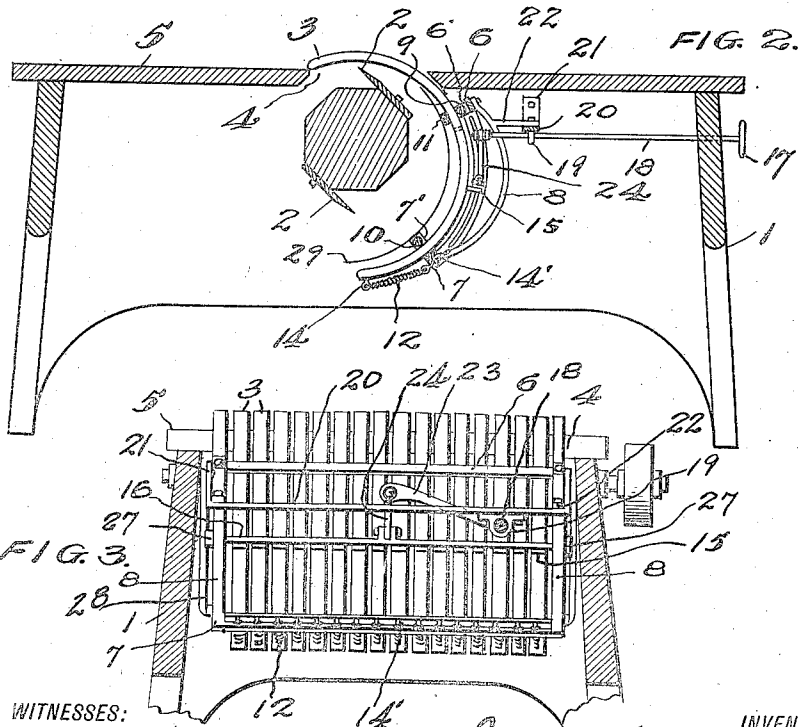
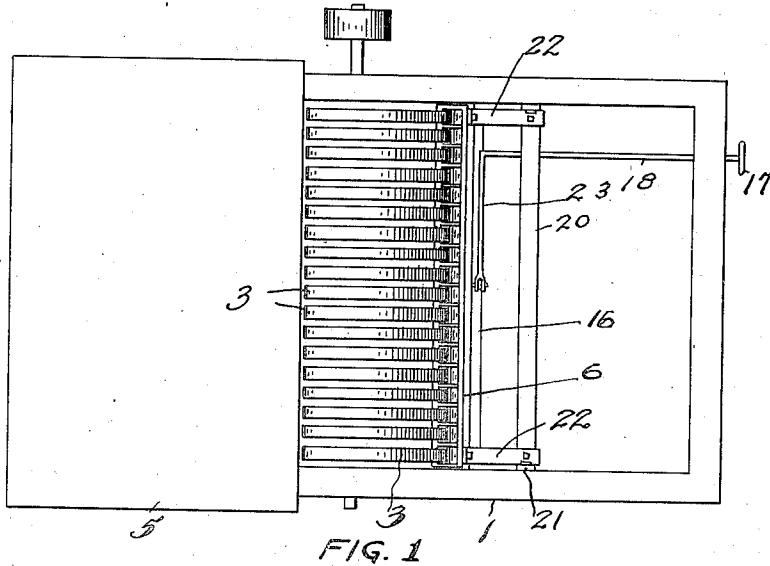


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APPLICATION FILED JUNE 20, 1912.

1,053,348.

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2 SHEETS—SHEET 1.



WITNESSES:  
M. L. Newcomb  
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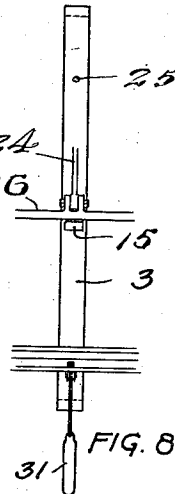
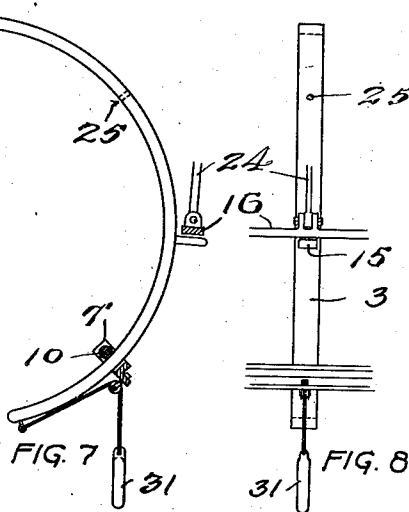
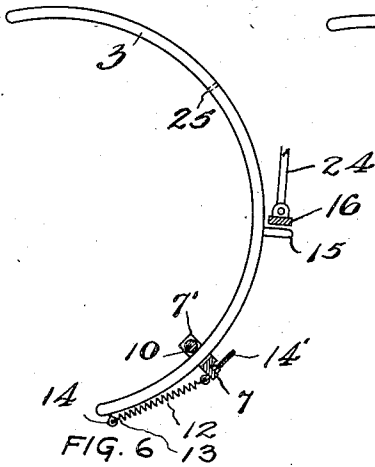
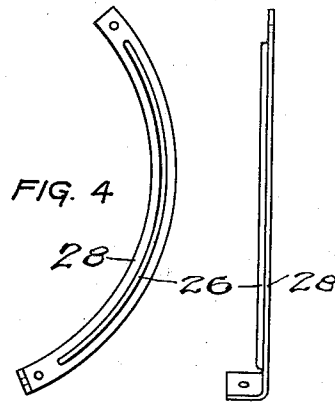
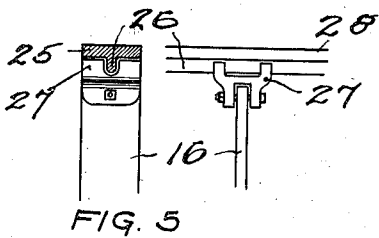
INVENTOR 5

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# UNITED STATES PATENT OFFICE.

JOSE C. BISHOP AND BENJAMIN A. BISHOP, OF BIRMINGHAM, ALABAMA.

## SAFETY DEVICE FOR PLANING-MILLS.

1,053,348.

Specification of Letters Patent.

Patented Feb. 18, 1913.

Application filed June 20, 1912. Serial No. 704,777.

*To all whom it may concern:*

Be it known that we, JOSE C. BISHOP and BENJAMIN A. BISHOP, citizens of the United States, residing at Birmingham, in the county of Jefferson and State of Alabama, have invented certain new and useful Improvements in Safety Devices for Planing-Mills, of which the following is a specification.

Our invention relates to improvements in safety devices for use in connection with planing mills and other machines of this character.

The object of the invention is the provision of means acting as a guard to prevent accident in connection with the cutter knives of the planing mill.

The invention consists essentially in a series of depressible guards, which are movable singly or in series, located with relation to the planing knives in position to guard the operator of the mill from accident. And the invention further consists in certain novel features of construction and combinations and arrangements of parts as will be hereinafter more fully pointed out.

In the accompanying drawings we have illustrated one complete example, and a modification thereof, of the best mode we have so far devised for the practical application of the principles of the invention.

Figure 1 is a top plan view of a planing mill equipped with our invention. Fig. 2 is a longitudinal vertical section of the mill in Fig. 1. Fig. 3 is a transverse sectional view of Fig. 1. Fig. 4 shows two views of a guide bracket. Fig. 5 shows in two views the relation of the depressing bar to its guide bracket. Fig. 6 shows an enlarged detail of one of a series of guards, and means for retracting the guard or finger. Fig. 7 shows a modified form of retracting means, and Fig. 8 is an edge view of Fig. 7.

In the preferred embodiment of our invention we have illustrated the milling or planing machine 1 equipped with the safety guards, the planing mill being of standard type and including the rotary cutters 2, as usual.

The safety appliance comprises a series of depressible fingers or guards 3 arranged side by side and extending practically the entire distance between the two sides of the milling machine. These fingers or guards are curved pieces of suitable material, as metal or wood, and project, when in normal

position, through the opening 4 in the table 5 of the milling machine. The series of guards is suspended in a frame which includes an upper cross bar 6 and lower cross bar 7 and side bars 8, 8, curved to conform to the shape of the device. Each of the cross bars 6 and 7 is provided with a plurality of brackets 6' and 7' respectively and between the brackets is journaled an upper roller 9 and a lower roller 10, against which the depressible guards 3 are adapted to contact and rub when in motion. At the upper end of the frame, a third cross bar 11 is located, and thus it will be seen that the guards 3 may be depressed and will move between the upper bar 11 and roller 9 and the lower bar 7 and roller 10. For returning the guards to normal position, each guard is provided with a spring 12 attached at 13 to a screw eye 14 at the lower end of the guard, and by means of a screw bolt 14' secured to the lower cross bar 7.

The guards are each individually and independently movable or depressible, but under some conditions it is desirable to depress the entire series simultaneously. To accomplish this end, each guard is provided with a projecting pin or lug 15, the lugs being located on a horizontal line, and above the line of pins a depressing bar 16 is suspended. The depressing bar is actuated through the medium of the hand wheel 17 and bar 18 which is journaled in the bearing 19 secured to the cross bracket 20, the latter having its ends 21 turned at an angle and attached to the sides of the milling machine. By means of arms 22, the guard supporting frame is rigidly held to this cross bracket 20. A crank 23 and link 24 connect the bar 18 with the depressing bar 16, and as thus described, it will be understood that a proper turn of the wheel 17 will depress the whole series of guards and depress them below the level of the table 5. Each guard may be depressed independently of the others, and to hold the single guard in depressed position a hole 25 is provided in each guard through which a pin may be shoved to extend under the depressing bar 16. To guide the depressing bar 16 in its movements to conform to the curvature of the guards 3 we use the side guide bars 28, curved concentric with the guards and each formed with a rib 26 over which the shoe 27 is adapted to travel and is guided.

In operation, a plank is fed from left to

right across the table top 5. The plank is shoved against the guards 3 and depresses those with which it comes in contact. The number of guards will depend upon the 5 width of the plank. The pressure from the plank will depress the guards sufficiently to permit the cutter knives 2 to act on the moving plank, and the guards which remain in normal position will serve to protect the 10 operator against injury from contact with the knives.

A sheet metal shield 29 is attached to the brackets 7' and cross bar 11, to prevent clog- 15 ging of the parts of the device by accumulation of shavings, etc.

In Figs. 7 and 8 we illustrate the use of a weight 31, for returning the guards to place.

Having thus fully described our invention, what we claim as new and desire to secure by Letters Patent is:—

The combination with a supporting frame 20 of a series of spring held, depressible guards each having a pin, a cross bar adapted to bear upon said pins and means for depressing said bar, and side bars each having a 25 guiding rib thereon engaging a recess in the ends of said cross bar.

In testimony whereof we affix our signatures in presence of two witnesses.

JOSE C. BISHOP.

BENJAMIN A. BISHOP.

Witnesses:

G. K. ARMES,

WILLIS W. BURT.