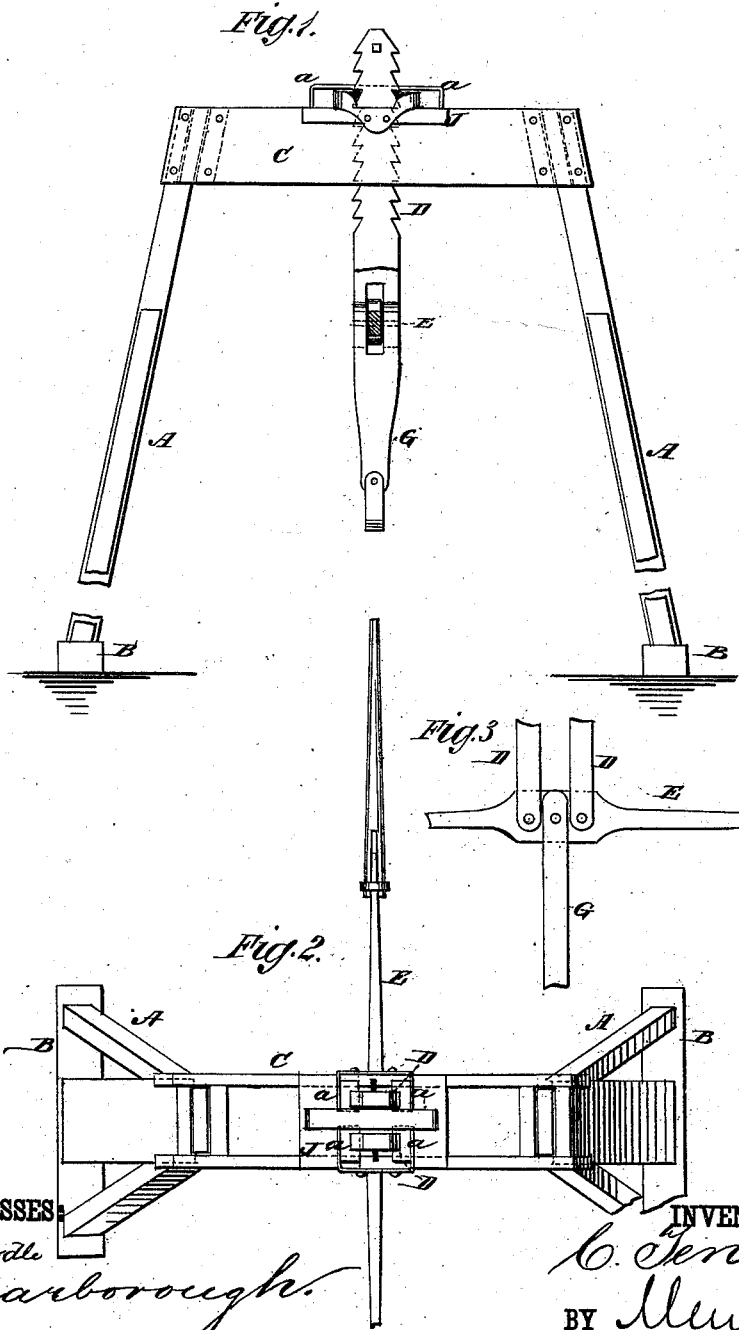


C. TENER.  
STUMP-EXTRACTORS.

No. 194,626

Patented Aug. 28, 1877.



WITNESSES:  
*J. M. O'Neil*  
*J. H. Scarborough*

INVENTOR:  
*C. Tener*  
BY *Merritt*

ATTORNEYS.

# UNITED STATES PATENT OFFICE.

CHARLES TENER, OF NEW MARKET, OHIO.

## IMPROVEMENT IN STUMP-EXTRACTORS.

Specification forming part of Letters Patent No. **194,626**, dated August 28, 1877; application filed July 9, 1877.

*To all whom it may concern:*

Be it known that I, CHARLES TENER, of New Market, in the county of Highland and State of Ohio, have invented a new and Improved Stump-Extractor, of which the following is a specification:

This invention relates to machines which are designed for extracting stumps and stones; and the nature of my invention consists in a portable frame, which can be taken apart or erected at pleasure, and which affords a substantial support for two rack-bars, spring-pawls, a vibrating actuating-lever, and a lifting-link, all being arranged substantially as will be hereinafter explained.

In the annexed drawing, Figure 1 is a side elevation of the improved machine. Fig. 2 is a top view. Fig. 3 is a detail.

Similar letters of reference indicate corresponding parts.

The frame or trestle consists of two strongly-braced inclined standards, A A, which are mortised into sills B B, and constructed with tenons on their upper ends that enter recesses formed in the ends of a horizontal portion, C.

The standards A A can be easily detached from the portion C when it is desired to pack the machine for transportation.

A strong timber, J, is secured midlength of the beams C, and constructed with openings through it to receive two ratchet or rack bars,

D D, the teeth of which are pitched downward. The lower ends of these bars are slotted and pivoted to a long lever, E, which is made of sections secured together so that they can be readily detached.

Between the lower pivoted ends of the ratchet-bars D D a lifting-link, G, is pivoted to the lever E, and provided on its lower end with a loop or with grappling-irons, or any other suitable device for fastening to a stump or stone.

On top of the timber J are four spring-pawls, *a a a a*, which engage with the teeth of the bars D D, and hold these bars at whatever height they may be adjusted.

The operation of the machine is as follows: The link G is made fast to a stump, and the lever E is vibrated, which gives alternate upward movements to the two ratchet-bars, the pawls holding them firmly after each upward stroke.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination, with frame A B C, of the bars D D, having ratchets on both sides and exactly opposite each other, the cross-lever E, and the link G, all as shown and described.

CHARLES TENER.

Witnesses:

H. P. BARREN,  
C. P. TENER.