G. W. SWIFT, JR.

METHOD OF MAKING OPEN FACE ENVELOPS.

APPLICATION FILED AUG. 21, 1915.

1,227,017.

Patented May 22, 1917.

FIG. I.

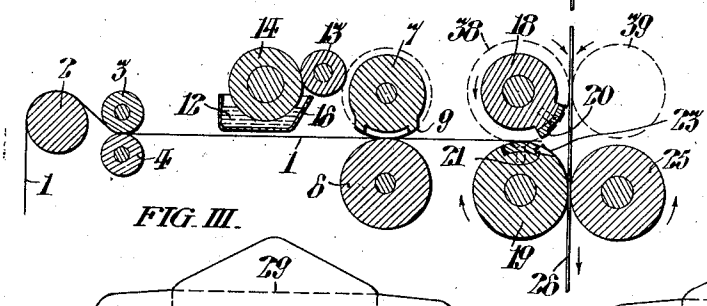


FIG. II.

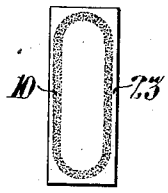


FIG. III.

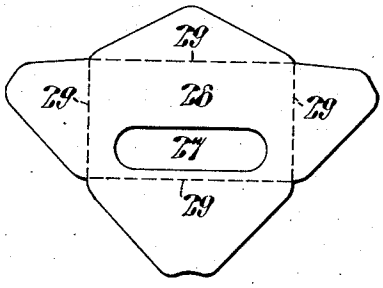
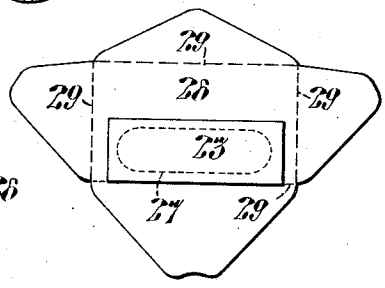


FIG. IV.



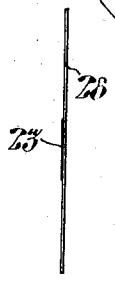


FIG. V.

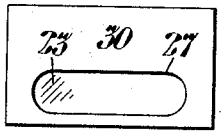


FIG. VI.



FIG. VII.

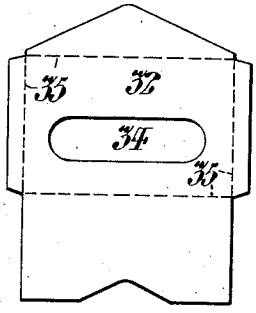


FIG. VIII.

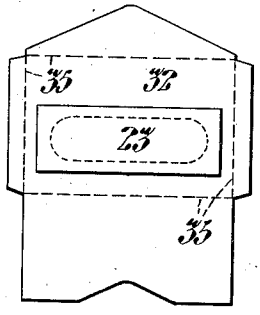


FIG. IX.

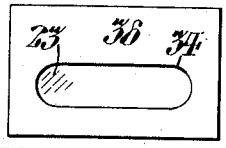


FIG. X.



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UNITED STATES PATENT OFFICE.

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METHOD OF MAKING OPEN-FACE ENVELOPS.

1,227,017. Specification of Letters Patent. Patented May 22, 1917.

Application filed August 21, 1915. Serial No. 46,653.

To all whom it may concern:

Be it known that I, GEORGE W. SWIFT, Jr., a citizen of the United States, residing at Bordentown, in the State of New Jersey, have invented a certain new and useful Improvement in Methods of Making Open-Face Envelops, whereof the following is a specification, reference being had to the accompanying drawing.

My invention relates to envelops of the class wherein the openings in the faces thereof, for display of the address, etc., are covered by transparent or translucent material sealed thereon to prevent access to the contents of the envelops through said openings.

In accordance with my method, individual envelop blanks, cut from plane paper or other suitable fabric, and of any desired configuration, respectively provided with openings as aforesaid, are fed singly, in succession, to mechanism whereby a web of the transparent or translucent material, of such length that it may be used to form a plurality of covers, for successive envelops, is provided with a succession of imprints of adhesive material in such spaced relation that said web may be subsequently divided to form individual adhesive patches to cover the openings in said envelop blanks, and pieces of said transparent material, each of such dimensions as to form a cover for a single envelop opening, are cut from said continuous web, and pressed in succession upon said envelop blanks in position to cover the respective openings therein. Said blanks are then folded to form envelops.

I do not herein claim broadly the method of forming transparent coverings for open face envelops by cutting a succession of patches from a continuous web. Such mechanism has heretofore been used in conjunction with mechanism for progressing a continuous web from which envelop blanks are to be subsequently formed; the latter web being progressed in definite relation to punching mechanism by which openings are formed in it in definite relation to the operation of the patch forming mechanism; the product of such a method being a continuous web having openings covered with patches, which web must subsequently be cut to form individual envelop blanks around the respective openings in the web. Such a method and means for effecting it are disadvantageous in that but one size of envelops can be economically made therewith, because, as the envelop web is continuous from the punching to the patching mechanism the openings must be formed therein in invariable relation to the patching mechanism and, if it is desired to form smaller envelops than those for which the mechanism is designed, it is, of course, necessary to form the blanks for the same respectively local to the openings in the web and waste more or less of the web intermediate of said openings. Therefore, my method is advantageous in that envelops of different sizes may be formed with the same punching and patching mechanism, without waste of material, because it is only necessary to vary the interval of space at which the separate individual envelop blanks used by my method, are supplied to the patching mechanism, without changing the rate of operation of the latter. That is to say, in accordance with my method, with the patching mechanism operating at a given rate, small envelop blanks are supplied thereto at greater intervals than large envelop blanks, so as to afford such space between successive envelop blanks as to present the openings therein to the patching mechanism at the proper time; the openings in successive envelop blanks being thus presented in greater spaced relation with each other than in the web from which they were formed without waste of material intermediate of their respective openings.

My invention includes the various novel features hereinafter more definitely specified and claimed.

In the drawing; Figure I is a diagrammatic vertical sectional view of mechanism for feeding, cutting and applying the transparent or translucent material to the envelop blanks, and contemporaneously feeding the latter.

Fig. II is a plan view of an adhesive transparent patch.

Fig. III is an inside face view of a plane envelop blank provided with an opening and adapted to be treated in accordance with my method by the mechanism shown in Fig. I.

Fig. IV is an inner face view of said envelop blank shown in Fig. III, after the opening therein is covered by an adhesive patch of the transparent fabric, by the mechanism shown in Fig. I.

Fig. V is a front view of the completed envelop formed by folding the blank shown in Fig. IV.

Fig. VI is a rear view of the envelop shown in Fig. V.

Fig. VII is an inside face view, similar to Fig. III but showing a different configuration of envelop blank provided with an opening and adapted to be treated in accordance with my method by the mechanism shown in Fig. I.

Fig. VIII is an inner face view of said envelop blank shown in Fig. VII, after the opening therein is covered by an adhesive patch of the transparent fabric, by the mechanism shown in Fig. I.

Fig. IX is a front view of the completed envelop formed by folding the blank shown in Fig. VIII.

Fig. X is a rear view of the envelop shown in Fig. IX.

Referring to Fig. I; the web 1 of transparent or translucent paper or other suitable fabric, is continuously drawn over the guide roll 2 by the feed rolls 3 and 4 which are so related as to eliminate the curl of said web, due to its having been previously tightly wound. Said feed rolls 3 and 4 present said web 1 in plane form over the platen roll 6 beneath the printing roll 7 having the type form 9 adapted to form imprints of adhesive material such as indicated at 10 in Fig. II. Said type form 9 receives a coating of the adhesive material 12 from the transfer roller 13 which is in operative relation with the coating roller 14 which dips into a supply of said adhesive material in the tank 16. Said transparent web 1 passes from the printing roller 7 between the shear rolls 18 and 19 which respectively carry cutters 20 and 21 in such coöperative relation as to shear from said web 1 successive patches 23; one such patch as shown in Fig. II being sheared from said web 1 at each revolution of said rolls 18 and 19 in the direction of the arrows indicated in Fig. I.

Said mechanism also includes the feed roll 25 which is opposed to said roll 19 and rotated in the direction of the arrow so as to engage and feed between said rolls 19 and 25 successive individual envelop blanks 26 which are entirely independent of each other. As shown in Fig. III, each of said envelop blanks 26 has an opening 27 formed therein; so that, as said blanks are progressed downwardly between said rolls 19 and 25, the patches 23 are pressed upon the successive blanks in position to cover the respective openings 27 therein, as shown in Fig. IV. Said blanks 26, when creased on the lines 29 indicated in Figs. III and IV, may be folded to form envelops 30 as indicated in Figs. V and VI.

In the operation above described; said mechanism being operated at a given rate, it is necessary to supply said envelop blanks 26 thereto in such timed relation as to present their respective openings 27 in proper relation with the patches 23, as the latter are turned on the roll 19 from a plane normal to said blanks, to a plane parallel with said blanks, and are pressed thereon between said rolls 19 and 25; the interval existing between blanks 26 as supplied to the patching mechanism being different from the interval required in supplying the blanks 32 shown in Figs. VII and VIII; said blanks 32 being not only of an entirely different configuration, but longer than said blanks 26, in the direction of their movement with respect to said patching mechanism. However, said blanks 32 are like the blanks 26 in that they are provided with respective openings 34, and adapted to be covered by patches 23 of the same size as indicated in Figs. II and VIII. Said patches 23 are applied to the blanks 32 in precisely the same way as they are applied to the blanks 26, as above described; the only difference being in the intervals at which said blanks, 26 and 32, are supplied to the patching mechanism; because of their respectively different lengths. Said blanks 32, when creased on the lines 35, indicated in Figs. VII and VIII, may be folded to form envelops 36 as indicated in Figs. IX and X.

The patching mechanism above described may be supplied with envelop blanks by hand or by any suitable mechanism; for instance, rolls 38 and 39, indicated in dotted lines in Fig. I, may be used to engage the blanks between them and present them to said patching mechanism at the desired rate.

I do not desire to limit myself either to the particular forms of the envelop blanks or to the details of construction of the mechanism herein shown, as it is obvious that various modifications may be made therein without departing from the essential features of my invention as defined in the appended claim.

I claim:—

The method of making open face envelops which consists in progressing a web of transparent material, providing said web with a succession of imprints of adhesive material in such spaced relation that said web may be subsequently divided to form individual patches, each having one of said imprints, severing said patches from said web, con-

tinuously progressing said severed patches at a uniform rate and presenting individual envelop blanks, each having an opening, to said traveling patch in such timed relation thereto that the opening therein is covered by said patch.

In testimony whereof, I have hereunto signed my name at Bordentown, New Jersey, this twenty-sixth day of April, 1915.

GEORGE W. SWIFT, JR.

Witnesses:
HOBART W. BRUKER,
JOHN HENRY BLACK.