

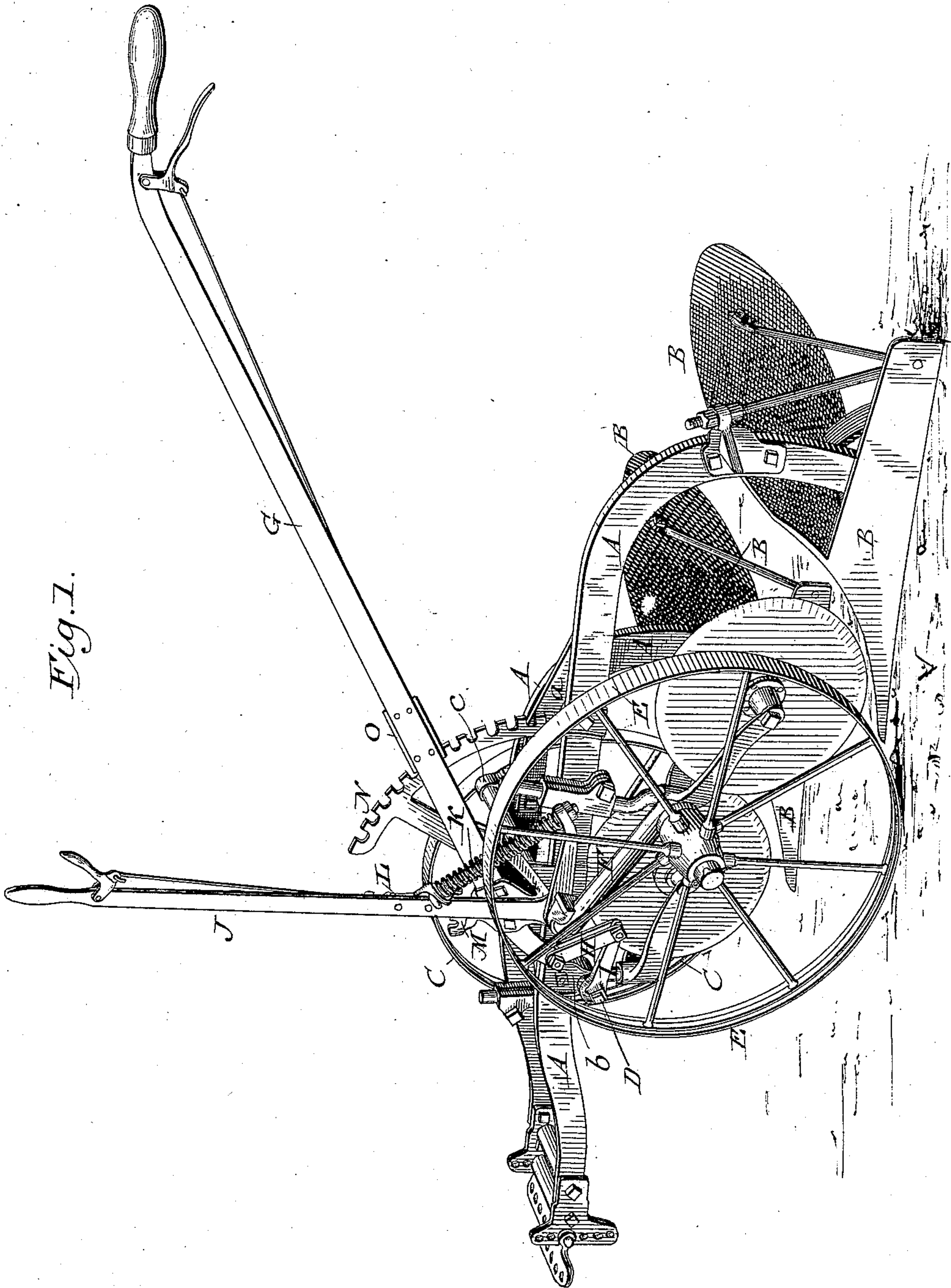
(No Model.)

2 Sheets—Sheet 1.

A. LINDGREN.
SULKY PLOW.

No. 376,532.

Patented Jan. 17, 1888.



Attest:

Sidney P. Hollingsworth
Ch. R. Kennedy

Inventor:

August Lindgren
By his Atty.
Phil. T. Dodge

(No Model.)

2 Sheets—Sheet 2.

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Fig. 2.

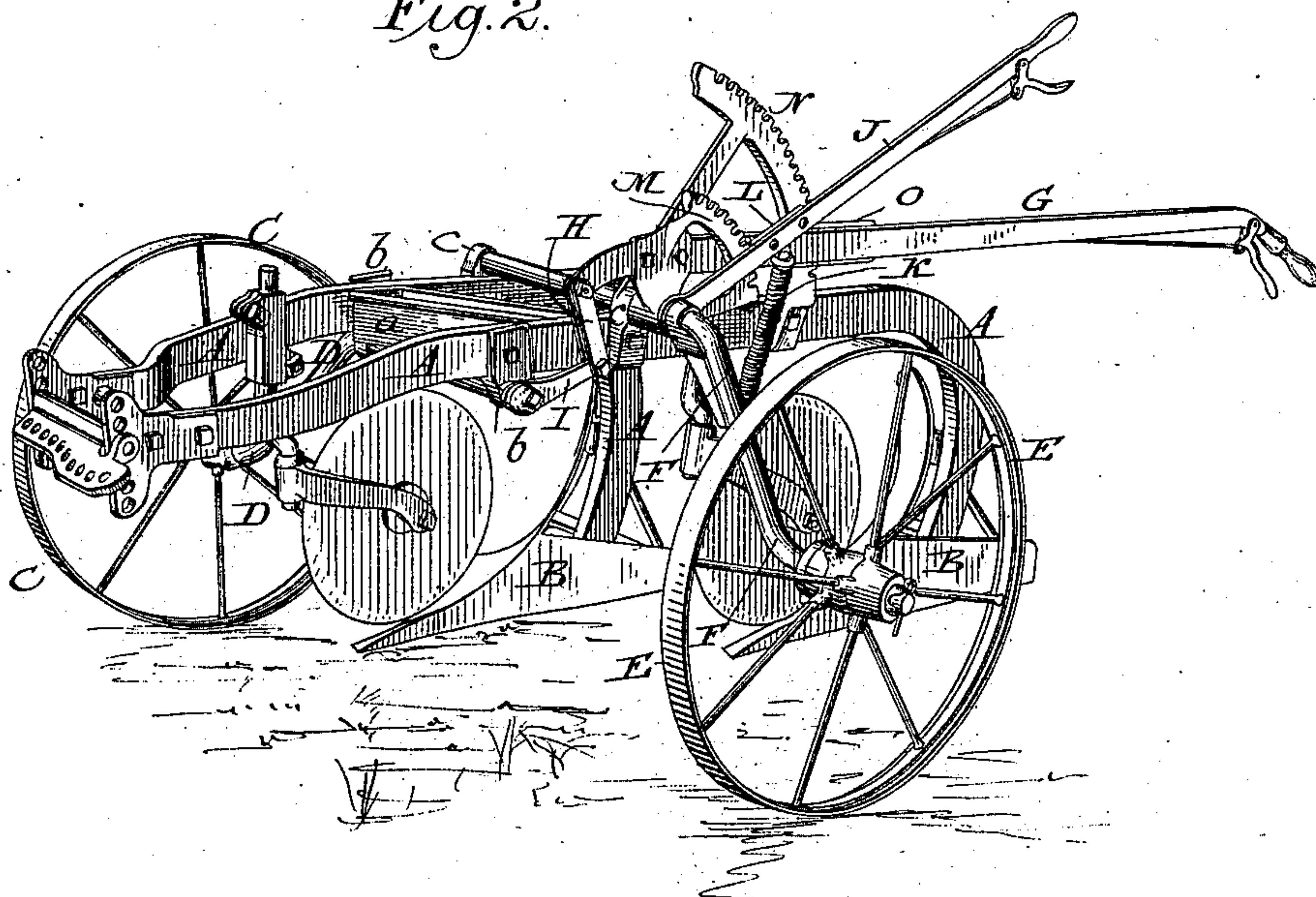
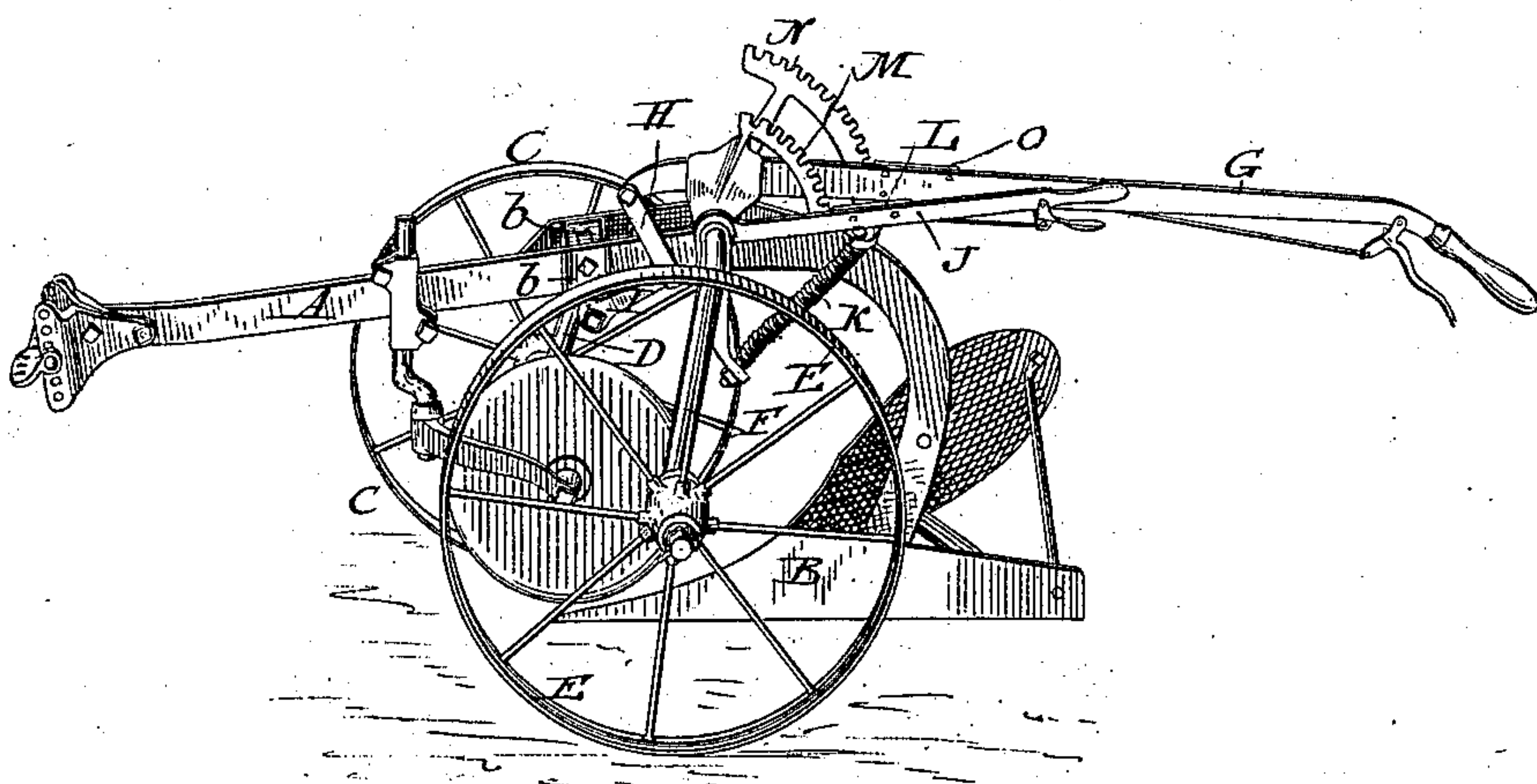


Fig. 3.



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UNITED STATES PATENT OFFICE.

AUGUST LINDGREN, OF MOLINE, ILLINOIS, ASSIGNOR TO THE MOLINE PLOW COMPANY, OF SAME PLACE.

SULKY-PLOW.

SPECIFICATION forming part of Letters Patent No. 376,532, dated January 17, 1888.

Application filed August 31, 1887. Serial No. 218,330. (No model.)

To all whom it may concern:

Be it known that I, AUGUST LINDGREN, of Moline, in the county of Rock Island and State of Illinois, have invented certain Improvements in Sulky-Plows, of which the following is a specification.

My invention relates more particularly to walkingsulky-plows having one or more plows attached to a single frame; and it consists, mainly, in an improved arrangement of parts for adjusting the wheels to throw the plow into and out of action and for bringing the wheels opposite each other to facilitate the turning of corners and the transportation of the machine from place to place.

In the accompanying drawings, Figure 1 is a perspective view of a double plow constructed on my plan as seen from a rear point on the land side. Fig. 2 is a similar view of the machine viewed from a forward point. Fig. 3 is a view of the machine constructed with a single plow.

Referring to Figs. 1 and 2, A A represent two rigid metallic beams curved downward at their rear ends and each provided with an ordinary mold-board plow, B. The beams are connected rigidly together by means of tie-rods and cross-bars *a*, or other suitable connections, so that they constitute in effect a main frame, and are provided at the forward end with draft devices—such as represented, or of other suitable form—these features constituting no part of the present invention.

C represents the furrow-wheel located in advance of the forward plow and carried by a horizontal journal on the lower outer end of a crank-axle, D, the upper end of which is carried horizontally across the machine and seated in ears *b*, bolted to the beams.

E represents the land-wheel mounted on a wrist on the lower outer end of a crank-axle, F, the upper end of which is carried across the machine and seated in fixed bearings *c*. The furrow-wheel stands normally in advance of the forward plow, while the land-wheel stands at a point farther to the rear.

G represents a long hand-lever arranged to turn loosely around the upper horizontal portion of the axle F, and provided with a locking dog or latch, O, adapted to engage a notched

plate, N, bolted to one of the beams, whereby the lever may be secured in different positions. The forward end of this lever G is connected by a link, H, to a crank-arm, I, secured to the inner end of the furrow-wheel axle D, so that the movement of the lever has the effect of swinging the wheel C forward or backward. A second and smaller lever, J, is loosely mounted around the axle F, and provided with a latch or locking device, L, adapted to engage a notched plate, M, fixed to the main lever G, this arrangement permitting the two levers to be locked together in order that they may move as one, and also permitting their relative positions to be changed at will.

The secondary lever J is connected to the upper end of a spiral compression spring, K, the lower end of which bears against the crank-arm of the axle F or a bearing-plate thereon.

In the normal position of the parts the furrow-wheel axle D has its crank-arm extended downward and forward, while the crank-arm of the land-wheel is extended downward and rearward, thus maintaining the one wheel considerably in advance of the other.

On depressing the lever G it imparts motion through the link H and arm I to the axle D, carrying the furrow-wheel rearward, and at the same time it imparts motion through the lever J and spring K to the axle F, swinging the same downward and forward. The result of this action is to raise the frame and lift the plows clear of the ground, and at the same time by moving the front wheel rearward and the rear wheel forward to bring the two wheels opposite, or substantially opposite, each other, in which position they admit of the machine being conveniently turned and of its being readily moved from place to place.

I am aware that plows have been variously constructed with adjustable crank-axes. The essence of my invention in this regard resides in the arrangement and connection of the two axes in such manner that one wheel is carried forward as the other is carried rearward until the two stand opposite, or substantially opposite, each other. It will be perceived that in my machine this result is accomplished by the operation of a single lever.

The machine represented in Fig. 3 is sub-

stantially identical with that represented in the preceding figures, except that it contains but a single beam and plow.

It is manifest that the details of construction may be modified at will without departing from the limits of my invention, provided only the connection between the wheels is such as to secure their simultaneous movement in opposite directions.

The particular form and arrangement of the hand-levers, their locking devices, and other minor features are of secondary importance.

I am aware that plows have been constructed with crank-axes carrying their supporting-wheels, the two axles being in some cases combined with a single operating-lever; but I believe myself to be the first to combine two adjustable wheels with a single operating-lever in such manner that in raising the plow the two wheels are moved by a single lever, one forward and the other rearward, until they stand substantially abreast.

Having thus described my invention, what I claim is—

1. The plow-carrying frame, in combination with the land-wheel and the furrow-wheel adjustably connected thereto, the hand-lever, and connections whereby said lever is enabled to move the wheels simultaneously in opposite directions, one forward and the other rearward.

2. The plow-carrying frame, in combination with the front furrow-wheel and its crank-axle, the rear land-wheel and its crank-axle, and a connection between said axles compelling them

to swing in opposite directions, whereby the wheels in the act of raising the frame are moved one forward and the other rearward and brought approximately opposite each other.

3. The main frame having one or more plows attached, in combination with the furrow-wheel and its crank-axle D, provided with arm I, the hand-lever G, connected to said arm, the land-wheel E, its crank-axle F, the lever J, the spring between the lever J and axle F, devices for locking the levers to each other, and devices for locking the lever G to the frame, said members arranged, as described and shown, so that the adjustment of the lever G will move the wheels simultaneously in opposite directions, one forward and the other rearward.

4. In a wheel-plow, the combination of a plow-carrying frame, a furrow-wheel in advance of the plow, a crank-axle extending from the frame forward to the furrow-wheel, a land-wheel in rear of the furrow-wheel, a crank-axle extending from the frame rearward to said land-wheel, and connections, substantially as described, between the two axles, whereby they are caused to swing simultaneously in opposite directions, one forward and the other rearward.

In testimony whereof I hereunto set my hand, this 8th day of July, 1887, in the presence of two attesting witnesses.

AUGUST LINDGREN.

Witnesses:

A. A. CRAMPTON,
A. L. CARSON.