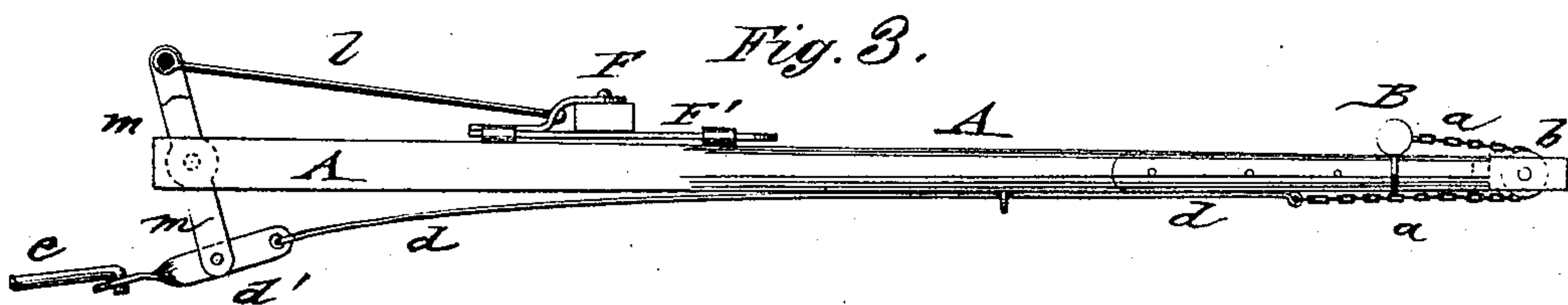
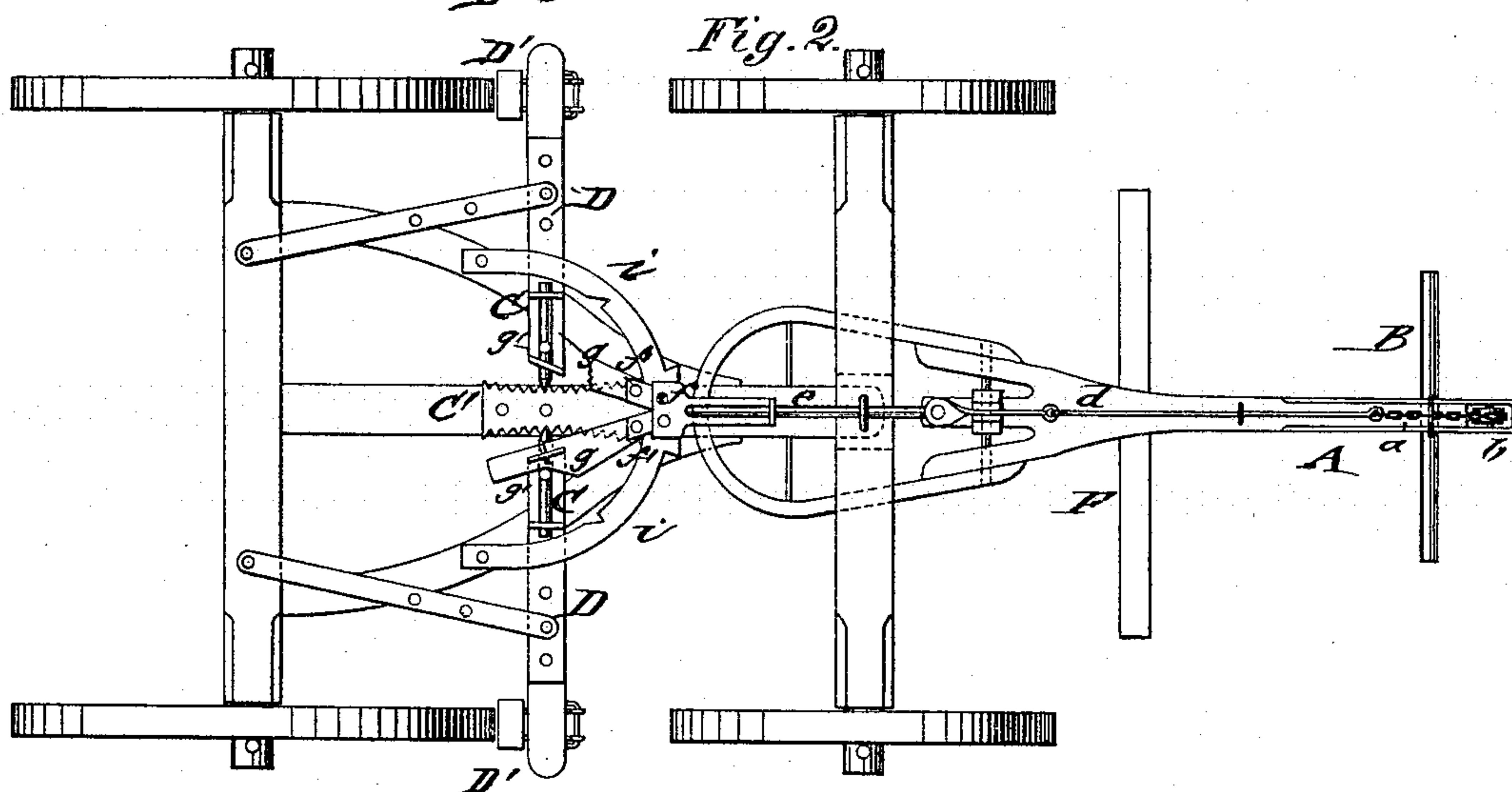
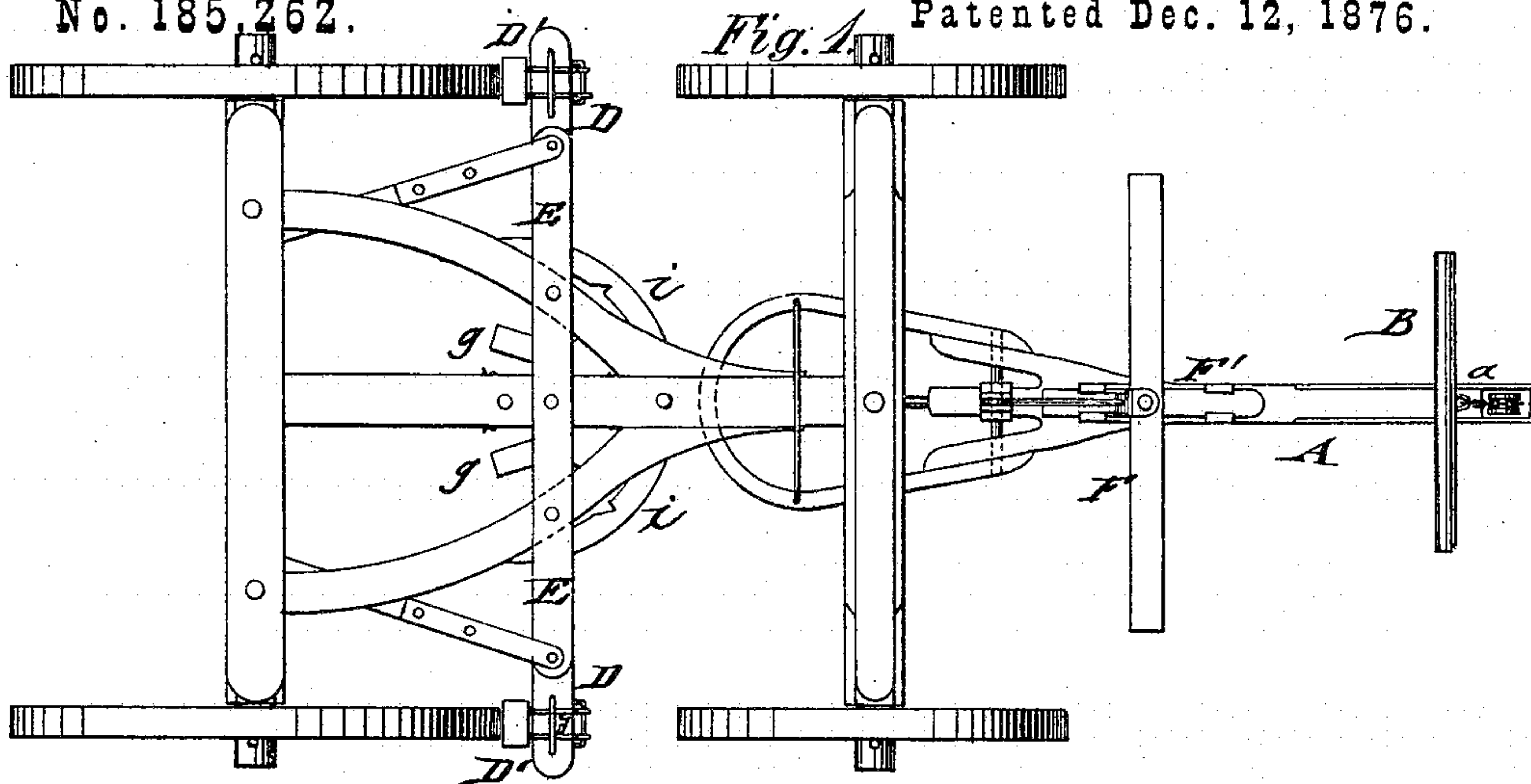


AUTOMATIC BRAKE-LOCK.

Patented Dec. 12, 1876.



WITNESSES:

H. Rydquist
John Goethals

INVENTOR:

INVENTOR:
G. C. Poling
BY *Wm. H. [Signature]*
ATTORNEYS.

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UNITED STATES PATENT OFFICE.

GARHARD H. ROLING, OF BELLEVUE, IOWA.

IMPROVEMENT IN AUTOMATIC BRAKE-LOCKS.

Specification forming part of Letters Patent No. 185,262, dated December 12, 1876; application filed September 2, 1876.

To all whom it may concern:

Be it known that I, G. HENRY ROLING, of Bellevue, county of Jackson, and State of Iowa, have invented a new and Improved Wagon-Brake, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a top view, Fig. 2 a bottom view, and Fig. 3 is a side view, of the double-tree and neck-yoke connection, with brake.

Similar letters of reference indicate corresponding parts.

The invention relates to an improved wagon-brake, operated automatically in going down hill by the neck-yoke, and released by the strain on the whiffletrees when on level ground; and the invention consists of the improvements hereinafter described.

In the drawing, A represents the tongue of a vehicle, and B the neck-yoke sliding at the outer end of the same. A chain, *a*, passes from the neck-yoke over a pulley, *b*, at the outer end of the tongue A, to a sliding rod, *d*, which is guided in staples along the under side of the tongue, and connected to a link, *d'*, which again connects with a sliding rod, *e*, guided on the reach with a piece, *f*, that operates, by pivot-links *f'*, the pivoted and slotted plates *g*, that bear on the pins *g'* of sliding spring-bolts C, and act on the inner ends of the brake-rods D. The brake-rods D are fulcrumed to a rigidly-braced cross-piece, E, of the reach, and carry the brake-shoes D' at the outer ends. The swinging brake-rods D lock by the spring-bolts C into a rack-plate, C', of the reach, that is toothed in arc shape at both sides, so as to secure the action of the bolts at any position of the swinging brake-rods. Curved guard-plates *i* of the reach, with recesses, define the extreme forward motion of the swinging brake-rods.

When the wagon is going down hill the strain of the horses on the neck-yoke carries

the same back on the tongue, and sets thereby the connecting mechanism in operation, so as to apply the brakes and throw the spring-bolts into the rack.

When the brake has been applied by the action of the described mechanism, the spring-bolts *g'* act to retain it in position until they are released by the forward movement of the slotted bars *g*, when the brake may also be withdrawn by the forward movement of the team.

The double-tree F is secured to a sliding plate, F', that is guided in top ways of the tongue, and connected by a rod, *l*, with the upper end of a fulcrumed lever, *m*, that engages by its lower end the link *d'*, and thereby the brake-operating mechanism.

The alternating application and release of the brakes by the automatic action of the horses, according to the nature of the ground, is thus produced in effective and reliable manner.

The brake-shoes are pivoted by curved rods to the brake-rods, being guided to bear on the wheels above the brake-rods D. When, therefore, the horses are backed on level ground, the wheels are reversed and the brake-shoes are raised up to be thrown out of action. The brake is thus automatically released whenever the wagon has to be moved backward.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

The combination, with an automatic-brake mechanism, substantially as described, of spring-bolts and rack and slotted cam-plates *g*, as and for the purpose specified.

GARHARD HENRY ROLING.

Witnesses:

ANDREW WOODS,
B. W. SEAWARD.