

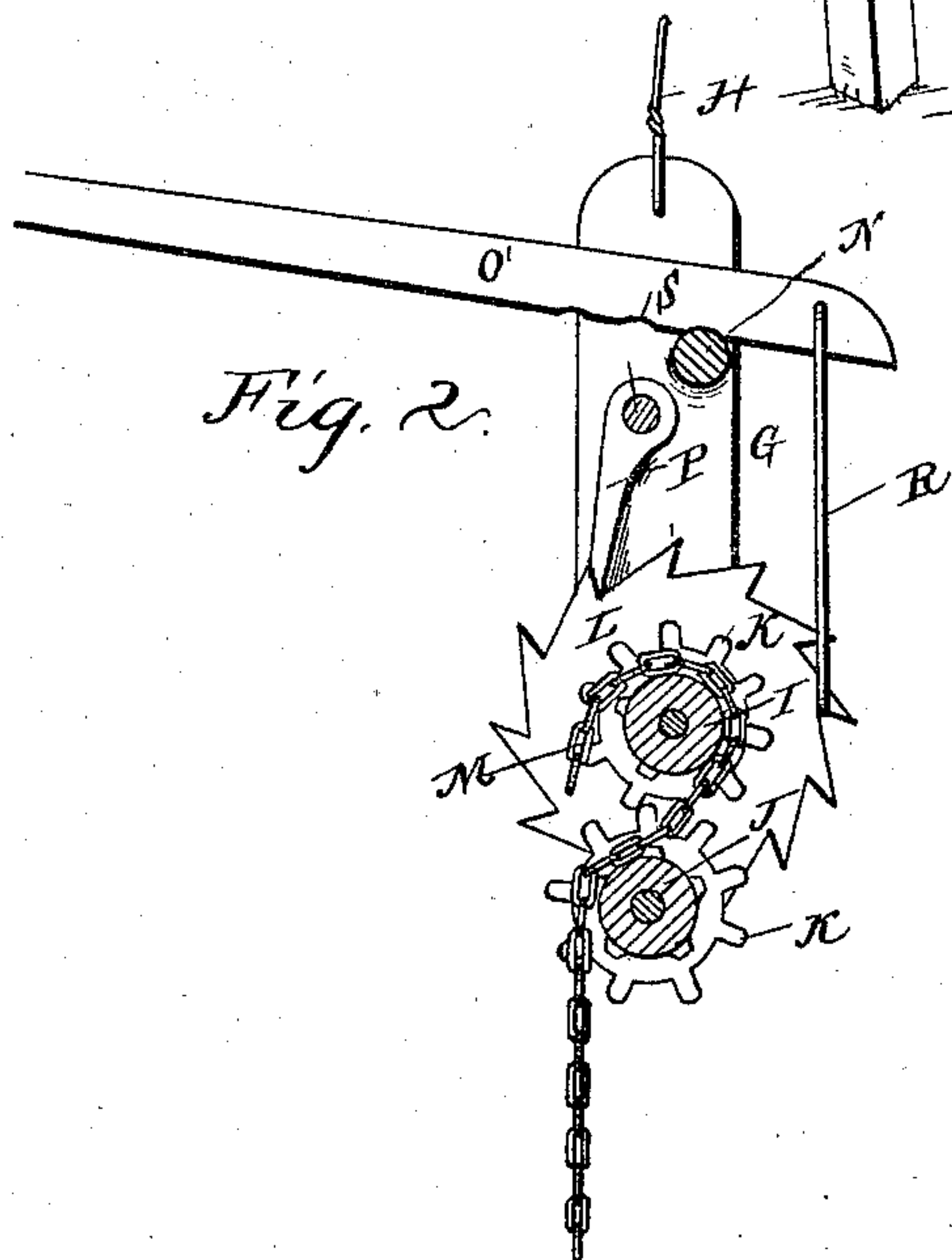
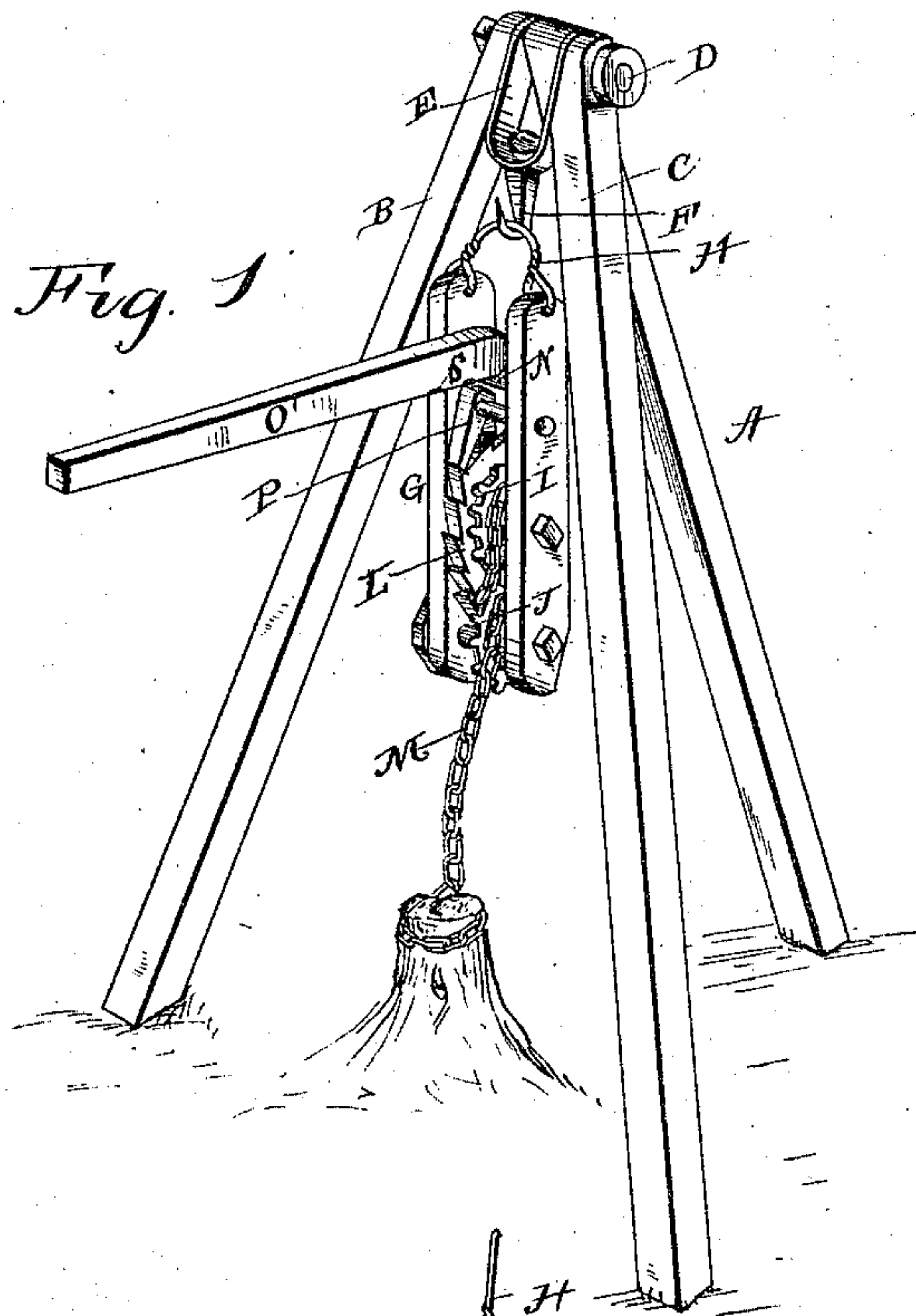
(No Model.)

J. A. HORSEMAN.

STUMP PULLER.

No. 305,518.

Patented Sept. 23, 1884.



WITNESSES

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# UNITED STATES PATENT OFFICE.

JOHN ALLEN HORSEMAN, OF DUBOIS, PENNSYLVANIA.

## STUMP-PULLER.

SPECIFICATION forming part of Letters Patent No. 305,518, dated September 23, 1884.

Application filed July 16, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN ALLEN HORSEMAN, a citizen of Canada, residing at Dubois, in the county of Clearfield and State of Pennsylvania, have invented a new and useful Stump-Puller, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to stump-pullers or apparatus for lifting heavy and medium weights, and my object is to provide a device of the class referred to that shall possess superior advantages in point of simplicity, cheapness, durability, and general efficiency; and my invention consists in the construction and novel arrangement of parts, as will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings, Figure 1 is a view in perspective of a stump-puller embodying my improvements, and Fig. 2 is a vertical longitudinal sectional view.

Referring by letter to the accompanying drawings, A designates the derrick, which consists of three scantlings, two of which, B and C, are beveled on their inner faces at their upper ends, bolted together as shown, so that they may be folded together for transportation and extended for use. The bolt D, that secures the scantlings together, also secures a bail, E, in place. This bail E is provided with a swivel-hook, F, from which the pulley-block G is suspended by a chain, H. The pulley-block G is provided with two chain-pulleys, I and J, which are provided with cog-teeth K, the teeth on one pulley engaging the teeth on the other. These pulleys are eight inches in diameter, and the upper pulley, I, is fixed to or cast on a ratchet-wheel, L, which is thirty inches in diameter. With pulleys of these dimensions I use a chain, M, with two-inch links. The pulley-block is provided with a fulcrum-rod, N, and a rod, O, on the latter of which a pivoted detent, P, slides, so that it may be moved into engagement with the teeth of the ratchet-wheel L and moved out of engagement, when necessary, to lower the chain M. The ratchet-wheel L is

operated by a lever, O', having a bail, R, at its weight end. This lever O' is provided with several depressions, S, in its under face near its weight end. These depressions rest, one at a time, upon the fulcrum-rod, and by them the leverage can be increased or lessened, as may be desired. The chain M is passed over the chain-pulley J from the side of the pulley-block on which the detent P engages the ratchet-teeth, and then between the pulleys and up over the pulley I. The lower end of the chain is fastened to the stump to be pulled or other article to be lifted, and the ratchet-wheel L is operated by engaging the teeth of the same successively with the bail R and working the lever O'. This operates the chain-pulleys and raises the chain and whatever may be attached to it. The detent, while in engagement with the ratchet-teeth, prevents backward movement of the ratchet-wheel L, thereby holding the article at the point to which it has been raised.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination, with the pulley-block, of two chain-pulleys geared together by engaging cog-teeth, one of said pulleys being provided with a ratchet-wheel and pivoted sliding detent, substantially as specified.

2. The combination, with the pulley-block provided with the fulcrum-rod and sliding detent, of the ratchet-wheel provided with a chain-pulley having cog-teeth, a chain-pulley having cog-teeth engaging the cog-teeth of the pulley on the ratchet-wheel, the chain, the lever having a pivoted bail in its weight end, and a derrick, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JOHN ALLEN <sup>his</sup> + HORSEMAN.  
mark.

Witnesses:

JAMES W. FERER,  
JOHN JENKINS.