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CHAIN SAW GUARD

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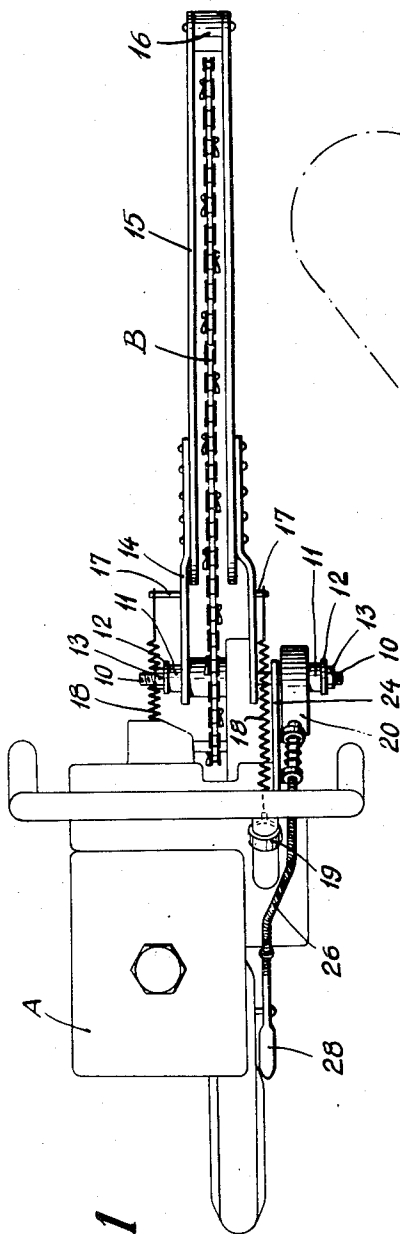


Fig. 1

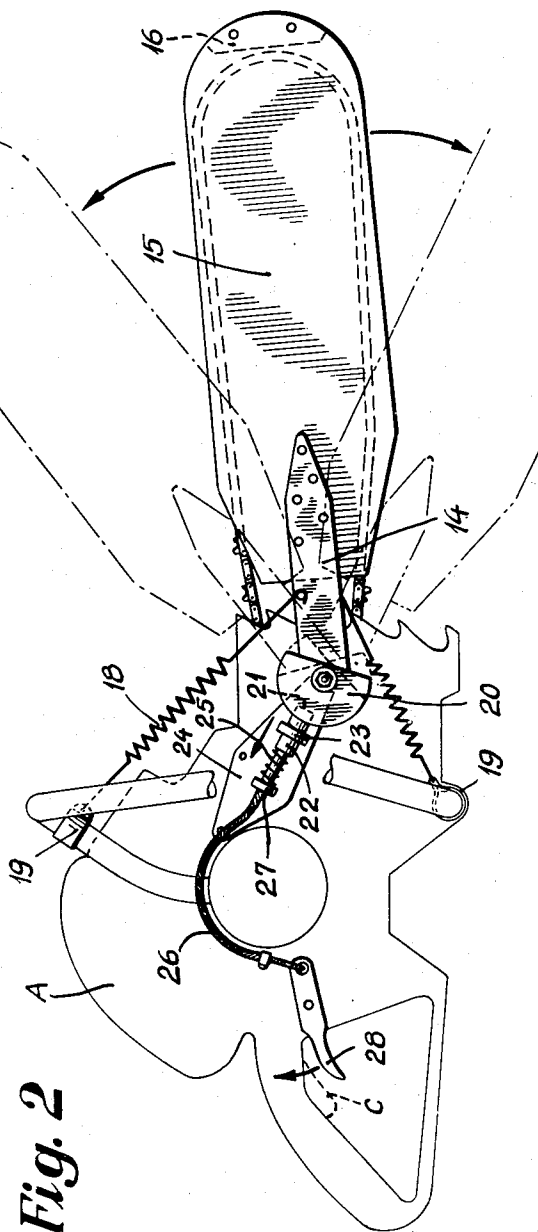


Fig. 2

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CHAIN SAW GUARD

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2 Claims. (Cl. 143—32)

The present invention relates to a protective guard for chain saws. It is well known that tools of this type are dangerous to use because of the large exposed cutting surface of the saw. Guards, however have not been used on chain saws mainly because they decrease the convenience of the tool, and have a tendency of getting in the way.

The present invention provides a chain saw guard which will not hamper the operation of the machine, while at the same time affording sufficient protection for the user of the machine. Furthermore, the protective guard in accordance with the invention prevents damage to the chain when the saw is not in use.

The invention consists essentially in the combination of guard plates, with resilient means which are adapted to bring the guard plates into a position where they overlap the saw, and locking means adapted to lock the guard plates in this position. A particularly advantageous feature of the invention lies in that the assembly of guard plates may be retracted in either direction so as to make possible the use of both sides of the chain. The resilient means which return the guards to a protective position comprise, according to the invention, two springs which are attached to the guard plate assembly and to opposite sides of the chain saw casing. The two springs are of course mutually calibrated in order to attain the above described result.

A further feature of the invention resides in that the guard and all its associated parts can be easily mounted on a chain saw of already existing construction without any basic changes therein.

An embodiment of the invention is illustrated by way of example in the accompanying drawings, wherein

Figure 1 is a top view of a chain saw provided with a protective guard in accordance with the invention; and Figure 2 is a side view of the same.

Referring now to the drawings, a chain saw of conventional construction is shown in outline, and is indicated at A. The inner sprocket wheel shaft 10 of the saw has rotatably mounted thereon by means of bushings 11, lock washers 12 and nuts 13, two support bars 14 disposed on either side of the chain, and to which bars 14 are riveted the guard plates 15. At their outer free end the plates 15 are spaced by a spacer member 16 which is riveted together with the plates 15. The spacer 16 is so disposed as to clear the outer end of the chain B of the saw, so that the assembly of guard plate 15 is movable in either direction as shown by arrows in Figure 2.

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A pin 17 is fixed to each of bars 14. Two springs 18 have one end attached to each of pins 17 and the other end attached to a suitable part of the casing of the saw, for example, as shown in the drawing, by means of collars 19, which embrace the tubular handle portion of the saw. The collars 19 are located in such a way that the springs 18 extend on opposite sides of the shaft 10, and the springs 18 are mutually calibrated to urge the plates 15 in a position, such as shown in full line in Figure 2, where the plates overlap the chain. Thus when the saw is not in use, the plates 15 automatically assume a protective position. A partial drum 20 is rigidly assembled on the shaft 10, so as to be rotatable with the assembly of bars 14 and plates 15. The drum 20 has therein a locking slot 21 in which engages a latch 22, when the assembly of plates 15 is in overlapping relation with the saw, namely in the protective position of Figure 2. The latch 22 is slidably mounted in a guide block 23 welded on a support plate 24 which is fastened to the casing of the saw. A spring 25 urges the latch 22 into the locking slot 21, and at any other position of the guard plate assembly, into engagement with the cylindrical surface of drum 20. A Bowden-cable 26 is suitably mounted to withdraw the latch 22 from the locking slot 21. The reaction member 27 of the Bowden-cable is welded to the plate 24, and also serves to back the spring 25. The handle 28 of the Bowden-cable is preferably located close to the trigger C of the chain saw so that the assembly of plates 15 can be easily unlocked when the saw is ready to be used.

It will be seen that with the above construction the guard snaps into its proper position and is automatically locked as soon as the saw is out of use, but it is very easy to unlock it, when the saw is put in operation.

The above described and illustrated embodiment of the invention is given only by way of example, and various modifications thereof are possible within the scope of the appended claims.

We claim:

1. In combination with a chain saw having a casing, a protective guard comprising a pair of plates on either side of the chain, said plates being mounted for rotation on the shaft of the inner sprocket wheel of the chain, means resiliently holding said plates in a position in which they overlap the chain, and manually releasable means locking said plates in said position, said locking means comprising a drum attached to one of said plates and having a locking slot, a spring urged latch secured to said chain saw casing and adapted to enter said slot and a Bowden-cable connected to said latch and mounted on said casing, to lift said latch out of said slot.

2. A chain saw guard as claimed in claim 1, wherein the Bowden-cable actuating handle is located adjacent the chain saw trigger.

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