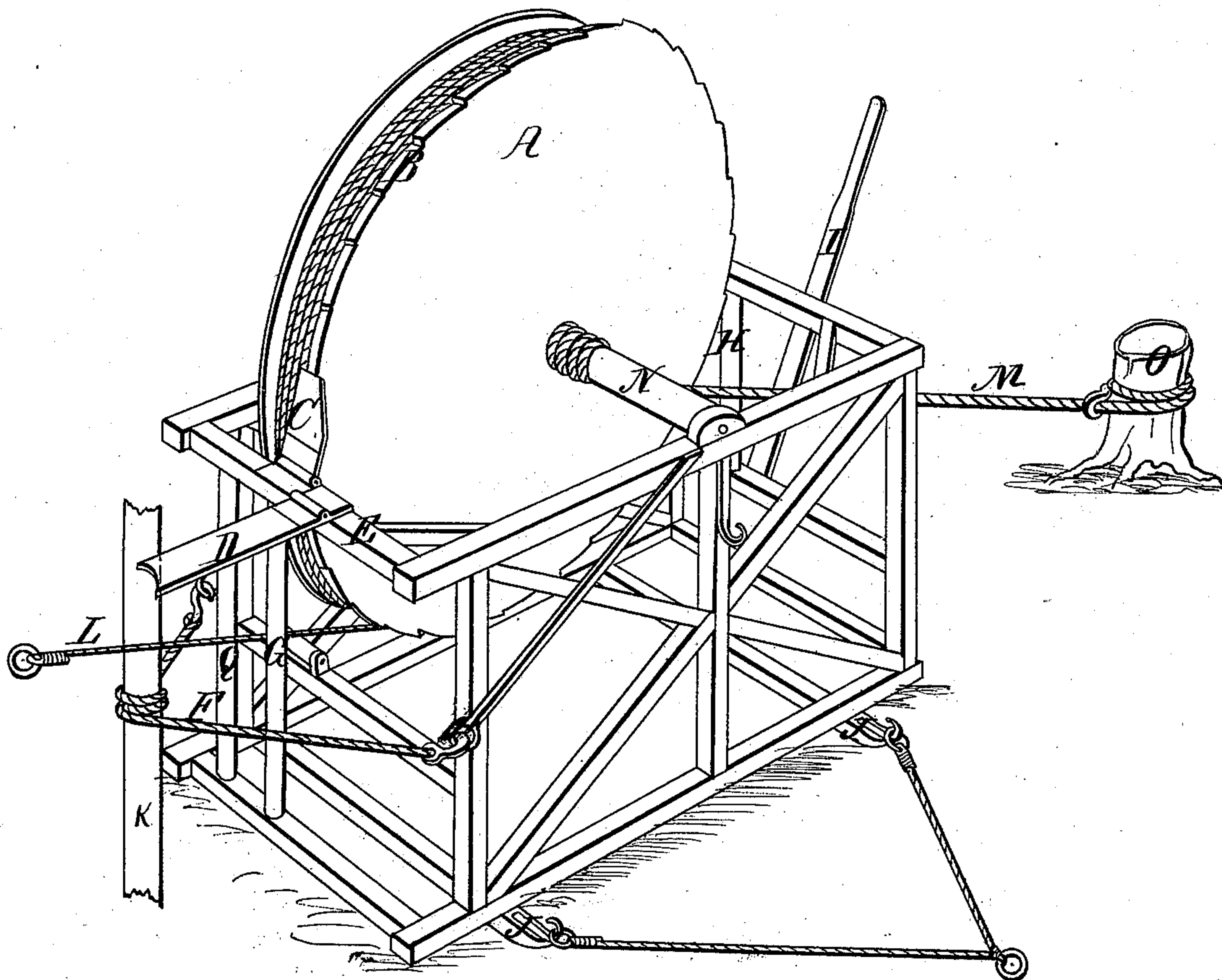


*J. A. Woodworth.*

*Stump Extractor.*

*N<sup>o</sup> 88,596.*

*Patented Apr. 6, 1869.*



*Witnesses;*  
*H. F. Everts*  
*Jas. J. Day*

*Inventor;*  
*Jasper A. Woodworth*  
*Per Attorney Thos. S. Sprague*



JASPER A. WOODWORTH, OF HICKORY-CORNERS, MICHIGAN

*Letters Patent No. 88,596, dated April 6, 1869.*

**IMPROVEMENT IN STUMP-EXTRACTORS.**

*The Schedule referred to in these Letters Patent and making part of the same.*

*To whom it may concern :*

Be it known that I, JASPER A. WOODWORTH, of Hickory-Corners, in the county of Barry, and State of Michigan, have invented a new and useful Improvement in Grub-Extractor; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, and being a part of this specification.

The nature of this invention relates to an improved construction of an apparatus for extracting grubs and small stumps from the soil, so that the machine will be light, and readily transported from place to place, easy of operation, and economical to build.

The invention consists in the peculiar arrangement of its parts, all of which are well-known and common devices.

A, in the drawings, represents a large wheel, secured to the shaft N, which is suitably journaled to the frame E. This wheel is grooved, as shown, for the purpose of retaining the rope L in position, and is provided with ratchet-teeth, B, which engage with the pawl C, which is secured to the frame E.

D is a brace, pivoted, or hinged to the frame E, and is designed to assist in anchoring the apparatus, as is hereinafter described.

G and H are vertical rollers, journaled, at top and bottom, to the plate and sills of the frame.

I is a lever, pivoted to the sill of the frame, and is provided with a vertical roller, let into one of its sides, and is designed to guide the rope M in its winding around the shaft N.

J are suitable runners, upon which the apparatus is placed, for its easy removal from place to place.

The machine, being light, must be anchored to some stationary object, like a tree, or post, K. This is done by passing the rope F around said post K, and securing the two ends to the frame. Then drop the brace D against said post, so that the strain upon it will not pull it out of the ground. Then carry the end of the rope M, which should be provided with a suitable hook, around the stump or grub O, unwinding said rope from the shaft N. Attach the team to the end of the rope L, which is wound around the wheel A and start. Unwinding the rope L from the wheel will wind the rope M upon the shaft, thereby extracting the grub. The pawl, engaging with the ratchet, prevents any slipping of the wheel and shaft.

The vertical rollers, G and H, prevent the ropes chafing against the frame, should it be necessary to change the direction of the strain, and the pivoted lever I will enable the operator to guide the rope M, so that it will wind smoothly upon the shaft.

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

1. The wheel A, with rack B, and pawl C, adjustable brace D, frame E, and anchor-chain F, the whole being combined as described, for the purpose set forth.

2. The combination of the above-named parts with the vertical rollers G and H, the pivoted lever I, and runners J, when constructed, arranged, and operating substantially as and for the purposes herein shown.

JASPER A. WOODWORTH.

Witnesses:

JAS. I. DAY,

H. F. EBERTS.