

[54] GUARD FOR POWER CHAIN SAW
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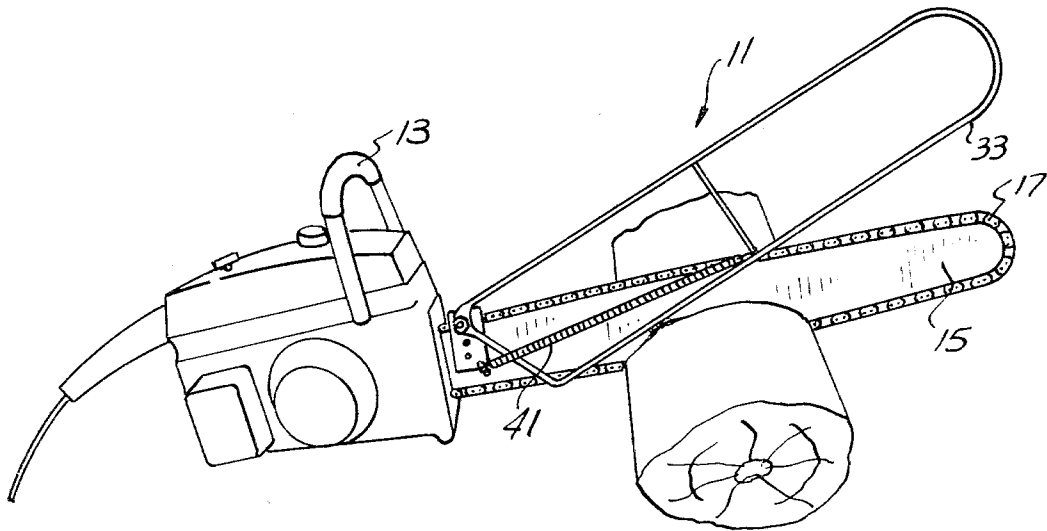
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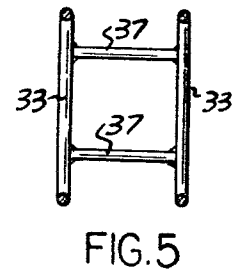
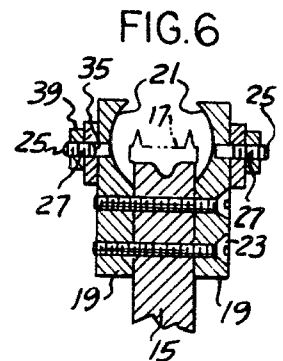
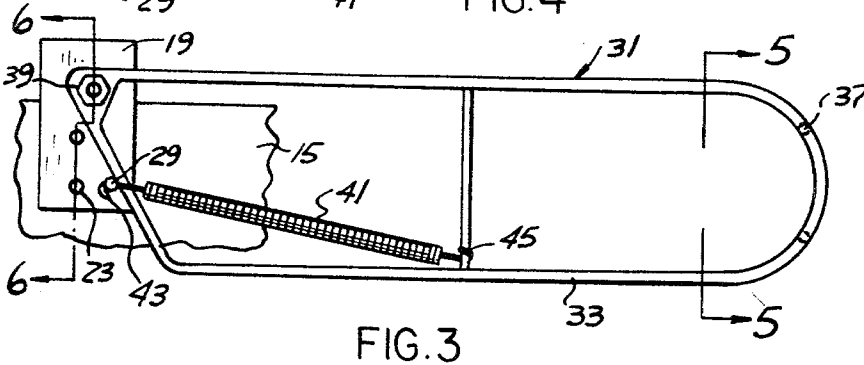
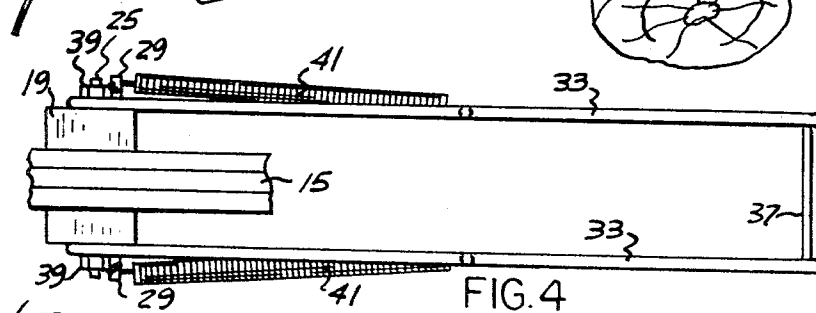
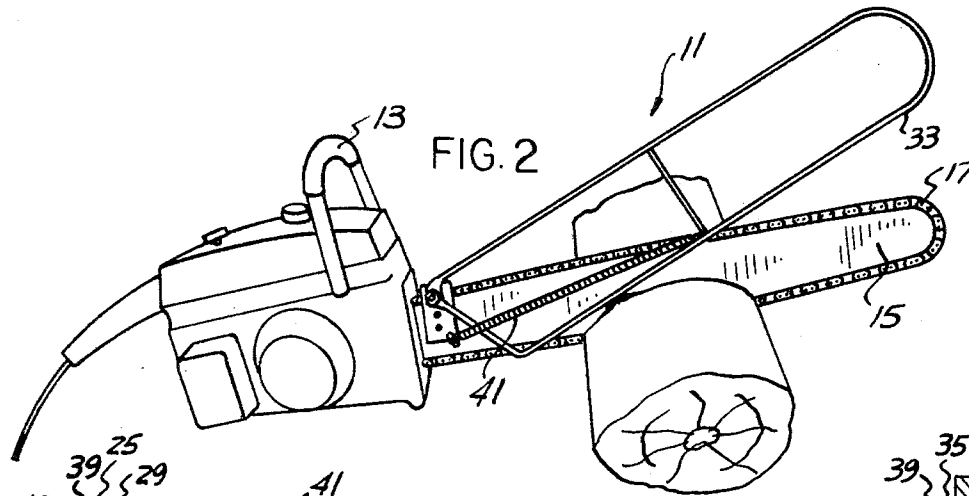
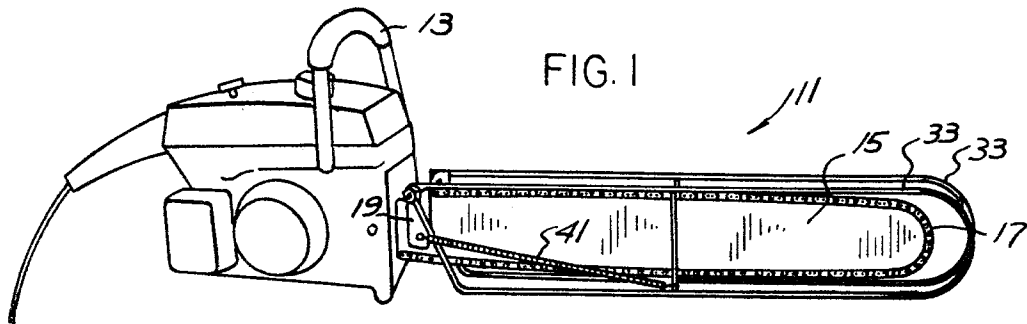
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[57] ABSTRACT

For a power chain saw having a guide bar and chain saw element, a guard which includes brackets mounted on said guide bar upon which a framework is pivotally mounted to protectively enclose the chain saw element throughout its length and height together with stops on said brackets for initially maintaining the framework to enclose said chain saw element together with a spring for biasing said framework into normal protective position.

6 Claims, 6 Drawing Figures





GUARD FOR POWER CHAIN SAW

BACKGROUND OF THE INVENTION

Heretofore, it is believed that there has been no effective protective enclosure for power chain saws.

It is therefore an object of the present invention to provide a protective enclosing framework or guard for power chain saw element.

It is another object to incorporate upon a power chain saw guide bar suitable brackets to which a hollow protective framework may be pivotally mounted and supported during the sawing operation and which will be gradually cammed upward by the work piece as the saw penetrates therein and wherein, upon disengagement with the work piece, the guard will automatically return to protective guard position.

These and other objects will be seen from the following specification and claims in conjunction with the appended drawing in which:

FIG. 1 is a front perspective view of a power chain saw including the present guard;

FIG. 2 is a similar view during a sawing operation;

FIG. 3 is a fragmentary side elevation of the guard and mounting;

FIG. 4 is a plan view thereof;

FIG. 5 is a section taken on line 5—5 of FIG. 3;

FIG. 6 is a section taken on line 6—6 of FIG. 3.

It will be understood that the above drawing illustrates merely a preferred embodiment of the invention and that other embodiments are contemplated within the scope of the claims hereafter set forth.

DETAILED DESCRIPTION

Referring to the drawing, a conventional power chain saw is generally designated at 11 which includes support handle 13, conventional grooved elongated guide bar 15 upon which is mounted a continuous elongated sprocket type chain saw element 17.

To this conventional construction are applied a pair of opposed substantially upright brackets 19 which extend approximately at right angles to the longitudinal axis of the guide bar and are secured thereto by fasteners 23.

Opposed concave recesses 21 are formed in the upper portions of the brackets 19 to provide a clearance opening for a sprocket chain saw element 17 as best shown in FIG. 6. An opposed pair of aligned outwardly directed pivot studs 25 are mounted upon the respective brackets 19 adjacent their upper ends, and are threaded at 27. An additional pair of outwardly extending opposed aligned stop studs 29 are mounted upon lower portions of each bracket.

The present protective guard for the chain saw throughout its length and height includes a framework 31 having a pair of opposed upright parallel spaced elongated frames 33. As shown in FIG. 6, these frames at their rear upper ends have apertures 35 therein adapted to receive and to pivotally mount the guard upon the pivot studs 25.

The respective hollow open frames 33, made of tube or bar stock are arranged in parallel spaced relation and at their forward ends are interconnected by the pair of vertically spaced cross bars 37. Upon assembly of the frames to the respective pivot studs 25, suitable fasteners such as nuts 39 are applied to said pivot studs.

Coiled elongated spring 41, FIG. 3, is anchored at 43 to one of the stop studs 29, and at its opposite end is anchored to the guard frame work at 45.

The coil spring accordingly provides means for biasing the protective frame work or guard so that its rear end portions bear against the stop studs 29, normally maintaining the guard so as to protectively enclose the chain saw element and its adjacent guide bar throughout its length and height.

As the power chain saw is applied to a work piece such as a log, and in view of the open character of the protective frame work, as the saw bites into the work piece, the work piece in turn cams the guard upwardly against the action of the coil spring 41.

In completing cutting through a log for example, the guard may have been pivoted by the log during cutting up to a position substantially 90° from the normal at rest position.

When the power chain saw is removed from the work piece cut, the spring is effective to bias the protective frame work or guard to the normal protective position shown.

It is noted that the present frame work has no spanning cross members either at the top or bottom throughout its length. Accordingly, the guard is capable of swinging upwardly during cutting about its pivot studs 25. Additionally, no damage will occur to the chain saw element should the stop studs break off for any reason in view of the open character of the present framework.

Having described my invention, reference should now be had to the claims which follow.

I claim:

1. In a power chain saw having a forwardly extending guide bar with a longitudinal axis and a chain saw element movably and guidably mounted upon and around said guide bar;

a pair of opposed brackets mounted upon and secured to opposite sides of said guide bar adjacent its rear end and extending at approximately right angles to said axis;

a pair of opposed aligned pivot studs respectively connected to upper portions of said brackets and extending outwardly;

a pair of opposed aligned stop studs respectively connected to lower portions of said brackets and extending outwardly thereof;

and a saw guard comprising a hollow framework protectively enclosing said guide bar and chain saw element throughout its length and height and at its rear end pivotally mounted upon said pivot studs; rear portions of said framework bearing against said stop studs normally retaining said guard in position to enclose said bar and chain saw element; and spring means interposed between one bracket and said framework normally biasing said frame work against said stop studs.

2. In the power chain saw of claim 1, said framework comprising a pair of parallel spaced elongated frames; and a pair of parallel vertically spaced cross bars interconnecting forward end portions of said frame; each frame at its rear upper end portion having a transverse aperture receiving said pivot studs; rear portions of each frame being inclined downwardly and forwardly and registerable with said stop studs.

3. In the power chain saw of claim 2, fasteners on said pivot studs retainingly engaging said frames.

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4. In the power saw of claim 1, said brackets having opposed concave recesses at their upper ends providing clearance for said chain saw element.

5. In the power chain saw of claim 1, said framework being open along its top and bottom and engageable with a work piece as the saw element progresses thereinto, so that the framework is cammed progressively

upward around its pivot mounting.

6. In the power chain saw of claim 1, said spring means at one end being connected to one of said frames intermediate its ends, and at its other end connected to a stop stud.

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