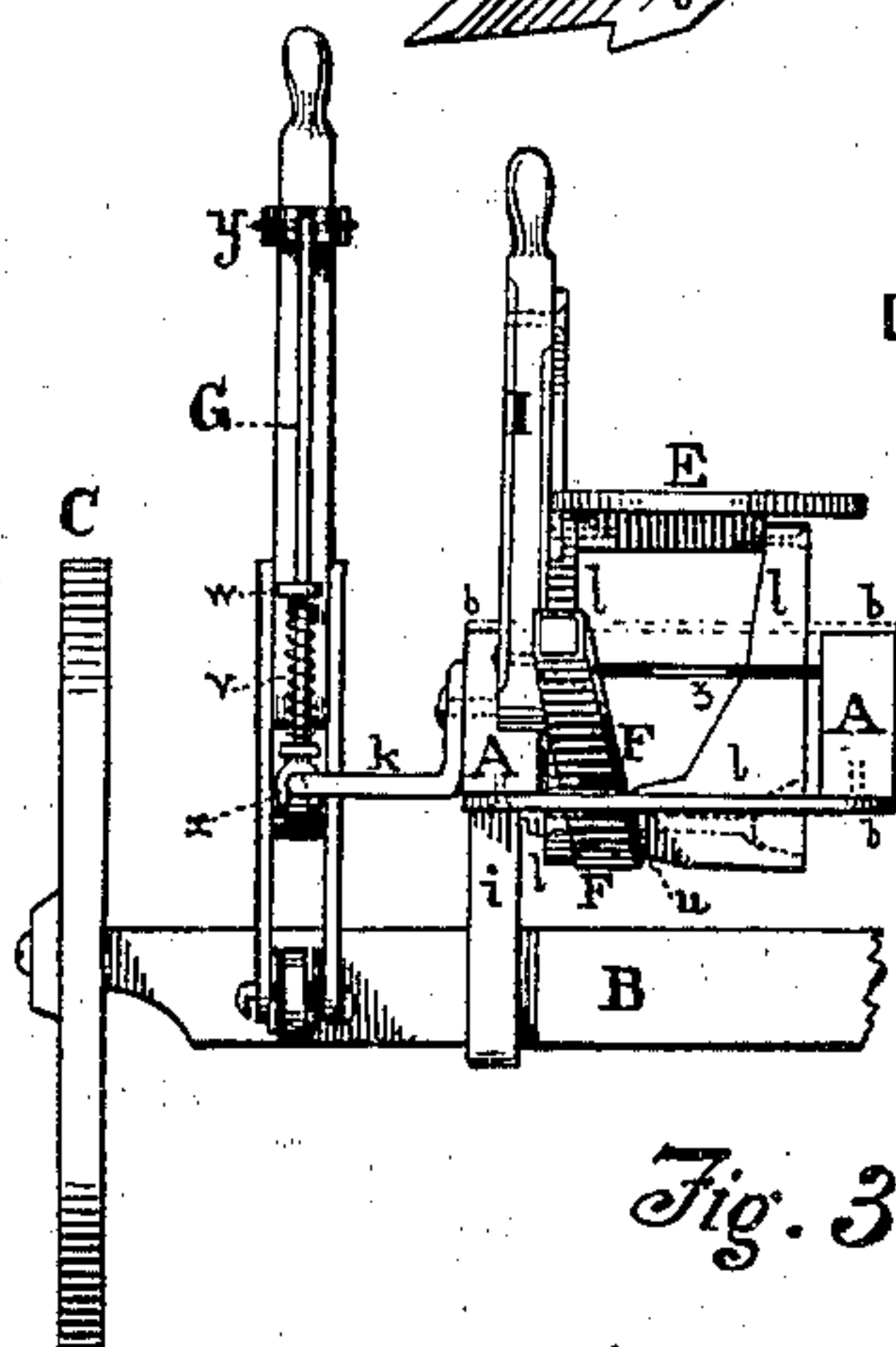


Fig. 3.

Front View, with Lever D & Frame "A" Elevated from Axle.

Witnesses
Henry W. Wells
John Ansous

John K. McLennan,
by E. Thurston,
his Atty.

UNITED STATES PATENT OFFICE.

JOHN K. McLENNAN, OF ELMIRA, ILLINOIS.

IMPROVEMENT IN GANG-PLOWS.

Specification forming part of Letters Patent No. 135,654, dated February 11, 1873.

To all whom it may concern:

Be it known that I, JOHN K. McLENNAN, of Elmira, in the county of Starke and in the State of Illinois, have invented a valuable Improvement in Gang-Plow; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawing making a part of this specification, in which like letters of reference refer to like parts, and in which—

Figure 1 represents a longitudinalelevation, the wheel in front being removed; Fig. 2, a plan; Fig. 3, an end view in front of part of machine, showing stirrup, &c.

This invention consists of an improvement in the mode of raising and lowering the plows and revolving cutters of a gang-plow by means of slotted levers pivoted to the axle-tree on each side of the frame, which operate by raising the whole of plow, cutters, and frame at once, the bearings of which frame are supported by a roller fixed in a slot in each lever, the latter being operated from the driver's seat. Also, in quickly adapting the angle of the "tongue" to the requirements of the machine, when said lever is changed, by means of the pressure of the driver's foot upon a foot-board pivoted to the frame, and having, at the other end, a bearing upon the tongue-tail, and in the use of an auxiliary lever to raise said foot-board and lower the fore part of the frame and heel of the tongue simultaneously so as to lift the plows entirely from the soil when necessary.

A A represent the two parallel plow-beams, braced together by the cross-braces *a b b*, to which the plows *e f* are attached in the usual position and manner, each being preceded by a rotary cutter, *g h*, both of which are attached to the frame. Beneath, and near the middle of each beam A A, is fixed a vertical staple, *i i*, with a vertical slot, in which is retained one end of the axle-tree B, and in which the latter may be raised or lowered, as hereafter described; B, the supporting axle-tree, which is prevented from lateral movement by the stops *n n* on either side of the staples *i i*. C C are the supporting-wheels. D D are two levers, managed from the driver's seat *d*, each being pivoted to the axle-tree, and are each provided with a slot above the

pivot, having a small anti-friction roller, *p p*, over which, in the said slot, passes a horizontal rod, *k k*, parallel with and firmly fixed to the beam A, one on each side of the latter, and extending more or less in advance of the axle, and on a level with the bottom of the beam. E is a horizontal foot-board, pivoted at its rear end to a cross-rod, *q*, or similar device, extending from said rod, forward and carrying, suspended from its middle part beneath, a stirrup, *l*, pivoted thereto, the lower part of which stirrup is also pivoted to the heel of the tongue F, the latter being also pivoted, at *z* between beams A, a little in advance of the stirrup. To the upper part of the latter a connecting-bar, *r*, is pivoted, which bar is again pivoted, at its upper end, to an inclined lever, I, which extends hence to a point in advance of the pivot which confines the tongue to the beam A. The angle inclosed by these is nearly a right angle, the lever I forming the "diagonal." A vertical rod or stay, *m*, having a notch or angle forming a detent for the lever I, rises from the beam close to the lever. G G are detent-rods, attached above to a short lever, *y y*, pivoted in the top of each lever D D, each rod G G passing downward in front of their respective levers through an eye, *w w*, on the same, and each in a fork, *x*, which straddles the horizontal rod *k k*. This fork is adjustable in any of the notches on said rod *k k*. Above the fork *x x* of each detent-rod is a collar, between which and the eye *w* is a spiral spring, *v*, surrounding this part of the detent.

The operation of this machine is as follows: The whole machine is lifted from the soil by raising the levers D D, which brings the rollers *p p* in the lever-slots against the horizontal bars *k k* on either side of the beams A A at the same time that the heel of the tongue F is allowed to rise with the frame A A, so that any reasonable depth of cut may be given to the plows. The levers D D are detained at points or notches on their respective bars *k k* by their detent-rods G G. Again, to adjust the plows to a proper depth the foot-board E is depressed, which also depresses the stirrup *l l* attached to the heel of the tongue F, thus lowering the heel of said tongue, and allowing the plows to strike a deeper furrow. The board E

and the tongue are again raised by lifting forward the auxiliary-lever *l* to raise the plows from the soil or regulate their "cutting depth."

It will be seen that the joint use of the levers *D D* permit, by their detents *G*, a nice adjustment of the depth of the plows in the soil; and also, when desired, raise all the plows and revolving colters from the soil.

What I claim as my invention is—

1. The bent slotted levers *D D*, with their adjusting-detents *G G*, or equivalents, attached to the axle *B*, as constructed in combination with their horizontal bars *k k*, attached to the plow-beams *A A*, substantially as described.

2. The plow-beams *A A*, when constructed as described, and carrying the axle-staples *i i*, and

pivoted at the front to the heel of the tongue, and connected with the pivoted foot-board *E*; stirrup *l l*, connecting the latter to the heel of the tongue; the lever *I*, and connecting-bar *r*, pivoted to foot-board *E*, combined and arranged to operate in conjunction with the levers *D D* and supporting-rods *k k* of the plow-beams, as described.

In testimony that I claim the foregoing improvement in gang-plows I have hereunto set my hand this 18th day of September, 1872.

JOHN K. McLENNAN.

Witnesses:

MARTIN SHALLENBERGER,
THOS. M. SHALLENBERGER.