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LOCK MEANS FOR TILTABLE TABLE TOPS

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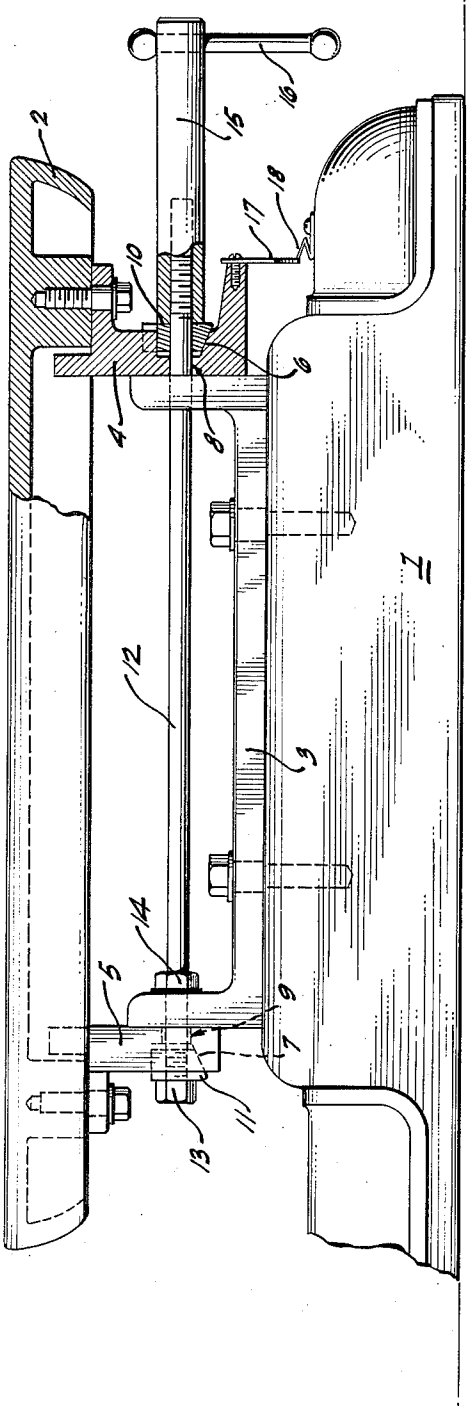


FIG. 1.

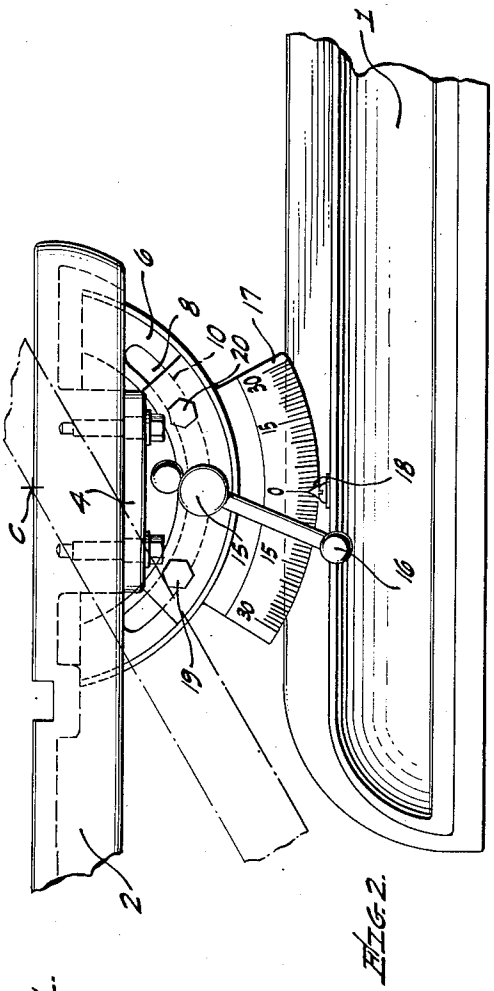


FIG. 2.

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LOCK MEANS FOR TILTABLE TABLE TOPS

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5 Claims. (Cl. 311—38)

This invention relates to a lock means for tiltable table tops, such as the table of a planer, grinder, or the like, and the invention relates particularly to a means of adjusting or tilting the table top.

An object of my invention is to provide a novel lock means for tiltable table tops, in which a single manually operable means is provided to either release the table top for adjustment and to latch or lock the same in its adjusted position.

Another object of my invention is to provide a novel lock means of the character stated, in which the lock means consists of wedge blocks which are pressed into an appropriate seat in a movable member for the purpose of holding the table top in its adjusted or tilted position.

Another object of my invention is to provide a novel lock means of the character stated, in which the wedge blocks are pressed into their respective seats, or are released from the seats by means of a single sleeve threaded on a shaft, the sleeve bearing against one of the wedges.

Still another object of my invention is to provide a novel lock means of the character stated, in which the table top can be accurately tilted or adjusted over a very small distance, if desired; the table top can be held in this adjusted position without movement, due to the pressure or activity of the work.

Other objects, advantages and features of invention may appear from the accompanying drawing, the subjoined detailed description and the appended claims.

In the drawing—

Figure 1 is a side elevation of a tiltable table top with my adjusting means thereon, and with parts broken away to show interior construction.

Figure 2 is a fragmentary end view of my invention.

Referring more particularly to the drawing, the numeral 1 indicates a base or frame upon which a table 2 is mounted. The table 2 can be the work surface of a planer, a grinder, a drill press, or the like, and the table is mounted on the base 1 in the following manner:

The table 2 is tiltable about a horizontal axis C constructed and arranged as follows: A channel 3 is bolted or otherwise fixedly secured to the upper surface of the frame or base 1. A pair of mounting lugs 4 and 5 are each bolted or otherwise fixedly attached to the bottom of the table top 2. The mounting lugs 4 and 5 are arranged in spaced relation, so that they will bear against the outer flat surfaces of the channel member 3. The lugs 4 and 5 are each provided with an arcuate seat 6 and 7, respectively, and these seats are also tapered for purpose to be further described. The lugs 4 and 5 are also formed with arcuate slots 8 and 9, respectively, so that the lugs may move relative to the center of rotation C of the table top 2. Wedge blocks 10 and 11 fit in the arcuate seats 6 and 7, respectively, and these blocks are also arcuate in shape and accurately fit the seats 6 and 7. The blocks 10 and 11 are also wedge shaped in cross-section so as to fit onto the tapered surfaces of the seats

6 and 7. A shaft 12 is journaled in the channel member 3 and is formed with a head 13 at one end which bears against the wedge block 11 and a shoulder 14 which bears against one end of the channel 3. The shaft is also threaded into the block 11. The stop member 14 permits a very slight endwise movement of the shaft 12 so that the wedge blocks 10—11 can be either tightened on their seats in the lugs 4 and 5, respectively, or can be slightly retracted so that the table top 2 and the lugs 4 and 5 are free to rotate around the center C, the shaft 12 remaining stationary. The wedge blocks 10 and 11 also act as accurate guides during the rotation or movement of the table top 2 since these blocks are accurately fitted in the seats 6 and 7, as will be evident from the foregoing description.

A sleeve or nut 15 is threaded on to the outer end of the shaft 12 and bears against the block 11 for the purpose of pressing the block 10 inwardly into the seat 6, and simultaneously drawing the block 11 into its seat, thereby locking the table top 2 in its adjusted position. A pin or handle 16 extends through the sleeve 15 and permits manual rotation of the sleeve for the purpose of tightening or loosening the same, as may be required. A protractor or scale 17 is attached to the lug 4 so that the amount of tilt of the table 2 can be determined. A fixed pointer 18 on the base 1 serves to indicate the amount of tilt or adjustment of the table 2 on the scale 17. As a further means of guiding the lugs 4 and 5 as the table top 2 is tilted, the wedge blocks 10 and 11 are each provided with a pair of pins 19 and 20 which extend into the slots 7 and 8 to further hold the parts in proper relation.

In operation, if it is desired to tilt or adjust the table top 2 the sleeve 15 is unthreaded on the shaft 12 an amount sufficient to permit the slight retraction of the blocks 10 and 11 from their arcuate seats 6 and 7, respectively, in the mounting lugs 4 and 5, respectively. The table top 2 can now be rotated or tilted with the center C as the center of rotation, the amount of tilt being indicated on the scale or protractor 17. The sleeve 15 is now tightened against the block 10 and pressure of the sleeve against the block will also draw the shaft 12 endwise to press the head 13 against the block 11, thus simultaneously pressing the last named block into its seat in the lug 5, thus effectively locking the table top 2 in its tilted or adjusted position. The adjustment and locking of the table top is accomplished by the movement of a single sleeve, and due to the wedge shape of the blocks 10 and 11 extending into tapered seats 6 and 7 will hold the table top accurately and permanently in its adjusted position.

Having described my invention, I claim:

1. A lock means for tiltable table tops including a frame, and a table top tiltable relative to the frame, a horizontal shaft, means mounting the shaft on said frame, a pair of spaced mounting lugs depending from the table top, said lugs each having an elongated slot therein through which said shaft extends, said lugs each having a tapered recessed seat therein, a tapered block resting in each of the seats, said blocks being both mounted on said shaft, and means on the shaft to simultaneously press said blocks into said seats.

2. A lock means for tiltable table tops including a frame, and a table top tiltable relative to the frame, a horizontal shaft, means mounting the shaft on said frame, a pair of spaced mounting lugs depending from the table top, said lugs each having an elongated slot therein through which said shaft extends, said lugs each having a tapered recessed seat therein, a tapered block resting in each of the seats, said blocks being both mounted on said shaft, a head on one end of the shaft bearing against one of said blocks, and a sleeve threaded onto the other

end of the shaft and bearing against another of said blocks, to simultaneously press both of said blocks into said seats.

3. A lock means for tiltable table tops including a frame, a channel on said frame, a table top tiltably mounted on the frame, a horizontal shaft journaled in said channel, a pair of spaced mounting lugs depending from the table top, each lug bearing against one side of the channel, said lugs each having an elongated slot therein through which said shaft extends, said lugs each having a tapered recessed seat therein, a tapered block resting in each of the seats, said blocks being slidably mounted on said shaft, and means on the shaft engaging the blocks to simultaneously press said blocks into said seats.

4. A lock means for tiltable table tops including a frame, a channel on said frame, a table top tiltably mounted on the frame, a horizontal shaft journaled in said channel, a pair of spaced mounting lugs depending from the table top, each lug bearing against one side of the channel, said lugs each having an elongated slot therein through which said shaft extends, said lugs each having a tapered recessed seat therein, a tapered block resting in each of the seats, said blocks being slidably mounted on said shaft, a head on one end of the shaft, said head bearing against one of the blocks and a sleeve

threaded on the other end of the shaft, said sleeve bearing against another of the blocks, to simultaneously press both of said blocks into said seats.

5. A lock means for tiltable table tops including a frame, a table top tiltably mounted on the frame, a channel on the frame, a horizontal shaft journaled in said channel, a pair of spaced mounting lugs depending from the table top, said lugs each bearing against one side of the channel, said lugs each having an elongated arcuate slot therein through which said shaft extends, said lugs each having an arcuate tapered recessed seat therein, an arcuate tapered block resting in each of the seats, said shaft extending through each of the blocks, a head on one end of the shaft bearing against one of the blocks, and a sleeve threaded onto the other end of the shaft and bearing against another of said blocks, to simultaneously press both of said blocks into said seats.

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