

Jan. 23, 1968

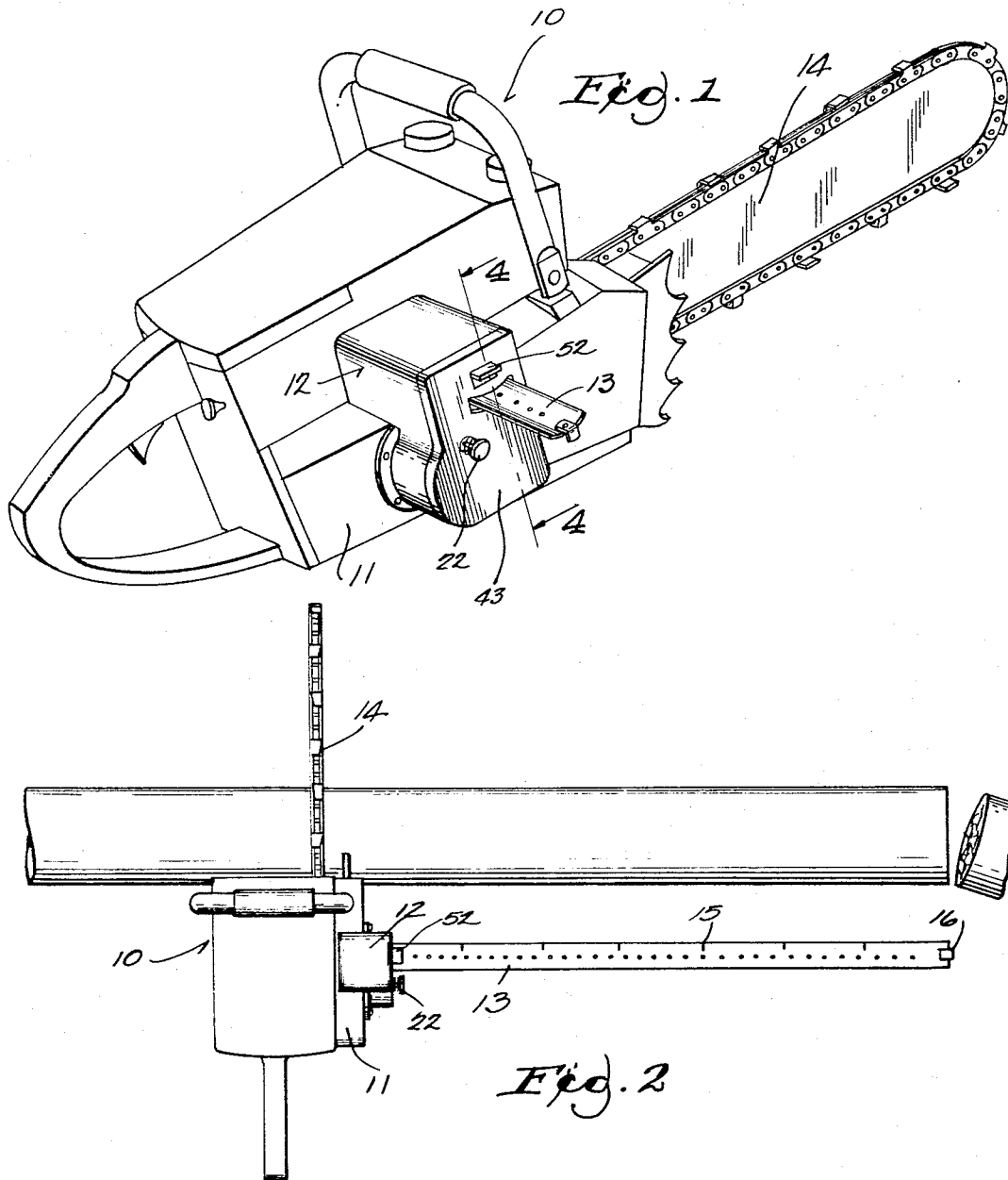
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3,364,580

MEASURING ATTACHMENT FOR CHAIN SAWS

Filed Dec. 27, 1965

3 Sheets-Sheet 1



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3 Sheets-Sheet 2

Fig. 3

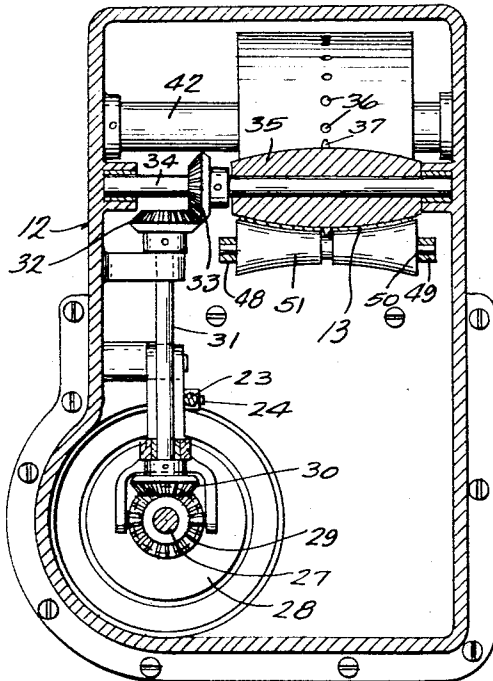


Fig. 4

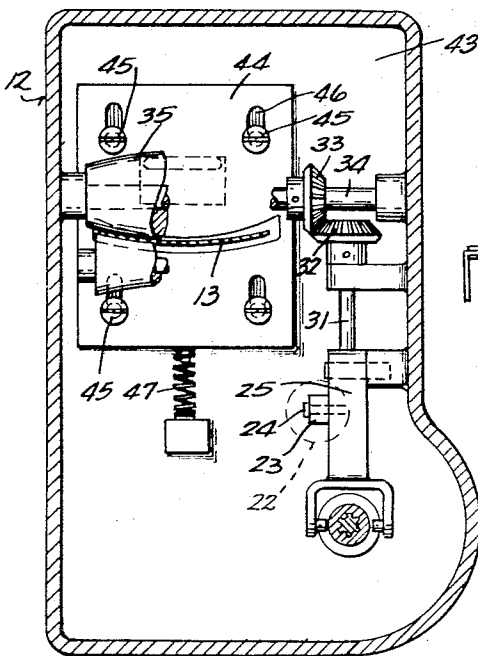
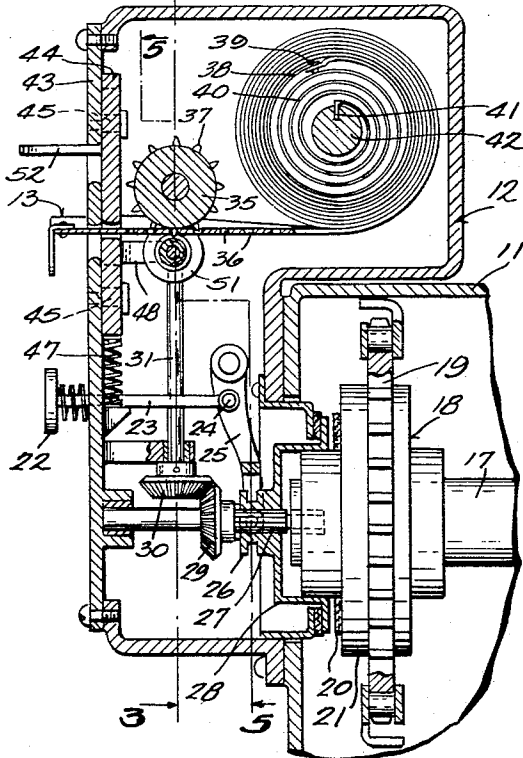


Fig. 5

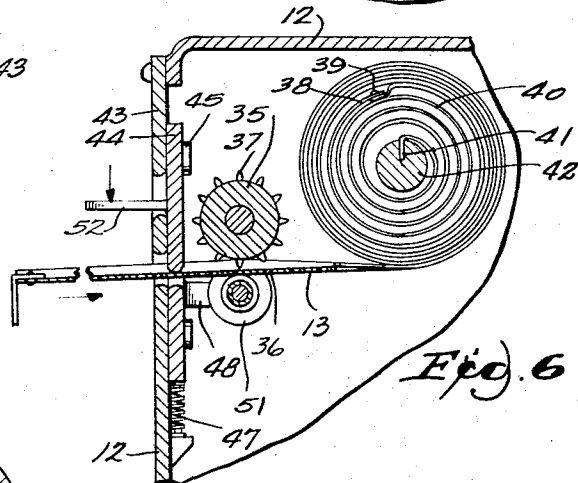


Fig. 6

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3 Sheets-Sheet 3

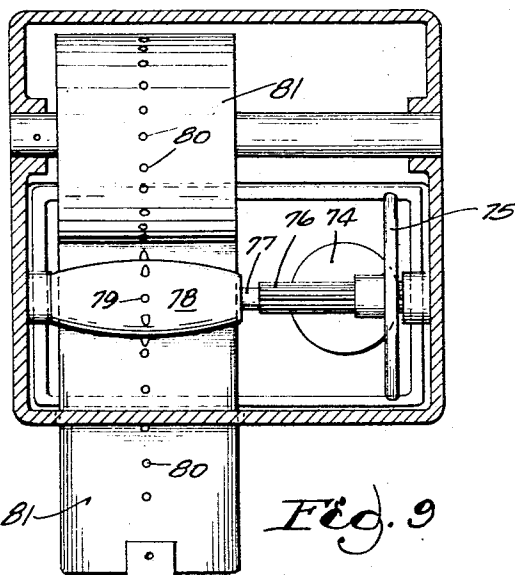
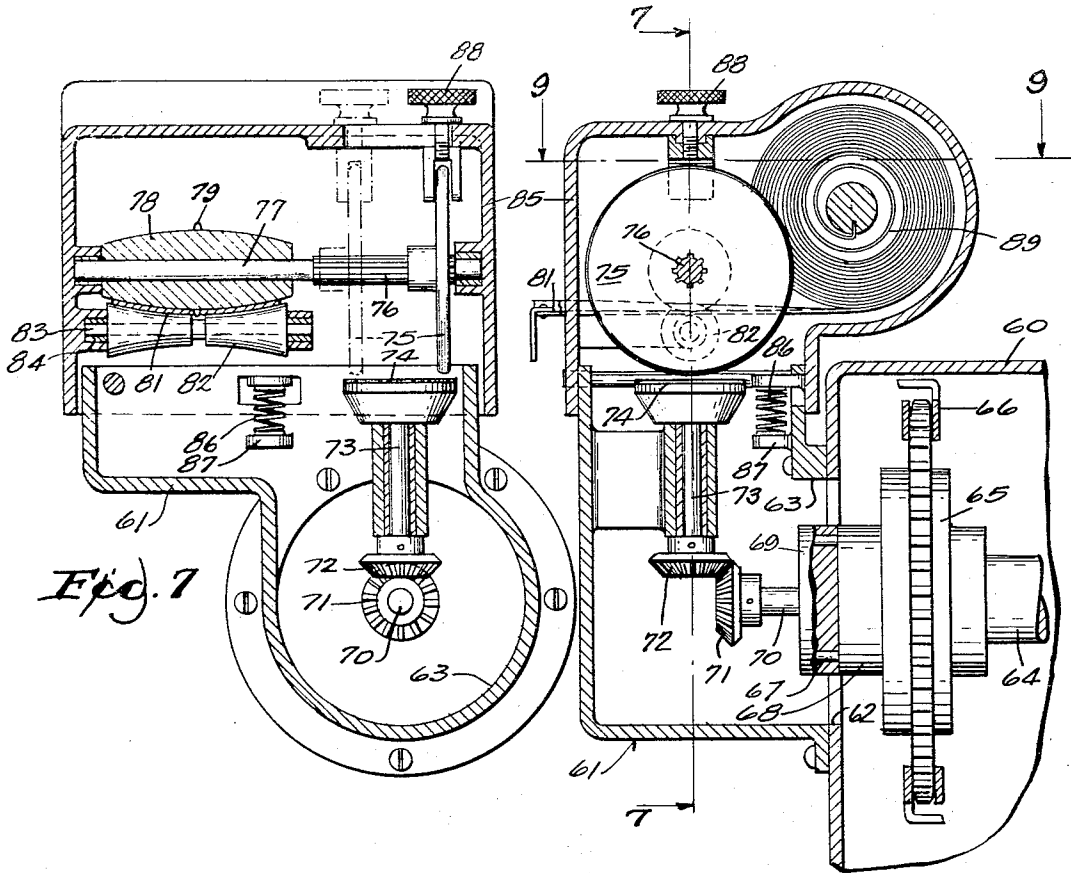


Fig. 8

Fig. 9

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1

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MEASURING ATTACHMENT FOR CHAIN SAWS

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Filed Dec. 27, 1965, Ser. No. 530,243

1 Claim. (Cl. 33—185)

ABSTRACT OF THE DISCLOSURE

A portable chain saw provided with a laterally extendable measuring scale driven by the chain saw motive power, retractable by the same means.

This invention relates to improvements in measuring attachments for chain saws, and more particularly to a novel motor operable tape measure.

An object of the invention is to provide a device of the type which will enable an operator to saw through a log, extend the tape by means of the saw motor to a required length, saw said length, and return said tape by motor or spring means.

Other and further objects of the invention will appear as the description proceeds, reference being had to the accompanying drawing, in which:

FIG. 1 is a view in perspective of a chain saw equipped with a measuring attachment embodying the invention.

FIG. 2 is a plan view of the same with the tape partially extended.

FIG. 3 is a vertical sectional view taken on line 3—3 of FIG. 4.

FIG. 4 is a cross-sectional view taken on line 4—4 of FIG. 1.

FIG. 5 is a view taken on line 5—5 of FIG. 4.

FIG. 6 is a fragmentary cross-sectional view of the means for engaging and disengaging the tape with the sprocket.

FIG. 7 is a vertical sectional view taken on line 7—7 of FIG. 8.

FIG. 8 is a similar view taken at right angles to that of FIG. 7.

FIG. 9 is a horizontal sectional view taken on line 9—9 of FIG. 8.

Referring more particularly to the drawings, the numeral 10 refers to a conventional chain saw. Attached exteriorly to its casing 11 is an auxiliary casing 12 containing means for projecting and retracting a measuring rule 13 at a right angle to the saw chain 14. The rule 13 is graduated as at 15 to indicate inches from the chain 14 to the end piece 16 on the rule 13.

As shown in FIGS. 3 and 4, the engine shaft 17 carries a centrifugal clutch 18 and the saw chain sprocket 19. When the engine shaft exceeds a certain velocity the centrifugal clutch 18 engages to operate the saw chain sprocket 19 and the chain saw 10. A ring friction clutch element 20 is disposed externally of the centrifugal clutch casing 21. When the button 22 is pressed by the operator, rod 23 pivoted at 24 on the link 25 will move element 26 on splined shaft 27 to force the clutch member 28 to bear against clutch element 20, thus turning gear 29 and gear 30 meshed with the latter to rotate vertical shaft 31. The shaft 31 is crowned by a bevel gear 32 meshed with gear 33 on shaft 34 to drive sprocket 35.

A metal or plastic rule 13 is centrally longitudinally apertured at intervals as at 36 to engage with the teeth 37 of the sprocket 35. The inner end 38 of the rule 13 is secured by rivet 39 to the spring 40, which is in turn fastened by the pin 41 to the anchor element 42. The outer wall 43 of the auxiliary casing 12 carries interiorly thereof the plate 44 mounted for limited vertical movement on pins 45 within the slots 46, and normally maintained

2

in uppermost position by the expansion coil spring 47. A pair of trunnion arms 48 and 49 extend laterally from the plate 44 and at their free ends journal the axle 50 of the roller 51 which normally bears upwardly sufficiently against the sprocket 35 to stop the rule 13 in extended position. A downward pressure on the projection 52 on the plate 44 will release the rule 13 and allow the spring 40 to retract the rule 13 backwardly into the auxiliary casing 12.

In FIGS. 7, 8 and 9 of the drawings, a modified form of the invention is shown, in which a chain saw casing 60 has an attached auxiliary casing 61 communicating therewith. An aperture at 62 of casing 60 registers with an aperture at 63 of casing 61. An engine shaft 64 carries the centrifugal clutch 65 and saw chain 66. Pins 67 on hub 68 engage element 69 connected with shaft 70 to drive bevel gear 71 meshed with the horizontal bevel gear 72 connected by tubular element 73 with the disk 74 which will friction drive the wheel 75 engaged with splined element 76 which is integral with the shaft 77 carrying the sprocket 78 provided with teeth 79 which engage in the aligned apertures as at 80 of the measuring rule 81. A roller 82 is freely held by axle 83 in the bearings 84. The casing 61 has a separate upper portion 85 mounted for limited vertical movement and is normally held in raised position by means of the spring 86 based on element 87. The operator may move the wheel 75 laterally on the splined element 76 to bear against either side of the face of disk 74 by means of the knurled handle 88, and a downward pressure will thus project or retract the measuring rule between sprocket 78 and the roller 82. A spring may be provided on the inner end of rule 89 to facilitate its return to retracted position.

It will be understood that the device is capable of many modifications in structure and design, without departing from the spirit of the invention, within the scope of the appended claims.

Having thus described the invention, what is claimed and desired to be secured by Letters Patent of the United States, is:

1. An attachment for chain saws having an engine shaft comprising a rolled measuring rule, a centrifugal clutch mounted on said engine shaft, a horizontal rotatable shaft connected with said centrifugal clutch, a pair of meshed bevel gears connecting said horizontal shaft with a vertical shaft, a horizontal friction disk fixed to the upper end of the latter, a spring-mounted horizontal shaft disposed above said disk, a sprocket on the shaft engaged with said rule for projection and retraction thereof, a splined portion on the sprocket shaft, a friction wheel mounted for limited movement axially on said splined portion whereby said wheel may be engaged with either margin of said disk to govern direction of movement of the sprocket and tape, and manual means for axially moving said wheel and pressing the same downwardly against the friction disk.

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