

March 3, 1931.

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1,795,203

SAW GUARD

Filed June 11, 1930

2 Sheets-Sheet 1

Fig. 1.

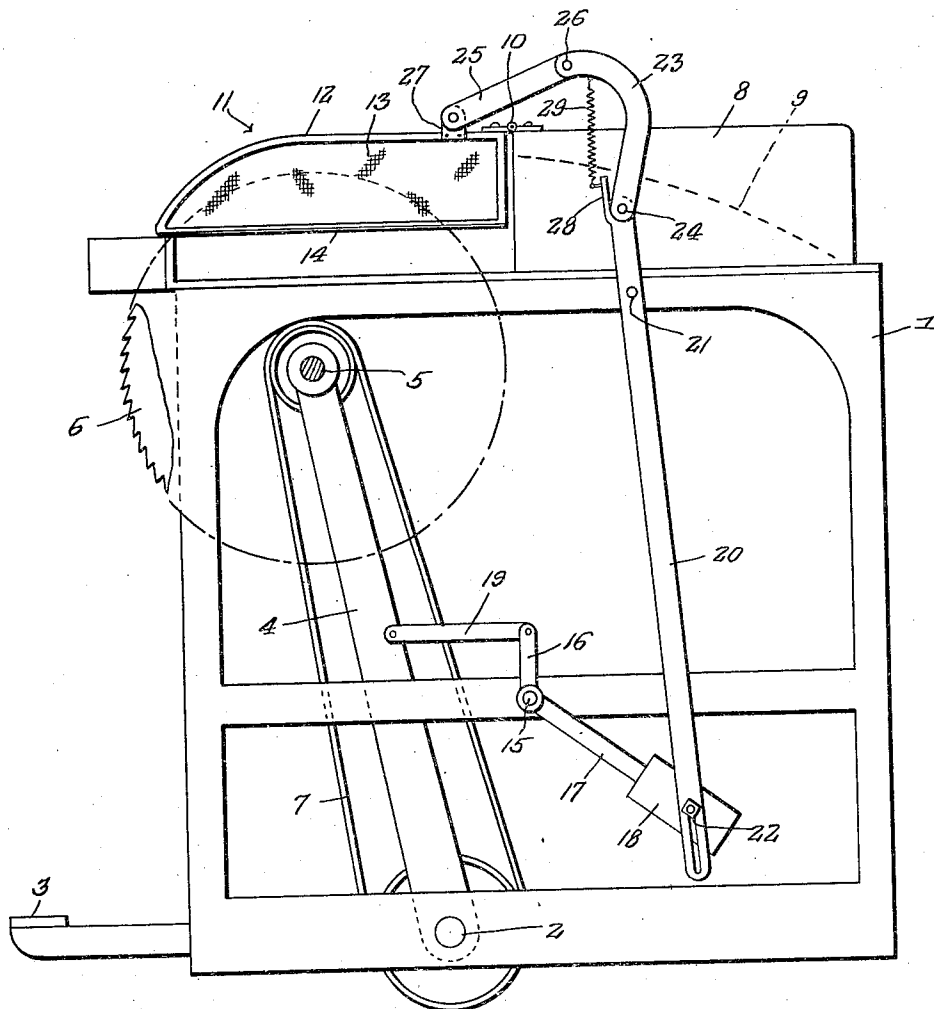
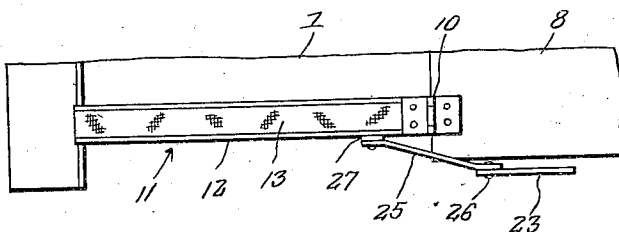


Fig. 3.

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Fig. 2.

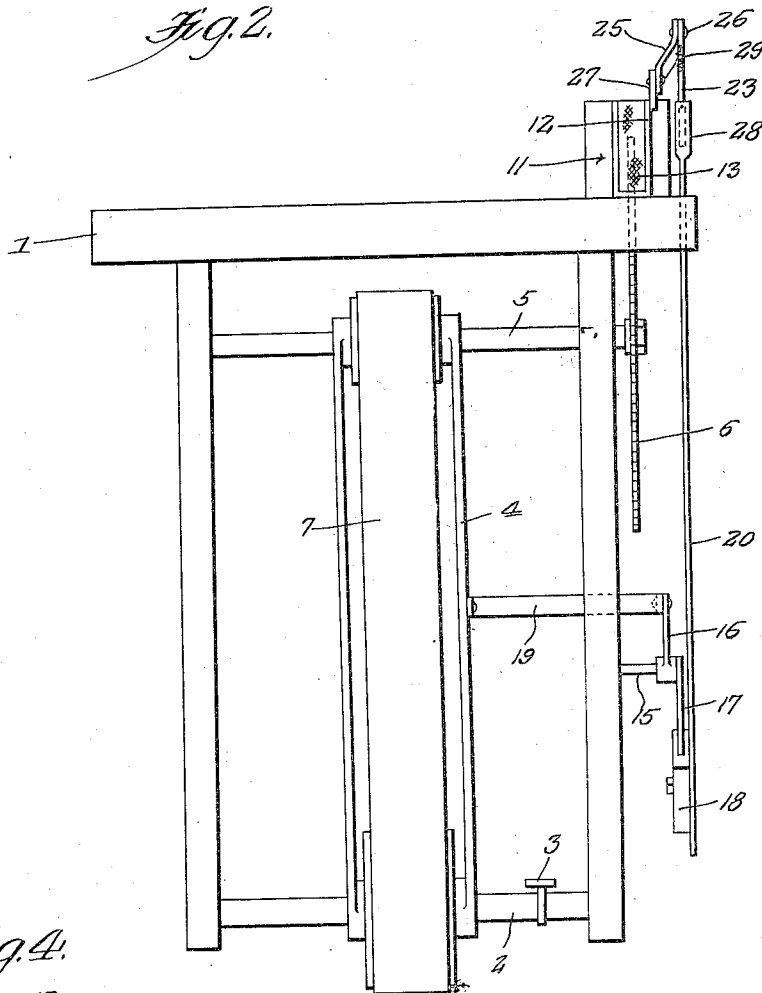


Fig. 4.

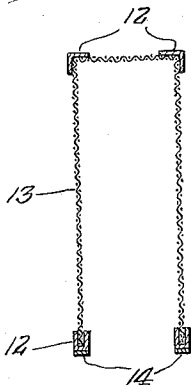
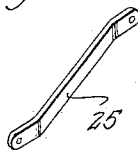


Fig. 5.



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UNITED STATES PATENT OFFICE

WILBUR ESKRIDGE, OF LOUISVILLE, KENTUCKY, ASSIGNOR OF ONE-THIRD TO ARTHUR FLEISCHAKER AND ONE-THIRD TO VINCENT O. PATTERSON, BOTH OF LOUISVILLE, KENTUCKY

SAW GUARD

Application filed June 11, 1930. Serial No. 460,473.

This invention relates generally to saw guards and more particularly to devices of this character for use in connection with cut off saws and has for its primary object to provide, in a manner as hereinafter set forth, a saw guard which is operatively connected to the swingable supporting structure of the saw for actuation thereby in a manner to automatically move the guard to operative and inoperative position when the saw is in use.

Other objects of the invention are to provide a saw guard of the character described which will be simple in construction, strong, durable, efficient in its use, and which may be manufactured at low cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawings, wherein like reference characters designate corresponding parts throughout the several views, and wherein:

Figure 1 is a view in side elevation showing a saw guard constructed in accordance with this invention mounted in operative position on a cut off saw,

Figure 2 is a view in front elevation thereof,

Figure 3 is a fragmentary view in top plan of the guard,

Figure 4 is a vertical cross sectional view through the guard,

Figure 5 is a detail view in perspective of the link which pivotally connects the guard to the actuating mechanism.

Referring to the drawings in detail, it will be seen that reference numerals 1 designate a conventional saw table in the lower portion of the supporting structure of which is journaled a transverse shaft 2 mounted for oscillatory movement and having fixed thereon engaging one end an operating foot pedal 3. Also fixed on an intermediate portion of the shaft 2 is the swingable saw supporting frame 4 through the upper end portion of which is rotatably mounted the arbor 5 upon one end portion of which is fixed a saw disk 6 which projects through a slot (not shown) provided therefor in the usual manner in the

top of the table 1. Suitable driving mechanism 7 is provided for the arbor 5 and the saw 6.

Mounted on the table 1 is the block 8 which is recessed as at 9 for the reception of the saw 6. Hingedly mounted as at 10 on the upper side and at one end of the block is a guard of appropriate configuration designated generally by the reference numeral 11 and comprising a skeleton frame 12 having a foraminous side and top walls 13, as best seen in Figure 4 of the drawings, the work or table engaging surfaces of the frame 12 are provided with suitable pads 14.

Projecting laterally from one side of the supporting structure of the table 1 is a stub shaft 15 upon which is mounted for swinging movement an arm 16 to the hub portion of which is fixed an arm 17 which is disposed at an angle with respect to the arm 16 and has fixed on its free end portion a weight 18. The free end of the arm 16 is operatively connected to the intermediate portion of the saw supporting frame 4 through the medium of the angular bar 19. A lever 20 has an intermediate portion pivotally connected to an upper portion of the table supporting structure as at 21, the lower end portion of said lever 20 being operatively connected to the weight 18 for actuation thereby through the medium of the pin and slot connection 22.

A longitudinally curved bar 23 is pivotally mounted as at 24 for swinging movement on the upper end portion of the lever 20 and a connecting link 25 has one end pivotally connected to the bar 23 as at 26 and its opposite end portion pivotally connected to the upstanding ear 27 on the frame 12 of the guard 11.

An integral stop lug 28 is provided on the upper end portion of the lever 20 for engagement with the bar 23 in a manner to limit the swinging movement of said bar in one direction, a coil spring 29 at one end connected to the stop lug 28 and its opposite end connected to the bar 23 in a manner to pull said bar 23 toward the stop lug 28.

In use, the saw 6 is normally housed in the recess 9 of the block 8. It is understood, of course, that the saw is always returned to the

position by the weight, when the saw is housed in the block 8, the guard 11 is in raised or inoperative position. The work is then positioned on the table 1 in the usual manner and the operator depresses the foot pedal 3 on the raised position toward the position illustrated to advantage in Figure 1 of the drawings. The saw is thus swung outwardly from the block 8 into engagement with the work and the guard 11 simultaneously starts to swing downwardly.

The guard 11 will have reached its lowermost position before the saw reaches the limit of its forward swinging movement through the medium of the pin and slot connection 22 but after the cutting operation has been completed. When the operator releases the foot pedal 3, the weight 18 will gravitate toward a vertical position from the position illustrated in Figure 1 and the saw is thus returned to its position within the block 8. The pin and slot connection 22 permits an initial movement of the saw 6 before the guard 11 begins to move upwardly. It will further be apparent that the pivotal connection 24 and the stop lug 28 will permit an initial swinging movement of the lever 20 with the weight 18 before said bar 23 will begin to swing with the lever 20 to raise the guard 11.

It is believed that the many advantages of a saw guard constructed in accordance with this invention will be readily understood, and although the preferred embodiment of the invention is as illustrated and described, it is to be understood that changes in the details of construction may be had which will fall within the scope of the invention as claimed.

What is claimed is:

1. The combination with a saw table and a swinging saw frame having a saw rotatably mounted thereon and a stationary housing mounted on the table for the reception of the saw in its inoperative position, means for manually swinging the saw to operative position out of the housing, a gravity actuated weight mounted for swinging movement and operatively connected with the saw frame for returning the saw to inoperative position in the housing, a guard hingedly mounted for swinging movement on the housing for disposition over the saw when said saw is in its operative position, a lever mounted for swinging movement on the table and having a pin and slot connection with the weight for actuation thereby, a bar hingedly mounted on the lever, a link pivotally connecting the bar to the guard in a manner to swing said guard to operative and inoperative position upon actuation of the lever, and means for limiting the swinging movement of the lever and the bar relative to each other in one direction.

2. The combination with a saw table and a swinging saw frame having a saw rotatably

mounted thereon and a stationary housing mounted in the table for the reception of the saw in its inoperative position, means for manually swinging the saw to operative position out of the housing, a gravity actuated weight mounted for swinging movement and operatively connected with the saw frame for returning the saw to inoperative position in the housing, a guard hingedly mounted for swinging movement on the housing for disposition over the saw when said saw is in its operative position, a lever mounted for swinging movement on the table and having a pin and slot connection with the weight for actuation thereby, a bar hingedly mounted on the lever, a link pivotally connecting the bar to the guard in a manner to swing said guard to operative and inoperative position upon actuation of the lever, a stop lug on the lever engageable with the bar in a manner to limit the swinging movement of said bar in one direction, and resilient means connected with the bar for yieldably urging the same toward the stop lug.

3. The combination with a saw table and a swinging saw frame having a saw rotatably mounted thereon and a stationary housing mounted on the table for the reception of the saw in inoperative position, means for manually swinging the saw to operative position out of the housing, a stub shaft extending from the table structure, an arm mounted for swinging movement on the stub shaft, another arm fixed to the first named arm and extending at an angle therefrom, a gravity actuated weight on the free end portion of the second named arm, an angular bar operatively connecting the swinging saw frame to the first named arm, said bar, the arms and the weight constituting gravity actuated means for returning the saw to its inoperative position within the stationary housing, a lever pivotally mounted intermediate its ends on the cable supporting structure and having a pin and slot connection with the weight for actuation thereby, a longitudinally curved bar mounted for swinging movement on one end of the lever, a stop lug on said one end of the lever engageable with the bar in a manner to limit the movement in one direction and for connecting said bar for movement in unison with the lever, a coil spring connected to the stop lug and the bar in a manner to yieldingly urge said bar toward the stop lug, and a link pivotally connecting the bar and the guard together in a manner to swing the guard to operative and inoperative position upon actuation of the lever.

In testimony whereof I affix my signature.

WILBUR ESKRIDGE.