

J. B. RALSTON.
GANG-FLOW.

No. 184,425.

Patented Nov. 14, 1876.

Fig. 1.

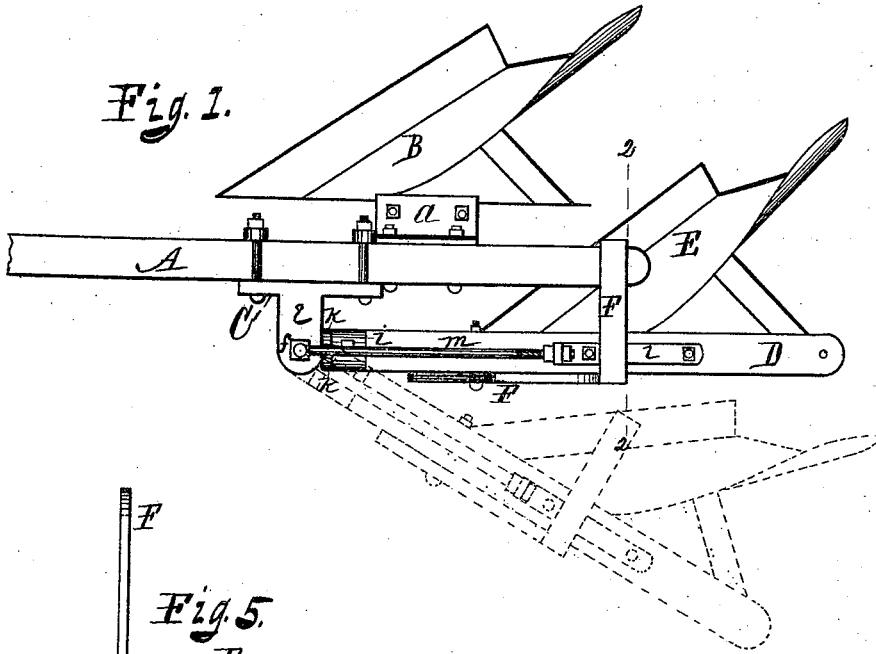


Fig. 5.

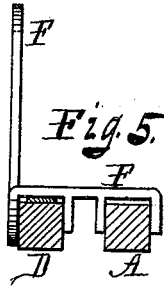
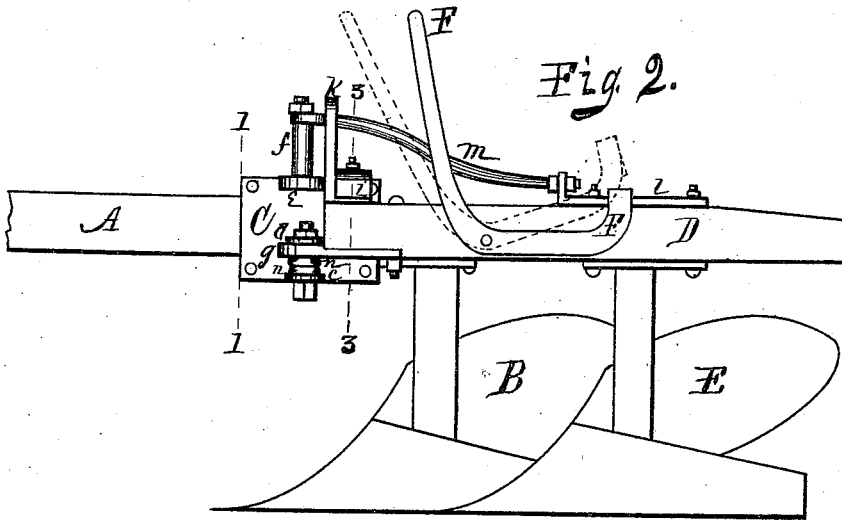


Fig. 2.



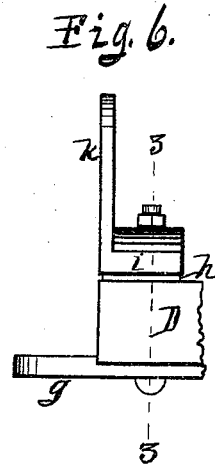
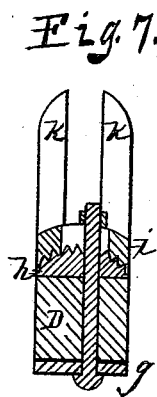
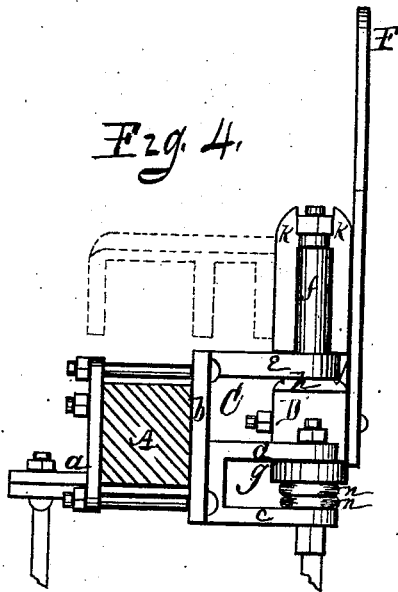
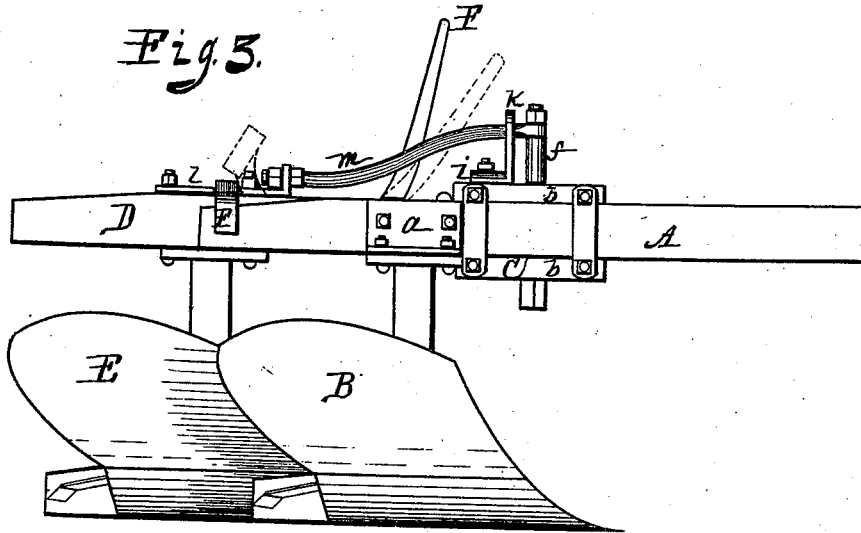
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A. O. Behel
C. J. Behel

Inventor.
John B. Ralston
Per Jacob Behel
Atty.

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UNITED STATES PATENT OFFICE.

JOHN B. RALSTON, OF ROCKFORD, ILLINOIS.

IMPROVEMENT IN GANG-PLOWS.

Specification forming part of Letters Patent No. 184,425, dated November 14, 1876; application filed June 23, 1876.

To all whom it may concern:

Be it known that I, JOHN B. RALSTON, of the city of Rockford, in the county of Winnebago, and State of Illinois, have invented a new and useful Improvement in Gang-Plows, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

My invention relates to that class usually known as gang-plows, in which two or more plows are employed and operated by the same power at the same time, managed and controlled by the same operator; and consists in devices, combinations, and arrangement of devices represented in the accompanying drawings, which I now proceed to explain, and in which—

Figure 1 is a plan view of my improved gang. Fig. 2 is a land-side elevation. Fig. 3 is a mold-board side elevation. Fig. 4 is a transverse section on dotted line 1, in which the plows are omitted. Fig. 5 is a transverse section of the beams on dotted line 2. Fig. 6 is a side elevation of the front end of the rear plow-beam with its attachments, and Fig. 7 is a transverse section on dotted line 3.

In the drawings, A represents a plow-beam, to the side of which is secured the angle-bracket *a*, to which the plow B, which is of ordinary construction, is connected by suitable bolts, in such a manner as to be adjustable to or from the land by means of the transverse slots in the ends of the cap on the upper end of the standard. C is a bracket, of the peculiar form represented in the drawings, consisting of a bed-plate, *b*, and lateral-projecting arms *c*, *d*, and *e*, and an upward-projecting stud, *f*, rising from the upper side of arm *e*. This bracket is secured to the side of the beam A by means of clamping-bolts passing through the base-plate on the upper and under sides of the beam, and through clamping-bars on its opposite side. D is a plow-beam, fitted at its forward end and under side with a draw-bar, *g*, and on its upper side with a corrugated bed-block, *h*, to receive the cap *i*, which is corrugated, to engage the corrugations in block *h*, and is held in place on the beams by means of a sufficient bolt passing vertically through the parts. The cap *i* is slotted transversely to receive

the bolt which holds it in place on the plow-beam, for the purpose of lateral adjustment on block *h*, and is also provided with a vertically-slotted arm, *k*, which rises above the beam at its forward end. E represents a plow, substantially the same as the plow B, and is secured in the same adjustable manner to the under side of the beam D by means of suitable bolts passing upward through the transverse slots in the ends of the caps on the plow-standard, and through the beam and plate *l*, on its upper side. The beam D, with the plow attached, is connected by hinge-joint to the beam A by bracket C, by means of the draw-bar being placed between the arms *c* and *d*, and a bolt passing upward through the parts. *m* is a brace-rod, with eye formed upon its forward end, which is received on the upper end of stud *f*. Its rear end is screw-threaded, and is received in the forward upturned end of the plate *l*; and by means of the screw-nuts at each side of the plate the rear end of the plow can be raised, or lowered to the proper depth, and the forward end can be vertically adjusted by placing the washers *n* above or below the draw-bar, in the space between the arms *c* and *d*. By means of this joint the plow E is connected by its beam to the beam of the forward plow B in such a manner as to be rigid vertically, and free to swing laterally in a horizontal plane, as represented in dotted lines Fig. 1; and by means of the corrugated parts *h* and *i*, and their connections with the plow and the brace *m*, the plow E may be leveled to cut on the same plane as the plow B. F is a lever-clasp, fitted to overspan the plow-beams near the rear end of the beam of the forward plow, and is fitted with loops to embrace each beam, in such a manner as to hold them about parallel to each other, and is pivoted to the plow-beam, with its free handle end rising within easy reach of the driver in his seat, when the plows are attached to a wheeled carriage in the usual manner; and by means of the lever the clasp can be raised from the plow-beams, as seen in dotted lines, and permit them to move laterally, independent of each other, when circumstances requires it, as in turning or in cleaning up dead furrows. These plows connected to each other, forming a gang, as

shown and described, are designed to be connected to any suitable wheeled carriage in any suitable manner, and to be operated by means of lifting-levers, all in substantially the same manner as gang and sulky plows attached to wheel-carriages are now connected and operated.

I claim as my invention—

1. The beams A and D, with plows thereto attached, connected by a hinge-joint, substantially as described, permitting of an independent lateral swinging movement of the plows, and made vertically adjustable relatively with each other, and adapted to wheeled-sulky attachments to be connected thereto by means of the usual connection, substantially in the manner and for the purpose hereinbefore set forth.

2. The brace-rod *m*, constructed with adjusting screw-nuts, as described, in combination with the bracket C, and plow-beam D, for the purpose of raising or lowering the

rear end of the plow thereto attached, to adjust it to the proper working depth, and holding it vertically rigid relatively with the plow to which it is attached, as and for the purpose hereinbefore set forth.

3. The bed-block *h*, and cap *i*, with arm *k*, in combination with the brace *m*, and plow-beam D, having a plow thereto attached, for the purpose of leveling the plow E laterally, substantially as and for the purpose hereinbefore set forth.

4. In combination with the plow-beams A and D, having plows thereto attached, the clasp-ing-lever F, pivoted thereto and fitted with loops to embrace the beams for the purpose of connecting or disconnecting the plows, substantially as and for the purpose hereinbefore set forth.

JOHN B. RALSTON.

Witnesses:

MARCUS S. PARMELE,
ALFRD. P. WELLS.