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F. E. ANDERSON

2,349,573

CUTTER CABLE

Filed Feb. 3, 1941

Fig. 1

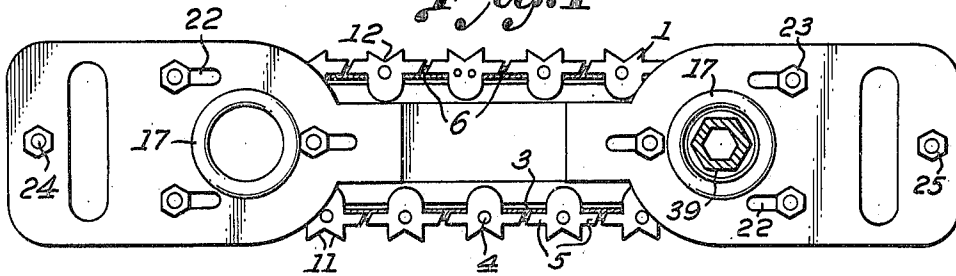


Fig. 2

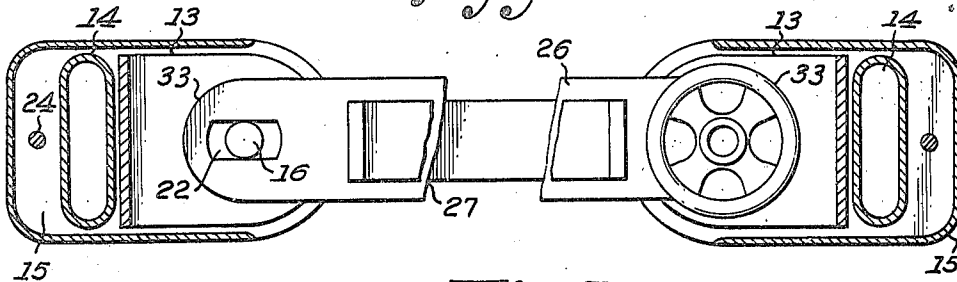


Fig. 3

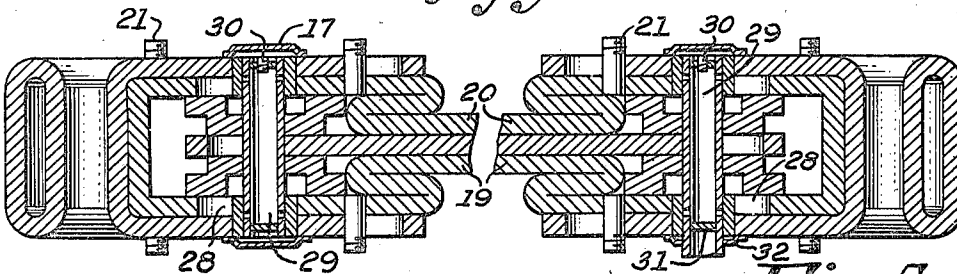


Fig. 4

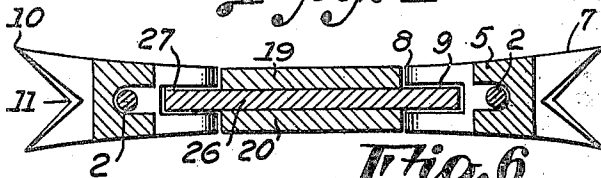


Fig. 6

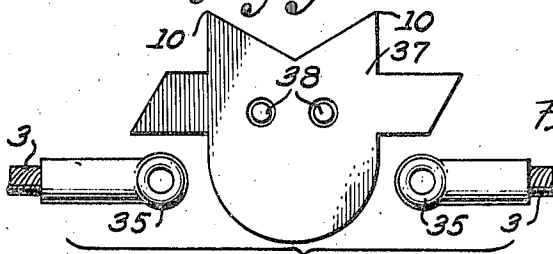
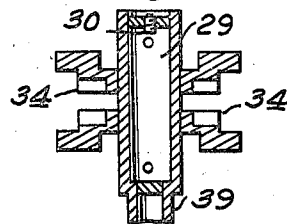


Fig. 5



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UNITED STATES PATENT OFFICE

2,349,573

CUTTER CABLE

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Application February 3, 1941, Serial No. 377,222

2 Claims. (Cl. 143—135)

My invention relates to improvements in tree and log saws for cutting timber and the objects of my improvement are, first, to provide an endless cable with toothed members attached thereto to form an endless saw for use by lumbermen; second, to provide means for driving, supporting, and guiding the cable and teeth; and third, to provide handle means for carrying the saw.

In the accompanying drawing:

Figure 1 is a side view of the sawing device,

Fig. 2, a vertical section of the same with saw-cable removed,

Fig. 3 is a horizontal, longitudinal section,

Fig. 4 is a cross section through the center showing saw teeth and guides,

Fig. 5 is a section of the driving sprocket, and

Fig. 6 is a side view of the cable terminals and the special toothed member used to connect them.

The toothed units 1 of the saw are bored longitudinally with holes 2, through which passes the wire cable 3. The tooth-units 1 also carry transverse holes 4 to permit the secure fastenings of the teeth to the cable as by pins or screws. Integral, longitudinal projections 5 from the tooth-units 1 have angular terminations 6 and protect the cable passing through them.

The doubly bifurcated tooth-units 1 are wider between the cutting points 10 than at the neck 7 to prevent pinching in sawing; and opposite to the points 10 are semicircular lugs 8, longitudinally traversed by grooves 9. Each tooth-unit 1 has two pairs of cutting points 10 with notches 11 between the points and notches 12 between the pairs. The points 10 are appropriately beveled for timber cutting.

The frame about which the above cable-saw travels has a central plate or bar 26 and two contiguous plates 19 and 20, one on each side, the combined thickness of all of which does not exceed the narrowest portion of the tooth-units. The central plate 26 projects beyond the others to form a guide 27 for the grooved tooth-units 9, and is shaped to form in cooperation with sprockets 33, one oblong continuous path for the cable 3 and its attached saw teeth.

The narrower lateral plates 19 and 20 are bent longitudinally twice upon themselves at some distance from the center, and at both ends, to form housings 28 for the sprockets 33—one at each end of the frame. Handle plates 13—two at each end—surround the housings 28 made by plates 19 and 20 and extend beyond. In these extensions are formed handle holes 14 and handles 15, by means of which the whole saw may be conveniently operated by two men—one at each handle. Shaft openings 16 in the handle plates 13 are provided with cover plates 17.

Handle plates 13 are bolted to the housing plates 19 and 20 by threaded studs 21 passing through slots 22 and fitted with nuts 23. Further studs 24 at the extremities of the handles 15 serve to hold together the two lateral plates of each handle.

Athwart the housings 28 are tubular shafts 29 provided with oil plugs 30, oil stops 31, and journal bearings 32. Upon shafts 29 are mounted sprockets 33 into whose peripheral depressions 34 fit the lugs 8 of the tooth-units 1.

One shaft 39 projects beyond the housing and is driven by any convenient external source of power—not shown. Eyes 35 affixed to both ends of cable 3 are held to the coupling tooth-unit 37 by the two screws 38 with which this special unit is provided. Since the shafts 29 are journaled in the handle plates 13, the saw cable 3 may be tightened by loosening nuts 23, pulling the handle plates 13 farther apart, as made possible by slots 22, and then again tightening the nuts 23.

In operation, the saw is held by the end handles 15; and the cutting teeth, exposed in the central part of the saw, are pressed against the tree to be felled—or log to be cut. Shaft 39, supplied with power (not shown) turns the sprocket 33 affixed to it. The sprocket in turn drives the endless cable 3 upon which are strung the toothed members 1, with their engaging lugs 8. The toothed members 1 and cable 3 are supported and guided along their endless path by plates 19, 20, and 26.

I claim:

1. A cutting device for use with a guide bar and comprising a cable, a plurality of one-piece cutters threaded upon said cable, two pairs of outwardly projecting teeth upon each of said cutters integral therewith, a longitudinal passageway through each of said cutters for threading them upon said cable, a pair of inwardly projecting semicircular flanges opposite to said teeth and integral with said cutters for guiding said cutters upon said guide bar, lateral holes in the side of each cutter, and means in said holes for attaching each of said cutter to said cable.

2. A cutting device comprising an endless cable, one-piece cutters threaded upon said cable, outwardly projecting teeth upon said cutters and integral therewith, longitudinal projections upon said cutters with parallel, nonrectangular terminations, collinear longitudinal holes continuous through said cutters and said projections for said cable, and lateral holes in said cutters with means in said holes for attaching the cutters to said cable.

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