

G. A. GROVES.
Gang-Plows.

No. 134,540.

Patented Jan. 7, 1873.

Fig. 1.

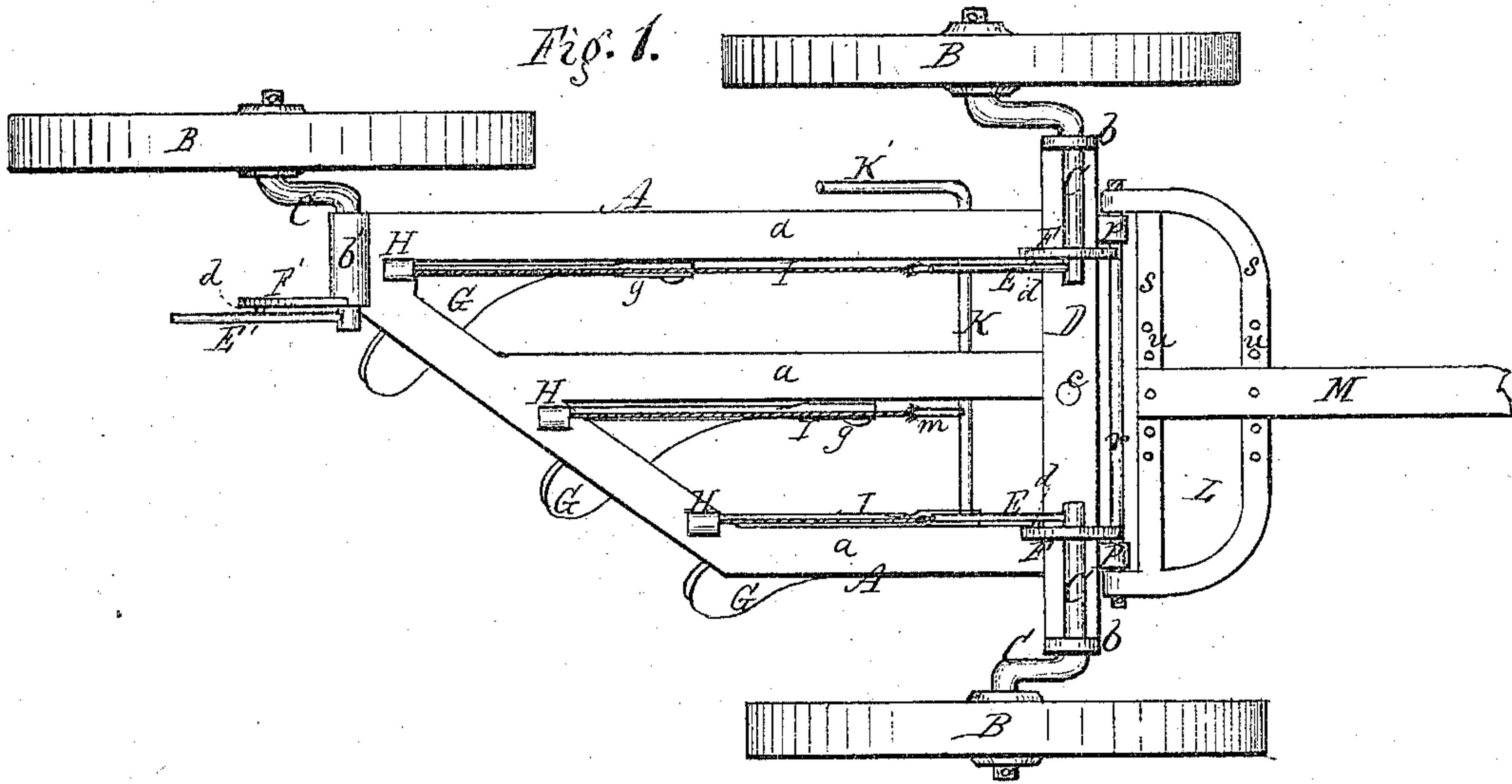


Fig. 2.

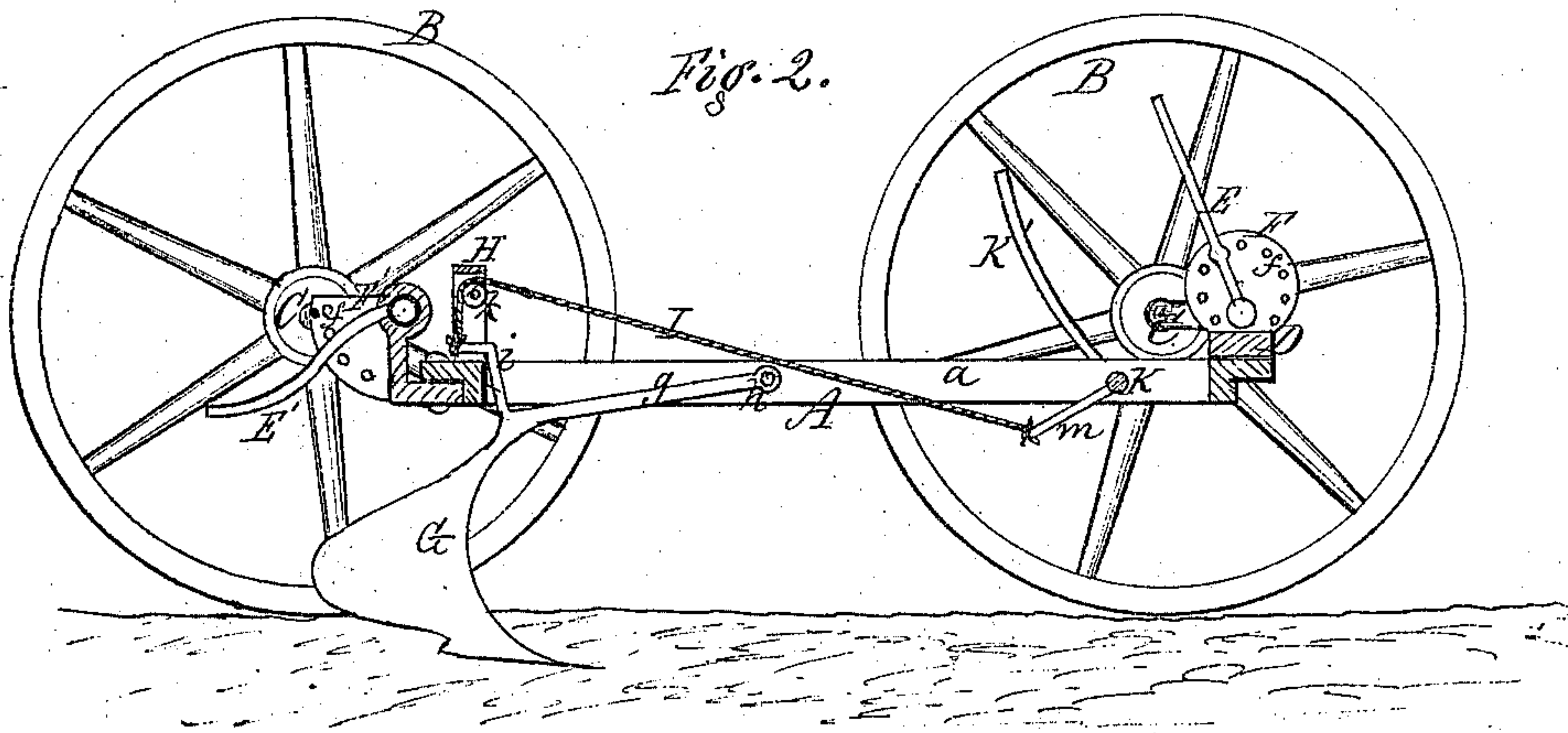
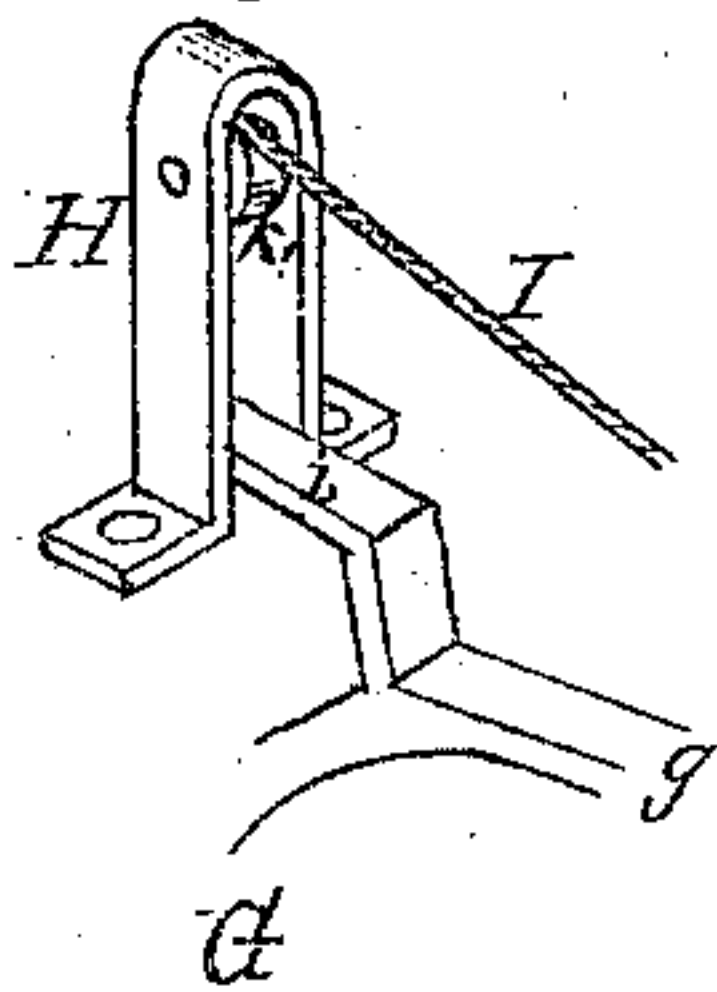


Fig. 3.



Witnesses.
R. F. Osgood
C. H. Woodward.

Inventor.
Geo. A. Groves
By J. Fraser & Co.
attys

UNITED STATES PATENT OFFICE.

GEORGE A. GROVES, OF EAST CLARKSON, NEW YORK.

IMPROVEMENT IN GANG-PLOWS.

Specification forming part of Letters Patent No. 134,540, dated January 7, 1873.

To all whom it may concern:

Be it known that I, GEORGE A. GROVES, of East Clarkson, in the county of Monroe and State of New York, have invented a certain new and useful Improvement in Gang-Plows, of which the following is a specification:

Nature of the Invention.

This invention relates to a certain combination and construction of parts for adjusting gang-plows with respect to their frame-work and wheels, as hereinafter more fully set forth.

General Description.

In the drawing, Figure 1 is a plan; Fig. 2, a sectional elevation; and Fig. 3, a detail view.

A represents the frame, which is of angular form, and consists of three or more bars, *a a a*, united at the ends. B B B represent the supporting-wheels, two in front and one in the rear. These wheels are connected with the frame by crank-axes C C C, which rest in bearings *b b' b'*. In front these bearings are attached to swing-bar D, pivoted at *c* to the frame. This is to allow the turning of the plow. E E are levers attached to the inner ends of axes C C in front, and E' a similar lever attached to the axle in the rear. These levers have pins *d d*, which strike into and engage with holes *f f'* of segment-plates F F' in front and rear. By this means it will be seen that the frame on each wheel may be adjusted higher or lower at pleasure, either bodily or with one end or one side higher or lower than the other. This is frequently necessary to adapt to unequal or inclined ground. G G G are the plows, hung respectively to the bars *a a a* of the frame by means of shanks or arms *g g g* pivoted at *h*. These shanks also have branches *i i*, which extend up over the rear end of the frame and rest between the separated sides of standards H H, which thus serve as guides to keep them in place. In the upper ends of the standards are pulleys *k k*, and over these pass chains or cords I I, at-

tached at one end to the branches *i i* and at the other to arms *m m* of a shaft, K, which is operated by lever K'. By this means it will be seen that the plows can be elevated at pleasure in going over rough ground, or held entirely from the ground in going to or from the field. If desirable, the lever K' may work opposite a gage-plate similar to F, by which the depth of cut may be gaged by a pin set therein, or held in position when elevated.

I claim a special advantage in this method of connection, as not only are the plows easily and readily raised and controlled, but they are also perfectly guided and kept in position by means of the branches *i* resting in the standards H. This prevents any possibility of displacement.

The swing-bar D, which is pivoted over the front end of the frame, has two lugs or eyes, *p p*, to which are jointed, by axis *r*, the tongue-plate L. This plate has two bars, *s s*, in which are made a series of holes, *u u*, for the adjustment of tongue M laterally either side of the center. This is a convenient arrangement, as it enables the connection of the tongue to be made to the swing-bar without in any way interfering with the frame beneath; and it also adapts the machine for either two or three horses.

Claims.

What I claim, and desire to secure by Letters Patent, is—

1. The branch-arm *i* of the plow G guided in the standard H, as and for the purpose set forth.

2. The plows G provided with the shanks *g* and branch *i* and pivoted to the bars *a a a* of the frame A, in combination with the rock-shaft K, arm *m*, guide-standards H, pulley K, and cord or chain I, all constructed and arranged as and for the purpose described.

In testimony whereof I have hereunto set my hand this 30th day of March, 1871.

Witnesses: GEORGE A. GROVES.
R. F. OSGOOD,
ARCHIE BAINE.