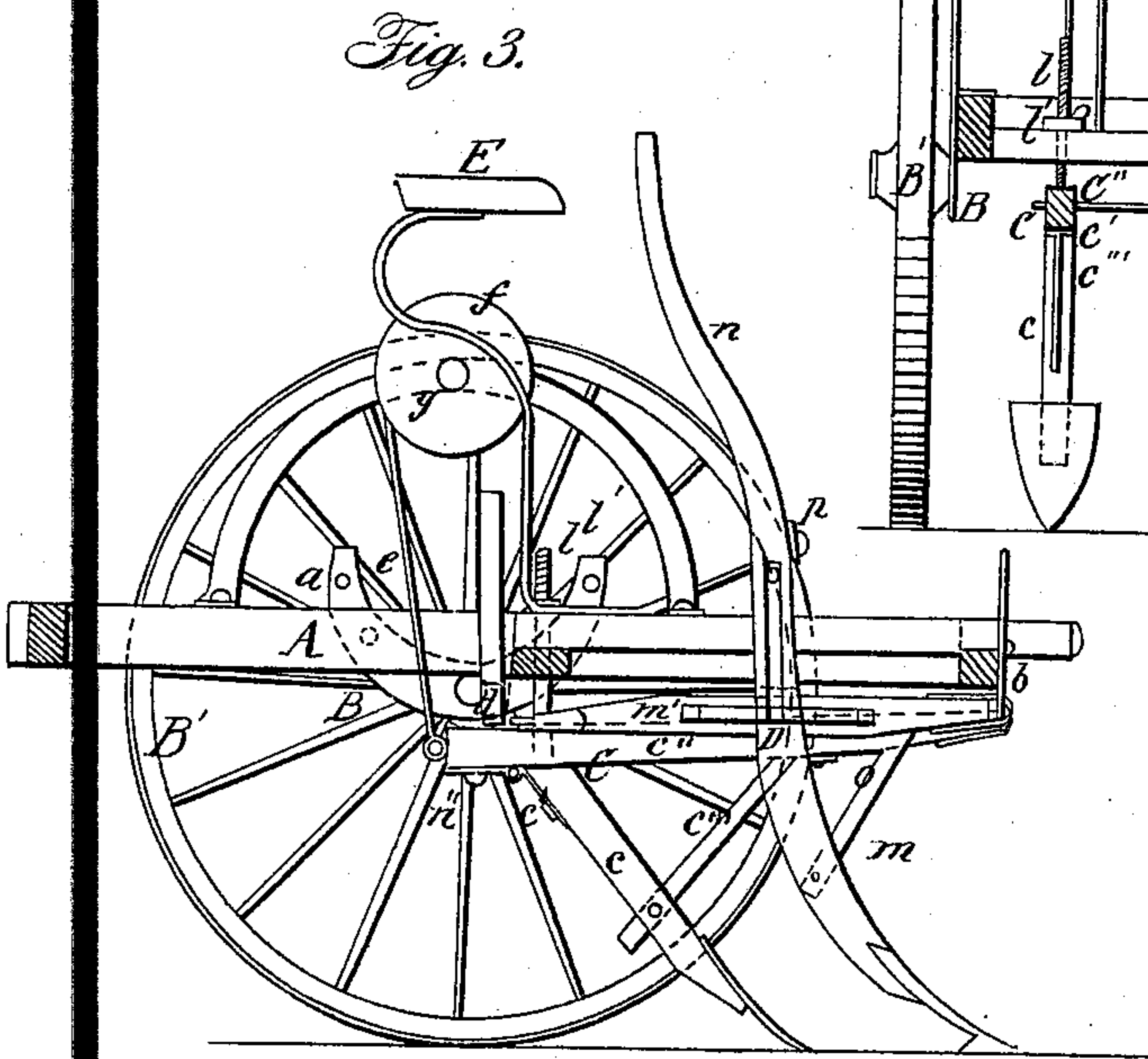
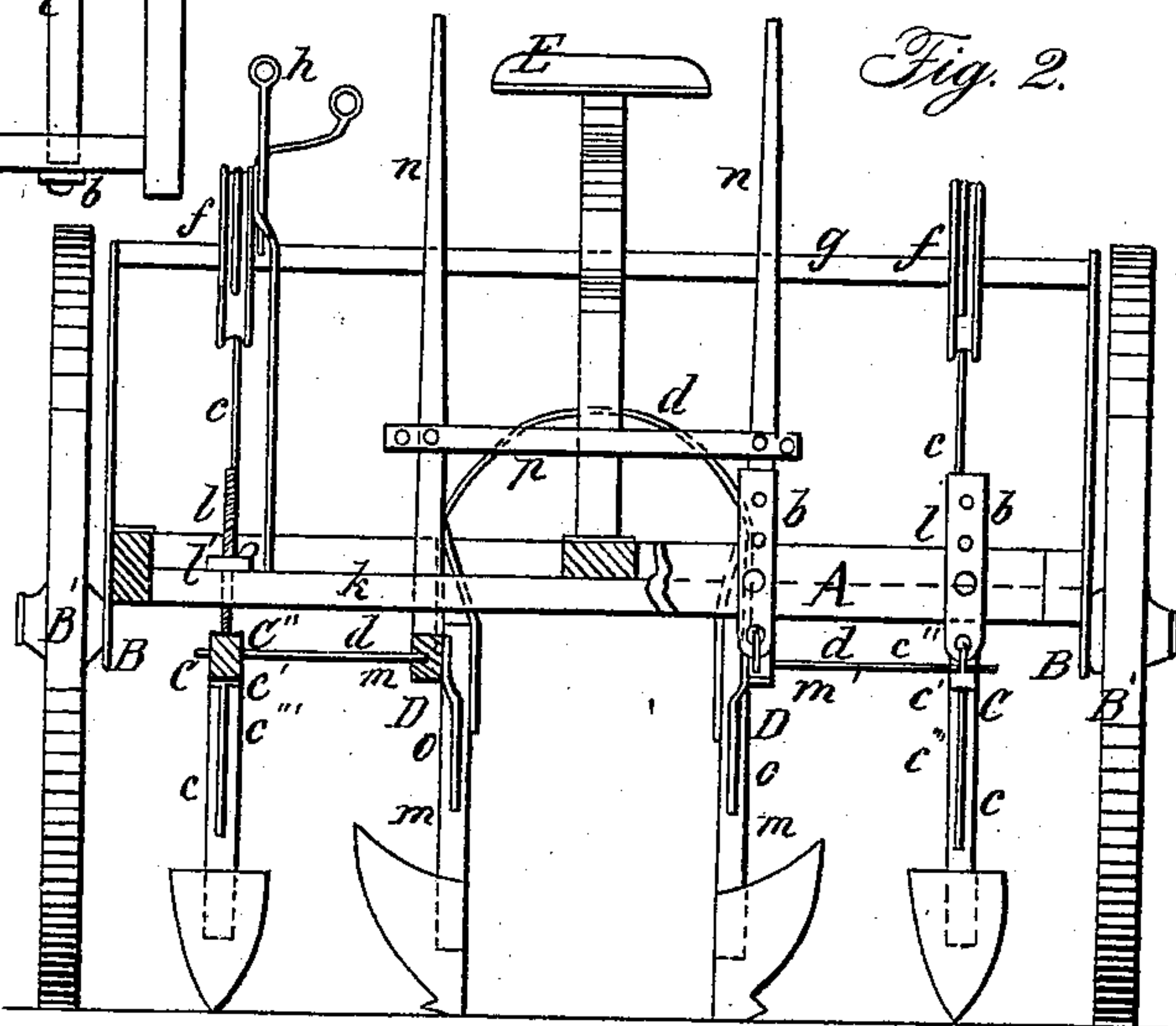
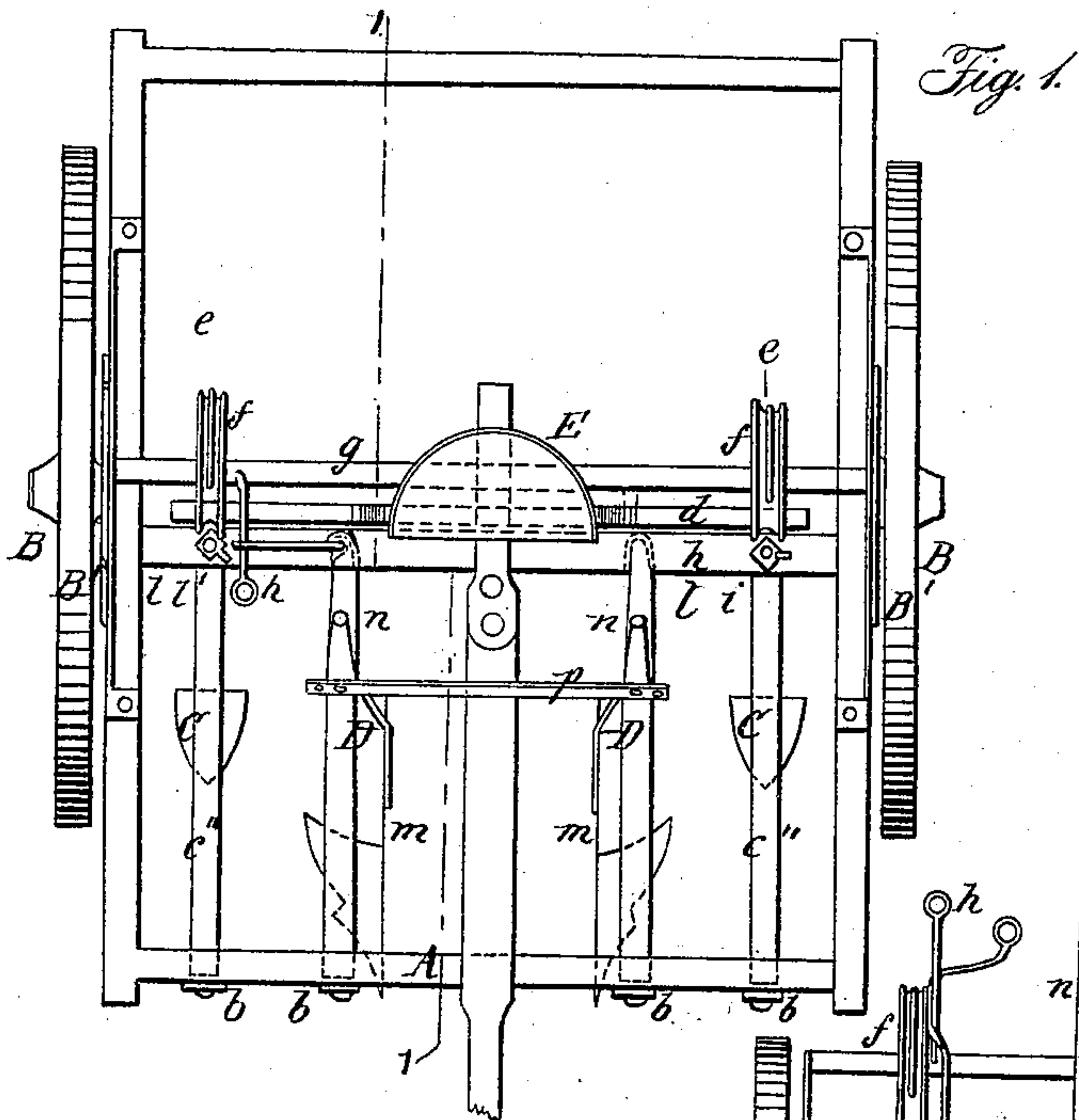


J. H. RANKIN.
Wheel Cultivator.

No. 70,615.

Patented Nov. 5, 1867.



Witnesses:

A. J. Gibson
Charles L. Fisher.

Inventor:

J. H. Rankin

United States Patent Office.

JOHN H. RANKIN, OF VERSAILLES, MISSOURI.

Letters Patent No. 70,615, dated November 5, 1867.

SULKY-PLOUGH.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOHN H. RANKIN, of Versailles, Morgan county, and State of Missouri, have invented a new and improved Sulky-Plough, of which the following is a full and clear description, reference being had to the accompanying drawings, making part of this specification.

My improvement in ploughs relates to mechanical devices for elevating one or more ploughs, so that the depth cut shall be any desired one, or that they may be removed entirely from the ground. Also, such an arrangement of adjusting-bars connected with the ploughs for regulating the angle between the ploughs and the ground as shall be conducive to economy in ploughing. And, further, by pivoting the central ploughs fore and aft, facilitate the operation of hilling, or enable the operator to avoid obstacles.

Figure 1 represents a plan of my improved plough.

Figure 2 is a front elevation of the same, a part of the front framing-timber being removed.

Figure 3 is a section elevation of my plough, the section being taken vertically in the plane indicated by the line 1-1 in fig. 1.

A is the frame of the plough, to either side of which, at a suitable distance back of the ploughs, is secured the gauging-plate B, from which projects the axle bearing the wheels B'; the plate is perforated at *a*. Immediately beneath the frame A are the adjustable cultivators C and adjustable ploughs D. A cultivator, C, is placed outside of the pair of ploughs D. The front ends of both ploughs and cultivators are provided with staples, which pass through eyes in the adjusting-bars *b*, secured to the front face of the forward cross-rail of the frame A. The legs *c* of the cultivators C are hinged at *c'* to the under sides of the beams *c''*. A rod or bar, *c'''*, extends between and is pivoted to the leg *c* and beam *c''* of each cultivator. The rear ends of the cultivators are retained at a given distance apart by rail *d*. Cords *e*, secured to the extreme rear ends of the cultivators C, extending upwards, pass about drums *f*, securely attached to the axle *g*, from which projects the handle *h*, conveniently located by the side of the operator. From the beams *c''*, projecting upwards and through the cross-timber *k* of the frame A, are the screws *l*, having the regulating-nuts *l'* above the cross-timber *k*. The legs *m* of the ploughs D are pivoted to the inside faces of the beams *m'*. Handles *n* extend from the plough-beams *m'* vertically to an altitude greater than the seat E of the operator. The front ends of the plough-beams *m'* are provided with staples, which pass through eyes in the adjustable bars *b*, secured to the front face of the forward cross-rail of the frame A. The rear ends of the plough-beams *m'* are also provided with staples, which pass through eyes *n''* in the rod or bar *d*. A strip, *p*, of metal or other desirable material, is pivoted to either handle *n*. A rod, *o*, extends from the plough-beam *m'* to the leg *m* in each of the ploughs D.

Operation.

By means of the regulating-nuts *l'* on the screws *l*, the rear ends of the cultivators C and ploughs D may, at the option of the operator, be elevated or depressed, according to the depth of ploughing desired, and by pressing forward the handle *h* the cords *e* are wound about the drums *f*, elevating the system of cultivators and ploughs entirely above the ground. In ploughing loose or light soil, the legs *c* and *m* of the cultivators C and ploughs D are set at an acute angle with the ground, by means of rods *c'''* and *o*. Since the beams *m'* of the ploughs D are pivoted fore and aft, the operator may, by imparting a lateral motion to the handles *n*, cause the ploughs to hill corn or furrow the ground near one or the other of the cultivators, and also to readily avoid obstacles. The adjustment of both cultivators and ploughs is effected by means of the adjusting-bars *b*. By securing the gauging-plates B high or low to the frame A, the cultivators and ploughs are removed from or caused to penetrate the ground to a greater depth.

It will be seen that the various devices for adjusting the position of the cultivators and ploughs enable the operator to adapt one plough to every species of soil and kind of ploughing.

Having fully described my improved sulky-plough, the use and operation of its various parts, and set forth its advantages, I make the following claims, which I desire to secure by Letters Patent:

1. The cultivators C, constructed as above described and for the purpose set forth.
2. The cultivators C, screw *l*, nut *l'*, cords *e*, drums *f*, on axle *g*, and handle *h*, in combination with the frame A, all arranged as above described and for the purpose set forth.
3. The ploughs D, constructed as above described and for the purpose specified.
4. The cultivators C, ploughs D, adjusting-bars *b*, rail *d*, screws *l*, nuts *l'*, cords *e*, drums *f*, on axle *g*, and handle *h*, in combination with the frame A, as above described and for the purpose set forth.

JOHN H. RANKIN.

Witnesses:

A. J. GIBSON,

CHARLES L. FISHER.