June 28, 1932. A. NOVICK 1,865,037

METHOD OF MAKING WINDOW ENVELOPES

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Fig. 1.

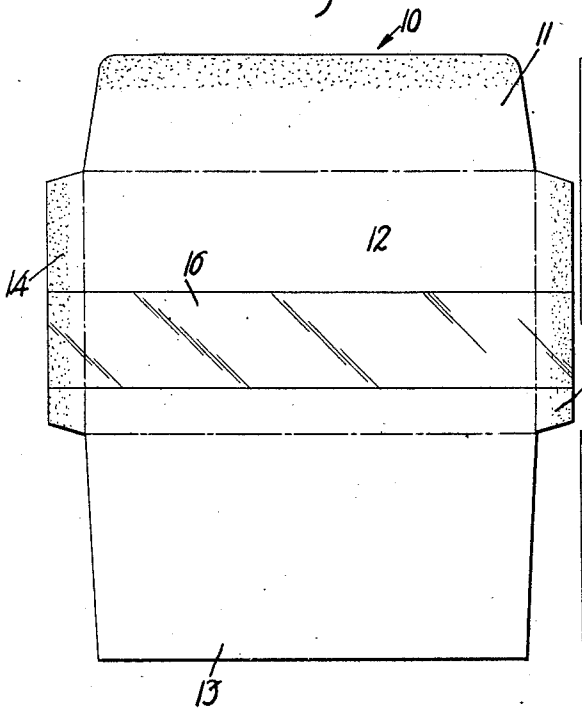


Fig. 2.

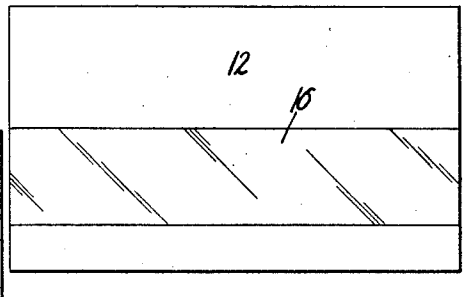


Fig. 3.

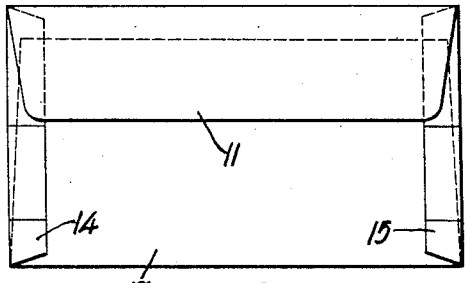


Fig. 4.

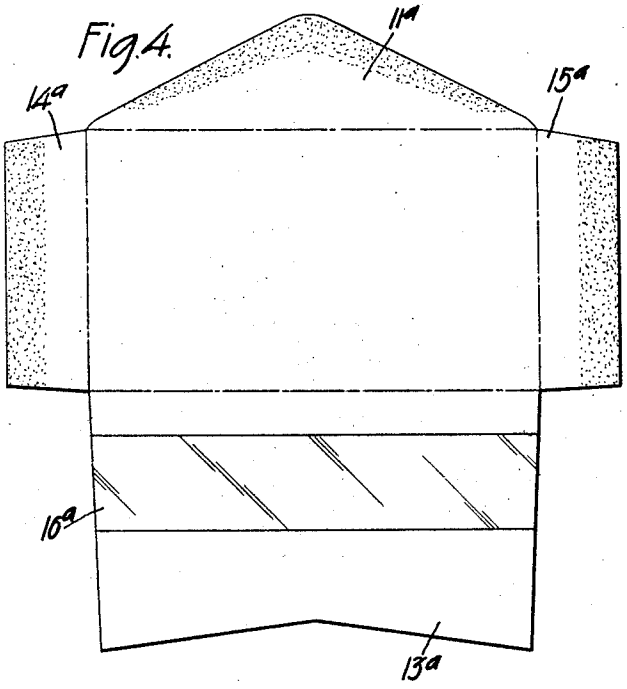


Fig. 5.

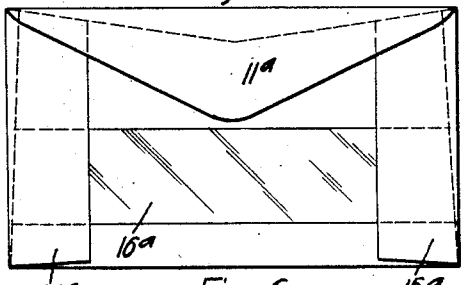
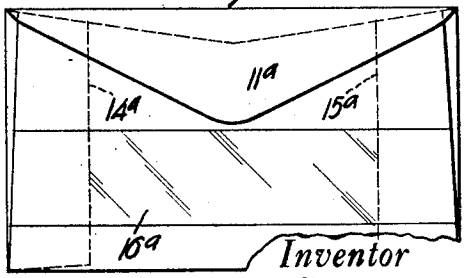


Fig. 6.



Inventor
Abraham Novick
by Moses and Moses

Attorneys

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METHOD OF MAKING WINDOW ENVELOPES

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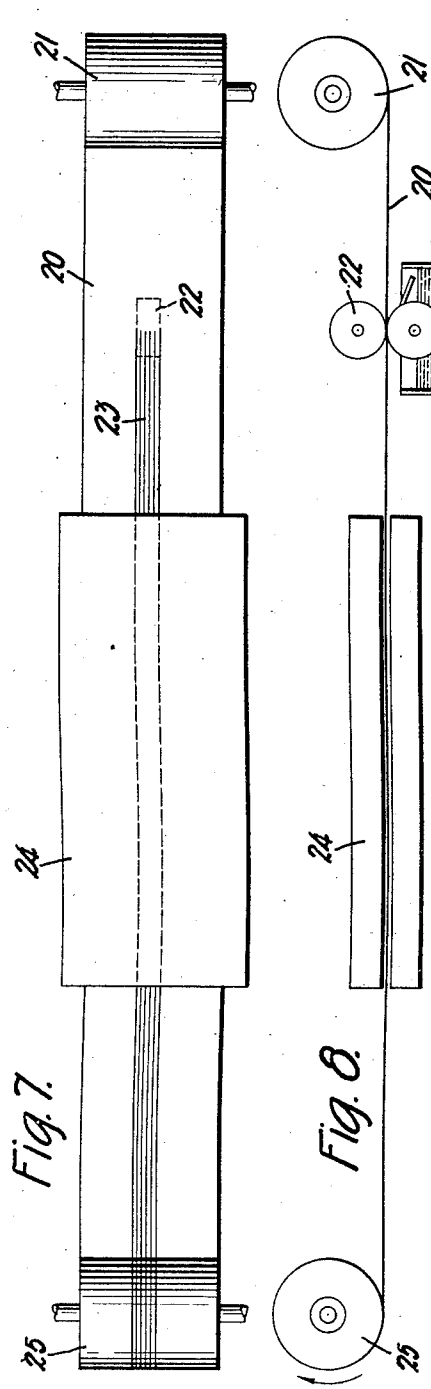


Fig. 7.

Fig. 8.

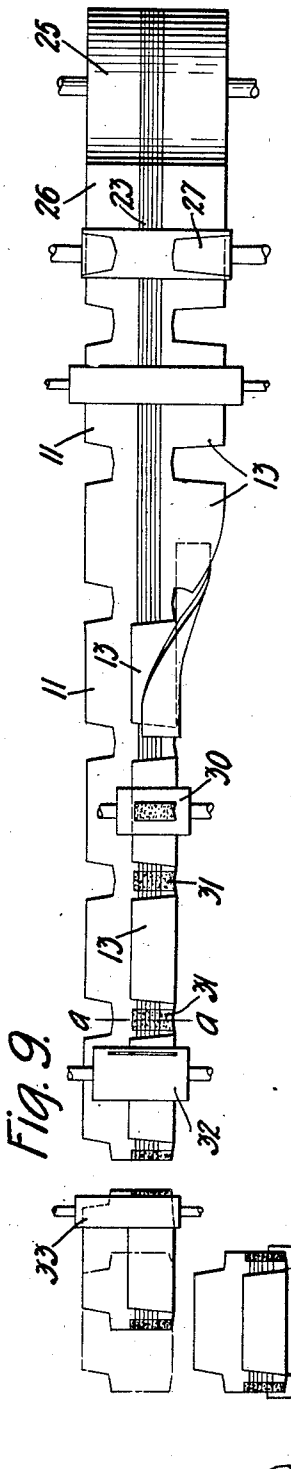


Fig. 9.

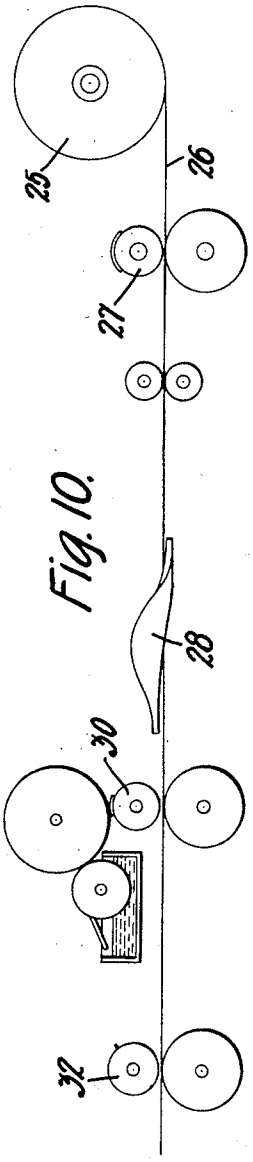


Fig. 10.

Inventor
Abraham Novick
by Moser and Nolte
Attorneys

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METHOD OF MAKING WINDOW ENVELOPES

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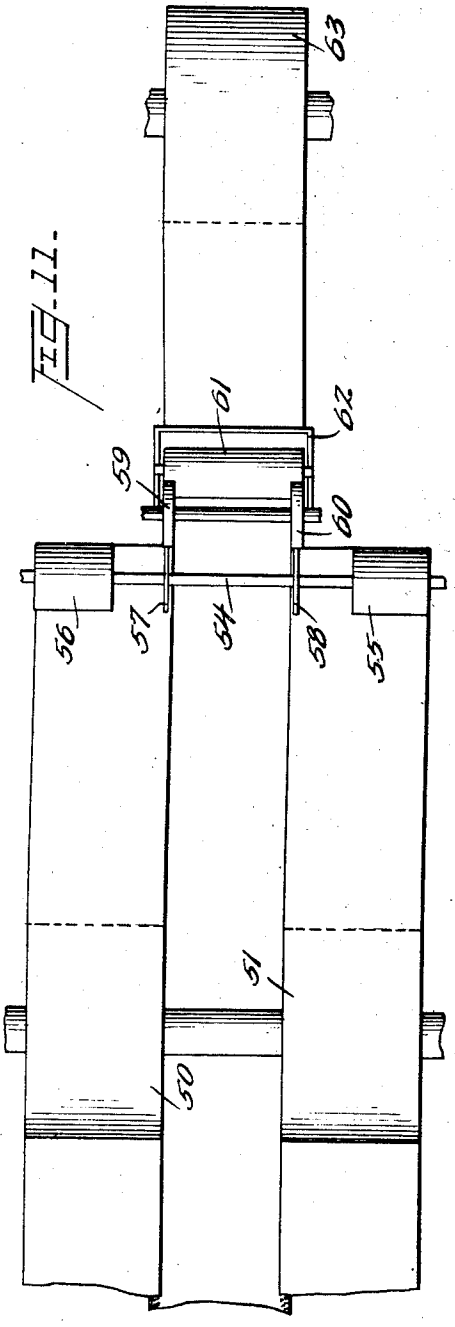


Fig. 11.

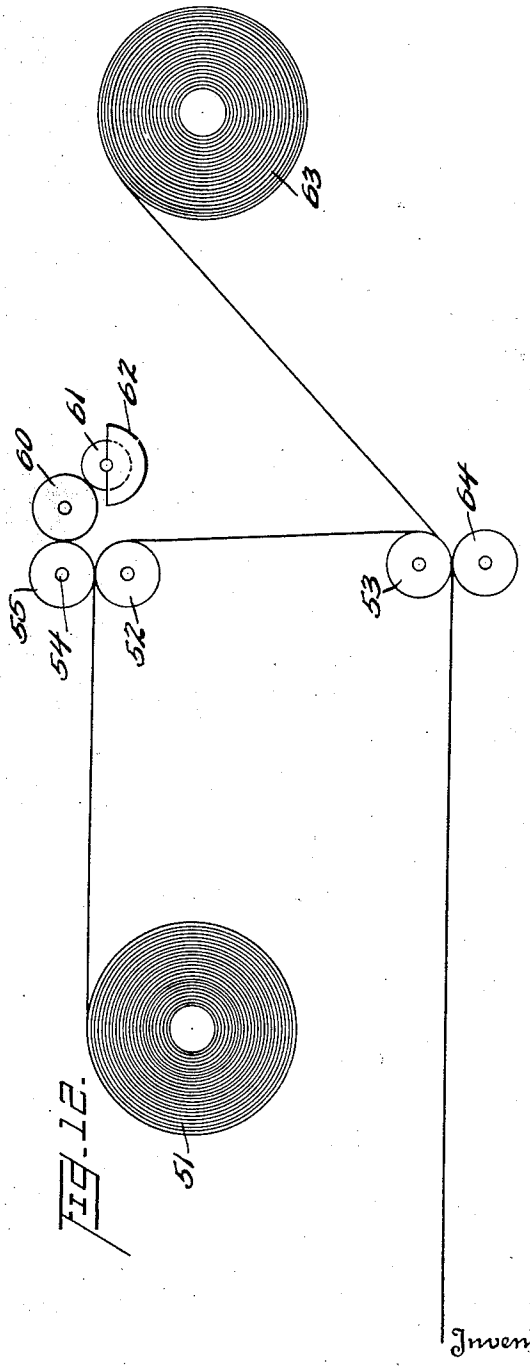


Fig. 12.

Inventor

Abraham Novick

By Moses & Nolte

Attorney

Patented June 28, 1932

1,865,037

UNITED STATES PATENT OFFICE

ABRAHAM NOVICK, OF FLUSHING, NEW YORK, ASSIGNOR TO F. L. SMITHE MACHINE CO., INC., OF NEW YORK, N. Y., A CORPORATION OF NEW YORK

METHOD OF MAKING WINDOW ENVELOPES

Application filed September 19, 1927. Serial No. 220,294.

It is an object of this invention to provide a continuous web of material having formed therein the transparencies of the finished envelopes whereby window envelopes may be made at a cost not substantially greater than those of the non-window type.

No claim is made herein to the envelope per se since the same is claimed in my application Ser. No. 541,933, filed June 3, 1931, which is a division of the instant application.

My invention will be best understood by reference to the following detailed description taken with the annexed drawings in which,

Figure 1 is a view of an illustrative embodiment, the same being in the form of a blank;

Fig. 2 is a view of the front of a completed envelope made from the blank shown in Figure 1;

Fig. 3 is a view of the back of the envelope;

Fig. 4 is a view of a modified blank;

Fig. 5 is a completed envelope made from the blank shown in Fig. 4 in which the side flaps are on the outside;

Fig. 6 shows the same form of envelope in which the flaps are inside;

Fig. 7 is a diagrammatic showing in plan illustrating one method of preparing the impregnated strip;

Fig. 8 is a corresponding view of same in elevation;

Fig. 9 is a plan view illustrating the subsequent steps of cutting and applying the gum to the partially formed blank and folding to produce the form of envelope shown in Figs. 1, 2 and 3; and

Fig. 10 is an elevational view of the means shown in Fig. 9 for carrying out the cutting, gumming and certain of the folding steps.

Figures 11 and 12 diagrammatically illustrate an additional method of making a web having a transparent panel or zone. The figures are respectively in plan and elevation.

Referring to Figure 1, 10 denotes generally an envelope blank of the side seam type, having the usual sealing flap 11, front 12, bottom flap 13, and side flaps 14 and 15, the sealing and side flaps being gummed as is customary in envelopes of this type. Extending lengthwise of the front 12 is a window portion 16 which preferably extends the entire length of the blank. Fig. 3 shows the side flaps 15 outside the bottom flap, although if desired the side flaps may be inside such flap.

Fig. 4 which shows an alternative form, has a bottom flap 13*a* provided with a window portion 16*a* also extending across the entire bottom flap. In addition the side flaps 14*a* and 15*a* are preferably made slightly wider in order that when made into the finished envelope the side flaps will cover up the respective ends of the window portion 16*a* thereby making such window of less effective extent and giving it the appearance of window envelopes of the usual type in which the window occupies a portion only of the length of the envelope. As shown in Figs. 5 and 6 the envelopes may be formed either with the side flaps on the outside as in Fig. 5 or on the inside as in Fig. 6. In this type of envelope the sealing flap 11*a* is on the same side as the window.

The window portion may be formed by impregnating a strip of paper from which the blanks are to be cut with a material giving the requisite transparency. Such substances are well known and easily procured and per se form no part of the present invention and therefore need not be considered in detail.

My invention contemplates an improved method for making an envelope of the types above described. Referring to Fig. 7, 20 denotes a web of envelope material fed from the roll 21 and passing, first, to impregnating rolls 22 which operate to impart to the web 20 a continuous translucent or transparent strip 23. After this has occurred the web is moved to a drying chamber 24 whence it may be formed into a roll 25 which may now

be taken to the envelope making machine proper.

Figs. 9 and 10 illustrate diagrammatically the operations performed by such machine. Thus a web 26 of the impregnated material from roll 25 is fed to a cutter 27 which operates to form the actual blanks by cutting out portions which leave top flaps 11 and bottom flaps 13. Thence the web traverses a ploughshare 28 which turns over the bottom flap after which the web consisting of the partially cut out blanks passes beneath a gumming roll 30 which supplies a layer 31 of gum to the region of the side flaps. Thence the web passes beneath a cutting roll 32 which separates the blanks along the line *a—a* of the side flaps. After this has occurred the separated blanks are further spaced apart by means of a feed roll including roll 33 and then the remaining operation of folding side flaps is performed by ploughshares 34 and pressing roll 35, the finished envelope being shown at B.

It will be seen from the foregoing that I thus first form a continuous web which bears a continuous transparent strip. A roll of such material may then be distributed to manufacturers having suitable envelope machinery and the envelopes formed in the manner described.

It will also be apparent that I may form the transparent portion of the blank or of the web of the material by the method of pasting a separate sheet of transparent material along the edges of separated strips in lieu of forming the window section by impregnation. Such a method is illustrated in Figures 11 and 12. Two spaced strips of opaque paper are drawn from a pair of supply reels 50 and 51. The strips pass over a guide roller 52, thence to a second guide roller 53 from which they pass on, either to a storage reel or directly to the forming machine. Mounted on a shaft 54 above the first guide roller 52 are hold down rolls 55 and 56 and a pair of paste applying rolls 57 and 58. The latter run in contact with a pair of paste transfer rolls 59 and 60 which in turn make contact with a roller 61 which runs in a paste vat 62. The paste applying rolls 57 and 58 apply a narrow strip of paste to the inner margin of each strip of opaque paper.

A strip of transparent material is drawn from a supply reel 63 and passes over the second guide roller 53. This strip is of such a width that it overlaps the pasted margin of each of the spaced opaque strips. A pressure roller 64 cooperates with the second guide roller 53 to press the transparent strip firmly into pasted engagement with the margins of both opaque strips, thus forming a single web having the same desirable characteristics as the impregnated web heretofore described.

While not limited to the envelopes of the side seam type, this type is preferred for the reason that an envelope embodying the invention lends itself more readily to manufacture by the so-called web type machines which operate upon a continuous strip or web of the blank material. The invention is applicable to paper containers such as bags or envelopes used for the display of merchandise. The term "envelope" is therefore to be interpreted as used herein in its generic sense.

I claim:

1. The method of making paper containers which comprises forming a composite web having a continuous, longitudinally extending strip of transparent material and a continuous, longitudinally extending, strip of relatively opaque paper adjacent each edge of said transparent strip, severing the composite web into individual blanks, each blank thereby having a transparent zone extending the entire length thereof and intermediate the width thereof, and thereafter completing the manufacture of the containers while maintaining the transparent area fully exposed throughout one face of the container.

2. The method of making paper containers, which comprises providing continuous webs which are respectively transparent and relatively opaque, overlapping and adhesively uniting adjacent marginal portions of the transparent and opaque webs to form a composite web, successively severing individual blanks from the composite web, and forming the blanks successively into containers.

3. The method of making paper containers, which comprises providing continuous webs which are respectively transparent and relatively opaque, overlapping and adhesively uniting adjacent marginal portions of the transparent and opaque webs to form a composite web, successively severing individual blanks from the composite web, and folding an end portion of each blank over against, and adhesively uniting it to, a body portion thereof.

4. The method of making paper containers, which comprises providing continuous webs which are respectively transparent and relatively opaque, overlapping and adhesively uniting adjacent marginal portions of the transparent and opaque webs to form a composite web, successively severing individual blanks from the composite web, and folding an end portion of each blank over against, and adhesively uniting it to, a body portion thereof, formed from the material of the opaque web.

5. The method of making paper containers which comprises forming a composite web having a continuous, longitudinally extending strip of transparent material and a continuous, longitudinally extending strip of relatively opaque paper adjacent each edge of said transparent strip, folding one strip of

opaque material along a line intermediate its width, severing the composite web into individual blanks, each blank thereby having a transparent zone extending the entire length thereof and intermediate the width thereof, and thereafter completing the manufacture of the containers while maintaining the transparent area fully exposed throughout one face of the container.

In testimony whereof I have affixed my signature to this specification.

ABRAHAM NOVICK.