

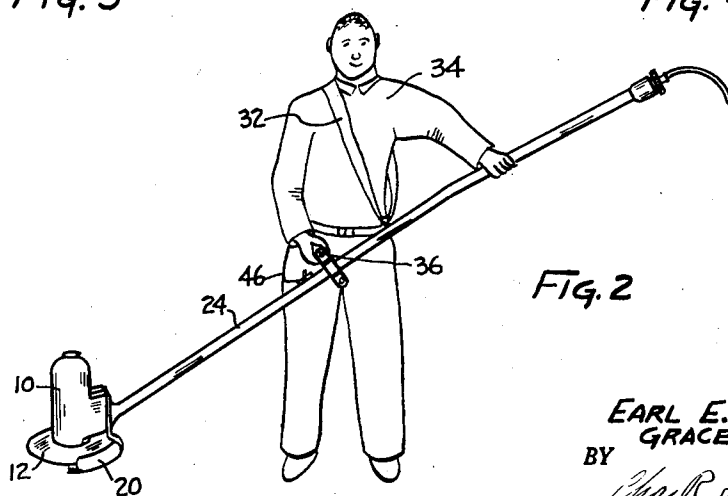
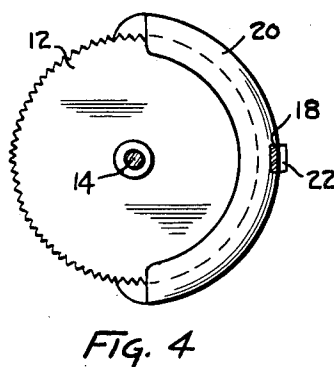
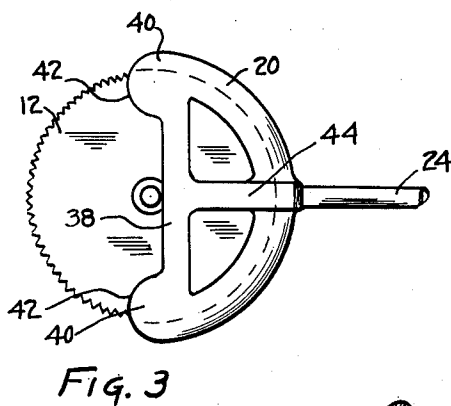
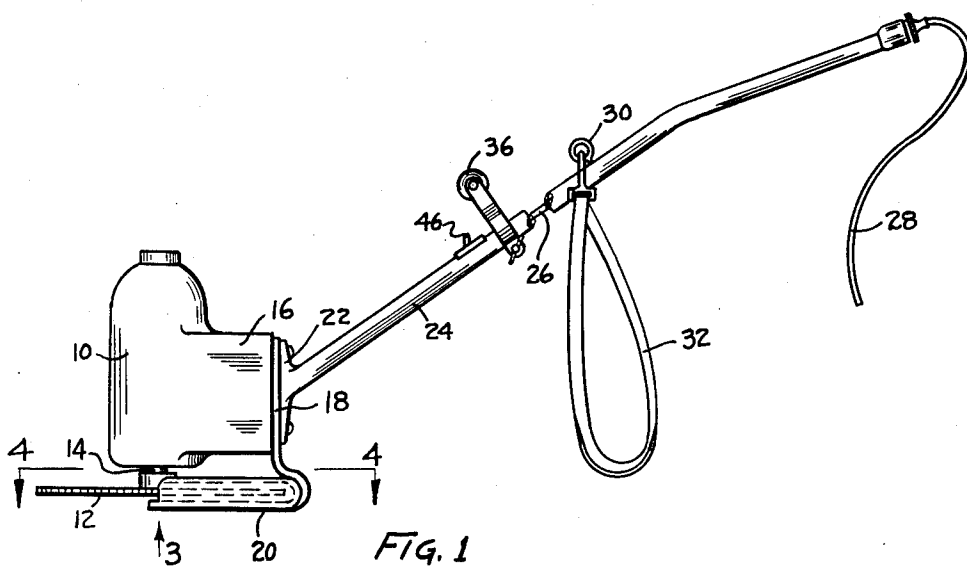
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ELECTRIC POWERED SAW FOR CUTTING BRUSH

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ELECTRIC POWERED SAW FOR CUTTING BRUSH

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1 Claim. (Cl. 143—43)

This invention relates to a high-speed electric powered saw for cutting brush and small trees, and the principal object of the invention resides in the provision of an extremely simple and easily handled and operated high-speed saw of the class described which has a minimum of parts and yet is efficient in operation and safe to use on the part of the operator.

Another object of the invention resides in the provision of a high-speed electric saw provided at the end of an elongated handle along which current is conveniently conducted by means of electric wires to a motor especially adapted for high-speed operation of a saw blade, the latter being held in horizontal position by the operator, and the handle having a strap and cross handle by which it is held somewhat in the manner of a scythe, said motor having a special housing providing a support for a novel guard for said saw, whereby the same may be held very close to the ground and in safe relation to protect the limbs of the operator whereby even though the saw is rotated at very high speed, it cannot kick back and injure the operator.

Other objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawings, in which:

Fig. 1 is a view in front elevation of a device according to the present invention;

Fig. 2 illustrates the manner of use thereof;

Fig. 3 is a plan view, looking in the direction of arrow 3 in Fig. 1; and

Fig. 4 is a section on line 4—4 of Fig. 1.

In the cutting of brush and small trees, in clearance work, particularly for road building, maintenance and transmission line clearance, the clearance of such brush and small trees creates a major problem. The brush must be removed at regular intervals and it must be done quickly and efficiently or the costs run so high as to make this necessary work extremely expensive.

It has been proposed to provide gasoline operated saws for this purpose but these saws are unsatisfactory in many respects. They are heavy and cumbersome to handle, they are noisy and dangerous because of the fuel supply therefor, and ordinarily the speed of rotation of the saw blade is less than required for the most efficient operation in this type of work.

The present invention comprises a high-speed motor which may be easily geared up within the special housing 10 for driving the saw blade 12 at an extremely high speed. The motor is provided with a vertical shaft 14, the saw blade being generally held in horizontal position on the shaft as in Figs. 1 and 2. The housing 10 is provided with an offset portion 16 to which is secured a bracket plate 18 for a guard 20 to be described hereinafter, and said plate 18 is clamped onto the side wall of the part 16 by means of the enlargement 22 at one end of a long narrow handle 24.

The handle 24 is conveniently hollow and used for providing a safe and rigid housing for conductor wires

26 leading from a cable 28 which may be supplied from a portable generator or from the power lines available.

The handle 24 also provides a support for a ring 30 by which is carried a flexible strap 32 which may be hung over the shoulder of the operator 34 (see Fig. 2) and in this case the left-hand of the operator rests upon the outer end of the handle adjacent the cable 28 so as to balance the weight of the motor and saw about a cross handle 36 located to be grasped by the right hand of the operator to act somewhat in the manner of a fulcrum. In any event, it will be seen that the entire device is easy to handle and lightweight compared to a gasoline-operated rig wherein the gasoline motor must also be carried and the saving in weight in this invention is very considerable.

The plate 18 supports the guard 20 which extends in general semi-circular form as seen in Fig. 3 below the saw blade, and in Fig. 4 above the same. The semi-circular portion of the guard underneath the saw blade is provided with a chordal member 38 at each end of which is provided an enlargement 40 having a rounded forward contour 44 which extends in the plane of the chordal member 38 and the semi-cylindrical portion, past a diameter parallel to the chordal member.

The result of this construction is that the saw blade may operate very close to the ground, with the guard 20 resting on the ground, and brush and small trees are therefore felled extremely close to the ground. At the same time, the curved portions 42 of the elements 40 tend to cause stalks and trunks of trees to ride in toward the center of the saw. The entire capacity of the saw is utilized, the guard failing to obstruct any of the necessary cutting parts thereof; the guard forms a ground support; and it also forms a guard for the feet and limbs of the operator, so that if he should get too close to the device and the same should kick back, due to its high speed, from a trunk of a tree or the like, the semi-circular portion of the guard will strike the operator rather than the rotating saw teeth.

A convenient switch 46 may be provided adjacent the cross handle 36 to control the operation of the saw and this is another advantage over gasoline powered saws which cannot be controlled so easily with the handle held in operative position as in Fig. 2, since gasoline engines have to be started separately and then the tool picked up for operation.

The device of the present invention has been found to cut stalks and small trees much faster than any other kind of saw, it is safe in operation, it is lightweight, and easily controlled, and it may be taken anywhere that a source of electric power is provided or where a small generator may be taken.

The device will not injure the operator in any way and it may be utilized for hours of operation without fatigue both because of its light weight and high-speed and the fact that the guard may be set upon the ground and take most of the weight, either with the saw inoperative or in order to provide cuts close to the ground level.

Having thus described our invention and the advantages thereof, we do not wish to be limited to the details herein disclosed, otherwise than as set forth in the claim, but what we claim is:

A high-speed electric saw comprising an elongated handle, an electric conduit associated with said handle, an inverted motor connected to said handle at one end thereof, a shoulder strap and a cross handle intermediate the ends of the elongated handle, and a saw guard connected to the motor housing and including a semi-circular member located at the side of the saw blade opposite the motor housing from the motor, said guard being adapted to rest on the ground, a radial strengthening member on the guard and a chordal member at right

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angles to said radial member, said chordal member connecting the ends of the semi-circular guard, said guard including enlarged semi-circular convex extensions, one at each end of said semi-circular guard part and extending past a diametrical line relative to said saw, the main portion of the guard being at one side of said line and said extending portion being at the other side thereof opposite the handle.

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