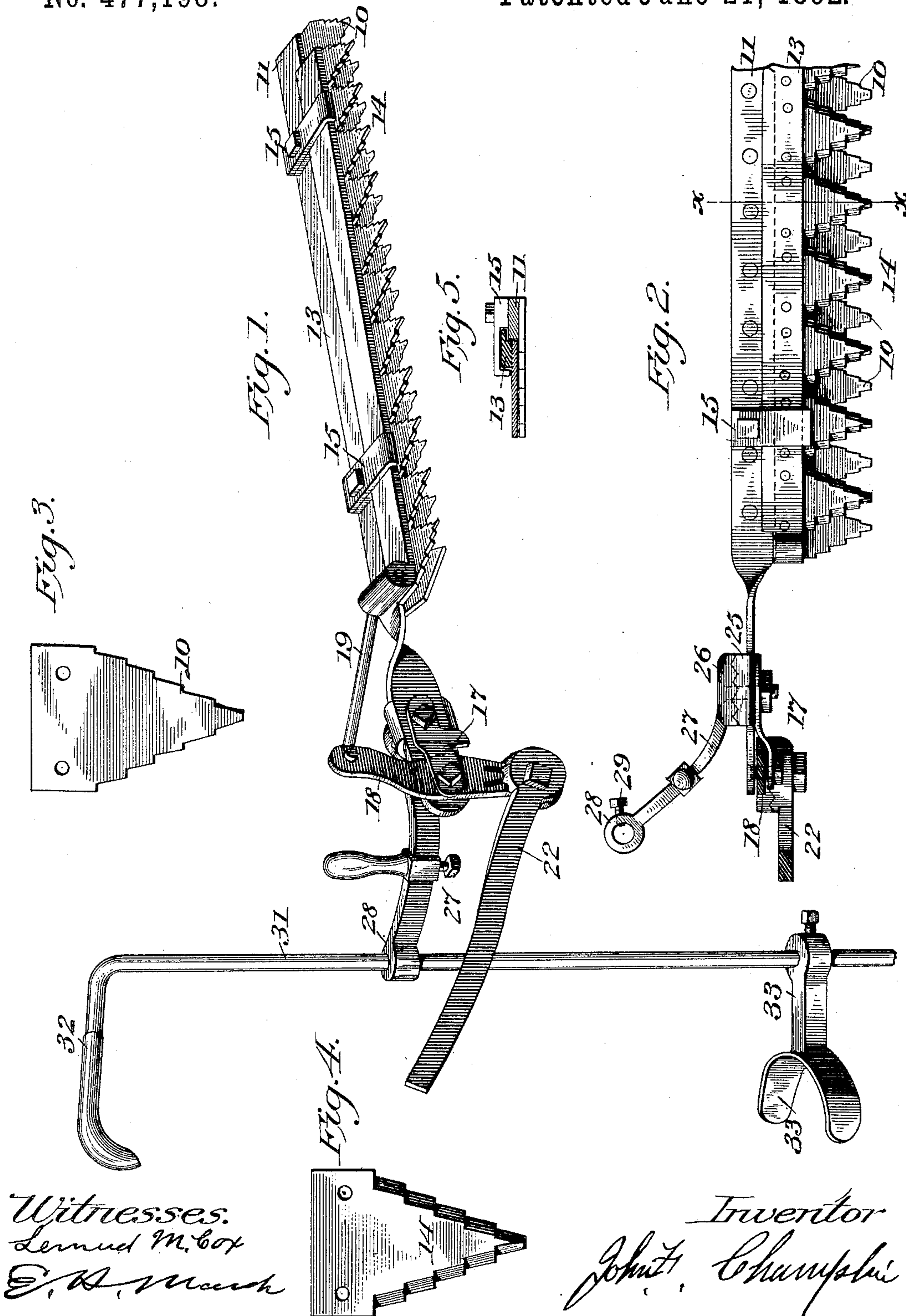


(No Model.)

J. F. CHAMPLIN.
HEDGE CUTTING MACHINE.

No. 477,198.

Patented June 21, 1892.



Witnesses:
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JOHN F. CHAMPLIN, OF CEDAR VALE, KANSAS.

HEDGE-CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 477,198, dated June 21, 1892.

Application filed June 7, 1890. Serial No. 354,655. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. CHAMPLIN, a citizen of the United States, residing at Cedar Vale, in the county of Chautauqua and State of Kansas, have invented a new and useful Hedge-Trimming Machine, of which the following is a specification.

My invention relates to a machine operated by a jointed and adjustable lever and capable of trimming the top and sides of hedges and cutting hard or dry sprouts or twigs. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the device. Fig. 2 is a plan view, the knife-operating lever being in section and the connecting-rod and upper end of lever being removed. Fig. 3 is a top plan view of a lower knife-blade. Fig. 4 is a top plan view of an upper knife-blade; and Fig. 5 is a sectional view of the cutter-bars on the line *x x*, Fig. 2, showing the bearing of the upper bar 13 upon the front edge of the lower bar 11 and also the plate-bearings 15.

The lower knives 10 are secured permanently on the under side of the body-bar 11, which is twisted near the inner edge of the inner knife and bent slightly downward, causing the side faces of the inner extremity to stand at a right angle to the top and bottom faces of said bar. The upper faces of the lower knives are flat, and over them in a line with one longitudinal edge of the bar 11 a second bar 13 is held to slide, having secured to its under side a series of knives 14, their flat faces contacting with the corresponding faces of the lower knives.

In order to cause the bearing to press the edges of the knives together more firmly, the under side of the bar 13 at the back edge is planed out, which enables said bar to project back upon the front edge of bar 11, as shown in Fig. 5.

The usual guide for this character of cutter is dispensed with and plates 15 are secured to the upper surface of bar 11, which plates extend at a right angle therefrom over the sliding bar 13, being turned downward at their extremities to contact with the front edge of said bar.

In order that the twigs or sprouts to be cut may not slip out from the knives until sev-

ered, the angle of the knife is reduced by forming short offsets in the edges, as shown in Figs. 3 and 4.

Near the inner end of the body-bar 11 an angled bracket 17 is secured, preferably by a bolt and nut, and between the contiguous faces of the bracket and body-bar a lever 18 is fulcrumed, the upper end of which lever is connected with the inner end of the sliding knife-bar 13 by a pitman 19. The lever is provided with an adjustable joint below and near the fulcrum, each part having a clutch-faced disk. The two clutch-faces are held in adjustable contact by a suitable bolt and nut or equivalent fastening device. The outer end of the jointed lever forms the handle 22. The movements of the lever 18 are limited by the latter coming in contact with the top and bottom parts of brackets 17. Upon the back of the body-bar 11, near its inner end, a clutch outer face 25 is formed, which is engaged by a clutch-surface 26, formed upon one end of a supporting-arm 27. The clutch-faces of the arm and bar are held in contact by the bolt and nut, which secures the bracket 17 to the body-bar. The supporting-arm 27 is carried outward from the bar 11, and is provided at its extremity with a socket 28 and a set-screw 29, and on the supporting-arm a handle is secured, made to slide out or in on the arm to suit the convenience of the operator and to be held in place by tightening a nut on the top of said handle. Through the socket 28 a round supporting-rod 31 is passed provided at the upper end with a padded crook 32, adapted to fit over the left shoulder of the operator, and upon the lower end of rod 31 a socket and set-screw with a short arm 33, connected with a semicircular plate 34, is attached adapted to fit against the thigh of the operator. The clutch-joint attaching the supporting-arm 27 and the body-bar 11 is adjustable, in order to place the cutter-bar in any position to trim the top or sides of a hedge, and the similar joint connecting the lever and handle is to adjust the handle of the lever to the convenience of the operator when the position of the cutter-bar is changed.

It is evident that slight changes in the construction and relative arrangements of the parts of my invention might be resorted to without departing from the spirit of my in-

vention, and hence I would not restrict myself to the exact construction and arrangements of parts shown and described; but,

Having fully described my invention, what
5 I claim as new, and desire to secure by Letters Patent, is—

1. In a hedge-trimmer, the combination, with a fixed body-bar having secured thereto a series of knives, of a carrying-bar also pro-
10 vided with knives and held to slide over the fixed knives, a plate attached to the body-bar contacting with and guiding the sliding bar, a lever fulcrumed upon the body-bar and connected with the sliding bar, and a handle ad-
15 justably secured to said lever, substantially as shown and described.

2. In a hedge-cutter, the combination, with a fixed body-bar, knives secured thereto, a knife-carrying bar held to slide over fixed
20 knives, and plates secured to the body-bar contacting with and guiding the sliding bar, of a lever fulcrumed upon the body-bar, a con-

nection between one end of the lever and the sliding bar, a handle adjustably secured to the other end of the lever, and a supporting-
25 arm adjustably attached to the body-bar, substantially as and for the purposes specified.

3. In a hedge-trimmer, the combination, with a stationary knife-bar, of a sliding knife-
30 bar, a lever fulcrumed upon the stationary bar, a handle adjustably secured to the lever, a connection between the lever and sliding knife-bar, a supporting-arm adjustably secured to the body-bar, an attaching-rod ad-
35 justably secured to the supporting-arm provided with a crooked upper end, and a curved hip-plate adjustably attached to the lower part of said attaching-rod, substantially as shown and described.

JOHN F. CHAMPLIN.

Witnesses:

L. P. CROAKER,
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