

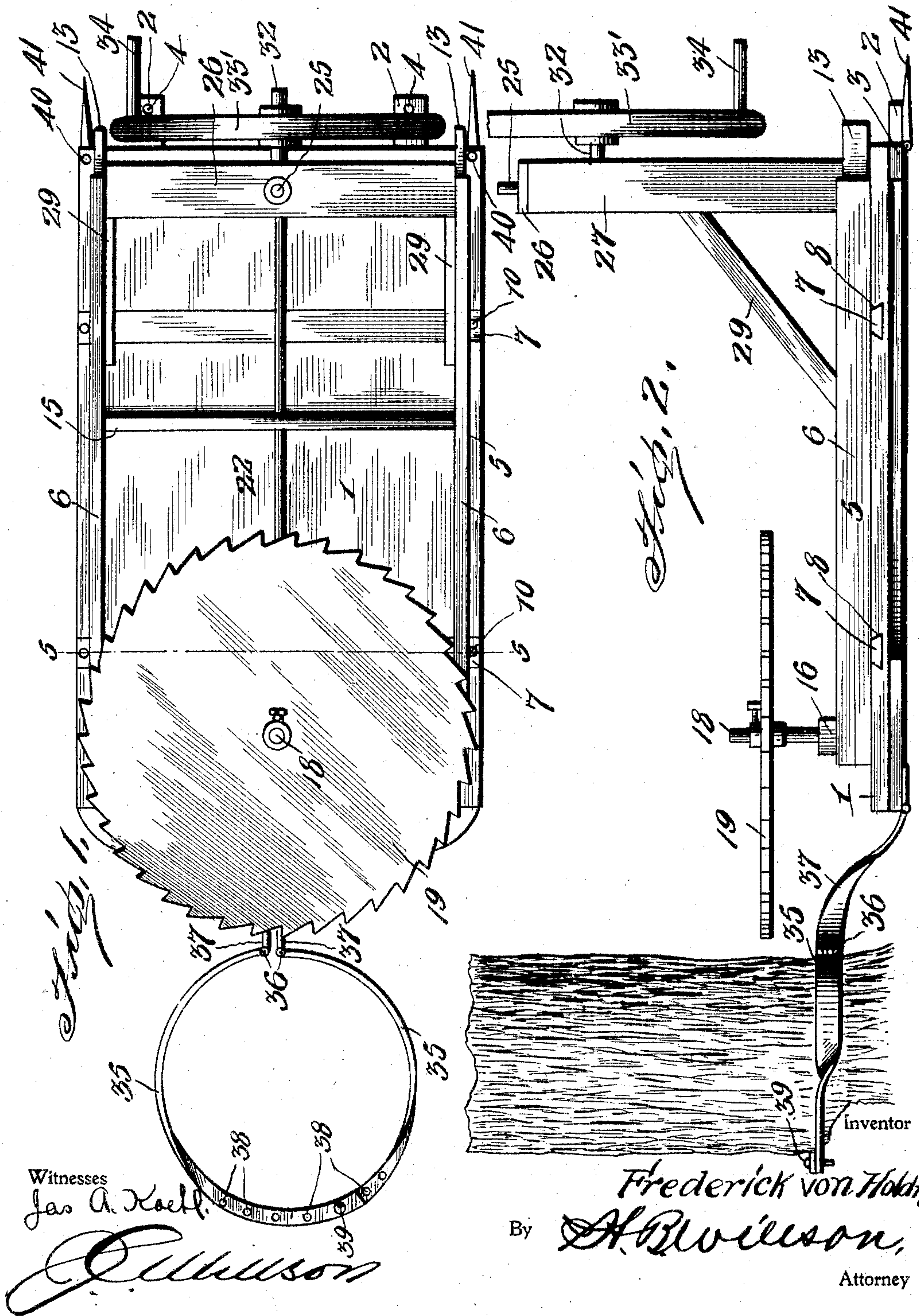
No. 776,743.

PATENTED DEC. 6, 1904.

F. VON HOLDT.
CIRCULAR SAW MACHINE.
APPLICATION FILED JAN. 28, 1904.

NO MODEL.

2 SHEETS—SHEET 1.



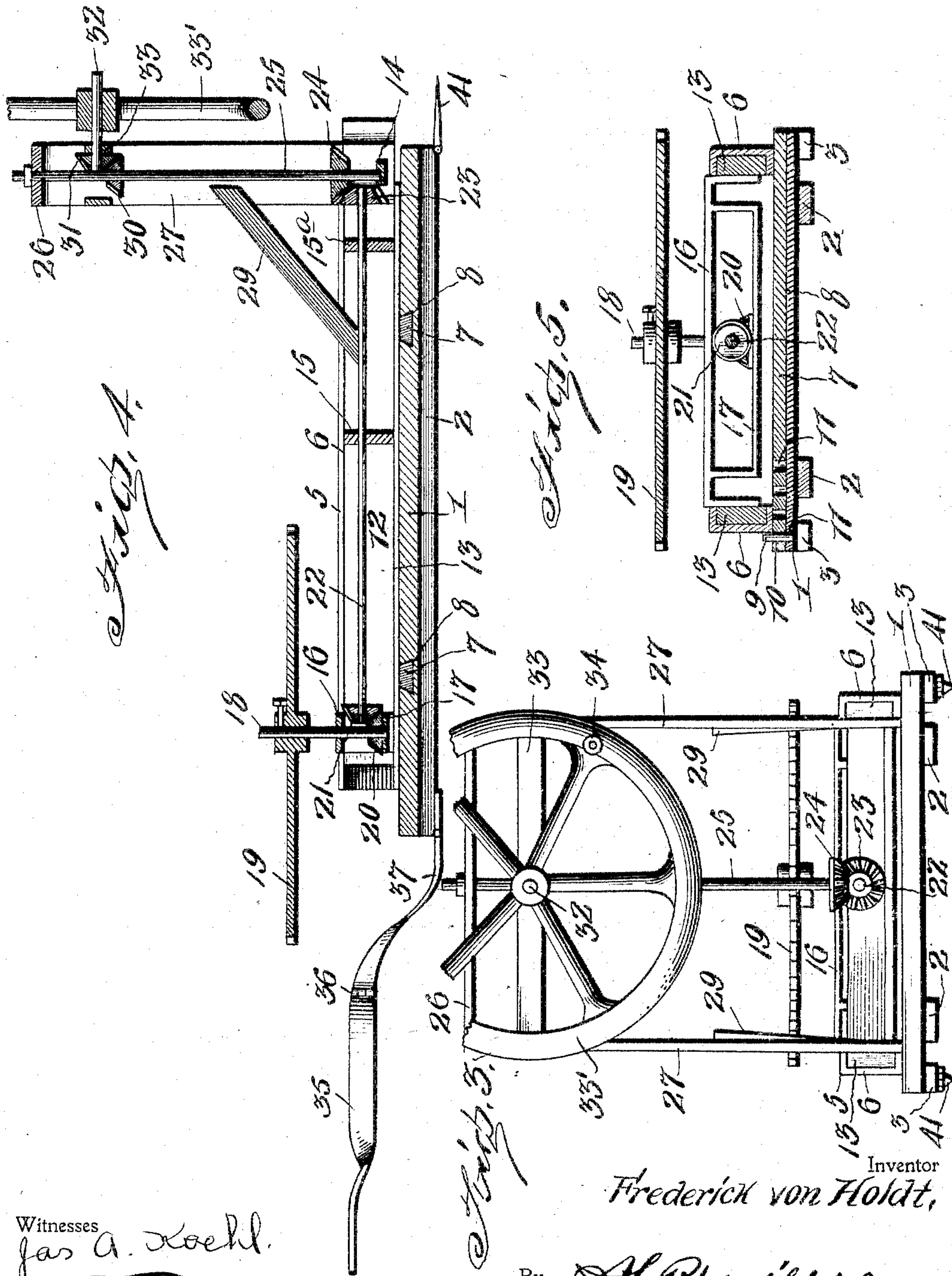
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Witnesses
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UNITED STATES PATENT OFFICE.

FREDERICK VON HOLDT, OF DENVER, COLORADO.

CIRCULAR-SAW MACHINE.

SPECIFICATION forming part of Letters Patent No. 776,743, dated December 6, 1904.

Application filed January 28, 1904. Serial No. 191,047. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK VON HOLDT, a citizen of the United States, residing at Denver, in the county of Denver and State of Colorado, have invented certain new and useful Improvements in Circular-Saw Machines; and I do 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.

My invention relates to improvements in circular-saw machines of the portable type adapted for felling timber.

The object of my invention is to provide a machine of this character which will be simple in construction, durable in use, efficient in operation, and comparatively inexpensive to manufacture.

With this and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a top plan view of my improved circular-saw machine. Fig. 2 is a side elevation of the same. Fig. 3 is an end elevation. Fig. 4 is a vertical longitudinal section. Fig. 5 is a vertical transverse section taken on the line 5 of Fig. 1.

Referring to the drawings by numerals, 1 denotes a base provided upon its under side with longitudinally-disposed runners 2 and corner-blocks 3, by means of which runners and blocks it is enabled to rest firmly upon the ground and at the same time to be readily transported. The runners 2 project beyond the rear end of the base and are formed with openings 4, in which a suitable draft device or appliance may be engaged when it is desired to move the machine from place to place. Mounted upon the upper side of the base 1 is a transversely-adjustable frame 5, comprising two longitudinally-disposed channel-iron beams or bars 6, secured upon cross-beams 7, which have a sliding engagement with the base to permit the frame 5 to be moved transversely upon the same. This sliding connection is preferably effected by having the bev-

eled edges of the cross-bars engage transversely-disposed dovetailed grooves 8, formed in the base, and said cross-bars may be secured in any adjusted position in said grooves by passing pins 9 through alining openings or apertures 10 and 11, formed, respectively, in the cross-bars and in the grooves of the base. Mounted to slide longitudinally in the guide-frame 5 is a saw-carriage in the form of a horizontally-disposed frame 12, which comprises two longitudinal side bars 13, connected by cross-bars 14 and 15 and by a bridge-bar 16. The side bars 13 engage and slide in the channel bars or beams 6 of frame 5, as shown in Figs. 3 and 5 of the drawings. The bridge-bar 16 is disposed adjacent to the front end of the frame or carriage 12 and has depending from its under side a bracket 17, in which and the bridge-bar a vertical saw arbor or shaft 18 is journaled. The circular saw 19 is secured upon the upper end of this shaft, and upon its lower portion between said bridge-bar and bracket is secured a beveled gear 20, which is in mesh with a similar gear 21, secured upon one end of a horizontally and longitudinally disposed shaft 22, journaled centrally in the cross-bars 15 and 15^a. The opposite end of said shaft has secured to it a beveled gear 23, adapted to mesh with a similar gear 24 upon a vertical shaft 25, journaled at its lower end in a cross-bar 14 and at its upper end in a cross-bar 26, connecting the upper ends of vertical standards or uprights 27, secured upon the inner sides of the side bars 13 at a point above the cross-bar 14. These uprights 27 and cross-bar 26 form a vertically-disposed frame which is strengthened by diagonal braces 29, connecting said uprights and the side bars 13. Secured adjacent to the upper end of the shaft 25 is a beveled gear 30, which meshes with a similar gear 31 upon the inner end of a horizontal shaft 32, journaled in a cross bar or brace 33, connecting said uprights 27. Upon the outer end of said shaft 32 is a fly-wheel 33', provided with a handle 34, by means of which the same may be rotated to impart motion to the circular saw through the intermediate gearing just described.

The machine is attached to the tree that is

desired to be felled by hooks 35, which have their inner ends pivoted or hinged, as at 36, to the outer ends of curved arms 37, secured upon the under side of the base 1 at its front 5 end and extending forwardly, inwardly, and upwardly to permit the curved hooks 35 to be swung back under the saw when it is desired to engage them with a tree. Said hooks, which are designed to surround the trunk of 10 the tree, are semicircular-shaped pieces of metal twisted at about their centers so that their inner ends lie in a vertical plane and their outer ends in a horizontal plane. Said outer ends are adapted to be secured together 15 by a pin 39 passed through openings or apertures 38 formed therein, as shown. The corners of the base 1 are formed with openings 40, through which a pin or stake may be driven into the ground to hold the machine 20 steady while in operation. Upon the under side of the base 1 at each of its corners is a hinged pin or stake 41, which is used to support the base in a horizontal position when the ground is uneven or inclined by being 25 driven into the earth a sufficient distance.

The operation and advantages of the machine will be readily understood from the foregoing description, taken in connection with the accompanying drawings. When it is de- 30 sired to cut or fell a tree, the machine, with its hooks 35 swung to their open position, is pushed up as close to the tree-trunk as possible and the said hooks are then closed and fastened by means of the pin 39, as previ- 35 ously explained. The base 1 is then made stationary in a horizontal position by means of the hinged pins 41 or by pins or stakes driven into the ground through the openings 40. By 40 shifting the saw-carriage 12 longitudinally in its guide-frame 5 the edge of the saw may be brought against the tree, and the saw is then rotated by turning the wheel 33, which may be done by two or more men. The saw is ad- 45 vanced as it cuts through the trunk by sliding the carriage 12 longitudinally in the guides 6 of frame 5, and this is preferably done by hand, an operator holding a forked stick or rod against the cross-bar 14 and exerting just sufficient force to cause the saw to cut effect-

ively. When the tree to be felled is of very 50 large diameter, the saw makes as great a cut as possible, while the guide-frame 5 is adjusted upon one side of the base 1, and said frame 5 is then shifted to the other side of the base to permit the saw to make another cut upon 55 the same side of the tree, the two cuts forming a kerf approximately half-way through the trunk. The base 1 of the machine is then swung around to the opposite side of the tree- 60 trunk, and in a similar manner two more cuts are made to entirely sever the trunk, as will be readily understood.

It will be understood that various changes in the form, proportion, and the minor details of construction may be resorted to without de- 65 parting from the principle or sacrificing any of the advantages of this invention.

Having thus fully described my invention, what I claim as new, and desire to secure by 70 Letters Patent, is—

1. A circular-saw machine comprising a base formed with transverse grooves, slidable cross-bars adjustably secured in said grooves, chan- 75 nel-bars secured upon said cross-bars and serving as guides, a saw-carriage slidably mounted in said channel-bars, a horizontally-disposed saw upon said carriage, means for rotating said saw, and means for securing said base upon 80 the object to be cut, substantially as described.

2. A circular-saw machine comprising a base 80 formed with transverse grooves, slidable cross-bars adjustably secured in said grooves, channel-bars secured upon said cross-bars and serving as guides, a saw-carriage comprising hori- 85 zontally and vertically disposed and connected frames, said horizontal frame being slidably engaged with said channel-bars, a saw mounted horizontally upon said horizontal 90 frame, a drive-wheel mounted upon said vertical frame, and gearing between said drive-wheel and said saw, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

FREDERICK VON HOLDT.

Witnesses:

FRANK KIRCHHOF,
GODFREY SCHIRMO.