

April 28, 1925.

S. FRENCH

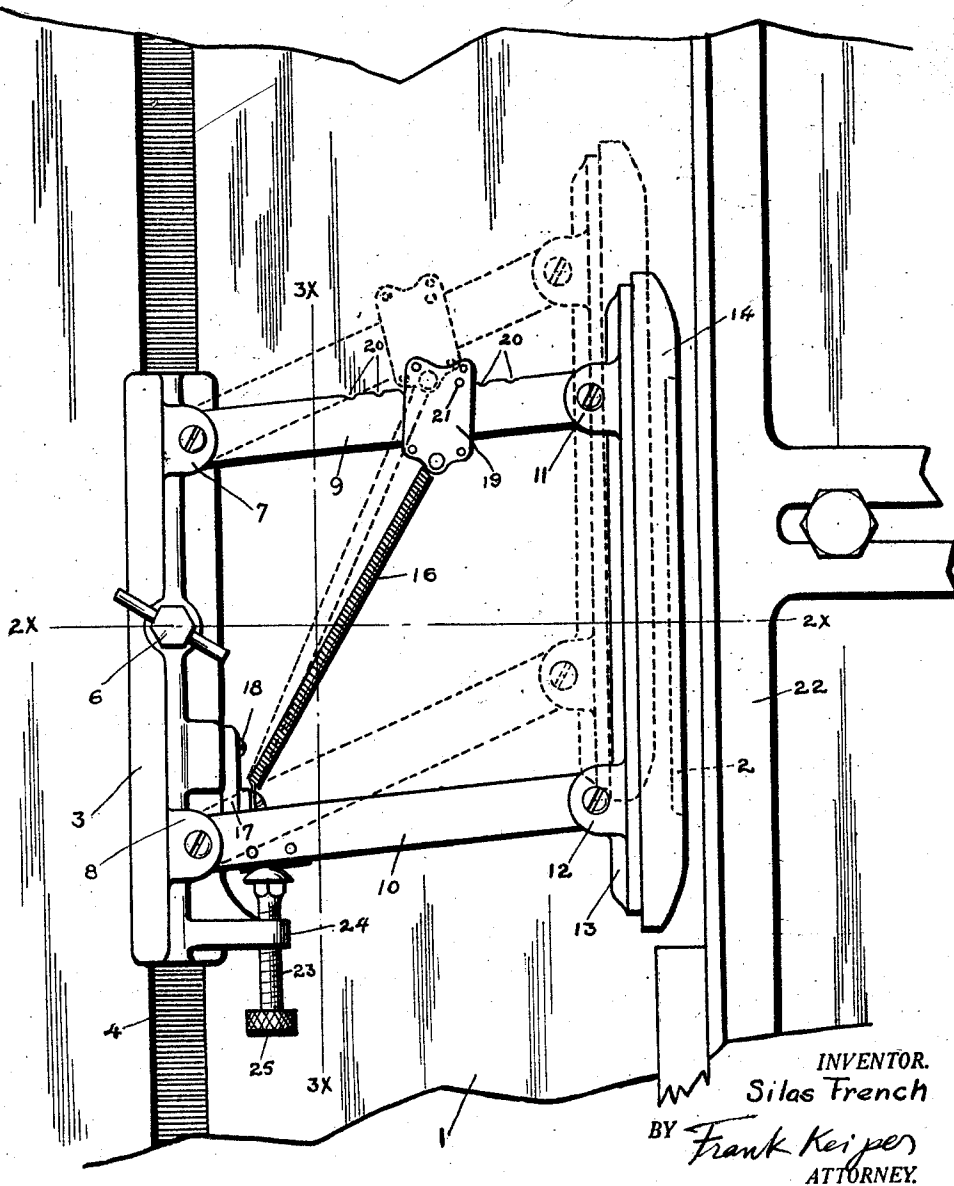
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GUARD AND GUIDE FOR CIRCULAR RABBETING SAWS

Filed July 18, 1923

2 Sheets-Sheet 1

FIG-1



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FIG. 2

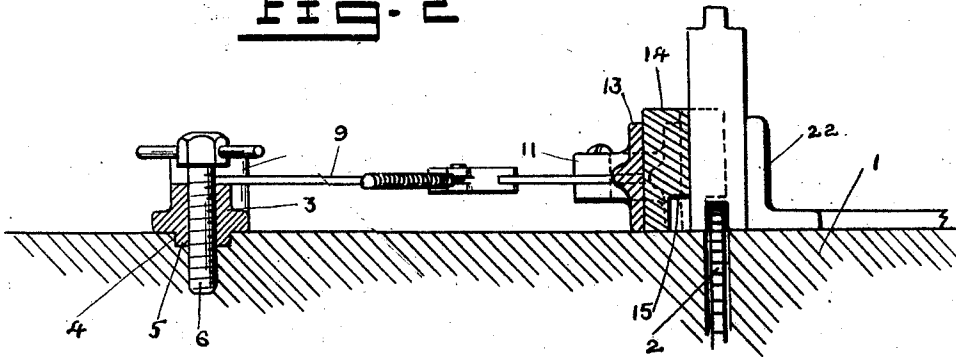


FIG. 3

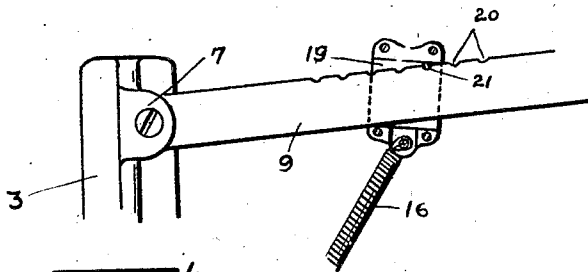
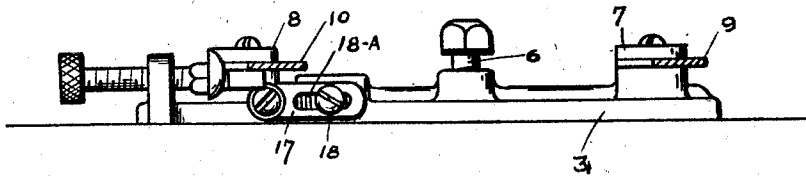


FIG. 4

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GUARD AND GUIDE FOR CIRCULAR RABBETING SAWS.

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To all whom it may concern:

Be it known that I, SILAS FRENCH, a citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Guards and Guides for Circular Rabbeting Saws, of which the following is a specification.

The object of this invention is to provide a new and improved form of combination guide and guard for circular saws used for rabbeting.

This and other objects of this invention will be fully illustrated in the drawings, described in the specification and pointed out in the claims at the end thereof.

In the accompanying drawings:

Figure 1 is a top plan view of a saw table equipped with my improved combination guide and guard.

Figure 2 is a vertical sectional view of the combination guard and guide, the section being taken on the line 2*-2* of Figure 1.

Figure 3 is a partial section and elevation of the combination guide and guard, the section being taken on the line 3*-3* of Figure 1.

Figure 4 is a detail view of the adjustable tension member of the combination guide and guard.

In the several figures of the drawing like reference numerals indicate like parts.

The combination guard and guide forming the subject matter of my present invention is intended for use with circular saws when rabbeting is done therewith. This rabbeting operation consists of cutting channels or grooves into the longitudinal edges of boards and is done by guiding the edges of the boards over the circular rabbeting saw and allowing the teeth thereof to cut into the edge of the board according to the depth required for the groove or channel to be formed therein. My invention is adapted to hold the board to be rabbeted, uniformly, against the gage of the saw table while the rabbeting operation takes place and then swing a guard member over the exposed cutting edge of the saw after the cutting operation has been completed and the board has been removed.

As illustrated in the drawings the guard and guide is mounted on top of the saw table 1 at one side of the circular saw 2 and parallel thereto. It consists of the supporting rail 3 which can be adjustably clamped

in place in the guide channel on groove 4 of the saw table. For this purpose the under side of the guide rail 3 is provided with the tongue 5 extending the full length thereof and this tongue is adapted to slide in the groove 4 so that the supporting rail can be located at the desired position on the saw table with relation to the circular saw and be securely clamped in place in this position by threading the set screw 6 carried by the supporting rail into a threaded opening in the groove 4 as illustrated in section in Figure 2.

Near each end of the supporting rail 3 are provided the lugs 7 and 8. These lugs are slotted on one side and have one end of each of the arms 9 and 10 pivoted therein. The other end of these arms are pivoted in similar lugs 11 and 12 provided on one side of the pressure bar 13. This bar which is thus connected with the supporting rail 3 by means of the arms 9 and 10 is thus held parallel to the supporting rail when swinging toward or away from the supporting rail or the circular saw along side of which it is normally held in place. This bar is made of cast metal.

Suitably fastened to the outside of the pressure bar 13 is the guard shoe 14. This shoe is made of wood or other material that can be readily sawed so that when the cutting edge of the saw comes in contact with it it will not injure the saw but instead the wooden shoe will be cut away by it. Furthermore, the circular saw is allowed to saw a groove into the lower edge of the guard shoe as illustrated in section in Figure 2 for the purpose of forming an overhanging ledge 15 on the side of the guard shoe that will project over the cutting edge of the saw and protect the operator of the saw against accidental contact with it after or before a board is being fed through the saw for rabbeting.

For the purpose of yieldingly holding the pressure bar and its guard shoe against the side of the board that is being fed through the saw a tension spring 16 is provided. One end of this tension spring is fastened to the adjustable lug 17 which is fastened to the inside of the supporting rail 3 by means of the set screw 18. The lug 17 is elongated and has a slot 18^a provided in the middle thereof. The set screw 18 passes through this slot and is threaded into the side of the supporting rail 3 to clamp the lug in place there-

on. At the opposite end the spring 16 is attached to the adjustable member 19 carried by the arm 9. This member comprises a block having a slot passing through the middle thereof. The arm 9 passes through this slot and provides a guide rail for the member 19 to slide thereon. The outer edge of the arm 9 is notched at 20, 20 and the pin 21 carried by the adjustable member 19 is adapted to engage with these notches. The pin 21 passes through the block forming the member 19 and into the slot formed in the middle thereof so that the tension of the spring 16 pulls the portion of the pin exposed within the slot in the member 19 into one of the notches 20 and thus anchors the adjustable member 19 in a predetermined position on the arm 9. This position can be changed by pulling the adjustable member 19 outwardly so that the pin 21 is disengaged from the notch in which it was held and then sliding the member 19 along the arm 9 until the desired position for the member is reached. On the release of the member 19 the pin will then be pulled in to engagement with another notch 20 which will anchor the member 19 in place in this new position. Through this adjustment of the member 19 the tension of the spring 16 can be increased or decreased, in that the distance between the point of attachment of the spring on the lug 17 and adjustable member 19 is increased or decreased and the normal or starting tension of the spring correspondingly increased or decreased.

The pressure of the pressure bar and its guard shoe against the side of the board as it is fed through the saw can therefore be increased or decreased to securely hold it against the gage 22 and keep it in line therewith.

As illustrated in dotted lines the pressure bar and its guard shoe swings to one side when the board is fed against the saw and will maintain an even pressure against the board as long as it is in contact therewith. When the board has passed the saw and the guard the pressure bar and its guard shoe will swing back to its normal position in which the ledge formed on the guard shoe will cover the cutting edge of the saw.

The normal position of the guard shoe with relation to the saw of course must vary with the thickness of the board to be rabbeted and the particular rabbeting operation to be performed on the board. For this purpose a stop in the form of an adjustable bolt 23 is provided on one side of the supporting rail. This bolt is threaded in a suitable lug 24 carried by the supporting rail and by turning the bolt by means of its knob 25, the inner end thereof can be forced against the edge of the arm 10 and thus form a stop for it that will prevent the swinging of the arm beyond a predeter-

mined position in which the pressure bar and guard arm is held properly with relation to the circular saw.

I claim—

1. In a guard and guide for circular rabbeting saws having a saw table, the combination of a supporting rail, means for adjustably anchoring said supporting rail in the saw table, a pair of parallel arms pivoted to one side of said supporting rail, a pressure bar pivoted to the end of said parallel arms, a nonmetallic guard member carried on the outside of said pressure bar and held parallel to the plane of rotation of the circular saw, a ledge formed on said guard member, said ledge overhanging one of the exposed sides and the top of the circular saw when in its normal inoperative position.

2. In a guard and guide for circular rabbeting saws having a saw table, the combination of a supporting rail, means for adjustably anchoring said supporting rail in the saw table, a pair of parallel arms pivoted to one side of said supporting rail, a pressure bar pivoted to the end of said parallel arms, a nonmetallic guard member carried on the outside of said pressure bar, a ledge formed on said guard member, said ledge overhanging the circular saw when in its normal inoperative position, an adjustable lug carried by said supporting rail, an adjustable member carried by one of said parallel arms, a tension spring stretched between said adjustable lug and said adjustable member on said arm to normally swing said parallel arm away from said supporting rail.

3. In a guard and guide for circular rabbeting saws having a saw table, the combination of a supporting rail, means for adjustably anchoring said supporting rail in the saw table, a pair of parallel arms pivoted to one side of said supporting rail, a pressure bar pivoted to the end of said parallel arms, a nonmetallic guard member carried on the outside of said pressure bar, a ledge formed on said guard member, said ledge overhanging the circular saw when in its normal inoperative position, an adjustable lug carried by said supporting rail, an adjustable member carried by one of said parallel arms, a tension spring stretched between said adjustable lug and said adjustable member on said arm to normally swing said parallel arm away from said supporting rail, a stop for said parallel arms carried by said supporting rail, said stop being adjustable parallel to said supporting rail and being adapted to be forced against one of said parallel arms to hold said arms and with it said pressure bar and guard member in a predetermined position with relation to the side of the circular saw.

4. In a guard and guide for circular rabbeting saws having a saw table, the combination of a supporting rail, means for ad-

justably anchoring said supporting rail in the saw table, a pair of parallel arms pivoted to one side of said supporting rail, a pressure bar pivoted to the end of said parallel arms, a nonmetallic guard member carried on the outside of said pressure bar, a ledge formed on said guard member, said ledge overhanging the circular saw when in its normal inoperative position, an adjustable lug carried by said supporting rail, an adjustable member carried by one of said parallel arms, a tension spring stretched between said adjustable lug and said adjustable member on said arm to normally swing said parallel arm away from said supporting rail, said adjustable member carried by one of said parallel arms comprising a block surrounding said parallel arm, a pin carried by said block, said parallel arm carrying said adjustable member having notches along the edge thereof, said tension spring forcing said pin into the notches of said parallel arm to anchor said block in a predetermined position on said parallel arm.

In testimony whereof I affix my signature.

SILAS FRENCH.