Nov. 4, 1969 H. R. ERDLEY 3,476,043

ENVELOPE OPENING DEVICE

Filed June 7, 1967

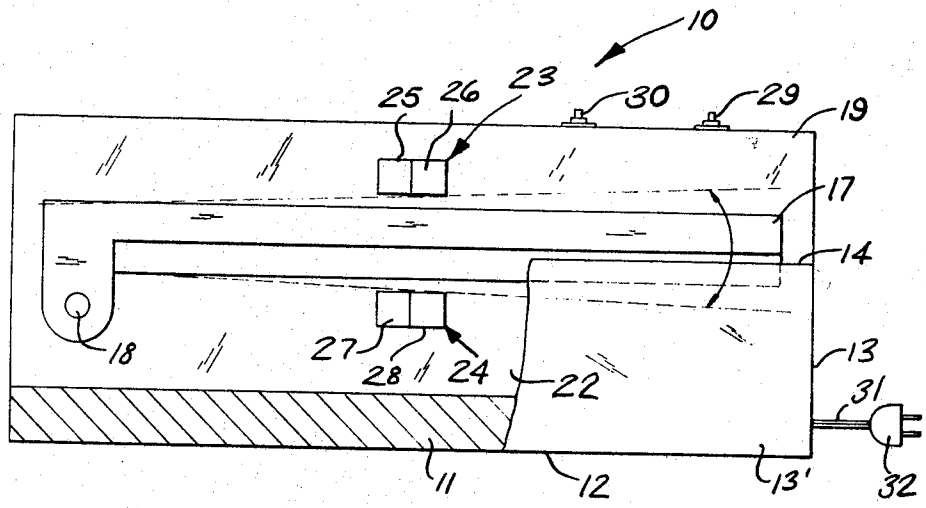


FIG. 1

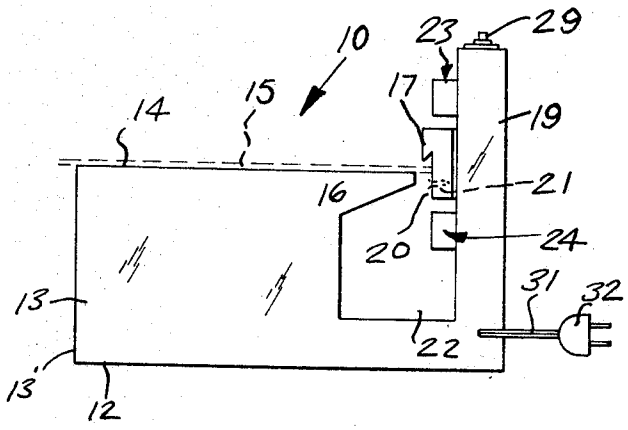


FIG. 2

INVENTOR.
HAROLD R. ERDLEY

United States Patent Office 3,476,043
Patented Nov. 4, 1969

3,476,043

ENVELOPE OPENING DEVICE

Harold R. Erdley, Road 2, Mifflinburg, Pa. 17844

Filed June 7, 1967, Ser. No. 644,238
Int. Cl. B26d 5/08
U.S. Cl. 83—575 2 Claims

ABSTRACT OF THE DISCLOSURE

An envelope opening apparatus which will cut approximately 1/64 to 1/100 of an inch from the edge of the envelope without cutting the material enclosed within the envelope having a pivotable blade which is electrically operated through the use of push-pull electro-magnets, the magnets effecting a shearing action against a shearing edge with respect to the pivotable blade of the apparatus. This apparatus serves to quickly and efficiently open envelopes.

This invention relates to cutting devices, and more particularly to an electrically operated envelope opener.

It is therefore the main purpose of this invention to provide an envelope opening device in which the blade serves as a stop and guide to cut a narrow strip from the edge of an envelope allowing the material to be removed therefrom without damage to the material.

Another object of this invention is to provide an envelope opening device which may be plugged into a wall receptacle and may be used upon a desk, counter or in any desired area to facilitate the quick opening of envelopes in order that their contents may be read in an expedited manner.

Another object of this invention is to provide an envelope opening device which will have a pivotable cutting blade which operates against a shear edge located on the top surface of the device and the depth of cut may be controlled by changing a shim secured to the pivotable cutting blade.

Other objects and advantages of the invention will become apparent from a consideration of the following detailed description taken in connection with the accompanying drawing wherein a satisfactory embodiment of the invention is shown. However, it is to be understood that the invention is not limited to the details disclosed but includes all such variations and modifications as fall within the spirit of the invention and the scope of the appended claims.

In the drawing:

FIGURE 1 is a front view of the present invention shown in elevation and partly broken away; and

FIGURE 2 is an end view of FIGURE 1.

According to this invention, an envelope opening device **10** is provided with a rectangular base **11**, the bottom surface **12** resting upon any desired surface such as a desk or the like. Device **10** is provided with vertical walls **13** and **13'** which supports a top wall **14** upon which the envelope **15** is placed. Top wall **14** is provided with a hard metallic shear edge **16** against which blade **17** will strip the edge of envelope **15** therefrom. Elongated cutting blade **17** is pivoted upon pin **18** which is secured at right angles to wall **19** of device **10**. Wall **19** is also secured to base **11** and provides support means for the pivotable blade **17** and its associated components which hereinafter will be described. A shim **20** may be screwed to blade **17** by means of screws **21** in order to change the thickness of cut from the edge of envelope **15** and the clippings from the envelope **15** fall into the receiving area **22** of device **10**. A pair of push-pull electro-magnets **23** and **24** provides actuating means for the cutting blade **17**. Electro-magnet **23** is provided with a repel portion **25** and

an attraction portion **26** while the electro-magnet **24** is provided with a repel portion **27** and an attraction portion **28**, switches **29** and **30** respectively providing the circuit closing and opening means for the operation of cutting blade **17**. A cord **31** and its associated male plug **32** when plugged into a receptacle (not shown) provides power electrically for the operation of device **10**.

In use, the blade **17** which shears a strip from envelope **15** so that the contents may be removed is controlled by two electro-magnets **23** and **24**. When the switch **29** is closed current flows to the attraction portion **26** of electro-magnet **23** and to the repel portion **27** of electro-magnet **24** thus causing the pivotable blade **17** to be held in the upward position. When switch **30** is closed a reversal of current is effected through the opposite portions **25** and **28** of magnets **23** and **24** thus suddenly and effectively pivoting blade **17** down to shear a strip or clipping from the envelope **15**.

It will be noted that blade **17** should be as heavy as conveniently possible to impart a greater inertia upon it when it is released for the down stroke to shear a strip from envelope **15**.

It shall further be noted that shims **20** may be of various sizes in thickness to allow for the desired cut upon envelope **15**.

What I now claim is:

1. An envelope opening device comprising a base, side walls, a top wall, and a rear supporting wall, pivotable blade means carried by said device for shearing a strip from the edge of an envelope, said top wall providing support means for said envelope, said envelope being urged against said pivotable blade member in order for said blade member to pivot downwardly to remove a strip from the edge of said envelope thus exposing the contents of said envelope, a pair of push-pull magnets carried by said device providing lifting means for said blade, switch means carried by said device providing control of said blade, said blade acting in concert with a hardened shear edge secured to said top wall of said device, a pin providing pivot means for said cutting blade, said pin being secured to the back wall of said device, the lifting of said blade being accomplished by a push button switch, said pushbutton switch closing a circuit to said pair of magnets, one positioned above and the other positioned below said cutting blade so that when said switch is depressed, one of said magnets attracts while the other repels and thus holds said blade in the upper position.

2. A combination according to claim **1**, wherein a second switch when depressed by the user of said device closes a circuit to reverse the polarity of said pair of magnets which through magnetic flux action and the inertia of said blade will suddenly shear the strip from said envelope, said strip falling into a clipping receiving area within the body of said device.

References Cited

UNITED STATES PATENTS

195,407	9/1877	See	83—912 X
938,741	11/1909	Campbell	83—912 X
1,197,788	9/1916	Bircher	83—912 X
1,833,549	11/1931	Anderson	83—912 X
2,592,699	4/1952	Iffland	83—912 X
2,679,098	5/1954	Deicken	83—912 X
3,260,445	7/1966	Wiseman	83—575 X

FOREIGN PATENTS

803,269— 7/1949 Germany.

WILLIAM S. LAWSON, Primary Examiner

U.S. Cl. X.R.

83—590, 607, 912, 467