

March 4, 1930.

A. T. MOYER

1,749,296

SAFETY DEVICE FOR PAPER CUTTERS

Filed July 14, 1927

2 Sheets-Sheet 1

Fig. 1.

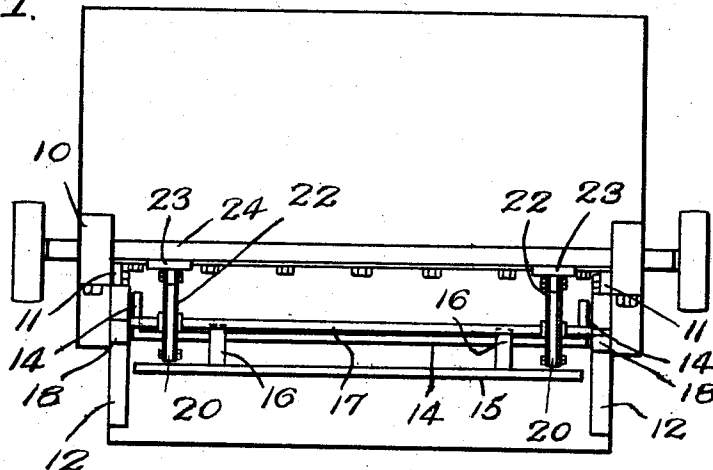
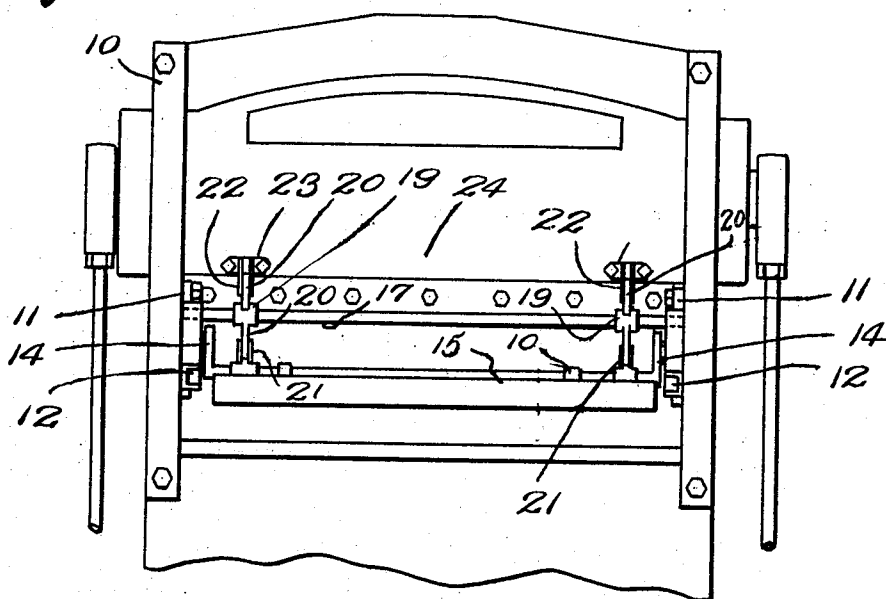


Fig. 2.



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Fig. 3.

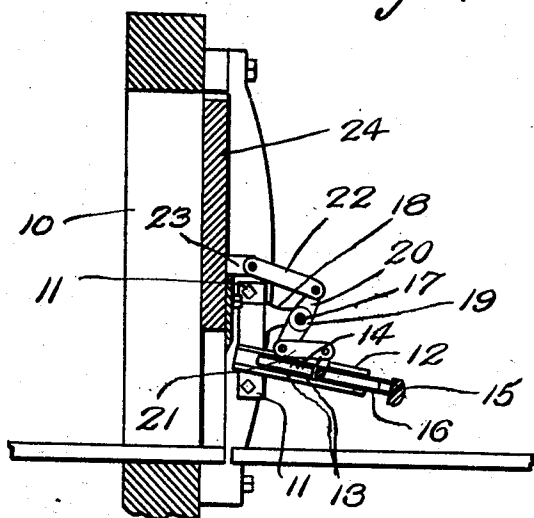


Fig. 5.

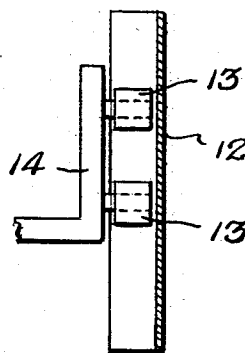
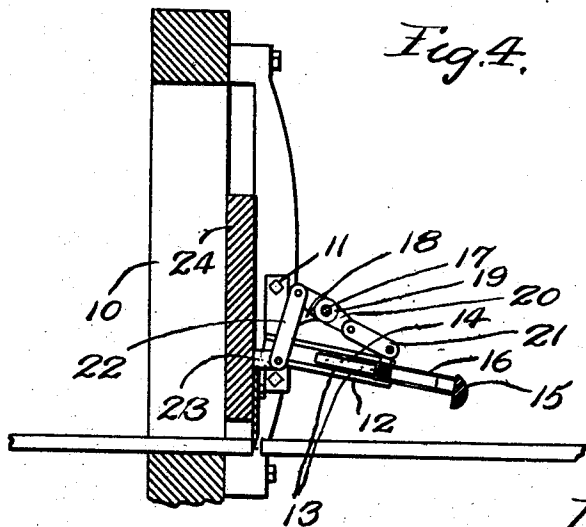


Fig. 4.



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UNITED STATES PATENT OFFICE

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SAFETY DEVICE FOR PAPER CUTTERS

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My invention relates to a new and useful improvement in safety devices for paper cutters and the like and has for its object to provide a simple and effective device of this description which can be readily attached to a paper cutting machine and be actuated by the reciprocations of the knife carrier to protect the operator from accident; a further object is to so mount a buffer bar that will be thrust outwardly when the knife of the cutter descends thereby forcing the hands of the operator out of the danger zone while the knife is descending; and a still further object of my invention is to accomplish these results by a simple and cheap arrangement of levers.

With these and other ends in view, this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains, may understand how to make and use the same, I will describe its construction in detail, referring by numerals to the accompanying drawings forming a part of this application, in which:

Fig. 1, is a plan view of a paper cutting machine showing my improved safety device attached thereto.

Fig. 2, is a front elevation of Fig. 1.

Fig. 3, is a side elevation of a portion of the paper cutting machine partly broken away, showing my improvement in elevation, the buffer bar being in the position assumed when the knife of the machine is in its elevated position.

Fig. 4, is a view similar to Fig. 3 showing the buffer bar thrust outward.

Fig. 5, is an enlarged section of one of the guideways, showing the rolls carried by the buffer bar frame.

In carrying out my invention as herein embodied, 10 represents a paper cutting machine of the usual construction and upon the inner surfaces of the uprights or standards of this machine are bolted or otherwise secured the brackets 11. Each of these brackets has extended therefrom a guideway 12 and in each of these guideways are fitted two rolls 13 journaled on the frame 14. This frame

has secured thereto the two reach rods 16, the latter in turn being secured to the buffer bar 15. By this arrangement, the buffer bar will move back and forth with said frame while always being held in proper alignment therewith.

17 represents a shaft supported in the extensions 18 of the brackets 11, and upon this shaft are journaled the hubs 19 with which latter are formed the levers 20, and the lower ends of these levers have pivoted thereto the links 21 which in turn are pivoted to the frame 14, while the upper ends of these levers are connected by the links 22 to the studs 23 secured upon the knife bar 24, thus when the knife bar is moved up and down, the levers 20 will be oscillated and in turn the frame 14 will be caused to move back and forth. This simple arrangement of mechanism serves to effectually prevent accidents to the hands of the operator of the machine by being caught under the knife when the latter is descending; the buffer bar is forced downward and at the same time on a downward angle at every downward stroke of the knife tending to shove the hands of the operator away from the knife as well as a warning that the knife is on its downward stroke.

This simplicity of the construction and arrangement of my improved safety device is such that it may readily be attached to a paper cutting machine and as readily detached when repairs or other work upon the machine is necessary.

It is also obvious that the construction here shown may be varied to considerable degree in adapting the device to various sizes or designs of machines, and I, therefore, do not wish to be limited to the exact details of construction of the apparatus for carrying my invention into effect as this may be varied within the limits of the appended claims without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new and useful is:

1. A device of the character described for use upon paper cutting machines provided with a reciprocating knife bar; brackets having guideways, a buffer bar, a frame carrying

said buffer bar, rolls journalled upon the frame and adapted to travel in the guideways; a shaft mounted in said brackets, oscillating levers mounted upon said shaft, links
 5 connecting said levers with the frame, and means for connecting said levers to the knife bar of the machine.

2. In combination with a power machine having a stationary frame and a reciprocating member; two guides secured to said frame
 10 extending outward and downward therefrom; a buffer frame slidably mounted in said guides; a safety buffer bar carried by the buffer frame, means connecting the stationary frame, buffer frame and said reciprocating member for giving the buffer frame an
 15 outward and downward thrust in unison with the downward movement of the reciprocating member.

3. In combination with a paper cutting machine, having a stationary frame and a reciprocating member, brackets secured to said frame extensions formed with the brackets; guides carried by the brackets and extending
 20 outward and downward from the frame; a buffer frame positioned between the brackets; a safety buffer bar carried by the buffer frame; rolls carried by said buffer frame and adapted to travel in the guides; a shaft supported in the extensions of the brackets; two
 25 levers mounted upon said shaft adapted to oscillate; links pivoted to the levers and to said buffer frame studs mounted on the reciprocating member, other links pivoted to the levers, said last named links being also
 30 pivoted to said studs, whereby the downward movement of the oscillating member will give to the buffer frame an outward and downward thrust.

4. A device of the kind described, brackets for securement to the frame of a machine having a reciprocating element, said brackets having guideways therein, a frame reciprocatingly mounted in the guideways, a buffer
 40 bar carried by the frame, extensions formed with the brackets, a shaft mounted in said extensions, levers journalled on said shaft, links pivoted to the lower ends of the levers and to the frame and other links pivoted to the upper
 45 ends of the levers to the reciprocating element of the machine whereby motion will be transmitted from said reciprocating element to the frame and buffer bar.

5. In a device of the kind described, brackets for securement to the stationary frame of a paper cutting machine provided with a vertical reciprocating element, said brackets having guideways inclined downwardly and outwardly at an angle to the reciprocating
 50 element of the machine, a frame mounted to move back and forth in the guideways, a buffer bar connected with said frame to operate therewith, a mechanism connected with the reciprocating element of the machine and the reciprocating frame to move the latter

with the buffer bar back and forth in the lines of the guideways.

In testimony whereof, I have hereunto affixed my signature.

ANDREW T. MOYER.

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