(No Model.)

R. S. WARREN & W. A. EASLEY.

STUMP PULLER.

No. 445,460. Patented Jan. 27, 1891.

Fig. 1.

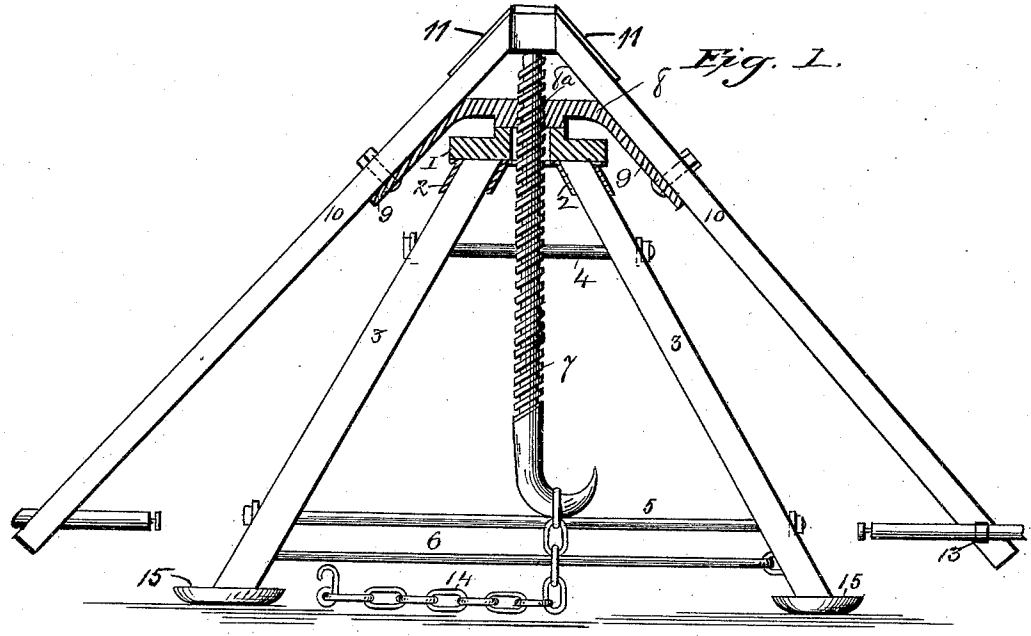


Fig. 2

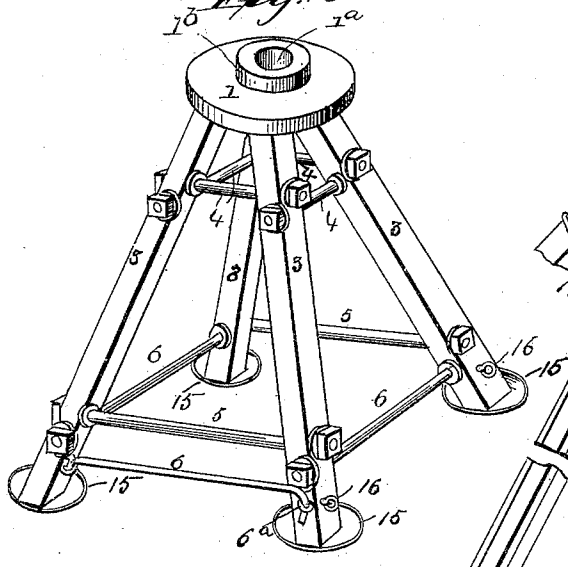
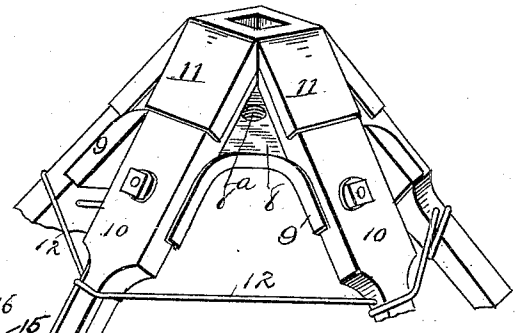
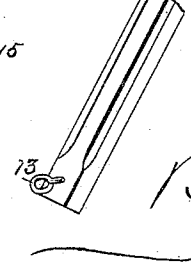


Fig. 3.





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STUMP-PULLER.

SPECIFICATION forming part of Letters Patent No. 445,460, dated January 27, 1891.

Application filed September 5, 1890. Serial No. 364,050. (No model.)

To all whom it may concern:

Be it known that we, ROBERT STEURT WARREN and WILLIAM ANDREW EASLEY, citizens of the United States, residing at Clinton, in the county of Hickman and State of Kentucky, have invented certain new and useful Improvements in Stump-Pullers; and we 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 appertains to make and use the same.

Our invention consists in a new and improved stump-puller in which we combine simplicity, great strength of construction, and efficiency in operation; and our invention will be hereinafter fully described and claimed.

Referring to the accompanying drawings, Figure 1 is a central vertical sectional view of our new and improved stump-puller. Fig. 2 is a perspective view of the lower part of the apparatus, and Fig. 3 is a detail view of the upper revolving part.

The same numerals of reference indicate corresponding parts in all the figures.

Referring to the several parts by their designating-numerals, 1 indicates a cap-piece, which is formed in one solid casting, with four sockets 2 on its under side, in which fit the upper ends of four inclined uprights 3. These uprights are secured or connected together near their upper ends by the threaded rods 4 and near their lower ends by the longer rods 5, and below these rods 5 may be arranged the movable rods 6, hinged at one end in a staple and having a hook at their free end, which hooks into an eye 6^a on the other upright. These rods 6 can be unhooked in placing the machine over high stumps, or the rods 5 may be dispensed with and the hooked rods 6 alone used.

The cap-piece 1 is formed with a central vertical opening 1^a, through which passes the long threaded screw 7, which is formed with a hook at its lower end, or may be formed with more than one hook if desired. The upper part of this screw passes through and works in the central threaded opening 8^a of a bearing-plate 8, which is formed with the downwardly-curved bearings 9. In these bearings fit and are bolted the upper ends of sweep 10, from one to four of which can be used. The upper extremities of these sweeps are secured in a cap 11, which also has a central opening, through which the upper end of the screw can pass. The sweeps are connected and strengthened by rods 12. The cap-piece 1 is formed on its upper side with an elevated central annular bearing 1^b to receive the weight of the metal bearing-plate 8, these two parts being so constructed as to reduce friction to a minimum. In the lower ends of the sweeps 10 are secured eyes 13, to which the team is attached; or the sweeps may be turned by a man or men.

It will be seen that the stump being secured by a chain 14 to the hooked lower end of the threaded screw 7, that when the sweeps are turned the plate 8 turns around on the screw like a nut and will raise the screw with immense power, so as to pull the stump with comparative ease.

The lower ends of the uprights 3 are secured in dished metal plates 15, which serve, first, to prevent the uprights from sinking into the ground when a stump is being pulled, and, second, to pull the machine about on the uprights being provided with hooks 16, to which the team is hitched to pull the machine from one stump to another; or the machine may be mounted on runners or on wheels for convenience in moving it, as may be preferred.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

The stump-extractor comprising the cap-piece 1, formed with the sockets 2 on its lower side and the annular bearing 1^b on its upper side, the uprights 3, having their upper ends fitting in said sockets and connected by the fixed rods 4 5, and the movable rods 6, hinged at one end and having the hooked ends fitting in eyes 6^a, the dished plates 15,

secured on the lower ends of the uprights, the bearing-plate 8, formed with the central threaded opening, and the inclined bearings 9, the inclined sweeps bolted near their upper ends in said bearings, the cap 11, secured on the upper ends of said sweeps, the rods 12, and the screw having the hooked lower end, substantially as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

ROBERT STEURT WARREN.
WILLIAM ANDREW EASLEY.

Witnesses:
CHAS. BEADLES,
C. L. UNDERWOOD.