

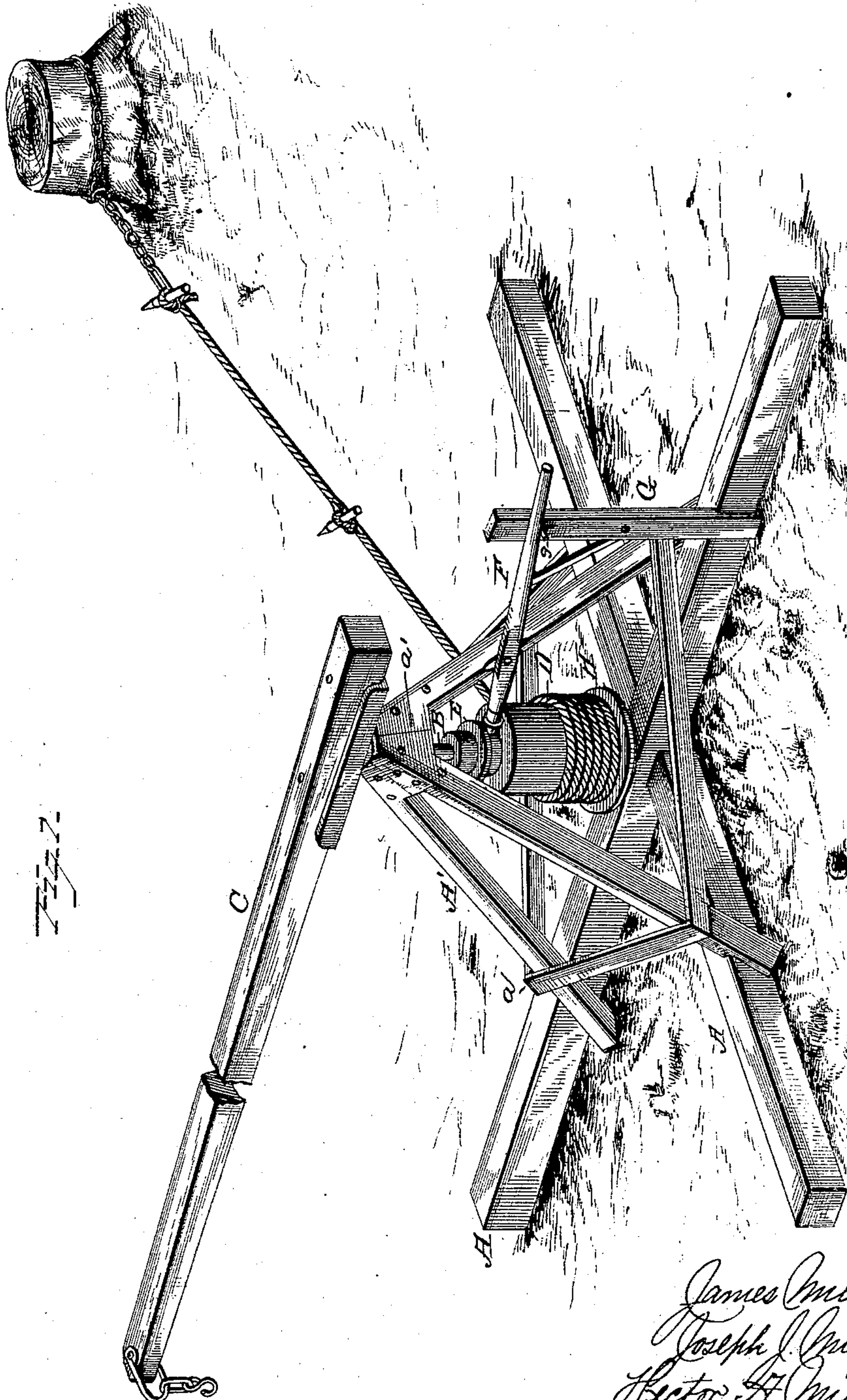
(No Model.)

2 Sheets—Sheet 1.

J., J. J. & H. A. MILNE.  
CAPSTAN FOR STUMP EXTRACTORS.

No. 308,783.

Patented Dec. 2, 1884.



WITNESSES

*F. L. Curand.*  
*E. M. Johnson*

*James Milne*  
*Joseph J. Milne*  
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INVENTOR

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Attorney

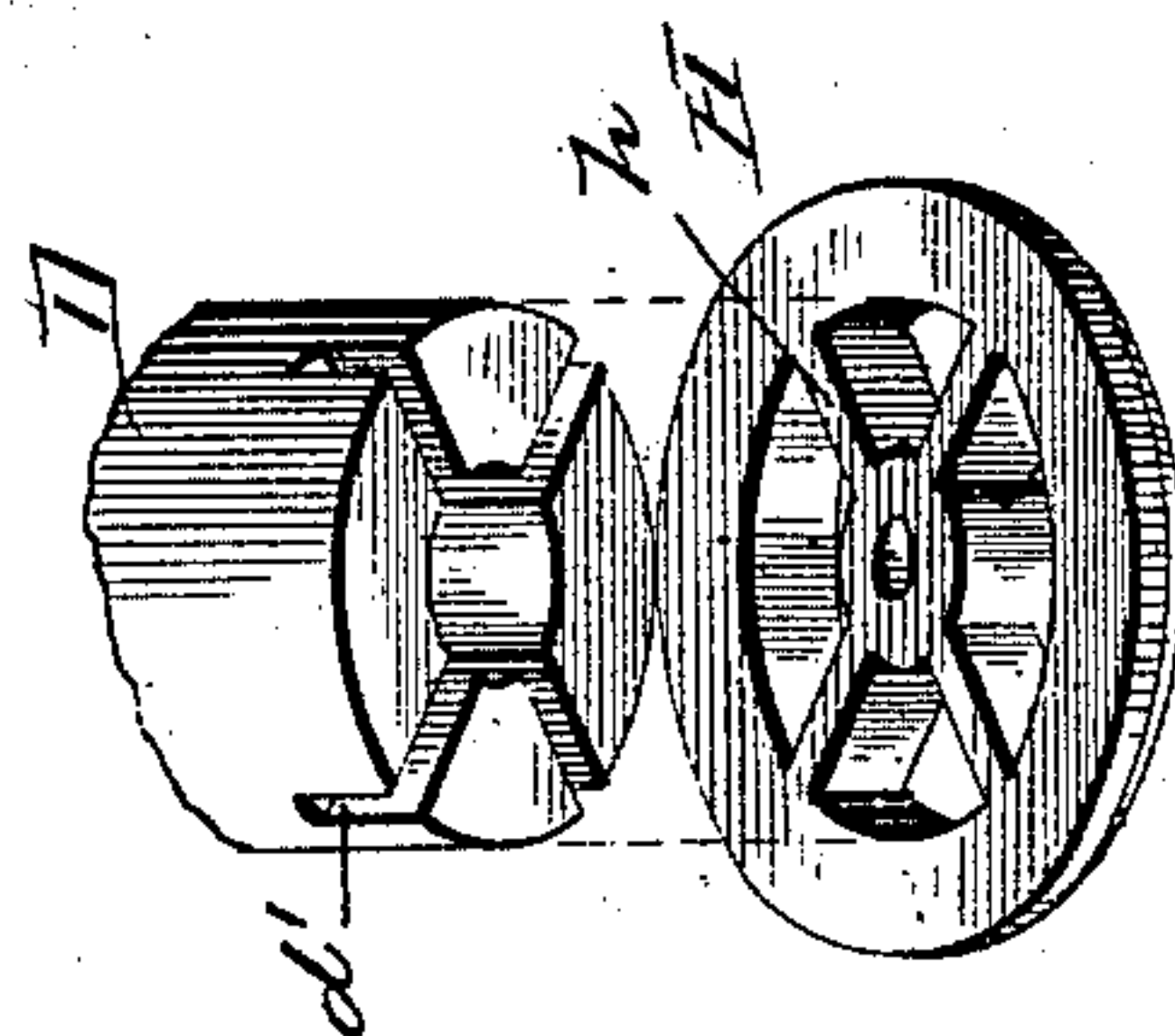
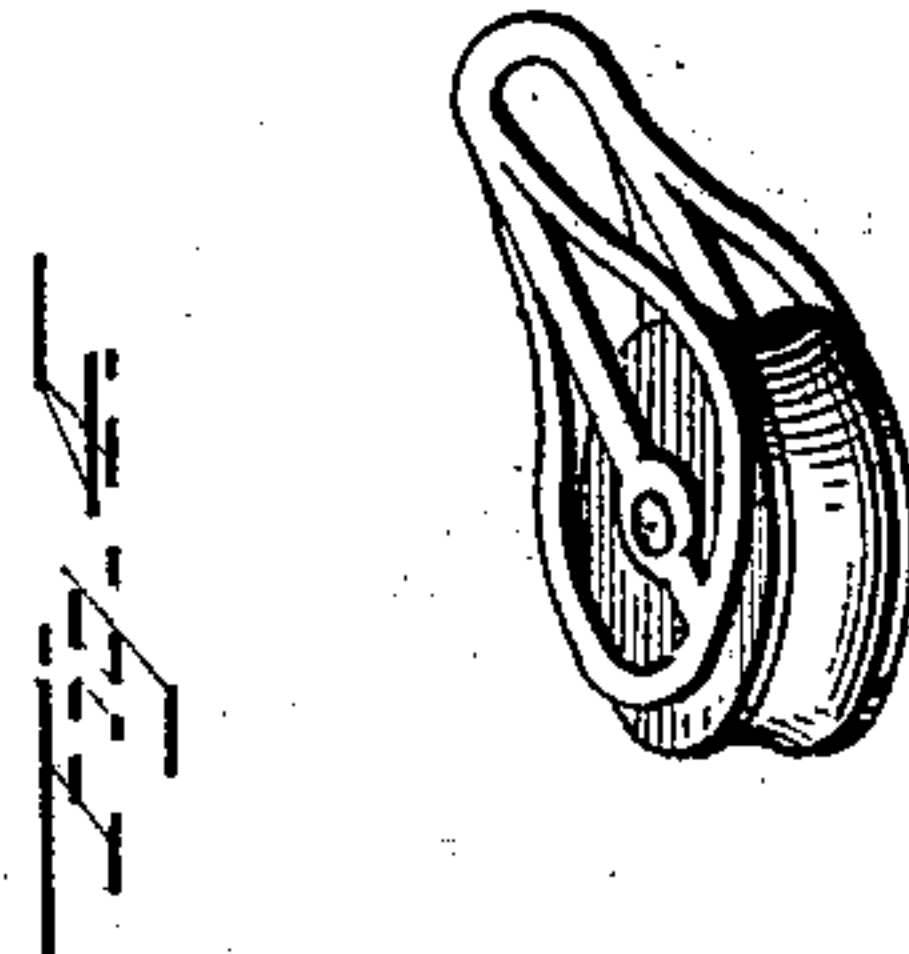
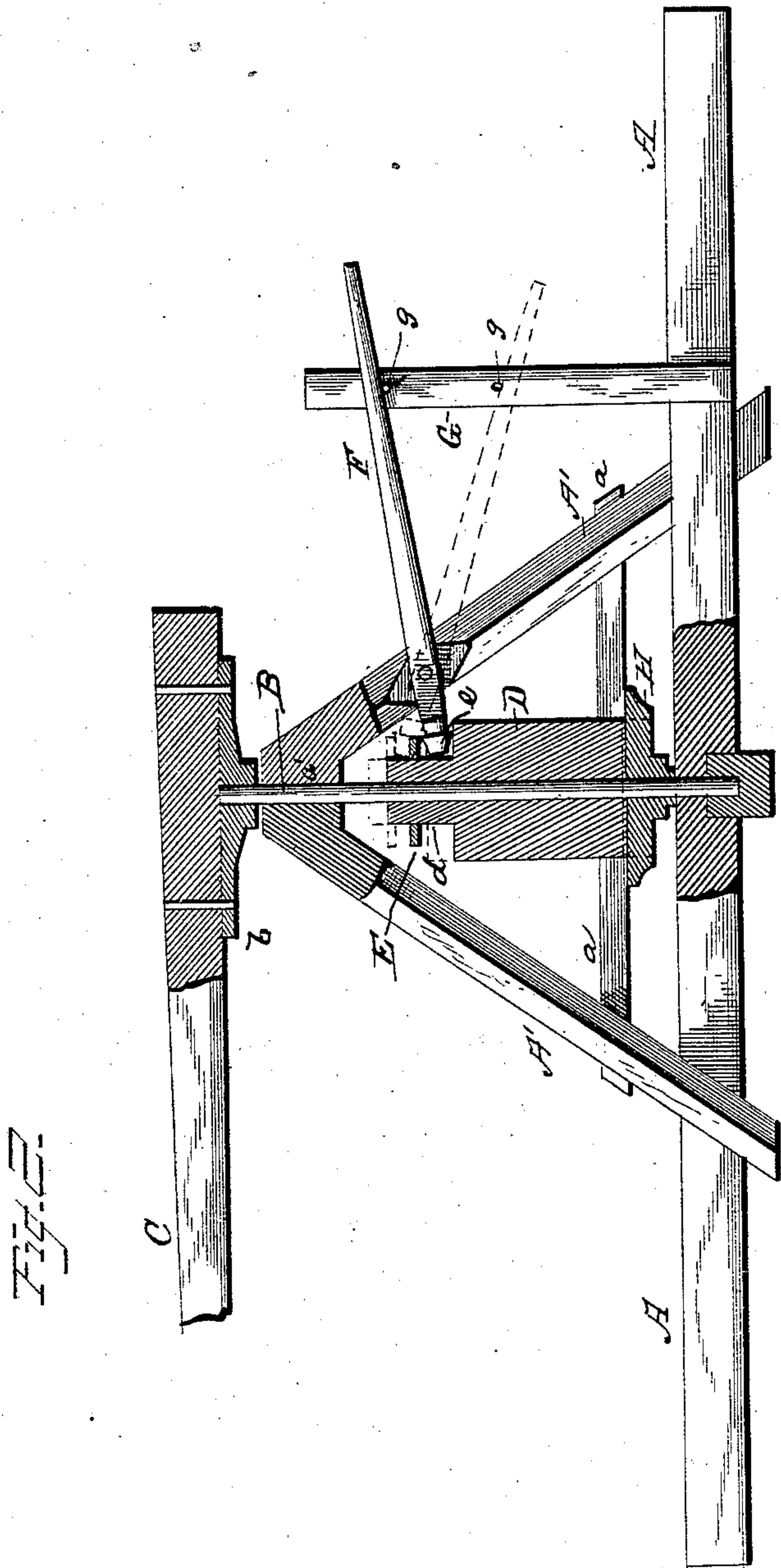
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# UNITED STATES PATENT OFFICE.

JAMES MILNE, JOSEPH J. MILNE, AND HECTOR A. MILNE, OF MONTICELLO,  
IOWA.

## CAPSTAN FOR STUMP-EXTRACTORS.

SPECIFICATION forming part of Letters Patent No. 308,783, dated December 2, 1884.

Application filed October 7, 1884. (No model.)

*To all whom it may concern:*

Be it known that we, JAMES MILNE, JOSEPH J. MILNE, and HECTOR A. MILNE, citizens of the United States of America, residing at Monticello, in the county of Jones and State of Iowa, have invented certain new and useful Improvements in Capstans for Stump-Extractors; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Our invention relates to certain new and useful improvements in windlasses or capstans, the same being designed for pulling stumps; and our invention consists in the combination and construction of the parts, as will be fully set forth hereinafter, and specifically pointed out in the claims.

In the accompanying drawings, which illustrate our invention, Figure 1 is a perspective view; Fig. 2, a sectional view; and Figs. 3 and 4 are detail views.

A A represent the beams, which cross each other centrally, and provide a foundation for the structure which is attached thereto. At the intersecting point of these beams they are provided with a bearing for a vertical shaft.

A' represents converging braces or stays, which are rigidly attached to each other at their upper portion and at their lower end to the beams A. The braces A' are further stiffened by horizontal bars *a*, which are rigidly secured to the same immediately above the base-beams A. The upper portions of the beams A' have projecting portions *a'*, with straight edges, so that they will abut against each other and form a block, as shown, which block is provided with an opening for the passage of the vertical shaft B.

To the upper portion of the shaft B, by means of the plate *b*, which is rigidly secured thereto, is attached a sweep or bar, C, which is provided at its end with a clevis for the attachment of power. A drum, D, is pivoted upon the vertical shaft B, and this drum, around which the rope passes, is reduced at its upper portion, *d*, and provided with a collar, E, be-

tween which and the upper horizontal surface of the drum is secured a roller, *e*, which is pivoted to one end of a lever, F, which is secured to one of the inclined side pieces or beams, A'. This lever F is for the purpose of raising and lowering the drum, and the end of the lever engages with an upright, G, which is attached to extend vertically from the cross-bar A. This vertical bar G is provided with perforations for the reception of a pin, *g*, for holding the lever elevated or depressed, so that the drum will be either in or out of engagement with the casting H, which is rigidly attached to the vertical shaft B. The lower portion of the drum D is provided with transverse grooves *d'*, which grooves lie over bars or spokes *h* on the casting.

To the drum D is firmly attached the end of a rope, which, in operation, connects with a chain provided with a pulley, which chain is passed around the stump to be removed.

In removing heavy stumps the beams A may be secured firmly in position by being let into trenches cut for the reception of the same in the surface of the ground, though in moving light objects the frame can be sufficiently secured by simply driving stakes or pinning the same to the ground, or by means of flukes attached to the beams A.

When it is desired to move a stump or other object, the drum is depressed by the lever and held in engagement with the casting H, and said drum is rotated therewith when power is applied to the sweep C.

We claim—

1. In a windlass or capstan, the frame A A', having a vertical shaft journaled thereto, said shaft having rigidly secured at its upper end a plate, to which is attached the end of a sweep, and at its lower portion a casting, H, in combination with a drum having a grooved base adapted to engage with the casting, and a reduced upper portion with collar, and a lever having a fulcrum independent of the drive-shaft for raising and lowering the drum, so as to throw the same in and out of engagement with the casting, substantially as shown, and for the purpose set forth.

2. In a stump-puller of the class described, the rotary shaft B, having rigidly attached thereto a casting, H, in combination with a

drum, D, adapted to be slid upon the shaft, and provided with a grooved base which engages with a casting, and a lever having a fulcrum independent of said shaft B, for operating said drum, substantially as shown, and for the purpose set forth.

3. In a stump-extractor constructed substantially as described, a rotary shaft having at its base a casting rigidly attached thereto, in combination with the drum D, with a grooved base which engages with said casting, and a reduced upper portion provided with a collar,

and a lever for raising and lowering the drum, having at its inner end a wheel, e, the parts being organized substantially as shown, and for the purpose set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

JAMES MILNE.

JOSEPH J. MILNE.

HECTOR A. MILNE.

Witnesses:

G. L. HINABAUGH,  
JOHN RAIRNS.