July 21, 1953 J. M. HANSON, SR 2,645,859

DEPTH GAUGE FOR CHAIN SAWS

Filed June 29, 1951

Fig. 1.

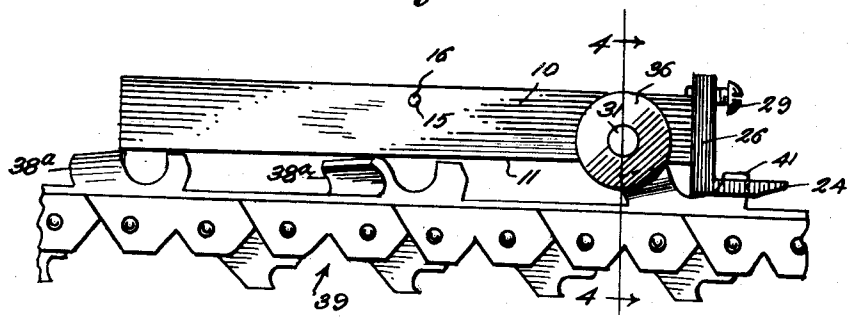


Fig. 2.

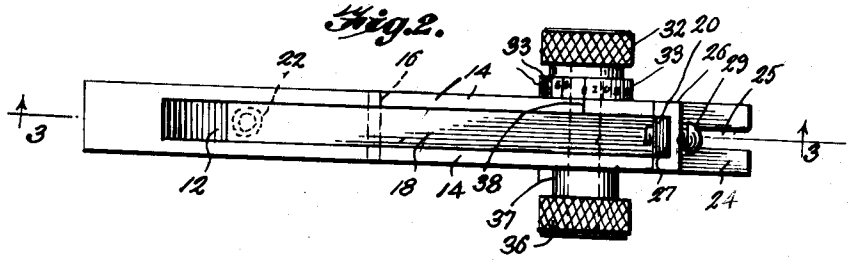


Fig. 3.

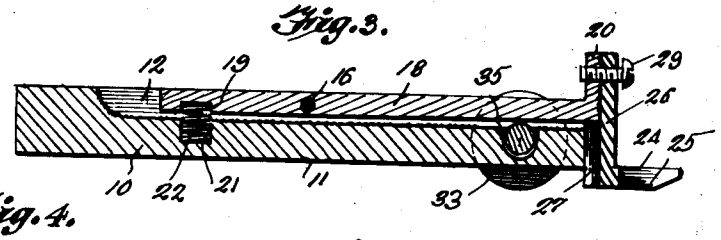


Fig. 4.

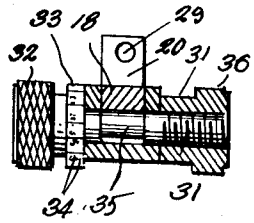


Fig. 7.

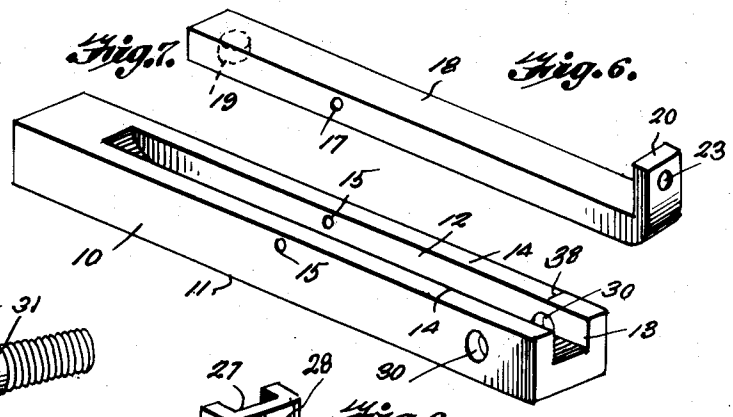
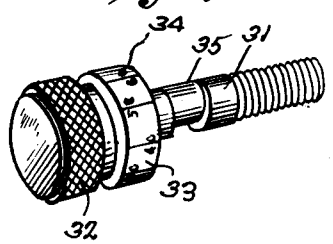


Fig. 6.

Fig. 5.



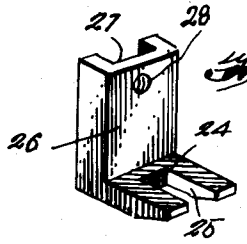


Fig. 8

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Patented July 21, 1953

2,645,859

UNITED STATES PATENT OFFICE

2,645,859

DEPTH GAUGE FOR CHAIN SAWS

John M. Hanson, Sr., Alsea, Oreg.

Application June 29, 1951, Serial No. 234,237

2 Claims. (Cl. 33—202)

1

The present invention relates to an improvement in depth gauges for chain saws and particularly an improvement over my co-pending application, Serial No. 178,365, filed on August 9, 1950, now Patent 2,592,278, granted April 8, 1952, and it consists in the combinations, constructions and arrangements of parts herein described and claimed.

It is an object of the present invention to provide a device of the character set forth having novel means for accurately positioning a file plate with respect to a straight edge both forming parts of the invention.

Another object of the invention is the provision, in a device of the character set forth, of novel spring actuated means for maintaining a file plate in position with respect to the remainder of the device.

Still another object of the invention is the provision of novel means for selectively positioning a file plate arm with respect to a straight edge, both forming parts of the invention.

Other and further objects of the invention will become apparent from a reading of the following specification taken in conjunction with the drawing, in which:

Figure 1 is a side elevational view of an embodiment of the invention,

Figure 2 is a plan view thereof,

Figure 3 is a sectional view taken along line 3—3 of Figure 2,

Figure 4 is a sectional view taken along line 4—4 of Figure 1,

Figure 5 is a perspective view of a dial bolt forming a part of the invention,

Figure 6 is a perspective view of a file plate arm forming a part of the invention,

Figure 7 is a perspective view of a base which likewise comprises a straight edge forming a part of the invention, and

Figure 8 is a perspective view of a file plate forming a part of the invention.

Referring more particularly to the drawing, there is shown therein an elongated body 10 whose bottom is of flat construction forming a straight edge 11 and whose upper face is provided with an elongated recess 12 which is open at one end, as indicated at 13. The recess 12 provides a pair of upstanding walls 14.

Extending centrally and transversely through the walls 14 is a pair of openings 15 and a pin 16 extends through the openings 15 and through an opening 17 in an elongated file plate arm 18 which is adapted to lie within the recess 12 adjacent the inner end of the arm 18 a recess 19

2

is provided in the underside of the arm 18 while the forward or outer end of the arm 18 has integrally formed therewith an upstanding bracket 20.

Immediately below the recess 19 there is provided in the lower part of the recess 12 a further recess 21 and a compression spring 22 is mounted in the recesses 19 and 21 to normally force the inner end of the arm 18 in an upward direction and to thus force the outer end of the arm 18 in a downward direction.

The bracket 20 is provided with a horizontally extending threaded slot 23 and there is provided a file plate 24 which has a centrally disposed slot 25 and an integrally formed upwardly extending arm 26 which is provided with a milled slot 27 which is adapted to encompass the bracket 20. The arm 26 is provided with a horizontally extending threaded opening 28 whereby a stove screw 29 or the like may be utilized to fasten the arm 26 to the bracket 20, as indicated, for example in Figure 3 of the drawing.

Adjacent the open end 13 of the recess 12 there is provided in the walls 14 a pair of transverse openings 30. Extending through the openings 30 is the threaded shank 31 of a dial bolt having a knurled head 32 and, inwardly of the head 32, a cylindrical dial 33 having indicia 34 thereon and, inwardly of the dial 33, a cam portion 35. Mounted upon the threaded portion of the shank 31 is a lock nut having a knurled portion 36 and, inwardly thereof, a hexagonal nut-shaped portion 37.

The file plate 24 is preferably formed of case hardened steel and the threads upon the shank 31 are preferably twenty-four to the inch while the indicia 34 upon the dial 33 is preferably marked to indicate ten-thousandths of an inch. Upon the upper side of the member 10 immediately above one of the openings 30 adjacent the dial 33 there is formed a marker 38 by which the dial indicia 34 may be read.

In operation, it will be apparent that the straight edge 11 may first be placed upon a pair of blades 38a of a chain saw 39 after which the file plate 24 may be adjusted by first loosening the lock nut 36—37 and then turning the dial 33 until the proper indicia 34 registers with the marker 38 after which the lock nut may again be tightened to securely hold the same in the selected position. This operation will cause a raising or lowering of the cammed portion 35 of the shank 31 to thus alter the angle at which the file plate 24 presents itself with respect to the straight edge 11. The outer end of the arm 18

which is constantly forced downwardly by means of the spring 22 will bear against this cammed portion 35 as shown, for example, in Figure 3 of the drawing thus maintaining the file plate 24 in the selected position. Thus it will be seen that the device may be quickly and accurately positioned and the proper angle for the plate selected and maintained in a simple and accurate manner after which a file may be utilized to bring, for example, the blade 41 which extends upwardly through the slot 25 to a proper shape.

While but one form of the invention has been shown and described herein, it will be readily apparent to those skilled in the art that many minor modifications may be made without departing from the spirit of the invention or the scope of the appended claims.

What is claimed is:

1. A device of the character described comprising an elongated body having a flat bottom and having a longitudinal recess in the top and extending through one end thereof, an arm centrally pivoted to said body in said recess and extending through the open end thereof, a bifurcated file plate affixed to the outer end of said arm, means for adjusting the plate with respect to said body, and means for indicating said relationship between the body and said plate, said means for adjusting the plate including a compression spring interposed between the lower end of said recess and the inner end of said arm, a cam revolubly mounted in said body and bearing against the underside of said arm adjacent the outer end thereof, means for revolving said cam, and means for locking said cam in selected position.

2. A device of the character described comprising an elongated body having a flat bottom and having a longitudinal recess in the top and extending through one end thereof, an arm centrally pivoted to said body in said recess and extending through the open end thereof, a bifurcated file plate affixed to the outer end of said arm, means for adjusting the plate with respect to said body, and means for indicating said relationship between said body and said plate, said means for adjusting the plate including a compression spring interposed between the lower end of said recess and the inner end of said arm, a cam revolubly mounted in said body and bearing against the underside of said arm adjacent the outer end thereof, means for revolving said cam, and means for locking said cam in selected position, and said means for indicating the relationship between the body and the plate including a marker on said body, a shank for said cam, a cylindrical dial affixed to said shank having indicia upon its periphery, said dial being adjacent said marker, a handle at one end of said shank, and a lock nut for the free end of said shank.

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