

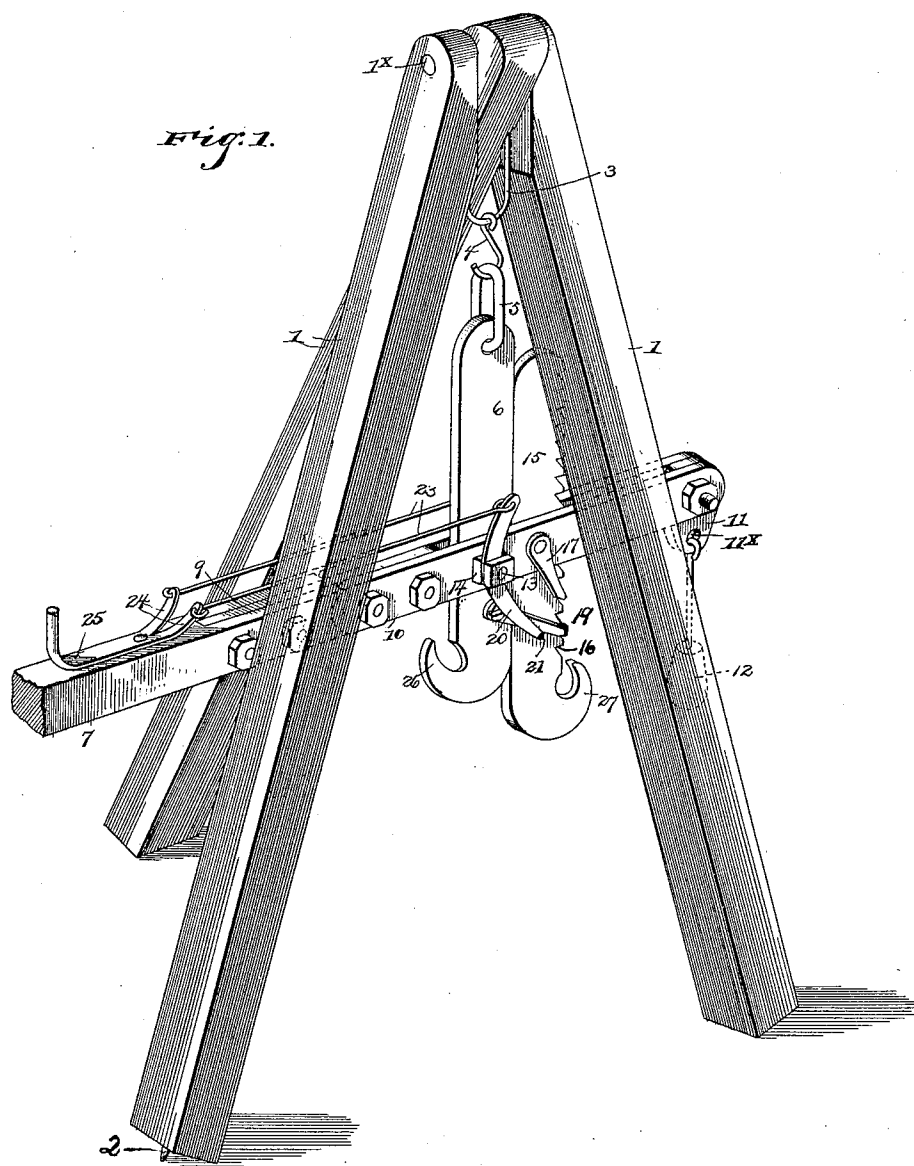
(No Model.)

2 Sheets—Sheet 1.

O. S. DIETRICH.
STUMP OR ROCK EXTRACTOR.

No. 479,974.

Patented Aug. 2, 1892.



Witnesses

B. S. Ober

Chas. S. Hyer

By *his* Attorneys,

C. A. Snow & Co.

Inventor

Oscar S. Dietrich

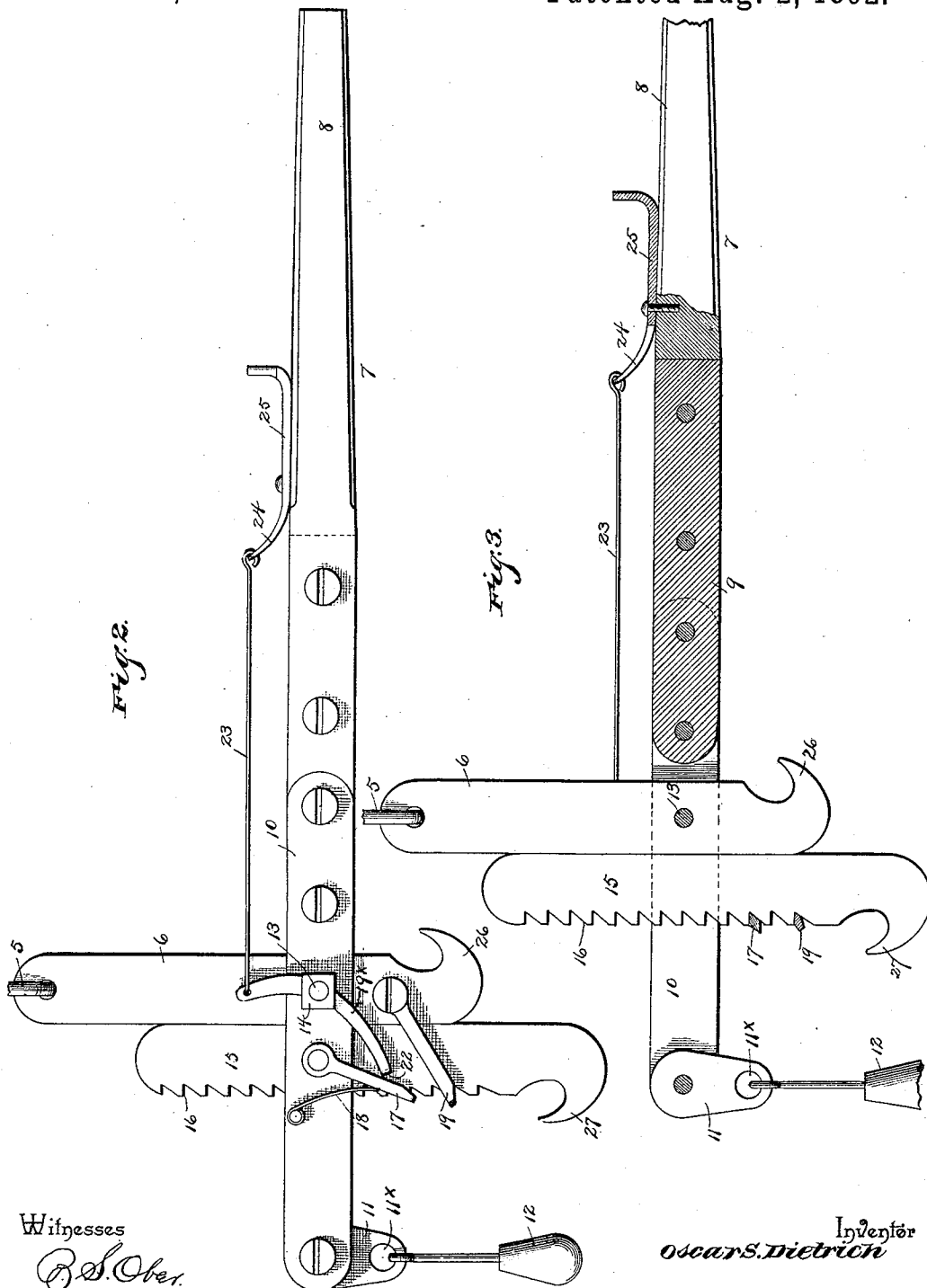
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UNITED STATES PATENT OFFICE.

OSCAR S. DIETRICH, OF WEATHERLY, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO ALLEN G. SWARTZ, OF SAME PLACE.

STUMP OR ROCK EXTRACTOR.

SPECIFICATION forming part of Letters Patent No. 479,974, dated August 2, 1892.

Application filed May 21, 1892. Serial No. 433,869. (No model.)

To all whom it may concern:

Be it known that I, OSCAR S. DIETRICH, a citizen of the United States, residing at Weatherly, in the county of Carbon and State of Pennsylvania, have invented a new and useful Stump and Rock Extractor, of which the following is a specification.

This invention relates to a stump or rock extractor; and it consists of the construction and arrangement of the parts, as will be more fully hereinafter described and claimed.

The object of this invention is to provide a device of the character set forth, wherein the leverage is increased and adjustable, whereby the tension brought to bear upon the stump or rock extracted thereby remains stationary until the leverage is set in motion to further increase the said tension.

In the drawings, Figure 1 is a perspective view of the improved device. Fig. 2 is a side elevation of the operating mechanism removed and looking toward the side opposite to that shown by Fig. 1. Fig. 3 is a longitudinal section taken on a central line through the operating-lever.

Similar numerals of reference are used to indicate corresponding parts in the several figures.

Referring to the drawings, the numeral 1 designates the legs forming the tripod or derrick of the device and pivotally connected to the upper ends to provide for folding the same together in compact form, the said legs being formed or constructed with spikes or spurs 2 at their lower ends to prevent the same from slipping when in an erect position. Depending from the pivotal point or bolt 1^x of the legs 1 is a link 3, to which is secured a hook 4, having attached thereto in removable manner another link 5, connected to the upper end of a bar 6, which is pivoted to the front bifurcated end of a lever 7. The said lever 7 comprises a rear operating-handle 8, of considerable length, having a metallic strip 9 projecting from the forward end thereof, and to said metallic strip is secured parallel bars or plates 10, between which is an intervening space forming the said bifurcated end of the lever, as hereinbefore referred to. A small plate or block 11 is secured between the front ends of the said bars or plates 10 to assist in

the holding of the latter apart and is formed with an eye 11^x, in which is secured a counterbalancing-weight 12, by means of which the said lever 7 is held in normal horizontal operating position. The said bar 6 passes through the bifurcated end of the said lever, and the bars or plates 10 are pivotally connected to the bar 6 by a bolt 13, extending transversely through said parts and having set-nuts 14, bearing against the outer faces of the said bars or plates 10. A ratchet-bar 15 is mounted on the said bifurcated end of lever 7, adjacent to the bar 6 and normally bearing against the front edge thereof. The said ratchet-bar 15 is formed with downwardly - projecting teeth 16, which are engaged by a looped pull-pawl 17, constructed in the form of a yoke and having its ends pivotally attached to the bars or plates 10, and is sustained in engaging position with the teeth of the said ratchet-bar 15 by a spring 18, secured to one of said bars or plates 10. A stop-pawl 19, of similar construction to the pawl 17, is pivotally connected to the lower portion of the bar 6 and is located below the said pawl 17 in order to sustain the ratchet-bar 16 in its adjusted position and prevent retrograde or back movement thereof. On the bolt 13, outside of the set-nuts 14, are mounted lifting-arms 19^x and 20, having inturned ends 21 and 22 at the lower terminations thereof and eyes in the upper ends of the same, to which are secured rods 23, extending rearward and attached to the forked ends 24 of a horizontally-disposed lever 25, which is pivoted to the top portion of the lever 7. The arm 19^x engages the pawl 17 to lift the same out of engagement with the teeth 16 of the ratchet-bar 15, and the arm 20 is made longer than the arm 19^x and engages the stop-pawl 19 to disengage the same in a similar manner from the said ratchet-bar. By turning the lever 25 laterally on the lever 7 the arms 19^x and 20 are operated alternately to disengage the pawls 17 and 19, which is owing to one of the rods 23 being first shoved forward and the other drawn backward and said movement reversed as the lever 25 is oscillated in reverse directions on its pivot-bolt in a horizontal plane. By this means the lower or stop pawl 19 is caused to retain its engagement with the ratchet-bar

15 until the pawl 17 takes into another tooth of the said ratchet-bar 15. By this means, also, the movement of the ratchet-bar 15 is progressive and the raising tension is accumulated. The lower ends of the bars 6 and 15 are formed with hooks 26 and 27, to which is adapted to be attached a rope, cable, or chain applied to the stump or rock or other object adapted to be lifted by the device. By the upper connection of the device, as hereinbefore set forth, a free swiveled movement of the entire mechanism is permitted, and thereby the same may be conveniently positioned for engagement with the object to be lifted.

In operating the device the lever 7 is oscillated in a vertical plane, thereby causing the pawl 17 to engage successive teeth of the ratchet-bar 15. At the same time the lever 25 is operated to actuate the arms 19^x and 20 to perform the function heretofore ascribed to the same. The link 5 may be disconnected from the hook 4 whenever desired, and the legs 1 are then permitted to be folded in compact position.

The advantages and conveniences of a device of a nature and in accordance with the construction thereof, as set forth, will be readily apparent to those skilled in the art, and it is obviously apparent, also, that many minor changes might be made in the construction and arrangement of these several parts without in the least departing from the spirit of the invention.

Having thus described the invention, what is claimed as new is—

1. In a stump or rock extractor, the combination of a support, a lever suspended from said support, a ratchet-bar freely movable through said lever, pull and stop pawls engaging the said ratchet-bar, arms controlling the engagement of said pawls with the said ratchet-bar, and a lever connected to said arms and adapted to be oscillated in a horizontal plane to alternately operate said arms, substantially as set forth.

2. In a stump or rock extractor, the combi-

nation of a suspended lever having a counterpoise weight secured thereto, a ratchet-bar freely movable through the said lever, pull and stop pawls engaging the said ratchet-bar, lifting-arms adapted to control the engagement of the said pawls, rods connected to said arms at their forward end, and a horizontally-disposed lever pivotally connected to the aforesaid lever and having the rear ends of said rods attached thereto, substantially as described.

3. In a stump or rock extractor, the combination of a lever freely suspended from a support and having a counterbalancing-weight attached thereto, a vertical bar to which said lever is pivotally connected and attached only at one point, a ratchet-bar freely movable through said lever, a pull-pawl connected to said lever and engaging said ratchet-bar, and a stop-pawl connected to the bar supporting the said lever, all arranged and operating substantially as described.

4. In a stump or rock extractor, the combination of the supporting-legs, a bar suspended from said legs, a lever pivotally connected to said bar, a ratchet-bar freely movable through said lever, the said bar and ratchet-bar having lower hooked ends, a pull-pawl connected to said lever and engaging said ratchet-bar, a stop-pawl connected to said bar, and also engaging the ratchet-bar, lifting-arms secured to said lever and controlling the engagement of the pawls with the said ratchet-bar, rods connected to said lifting-arms, a horizontally-disposed lever pivotally connected to the aforesaid lever to which said rods are also attached, and a counterbalancing-weight attached to the front end of the said lever, substantially as described.

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

OSCAR E. DIETRICH.

Witnesses:

PERCY E. FAUST,
J. L. HOUCK.