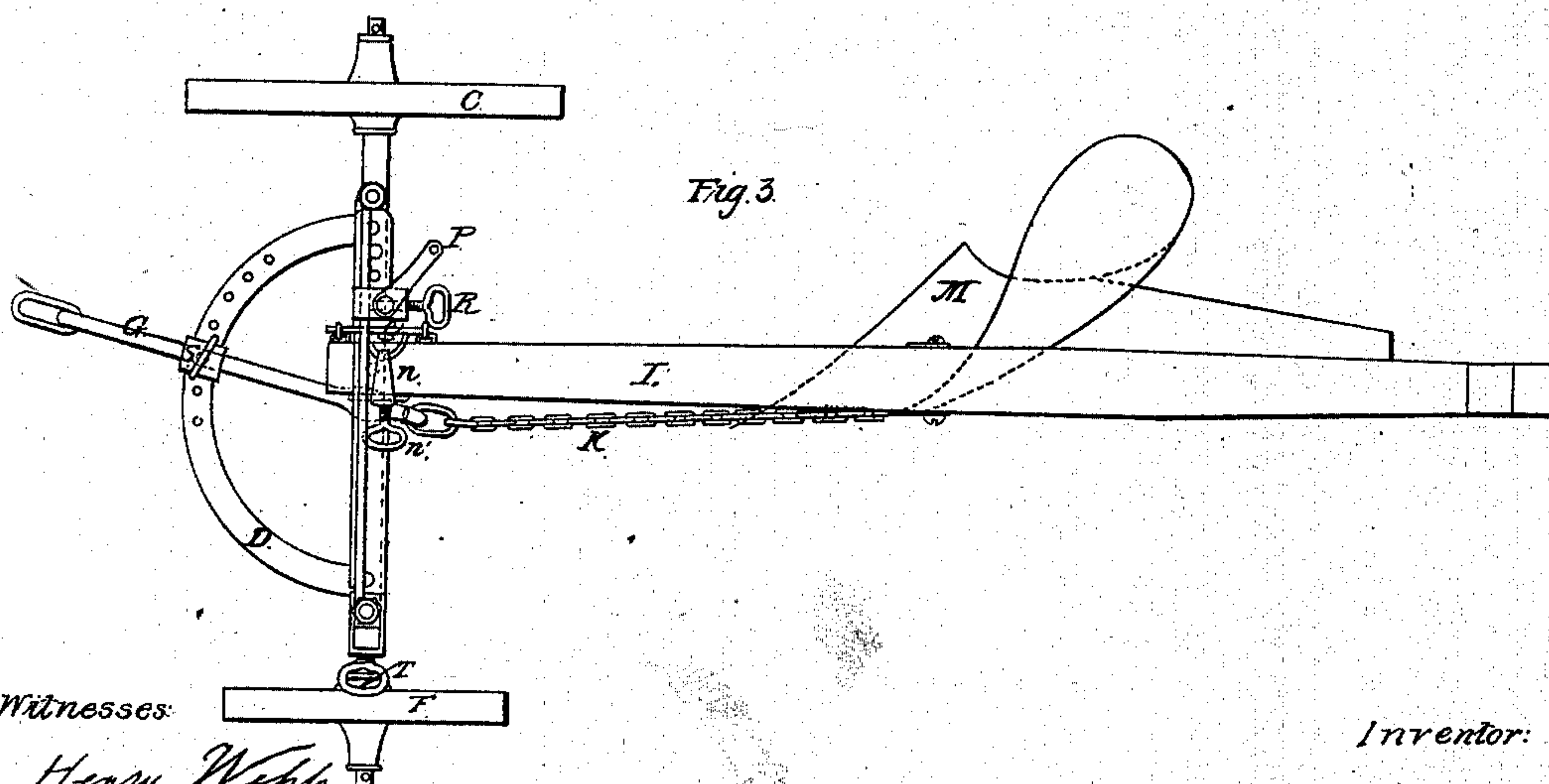
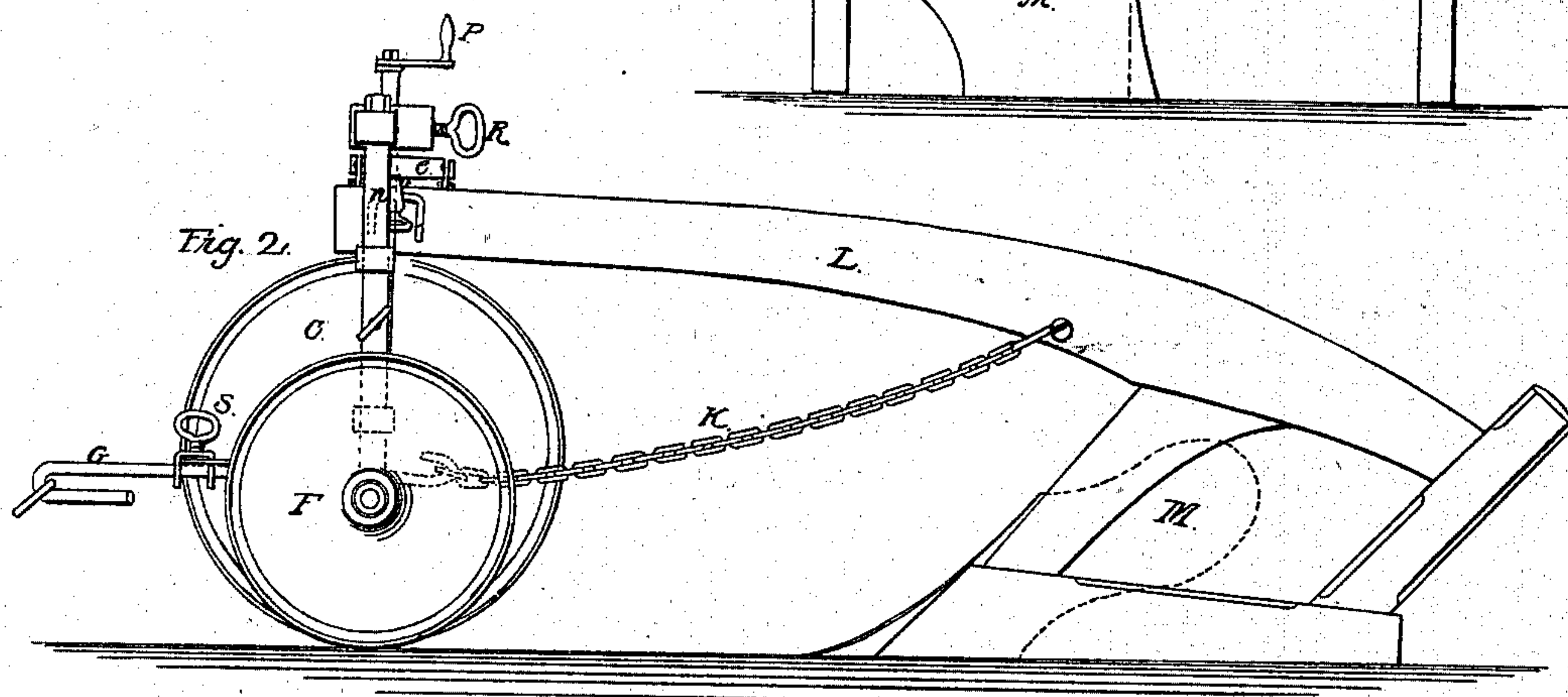
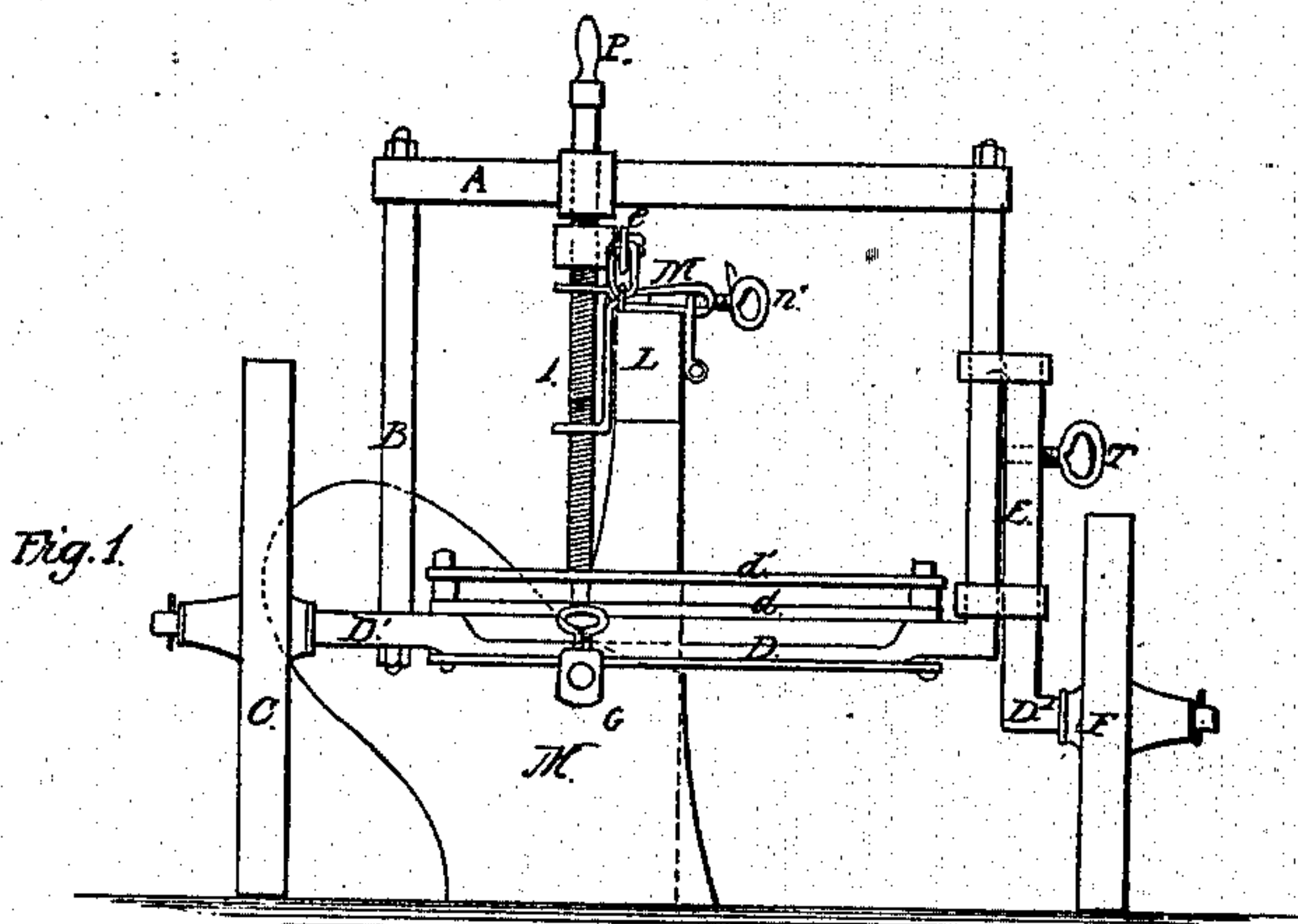



B. VOLKMAN.
 PLOW.

No. 60,095.

Patented Nov. 27, 1866.



Witnesses:

Henry Wehle 
Gustav Zimmerman.

Inventor:

Bruno Volkman

United States Patent Office.

IMPROVEMENT IN PLOUGES.

BRUNO VOLKMANN, OF NEW YORK, N. Y., ASSIGNOR TO FREDERICK VOLKMANN, OF SAME PLACE.

Letters Patent No. 60,095, dated November 27, 1866.

SPECIFICATION.

TO WHOM IT MAY CONCERN:

Be it known that I, BRUNO VOLKMANN, of the city, county, and State of New York, did invent a new and improved Plough; and I hereby declare the following to be a full and exact description thereof, reference being had to the annexed drawing, and to the letters of reference marked thereon, which form a part of this specification, and in which said drawings—

Figure 1 represents a front view of my improved plough.

Figure 2, a side view thereof.

Figure 3, a horizontal view of the same.

The same letters mark the same parts in all the figures.

The nature of my invention consists in a new and improved plough, of such a construction that the most perfect adjustability of the same may be attained without the aid of any plough-handle, or any equivalent thereof, and that the ploughshare, when thrown out of the furrow by any impediment, will resume its original position in the furrow without any effort on the part of the driver of the plough-cart, or of any other person.

To enable others skilled in the art to make and use my invention, I will proceed to more particularly describe the same.

In the annexed drawing, A B C D E F represent the plough-frame or plough-cart. G represents the shaft of the cart. D¹ D² represent the axle of the cart. c represents the right wheel of the plough-cart; F the left wheel of the same. I represents the screw-tree. D represents a semicircle, with regular openings for adjusting the shaft G. K represents the plough-trace. L represents the plough-beam. n represents the screw-chain. e represents a small balance-beam, in which the screw-chain, with the plough-beam, hangs. M represents the ploughshare. The axle of the cart, D¹ D², consists of, besides the usual horizontal axle, of two parallel plates attached thereto, the upper plate having perforations to admit the screw-tree I, being secured further to the right or left. P represents the crank or the handle for the screw-tree. R represents the regulating screw for the screw-tree. S is the regulating screw for the cart-shaft. T is the regulating screw for the vertical frame-piece E, which consists of two parallel pieces. d d' are two horizontal frame-pieces, attached to the lower side of the frame d', containing the perforations or screw-holes in which the screw-tree fits.

It is apparent from the drawing that the head of the plough-beam L is hung on the small balance-beam e by means of the screw-chain, or screw and chain, n, whereby the plough-beam is held to the screw-tree I, which, fitting into the mother-screw of the frame-piece d', may be elevated or depressed by means of its crank P, whereby the depth of the furrows may be lessened or increased at pleasure, while the width of the furrow may be fixed and determined by placing the screw-tree in the holes on d, either to the right or to the left; so that, standing behind the plough and desiring so make the furrow broader, I put the screw-tree in the holes to the left, as shown in fig. 3. If it is desired to deepen the furrow more than can be done by screwing down the screw-tree I, I can effect it by the sinking of the axle of the plough-cart D¹ D², by loosening the screw T, then sliding D² downwards, and fastening it again in that position by the said screw, T.

When the plough is used, the plough-frame or plough-cart must be brought into a vertical position, which is done by correctly straining the plough-trace K. In ploughing by this new plough, care must be taken that the larger wheel C should move inside of the furrow and close to the outside of it. The plough is kept straight by the shaft of the cart G, the position of which may be fixed by moving the pin below the regulating screw S into one of the holes of the semicircle D, and fastening it therein by means of said screw, as shown in fig. 3. The balance-beam e prevents the possibility of the plough-beam being turned over to the right, and the screw-chain n, which may be loosened or tightened by the screw n', prevents it from being turned over to the left. Any impediment which should throw the ploughshare out of the furrow, either upwards or sideways, can only do so for one moment, as the balance-beam and the screw-chain will cause it to assume its former position immediately, and without any aid from the driver or other person. This construction of the plough imparts to it a high degree of flexibility, so that it may be easily turned to the right or to the left at the end of a straight furrow, and during the time in which it turns no ploughing will be performed, for the reason that the large wheel C will not move in the furrow during that time, whereby the plough-beam is elevated sufficiently to raise the ploughshare out of the ground. As during the operation of ploughing the course and depth of the ploughshare are regulated and determined by the position of the principal parts of the plough, the use of any plough-

handle is superfluous. This plough is easily used, and two of them may be led by one man or boy without any difficulty, all that is required of the said attendant being the leading of the horses properly, the depth and width of furrows being fixed before the commencement of the ploughing.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The plough-frame or plough-cart A B C D E F, constructed substantially as described, in combination with the plough-beam L, for the purpose set forth.
2. The small balance-beam e, in combination with the screw-chain n, the screw n', and plough-beam L, substantially as described, for the purpose set forth.
3. The screw-tree I, in combination with the two horizontal frame-pieces d d', and the plough-beam L, substantially as described, for the purpose set forth.
4. The cart-shaft G, in combination with the semicircle D, regulating screw S, and with the plough-frame A B C D E F, substantially in the manner and for the purpose described.
5. The cart-axle D¹ D², in combination with the movable side-piece E, and regulating screw T, for the purpose of deepening the furrows, as required, substantially in the manner described.

BRUNO VOLKMANN.

Witnesses :

HENRY WEHLE,
GUSTAV ZIMMERMANN.