

C. A. BLACKNALL.
CIGAR CUTTER.
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1,045,503.

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Fig. 1.

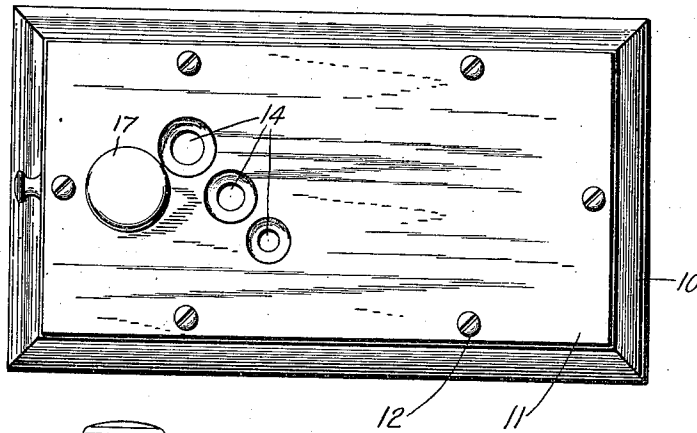


Fig. 2.

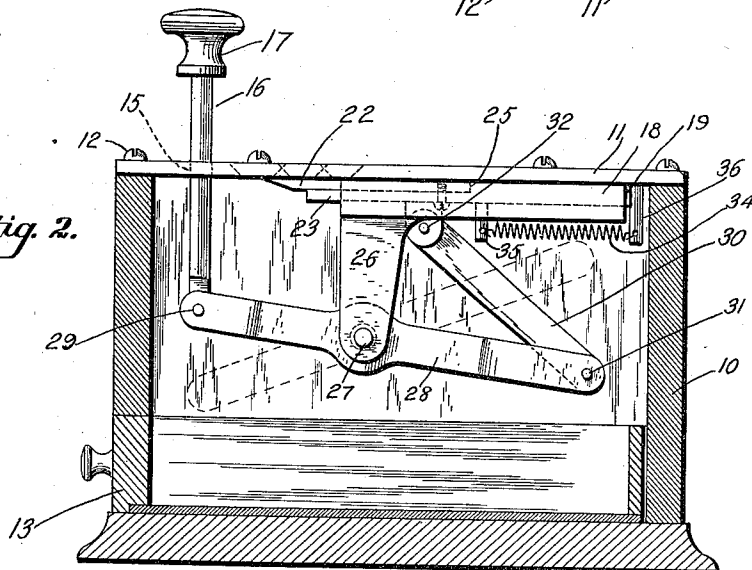
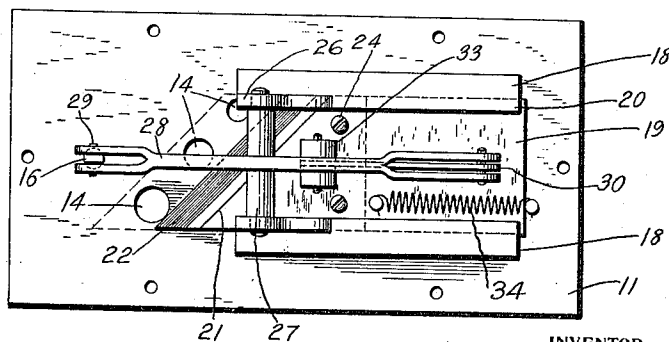


Fig. 3.



WITNESSES

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CIGAR-CUTTER.

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To all whom it may concern:

Be it known that I, CECIL A. BLACKNALL, a citizen of the United States, residing at 257 Eighth avenue, New York city, New York, have invented a new and useful Improvement in Cigar-Cutters, of which the following is a specification.

The object of the invention is to provide a cigar cutter of simple, effective and durable construction.

A further object of the invention is to provide an advantageous construction whereby convenient means are afforded for cutting cigars of different sizes and styles.

Still another object of the invention is to provide an improved construction wherein the cutting knife is removable and replaceable, and supported and guided in a solid and advantageous manner.

Other objects of the invention will become apparent.

With these ends in view the invention may be said to consist in the parts, improvements and combinations hereinafter described and more particularly set forth in the claims.

In the accompanying drawings illustrating the invention: Figure 1 is a plan view of the device; Fig. 2 is a vertical longitudinal section; and Fig. 3 is a bottom plan of the top plate and the parts carried thereby.

In these views the numeral 10 indicates a box or casing of suitable form having a top plate 11 which is removably secured to the body of the box by means of screws 12. The box is provided with a drawer 13 for collecting and permitting the removal of the clippings. The top plate 11 is provided with a diagonal series of cigar butt apertures 14 of graduated sizes. In front of these apertures it has a guiding aperture 15, through which passes the operating plunger 16, having a suitable head 17. Laterally spaced guides 18 are fixed in any suitable manner to the underside of the plate 11. An elongated knife bar 19 is mounted slidably between these guides, being confined between their underlying ledges 20 and the top plate 11. This knife bar has a diagonal forward edge 21, and the forward part of its upper side is cut away or recessed, as shown more particularly in Fig. 2, to afford a depressed seat for the reception of a removable and replaceable knife 22, which thus lies between this cut-away portion 23 of the bar and the top plate 11. The knife

is secured in place by means accessible from the underside of the knife bar 19, such as screws 24, and the rear end or edge of the knife preferably abuts solidly against the shoulder 25. The cutting edge of the knife 22 is also diagonal and it extends in the same direction as the diagonal series of cigar butt apertures 14. Preferably the cutting edge is approximately parallel to the line of centers of these openings.

Bearing brackets 26 are formed with the guides 18 for the reception of the journal ends of a shaft 27, which is disposed at a distance below the slide 23. A two-armed lever 28 is fixed to this shaft, its front end being pivoted to the lower end of the plunger 16 at 29, and its rear end being pivoted to an inclined link 30 at 31. The upper end of this link, which extends upward and forward, is pivoted at 32 to ears 33 projecting from the underside of the slide 23. A tension spring 34, secured at one end to a post 35 projecting downward from the slide 19 and at the other end to a post 36 projecting downward from the top plate 11 in rear of the slide, serves to restore the parts to normal position after actuation. The head 17 of the plunger 16 constitutes the stop for limiting the forward movement of the knife 22, by contacting with the plate 11, and the post 36 constitutes the stop for limiting the rearward movement of the knife under the actuation of the spring 34. In the preferred construction the two-armed lever 28 is normally inclined downward from front to rear, its inclination being less than the inclination of the link 30, as shown in Fig. 2, and the relations of the parts are such that during the cutting stroke the lever 28 tilts reversely with respect to the horizontal, as indicated by dotted lines. Thus, the pivot 31 in moving upward first moves slightly rearward and then after passing the horizontal it moves forward.

In operation depression of the plunger 16 rocks the lever 28, which, with the link 30, moves the knife 22 forward beneath the apertures 14 to clip off the butt of a cigar placed in any one of them. It will be observed that several advantages flow from the diagonal arrangement of the graduated cigar butt apertures 14 and the cutting edge of the knife 22. The diagonal disposition of the openings enables a narrow knife to coöperate with all of them than it would be possible to use if the openings were in

transverse alinement. Furthermore, the diagonal disposition of the openings makes it possible to use a diagonal cutting edge, with its accompanying advantages and without necessitating a greater length of cutting stroke than if one opening only were employed. It will be apparent also that the diagonal series of openings weakens the top plate less than would the same series arranged transversely. The cutting blade 22 may be conveniently removed by unscrewing the screws 24 and slipping the knife forward out of the space between the reduced portion 23 of the knife bar and the top plate 11 and between the guides 18. The distance between the plunger 16 and the forward ends of the guides 18 is sufficient to permit of this removal. It will be observed that in the preferred arrangement of parts the forward movement of the knife member 23 is due to two factors, namely, the upward movement of the pivot 31, which tends to cause the pivot 32 and the knife to move forward with decreasing speed and increasing power after the manner of a toggle, and the forward movement of the pivot 31 after passing the horizontal. However, the pivot 31 does not commence this forward movement until after the first part of the stroke, during which it is moving slightly to the rear, the result being that during the first part of the stroke the speed is less and the power greater than would otherwise be the case, while during the latter part of the stroke the forward movement of the pivot 31 partially neutralizes the negative acceleration. In this way a very advantageous cutting stroke is secured. A further advantage of this arrangement is that the plunger 16, which is pivoted directly to the lever and therefore must have longitudinal tilting movement, is first tilted slightly in one direction and then in the other during the stroke, since the pivot 29 moves slightly to the left from normal position to the horizontal, and slightly to the right from the horizontal plane to lowermost position. In this way the plunger 16 may be guided in an aperture only slightly larger than itself without danger of binding.

What is claimed as new is:

1. In a cigar cutter, the combination of a casing having a stationary top provided with a series of cigar butt apertures of graduated sizes and a plunger aperture at one side of said series of cigar butt apertures, guides fixed beneath said top, a knife member mounted slidably in said guides at

the opposite side of said series of cigar butt apertures and cooperating with all of them, a plunger passing through said plunger aperture, a two-armed lever pivotally supported by the casing at a distance below said slidable knife member and having its forward arm pivotally connected to the lower end of said plunger, an inclined link pivoted at its opposite ends to the rear arm of said lever and to said knife member, and a spring for restoring the parts to normal position.

2. In a cigar cutter, the combination of a casing having a top provided with a cigar butt aperture and a plunger aperture in front of said cigar butt aperture, spaced guides fixed to the underside of said top and having downward projecting bearing brackets, a knife member mounted slidably in said guides in rear of said cigar butt aperture, a plunger passing through said plunger aperture, a transverse shaft journaled in said downward projecting brackets at a distance below said knife member, a two-armed lever on said shaft having pivoted connection at its front end with the lower end of said plunger, an inclined link pivoted at its opposite ends to the rear end of said lever and to said knife member, and a spring for restoring the parts to normal position.

3. In a cigar cutter, the combination of a casing having a top provided with a cigar butt aperture and a plunger aperture in front of said cigar butt aperture, guides fixed beneath said top, a knife member mounted slidably in said guides in rear of said cigar butt aperture, a plunger passing through said plunger aperture and capable of slight tilting therein without binding, a two-armed lever pivotally supported by the casing at a distance below said knife member and pivoted directly at its forward end to the lower end of said plunger, said lever being normally inclined downward from front to rear and swinging during the cutting stroke reversely with respect to the horizontal, a link pivoted at its opposite ends to the rear end of said lever and to said slidable knife member, said link being normally inclined upward from back to front at a greater angle than said lever, and a spring for restoring the parts to normal position after actuation.

CECIL A. BLACKNALL.

In the presence of—

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