

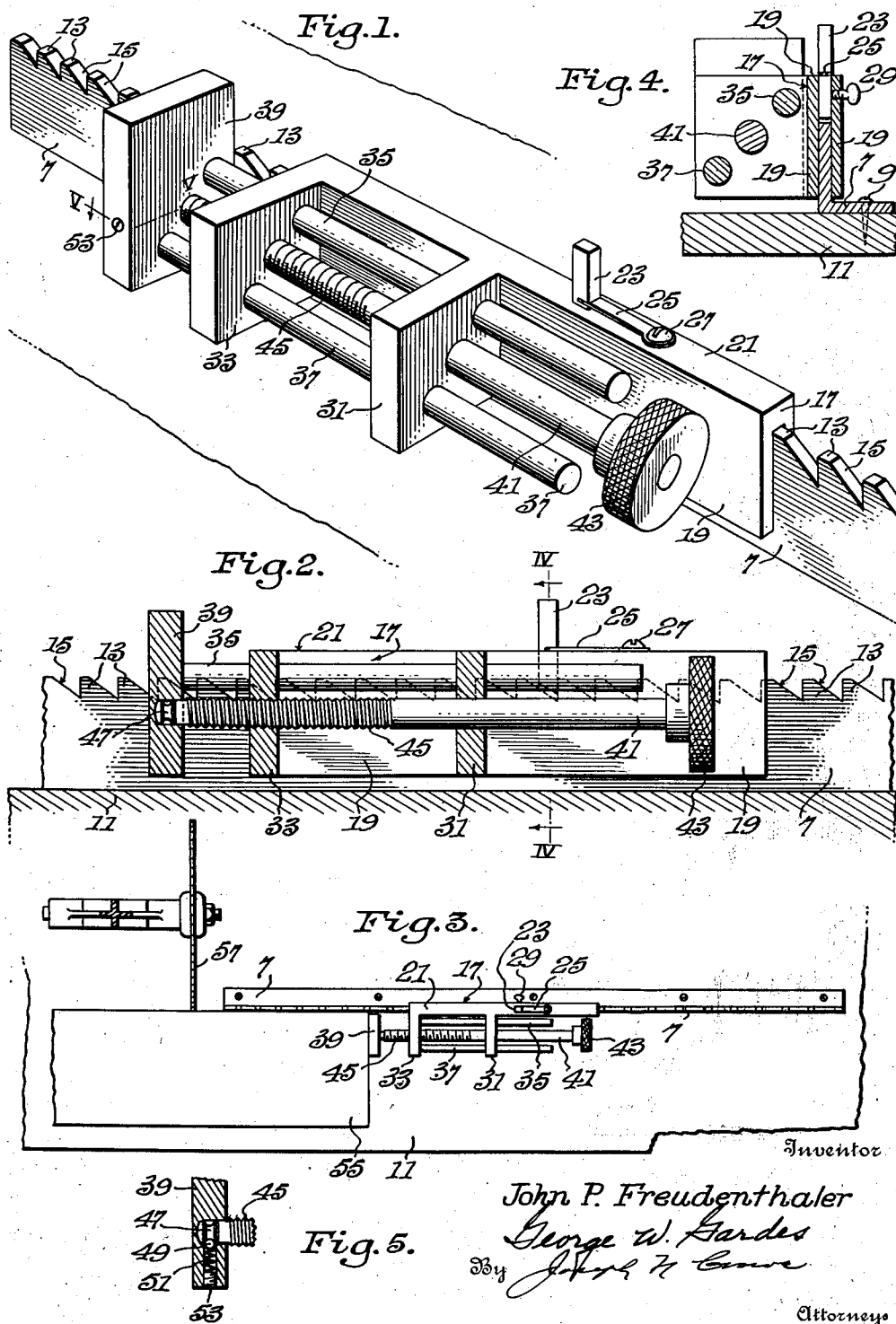
Nov. 18, 1952

J. P. FREUDENTHALER

2,618,300

STOP FOR CUT-OFF SAWS

Filed Nov. 5, 1948



UNITED STATES PATENT OFFICE

2,618,300

STOP FOR CUT-OFF SAWS

John P. Freudenthaler, Montgomery, Ohio

Application November 5, 1948, Serial No. 58,582

2 Claims. (Cl. 143—174)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

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The invention described herein may be manufactured and used by or for the Government for governmental purposes, without payment to me of any royalty thereon.

The present invention provides improvements in gauges or stops adapted to be used in conjunction with saw tables upon which boards, lumber or timbers are being sawed to a definite predetermined length.

The invention more particularly relates to saw tables, and still more particularly to the cut-off stop for the same and the means for adjusting it.

In cutting lumber such as boards or timbers into pieces of any desired length, it is necessary to set the cut-off stop at the proper distance from the saw, and it is very desirable that this be done without the necessity of measuring it every time or resorting to graduations upon the table top.

This is accomplished in accordance with the present invention by providing a notched or serrated angle bar that may be clamped to the saw table top, with stop-mounting guide members adjustably mounted on the said angle bar, there being provided means for locking the stop in predetermined position of adjustment and means enabling both coarse and fine adjustment of the stop.

The invention will be understood more readily by reference to the accompanying drawings, wherein:

Fig. 1 represents a perspective view of a construction embodying the improvements of the present invention;

Fig. 2 is a longitudinal sectional elevation of the device of Fig. 1;

Fig. 3 is a diagrammatic plan view of the device of Fig. 1 applied to a saw-table top;

Fig. 4 is a transverse sectional elevation taken on the line IV—IV of Fig. 2, looking in the direction of the arrows;

Fig. 5 is an enlarged fragmentary detail of the left-hand mounting as viewed in Fig. 1, taken on line V—V of Fig. 1.

Referring more particularly to the drawings, the illustrated embodiment of the invention comprises an angle bar 7 or other member having a planar web, which is adapted to be secured by screws 9 or equivalent fastening means, to a saw-table top 11, the angle bar 7 being provided along its upstanding edge with equally spaced serrations or teeth 13, which have a uniform, known spacing, and which slope correspondingly, as is indicated at 15. Any conveniently formed member having an elongated planar por-

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tion and means for attaching the member to a supporting surface to allow the planar portion to extend normally therefrom may be used as an equivalent of the angle bar 7.

Slidably mounted on the angle bar 7 is a channel member 17, the sides 19 of which engage the sides of the upstanding web of the angle bar, the channel member 17 being slidable along the top of the teeth 13. The top 21 of the channel member 17 is recessed or cut away to receive a pawl or dog 23 that is maintained yieldably pressed into the teeth 13 by the action of a spring 25 secured at 27 to the top of the channel member, and which fits into a slit provided therefor in the pawl 23, as will be apparent from the drawings. The pawl 23 may be locked in position by a thumb-actuated locking screw 29 for preventing any possibility of accidental displacement of the pawl from its adjusted position.

Projecting laterally from the channel member 17 are parallel guides or guide flanges 31, 33 through which holes are provided for slidably passing guide rods 35, 37 that are secured in the stop member 39. The guides 31, 33 are also provided with registering holes for receiving the shank 41 of a micrometer screw that is operated by turning a knurled head 43 therein. The shank 41 of the micrometer screw is provided with threads 45 of small pitch, the end guide 33 being correspondingly internally threaded to allow for movement of the micrometer screw. The end of the shank 41 is freely turnable in the stop member 39, the end of the shank 41 being provided with an annular groove 47 in which a locking ball 49 is maintained by pressure of a compressed coil spring 51 secured in place against a machine screw 53.

The parallel guides 31, 33 prevent lateral turning of the stop member 39, the guide rods 35 and 37 being spaced in diagonal relation relative to the stop 39, the shank 41 of the micrometer screw being mounted intermediate the guide rods 35 and 37.

In operation, in order to assure the sawing off of a definite predetermined length of a piece of work 55 by a saw blade 57, the channel member 17 is adjusted coarsely by moving it and its pawl 23 along a requisite number of notches or teeth 13, the pawl 23 then being locked against accidental displacement by tightening the locking screw 29. It is convenient to have the teeth 13 spaced equally an inch apart, fractions of an inch being obtained by actuation of the knurled head 43 of the micrometer screw, which effects a fine adjustment of the stop member 39 against

which the work-piece 55 is brought for sawing off the desired length of lumber by the saw 57.

It will be seen that the device of the invention is rugged, but easily manufactured and operated and enables accurate repeating of desired sawed off lengths of lumber, as all movable parts are guarded against accidental displacements even of small magnitudes. When desired, removal of the screw 53 releases the coil spring 51 and the locking ball 49, thereby permitting removal of the shank 41 of the micrometer screw from the stop 39.

It will be understood that the illustrated embodiment of the invention is illustrative only of one form of construction which the invention may take without departing from the inventive concept, and that many structural details may be modified in manners readily apparent to one skilled in the art. Accordingly, it will be understood that it is intended and desired to embrace within the scope of the invention such modifications and changes as may be necessary to adapt it to varying conditions and uses, as defined by the appended claims.

Having thus described my invention, what I claim as new and wish to secure by Letters Patent is:

1. A stop for cut-off saws comprising a support, an elongated angle bar secured to the support with one web projecting normal to the support, said web having a serrated free edge forming a plurality of equally spaced teeth, an elongated channel member mounted astride the serrated free edge of the angle bar for linear sliding movement therealong, a pawl extending through the bight of the channel member and removably engaged in the teeth of the angle bar, a leaf spring attached to both the pawl and the channel member for biasing the pawl toward the angle bar, a thumb actuated locking screw threaded through the channel member and frictionally engaging the pawl, said channel member having integral parallel guide flanges projecting normally therefrom, said guide flanges having spaced apertures in the same relative positions therethrough, parallel guide rods journaled in apertures in the guide flanges for longitudinal sliding motion parallel to the channel member and to the angle bar, a micrometer screw extending through apertures in the guide flanges parallel to the guide rods, one aperture in one guide flange being threaded and meshing with the micrometer screw, a saw stop positioned adjacent and normal to the angle bar, attached to ends of the guide rods and rotatably receiving one end of the micrometer screw whereby coarse adjustment of the saw stop may be effected by

movement of the channel member relative to the angle bar and fine adjustment may be effected by rotation of the micrometer screw to cause movement of the saw stop relative to the guide flanges of the channel member.

2. A stop for cut-off saws comprising an elongated planar member adapted to be secured to a surface and project normally therefrom, said elongated member having a serrated free edge forming a plurality of equally spaced teeth, an elongated channel member mounted astride the serrated free edge of the elongated member for linear sliding movement therealong, a pawl attached to the channel member by means of a spring and engaged in the teeth of the elongated member, said spring biasing the pawl into the teeth, means for locking the pawl in a predetermined position, said channel member having parallel guide flanges projecting therefrom normal to the channel member and to the elongated member, said guide flanges having spaced apertures therethrough in the same relative positions, one of said guide flanges having an integral thread in one aperture, a saw stop member positioned adjacent said channel member, said stop member being provided with spaced guide rods extending parallel to the channel member and being journaled in one aperture in each guide flange, and a micrometer screw having one end pivotally secured to the stop member and extending therefrom parallel to the guide rods and through one aperture in each guide flange including the threaded aperture in which it engages the threads whereby coarse adjustment of the saw stop member may be effected by movement of the channel member along the elongated member and whereby fine adjustment of the saw stop member may be effected by rotation of the micrometer screw to cause movement of the saw stop member relative to the channel member.

JOHN P. FREUDENTHALER.

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