

No. 767,048.

PATENTED AUG. 9, 1904.

M. FOSHEE.
SAWING DEVICE.

APPLICATION FILED APR. 30, 1904.

NO MODEL.

FIG. I.

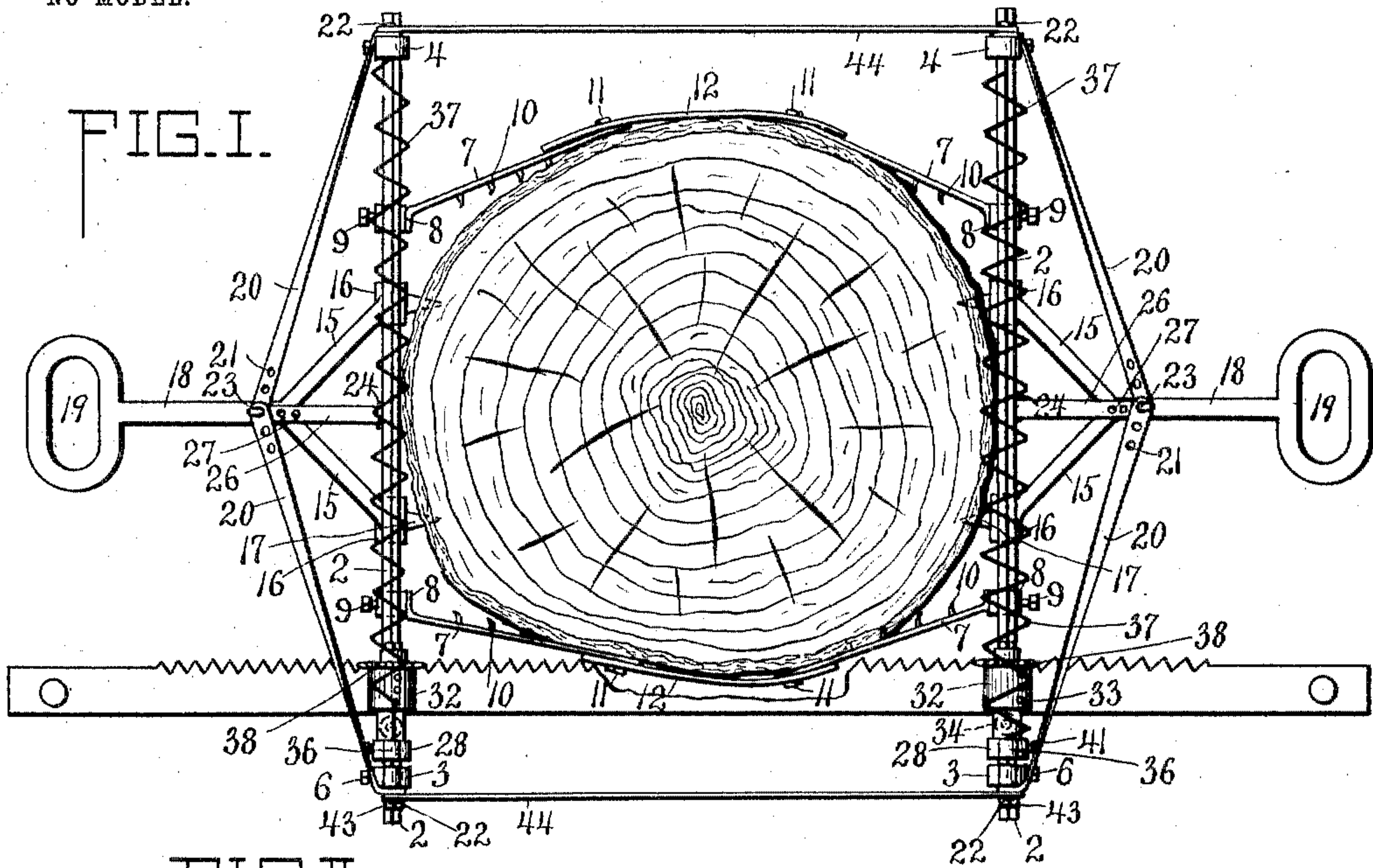


FIG. II.

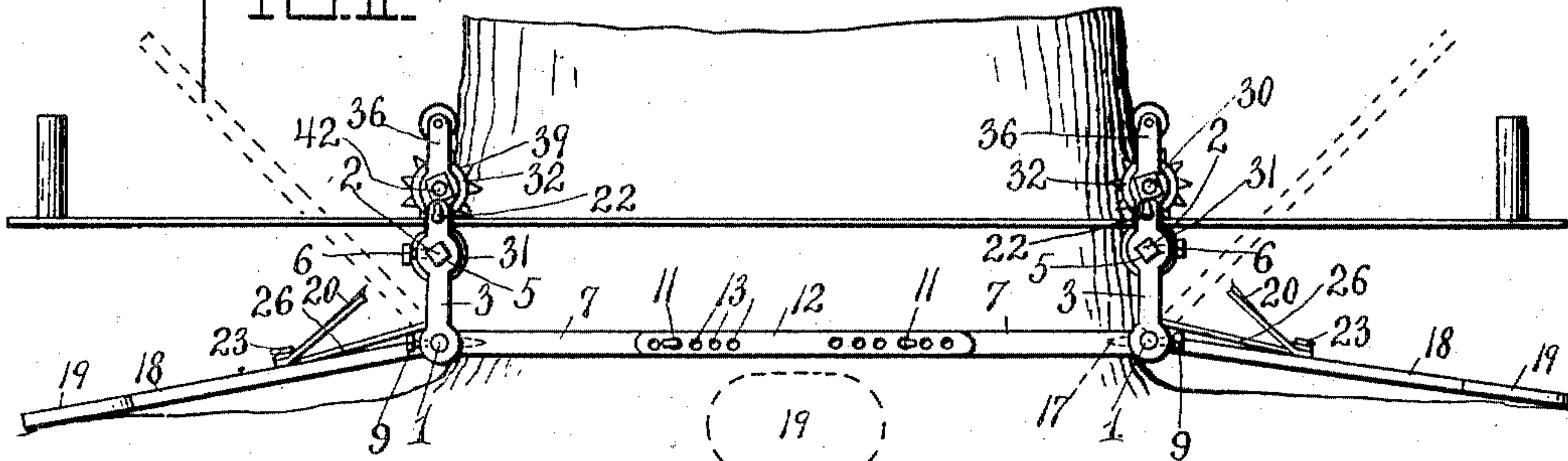


FIG. III.

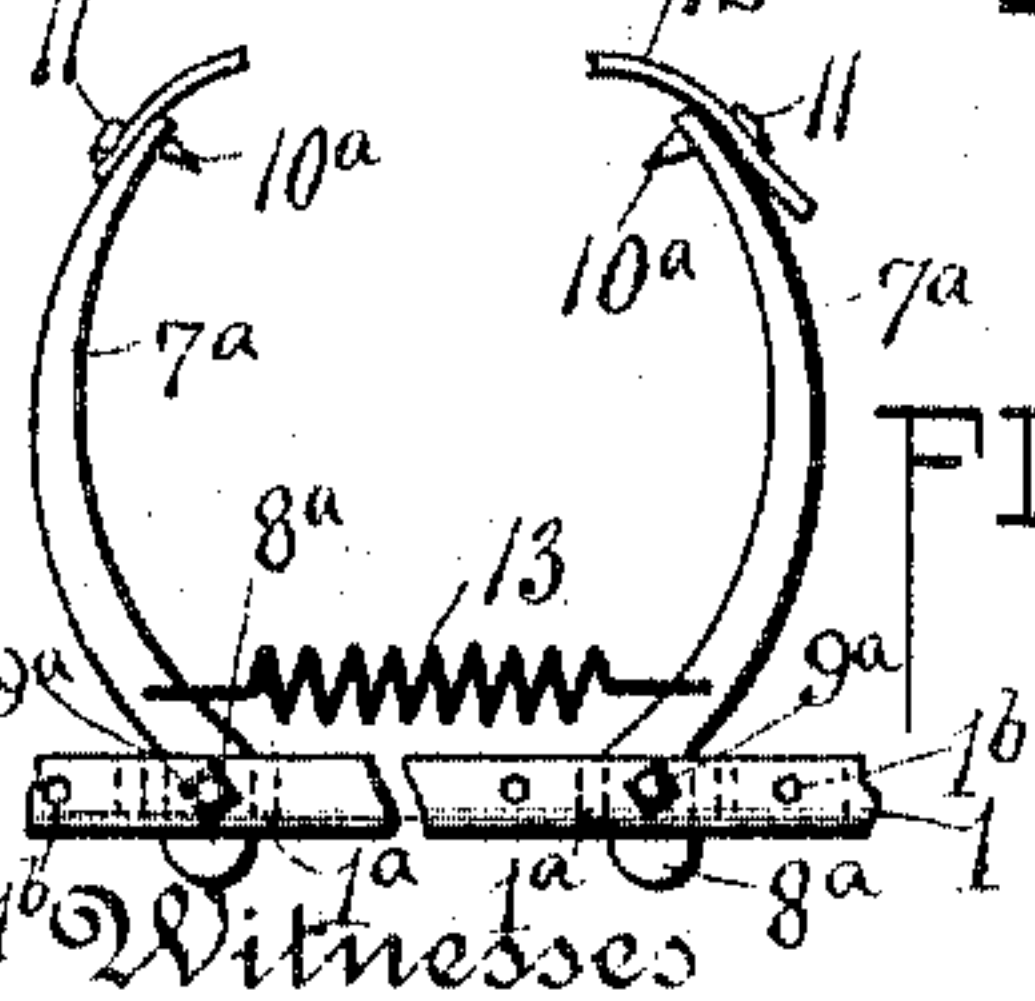
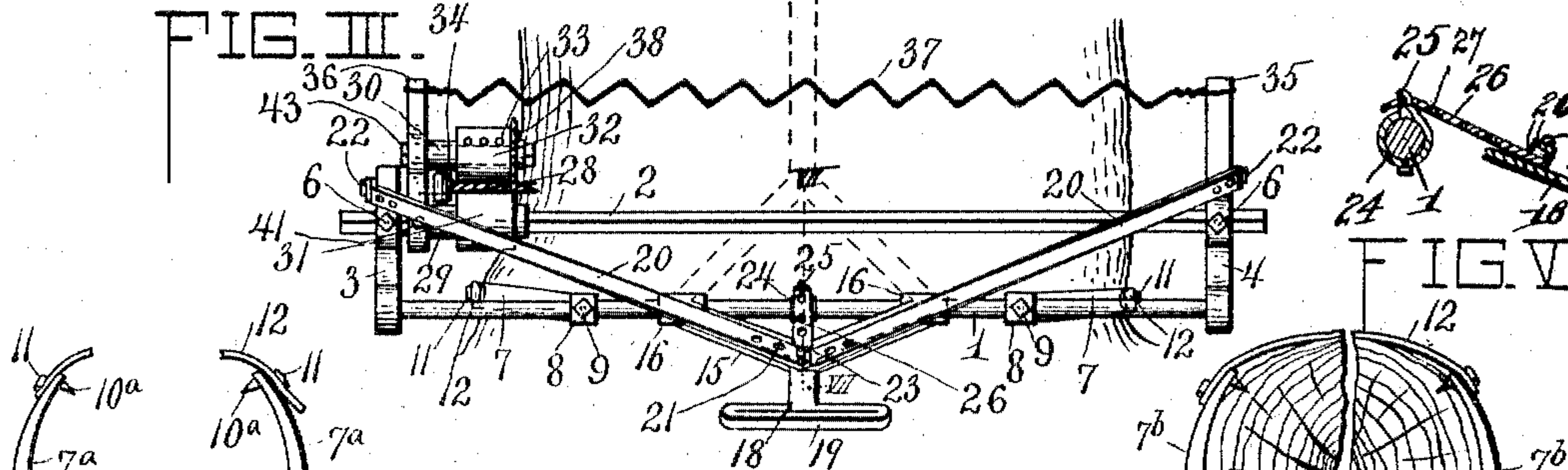
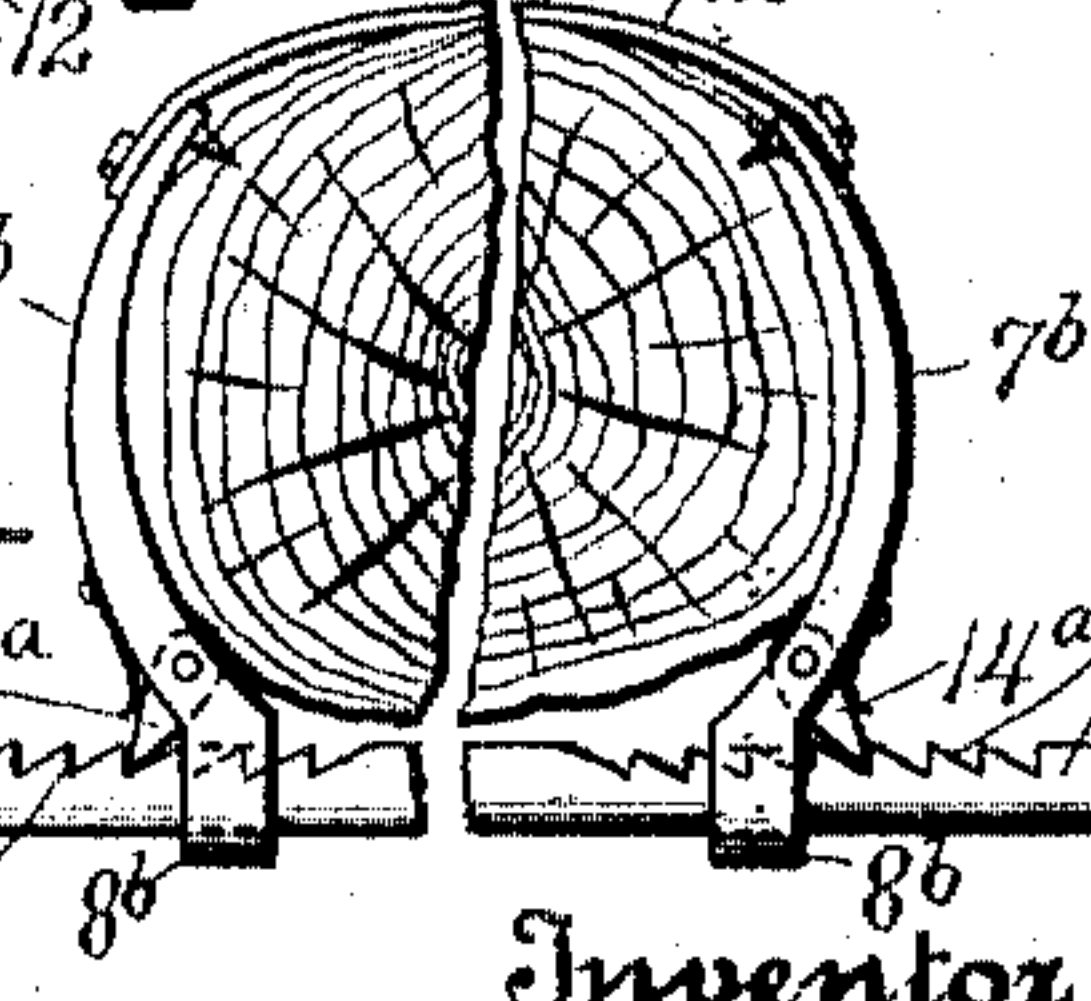


FIG. V.

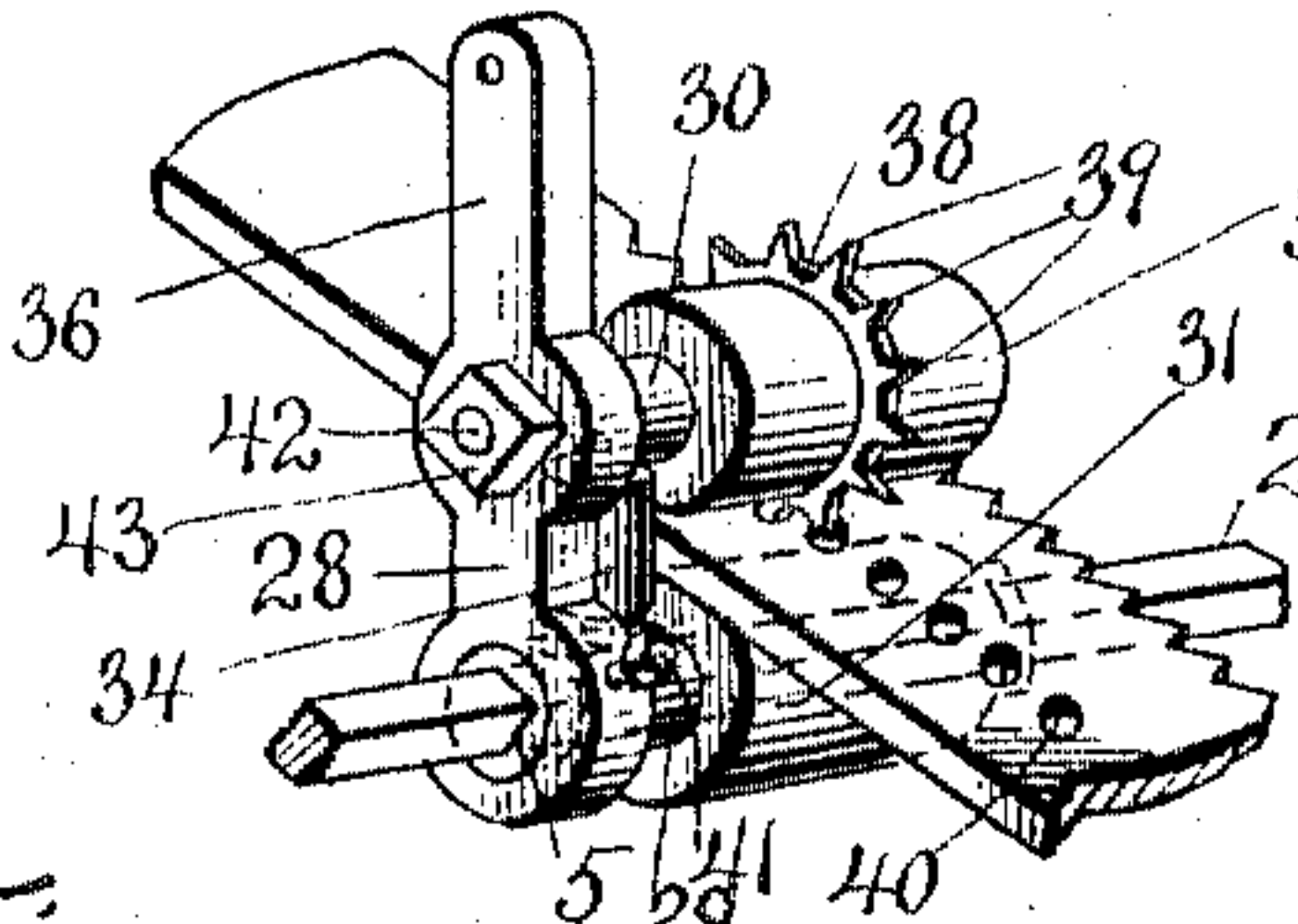
FIG. IV.

FIG. VI.

FIG. VII.



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SAWING DEVICE.

SPECIFICATION forming part of Letters Patent No. 767,048, dated August 9, 1904.

Application filed April 30, 1904. Serial No. 205,650. (No model.)

To all whom it may concern:

Be it known that I, MASON FOSHEE, a citizen of the United States of America, and a resident of Chapman, in the county of Butler and State of Alabama, have invented certain new and useful Improvements in Sawing Devices, of which the following is a specification.

My invention is an improvement on those sawing devices which are employed for felling trees or cutting posts, piles, or similar objects transversely or crosswise.

One object of my invention is to provide an improved sawing device which is adapted to work very near to the ground on the tree to be felled.

Another object of my invention is to provide means for adjusting the arms, which extend from the main frame and embrace the tree to be felled.

Another object of my invention is to provide a main frame with improved means for interlocking it with the tree to be felled.

Another object of my invention is to provide an improved roller-slide for the saw.

Another object of my invention is to provide means whereby the upper roller can be positively moved by and connected or geared with the saw.

Another object of my invention is to provide improved means for advancing the slide as the saw accomplishes its work.

With these and other objects in view my invention consists in novel features of construction hereinafter described and claimed.

In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure I is a top plan view of a pair of my improved sawing devices in operative position. Fig. II is a front elevation thereof. Fig. III is a side elevation of the same. Fig. IV is a detail perspective view of a saw-slide. Fig. V is a plan view of a pair of spring-connected pivoted hooks for embracing a tree, post, pile, or similar object to be cut. Fig. VI is a plan view of a pair of sliding hooks for embracing a tree, post, pile, or similar object to be cut, having spring pawl and ratchet adjustment. Fig. VII is a detail vertical sec-

tion of the intermediate lug, taken on the line VII VII of Fig. III.

In carrying out my invention I provide a main frame constructed with a fixed lower bar 1, circular in transverse section, with a removable upper bar 2, located parallel with the lower bar 1, square or non-circular in transverse section, and with end posts 3 4, rigidly and fixedly connected with the lower bar 1, each post having a non-circular or square opening 5, in which the upper bar 2 is supported and adapted to slide, so as to be readily removed or adjusted.

6 represents set-bolts extending through the posts and into the openings 5 for the purpose of bearing upon the upper bar 2 and holding it rigidly to its adjustment. Between the posts 3 4 on the lower bar 1 I mount two inwardly-curved spring-steel arms 7, whose inner ends 8 are adapted to slide on the lower bar 1 and are adjustably held at the desired distance apart by means of set-bolts 9, bearing at their inner ends on the lower bar 1. These arms 7 are adapted to embrace and lap around a tree, post, pile, or similar object, and to enable them to tightly grasp the tree more firmly I provide each of them on their inner sides with a series of inwardly-curved pointed teeth 10, adapted to penetrate the surface of the tree, so as to anchor the frame thereto. On the outer sides of these arms 7 are secured buttons or hooks 11.

12 represents flexible steel strips having a series of holes 13 near their ends adapted to receive the hooks or buttons 11, so as to connect the outer ends of the arms 7 adjustably together and provide, with the arms 7, a support for encircling the tree. Instead of the spring-steel arms 7 I may substitute therefor the inwardly-curved rigid arms 7^a, (shown in Fig. V,) whose inner ends 8^a are pivoted to and adjustable at the desired distance apart on the lower bar 1 in slots 1^a by means of bolts 9^a, which may be inserted in coinciding holes 1^b in the lower bar 1. The outer ends of these arms 7^a are provided on their inner sides with teeth 10^a and are also provided on their outer sides with similar buttons or hooks 11 to those on the spring-steel arms 7, which receive the perforated ends of the steel strips 12 for con-

necting their outer ends together. The inner ends of the arms 7^a are coupled by a coil-spring 13 for the purpose of drawing or closing them together toward the tree to which they may be applied.

In Fig. VI, I show another means for adjustably mounting the arms on the lower bar, in which 7^b represents arms having their inner ends 8^b adapted to slide on the lower bar 1, which is formed with oppositely-disposed series of ratchet-teeth 14 on the inner side, with which the spring pawls or ratchets 14^a, pivoted to the inner ends 8^b of the arms, are adapted to engage. Mounted on the lower bar 1 between the embracing arms is a lever-frame having inwardly-diverging arms 15, formed at their inner ends with sleeves 16, adapted to rock on the lower bar 1. These sleeves 16 are each provided with an inwardly-projecting tine 17, adapted to penetrate the surface of the tree to which the device is applied, so as to hold down the main frame when the lever-frame is brought from a vertical position to a horizontal position, at the same time drawing the embracing arms outward and causing their curved pointed teeth 10 to be embedded in the surface of the tree, thus firmly holding the device to the tree. For facilitating the manipulation of the lever-frame I provide it with an outwardly-extending arm 18, having a broad handle 19, whereby it may be grasped and lowered to insert the tines in the surface of the tree, the handle being pressed down by the foot of the operator if additional power is required to force the tines 17 farther into the surface of the tree.

20 represents flexible steel strips for bracing the lever-frame to the main frame, having a series of holes 21 at each end adapted to engage buttons or hooks 22 on the posts 3 4 of the main frame and a button or hook 23 on the lever-frame.

24 is a lug intermediate of the end posts 3 4, having a button or hook 25 at its upper end and rigidly secured to the lower bar 1. Extending from this intermediate lug is a flexible steel strip 26, having a series of holes 27 in its ends and adapted to engage the button or hook 23 on the lever-frame and the button or hook 25 on the intermediate lug 24 for holding the lever-frame in elevated position. Mounted on the upper bar 2 of the main frame and adapted to travel thereon is a slide 28, having a lower sleeve-journal 29 and an upper journal 30.

31 is a lower roller mounted loosely on the journal-sleeve 29, and 32 is an upper hollow guide-roller loosely mounted on the upper journal 30 and adapted to contain a lubricant, which is fed through perforations 33 in its periphery during its rotation.

34 is a vertically-arranged guide-roller journaled on a perpendicular axis to the lower sleeve-journal 29 and upper journal 30, respectively, to provide a bearing for the back

of a thin flexible crosscut-saw, which travels on the lower roller 31 and is held down by the upper guide-roller 32. The end post 4 in advance of the saw has an upward extension 35, while the slide 28 has an upper extension 36.

37 is a tension-spring secured at one end to the post extension 35 and at the other end to the slide extension 30 for the purpose of drawing or pulling on the slide 28 to advance it as the saw cuts through the tree to accomplish its work. The upper guide-roller 32 is provided with a ring 38, fixed thereto so as to rotate therewith, having radial projections 39, which are spaced apart so as to fit into the intervals between the saw-teeth and follow the saw as the latter is reciprocated.

If preferred, as shown in Fig. IV, the saw is provided with a longitudinal series of perforations 40 in the body thereof, and the ring 38 is located in such a position on the upper guide-roller 32 that its radial projections 39 will register with the perforation 40, so as to cause the upper guide-roller 32 to follow the saw in a similar manner to the previously-described arrangement in which the projections 39 work between the teeth of the saw. The lower sleeve-journal 29 is fixed to the slide 28 by a set-bolt 41, while the upper journal 30 has a screw-threaded inner end 42 extending through the slide 28 and is fastened by a nut 43. Where a pair of my sawing devices are employed, they may be additionally braced by tie-strips 44, whose ends are secured to the end posts 3 and 4 by the bolts 22.

When it is desired to fell a tree, the arms of the device are opened out and the device is pushed up against the tree and the arms made to embrace or inclose the tree as close to the ground as may be desired, with the lever-frame in perpendicular position. The latter is next depressed by taking hold of its handle 19, which forces its tines 17 and the hooked teeth of the arms 10 into the surface of the tree. The lever-frame is then held down by the foot of the operator, thus rigidly attaching the device to the tree. This rigidity of the device is increased by connecting a flexible steel strip 12 to the ends of the arms to provide an encircling guide. When the device is fastened to the tree so that the arms and connecting-strip together encircle the tree, the thin flexible crosscut-saw is placed between the horizontal rollers 31 32, and the operator can saw easily and rapidly without stooping and in a perfectly straight line and with less friction than is the case ordinarily. If a tree of large diameter is to be felled, I apply two devices at opposite sides of the tree in a similar manner and connect the arms of the devices together at opposite sides of the tree by means of steel strips 12.

My improved sawing device can be used to advantage in sawing stumps below the ground when dug around.

Having thus described my invention, the

following is what I claim as new therein and desire to secure by Letters Patent:

1. A sawing device comprising a main frame having arms adapted to lap and tightly embrace a tree, and a lever-frame having tines and mounted on the main frame transversely of the latter for interlocking the main frame and arms with the tree and holding down the main frame.

2. A sawing device comprising a main frame having arms provided with teeth and adapted to lap and tightly embrace a tree, and a lever-frame having tines and mounted on the main frame transversely of the latter for interlocking the main frame and arms with the tree and holding down the main frame.

3. A sawing device comprising a main frame having adjustable arms provided with teeth and adapted to lap and tightly embrace a tree and a lever-frame having tines and mounted on the main frame transversely of the latter for interlocking the main frame and arms with the tree and for holding down the main frame.

4. A sawing device comprising a main frame having arms adapted to lap and tightly embrace a tree, a strip whereby the arms are connected, and a lever-frame having tines and mounted on the main frame transversely of the latter for interlocking the main frame and arms with the tree and holding down the main frame.

5. A sawing device comprising a main frame having arms adapted to lap and tightly embrace a tree, a strip having adjustable connection with the arms, and a lever-frame having tines and mounted on the main frame transversely of the latter for interlocking the main frame and arms with the tree and holding down the main frame.

6. A sawing device comprising a main frame having means for embracing a tree, a lever-frame having tines and mounted on the main frame for interlocking the latter with the tree, and holding down the main frame, and bracing-strips extending from the ends of the main frame to the lever-frame.

7. A sawing device comprising a main frame having means for embracing a tree, a lever-frame having tines and mounted on the main frame for interlocking the latter with the tree and holding down the main frame and bracing-strips extending from the ends of the main frame and adjustably connected to the lever-frame.

8. A sawing device comprising a main frame having means for embracing a tree, a lever-frame having tines and mounted on the main frame transversely of the latter for interlocking the main frame with the tree and holding down the main frame, a lug on the main frame intermediate of the ends of the latter and a strip whereby the lever-frame is upheld by the lug.

9. A sawing device comprising a main frame having means for embracing a tree, a lever-

frame having inwardly-diverging arms provided with sleeves whereby it is mounted on the main frame, tines on the sleeves for interlocking the main frame with the tree, an outwardly-extending arm, for depressing the lever-frame, and a handle on the arm for holding down the lever-frame.

10. A sawing device comprising a main frame having arms adapted to lap and tightly embrace a tree and support the main frame on the tree, a slide mounted on the main frame, having lower and upper journals, rollers mounted on the lower and upper journals, and between which the saw operates, and means for advancing the slide as the saw accomplishes its work.

11. A sawing device comprising a main frame having arms adapted to lap and tightly embrace a tree and support the main frame on the tree, a slide mounted on the main frame, having lower and upper journals, rollers mounted on the lower and upper journals, and between which the saw operates, a vertical roller journaled in the lower and upper journals at the rear of the lower and upper rollers and means for advancing the slide as the saw accomplishes its work.

12. A sawing device comprising a main frame having arms adapted to lap and tightly embrace a tree and support the main frame on the tree, an adjustable bar supported on the main frame, a slide mounted on the adjustable bar and having lower and upper journals, a roller mounted on the lower journal, a roller mounted on the upper journal, and means for advancing the slide as the saw accomplishes its work.

13. A sawing device comprising a main frame having means for embracing a tree, a slide mounted on the main frame, having lower and upper journals, a roller mounted on the lower journal, a roller mounted on the upper journal and having a ring provided with radial projections whereby it is geared to the saw, and means for advancing the slide as the saw accomplishes its work.

14. A sawing device comprising a main frame having means for embracing a tree, a slide mounted on the main frame, having lower and upper journals, a roller mounted on the lower journal, a roller mounted on the upper journal and having a ring provided with radial projections, a saw having a longitudinal series of perforations with which the radial projections engage, and means for advancing the slide as the saw accomplishes its work.

15. A sawing device comprising a main frame having arms adapted to lap and tightly embrace a tree and support the main frame on the tree and an end post provided with an upward extension, a slide having an upward extension, means carried by the slide adapted to engage the back of the saw and a journal and mounted on the main frame, a roller mounted on the journal, and a spring whereby the ex-

tension on the frame is connected with the extension on the slide, whereby the latter is advanced as the saw accomplishes its work.

16. A sawing device comprising a main frame
5 having a lower bar, an upper bar and end posts, arms secured to the lower bar for embracing a tree, a lever-frame having tines mounted on the lower bar between the arms, a slide mounted

on the upper bar having rollers between which the saw operates, and means for advancing the slide as the saw accomplishes its work. 10

MASON FOSHEE.

Witnesses:

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A. A. CALLOWAY.