June 24, 1930. W. T. VON WINKLER 1,766,416

WINDOW ENVELOPE

Filed Aug. 27, 1928

Fig. 1.

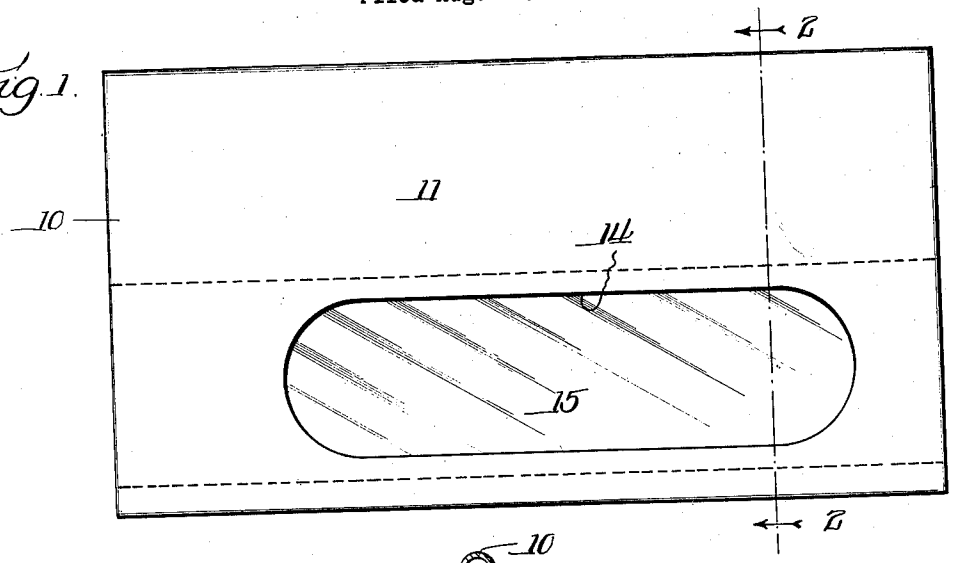
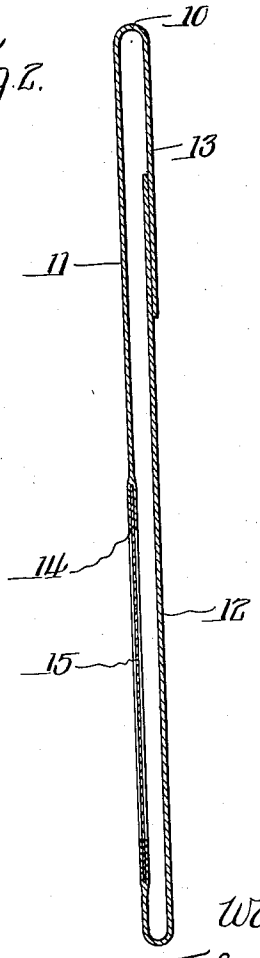


Fig. 2.



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1,766,416

UNITED STATES PATENT OFFICE

WALTER T. VON WINKLER, OF CHICAGO, ILLINOIS, ASSIGNOR OF TEN ONE-HUNDREDTHS TO VON WINKLER CHEMICAL CO., A CORPORATION OF ILLINOIS, FORTY-FIVE ONE-HUNDREDTHS TO SAMUEL W. WEIS AND FORTY-FIVE ONE-HUNDREDTHS TO MARINO GENTILE, ALL OF CHICAGO, ILLINOIS

WINDOW ENVELOPE

Application filed August 27, 1928. Serial No. 302,314.

This invention relates to mailing envelopes of the type commonly known as window envelopes, wherein the face of the envelope is provided with a transparent portion or window which renders visible therethrough the name and address written or printed on the enclosure.

Window envelopes of this type now in use have, for the most part, been manufactured in one of two ways. In one way, oil is applied to the surface of the paper and allowed to dry, thus rendering the paper sufficiently transparent to enable the name and address to be visible therethrough. According to the other method, an oblong slot is cut in the face of the envelope and a piece of so-called "glassine" paper, which is transparent, is pasted to the underside of the front wall of the envelope over said opening. In envelopes rendered transparent by the use of oil, the front and rear surfaces of the front wall of the envelope are, of course, perfectly smooth, but the visibility is considerably below that afford by the "glassine" paper strip or window. On the other hand, a strip of "glassine" paper pasted to the rear wall of the envelope occasionally becomes loosened or detached at its edges, and presents an obstruction to the insertion of the enclosure and is sometimes torn by the latter.

An object of the present invention is to provide an improved window envelope which will possess perfect transparency and visibility with entire freedom from the faults above-noted.

Again, window envelopes, to be commercially practical, must be capable of being manufactured in large quantities economically and by high speed operations; and another object of the present invention is to provide a window envelope which can be produced under the conditions last specified.

A still further object of the invention is to provide a window envelope of the transparent strip type wherein the transparent strip will be securely held in place and will be free from any liability of displacement or breakage by the enclosure when the latter is inserted in the envelope.

Other objects and attendant advantages of the invention will be apparent to persons skilled in the art as the same becomes better understood by reference to the following detail description, taken in connection with the accompanying drawing, in which I have illustrated a simple and practical embodiment of the principle of the invention, and wherein—

Fig. 1 is a front elevation of the improved envelope;

Fig. 2 is a cross-section, enlarged, on the line 2—2 of Fig. 1.

Referring to the drawing, 10 may designate the envelope as an entirety, of the usual rectangular form, 11 being the front wall thereof and 12 and 13 representing the usual lower and upper flaps respectively on the rear side of the envelope.

In the front wall 11 is cut the usual oblong opening 14, and forming the window of this opening is a transparent film 15 of less thickness than the wall of the envelope and greater width and length than the opening 14, and having the portions thereof lying beyond the edges of the opening 14 embedded in and completely covered by the paper stock of the front wall. This transparent film may be of any suitable material, such as glassine paper, gelatine, nitro-cellulose or cellulose-acetate,—preferably nitro-cellulose or celluose-acetate on account of the perfect transparency and moisture-proof quaity of these substances. One practical method of manufacturing the envelope may be briefly described as follows. A pair of continuous thin unfinished paper webs, as they come from the web-forming vat of a paper making machine, and each of a width equal to or greater than that of the envelope blank, with the openings 14 cut therein, and, if desired, trans-

versely perforated or scored at spaces equal to the length of an envelope blank, may be advanced at equal speeds from delivery reels or directly from a pair of paper making machines toward each other so that their openings 14 will exactly register, and simultaneously a transparent strip of a width slightly greater than suffices to span the width of the openings 14 and preferably perforated or scored to register with the perforated or scored lines of the paper webs is advanced at the same speed between the latter, and the three webs then travel between compression and calendering rollers which press the fibres of the unfinished paper webs into felted and interlocked association with each other, thereby producing a single integral finished sheet with the transparent film bodily incorporated therein. If desired, the unfinished webs before reaching the point of compression may travel over a pair of sizing rolls which will apply a thin film of size to their inner adjacent surfaces, and as the sized unfinished webs are squeezed together the film of paste applied thereto is distributed by pressure throughout the fibres of both webs. In such a case, the portions of the transparent film that are incorporated in the paper sheet are adhered to the fibrous stock of the latter. However, if the unfinished webs or films, whether of sized or unsized fiber, are not too dry, the pasting or sizing of their contiguous surfaces may be dispensed with, the heavy pressure under which they are squeezed together sufficing to thoroughly felt together and integrate the webs and securely embed the transparent film therein.

The continuous strip thus formed may then be divided on the perforated or scored lines, and the separated sheets then subjected to the usual blank cutting, folding, pasting and gumming operations to produce the completed envelope.

In the drawings the thicknesses of the paper and the transparent film relatively to the dimensions of the envelope are necessarily much exaggerated.

The above described envelope possesses the advantages that the window closure lies wholly between the planes of the front and rear surfaces of the front wall of the envelope, has no exposed edges to break or tear away from the wall of the envelope, and is very strongly and securely held in place.

While I have herein shown and described a useful and practical embodiment of the invention, I do not limit the latter to the particular form and construction herein presented, but reserve all such variations and modifications as fall within the spirit and purview of the claims.

I claim—

1. A window envelope having a wall thereof consisting of a single integral sheet and formed with an opening, and a transparent film occupying said opening and having marginal portions thereof embedded in the portions of said wall bounding said opening.

2. A window envelope having its front wall consisting of a single integral sheet and formed with an opening, and a transparent film of less thickness than said front wall and of greater width and length than said opening occupying the latter with the marginal portions thereof lying beyond the edges of said opening embedded in and covered by the stock of said front wall.

WALTER T. VON WINKLER.