

(No Model.)

J. C. SMITH.
STUMP EXTRACTOR.

No. 528,994.

Patented Nov. 13, 1894.

Fig. 1.

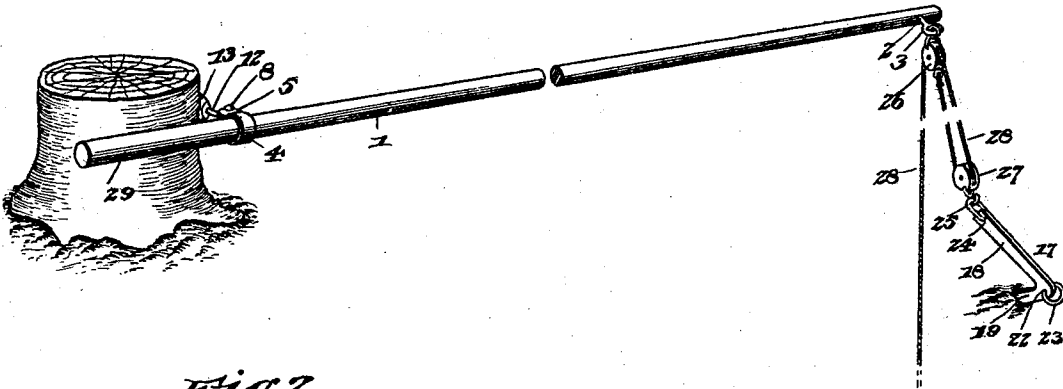


Fig. 2.

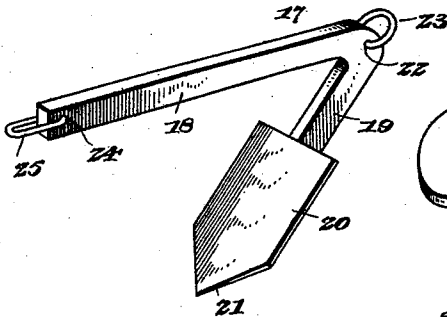


Fig. 3.

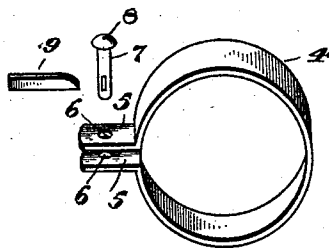
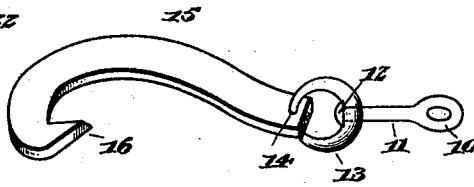


Fig. 4.

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UNITED STATES PATENT OFFICE.

JOHN CLEMENT SMITH, OF SUGARTREE, MISSOURI.

STUMP-EXTRACTOR.

SPECIFICATION forming part of Letters Patent No. 528,994, dated November 13, 1894.

Application filed June 18, 1894. Serial No. 514,961. (No model.)

To all whom it may concern:

Be it known that I, JOHN CLEMENT SMITH, a citizen of the United States, residing at Sugartree, in the county of Carroll and State of Missouri, have invented a new and useful Stump-Extractor, of which the following is a specification.

The invention relates to that class of stump-extractors, wherein a hook is provided and adapted to engage the stump so that it may be connected with the source of power; and the invention consists in certain novel features of construction, and combination and arrangement of parts, that will be more fully described hereinafter and finally embodied in the claims.

In the accompanying drawings: Figure 1 represents a perspective view of my complete appliance, showing it in the act of withdrawing or extracting a stump; Fig. 2, an enlarged perspective of the anchor; Fig. 3, a similar view of the cant hook which I employ, together with its immediately adjacent parts; Fig. 4, a detail perspective of the band for encircling the beam of my stump-extractor, and showing it together with the bolt or pin for connecting the cant hook to the beam.

The reference numeral 1 indicates the beam of the stump-extractor, which will be, in practice, from eighteen to twenty feet in length, and which should be formed of strong and light wood. Passing through the smaller or outer end of the beam 1 is the bolt 2, which is provided with an eye 3, for attaching the beam to the draft ropes or chains, as will appear hereinafter. Fixed to the beam 1, at a point near its inner end, is the band 4, which is preferably formed of steel and provided with the ears 5, having openings 6 therein. These openings 6 are transversely aligned and adapted for the reception of the bolt 7. The bolt 7 is formed with a head 8, and has its remaining end slotted laterally, to permit the insertion of the pin or key 9. By this means the band 4 is joined to the beam 1, and the bolt 7 is adapted to pass through the eye 10, of the swivel bolt 11. The swivel bolt 11 is formed with a head 12, which fits into an opening in the swivel link 13. The link 13 may be round or elongated, as preferred, and is adapted to pass through an opening 14 in the shank or inner end of the cant-hook 15.

The cant hook 15 is formed of steel, by preference, and has the point 16 thereon which is adapted to project into the stump in the extracting operation. By these means the cant hook 15 is pivotally connected to the beam 1, so that it will be capable of universal movement thereon, as is required by the operation of the device.

I provide the anchor of Fig. 2 for use with my invention, and this anchor consists of a substantially V-shaped bar 17, having the horizontal arm 18 and downwardly and forwardly extending arms 19, said arms comprising the V-shaped bar aforesaid. The lower end of the arm 19 is provided with the anchor-plate 20, which may be rigidly secured thereto, or formed integral therewith as desired, and which has a pointed and edged side 21, adapted to permit the passage of the arm 19 into the ground.

Formed at the juncture of the arms 18 and 19 is the opening 22, which is provided for the reception of the ring 23. The ring 23 has for its purpose to provide means for permitting the withdrawal of the anchor from the ground. The free end of the horizontal arm 18 is formed with a recess or opening 24, adapted for the reception of the elongated link 25, which is secured to the arm 18 by means of such opening. The link 25 is provided to permit the attachment of the ropes or chains used in applying the power to my invention.

As will be seen by Fig. 1, the preferred use of my invention consists in attaching to the bolt 2 the block or pulley 26, and to the anchor 17 the block or pulley 27. Over these pulleys the rope or chain 28 is passed, and has its free end connected to the source of power, which will be, by preference, a team of horses. The cant hook 15 is arranged with its point 16 penetrating the stump, and with the butt or end 29 of the beam 1 in engagement with the side of the stump. Thus it will be seen that as the rope 28 is tightened, the beam 1 will be swung toward the anchor 17, which will, by reason of its peculiar construction, become securely fastened in place. As the beam 1 swings, it will twist or wrench the stump from its seat and loosen its roots to an extent which will permit its easy removal. When the stump has been sufficiently wrenched or

twisted, the anchor 17 may be used to complete its removal. I do not anticipate the necessity for this use, however, except in cases where the roots hold to a degree which
5 will make it impossible to remove the stump by hand. When this is the case, the pulley 26 should be disconnected from the beam 1, and the extractor detached from the stump, after which the removed pulley should be
10 fixed to the stump and power applied to the rope 28. This will furnish sufficient power to remove the already loosened roots.

It is not necessary in every case to use the anchor 17 in the operation of extracting a
15 stump, since in some cases the increased power afforded by the blocks 26 and 27 will not be necessary; and since it is the purpose of the anchor to permit the use of such blocks. When the use of the anchor 17 is dispensed
20 with, the draft rope is connected directly to the bolt 2, and the power of the team applied to the rope, as explained.

It will be understood that the length of the bolt 7 is sufficient to permit the interposition
25 of the swivel bolt 11 between the ears or lugs 5 of the band 4. The length of such bolt is, however, gaged so that the swivel bolt, or rather the eye 10 thereof, will be snugly secured in place upon the fixing of key 9 in position.
30

While I have shown my invention embodied in certain specific details of construction,

and have described these details as those best adapted to carrying out the invention, it will, however, be understood that I am not limited
35 to the precise construction herein shown; but, on the other hand, I am entitled to all such variations as come within the spirit and scope of the invention, and as would suggest themselves to persons skilled in the art to which
40 the invention relates.

Having described my invention, I claim—

1. A stump-extractor, comprising the combination of a beam, a cant hook, a swivel pivotally connected to the shank thereof, and a
45 band encircling the beam and secured thereto and to the swivel, substantially as described.

2. A stump-extractor comprising the combination of a beam, a band encircling the same and provided with projecting ears, a bolt
50 passing through said ears and secured therein, a swivel bolt having an eye embracing the bolt of the band, a swivel link connected to the swivel bolt, and a cant hook having its shank pivotally connected to the swivel link, sub-
55 stantially as described.

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

JOHN CLEMENT SMITH.

Witnesses:

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W. A. BAUMGARDNER.