(No Model.)

C. M. HILLMAN.

STUMP PULLER.

No. 266,821. Patented Oct. 31, 1882.

Fig. 1.

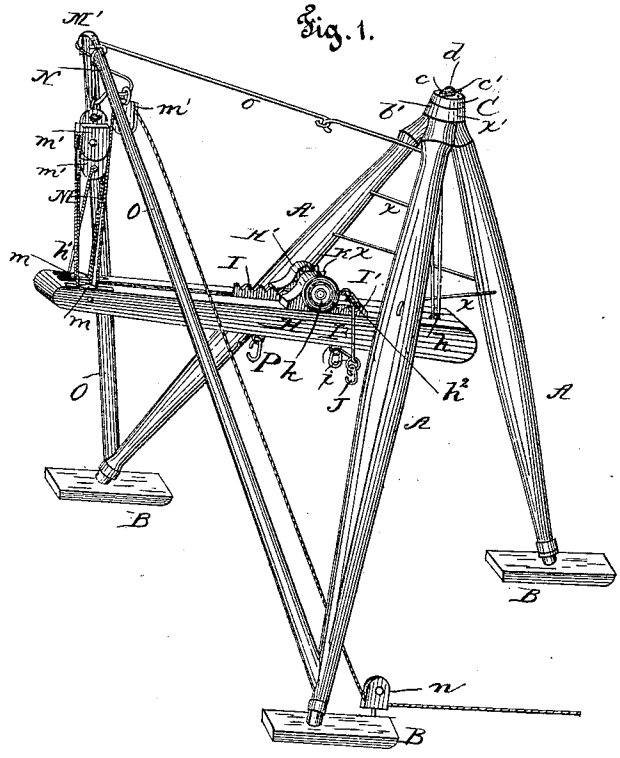


Fig. 2.

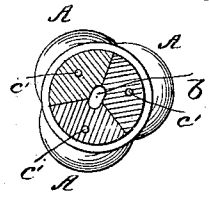
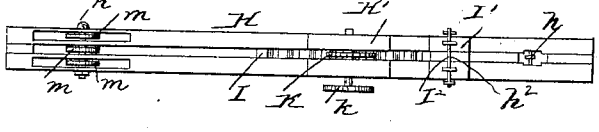


Fig. 3.



WITNESSES:

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CHARLES M. HILLMAN, OF PIERSON, MICHIGAN.

STUMP-PULLER.

SPECIFICATION forming part of Letters Patent No. 266,821, dated October 31, 1882.

Application filed July 3, 1882. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. HILLMAN, of Pierson, in the county of Montcalm and State of Michigan, have invented certain new and useful Improvements in Stump-Pullers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to a device for pulling stumps, snags, unearthing stones, and the like; and the novelty consists in the construction and arrangement of parts, as will be more fully hereinafter set forth, and specifically pointed out in the claims.

Among others, the objects of the invention may be stated to be essentially, first, to provide a firm bearing for the device by means of a tripod-standard; second, to multiply power-purchase by rope and pulley connection with a flying-lever having a shifting object-point; and, third, in a novel means of securing the upper ends of the tripod-legs together, such means comprising the support of the hanging fulcrum for the operating-lever.

To these ends the invention consists essentially in the mechanism and devices fully shown in the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view to show the sliding rack-bar; Fig. 2, a horizontal section through the junction of the tripod-legs, and Fig. 3 a top view of the rack-bar.

Referring to the drawings, A A A represent the three tripod-standards, the lower ends of which are pivoted to the shoes or runners B, and the upper ends so formed that when drawn into close connection they will form a cylindrical body having a vertical aperture, *b*, in the center. A cap, C, having a cross-bar, *c*, and apertures *c'* upon each side thereof, is adapted to have a firm bearing upon the upper surface of the head *b'*, and a hooked link, *d*, formed with duplex arms, one of which operates through either of the apertures *c'*, embraces the cross-bar *c*, and, passing through the vertical aperture *b*, serves as a support for the fulcrum-connection. The tripod-legs are held rigid in a triangular position by cross-rods *x*, and their upper extremities are held firmly together by a strong metal band, *x'*.

H represents the operating-lever, the fulcrum of which is designated by *h* and the power-connection by *h'*. In a recess in this lever operates a reciprocating rack-bar, I, rigid to one end of which is a block, I', which bears upon the upper surface of the operating-lever and comprises a movable object-point, h^2. From this block, and embracing the lever, is a frame, I^2, upon which are suspended links *i*, to which is secured the tying-chain J.

Rigid with the lever H, and upon the upper surface thereof, is a frame, H', which furnishes journal-bearings for the shaft of a pinion, K, which meshes with the rack-bar I, and serves to shift the object-block to or from the fulcrum by means of a convenient handle, *k*.

Journaled within the free or power end of the lever H are three sheaves, *m*, around which is properly reefed the power-rope M, the said rope operating similarly around two pulley-blocks, *m'*, which are suspended from a triangular bracket, N, hung upon a cap-frame, M', which embraces the upper end of an auxiliary derrick, O, braced and strengthened by the bar *o*, the base being secured to two of the tripod-legs. From the pulleys last mentioned the power-rope is passed through a pulley, *n*, secured to one of the runners.

I deem the following points of importance: first, the flying-lever adapted to accommodate itself to different strains; second, the manner of securing the tripod-standards in connection with the fulcrum-support; third, the pinion and rack-bar for shifting the object-point to graduate the power as occasion requires; and, fourth, the power-connections in relation to the flying-lever and suspended fulcrum.

P is an auxiliary link, by means of which the tie-chain J is afforded a support arranged in triangular form.

What I claim as new is—

1. In a stump-puller, a tripod-derrick having suspended fulcrum, and an auxiliary derrick rigid therewith, having a suspended power-connection, combined with a flying-lever having movable object-point, the whole being arranged to accommodate strain in any direction, as set forth.

2. The tripod-legs jointed to form a cylindrical body, b', having vertical aperture b, cap C, having cross-bar c and apertures c', and the hooked link d, combined with the suspended fulcrum and operating-lever, as set forth.

3. The operating-lever H, rack-bar I, and block I′, combined with the pinion K, suspended fulcrum h, and suspended power-connection h', as and for the purposes set forth.

4. The sheaves m and blocks m', combined with the rope M, triangular bracket N, cap-frame M′, auxiliary derrick O, and flying-lever H, as specified.

5. The combination of the main and auxiliary derricks A O, rigid with each other and having triangular bearings, with the suspended lever H, rack-bar and pinion, and with the fulcrum and power connections, substantially as and for the purposes set forth.

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

CHARLES M. HILLMAN.

Witnesses:

WILLIAM FRAWLEY,

SOLOMON LISK.