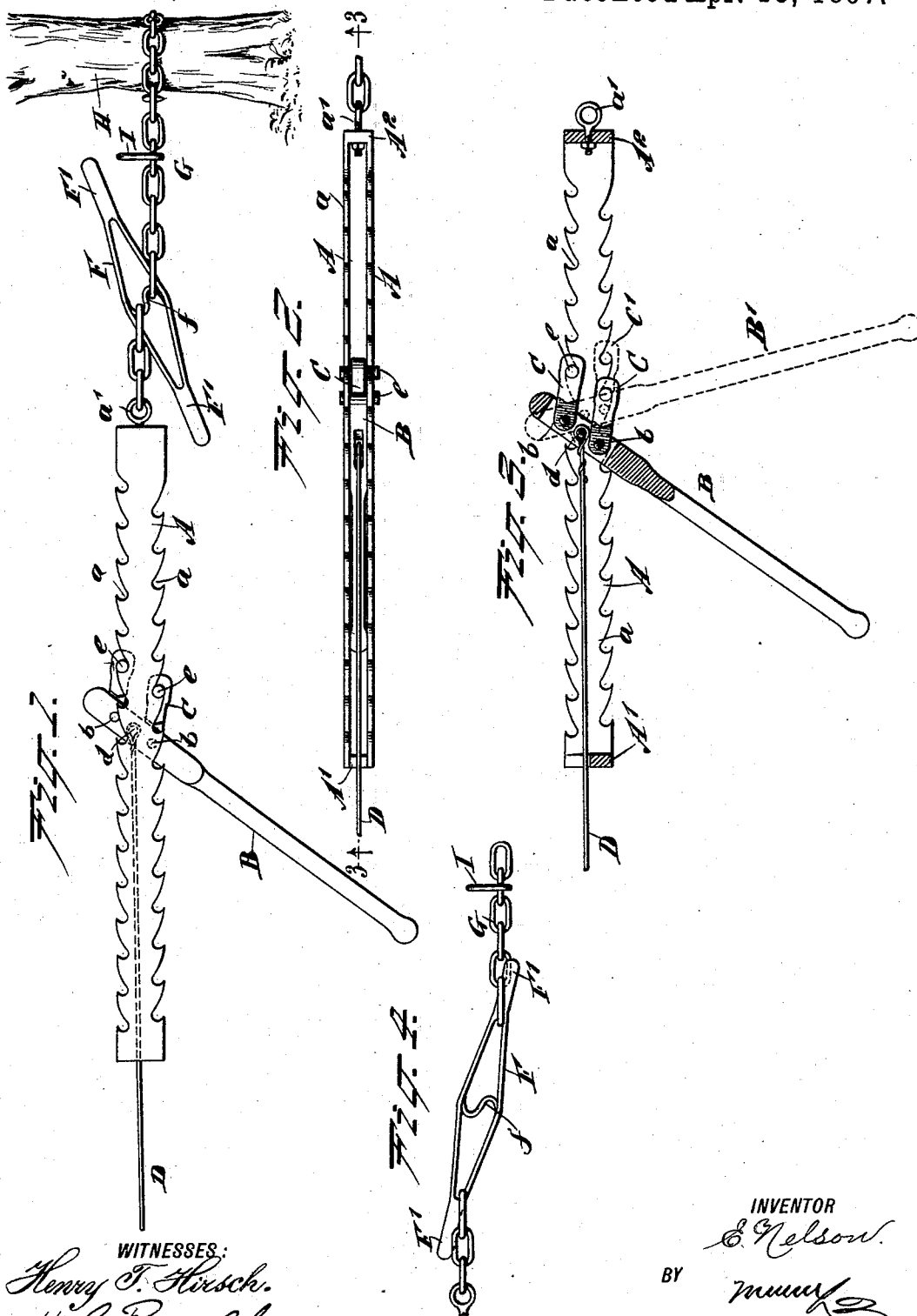


E. NELSON.
STUMP PULLER.

Patented Apr. 13, 1897.



WITNESSES:

WITNESSES:
Henry F. Hirsch.
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BY

mmx/2

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UNITED STATES PATENT OFFICE.

EDGAR NELSON, OF ST. MARY'S, OHIO.

STUMP-PULLER.

SPECIFICATION forming part of Letters Patent No. 580,704, dated April 13, 1897.

Application filed November 11, 1896. Serial No. 611,740. (No model.)

To all whom it may concern:

Be it known that I, EDGAR NELSON, of St. Mary's, in the county of Auglaize and State of Ohio, have invented a new and Improved Stump-Puller, of which the following is a full, clear, and exact description.

My invention relates to an improvement in stump-pullers and in means for releasing the strain upon the draft-rigging.

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

Figure 1 is a side view of my device. Fig. 2 is a plan view of the same. Fig. 3 is a sectional side view of the power mechanism, and Fig. 4 is a side view of the connection between the power mechanism and the anchor.

The object of my invention is to provide a simple and forceful means for applying power, which may be used for pulling stumps or any other purpose requiring a strong power; also, to provide a device, to be made a part of the anchor or connecting means, by which the strain may be released when desired and by which the slack may be partially taken up before commencing the pull.

In making my stump-puller I provide two bars A, of iron, which are toothed upon their sides, as shown at *a*, forming a series of hooked notches, which upon opposite sides alternate with each other and are adapted to receive a pin, as hereinafter described. These two bars are connected at each end by cross-bars A' and A², so that they are held a slight distance from each other, and at one end a staple *a'* or any other suitable means is provided by which the anchor chain or cable may be attached. Between the two bars A is placed the operating-lever B, which has a central pivot *d*, to which a rod, cable, or other draft device D is attached, and upon each side of said lever are pins *b*, to which are attached short links C C, which pins and links may be inserted in a slot in the bar, as is shown in the drawings, or fastened to one side thereof. The outer ends of the links C C are provided with pins *e*, which project beyond the surface of the links, said pins being adapted to engage the hooks *a* upon the bars A.

In the position shown in full lines in Fig. 3 the strain of the pull upon the rod D is car-

ried by the pins *e* of both the links. If now the end of the lever B be moved up to the position shown by the dotted lines at B', the pin *e* upon that side of the bars A will be moved up so that it may engage the next notch *a*. If it is swung back to a position parallel to that shown in full lines, the link upon the opposite side will be moved up so that its pin *e* may engage the next notch upon its side of the bars A. In this way the lever may be advanced step by step until it has traveled the entire length of the bars, carrying with it the draft rod or cable D.

When the device is first placed in position, it is desirable to be able to take up a portion at least of the slack before applying the power in the manner just described. After advancing the lever through the entire length of the bars A it is also desirable to be able to release the same or to slack off on the device. To attain these objects, I have provided the following means: In the anchor-chain I provide a link F, made very long in proportion to its width, and across the center of the link is fixed an S-shaped bar *f*, while the ends of the link are provided with extensions F', projecting beyond the central opening and serving as handles by which the link is readily operated. In the position shown in Fig. 4 the link is extended or slack. If now the ends of the link are reversed, as shown in Fig. 1, the two portions of the chain connected by the link will be drawn together and the slack be taken up. To secure the link in place and provide ready means for casting the same off, a ring I is placed upon the chain G and is adapted to pass over the end of the link F. It will thus hold the link F close to the body of the chain and in a position shown approximately in Fig. 1. In this way the slack may be taken up before commencing the pull, and after a pull has been made the chain G may be slacked off by knocking the ring I off of the end of the link F. The link F and ring I act as a cast-off to provide a certain amount of slack, but not to entirely break the connection between the two parts of the chain.

It is not absolutely necessary that the bar *f*, connecting the two sides of the link, should be of an S shape. It might be made straight, but would not be as satisfactory in operation as it would were it bent as shown.

In Fig. 1, H represents a tree, stump, or any other object to which the device may be anchored.

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

1. In a stump-puller, the combination with draft-bars having hook notches upon opposite edges, a lever having a draft attachment thereto, and links attached to the lever on opposite sides of the draft attachment and provided with pins adapted to engage the notches in the draft-bars, of an anchor-chain or similar device having a slack or cast-off member consisting of an interposed long link having an **S**-shaped bar connecting the middle of opposite sides, and a retaining device attached to the chain and adapted to pass over the end of said long link forming the slack member, substantially as described.

2. In a stump-puller or other device used for producing strain, the combination with a mechanism for applying power, of a tension draft device having interposed therein a slack member consisting of a long link having an **S**-shaped bar connecting its opposite sides, and a retaining device attached to the tension draft device and adapted to hold the ends of the slack member thereto, substantially as described.

3. A slack-controlling member adapted to be interposed in a tension draft device, consisting of a long link having an **S**-shaped bar

connecting opposite sides, and means for securing the link parallel with the draft mechanism, substantially as described.

4. A slack-controlling member adapted to be interposed in a tension draft device, consisting of a long link having an **S**-shaped bar connecting its opposite sides, draft-rings connected to the ends of the bar, and means for securing the link in position with the draft-rings engaging the **S**-shaped connecting-bar, substantially as described.

5. A slack-controlling member adapted to be interposed in a tension draft device, consisting of an elongated link having lever extensions at its ends, an **S**-shaped bar connecting opposite sides of the link, a draft-ring in each end of the bar, and means for securing the said link with the draft-rings engaging the **S**-shaped connecting-bar, substantially as described.

6. A slack-controlling member adapted to be interposed in a tension draft device, consisting of an elongated link having lever extensions at its ends, an **S**-shaped bar connecting opposite sides of the link, a draft-ring in each end of the said bar, and a retaining device upon the draft device and adapted to pass over the end of the slack-controlling member, substantially as described.

EDGAR NELSON.

Witnesses:

AUGUST SCHELBY,
JOHN H. KOENIG.