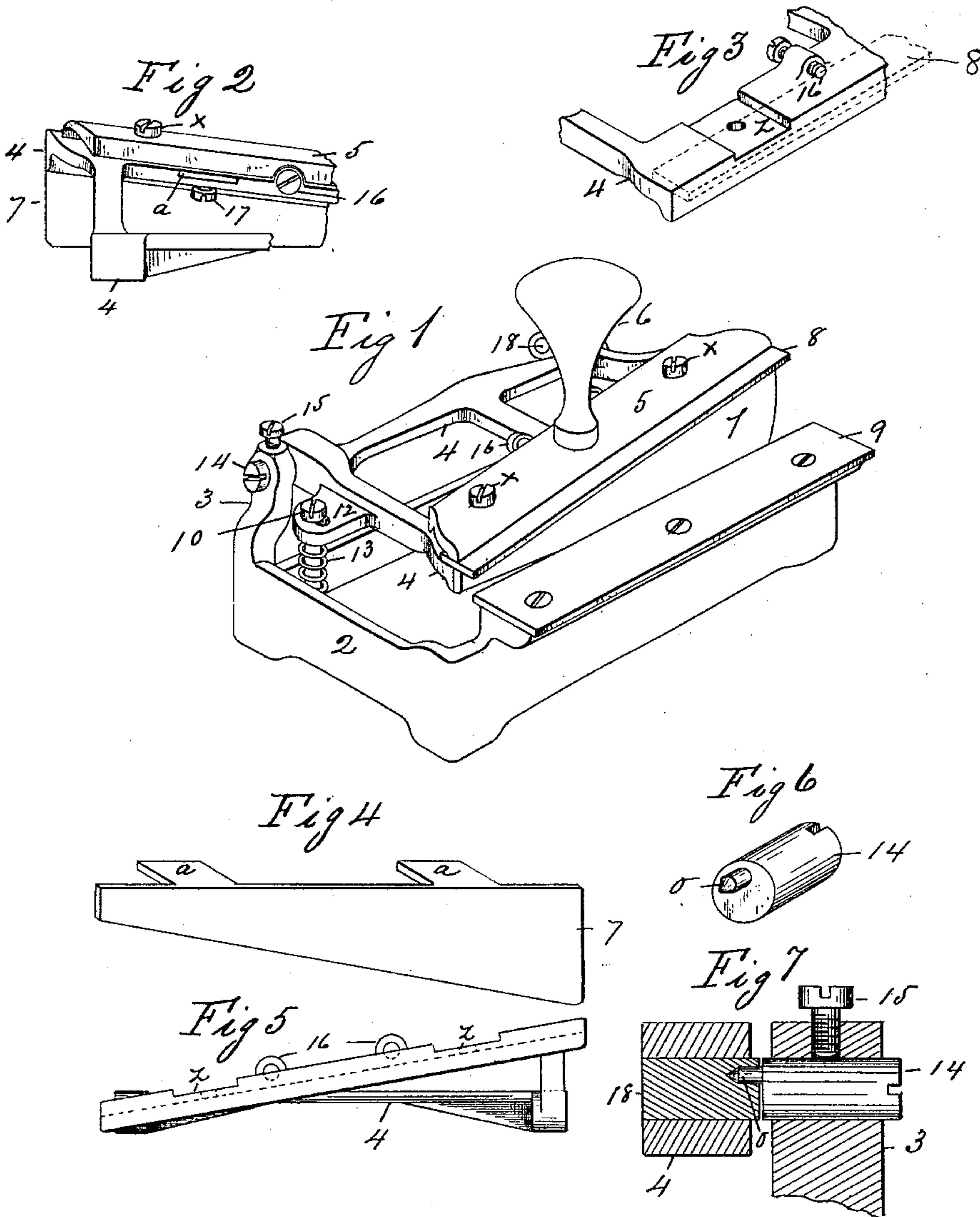


(No Model.)

F. CURTIS.  
ENVELOPE OPENER.

No. 388,343.

Patented Aug. 21, 1888.



Witnesses,  
G. W. Chamberlain.  
Wm. H. Chapin

Inventor,  
Francis Curtis.  
By his Attorneys Chapin & Co.

# UNITED STATES PATENT OFFICE.

FRANCIS CURTIS, OF SPRINGFIELD, MASSACHUSETTS.

## ENVELOPE-OPENER.

SPECIFICATION forming part of Letters Patent No. 388,343, dated August 21, 1888.

Application filed March 7, 1887. Serial No. 230,064. (No model.)

*To all whom it may concern:*

Be it known that I, FRANCIS CURTIS, a citizen of the United States, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Envelope-Openers, of which the following is a specification.

This invention relates to envelope openers, the object being to provide an improved machine of this class for cutting the edge of a folded and sealed envelope, whereby the latter may be easily opened to remove its contents; and the invention consists in the peculiar construction and arrangement of the various parts of the device, all as hereinafter fully described, and pointed out in the claims.

In the drawings forming part of this specification, Figure 1 is a perspective view of an envelope-opener constructed according to my invention. Figs. 2 to 7, inclusive, illustrate in perspective views and in side elevation and section detail parts of the machine, hereinafter fully described.

In the drawings, 2 indicates the bed of the machine, which is made with upwardly-projecting surrounding borders to form a bed of a box form for the reception of clippings from cut envelopes, thereby preventing said clippings from being scattered on a desk or table where the opener may be used.

The operating parts of the opener are, as below described, so hung on said bed that they do not interfere with the discharge of said clippings from the bed by turning the latter partially over. The said bed has an upright post, 3, at each of its rear corners, to which the knife-frame 4 is pivoted, and each of said posts is provided with a pivot-pin, 14, (see Fig. 7, which show parts of said knife-frame and post in section, together with said pin 14 in side elevation,) which is free to be turned and moved endwise therein, having a grooved outer end, and on its inner end a stud, *o*, located eccentrically to the axis of said pin. A bushing, 18, is placed in each end of said knife-frame, having a socket in its end to receive said stud *o*. A set-screw, 15, is placed in the end of the said post 3, which serves to lock said pin 14 in any position to which it may be moved or turned.

The knife-frame 4 has the knife 8 secured

thereto, as below described, and the purpose of the above-described eccentric pivot-connection of the said frame to the posts 3 is to provide convenient means for adjusting said frame and knife horizontally toward the edge of the cutter-plate 9, which is secured, as shown, on the bed 2 opposite the edge of the knife 8, whereby the proper engagement of the edges of said knife and plate is effected to secure the desired cutting action. Therefore, by turning said pins 14 by the application of a screw-driver thereto the said adjustment of the knife-frame and knife is accomplished and the set-screws 15 prevent any derangement of said adjustment. The said knife-frame has on one end of it a perforated projection, 12, through which a screw passes into the bed 2, and between said projection and the bottom of the bed is placed a spiral spring, 13, through which the screw 10 passes. Said spring serves to hold the pivoted knife-frame 4 in an upward position, or in that shown in Fig. 1, and the head of the screw 10, by engagement with said projection 12, limits the upward movement of said frame. By locating the spring 13 and the screw 10 in the position shown at the end of the knife-frame and bed that part of the bed beneath the knife 8 is kept free, so that the aforesaid clippings from the envelopes may be easily thrown out of said bed.

Fig. 2 is perspective rear view of one end of the knife-frame and of one end of the gage 7, which is connected thereto. Fig. 3 is a perspective front view of one end of the knife-frame, whereon is shown in dotted lines the position of the knife 8 relative to the upper side of said frame, and to a knife-adjusting screw, 16, of which there are two in the frame, as shown in Fig. 5, which is a front elevation of said frame. In said Fig. 2 is shown a portion of the knife-clamp 5, which is secured against the knife 8 and on the frame 4 by the screws *x*. The front edge of the knife-frame is given an inclined form, as shown, so that when the knife 8 is secured thereon it will be brought to a corresponding inclined position relative to the adjoining edge of the cutter-plate 9, whereby the knife, when moved against the edge of said plate for cutting purposes, is caused to have the desirable shear movement. The aforesaid screws 16 are lo-



cated in the knife-frame directly behind the rear edge of the knife 8, and are capable of being screwed against the edge of the latter to move it outward for close adjustment, and  
 5 said screws constitute an additional means of adjustment for the knife, the other means being the above-described eccentrically-studded pins 14. Said screws 16, while serving a useful purpose for very close adjustment, may, if  
 10 desired, be omitted from the machine.

The gage 7 having thereon the arms *a a* is adjustably attached to the knife-frame 4 under the knife 8, and is capable of being adjusted toward and from the outer edge of said  
 15 knife independently of any movement of the knife-frame, in order to determine the width of the clippings which are cut from the end of an envelope, whereby one end thereof is opened, for in opening an envelope by means  
 20 of the within-described device one end is placed on the cutter-plate 9 and pushed against the gage 7, and then the knife-bearing side of the frame 4 is swung downward by pressing on the handle 6, carrying the  
 25 edge of the knife 8 against the envelope, the edge of said knife and the edge of said cutter-plate co operating in the usual way to clip the end of the envelope. As illustrated in Figs. 2, 3, and 5, the front edge of the knife-frame  
 30 has formed therein two transverse grooves, *z z*, which grooves receive the said arms *a*, and a screw, 17, (see Fig. 2,) passes upward through the frame 4 against the under side of each of the arms on the gage 7, thereby securing the

latter in any position to which it may have 35 been adjusted. The arms *a* have a bearing against the under side of the knife-clamp 5 when said screws are turned against them.

What I claim as my invention is—

1. The bed 2, having the posts 3 thereon, 40 the eccentrically-studded pins 14, passing through said posts, the knife-frame having a pivotal connection with the studs on said pins, the knife 8, attached to said frame, and the cutter-plate 9, attached to the bed opposite 45 said knife, combined and operating substantially as set forth.

2. An envelope-opener consisting of the bed 2, having a box form, as described, and the posts 3 thereon extending above the border 50 of said bed, the cutter-plate 9, secured on the latter, the knife-frame 4, having a pivotal connection with said posts, the knife 8 and the gage 7, attached to said knife-frame, the adjusting-screws 16, engaging with the rear edge 55 of said knife, the screw 10, engaging with said frame and bed, and the spring 13, combined and operating substantially as set forth.

3. In combination, the knife-frame 4, having the grooves *z z* therein, the knife-clamp 5, 60 the gage 7, having arms thereon entering said grooves, and the screws 17, passing through said frame against said arms.

FRANCIS CURTIS.

Witnesses:

WM. H. CHAPIN,  
 G. M. CHAMBERLAIN.