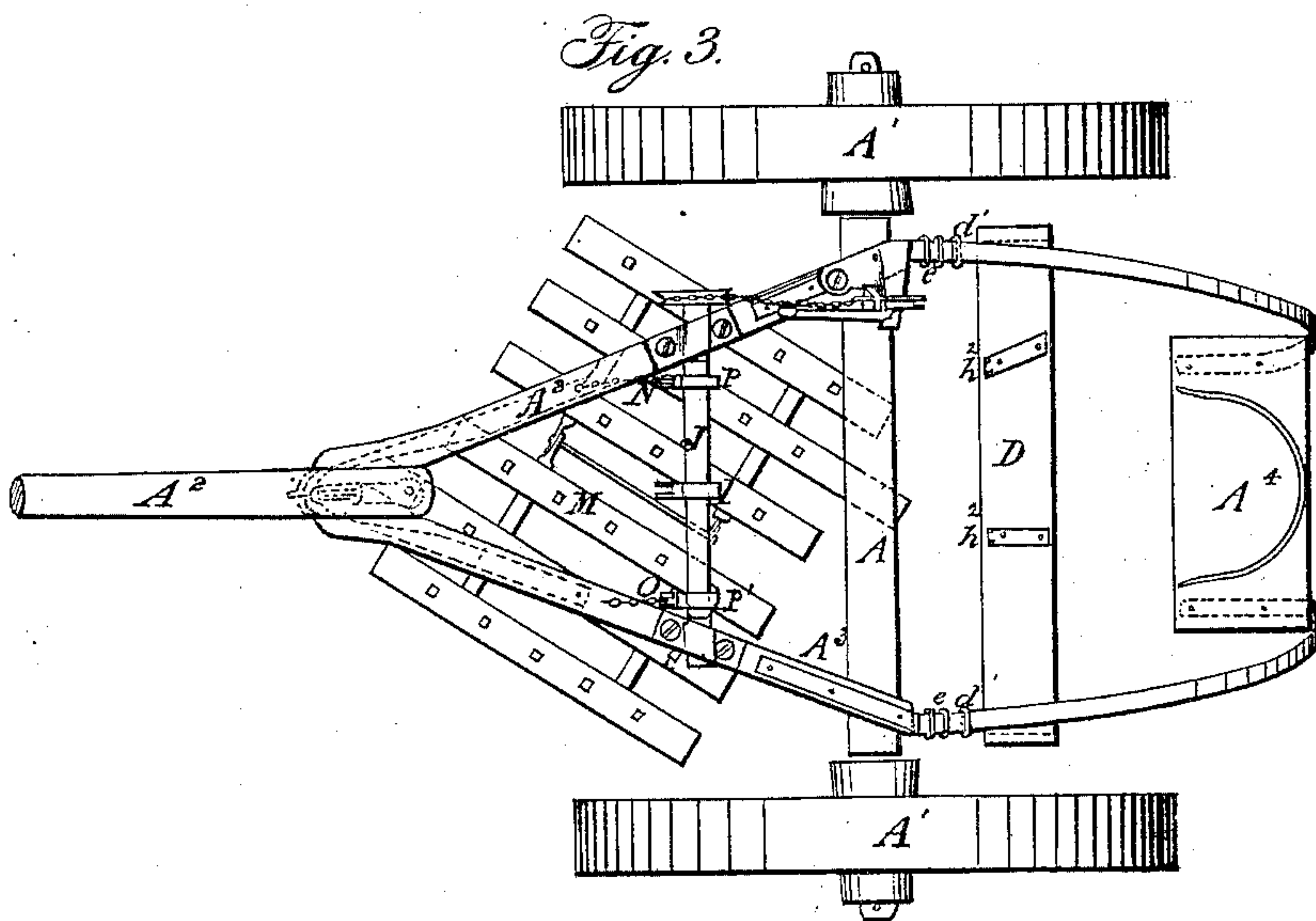
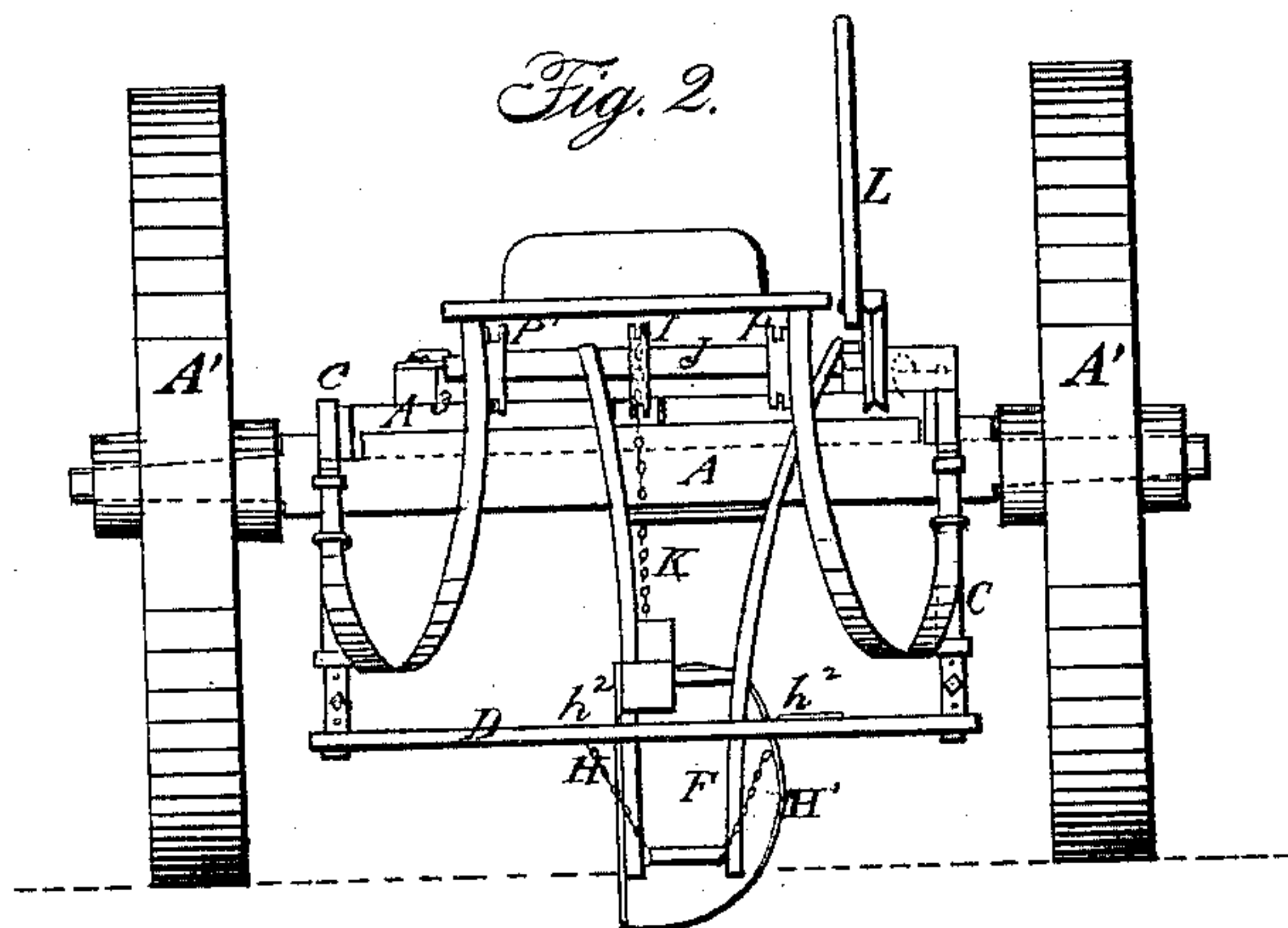
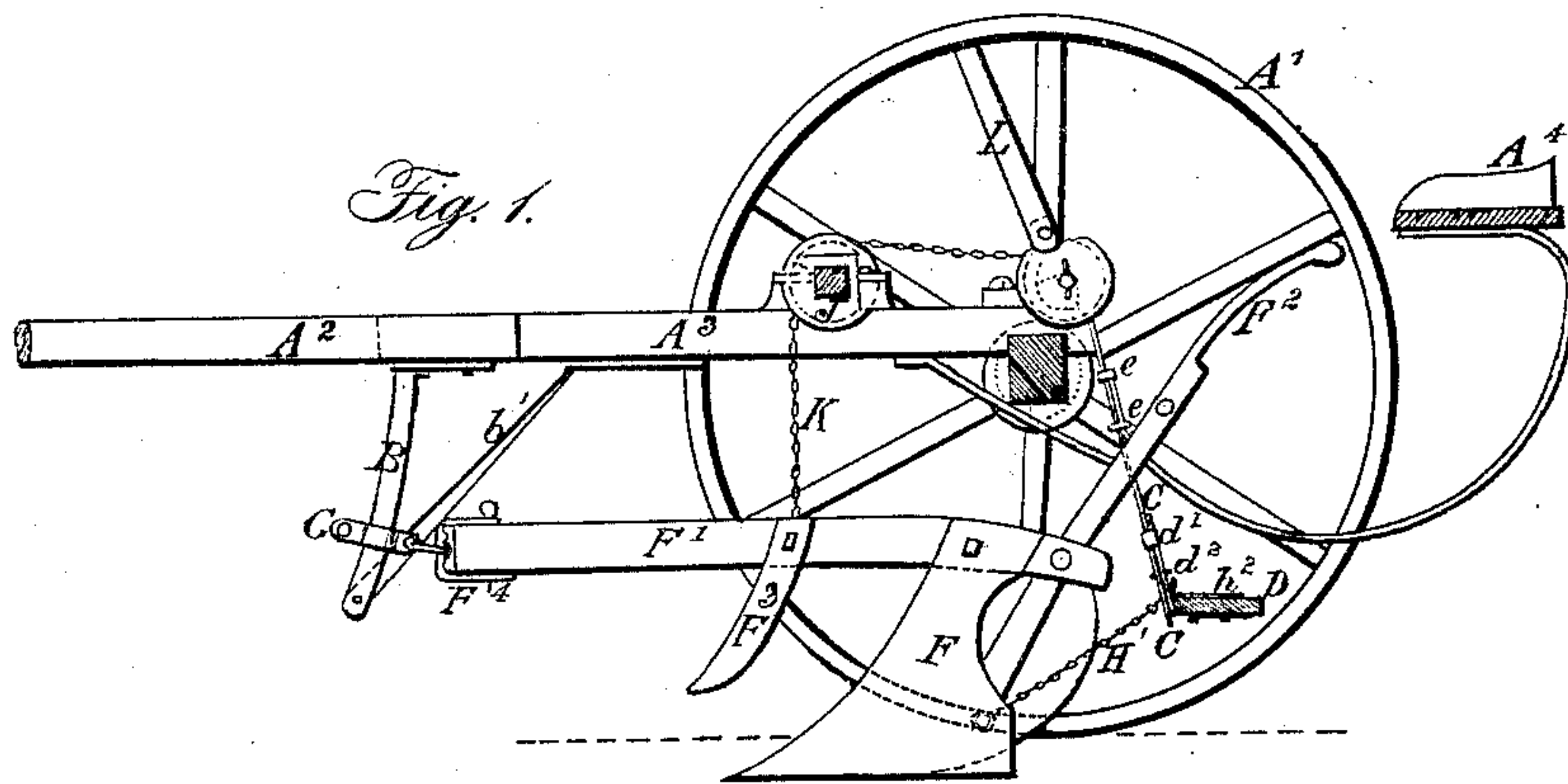


J. E. CHEASEBRO.

Plow and Harrow.

No. 58,773.

Patented Oct. 16, 1866.



Witnesses:

*E. B. Forbush*  
*B. H. Mehley*

Inventor:

*James E. Cheasebro*

# UNITED STATES PATENT OFFICE.

JAMES E. CHEASEBRO, OF MARILLA, NEW YORK.

## IMPROVEMENT IN SULKY-PLOW AND HARROW.

Specification forming part of Letters Patent No. 58,773, dated October 16, 1836.

*To all whom it may concern:*

Be it known that I, JAMES E. CHEASEBRO, of the town of Marilla, county of Erie, and State of New York, have invented a new and Improved Sulky-Plow and Harrow; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure I is a vertical longitudinal section; Fig. II, a rear end elevation of same, and Fig. III a top-plan view.

The nature of this invention consists, first, in combining and attaching a plow to a sulky in such manner that the plow-beam shall pass under the axle of the sulky and project forward, and the plow-handles project in rear of the axle and in convenient grasp of the plowman as he sits upon his seat; second, in connecting the forward end of the plow-beam to a guide-stirrup, which drops down from the pole of the sulky, the connection being formed by means of a clevis and slide, the slide being free to move up and down on the vertical bar of the guide-stirrup; third, in connecting the rear end of the plow, by means of chains or other flexible connection, to a brace or foot-piece projected from and in rear of the axle of the sulky; fourth, in an adjustable foot-piece and driver's seat projected and supported in rear of the axle; fifth, in the combination and use of a windlass and chains with a sulky and plow, for the purpose of raising and suspending the plow from the ground; sixth, in the combination of a harrow with the sulky.

Letters of like name and kind refer to like parts in each of the figures.

A sulky is a two-wheeled carriage for a single person.

A plainly-constructed sulky, to represent the combination of my improvement, is shown in the drawings, A being the axle, A<sup>1</sup> the wheels, A<sup>2</sup> the pole, A<sup>3</sup> the diagonal braces connecting the pole with the axle, and A<sup>4</sup> the driver's seat.

A guide-stirrup, B, is dropped down from the pole, which has lateral braces b'.

Strong braces C are projected from the axle in rear thereof and on an angle downwardly, to which braces is attached the foot-board D. This foot-board has iron elbows projecting up-

wardly, and is made adjustable on the braces by means of the clasp d<sup>1</sup> and pin d<sup>2</sup> taking hold of the elbows. The driver's seat is also made adjustable on these braces by means of the clasps e, which take hold of the ends of the seat-spring.

F represents the plow, and, in order to particularly represent each part, F<sup>1</sup> represents the plow-beam; F<sup>2</sup>, plow-handles; F<sup>3</sup>, colter, and F<sup>4</sup> the clevis. All of these parts and the plow as a whole may be of ordinary and common construction.

G represents a slide, which connects with the plow-clevis, as represented, and with the guide-stirrup B in such manner that the slide is free to move up and down on the stirrup B and guide the plow. The whiffletrees are connected with this slide by a suitable clevis, so that the draft of the horses is communicated directly through this slide and clevis to the plow-beam.

The rear end of the plow is connected to the foot-board D by means of two short chains, H H'. These chains are connected with the foot-board by means of hooks, as shown at h<sup>2</sup>, and are of the proper length to permit the plow to work with freedom and to enter the ground to any required depth.

The plow-beam stands under the axle of the sulky, extending forward, and the plow-handles project in rear and in convenient grasp of the driver as he sits upon his seat. The length of the chains will be determined so as not to allow the plow to hug the land side too closely. By this arrangement the plow is easily guided, and for the most part will run without aid from the plowman.

In order to turn easily at the corners when plowing, and to carry the plow from place to place, it is necessary to provide means to lift and suspend the plow, and for this purpose I have provided a windlass-wheel, I, supported upon the shaft J, which shaft has appropriate bearings on the diagonal braces A<sup>3</sup>. A windlass-chain, K, connects with the wheel and plow, and lever L connects with the shaft, so that by an easy pull of the lever by the plowman, as he sits upon his seat A<sup>4</sup>, the plow may be raised bodily from the ground and suspended under the axle while turning at the corners of the land and while the plow is be-



ing taken from field to field. In this manner the plow may also be lifted for passing around stumps and over large stones.

At M is represented a harrow of ordinary construction. This is combined with the sulky for harrowing the ground after it is plowed. It is connected with the guide-stirrup of the sulky by means of a slide and clevis in the same manner that the plow is.

There are also two chains, N O, connected with the harrow, and also with the windlass-wheels P P', which are placed upon the windlass-shaft J, so that the driver, as he sits upon his seat, by an easy pull upon the lever L, may lift the harrow from the ground for clearing it from clogging matter, or for any other purpose.

It will thus be seen that my improvement includes the combination of a harrow with the sulky.

It will also be noticed that this improvement renders plowing upon wheels (the plowman riding and guiding the plow) entirely practicable and easy. I have demonstrated by actual experiment that this sulky-plow may be used upon any plowable land, and that its draft is from ten to twenty per cent. less than plowing without the sulky.

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

1. The combination and attachment of a plow to a sulky in such manner that the plow-beam shall pass under the axle of the sulky and project forward, and the plow-handles project in rear of the axle and in convenient grasp of the plowman as he sits upon his seat, substantially as set forth and described.

2. The combination of the guide-stirrup B with the slide G, for the purpose of forming a connection of the forward end of the plow-beam with the sulky, substantially as set forth.

3. Connecting the rear end of the plow to a brace or foot-board, D, projected from and in rear of the axle, for the purpose and substantially as described.

4. The driver's seat A' and foot-board D, projected and supported in rear of the axle, for the purpose and substantially as set forth.

5. The combination of a harrow, M, with the sulky, for the purpose and substantially as described.

JAMES E. CHEASEBRO.

Witnesses:

B. H. MUEHLE,  
E. B. FORBUSH.