March 3, 1942. N. B. CURRIER 2,274,978

ROLL PAPER CUTTER

Original Filed Aug. 2, 1940

Fig. 1.

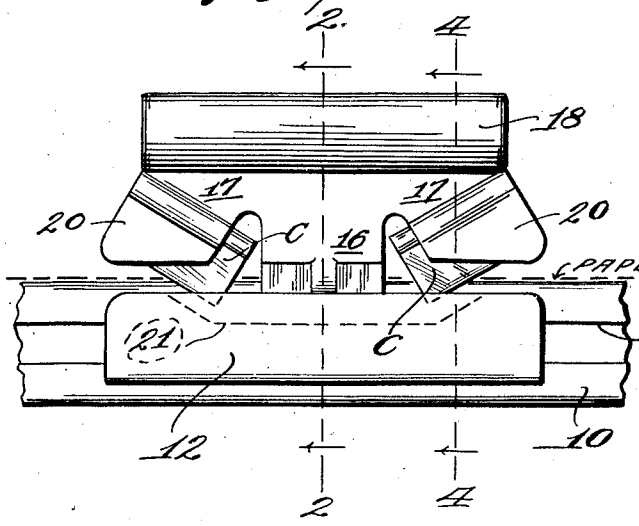


Fig. 2.

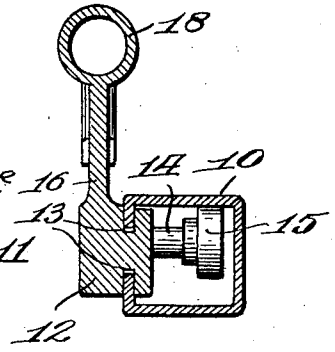


Fig. 3.

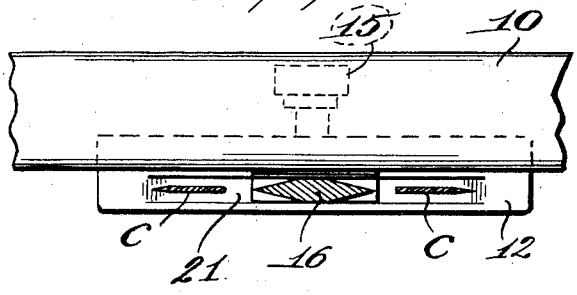
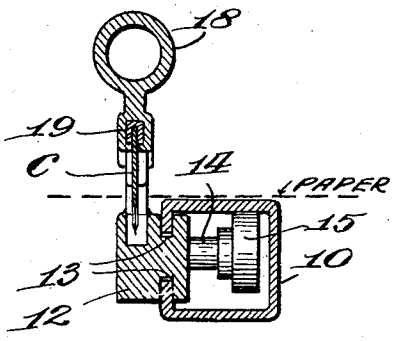


Fig. 4.



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ROLL PAPER CUTTER

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Original application August 2, 1940, Serial No. 349,913. Divided and this application February 26, 1941, Serial No. 380,638

5 Claims. (Cl. 164—73)

My invention relates to a roll paper cutter and the subject matter herein illustrated and described is a division of my copending application for U. S. Letters Patent on roll paper cutter filed August 2, 1940, Serial No. 349,913.

The principal objects of my invention are, to generally improve upon and simplify the construction of the existing forms of paper cutters, particularly those used for cutting wrapping paper, light weight cardboard, corrugated wrapping paper, light weight leather, or the like, and further, to provide a simple, strong, durable and efficient cutter, that is mounted for sliding movement upon a cutter bar over which the web of paper passes and said cutter carrying a pair of oppositely arranged blades so as to enable the paper or other material to be severed as the cutter is moved in either direction upon the cutter bar or supporting rail.

A further object of my invention is, to mount the sliding cutter upon the cutter bar or rail so that it will travel thereon with minimum friction, and further, to construct the body of the cutter between the blades so that very little, if any, resistance will be offered to the cutter body by the edges of the severed material during the cutting function.

With the foregoing and other objects in view, my invention consists in certain novel features of construction and arrangement of parts that will be hereinafter more fully described and claimed and illustrated in the accompanying drawing in which:

Fig. 1 is a front elevational view of a cutter of my improved construction and showing the same mounted for sliding movement upon a cutter bar.

Fig. 2 is a horizontal section taken in a plane just above the top of the cutter bar.

Fig. 3 is a vertical cross section taken on the line 3—3 of Fig. 1.

Fig. 4 is a vertical cross section taken on the line 4—4 of Fig. 1.

Referring by numerals to the accompanying drawing which illustrates a preferred embodiment of my invention, 10 designates a cutter bar that is suitably supported in a horizontal position in front of the roll of paper that is to be cut into sections of various lengths, said cutter bar being preferably formed of metal and substantially square or rectangular in cross section.

Formed in the front wall of the cutter bar is a longitudinally disposed slot 11. The cutter that is arranged for sliding movement on the cutter bar comprises a substantially rectangular block of metal 12 which may be several inches in length and formed in the upper and lower portions of said block are longitudinally disposed slots 13 for the accommodation of those portions of the front wall of the cutter bar 10 above and below the slot 11.

Projecting into the tubular cutter bar from the intermediate portion of block 12 is a stud 14, on the rear portion of which is mounted for rotation a roller 15, the periphery of which bears against the under side of the top wall of the cutter bar, thus providing a rolling bearing that maintains the cutter in proper upright position while traveling longitudinally of the cutter bar.

Formed integral with the top of block 12 in front of the upper one of the slots 13 therein is an upwardly projecting plate 16 considerably shorter than the block 12, and the upper end of this plate is increased in length so as to form extensions 17 that occupy positions above the end portions of block 12.

Formed integral with the upper edges of the plate 16 and its extensions 17 is a longitudinally disposed tubular member 18 that functions as a handle for manipulating the cutter. Formed in the lower portions of the extensions 17 are oppositely inclined slots 19 for the reception of the reinforced upper portions of cutters C. These cutters may be a standard form of safety razor blades and which are readily obtainable in the open market.

Formed integral with and extending downwardly and outwardly from the lower edges of the extensions 17 to the sides of the slots 19 therein are substantially triangular plates 20 that overlie and provide guards for the outer upper end portions of the cutting blades C.

Formed in the top of block 12 in front of the upper one of the slots 13 therein is a slot or recess 21 for the accommodation of the lower inner corners of the cutters C. When the cutting blades are properly positioned on the cutter, the lower inner corners of said cutters project downwardly past the plane occupied by the top of the cutter bar 10, and the lower corners of said cutters terminate within the slot 21.

The lower portion of plate 16 or that portion just above the block 12 has its side portions made substantially wedge-shape in horizontal section, with the apices thereof outwardly presented in order that said plate will pass freely through the slits that are cut across the web of paper by the blades while the cutter is in use, thereby enabling the cutter to be moved lengthwise of the cutter bar with minimum resistance offered by the paper or material that is being cut.

In the use of my improved cutter, the same is positioned at one end of the cutter bar and the web of paper or other material to be cut is drawn forwardly from the supported roll of paper across the cutter bar until the desired amount of paper projects in front of said cutter bar. The handle 18 is now grasped by the operator and the cutter is moved lengthwise upon the cutter bar and the forward one of the cutting blades will sever the withdrawn portion of the paper along a line immediately in front of the cutter bar.

While not in use, the cutter occupies an out-of-the-way position upon either end of the cutter bar.

As the cutter moves lengthwise upon the cutter bar, the roller 15 will ride against the under surface of the top of the cutter bar, thus maintaining the cutter in proper upright position and materially reducing any friction resulting from the movement of the cutter and immediately after the blade severs the paper, the edges along the line of cut will engage against the inclined faces of the wedge-shaped portions of plate 16, thus affording minimum resistance to the travel of the cutter while the same is in use.

It is to be understood that the cutters C are readily removable from the slots 19 in the end portions 17 of plate 16 so that when the cutters become dull they may be quickly removed and replaced by sharp cutters.

Thus it will be seen that I have provided a roll paper cutter that is relatively simple in construction, inexpensive of manufacture and very effective in performing the functions for which it is intended.

It will be understood that minor changes in the size, form and construction of the various parts of my improved roll paper cutter, may be made and substituted for those herein shown and described, without departing from the spirit of my invention, the scope of which is set forth in the appended claims.

I claim as my invention:

1. In a roll paper cutter, the combination with a tubular cutter bar provided with a longitudinally disposed slot, a block mounted for sliding movement on said cutter bar and having a portion that projects through the slot therein, a plate projecting upwardly from the center of said block, inclined cutters carried by the ends of said plate and positioned above the end portions of said block, a handle on the upper portion of said plate and those portions of said plate between the inner ends of said cutter being substantially wedge-shape in cross section.

2. In a roll paper cutter, the combination with a tubular cutter bar provided with a longitudinally disposed slot, a block mounted for sliding movement on said cutter bar and having a portion that projects through the slot therein, a plate projecting upwardly from the center of said block, inclined cutters carried by the ends of said plate and positioned above the end portions of said block, a handle on the upper portion of said plate and with oppositely arranged inclined faces formed on both sides of said plate above said block and between said cutters.

3. In a roll paper cutter, the combination with a tubular cutter bar provided with a longitudinally disposed slot, a block mounted for sliding movement on said cutter bar and having a portion that projects through the slot therein, a plate projecting upwardly from the center of said block, inclined cutters carried by the ends of said plate and positioned above the end portions of said block, a handle on the upper portion of said plate, those portions of said plate between the inner ends of said cutter being substantially wedge-shape in cross section and a roller journalled on that portion of the block that projects into said cutter bar for engaging the inner face of one of the walls of said cutter bar.

4. In a roll paper cutter, the combination with a tubular cutter bar provided with a longitudinally disposed slot, a block arranged for sliding movement on said cutter bar and having a portion projecting through the slot therein, anti-friction means carried by that portion of the block that projects into the cutter bar, which anti-friction means is adapted to engage the inner face of one of the walls of said cutter bar, a plate projecting upwardly from the center of said block, the side portions of which plate immediately above the block are substantially wedge-shape in horizontal section, extensions on the upper portion of said plate and cutters removably mounted on said extensions.

5. In a roll paper cutter, the combination as set forth in claim 4 and with a handle carried by the upper portion of said plate and said extensions.

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