(No Model.)

T. RICE.

STUMP PULLER.

No. 259,922. Patented June 20, 1882.

Fig. 1.

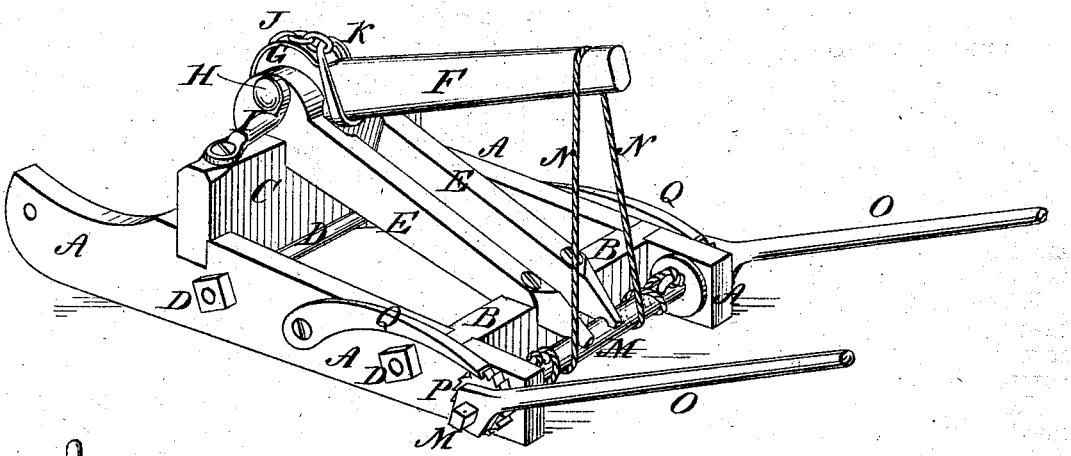
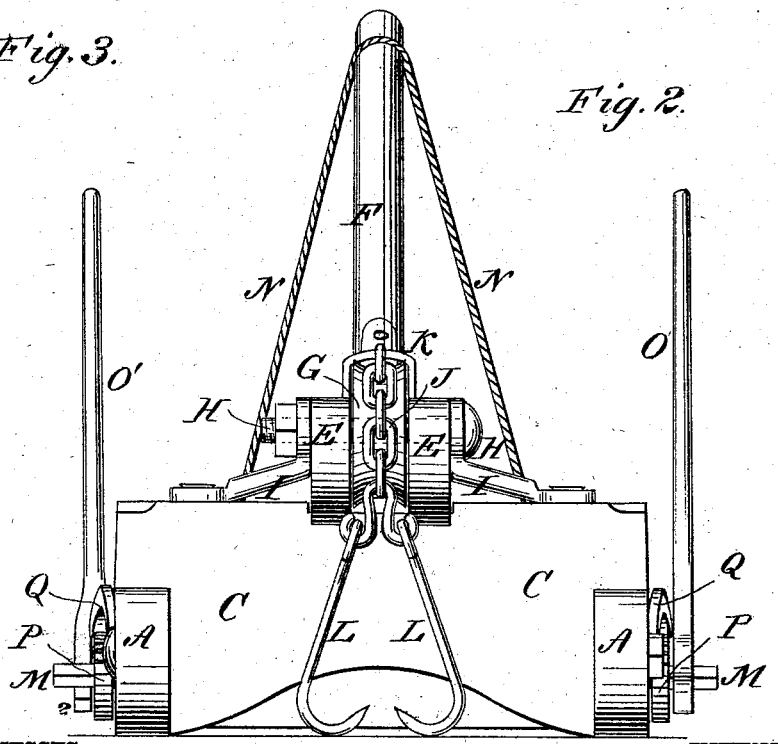


Fig. 3.

Fig. 2.



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TOLIVER RICE, OF ENFIELD, ILLINOIS.

STUMP-PULLER.

SPECIFICATION forming part of Letters Patent No. 259,922, dated June 20, 1882.

Application filed May 1, 1882. (No model.)

To all whom it may concern:

Be it known that I, TOLIVER RICE, of Enfield, in the county of White and State of Illinois, have invented a new and useful Improvement in Stump-Pullers, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of my improvement. Fig. 2 is a front elevation of the same. Fig. 3 is a perspective view of a lever for operating the machine.

The especial object of this invention is to facilitate the pulling of stumps and grubs.

The invention consists in a stump-puller constructed with a frame having pivoted to it a lever provided with a cam-head and a lifting-chain. The frame is also provided with a shaft connected with the cam-lever by a rope or chain, and provided with levers for operating it and ratchet-wheels and pawls for holding it against the strain of the rope or chain, as will be hereinafter fully described.

A are two runners, which are made of such a length and thickness and are placed at such a distance apart as will give a firm support to the machine. The runners A are connected near their rear ends by a cross-bar, B, and at a little distance from their forward ends by a cross-bar, C. The cross-bar C is made of a height equal to about twice the height of the runners A. The frame thus formed is strengthened by two tie-bolts, D, passing through the runners A at the inner sides of the cross-bars B C.

To the middle parts of the upper sides of the cross-bars B C are framed the rear parts of two parallel bars, E, which are placed at such a distance apart as to receive between them the lever F. The forward end of the lever F has a circular head or cam, G, formed upon it, and is pivoted to and between the forward ends of the bars E by a bolt, H, which also passes through the upper ends of the two inclined braces I. The braces I are secured at their lower ends to the upper side of the cross-bar C, and serve to fasten the bars E to the cross-bar C and to support or brace the forward ends of the said bars against lateral strain.

The face of the head or cam G is grooved to receive the lifting-chain J, the upper end of which is attached to a band, K, that passes around the lever F, so that the said lever will not be weakened by the attachment of the said chain.

The chain J is attached to the stump or grub to be raised, and can have hooks or dogs L attached to it for convenience in securing it to the said stump or grub.

In bearings in the rear ends of the runners A works a shaft, M, to which, at the inner sides of the said runners A, are attached the ends of a rope or chain, N, the central part of which is passed over the end of the lever F and rests in a notch formed in the upper side of the said end, so that the said end of the lever F will be drawn downward by winding the rope or chain N upon the shaft M. The shaft M is turned to wind up the rope or chain N by a lever, O, which may be made in the form of a wrench, as shown in Fig. 1 and at the right-hand side of Fig. 2, to fit upon the squared ends of the said shaft A, or with a jaw, 1, to engage with the teeth of a ratchet-wheel, P, attached to the shaft M at the outer sides of the runners A. In the latter case the lever O′ should be made with an arm, 2, to rest upon the end of the shaft M, which thus serves as a fulcrum to the said lever.

To the outer sides of the middle parts of the runners A are pivoted pawls Q, which engage with the teeth of the ratchet-wheels P to hold the shaft M from being turned back by the strain upon the rope or chain N when the levers O are being shifted for another stroke.

In using the machine it is drawn forward so that the forward ends of the runners A will be upon the opposite sides of the stump or grub to be pulled. The lever F, with the rope or chain N attached, is raised into a nearly vertical position, and the chain J is secured to the stump or grub. The upper end of the lever F is then drawn downward by operating the levers O to turn the shaft M and wind up the rope or chain N. By this operation the stump or grub will be turned out of the ground.

I have described my invention as being applied to pulling stumps and grubs, but do not limit myself to that application, as it can be used with advantage for raising various other objects.

In pulling small stumps or grubs a slip-lever

can be used on lever F, instead of using the shaft M and rope N, as being quicker in operation.

A hub provided with radial holes to receive levers can be used instead of the wrenches or ratchet-levers, as being more convenient in use. In this case the hubs and the ratchet-wheels P can be made in one piece, so that they can be readily slipped on and off the shaft M.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A stump-puller constructed substantially as herein shown and described, and consisting of the frame A B C E, the lever F, having cam G, chain J, the shaft M, the rope or chain N, the levers O, and ratchet-wheels P and pawls Q, as set forth.

2. In a stump-puller, the combination, with the front cross-bar, C, of the frame, of the lever F, having cam G, and the chain J, substantially as herein shown and described, whereby a stump can be raised by operating the said lever, as set forth.

3. In a stump-puller, the combination, with the frame A B C E and the lever F, of the rope or chain N, the shaft M, and the levers O, substantially as herein shown and described, whereby the said lever can be readily operated, as set forth.

4. In a stump-puller, the combination, with the frame A B C E and the shaft M, of the ratchet-wheels P and pawls Q, substantially as herein shown and described, whereby the said shaft will be held against the strain of the rope or chain, as set forth.

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Witnesses:
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