Sept. 16, 1924. 1,508,685

A. FLOHR

SAFETY DEVICE FOR JOINTERS

Filed Oct. 20, 1923

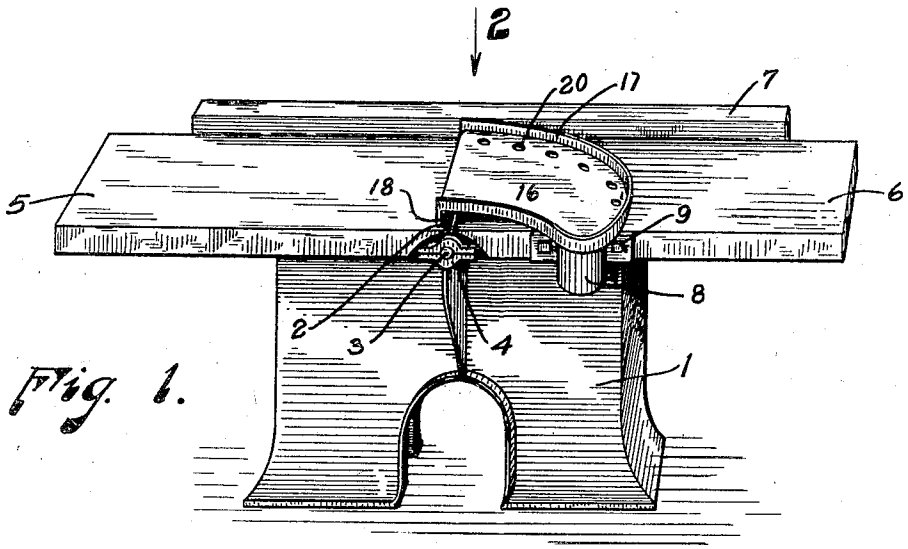


Fig. 1.

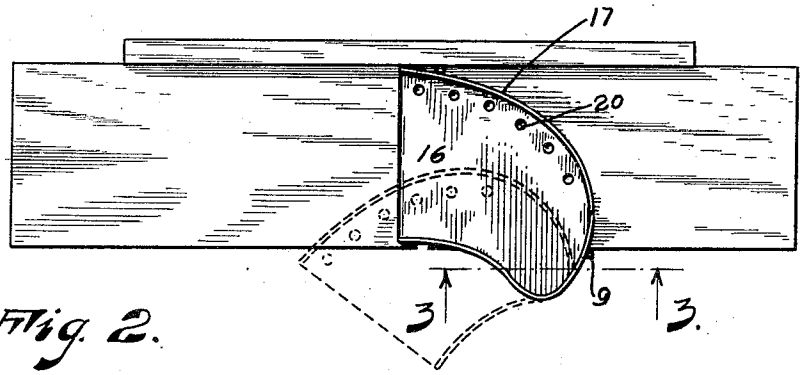


Fig. 2.

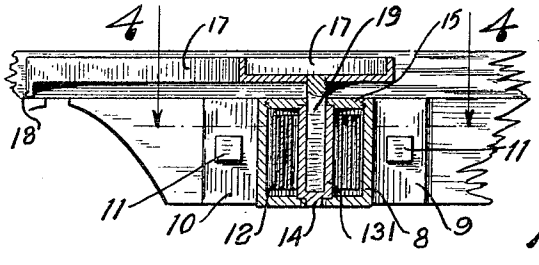


Fig. 3.

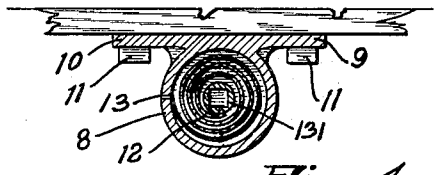


Fig. 4.

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UNITED STATES PATENT OFFICE.

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SAFETY DEVICE FOR JOINTERS.

Application filed October 20, 1923. Serial No. 669,732.

To all whom it may concern:

Be it known that I, ANDREW FLOHR, a citizen of the United States, residing at Colorado Springs, county of El Paso, and State of Colorado, have invented certain new and useful Improvements in Safety Devices for Jointers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this specification.

This invention relates to safety devices for jointers.

In wood-working establishments, the jointer is an indispensable machine and is universally employed. On account of its construction, the jointer must be handled with great care, as the slightest thoughtlessness is likely to result in a serious accident. The cutter, which revolves at high speed, is exposed and a finger or even an entire hand can readily be removed thereby in an instant.

It is the object of this invention to produce a guard or shield which will automatically move to closed position when the jointer is not being used, and which will yield to the introduction of the material to be worked upon. It is a further object of this invention to produce a guard that can be readily removed when the jointer is to be employed for cutting rabbets and which can furthermore be held in partly or fully open position.

My invention, briefly described, consists of a shield or guard plate pivotally connected to the outer edge of the front section of the table and acted upon by a spring that holds it normally in such a position that it covers the cutter. The guard is so constructed that when a piece of timber is inserted between it and the guide wall of the jointer table, the guard will yield and uncover so much of the cutter as may be necessary for the particular operation. When the timber is withdrawn, the guard moves back into protective position.

In order better and more fully to describe my invention, I shall have reference to the accompanying drawing in which the same is shown in its present preferred embodiment, and in which:

Fig. 1 is a perspective view of a jointer showing my protective device in place thereon;

Fig. 2 is a top plan view of the jointer and indicates by dotted lines the partly open position of the guard;

Fig. 3 is a section taken on line 3—3, Fig. 2; and

Fig. 4 is a section taken on line 4—4, Fig. 3.

The same reference characters will be used to designate the same parts throughout the several views.

Numeral 1 represents the base of a jointer and 2 the rotary cutter whose shaft 3 is journaled in the bearing 4. The jointer has a top or table which is formed of a part 5 that usually remains stationary, and a part 6 that can be adjusted in a vertical direction by means not shown. Along the rear of the tables is a guide wall 7. I claim nothing new in the construction of the jointer and have therefore merely shown the same conventionally in order to properly define my invention.

Secured to the front edge of the table section 6 is a casing 8 that has lugs 9 and 10 which are perforated for the reception of holding bolts 11. Casing 8 has a cylindrical opening within which is located a spiral spring 12, the outer end 13 of which is anchored in a suitable slot in the wall of the casing. The inner end of the spring is connected to a hollow tubular member 131 whose lower end 14 is journaled in an opening in the bottom of the casing. A cover 15 screws into the open end of the casing and is provided with a central opening whose diameter is substantially equal to the diagonal of the square opening in tubular member 131. The opening in the cover 15 is counterbored for the reception of the upper end of the tubular member. The guard or shield consists of a piece of sheet metal 16 whose shape is best understood by a reference to Figs. 1 and 2, and which may be roughly described as being convex along one side and end and concave along the other side, the end connecting the curved sides being straight. The guard has its curved sides bent upwardly as

indicated by numeral 17 so as to give it rigidity. The straight side is bent downwardly as indicated by numeral 18. At the curved end of the plate there is secured a downwardly extending square pin 19 whose dimensions are such that it fits the square opening in the tubular member 131. As the pin 19 is not fastened to the tubular member and fits loosely therein, it is evident that the guard member can be removed and replaced at will. The spring bears such a relation to the other parts and is so tensioned that it tends to move the guard to the position shown in Fig. 1 and permits it to be rotated in a counter-clockwise direction to the position shown dotted in Fig. 2 and even to a greater extent if necessary. The guard is so designed that it can be rotated so far that the entire width of the table is exposed. In order to hold the guard in open position, I have provided a series of holes 20 along the convex side for the reception of a bolt or pin, which cooperates with the side of the table to hold the guard in open position.

The flange 18 serves to space the guard a given distance from the table top and prevents shavings from being thrown out by the action of the cutter.

When the jointer is to be used for cutting rabbets, the guard is removed from the casing 8, but the latter may remain in place as it will not interfere with the proper functioning of the machine.

From the above description, taken in connection with the drawing, it will be apparent that I have produced a simple and efficient guard for jointers which will automatically keep the unused portion of the cutter covered and which can be held in open position, if for any reason this is desirable, and which furthermore can readily be removed when the machine is to be used for cutting rabbets.

Having now described my invention, what I claim as new is:

1. A guard adapted to be secured to a jointer table for covering the cutters, said guard comprising in combination a cylindrical casing provided with lugs on its outer surface for the reception of securing bolts, a tubular member rotatably mounted in said casing, a spiral spring in said casing, the outer end of the spring being secured to the casing and the inner end being secured to the tubular member, a sheet metal guard plate having a non-circular pin secured near one end for cooperating with the tubular member, said guard member having a convexly curved side, a flange along said convex side, and a downwardly extending flange at its free end.

2. A guard adapted to be secured to a jointer table for covering the cutter, said guard comprising in combination a cylindrical casing provided with lugs on its outer surface for the reception of securing bolts, a tubular member rotatably mounted in said casing, a spiral spring in said casing, the outer end of the spring being secured to the casing and the inner end being secured to the tubular member, a sheet metal guard plate having a non-circular pin secured near one end for cooperating with the tubular member, said guard member having a convexly curved side, a flange along said convex side, and a downwardly extending flange at its free end, said guard member being provided with a plurality of openings along its convex side for the reception of a pin.

In testimony whereof I affix my signature.

ANDREW FLOHR.