March 28, 1939. N. B. CURRIER 2,152,031

ROLL PAPER CUTTER

Filed Dec. 28, 1936

FIG. 1.

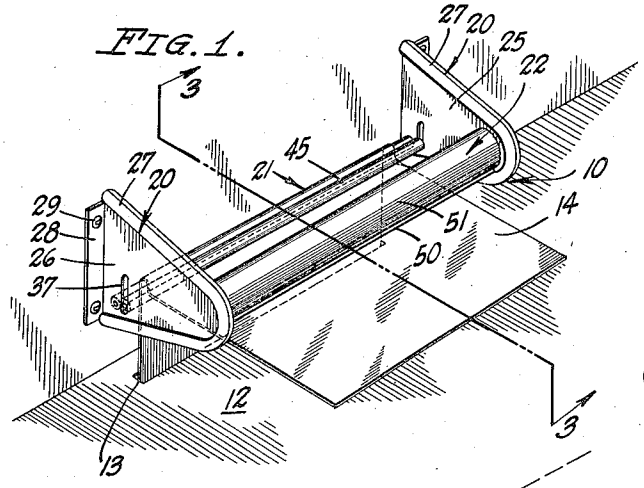


FIG. 5.

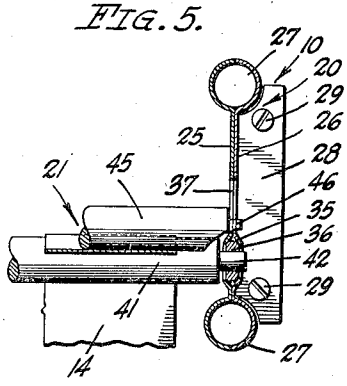


FIG. 2.

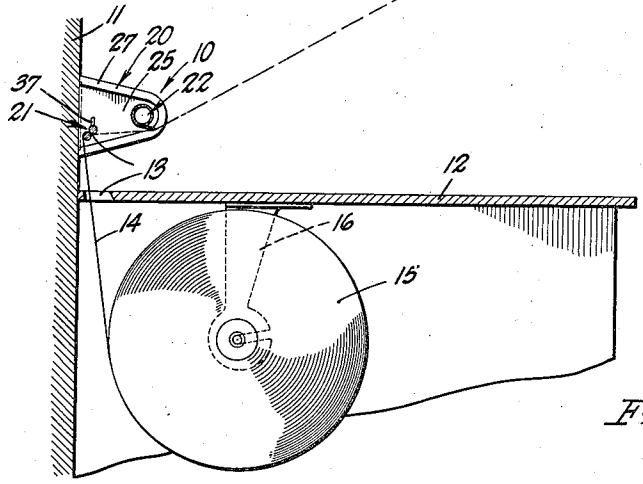


FIG. 6.

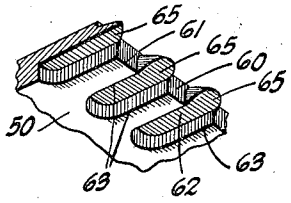


FIG. 4.

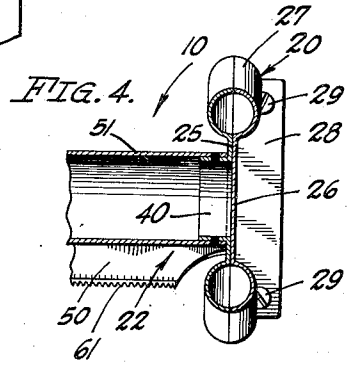
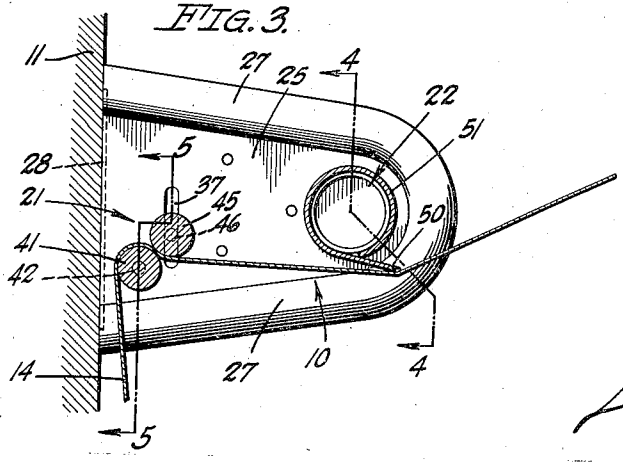


FIG. 3.



INVENTOR
NEIL B. CURRIER
BY
ATTORNEY.

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ROLL PAPER CUTTER

Neil B. Currier, Huntington Park, Calif.

Application December 28, 1936, Serial No. 117,722

6 Claims. (Cl. 164—36)

This invention relates to paper cutting devices and particularly to a roll paper cutter for use on counters, wrapping benches and the like.

It is an object of my invention to provide a simple, inexpensive and durable paper cutter which is easy to operate, easy to keep clean and which takes up a relatively small space when applied.

Further objects and advantages will be made manifest in the following description taken in connection with the accompanying drawing, in which:

Fig. 1 is a perspective view of a preferred embodiment of the invention as it appears when a sheet of paper is partly drawn outwardly in the operation of the device.

Fig. 2 is a diagrammatic cross sectional view illustrating the manner in which the invention may be mounted upon a wrapping bench.

Fig. 3 is an enlarged cross sectional view taken on the line 3—3 of Fig. 1.

Fig. 4 is a fragmentary sectional view taken on the line 4—4 of Fig. 3.

Fig. 5 is a fragmentary longitudinal sectional view taken on the line 5—5 of Fig. 3.

Fig. 6 is a highly magnified fragmentary perspective view of the teeth of the paper tearing blade of my invention.

Referring specifically to the drawing, the preferred embodiment of my invention is seen to comprise a roll paper cutter 10 which is shown as secured to a wall 11 directly over a bench 12, having an opening 13 through which a strip of paper 14 is fed upwardly from a roll 15 supported in brackets 16 on the lower face of the bench 12.

The paper cutter 10 includes end pieces 20, a paper feed mechanism 21 and a paper tearing blade 22. Each of the end pieces 20 comprises an inner plate 25 and an outer plate 26. These plates are formed so as to combine when placed together as shown in the drawing to provide a bulbular bead 27 which extends about the exposed edges of the end pieces when these are mounted on the wall 11. This mounting is accomplished by flanges 28 provided on the plates 26 and secured as by screws 29 to the wall 11. The plates 25 and 26 are formed so as to provide a pocket 35 in which is trapped a bearing 36 and these plates also are provided with vertical slots 37 disposed forwardly relative to the bearings 36. The inner plates 25 have bosses 40 which extend inwardly therefrom.

The paper feeding mechanism 21 includes a roller 41 having trunnions 42 which are journalled in the bearings 36, and a roller 45 having trunnions 46 which are rotatable and vertically slidable in the slots 37. The web of paper 14 is adapted to extend upwardly through the opening 13, to the rear of roller 41, and forwardly between this roller and roller 45 as shown in Fig. 3.

The tearing blade 22 is preferably formed of sheet metal so that a flat edged portion 50 thereof extends downwardly and forwardly and the balance of the blade is shaped into a tubular body 51 which snugly fits over the bosses 40 and is spot welded to these as indicated in Fig. 4. After the tubular body 51 is thus spot welded to the bosses 40, the plates 25 and 26 of the end pieces 20 are spot welded together. All of this spot welding, of course, takes place after the trunnions of the rollers 41 and 46 are placed in the bearings 36 and slots 37 as above described.

The tearing edge portion 50 of the tearing blade 22 is formed as shown in the fragmentary magnified view in Fig. 6. The front edge face 60 of this has a sharp cutting edge 61 and this edge is interrupted by the formation of the depressions 62 having sharp edges 63 and resulting in the outstriking of cutting teeth 65 from the front edge face 60.

When using the invention the operator stands in front of the bench 12 and seizes hold of the free end of the paper web 14 which hangs downwardly below the device 10 as shown in full lines in Fig. 2. The paper 14 is thus pulled forwardly until a piece of sufficient length extends beyond the tearing blade 22. The paper is then lifted, as indicated in full lines in Fig. 3 and in broken lines in Fig. 2, and the front edge of the paper is shifted to the right or left so as to cause the paper web 14 to be severed where it engages the edge portion 50 of the tearing blade 22. In using my invention this tearing is accomplished with considerable ease owing to the fact that the edge portion 50 of the tearing blade not only has cutting edges 61 but also sharp pointed teeth 65 which cooperate with the cutting edges 61 and 63 in rupturing the fibers of the paper along a double line where this paper contacts the tearing blade 22. The double line of rupture of a paper takes place along the line of the cutting edges 61 and the line of the sharp cutting edges of the ends of the teeth 65. The spacing of the cutting edges 61 and the interspersing of the teeth therebetween in slightly offset relation therewith produces the rupture of the paper along these two lines.

After a piece has thus been torn from the paper web 14 the portion of this web which lies between the device 10 and the paper roll 15 is suspended

by the semi-snubbing action of the paper web 14 about the roller 41. Thus the upper end of the web 14 is always gripped between the rollers 41 and 45 and held in position where it can easily be taken hold of by the person using the device.

What I claim is:

1. In a roll paper cutter, the combination of: a frame including end pieces; means on said end pieces for securing these to a wall; paper feeding means mounted between said end pieces; a sheet metal tearing blade having a body formed into tubular shape; and means for uniting the ends of said tearing blade body with said end pieces.

2. A combination as in claim 1 in which said end pieces are provided with bosses which extend into and are spot welded to the tubular body of said tearing blade.

3. In a roll paper cutter, the combination of: a pair of end pieces, each of said end pieces including an inner plate and an outer plate; bosses extending inwardly from said inner plate; a tearing blade formed of sheet metal and shaped to provide a tubular body, said bosses extending into the ends of said body and being secured thereto; and paper feed means disposed parallel to said tearing blade and rearwardly therefrom and supported between said end pieces, said inner and outer plates of said end pieces being spot welded together.

4. In a roll paper cutter, the combination of: a pair of end pieces, each of said end pieces including an inner plate and an outer plate; bosses extending inwardly from said inner plate; a tearing blade formed of sheet metal and shaped to provide a tubular body, said bosses extending into the ends of said body and being spot welded thereto; and paper feed means disposed parallel to said tearing blade and rearwardly therefrom and supported between said end pieces, said inner and outer plates of said end pieces being spot welded together.

5. In a roll paper cutter, the combination of: a frame adapted to be secured to a wall; paper feed means provided on said frame; and a tearing blade provided on said frame and disposed forwardly from said paper feed means, said blade being formed of sheet metal and inclined downwardly and being characterized by a series of minute depressions formed in the lower face of said blade adjacent the tearing edge thereof, said depressions having sharp edges adjacent the lower face of said blade and producing outstruck teeth extending in the plane of said blade from the tearing edge thereof just above and in alignment with said depressions respectively.

6. In a roll paper cutter, the combination of: paper feed means; a tearing edge blade having a series of short cutting edges disposed along the edge of said blade in a given line, said edges being spaced from each other; and a series of teeth interspersed between adjacent pairs of said cutting edges, the points of said teeth being sharp and being disposed along a line which is offset from the line of said cutting edges aforesaid.

NEIL B. CURRIER.