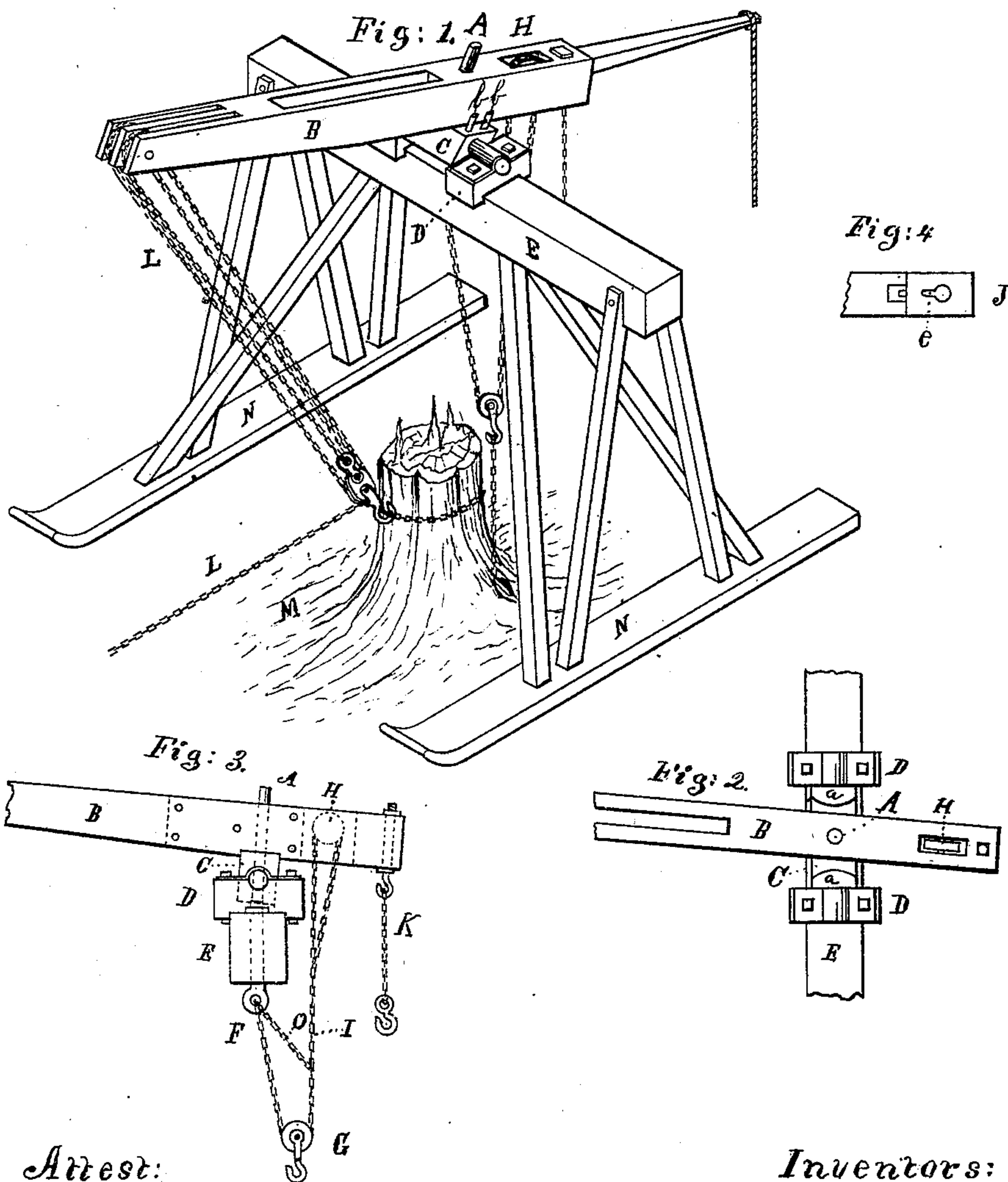


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Stump-Extractor.

No. 221,699.

Patented Nov. 18, 1879.



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# UNITED STATES PATENT OFFICE

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## IMPROVEMENT IN STUMP-EXTRACTORS.

Specification forming part of Letters Patent No. **221,699**, dated November 18, 1879; application filed October 3, 1879.

*To all whom it may concern:*

Be it known that we, MARCUS F. PARRISH and HOMER A. PARRISH, of Kalamazoo, county of Kalamazoo, State of Michigan, and MYRON W. PARRISH, of Jackson, county of Jackson, State of Michigan, have invented new and useful Improvements in Stump and Grub Extractors, of which the following is a specification.

Our invention relates to that class of stump-machines which are constructed with an elevated beam, across which is secured a lever at right angles with the same, especially to former inventions known as the "N. Parrish stump and grub extractor," of which we are the present owners.

Heretofore our machines have been constructed with the lever fastened stationary to a rocking shaft at right angles with the beam. Also, the lifting-chain has been secured to the end of the lever back of the fulcrum, and in other manners. To these two points the object of our invention relates.

First, we have found, in endeavoring to pull stumps located near to one side of the machine-frame, and also when hitched to a root on one side of the stump, that the lever is necessarily inclined toward the point of attachment to the stump or root, in which case the lever and gearing frequently break. Also, with the stationary lever, as described, when a stump or grub is too far removed from the lifting-chain to be operated on the whole machine must be moved forward. To obviate these objectionable features we have constructed our machine with the lever swiveled onto the rocking shaft by means of bolt running through it, on which it turns.

Second, we find the old manner of attaching the lifting-chain exceedingly inconvenient, requiring great exertion in shortening or lengthening the same preparatory to hitching to a stump. This we have greatly obviated by a pulley and perforated plate in the end of the lever back of the fulcrum, and by securing one end of the lifting-chain to the beam.

In the accompanying drawings, forming a part of this specification, Figure 1 is a perspective view of a device embodying our im-

provements. Fig. 2 is a top view of rocking shaft and lever at point of swiveling. Fig. 3 is a side view of device, and Fig. 4 the perforated plate secured on under side of lever.

E is the beam, on which are secured the box-heads D, and C is the rocking shaft located in said box-heads. B is the lever; A, the bolt through the same, the lower end of which is secured into the rocking shaft C. In the top side of said shaft C is a mortise, having semi-elliptic ends *a a*, in which mortise the lever B is placed, when, on account of ends *a a*, it can only swing around to a given point.

The rocking shaft C has a flat surface on top, with holes *b b*, into which pins can be inserted to effect the same purpose as the elliptic ends *a a* in the mortise, thereby facilitating the turning of the lever round end for end when the pins are removed, for the purpose of pulling other contiguous stumps, as previously specified.

Other desirable methods of securing the lever B to the shaft C, and of preventing its turning beyond a given point, and which will allow the lever B to be turned end for end, may be used and still be comprehended in our invention.

I is the lifting-chain secured to a bolt in the beam E at F. H is the pulley or wheel in the end of lever B, over which the lifting-chain I is placed; J, the plate, having a circular connected with an angular elongated perforation through the same, said plate being secured to the under side of rear end of lever B under pulley H, the use of this plate being to hold the chain I at any given length by its running through the perforation, and its links catching in the elongated portion *e* of the same.

L is the draft-chain, with its pulleys, &c., to which the power is attached; N, bed-pieces to frame; O, short chain to hold the stump when partially raised, in order to slack up and take a new hitch by hooking it to the lifting-chain I, as seen in Fig. 3.

What we claim is—

1. A lever located at right angles across beam B by means of rocking shaft C and pin A, or other suitable equivalents that will admit of the inclination of said lever toward the

point of the lifting-chain's attachment, as specified, for the purpose set forth.

2. The combination of the lever B with the rocking shaft C, with its bolt A, and mortise with ends *a a*, or plane surface with holes *b b* and pins, substantially as specified, for the purpose set forth.

3. The lever B, provided with pulley H, and plate J, with its perforations, in combination

with lifting-chain I, substantially as shown and described, for the purpose set forth.

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Witnesses:

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