No. 806,928. PATENTED DEC. 12, 1905.

G. W. SIMMONS.

LETTER OPENER.

APPLICATION FILED JULY 17, 1905.

Fig. 1.

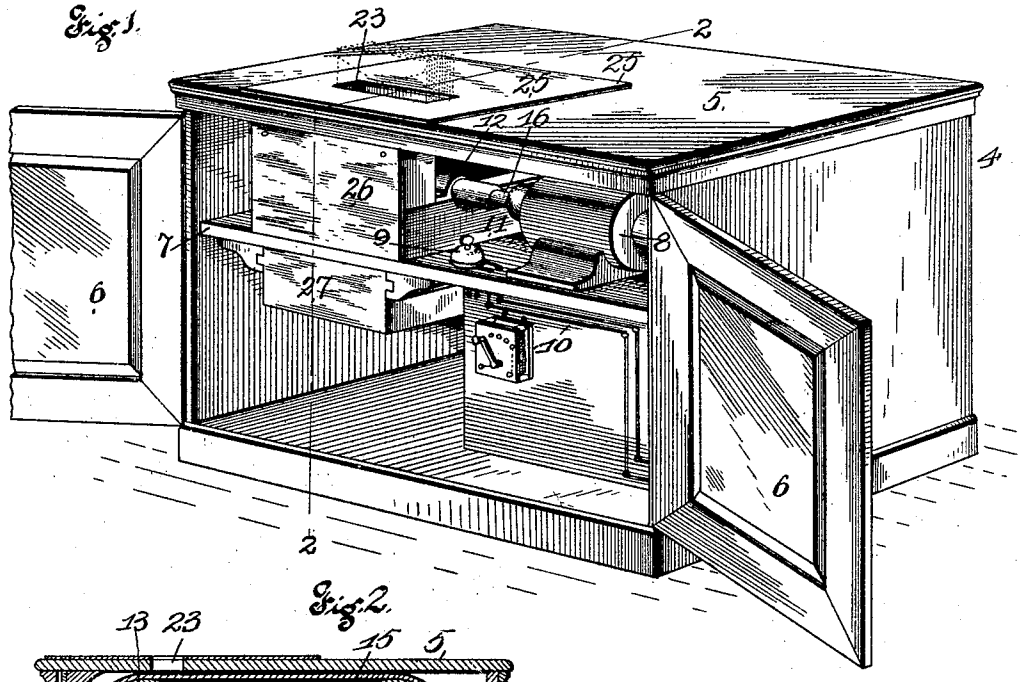


Fig. 2.

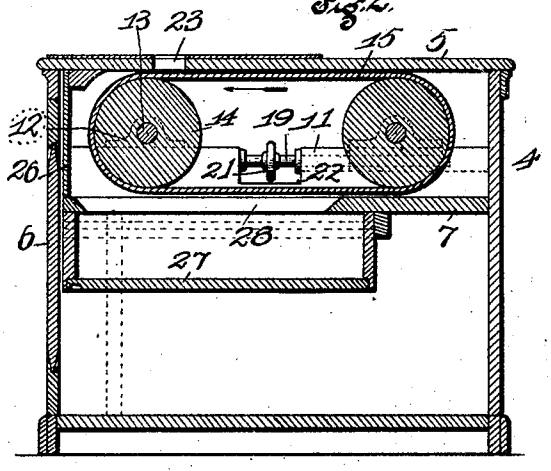


Fig. 3.

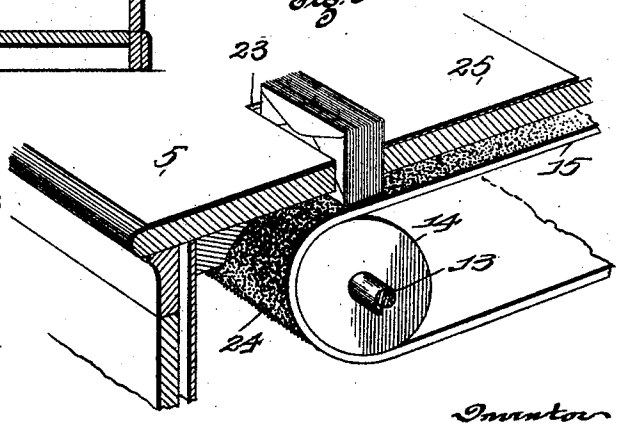
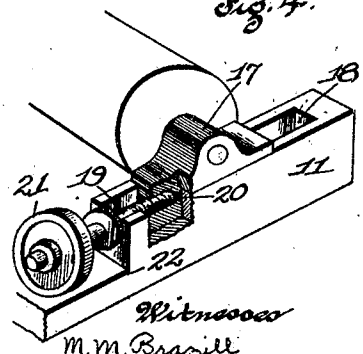


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE W. SIMMONS, OF ST. LOUIS, MISSOURI.

LETTER-OPENER.

No. 806,928. Specification of Letters Patent. Patented Dec. 12, 1905.

Application filed July 17, 1905. Serial No. 270,167.

To all whom it may concern:

Be it known that I, GEORGE W. SIMMONS, a citizen of the United States, and a resident of St. Louis, Missouri, have invented certain new and useful Improvements in Letter-Openers, of which the following is a specification.

My invention relates to improvements in letter-openers; and it consists in a novel arrangement, construction, and in combination of parts, as will be fully hereinafter described and claimed.

The object of my invention is to provide a means for rapidly opening letters by which a number may be opened simultaneously by grinding off one edge thereof.

Figure 1 is a perspective view of my complete invention with the cabinet-doors open, showing the operating mechanism. Fig. 2 is a vertical cross-sectional view taken on the line 2 2 of Fig. 1. Fig. 3 is a detailed sectional perspective view showing the manner in which the letters are brought in contact with the cutting-surface of the belt. Fig. 4 is a detailed perspective view of one of the belt-tighteners with a part broken away and in section.

Referring to the drawings in detail, 4 indicates a housing, preferably a cabinet in form, and consists of the top 5, bottom, sides, and back, the door 6 constituting the front thereof. Within the housing is located a shelf 7, on which is mounted a suitable motor 8, to which motion is imparted by operating the switch 9, which controls the electrical mechanism 10. On the shelf 7 is located a pair of bearing-bars 11, upon which is rigidly mounted a pair of journal-bearings 12. In these journal-bearings is mounted a shaft 13, which controls a roller 14, on which is operated a cutting-belt 15. The shaft 13 is directly connected to the commutator-shaft 16 of the motor and by which the same is placed in operation. On the bearing-bars 11 are also mounted a pair of sliding journal-boxes 17, which fit within a channel 18, formed in said bearing-bars, and which are for the purpose of tightening the cutting-belt 15. This feature of adjustment is attained by means of the adjusting-screw 19, located within the channel and being externally screw-threaded and communicating with an internally-screw-threaded opening 20, formed in the sliding journal-box. The adjusting-screw is operated by the hand-wheel 21 and allowed to operate within the recess 22, formed in the bars 11. The cutting-belt is located in close proximity to the under surface of the top 5, and in said top is formed a slot 23, into which the letters are inserted, and their edges brought in contact with the cutting-surface 24 of said belt. The top 5 is also provided with a plate 25, which has an opening to correspond with the slot 23, and is designed to be shifted, if desired, to vary the width of the slot, depending upon the number of letters to be opened and also to prevent the wearing of the top by continual use.

The front end of the bearing-bars is covered with a plate 26, which prevents the dust from passing out into the lower compartment of the cabinet and also acts as a deflector, causing the dust to pass downwardly and lodge it into the drawer 27, located beneath the rollers and slidably retained in position under the shelf 7. The dust is permitted to pass from the upper compartment to the drawer 27 through the opening 28, formed in the shelf 7.

A letter-opener of this description is applicable for use in establishments where considerable mail is received.

Having thus described my invention, what I claim as new, and desire to have secured to me by grant of Letters Patent, is—

1. In a letter-opener, the combination of a closed casing having an opening in the top thereof through which the letters are inserted, a traveling abrading mechanism arranged with the abrading-surface close to the inner end of the opening through the top of the casing, means for operating the abrading mechanism, and means for collecting the dust produced by the abrading mechanism arranged within the casing, substantially as set forth.

2. In a letter-opener, the combination with the casing provided with an opening, a pair of rollers mounted therein and a belt having a roughened surface mounted on the rollers, means for driving the rollers, and a movable plate provided with a slot, and arranged to rest on the said casing, for varying the width of the opening therein, substantially as set forth.

3. In a letter-opener, the combination with the casing provided with an opening, a set of rollers mounted therein, means for driving the rollers, a belt mounted on the said rollers

and provided with a roughened outer surface and arranged to move in close proximity to the said opening, a removable dust-collecting box arranged below the belt, and a dust-deflecting plate in front of the belt for deflecting the dust downward into the said box, substantially as set forth.

In testimony whereof I have signed my name to this specification in presence of two subscribing witnesses.

GEORGE W. SIMMONS.

Witnesses:
M. E. DARNEILLE,
JOS. F. SALER.