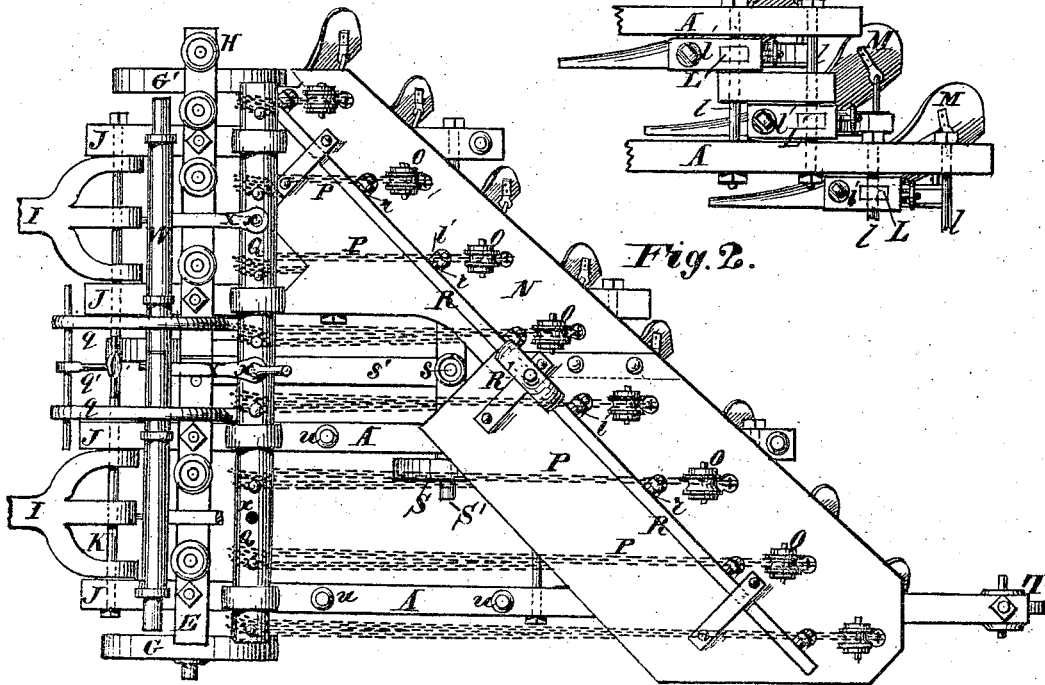
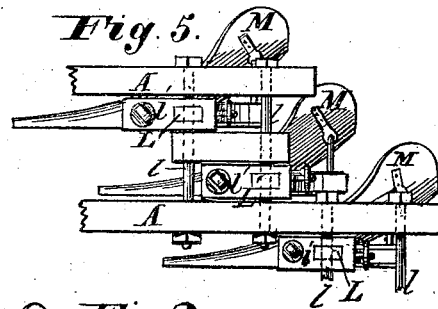
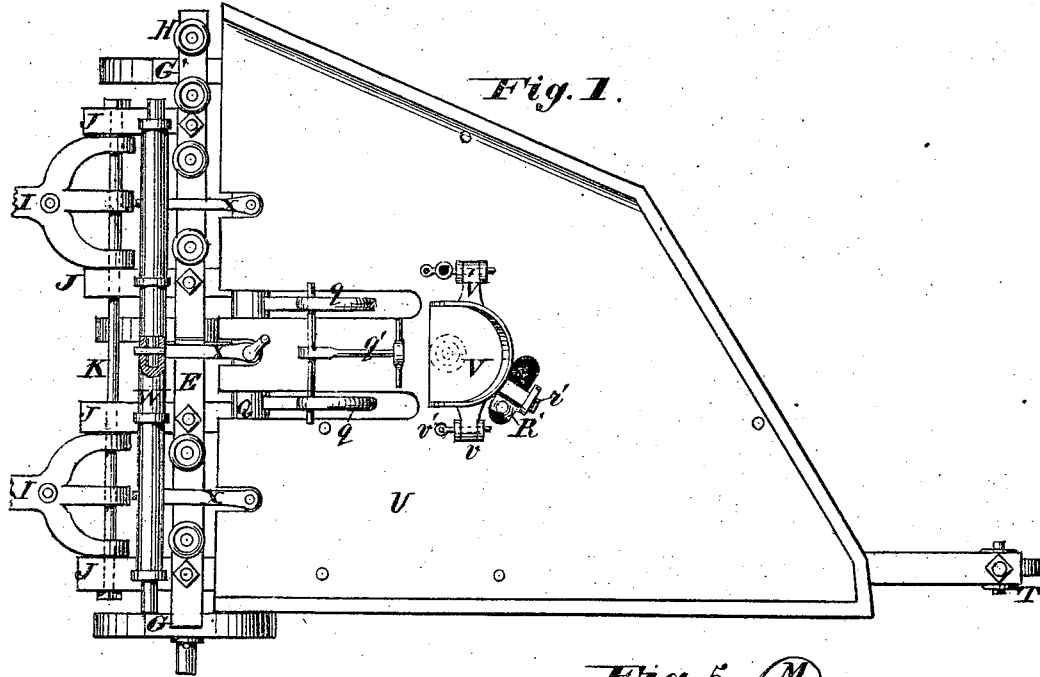


M. E. RONAT.
PLOW.

No. 183,213.

Patented Oct. 10, 1876.



WITNESSES

Chas. J. Gooch.
A. H. Galt

INVENTOR

Marie E. Ronat
By *Knights Bros* Attorneys

UNITED STATES PATENT OFFICE.

MARIE E. RONAT, OF ROCHELLE, ILLINOIS.

IMPROVEMENT IN PLOWS.

Specification forming part of Letters Patent No. **183,213**, dated October 10, 1876; application filed July 17, 1876.

To all whom it may concern:

Be it known that I, MARIE E. RONAT, of Rochelle, in the county of Ogle and State of Illinois, have invented a certain new and useful Improvement in Gang-Plows for Horse or Steam Power, of which the following is a specification:

The subject of my invention is a plow, which may consist of any number of sections, each section preferably carrying two mold-boards. The plow-sections have each one beam, which are connected in front to a draft-frame, and connected in the rear by screws, which permit their adjustment at any desirable distance asunder. The frame is supported on carrying-wheels having adjustment to regulate the penetration of the plows. The plow-standards are secured to their frame by pivots, which admit of their being tipped backward by suitable connections with a rocking beam under control of the driver, to keep them clear of the ground when the implement is being transported from place to place. The reverse motion of this beam draws the plows into position for action, and they are thus locked by a sliding bar carrying a catch-pin for each plow-standard. The whole is surmounted by a platform, on which the driver rides, and through which the various operating levers and screws are extended upward. A bolt above the platform fixes the locking-beams of the plows immovably in place, to keep the plows in their working position. The plows are constructed with cutting-fronts and hollow soles, and are mounted in an oblique range, so as to turn successive furrows one after the other.

In the accompanying drawing, Figure 1 is a plan or top view of the implement. Fig. 2 is a plan or top view with the platform removed. Fig. 3 is a front elevation. Fig. 4 is a side elevation. Fig. 5 is a partial plan, illustrating connections between two adjacent plow-beams. Fig. 6 is a side elevation of the plow with its standard and short beam. Fig. 7 is a rear elevation of the same.

Each plow-section consists of a pair of beams, A A, connected in front by a cross-bar, B, which is supported adjustably upon the axle C by screws D D. Above the sectional cross-bars B is a main cross-beam, E,

which also may be made in sections, but rigidly connected together, and is supported from the axle by standards F F, which also form guides for the vertical adjustment of the sectional cross-bars B B. The axle may also be made in as many sections as the main cross-beam E. The said axle runs on carrying-wheels G G G', the end wheel G', which has to run in the furrow after the first through, being attached to a detached portion, C', of the axle, which is adjusted vertically by screws D' and H, and is guided by the additional prolongation of the standard F. The draft-tongues I are mounted between hounds J, forming prolongations of the beam, and may be pivoted to the said hounds by a single through-bolt, K. On each side of each beam A is attached, by a horizontal pivot, L, a plow-standard, L, carrying a mold-board, M, which is constructed with a hollow sole and a cutting-front to act as a colter.

It will now appear that each plow-beam carries a pair of plows, and that each two beams carrying four plows constitute a section drawn by one tongue. These sections are constructed independently, so that any desirable number of them may be coupled together side by side, to produce a gang-plow of any desired capacity, the main cross-beams E E, axle C C, and other parts being formed of the required length, or connected together in sections corresponding with the plow-sections, as already described.

The plow-beams are graduated in length, and each plow-standard is set slightly to the rear of its predecessor, so as to cause the plows to act in succession in turning furrows one after the other. The plow-beams are surmounted by an oblique board, N, in which are mounted sheaves O O, over which pass chains P P, attached at their rear ends to arms p p', projecting backward from the pivoted plow-standards L L, and at their forward ends to arms P', projecting forward from the same. The intermediate part of each chain P passes around a windlass, Q, by the turning of which the plows may be thrown backward and elevated clear of the ground when the implement is to be moved from place to place without plowing. By turning the windlass in the opposite direction the plows will again be brought

into their working position. They are thus secured by means of a sliding bar, R, carrying pins *r*, which engage with eyes in lugs *l'*, projecting upward from the short beams L', which are attached rigidly to the plow-standards L, and rock or turn with them on the main beams A A. The lugs *l'* project upward through apertures prepared for them in the oblique board N, and, receiving the pins *r*, as stated, lock the plows securely in their working position, the sliding bar R resting firmly on the oblique board N. The depth of penetration of the plows is regulated by turning the screws D, so as to raise or lower the cross-beam B, as required. To assist in supporting the frame of the implement, especially when the plows are raised out of the ground, I employ a pair of wheels S, running on an axle, S', attached by a bar, *s*¹, to the main axle C, and adjusted vertically by a screw, *s*, swiveled in said axle *s*¹, and threaded in a cross-beam, *s*², which is prepared to receive it. The adjusting-screw *s* is surmounted by a hand-wheel, *s*³, for turning it. The rear extremity of the implement is supported by a caster-wheel, T, mounted and attached in any customary or suitable manner.

The vertical adjustment of the wheels S by means of the screw *s* facilitates the setting of said wheels in coincidence with the front and rear carrying-wheels, so that they will run on the surface of the ground.

U represents the main platform of the implement, which surmounts the parts already described, being supported upon the plow-beams A by standards *u*. This platform is constructed with suitable soles and apertures to receive such of the operating connections as require to be within reach of the driver, who rides upon a seat, V, upon the platform. The sliding bar R is operated by a handle, R', projecting upward from the platform, and locked by a bolt, *r*, so as to hold the said sliding bar in position to lock the plows. The windlass Q is operated by means of arms *q* and a handle, *q'*, within reach of the driver. W is a rock-shaft, from which project arms X, carrying pins *x*, which engage in apertures prepared to receive them in the windlass Q, so as to lock the said windlass at either extremity of its movement, when the plows are drawn either back and upward, to throw them

out of use, or down and forward, to place them in working position. One of the pins *x* is elongated upward to form a handle for the convenient operation of the rock-shaft W. The driver's seat V is mounted upon a spring, V', pivoted at *v*, and secured at its other end by a pin, *v'*, so that the seat may be folded over when desirable.

Having thus described my invention, the following is what I claim as new and desire to secure by Letters Patent:

1. The combination of the plow-beams A A, the plow-standards and mold-boards L M, pivoted thereto, with the chains P, sheaves O, and windlass Q, for throwing the plows in and out of working position, in the manner described.

2. The combination of the axle C C, plow-beams A A, cross-bars B B, main cross-beam E E, standards F F, and adjusting-screws D D, substantially as and for the purpose set forth.

3. The combination of the axle C C, detached axle-section C', guiding-standard F, and adjusting-screws D and H, as and for the purpose set forth.

4. The combination of the plow-beams A A, cross-bars B B, and draft-chains P attached thereto, as and for the purpose set forth.

5. The combination of the axle C C, carrying-wheels G, G', and F, the gage-wheels S S, with the plows A L M, as and for the purposes set forth.

6. The combination of the pivoted plows L M, beams A, short beams L', lugs *l'*, and locking-bar R, as and for the purpose set forth.

7. The combination of the pivoted plows L M, chains P P, windlass Q, locking rock-shaft W, arms X, and pins *x*, as and for the purposes set forth.

8. The combination, with a gang-plow, constructed to operate substantially as herein set forth, of the platform U, driver's seat V, and operating-arms *q* R' *s*, projecting above said platform, within reach of the driver, substantially as herein set forth.

In testimony of which invention I hereunto set my hand this 14th day of June, 1876.

MARIE ELIA RONAT.

Witnesses:

OCTAVIUS KNIGHT,
CHAS. J. GOOCH.