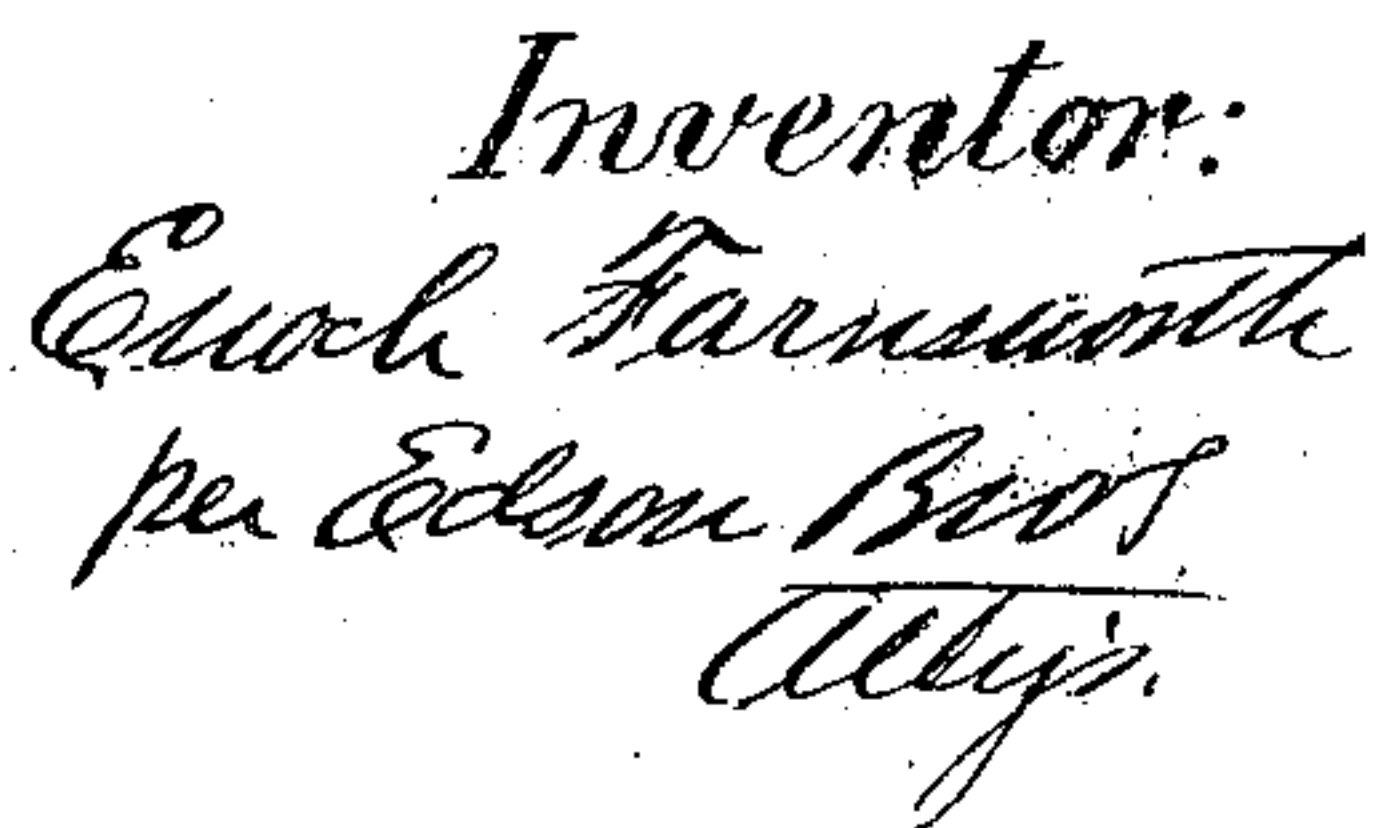


Patented June 7. 1870.



United States Patent Office.

ENOCH FARNSWORTH, OF SABBATH REST, PENNSYLVANIA.

Letters Patent No. 104,003, dated June 7, 1870.

IMPROVEMENT IN STUMP-EXTRACTOR.

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

To all whom it may concern:

Be it known that I, ENOCH FARNSWORTH, of Sabbath Rest, Blair county, Pennsylvania, have invented a new and improved Stump-Extractor; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

Drawing.

Figure 1 is a side elevation of my improved stump-extractor, it being extended and in position for raising a stump, and

Figure 2 is also a side elevation with the lever-support partially drawn in.

Like letters of reference indicate identical parts in both of the figures.

This invention relates to an improved stump-extractor; and

It consists—

First, of three supports, one of them being bolted to the other two, in such a manner as to form a lever, and provided with two chains, one above and the other below its fulcrum, so that a stump or weight can be raised at a greater distance above the ground than could be done by one operation of the device; and

Second, in the combination with the aforesaid parts of suitable tackling for operating the same.

A, I denominate a lever-support, which has its fulcrum between two uprights or beams, their position being indicated by the letter B, said lever being also provided with two chains C and D, one above its fulcrum and the other below, the usefulness and operation of which will be hereinafter fully explained.

A cross-bar, b, is nailed to each of the supports B.

E e F f f are cords and rings, for which rings pulleys may be substituted, as clearly shown, and readily understood by a reference to the drawing.

G is a roller, having a concave edge traversing upon a pole, to give a free and easy action thereto, as well as to direct the course of the lever A.

The chains C D hang pendent from the lever A, and are attached at or about the points indicated, in any suitable manner.

In ordinary practice for extracting stumps, the chain C only is used, but in such cases as when the operation of the machine must be repeated, as for instance to raise a weight above the ground, it can be accomplished as follows:

The parts being in position, as indicated in fig. 1,

the chain C is passed around the substance to be raised, and the hook is attached to the chain, say at a point, c. The lever or support A is then drawn in and the weight raised through a distance determined by the size of the machine. D is then passed under the weight, and hooked upon or at a point above, where its own hook is attached. A is then pushed out. Now, as the chain C passes through a greater distance of space than the chain D, in either raising or lowering the lever, it will be seen that, as it is drawn in, the chain C will rise through a greater distance than the chain D; so also when A is thrown out C will fall a greater distance than D; hence the entire weight will be equally distributed upon the chains.

After the operation just explained, that portion of chain C below where the chain D is attached thereto will become slack, when its hook may be latched higher up upon its own chain, making the second lift to the weight; and so the operation may be repeated until the weight has reached the required height.

The same result can be accomplished by operating the chains as follows:

Elevate the weight by means of chain C, as before described; then pass the chain D under the weight, as before, but, instead of attaching it to the chain C, hook it up in one of its own links and draw out A, thus leaving the weight entirely suspended upon D; pass C around the weight, and hook it up upon one of its own links, and again draw in A, when the weight is raised, and D is made slack, and so the operation can be repeated.

Having thus described my invention,

What I claim, and desire to secure by Letters Patent of the United States, is—

1. The chains C D, attached to and arranged to operate upon the lever-support A, as shown and described.

2. The combination, with the chains C D, of the tackling E F f f, and roller G, all the parts operating together, as shown and specified.

In testimony whereof I have hereunto subscribed my name in the presence of two subscribing witnesses.

ENOCH FARNSWORTH.

Witnesses:

JOSEPH R. EDSON,
M. BERTHRONG.