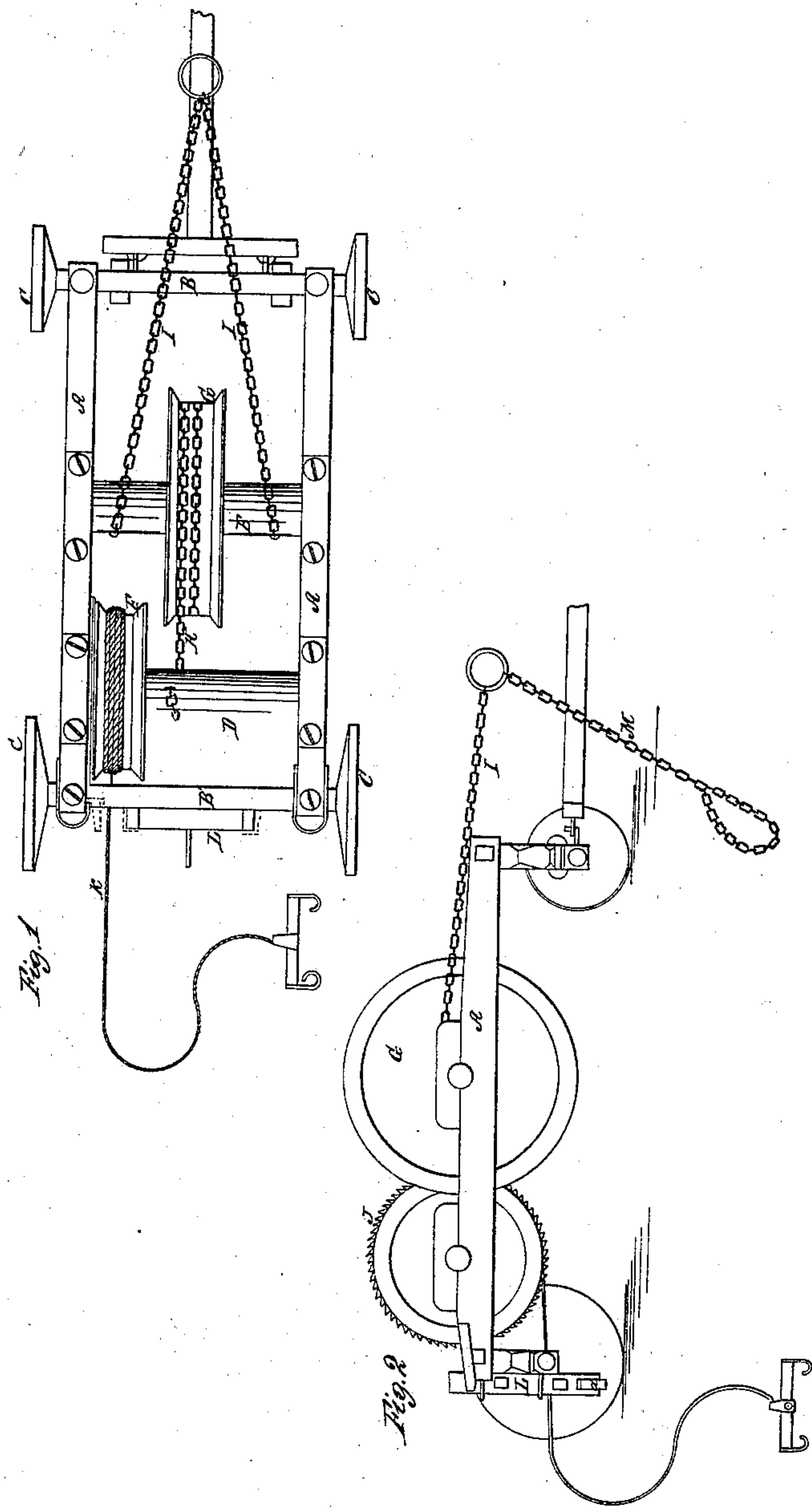


Warner & Vosburgh.

Stump Elevator.

N^o 33,116.

Patented Aug. 20, 1861.



Witnesses
H. H. Davis

Inventors
J. Warner
J. H. Vosburgh
per C. W. Alexander

UNITED STATES PATENT OFFICE.

JOHN WARNER AND JACOB H. VOSBURGH, OF GALESBURG, MICHIGAN.

STUMP-MACHINE.

Specification of Letters Patent No. 33,116, dated August 20, 1861.

To all whom it may concern:

Be it known that we, JOHN WARNER and J. H. VOSBURGH, of Galesburg, in the county of Kalamazoo and State of Michigan, have
5 invented certain new and useful Improvements in Machines for Extracting Stumps; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon.

In the annexed drawings making part of this specification A, represents the frame of the machine which is constructed in a strong
15 and substantial manner and which is made of any suitable and convenient size.

This frame is supported upon axles B, B', and the axles upon the wheels C, C, C, C. The frame rests upon a bolster on the
20 front axle as is usual in heavy wagons so that the machine may be readily turned about when changing its position.

At the rear of the frame A, is situated a frame L, which is provided upon its lower
25 end, with wheels. This frame L, is so attached to the frame of the machine that it can be raised or lowered when the frame L, is lowered so that the wheels (a,) bear the weight of the rear of the machine. Said
30 machine may be readily turned and adjusted to any desired position.

D, and E, represent two axles, which lie across the frame A, and have their bearings in the sides of said frame as is represented
35 in the drawings. These two axles are provided with large pulleys or drums F, G.

K represents a cord which is secured at one end to the drum F, the other end of said cord passing out to the rear of the machine has a whiffletree attached to it by
40 means of which power is applied to the pulley or drum F.

H represents a chain one end of which is attached to the axle D, while the other end
45 is secured to the pulley or drum G.

I, I, are chains which are secured at one

end to the axle E, as is shown in Fig. 1, while their other ends unite and are secured to a chain M.

J, represents a ratchet wheel which is secured to one of the faces of pulley F. A suitable ratchet or pawl is bolted to the frame of the machine, which catches into the teeth of this ratchet wheel J, and serves
55 to station it at any desired point.

When this machine is to be used, it is drawn into the field where the stumps are to be pulled up, and the chain M, is securely attached to the stump to be extracted. The other end of the machine is then made fast
60 to a stump or tree, and power is applied to the whiffletree upon cord K. When the cord K, draws, the pulley F, is made to revolve thus setting in motion the pulley G, by means of cord H, and also the stump by
65 means of the chains I, I, which wind around the shaft or axle E.

It will be seen, that by means of the system of compound leverage herein used, an immense power may be exerted upon the
70 stump to be drawn, and that this machine may be employed with great efficiency.

Having thus fully described our invention what we claim as new and desire to secure
75 by Letters Patent is.

1. The arrangement of the chains I, I, axles E, D, pulleys or drums G, F, chain H, and cord K, upon and in connection with the frame A, as and for the purpose herein fully
80 set forth.

2. In combination with the subject of the first claim the employment of the vertical frame L, when used as and for the purpose herein set forth.

In witness that we claim the foregoing we
85 have hereunto set our hands in the presence of witnesses.

JOHN WARNER.
JACOB H. VOSBURGH.

Witnesses:

W. A. BLAKE,
R. G. SMITH.