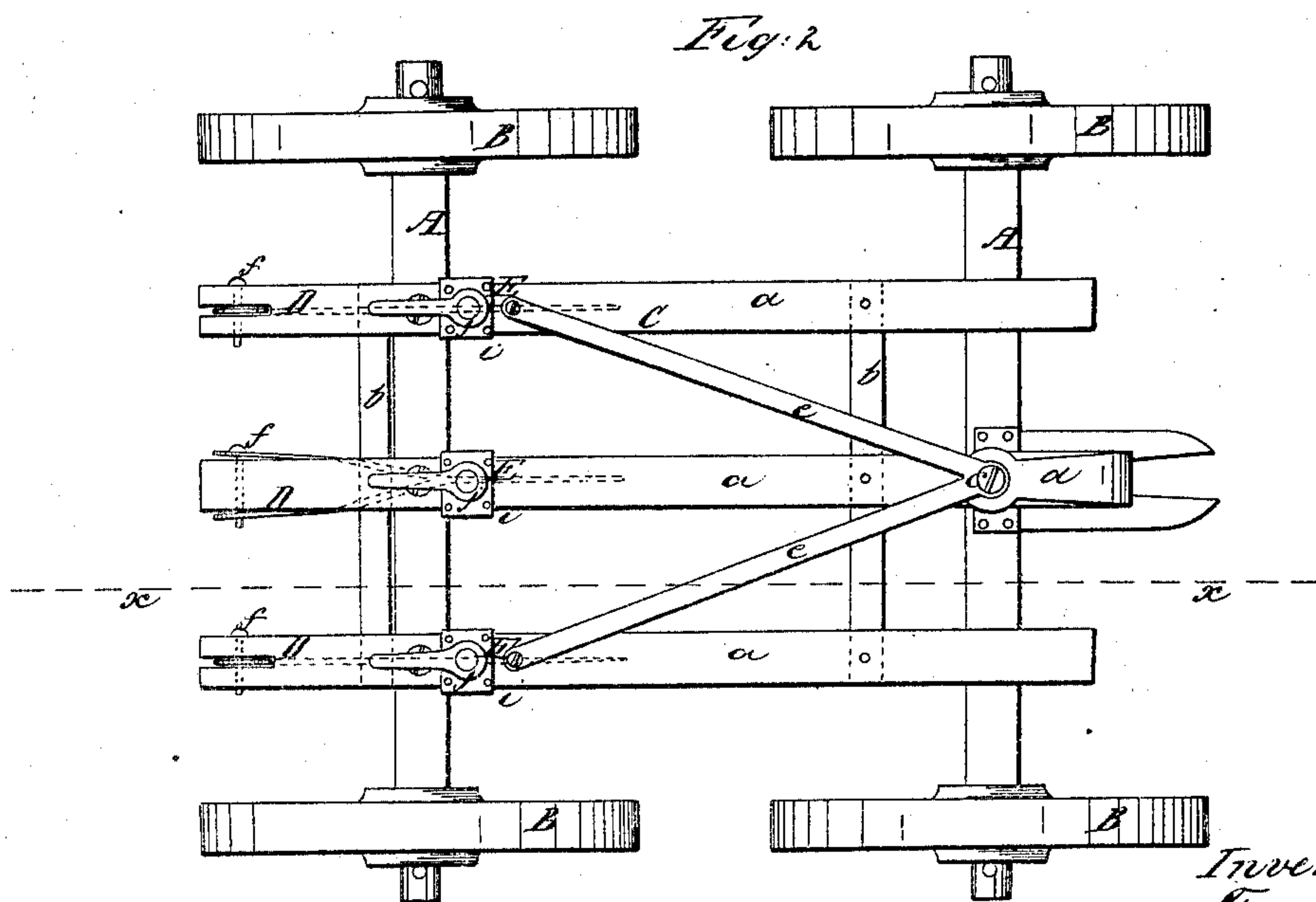
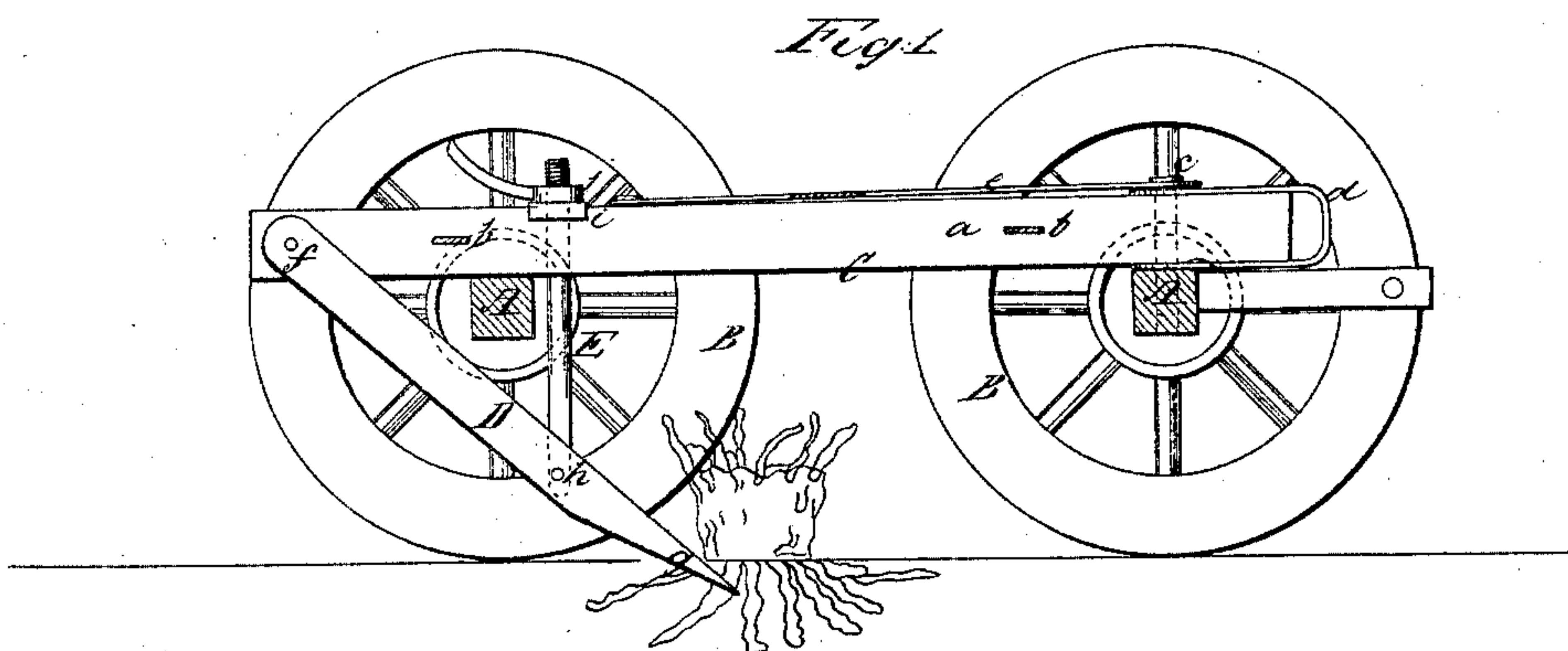


Bell & Hulen, Stump Elevator.

N^o 37,894.

Patented Mar. 17, 1863.



Witnesses
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UNITED STATES PATENT OFFICE.

THOMAS BELL, OF BELLPORT, AND LOUIS HULEN, OF NEW YORK, N. Y.

IMPROVEMENT IN STUMP-EXTRACTORS.

Specification forming part of Letters Patent No. 37,894, dated March 17, 1863.

To all whom it may concern:

Be it known that we, THOMAS BELL, of Bellport, in the county of Suffolk and State of New York, and LOUIS HULEN, of the city, county, and State of New York, have invented a new and Improved Stump-Extractor; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side sectional view of our invention; Fig. 2, a plan or top view of the same.

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

This invention is designed for extracting small stumps from the earth—such, for instance, as those of scrub-oaks—which in some sections of the country are spread over large tracts of land, and which are at present eradicated by hand at considerable expense, so much so as to exceed materially the first cost of the land.

The invention consists in attaching a series of inclined teeth or bars to a mounted frame and arranging the former with screws in such a manner that the implement may be drawn along by one or more teams, and the teeth or bars thereby made to pass underneath the stumps, which, if sufficiently large to resist the pull or draft of the team or teams, are eradicated or extracted by means of the screws, as hereinafter fully shown and described.

To enable those skilled in the art to fully understand and construct our invention, we will proceed to describe it.

A A represent two axles, and B the wheels fitted thereon in the same way as those of any ordinary wagon. C is a frame composed of three parallel bars, *a a a*, connected by cross-bars *b b*. This frame C is attached to the axles A A, the back part of the frame being attached permanently to the back axle, and the front part attached to the front axle by a king-bolt, *c*, which passes through the front part of the central bar, *a*, and also through a clevis, *d*, and draft-bars *e e*, the back ends of which are attached to the two side bars, *a a*. By this arrangement the front axle is allowed to turn, like that of an ordinary wagon.

To the back part of each bar *a* of the frame C there is attached by a pin or bolt, *f*, an inclined metal bar or tooth, D. These bars are

beveled at their lower ends and back edges so as to form points or sharp penetrating edges *g*, as shown in Fig. 1. Each bar or tooth D has a screw-rod, E, attached to it by a pivot, *k*. These screw-rods pass up through the bars *a* and through metal plates *i* fitted therein. On the upper ends of the screw-rods E nuts *j* are placed.

From the above description it will be seen that as the device is drawn along the bars or teeth D will penetrate into the earth, said bars or teeth being properly adjusted to effect that result by turning the nuts *j*, so that their lower ends will project downward a suitable distance. The lower ends of the bars or teeth D, in consequence of thus penetrating into the earth, will pass under the stumps, and if the latter are not very large and too firmly rooted they may be drawn out from the earth simply by the draft movement of the machine. In case, however, the stump should offer too great a resistance to the pull of the draft-animals, the latter may be stopped and the nuts *j* turned on the screw-rods E, so that the bars or teeth will be raised and with them the stump. Thus it will be seen that the screw-power is always at hand, ready for use when the draft-power is insufficient to eradicate the stump, and it will also be seen that this screw-power, in consequence of being applied to the bar or teeth, as described, is also used for adjusting the bars or teeth in a proper position to penetrate the earth and act upon the stump, and also for adjusting them, when necessary, entirely above the surface of the earth—as, for instance, in moving the machine from place to place.

This machine may be constructed at a very small cost, and the running-gear of any ordinary farm-wagon will answer, the latter being taken for the purpose whenever required, and the frame C attached to its axles.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The bars or teeth D, in combination with the screw-rods E and nuts *j*, the above parts being attached to a frame, C, and the latter placed on a wagon or mounted on wheels in any suitable way, and all arranged to operate as and for the purpose herein set forth.

THOS. BELL.

LOUIS HULEN.

Witnesses:

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DANIEL ROBERTSON.