

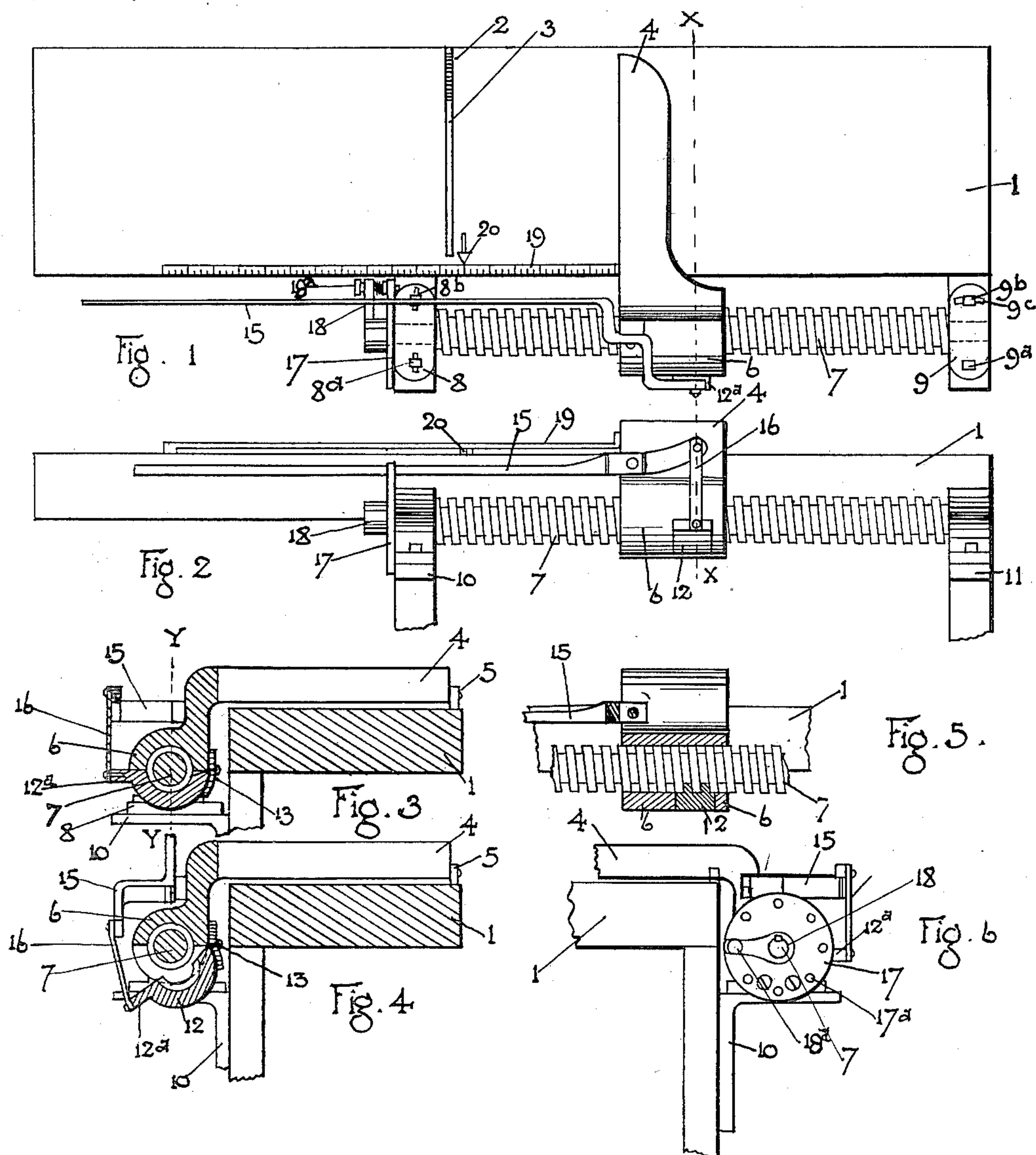
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Patented Nov. 6, 1900.

D. R. CARLETON.  
CIRCULAR SAW GAGE.

(Application filed Mar. 5, 1900.)

(No Model.)



Witnesses.

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# UNITED STATES PATENT OFFICE.

DORES R. CARLETON, OF HAVERHILL, MASSACHUSETTS.

## CIRCULAR-SAW GAGE.

SPECIFICATION forming part of Letters Patent No. 661,206, dated November 6, 1900.

Application filed March 5, 1900. Serial No. 7,261. (No model.)

*To all whom it may concern:*

Be it known that I, DORES R. CARLETON, a citizen of the United States, and a resident of Haverhill, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Circular-Saw Gages, of which the following is a specification.

In sawing boards into lengths for use in making wooden boxes and like articles where the boards of which the article is made must be cut off in certain lengths it is desirable that the long pieces be cut from those portions of the boards which do not taper to any considerable extent and that the short pieces be cut from those portions which taper considerably, if there are such, so that when the pieces are trimmed down to the same width throughout there will be no more waste of the board than is necessary. If the workman is to saw the boards as economically as possible, it will be necessary for him to change the saw-gage several times while sawing up a number of boards. As the boards must be cut accurately in their various lengths, it is necessary that the saw-gage be set accurately. This requires a considerable expenditure of time, and, in fact, it requires so much time that the workman is unlikely to take the trouble to change his gage so as to cut the boards in the most economical length.

The object of my invention is to produce a saw-gage which may be quickly and accurately adjusted by the workman without his being obliged to move from the place where he stands while operating the saw.

For an understanding of my invention attention is called to the accompanying drawings, in which—

Figure 1 is a plan view of the saw-gage. Fig. 2 is a side elevation thereof. Figs. 3 and 4 are cross-sections on the line X X of Figs. 1 and 2, showing the gage in its locked and unlocked positions, respectively. Fig. 5 is a cross-section on the line Y Y of Fig. 3. Fig. 6 is a partial end view of the apparatus.

The table 1 is provided with an ordinary crosscut-saw 2, which works across the table in the slot 3. The gage-bar, against which the ends of the boards are placed to determine the length to be cut off by the saw, consists of a bar 4, having a roller 5 at its back end and a depending arm 6 at its front end.

This arm 6 is provided with a hole, through which the shaft passes. Shaft 7 is provided with a square screw-thread throughout its entire length, said threads being preferably four to the inch. Said shaft is supported in journals 8 and 9 at its ends. The ends of the shaft are reduced in diameter, as shown in dotted lines in Fig. 1, so that the shaft will be held against longitudinal movement between the bearings. The bearings 8 9 are supported on suitable brackets 10 11, which are secured to the table. The bearing 9 is secured to the bracket 11 by bolts 9<sup>a</sup> 9<sup>b</sup>, the bolt 9<sup>a</sup> passing through a hole and the bolt 9<sup>b</sup> passing through an arc-shaped slot 9<sup>c</sup> in the ears of the bearing. The bearing 8 is secured to its bracket 10 by bolts 8<sup>a</sup> 8<sup>b</sup>, and these bolts each pass through an arc-shaped slot in the ears of the bearing. The three arc-shaped slots above referred to are each formed on an arc having the bolt 9<sup>a</sup> as a center, so that the bearing 9 may be swung on the bolt 9<sup>a</sup> as a center and the bearing 8 may be made to slide on its bracket in an arc having said bolt 9<sup>a</sup> as a center. The object of providing these arc-shaped slots is to provide a means of adjusting the gage-bar 4 so that the face will be parallel with the path of the saw. The arm 6 is bored out, so that it may slide easily on the shaft 7, and a slot is cut in the under side thereof, in which a half-nut or latch 12 is fitted. This latch is provided with threads on the inside which correspond with the threads of the shaft 7 and is hinged at 13 to the rear side of the arm 6. A lever 15, having a long handle, is pivoted to the side of the arm 6 and has one end of a flexible steel band 16 connected to its short arm. The opposite end of the band 16 is connected to a laterally-projecting arm 12<sup>a</sup> of the latch, and the parts are so arranged that when the handle end of the lever 15 is thrown upwardly the latch 12 may be dropped sufficiently to throw its threads out of engagement with the threads of the shaft 7. A plate 17, having a regular series of holes 17<sup>a</sup> therein, is secured to the left-hand side of the bearing 8. The corresponding end of the shaft 7 has a crank-arm 18 secured thereto, and said arm is provided with a spring-pin 18<sup>a</sup> in its end, which is adapted to engage the perforations 17<sup>a</sup> of the plate 17.



A scale 19 is secured to the bar 4, and a pointer 20 is secured to the table at a point adjacent to the path of the saw or some other point which is convenient to the workman.

5 In adjusting the gage-bar to the particular position desired the lever 15 will be thrown upwardly, permitting the latch 12 to drop out of engagement with shaft 7, so that the arm 6 is free to slide on the shaft 7. The  
10 workman moves the bar to a position which corresponds substantially to that desired, such position being ascertained by the scale 19. The lever 15 is then lowered, lifting the  
15 latch into engagement with the shaft. If the gage has not been adjusted to the precise position desired, the threads of the latch will not come into engagement with those of shaft 7 and the gage must be moved slightly, so that said threads may come into engagement  
20 properly. When this has been done, assuming that the parts have previously been properly adjusted, the gage-bar will be in precisely the correct position with respect to the saw, so that the board will be cut off at ex-  
25 actly the desired length.

As thus far described the gage can only be adjusted within ranges of one-quarter of an inch, and for ordinary purposes in making wooden boxes this is all that is needed; but  
30 in some instances it may be desired to adjust the gage-bar one-eighth or one-sixteenth of an inch, or less, from the quarter. To accomplish this result, I provide the plate 17 and the crank-arm with the spring-pin 18<sup>a</sup>.  
35 If, for instance, it is desired to move the gage one-eighth of an inch from the quarter at which it has been adjusted, as previously described, the spring-pin 19 will be pulled back, so that it is disengaged from the plate  
40 17, and then the shaft will be rotated by the crank 18, so that the pin may pass into the perforation 17<sup>a</sup>, which is diametrically opposite the one from which it was removed. This  
45 will cause the shaft to turn one-half a revolution, and therefore move the gage-bar one-eighth of an inch from the position in which it was previously adjusted. Obviously the shaft will be turned in one direction if a point one-eighth of an inch less than the previously-  
50 adjusted position is desired and in the opposite direction if a point one-eighth of an inch beyond is desired. By moving the shaft through one-quarter of a revolution the position of the gage-bar may be changed one-six-  
55 teenth of an inch. It will be obvious that the fineness with which the gage may be adjusted simply depends on the number of perforations in the plate 17.

From the foregoing description it will be  
60 apparent that I have provided a device which permits the workman to readily and accu-

ately adjust the gage-bar to any desired position, and he may do this without stepping from the position in which he stands to operate the saw.

Having described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is as follows:

1. A saw-gage comprising a movable gage-bar, a lever connected thereto, a screw-threaded shaft, means for holding the same in a fixed position, and means controlled by said lever for engaging the threads of said shaft.

2. A saw-gage comprising a movable gage-bar, a lever connected thereto, a screw-threaded shaft on which said bar is adapted to slide, means for holding said shaft in a fixed position, a latch connected to said bar which is adapted to be held in engagement with the threads of said shaft, and connections between said lever and said latch for moving the latter out of engagement with the threads of said shaft.

3. A saw-gage comprising a movable gage-bar, a screw-threaded shaft on which said bar is adapted to slide, a lever which is pivoted on said bar, a latch which is connected to said lever and is adapted to be held in engagement with the threads of said shaft by said lever, said parts being arranged so that when said lever is moved from its normal position said latch will be moved out of engagement with said shaft.

4. A saw-gage comprising a movable gage-bar, a screw-threaded shaft on which said bar is adapted to slide, means for adjusting the position of said shaft and for holding the same in its adjusted position, a latch which is adapted to engage said shaft between one or more of the threads thereof and lock said bar against movement, and means for disconnecting said latch from the threads of said shaft.

5. A saw-gage comprising a gage-bar, a screw-threaded shaft on which said bar is adapted to slide, a lever pivoted to said bar, a latch which is pivotally connected to said bar in such a position that it may engage the threads of said shaft, a flexible connection between said lever and said latch, said parts being arranged so that when said lever is lifted to move said bar, said latch will be moved out of engagement with said shaft.

In testimony whereof I have affixed my signature in presence of two witnesses.

DORES R. CARLETON.

Witnesses:

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