

May 29, 1962

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3,036,402

TOY CHAIN SAW

Filed May 11, 1960

FIG. 1

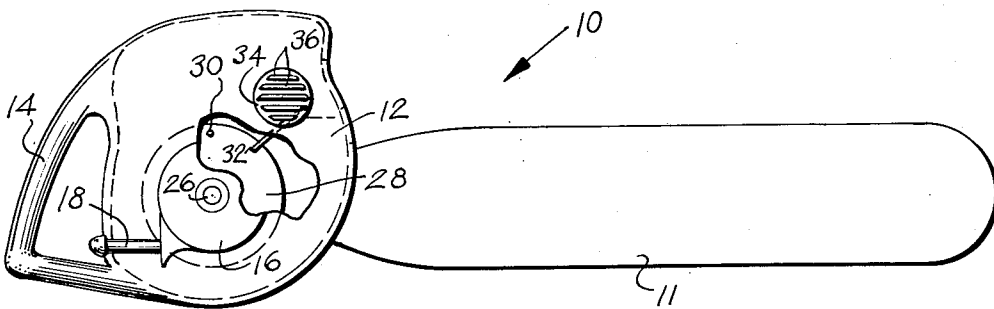


FIG. 2

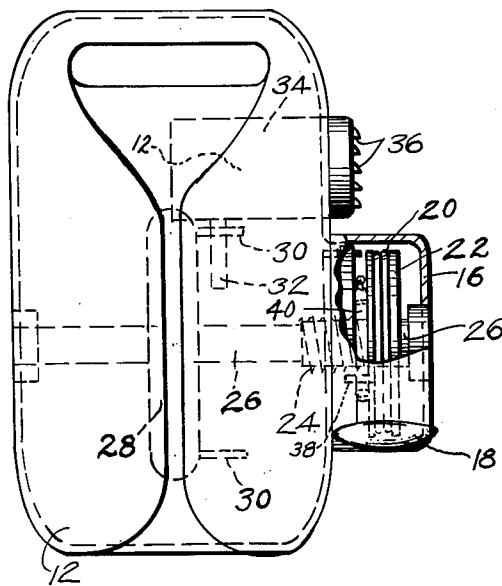
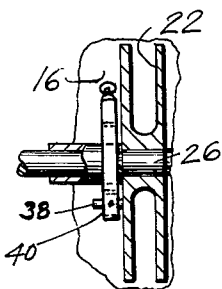


FIG. 3



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3,036,402

TOY CHAIN SAW

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Filed May 11, 1960, Ser. No. 28,473

2 Claims. (Cl. 46—39)

This invention relates to toys and, more particularly, to a simulated toy chain saw.

It is an object of the present invention to provide a new and novel toy for children which simulates a conventional chain saw appearance and sound generated thereby.

Another object of the present invention is to provide a toy chain saw of the above type which is extremely safe for children of all age groups, easy to operate, and which will produce a realistic sound and appearance during use.

Other objects of this invention are to provide a toy chain saw bearing the above objects in mind, which is of simple construction, has a minimum number of parts, is inexpensive to manufacture, and efficient in operation.

For other objects and for a better understanding of the invention, reference may be had to the following detailed description taken in conjunction with the accompanying drawing, in which:

FIGURE 1 is a side elevational view, with parts broken away, of a toy chain saw made in accordance with the present invention;

FIGURE 2 is an enlarged rear elevational view of the invention shown by FIGURE 1; and

FIGURE 3 is an enlarged fragmentary cross sectional view of an operating part of the present invention.

Referring now more in detail to the drawing, a toy chain saw 10 made in accordance with the present invention is shown to include a simulated chain blade support member 11 extending outwardly from one end of a main body portion 12 having a handle 14 extending outwardly from the opposite end thereof.

A housing 16 carried upon one side of the main body member 12 has an opening facing the handle 14 through which a pull handle 18 extends. This pull handle 18 is attached to one end of a flexible cable 20 wound upon a sheave 22 that is carried upon a shaft 26 extending transversely through the main housing 12. A torsion coil spring 24 encircling a portion of the shaft 26 is connected at one end to the sheave 22 and at the opposite end to a stationary part of the housing. Thus, in response to a pulling action upon the pull handle 18, the spring 24 may be energized.

Secured upon a central section of the shaft 26, is a fly wheel 28 having a plurality of laterally outwardly extending pins 30 which are movable into engagement with a reed type spring 32 connected at one end to a sounding box 34 having outwardly opening louvers 36 through which sound is transmitted.

It will now be recognized that upon pulling the pull handle 18, the child can energize the spring 24 to effect rotation of the fly wheel 28, thus causing the pins 30 to sequentially strike the reed spring 32 to create an audible sound within the box 34 which is directed outwardly through the louvers 36. The size and type of the reed spring 32 is such that the emitted sound closely resembles that produced by a motor driven conventional chain saw, whereby the child may reproduce the effect and sound of a regular chain saw in a safe and authentic manner.

It is clearly shown by FIG. 3, and partially hidden by FIGURE 2, that the sheave 22 has a pin 38 extending outwardly therefrom and towards the flywheel 28. A flat coil spring 40 is attached at one end to said pin 38 and has its opposite end attached to the wall of housing 16; the function of this spring 40 is to return the handle 18 and flexible cable 20 to starting position after it is released, once the handle has been pulled outwardly to energize the flywheel 28.

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The torsion spring 24 encircles a portion of the shaft 26 and is attached at one end to the sheave 22. When the handle 18 is pulled, the spring is wound up in such a manner as to grip the shaft 26 and causes the flywheel 28 to spin in only one direction. The fly wheel 28 being heavy relative to the other parts of the device is heavy enough to have its moment build up when rotated thereby causing the torsion spring 24 to expand away from shaft 26, thereby allowing shaft 26 to rotate centrally therein, and further allows the handle 18 to return to normal position by the action of spring 40.

It is noted that the sheave 22 fits loosely upon the shaft 26, and that spring 24 grips the shaft 26 and works like a ratchet.

While various changes may be made in the detail construction, it shall be understood that such changes shall be within the spirits and scope of the present invention as defined by the appended claims.

What I claim as new and desire to protect by Letters Patent of the United States is:

1. A toy saw comprising a main body member, a simulated longitudinal chain blade support secured to the forward end portion of said main body member and extending forwardly therefrom, a transverse aperture formed in the rear end portion of said main body member forming a finger compartment, the rear end portion of said body member formed with an integral supporting handle adjacent said transverse aperture and at the rear thereof, said main body member having a pair of substantially circular side walls, a bearing centrally located on one of said side walls, a sheave housing C-shaped in cross-section mounted upon the opposite side wall of said pair of side walls, a bearing centrally located on the vertical wall of said sheave housing, a horizontal rotatable shaft extending transversely of said main body member and said sheave housing and journaled at its ends in said bearings, a fly wheel rigidly secured upon the central section of said shaft and rotatable therewith, a plurality of horizontal and outwardly extending pins secured upon a vertical side of said fly wheel and rotatable therewith in a vertical plane, a reed type spring supported at one end by an audible sounding device carried within said main body member, the opposite end of said reed spring being free and extending into the path of rotation of said pins effecting an audible sound by contacting said pins upon rotation of said flywheel, a sheave rotatably mounted upon said shaft and located within said sheave housing, a coil spring attached at one end to said sheave and at the opposite end to said sheave housing effecting return of said sheave when rotated, a flexible cable secured at one end to said sheave, the opposite end of said flexible cable having a pull handle thereon for withdrawing said cable to effect a winding movement of said sheave, a slip spring type clutch coiled upon said shaft and fastened at one end to said sheave, the opposite end of said slip spring clutch normally free upon said shaft, said spring gripping said shaft when said cable is withdrawn and returning to original slipping starting position in response to the release of said cable.

2. The toy chain saw according to claim 1, wherein said audible sounding device comprises a sound box supported within said main body member having outwardly opening louvers.

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