

(No Model.)

J. SCHINDLER.

HARROW.

No. 289,860.

Patented Dec. 11, 1883.

Fig. 1.

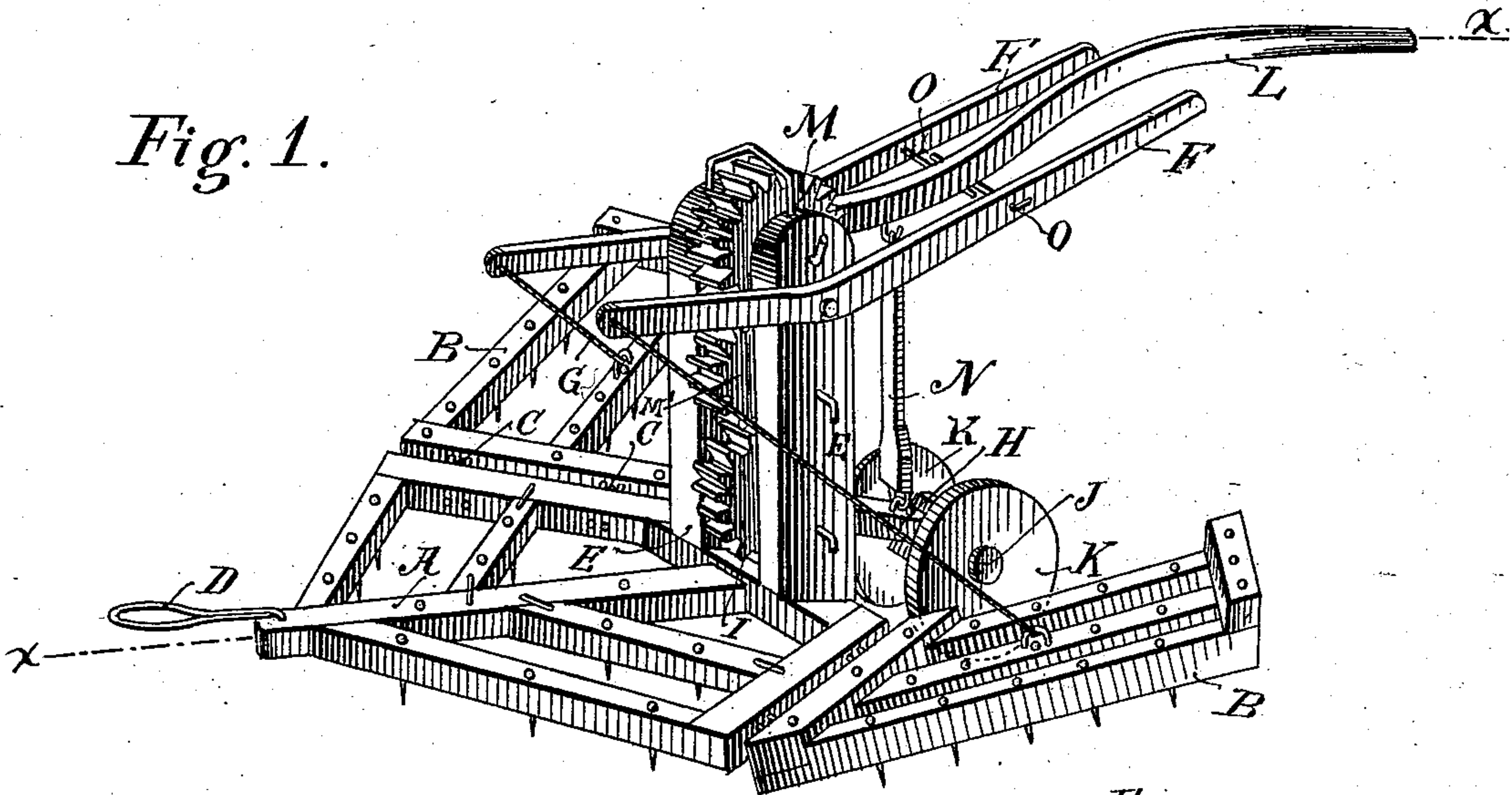


Fig. 2.

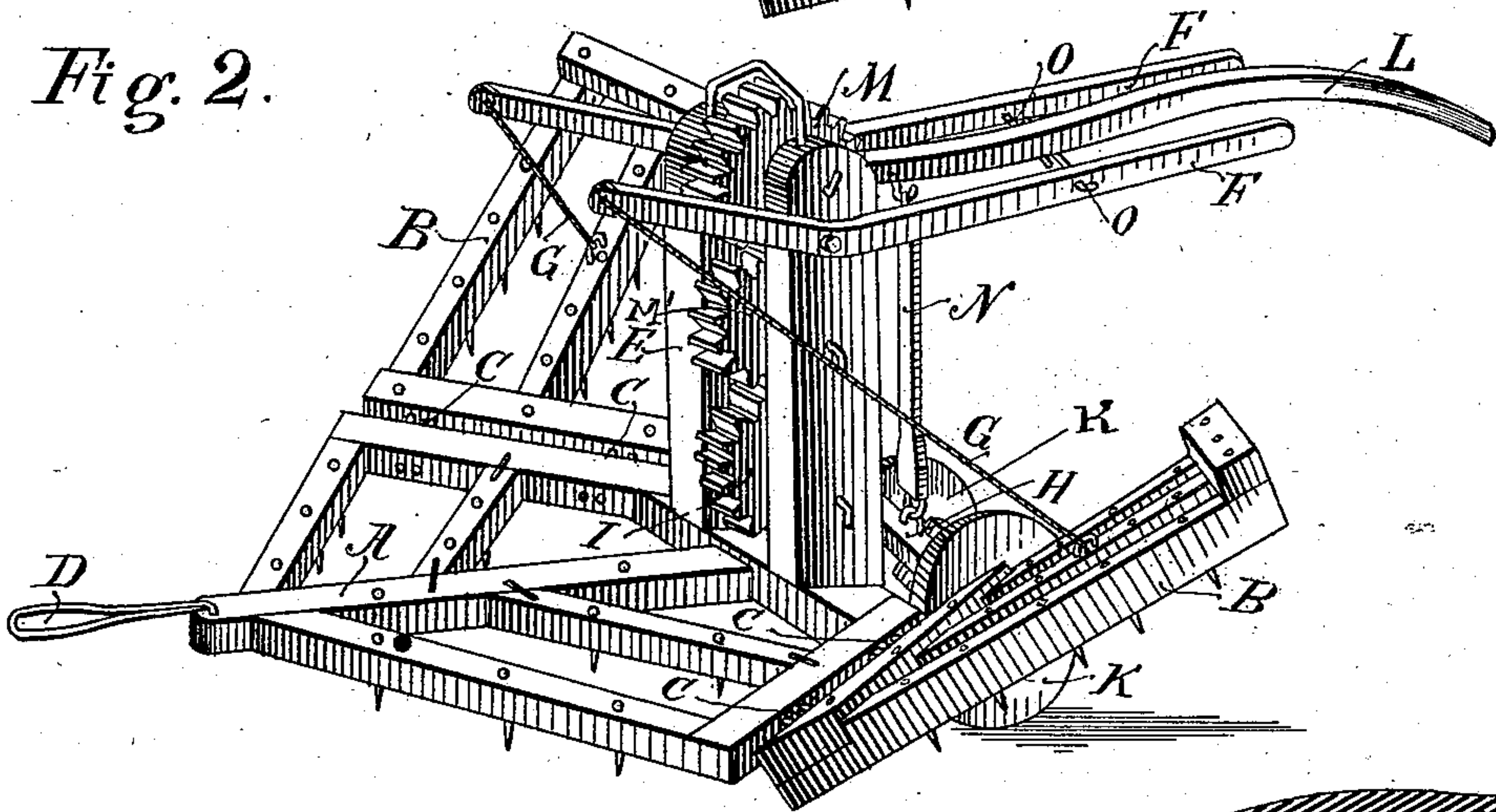
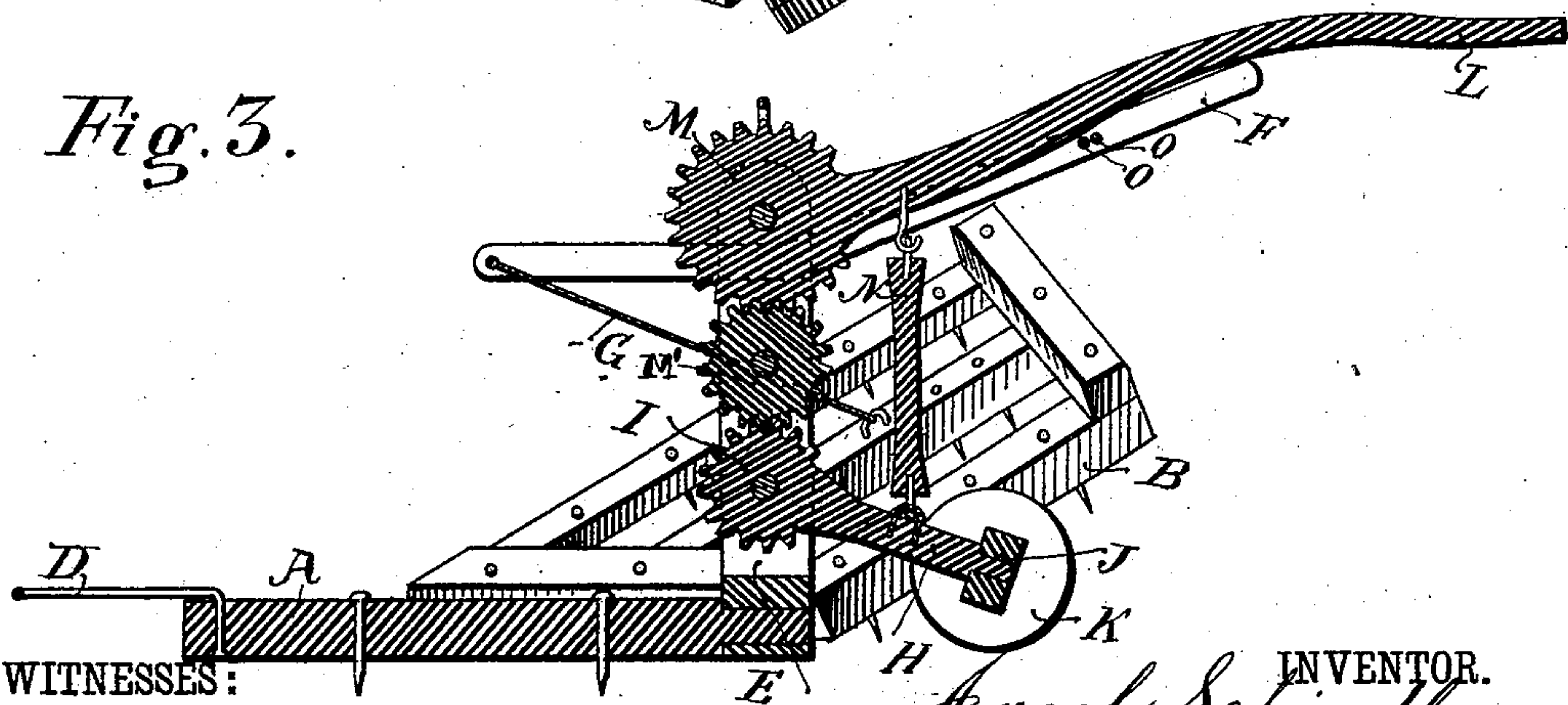


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JACOB SCHINDLER, OF KOELTZTOWN, MISSOURI.

HARROW.

SPECIFICATION forming part of Letters Patent No. 289,860, dated December 11, 1883.

Application filed October 4, 1883. (No model.)

To all whom it may concern:

Be it known that I, JACOB SCHINDLER, a citizen of the United States, and a resident of Koeltztown, in the county of Osage and State of Missouri, have invented certain new and useful Improvements in Harrows; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to 10 which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of my improved harrow, showing the same in operative position. Fig. 2 is a similar view of the harrow in its elevated position; and Fig. 3 is a vertical sectional view on line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts in all the figures.

My invention has relation to harrows; and it consists in the improved construction and combination of parts of a harrow of that class in which the body of the harrow is composed of a central part having two wings hinged or otherwise pivotally secured to it upon either side, as will be hereinafter more fully described and claimed.

In the accompanying drawings, A represents the front or central portion of the harrow, and B B the side wings, which are hinged to the central portion, A, by means of staples C.

To the front of the central portion, A, is secured the draft-iron D, while to its rear cross-beam is fastened a vertical frame or bearing, E, to the outer sides of which, near its upper end, are pivoted the levers F F, a chain or rope, G, extending from the end of each lever to a staple upon the center of each of the wings.

H indicates a tongue, which has upon its forward enlarged end a segmental rack, I, while to its rear end is secured the axle J, on which the wheels K are journaled, the end of the tongue upon which is the segmental rack I being journaled in the lower part of the frame or bearing E.

In the upper part of the frame or bearing E is journaled one end of a lever, L, the pivoted enlarged end of the lever being provided with a segmental rack, M, the teeth of which engage with the teeth of a cog-wheel, M', which is pivoted in the center of the frame E, and which serves as an idler to cause the segmental rack I to turn in the same direction as the segmental rack M. A link, N, connects the handle of the lever L and the tongue H together.

From the foregoing description, taken in connection with the accompanying drawings, the construction of my improved harrow will be readily understood without requiring further explanation.

By depressing either one of the levers F F, the wings B B may be separately elevated, as desired, while by depressing the main lever L, the entire harrow will be raised above the ground, as shown in Fig. 2, for the purpose of passing over a stone or other obstacle.

O O indicate projecting rods on each of the handles of the levers F F, which serve to prevent the wings B B from falling when the harrow is in its elevated position.

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

In a harrow of substantially the described construction, the combination of the central portion, A, having vertical frame E, hinged wings B B, pivoted levers F F, having projecting rods O O, chains G G, pivoted lever L, having segmental rack M, cog-wheel M', pivoted tongue H, having segmental rack I, axle J, and wheels K, and link N, all constructed and arranged to operate substantially in the manner and for the purpose shown and described.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

JACOB SCHINDLER.

Witnesses:

HENRY HENKE,
FRED. WOHR.