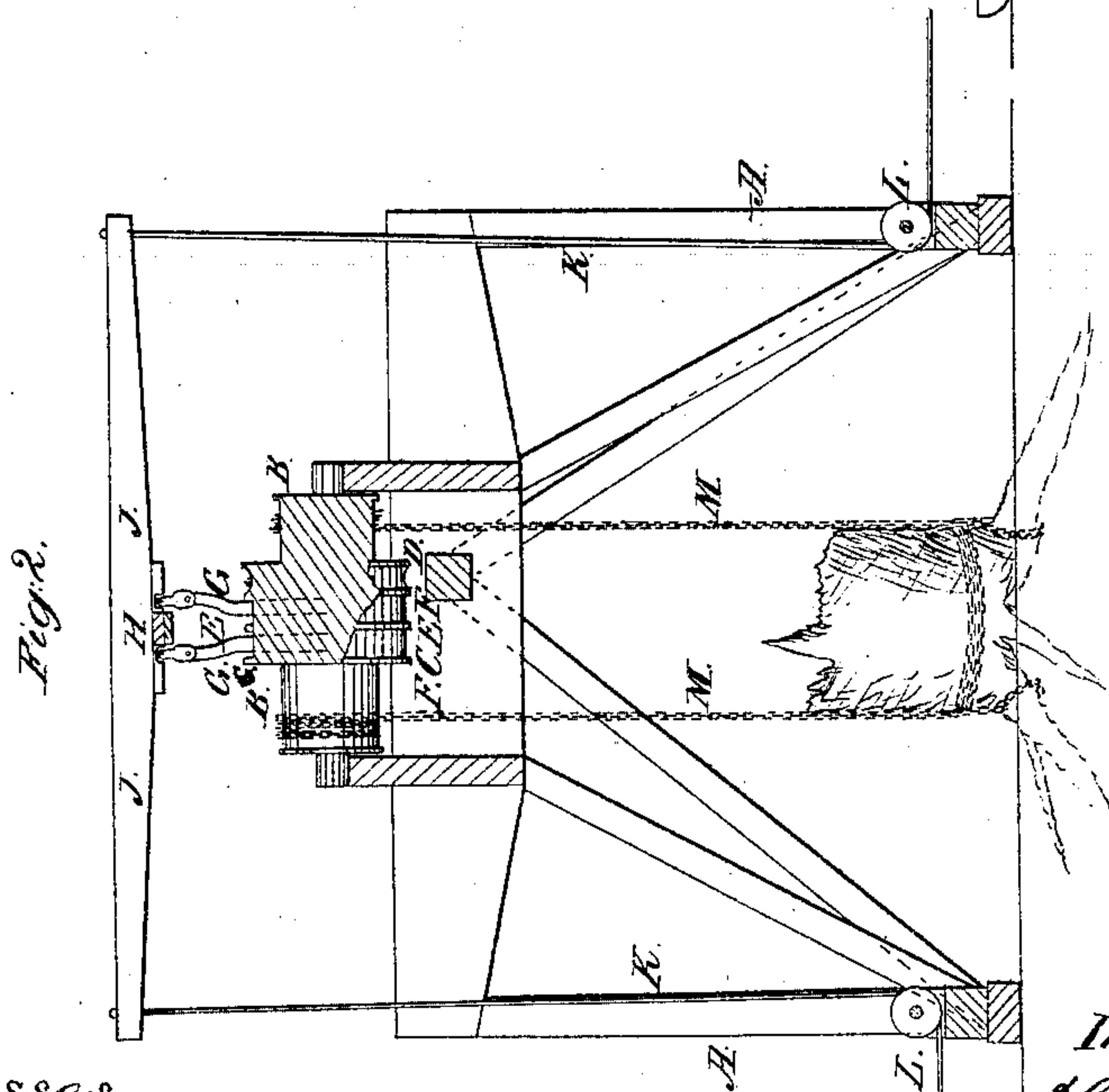
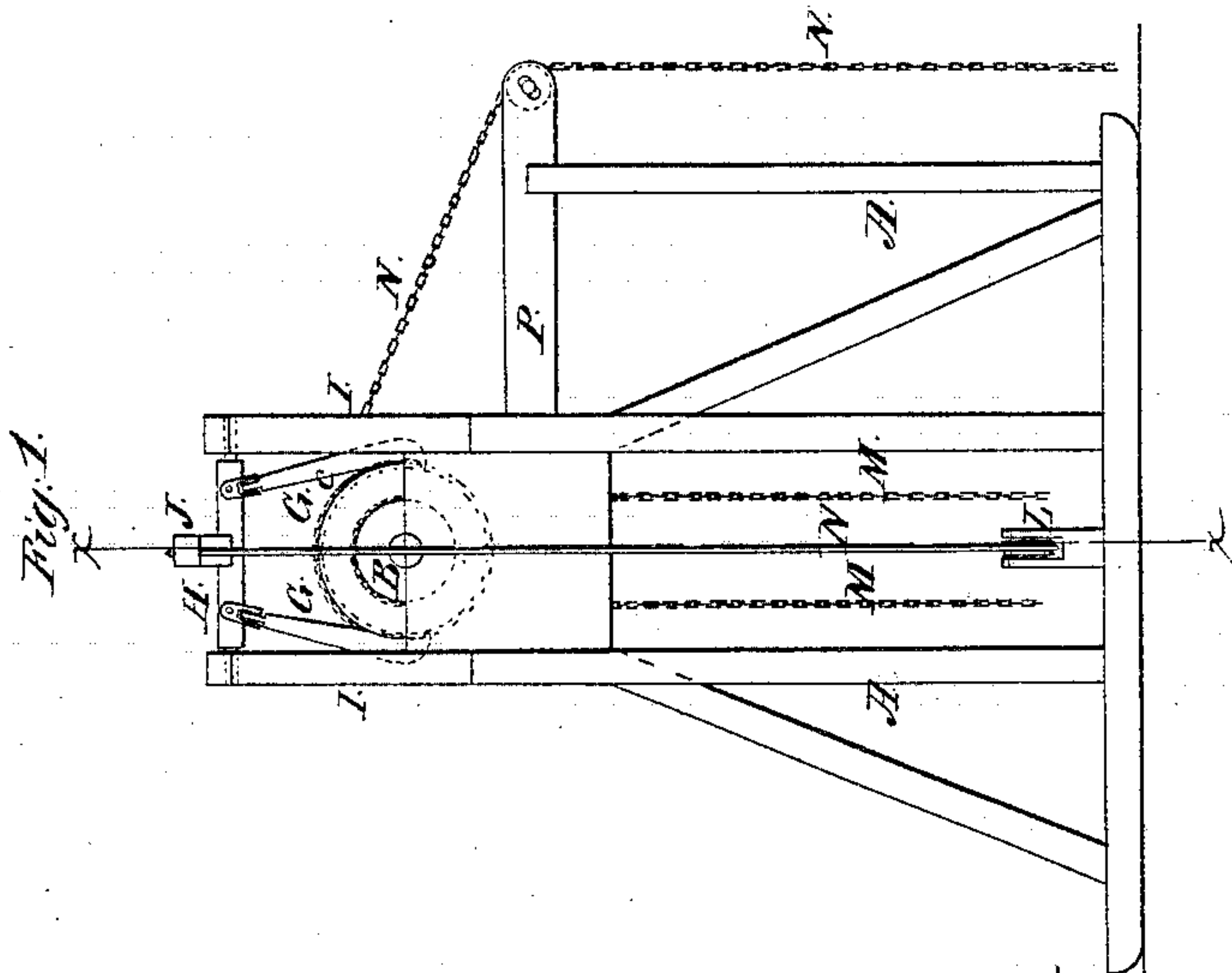


H. Lemm,
Stump Elevator.
N^o 62,346. Patented Feb. 26, 1867.



Witnesses.
Theo. Tusch.
J. A. Service.

Inventor:
H. Lemm
Per Munn & Co.
Attorneys.

United States Patent Office.

HIRAM LEMM, OF LEONIDAS, MICHIGAN.

Letters Patent No. 62,346, dated February 26, 1867.

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, HIRAM LEMM, of Leonidas, in the county of St. Joseph, and State of Michigan, have invented new and useful improvements in Machine for Extracting Stumps; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to certain new and useful improvements on a machine for extracting or drawing stumps from the ground, or for raising or lifting heavy bodies, or for any other similar purpose; and the invention consists in a novel arrangement of the various parts constituting the machine, and in the construction of the same, whereby many important advantages are obtained, such as, for instance, simplicity and facility of operation, ease of management, etc., as will be obvious from the following detail description of the same, reference being had to the accompanying plate of drawings, in which—

Figure 1 is an elevation of one end of the machine; and

Figure 2, a vertical section, taken in the plane of the line *x x*, fig. 1.

Similar letters of reference indicate like parts.

A A, in the drawings, represent the framework of the machine, which is to be of any suitable construction to accommodate the working parts of the same; B, the windlass shaft, hung and turning in suitable bearings of the upper portion of the framework A. This shaft, around its periphery, is provided with two ratchet-wheels, C and D, separated by a flange or raised lip, E, and surrounded by a similar raised lip or flange, F. With these ratchet-wheels pawls G engage, two to each wheel, and at points diametrically opposite to each other; the whole series of pawls being hung to a common rocking cross-bar, H, of the king-posts I of the framework A. One of the two pawls for each of these ratchet-wheels C, and those upon the same side of the said wheels, is made of a hook-shape at its end, which engages with the said wheels, and these pawls act to revolve the ratchet-wheels, as the bar H, to which they are hung, is rocked in a suitable direction therefor, as will be hereinafter explained, while the other pawls serve to hold and prevent the said ratchet-wheels from turning backwards. To the rocking cross-bar H lever-arms J are attached, which extend in opposite directions therefrom to each side of the machine, in the outer ends of which lever-arms J, ropes or chains K are hung, that, passing downward, are passed around pulleys L on the sills of the framework A. To each end of the windlass-shaft chains M are hung, which, when the machine is to be used for extracting stumps, are first, in any suitable manner, fastened about such stump, and then, power being applied to the windlass-shaft through the rocking cross-bar, are made to withdraw or extract the same from the ground, as they are thus wound upon the said windlass-shaft, when the stump, having been sufficiently extracted or raised, it is then lifted away from the pit or hole in the ground left by it, by attaching or hanging to it a chain, N, passing from the windlass-shaft over the pulley O of the horizontal beam or arm P of the framework A.

From the above description of my improvement in machines for extracting stumps, it is plain to be seen that it can be accomplished in a comparatively easy manner; that the strain upon the ratchet-wheels is equalized, and the friction on the bearings of the drum lessened, besides many other advantages, which are obvious without any particular mention herein.

I claim as new, and desire to secure by Letters Patent—

The ratchet-wheels C separated by a flange, F, of a common windlass-shaft, B, pawls G hung to a common rocking cross-bar operated through lever J and chains M, in combination with each other, substantially as and for the purposes described.

The combination with the above of the chain N, passing over beam P of the framework A, substantially as and for the purpose specified.

HIRAM LEMM.

Witnesses:

HENRY PINNEY,
NATHAN GREEN.