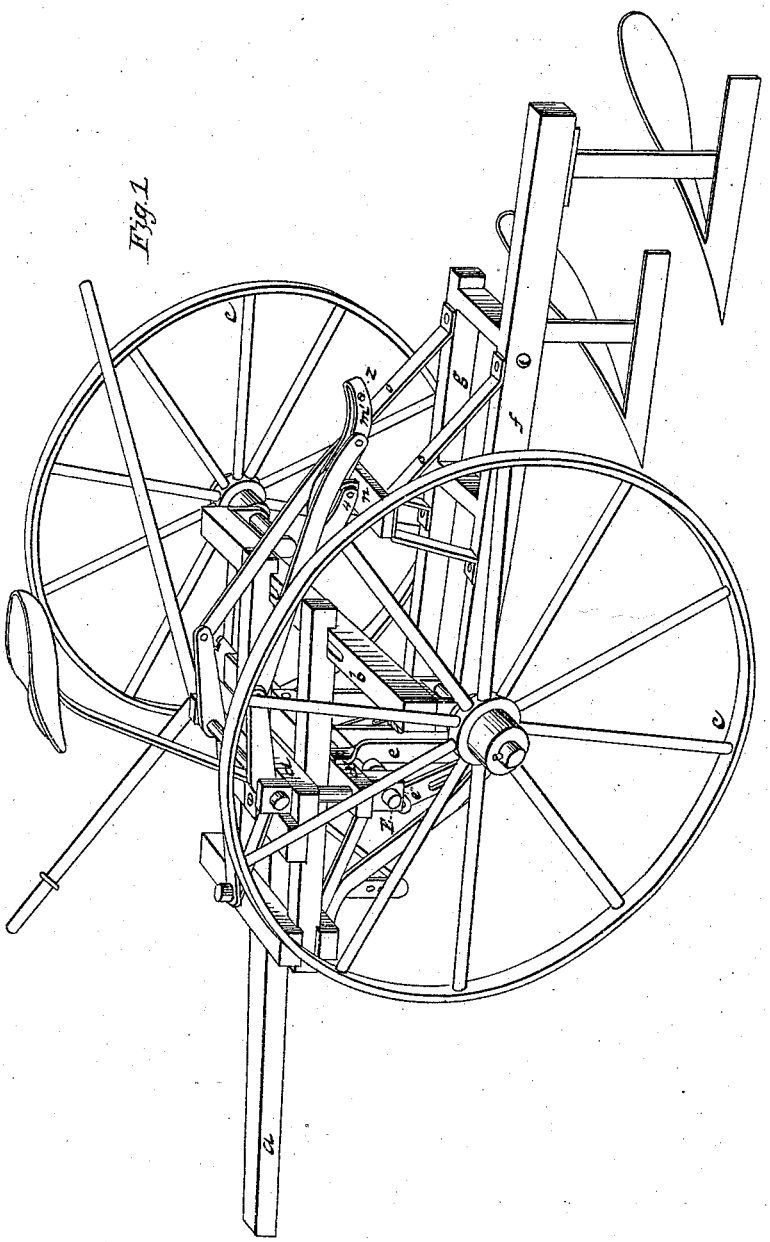
4 Sheets—Sheet 1.

E. D. & O. B. REYNOLDS.

WHEEL-PLOWS.

No. 182,735. Patented Sept. 26, 1876.

Fig. 1.



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4 Sheets—Sheet 2.

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WHEEL-PLOWS.

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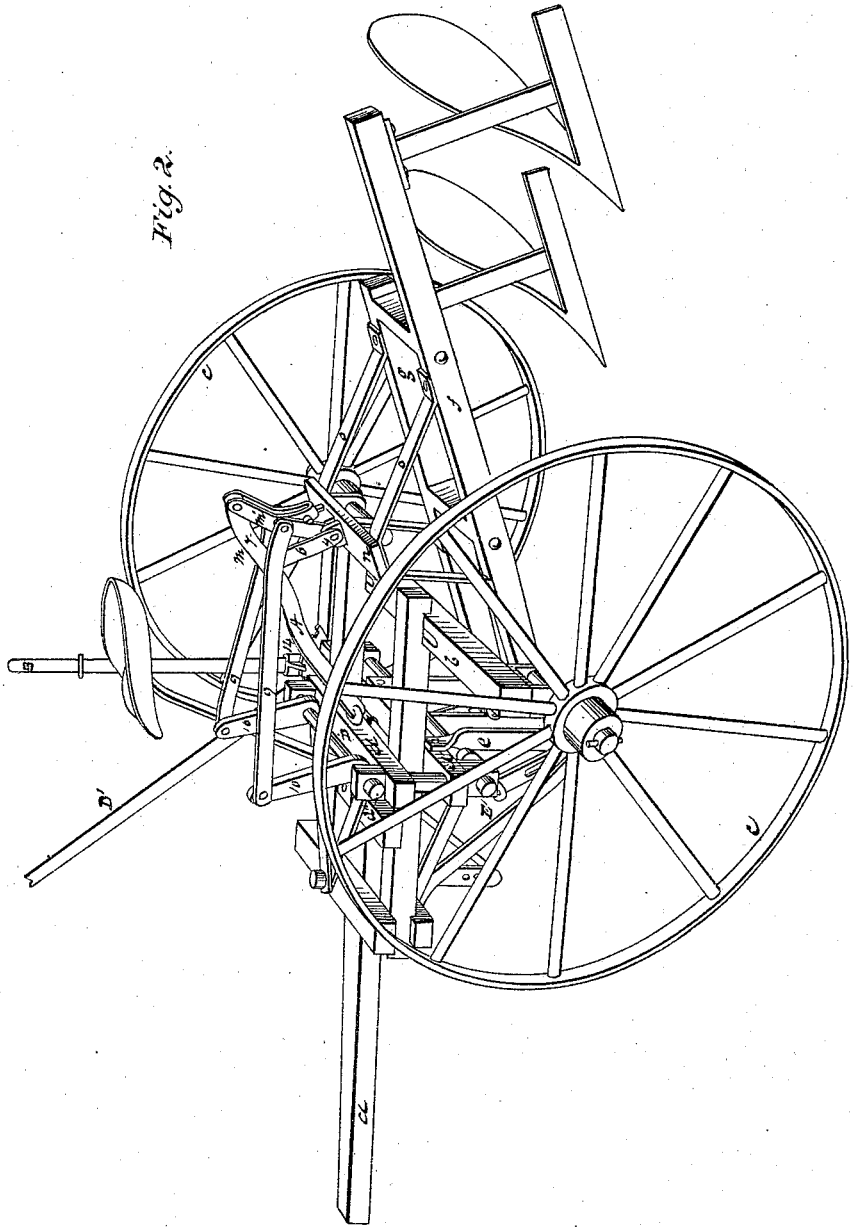
Fig. 2.



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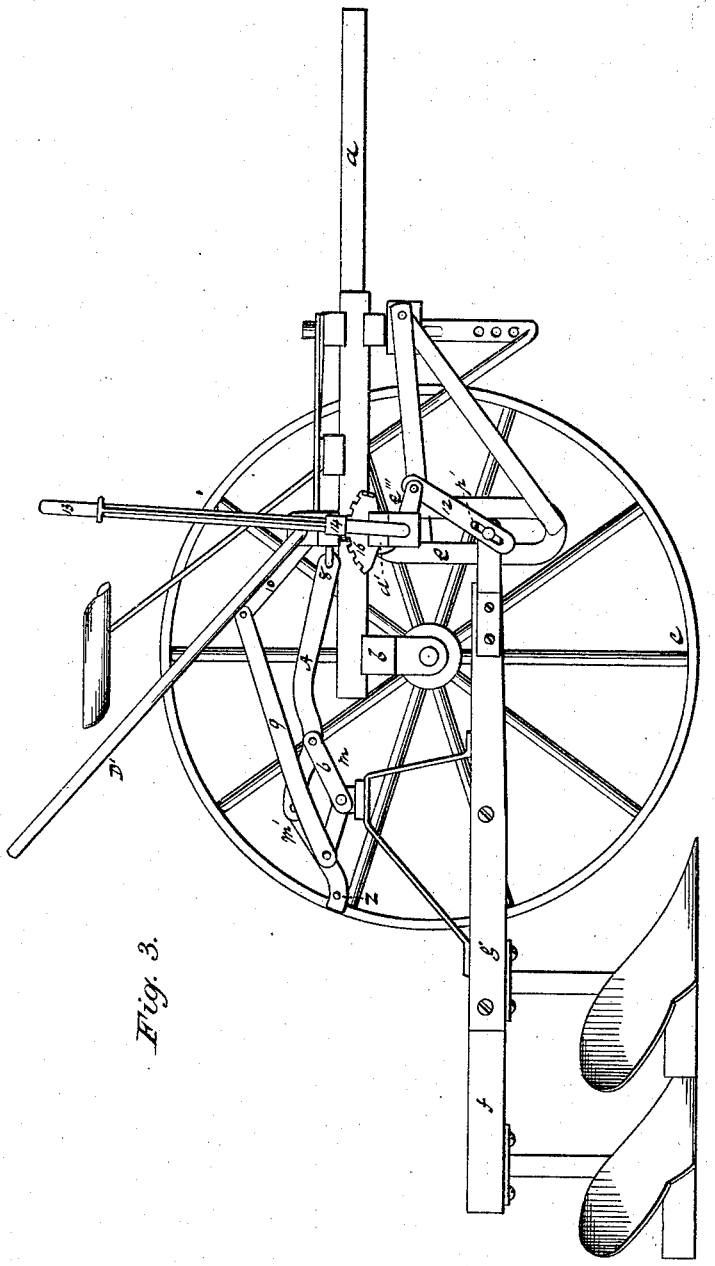

Fig. 3.

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WHEEL-PLOWS.

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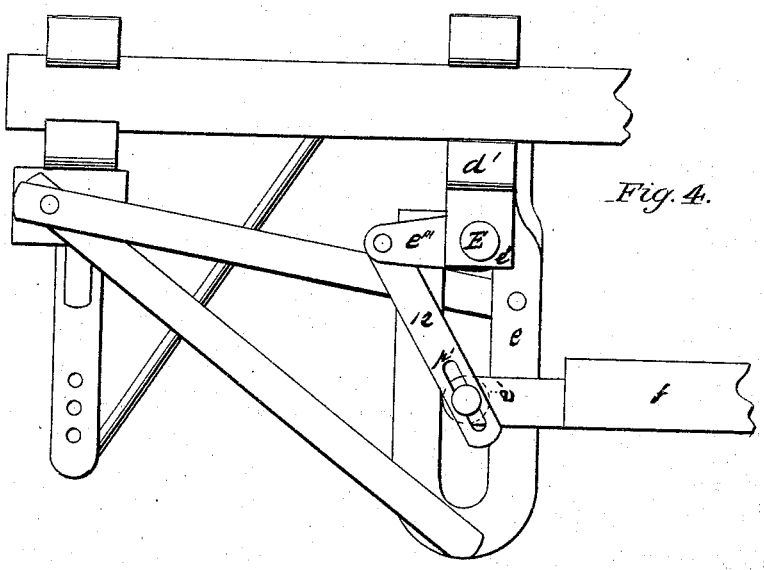

Fig. 4.

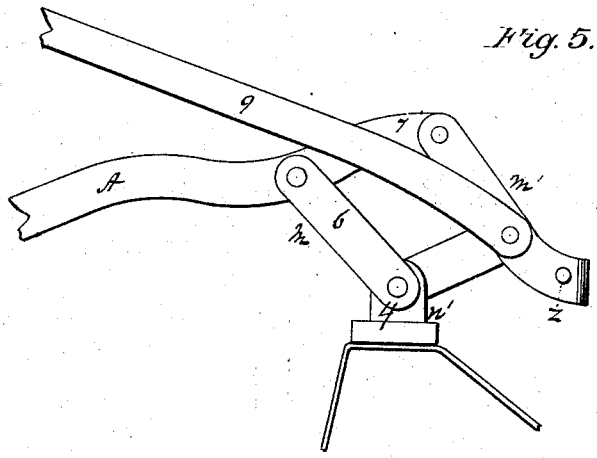

Fig. 5.

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UNITED STATES PATENT OFFICE.

EDMUND D. REYNOLDS AND OLIVER B. REYNOLDS, OF BROCKTON, MASS.

IMPROVEMENT IN WHEEL-PLOWS.

Specification forming part of Letters Patent No. **182,735**, dated September 26, 1876; application filed March 13, 1876.

To all whom it may concern:

Be it known that we, EDMUND D. REYNOLDS and OLIVER BRADFORD REYNOLDS, of Brockton, Massachusetts, have invented certain new and useful Improvements in Wheel-Plows, of which the following is a clear, full, and exact description, reference being had to accompanying drawings, in which—

Figure 1 is a perspective view of a wheel-plow, with our improvements attached. Fig. 2 is the same, with beams raised and locked. Fig. 3 is a side elevation. Fig. 4 is an enlarged view of the slotted arms *e e* and their connections. Fig. 5 is an enlarged view of the toggles.

To enable others skilled in the art to make and use our invention, we will proceed to describe the exact manner in which we have carried it out.

Our invention relates to wheel-plows; and it consists in the several combinations of devices hereafter described and claimed, and is an improvement on Patent No. 150,616, issued to us May 5, 1874.

The first point of our invention has for its object a new and improved method of raising the plow frame or beams, and locking it in position entirely above the ground, while going to, or returning from, the field. The second point has reference to the mode of adjusting the plow to the depth to be cut, and of allowing the plow to adjust itself with reference to the wheels and the ground; and the third point of invention is on the adjustment of the tongue and beams on the axle of the plow.

In the drawings, *a* denotes the pole; *b*, the axle; *c c*, the wheels; *d* and *d'*, cross-bars, the latter having depending arms *e e*, to which the plow-beams *f* and *g* are attached. These beams have a cross-bar, *n*, bolted to the braces *o o*. On the top of the cross-bar *n* are secured two ears, *n'*, with an eye between, to which is pivoted the lower point 4 of the double toggle-joints *m m'*. The inner toggle, *m*, is formed of the links 6 6, and an extension, 7, of the bar A, which connects the toggles to the cross-bar *d* by the eyebolt 8. The outer toggle, *m'*, is connected by pivots to the bars 9 9, which in turn are pivoted to the arms 10 10, rigidly attached to the horizontal shaft D, having its bearings at *d''* *d''*. On the outer end of the shaft D is secured the lever-arm D', for operating the same.

When the lever D' is thrown down, as shown in Fig. 1, the links of the double toggle are thrown in nearly a horizontal line, and the frame of the plow is locked down, somewhat similar to the manner of locking it down in our patent before referred to; but when the lever D' is thrown up, as represented in Fig. 2, the links of the toggle occupy nearly a vertical position, and as the pivots at the outer ends of the bars 9 9 are drawn in beyond the line of strain between the upper and lower pivots the plow-frame is locked in its elevated position. To unlock the same and allow it to descend, it is only necessary to draw down the lever D, which, through the action of the arms 10 10 and bars 9 9, forces the pivots again outside the line of strain.

By this simple arrangement of devices the beams of a plow can be easily and quickly raised or lowered, and securely locked in position.

The stop *z* prevents the toggle *m'* from passing too far beyond the line of strain. The arms *e e* depending from the cross-bar *d'* are slotted to receive the friction-rollers *e' e'* (see Fig. 4) secured in the bifurcated front ends of the beams *f g*, thus allowing a free vertical movement to the beams. Beneath the cross-bar *d'* is the horizontal shaft E, having its bearing at *e'' e''*. To this shaft are rigidly attached the short arms *e''' e'''*, to the outer ends of which are pivoted the bars 12 12, provided with slots *p' p'*, fitting on the outer ends of bolts holding the friction-rollers *e' e'*. On the outer end of the shaft E is secured the lever 13, provided with a sliding pawl, 14, which engages with a toothed segment, 16, bolted to the end of the cross-bar *d'*. It is evident from this description that upon drawing back the lever E the arms *e''' e'''* will raise the slotted bars 12 12, and with them will be raised the bifurcated ends of the beams *f g* for adjusting the plow to the depth to be cut in the soil, and at the same time leaving the beams to have a free play equal to the extent of the slots *p'*, for the purpose of automatic adjustment.

The plow-frame we secure to the axle by means of screw-bolts *t t* passing through lon-

gitudinal slots S S in the axle, and by this simple construction we secure an ample means of adjusting the frame on the axle of the plow.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a lifting device for plows, the toggles *m m'* and bar A, in combination with the bars 9 9, substantially as and for the purpose set forth.

2. The toggles *m m'* and bar A', in combination with the bars 9 9, arms 10 10, and shaft D, substantially as and for the purpose set forth.

3. The slotted arms *e e* and beams *f g*, provided with bifurcated ends, in combination with the bars 12 12, arms *e'' e''*, and shaft E, substantially as and for the purpose set forth.

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