(No Model.)

R. GREELEY.

STUMP PULLER.

No. 275,644. Patented Apr. 10, 1883.

Fig. 1.

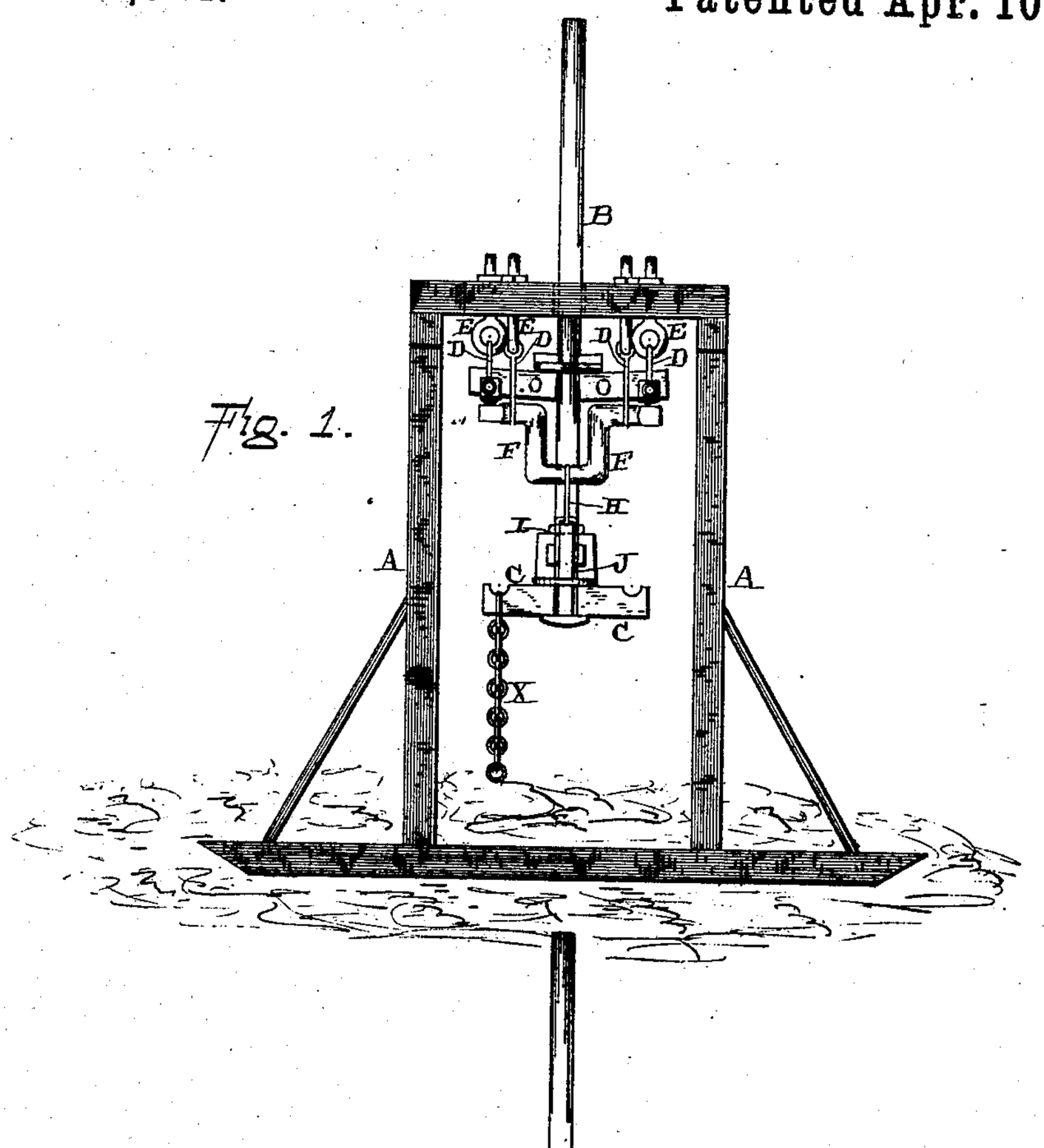
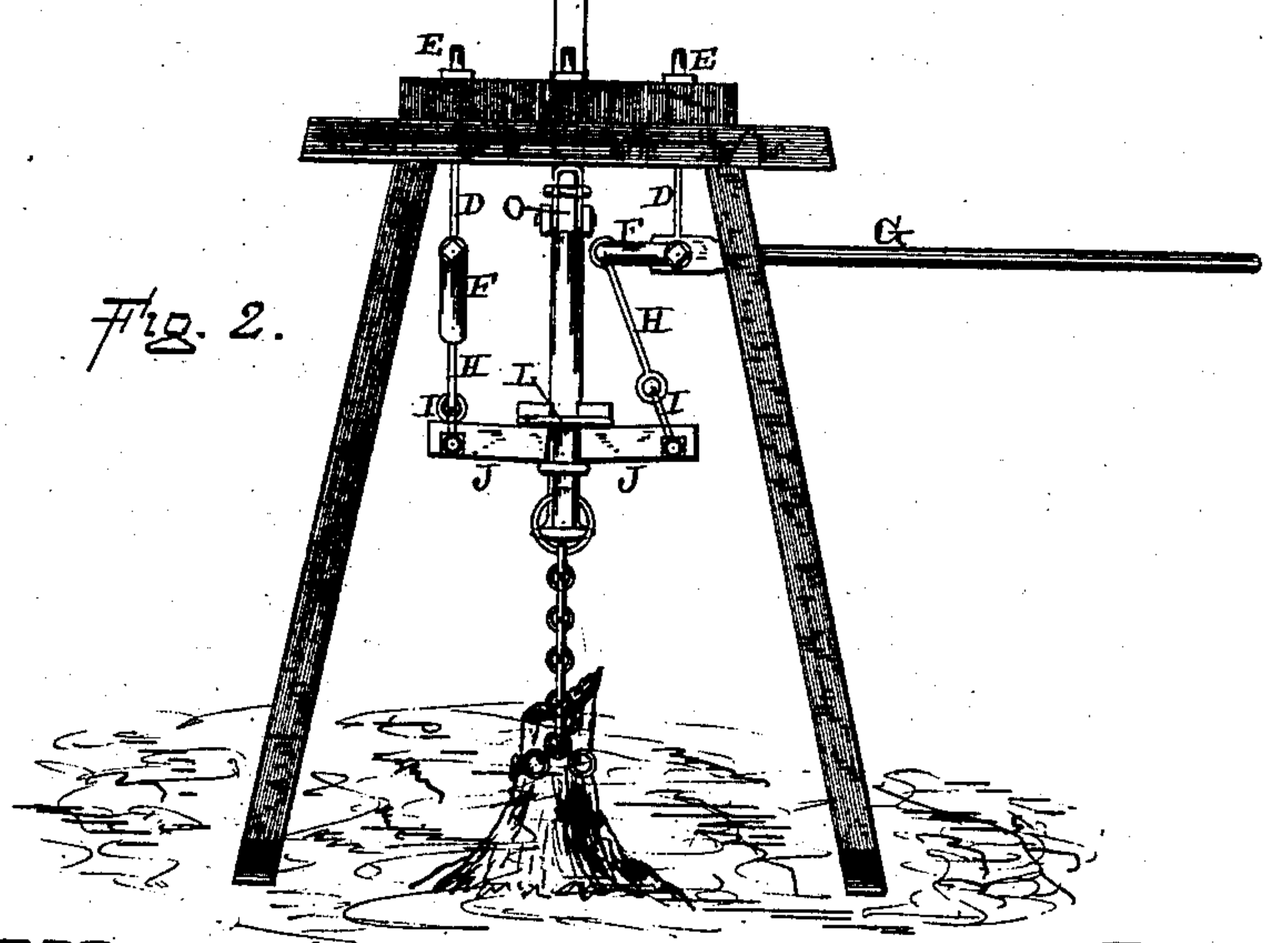


Fig. 2.



—Witnesses:—

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RANDALL GREELEY, OF SALEM, MISSOURI.

STUMP-PULLER.

SPECIFICATION forming part of Letters Patent No. 275,644, dated April 10, 1883.

Application filed September 11, 1882. (No model.)

To all whom it may concern:

Be it known that I, R. GREELEY, of Salem, in the county of Dent and State of Missouri, have invented certain new and useful Improvements in Stump-Pullers; and I 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in stump-extractors; and it consists in the combination of a vertically-moving rod, to the lower end of which the stump or other object to be raised is to be attached, a pair of friction-clamps which are operated by means of suspended cranks, to which the operating-levers are applied, and a pair of friction-clamps which support the rod after it has been raised upward, as will be more fully described hereinafter.

The object of my invention is to provide a cheap and simple means for extracting stumps and lifting heavy objects, and which is both cheap in construction and efficient in operation.

Figure 1 is a side elevation of my invention, and Fig. 2 is an end view of the same.

A represents a suitable frame-work, of any desired construction, and in which the operating parts of my machine are mounted. Passing vertically through the center of the machine is the lifting-rod B, to the lower ends of which are secured suitable arms or projections, C, to which the stump or other object to be raised is to be attached by means of the chain X. Journaled in suitable hangers, D, which have their upper ends fastened to the hooks E, are the two cranks F, which have their ends square, so that an operating-lever, G, can be applied to them. Fastened to each one of the cranks is a connecting-link, H, which have their lower ends fastened to the loops I, which are pivoted upon the outer ends of the two clamps J. These two clamps are of the shape shown, and are connected together by means of the link L, which extends entirely around the lifting-rod. This link holds the inner ends of the clamps in contact with the lifting-rod, as shown. These clamps being suspended by their outer ends, their upper inner corners are held tightly against the sides of the lifting-rod, while their lower inner corners are moved outward far enough not to engage with the rod. While the rod is being raised upward, the upper inner corners of the clamps are moved sufficiently far apart to allow the rod to slip freely through them; but the instant the rod begins to descend these corners bite against its side, so as to support the rod by frictional contact alone. In order to keep the rod in any position to which it may be raised, by operating either one or both of the cranks, the second pair of clamps, O, are suspended from the under side of the top of the frame, and which also bear against the sides of the lifting-rod, at right angles to the clamps by which the rod is raised upward. These clamps O are also suspended from their outer ends, and are connected together by means of a loop, as already described, for the purpose of holding them in contact with the sides of the rod.

In operating my machine the lifting-rod is first lowered until the chain attached to its lower end can be readily fastened to the stump or other object which is to be lifted upward. The operating-levers are then applied to one or more of the ends of the cranks, and these cranks may be operated either together or alternately. When a downward pressure is applied to the operating-levers, the cranks are turned in their bearings, and in turn exert an upward pull upon the outer ends of the lifting-clamps J. In drawing upward upon their outer ends the inner upper corners of each one of the clamps is forced tightly against the side of the rod, and the whole of the lifting strain is then transferred to these clamps. As the crank or cranks turn in their suspended bearings the clamps are turned upward, forcing the lifting-rod with them. This rod moves freely through the upper pair of clamps; but the moment the upward movement ceases the clamps bite against the sides of the lifting-rod and prevent the rod from slipping back. When the operating-levers are raised upward, the cranks turn in their bearings and allow the clamps J to slide down upon the rod for the purpose of taking a fresh hold.

The great advantage of the construction here

shown consists in its simplicity, cheapness, and the rapidity with which the lifting-rod can be raised upward.

Having thus described my invention, I claim—

1. The combination of the cranks journaled in suspended bearings and connected to the outer ends of a pair of clamps which bear against the lifting-rod, the lifting-rod, and a pair of suspended clamps, which catch the rod and prevent it from slipping backward, substantially as shown and described.

2. The combination of the rod B, having the arms C loosely attached to its lower end, and the chain, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

RANDALL GREELEY.

Witnesses:
M. GODBEY,
S. H. SHERLOCK.