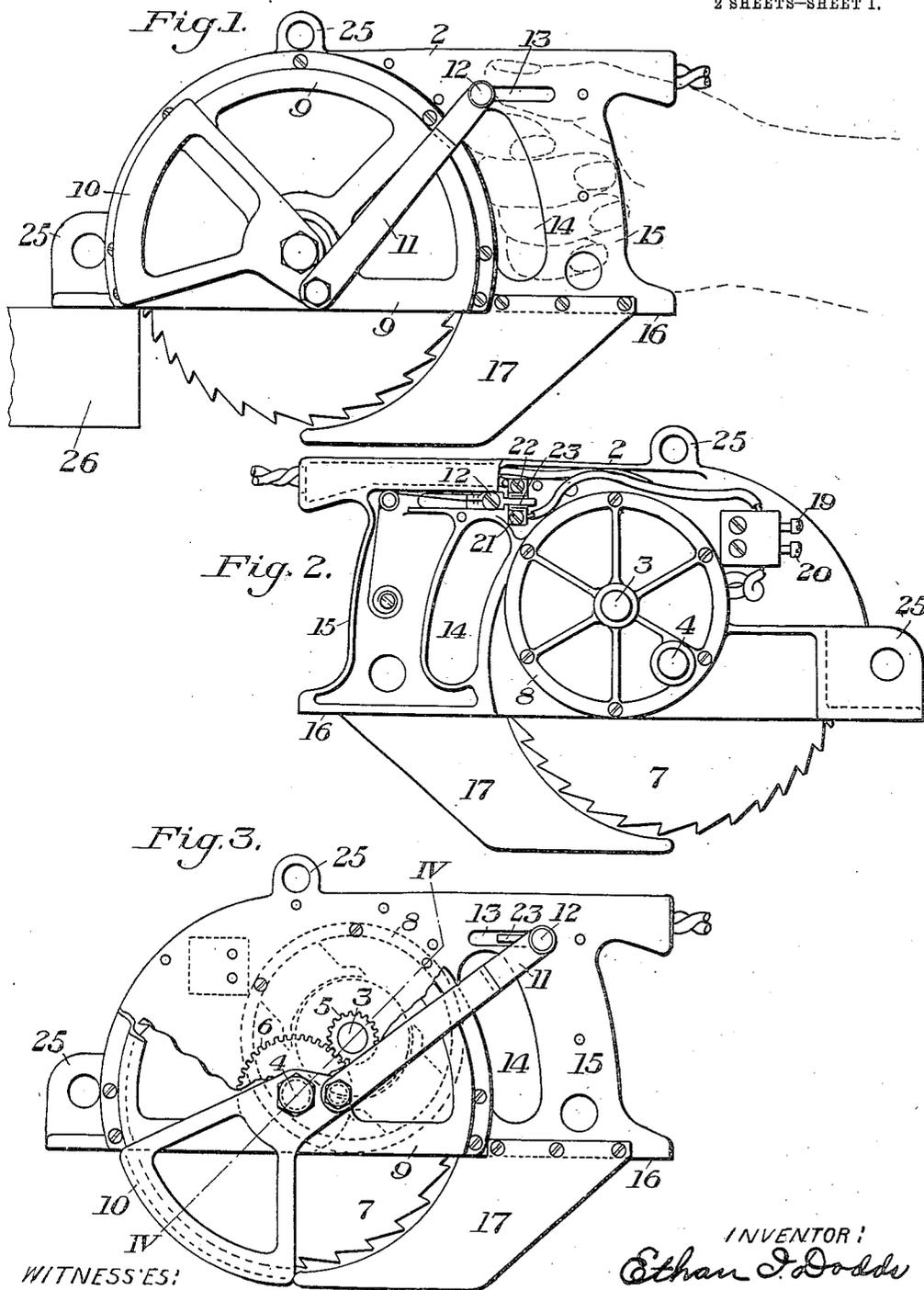


E. I. DODDS.  
 POWER DRIVEN HANDSAW.  
 APPLICATION FILED JUNE 6, 1912.

1,102,018.

Patented June 30, 1914.

2 SHEETS—SHEET 1.



WITNESSES:

*Louis A. Bucking*  
*Boyd Hilbert*

INVENTOR:

*Ethan I. Dodds*

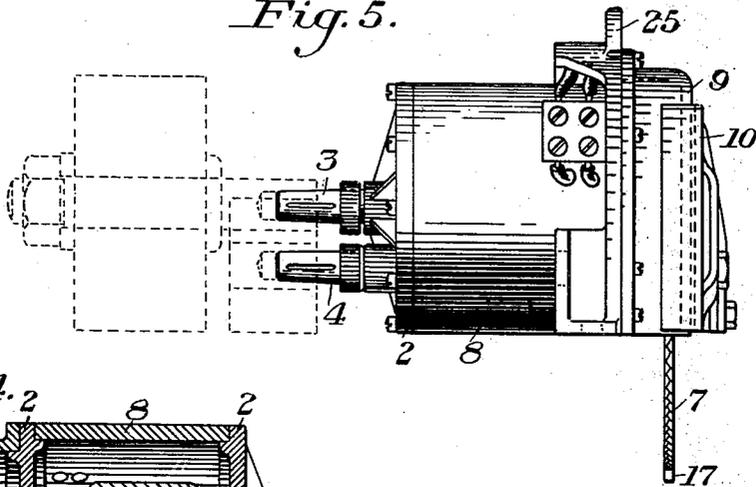
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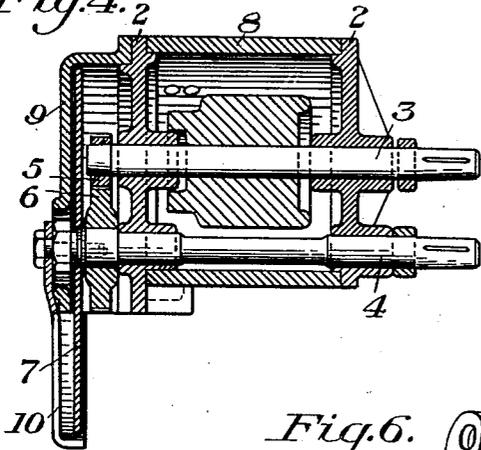
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2 SHEETS—SHEET 2.

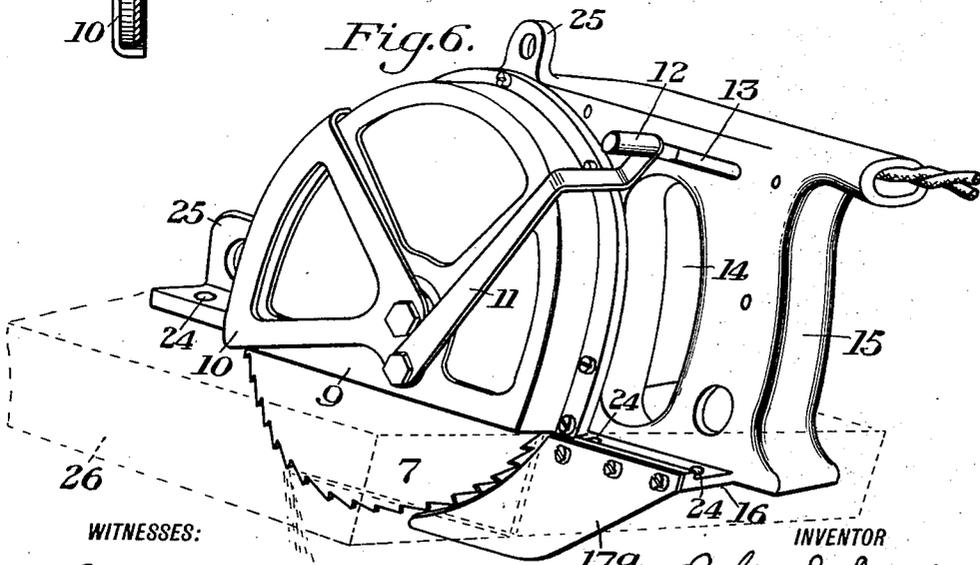
*Fig. 5.*



*Fig. 4.*



*Fig. 6.*



WITNESSES:

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INVENTOR

*Ethan I. Dodds*

# UNITED STATES PATENT OFFICE.

ETHAN I. DODDS, OF CENTRAL VALLEY, NEW YORK, ASSIGNOR TO KERNER MANUFACTURING COMPANY, OF PITTSBURGH, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

## POWER-DRIVEN HANDSAW.

1,102,018.

Specification of Letters Patent. Patented June 30, 1914.

Application filed June 6, 1912. Serial No. 702,097.

*To all whom it may concern:*

Be it known that I, ETHAN I. DODDS, a resident of Central Valley, in the county of Orange and State of New York, whose post-office address is Central Valley, New York, have invented a new and useful Improvement in Power-Driven Handsaws, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which:

Figure 1 is a side elevation of one form of my improved power driven saw, showing the device when in use. Fig. 2 is a similar view from the opposite side thereof. Fig. 3 is a view similar to Fig. 1, showing the position of the parts when the saw is not in use. Fig. 4 is a sectional view on the line IV—IV of Fig. 3. Fig. 5 is an end view; and Fig. 6 is a perspective view showing the device in use, to which I have attached a modified form of gage.

This invention relates to an improvement in power-driven hand saws, and is designed to provide a cheap and efficient device which can be readily handled by the operator, and which can be used for ripping, cross-cutting, or slotting.

Another object of my invention is to provide a device of this character in which the saw is guarded at all times, whether in use or not in use, and in which a supplemental guard is arranged to cover the saw when the device is laid down.

Another object of my invention is to provide a straight edge which is arranged to hold the saw in such a position that it will cut in a straight line.

The precise nature of my invention will be best understood by reference to the accompanying drawings, which will now be described, it being premised, however, that various changes may be made in the details of construction and general arrangement of the parts, without departing from the spirit and scope of my invention as defined in the appended claims.

In the drawings, the numeral 2 designates the sides of the frame. Journaled within these sides are the shafts 3 and 4; the shaft 3 having connected thereto, the armature and commutator of an electric motor. Connected to one end of shaft 3 is a pinion 5, which meshes with the gear wheel 6 on

the shaft 4, and connected to the shaft 4 adjacent to the gear wheel 6 is a circular saw 7.

8 is a casing for the motor, which is connected to the sides 2, and 9 is a shield for a portion of the saw, and which is also connected to one of the sides 2.

Pivotaly mounted on the end of the shaft 4, adjacent to the shield 9, is a guard 10, which is adapted to be swung about the shaft 4 in the manner hereinafter described.

Pivotaly connected to the guard 10 is a link 11, the upper end of which is provided with a pin 12, which extends through a longitudinal slot 13 in the side 2, adjacent to the shield 9. This side 2 is also provided with a hand hole 14 and a handle 15, which form a hand hold for the operator. The lower face 16 to the last mentioned side 2 is horizontal and is arranged to form a seat to rest on the block or board which is to be sawed, and connected to the rear end of this side 2 and in line with the saw 7 is a straight edge 17, the thickness of which is about equal to the thickness of the saw blade.

The straight edge 17 shown in Figs. 1 to 3 extends below the saw; while the straight edge shown in Fig. 6 does not extend to the lower edge of the saw, but is used only when it is desired to use the saw for slotting purposes. 19 and 20 designate screws which are arranged to connect the motor to any suitable source of current, one of these contacts being connected to the motor directly, while the other contact is in electrical connection with a contact 21. The contact 22 adjacent thereto is connected to the motor.

23 is a switch member which is connected to the pin 12 on the link 11, and is arranged to slide between the contacts 21 and 22 when the link 11 is operated to raise the guard, as shown in Fig. 1 of the drawings.

24—24 designate holes in the side 2 adjacent to the shield 9, which are adapted to receive screws for securing thickness blocks to the lower face of said side 2 for determining the depth of the cut of the saw 7.

25—25 designate lugs on said frame 2 having an opening therethrough for receiving a hook on a suspension chain or wire, so that the device can be used as a swinging saw.

When the device is not in use, the parts are in the position shown in Fig. 3 of the

drawings, and when it is desired to use the saw, the frame is grasped by the hand in the manner shown in Fig. 1, and the link 11 is moved forward by means of a thumb engaging the pin 12 which will raise the guard 10 and close the circuit through contacts 22 and 23, so that the two poles of the electric motor will be in connection with the source of electrical power, and will be rotated thereby. The rotation of the shaft 4 will rotate the saw through the medium of the gears 5 and 6. The saw is then advanced toward the piece shown at 26 in Figs. 1 and 6, the seat 16 resting on the top of the piece. As soon as the saw has been advanced a distance equal to one-half of its diameter, the straight edge 17 will enter the slot and cause the saw to travel in a straight line. As soon as the pin 12 is released by the thumb the guard 10 will be returned by gravity and cover the exposed portion of the saw, at the same time the movement of the member 23 will break the circuit to the motor.

The advantages of my invention result from the provision of a power driven hand saw which is provided with means for holding the saw in a straight line; and from the further provision of means of simultaneously cutting off the power to the motor and moving the guard to cover the exposed portion of the saw.

It will readily be understood by those familiar with the art that I can use a water motor instead of the electric motor; the controlling valve of each will be controlled by the link 11, which controls the movement of the guard.

I claim:

1. A rotary power driven hand tool having a frame, a rotary motor, motive power connections including a controlling device for said motor, a rotary tool journaled in said frame, driving connections between the motor and tool, a swinging guard pivotally connected to the frame and arranged to cover the exposed portion of the tool when not in use, and actuating connections between the controlling device and the guard

for shifting the guard when the controlling device is shifted; substantially as described.

2. A power-driven hand saw, having a frame, a seat on said frame for engaging the article to be cut, said seat forming a guide for retaining the saw in proper position with relation to the piece to be cut, a straight edge connected to said frame and adapted to enter the groove cut by the saw, said straight edge being of less thickness than the slot cut by the saw and arranged to guide the saw when making the cut, and a swinging guard pivotally connected to the frame, said swinging guard and straight edge being arranged to cover that portion of the saw below the frame when the saw is not in use; substantially as described.

3. A power-driven hand saw having a frame, a straight edge connected to said frame and adapted to enter the groove cut by the saw, said straight edge extending below the frame and guarding a portion of the saw, a guard for the saw connected to the frame, and a swinging guard pivotally connected to the frame and arranged to cover that portion of the saw below the frame between the end of the straight edge and the frame; substantially as described.

4. A power-driven hand saw having a frame, a straight edge connected to said frame and adapted to enter the groove cut by the saw, said straight edge extending below the frame and guarding a portion of the saw, a guard for the saw connected to the frame, a swinging guard pivotally connected to the frame and arranged to cover that portion of the saw below the frame between the end of the straight edge and the frame, and a link pivoted to the swinging guard and slidably connected to the frame for moving said guard when the saw is to be used; substantially as described.

In testimony whereof, I have hereunto set my hand.

ETHAN I. DODDS.

Witnesses:

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GEO. H. PARMELEE.