A. C. FOX.

ENVELOPE.

No. 191,419. Patented May 29, 1877.

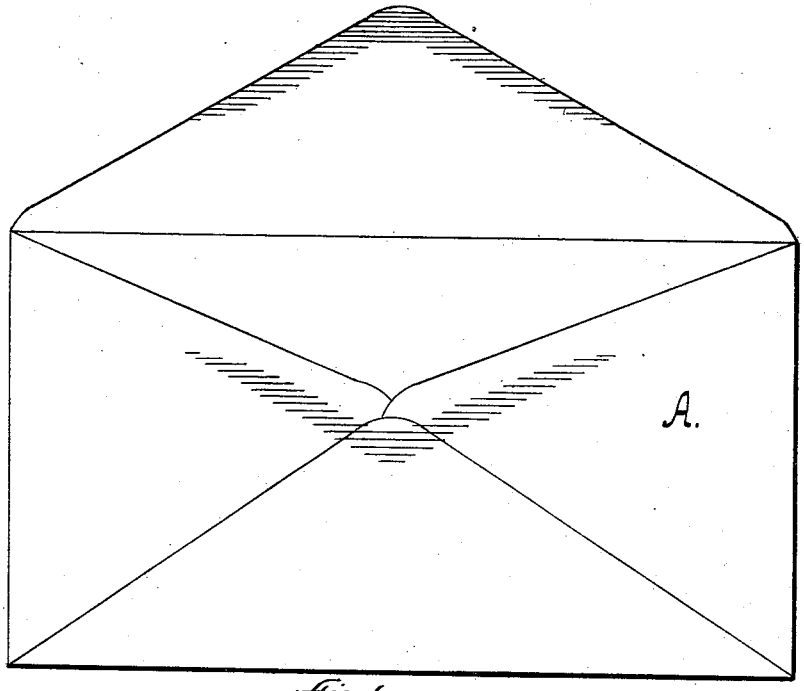

Fig. 1.

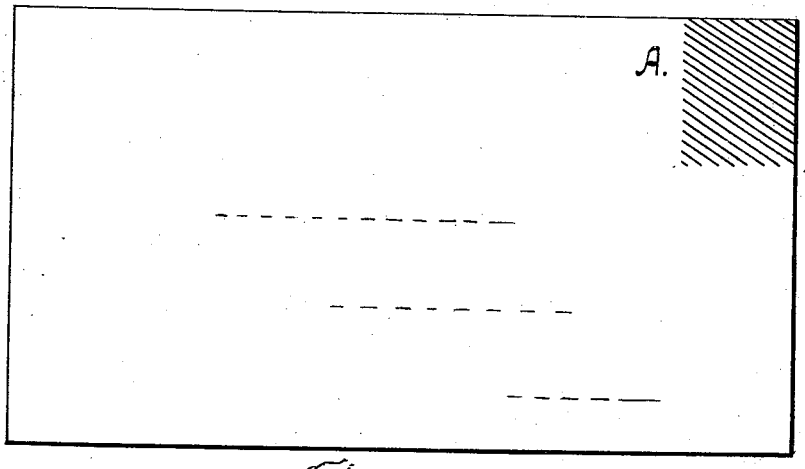

Fig 2.

Witnesses

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ADDISON C. FOX, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN ENVELOPES.

Specification forming part of Letters Patent No. **191,419**, dated May 29, 1877; application filed March 23, 1877.

To all whom it may concern:

Be it known that I, ADDISON C. FOX, of the city of Baltimore, State of Maryland, have invented certain new and useful Improvements in Envelopes; and I hereby declare the same to be fully, clearly, and exactly described as follows, reference being had to the accompanying drawing.

The flaps of envelopes, as now manufactured, are generally coated near the edge with dextrine or British gum, a substance readily soluble in water; and, hence, it is an easy matter to open an envelope by moistening or steaming the portions secured by the mucilage.

The fraudulent opening of envelopes has been a source of great loss to the public and annoyance to the post-office authorities, and my invention has been designed to obviate this evil by furnishing to the public an envelope bearing an insoluble adhesive substance upon its surface.

In the accompanying drawing A represents an ordinary envelope, bearing upon the edges of its flap, and upon that portion of the body of the envelope upon which the gummed edge of the flap falls when the envelope is closed, a pair of compositions which together constitute an insoluble cement.

These compositions consist, respectively, of the following ingredients: Composition No. 1 consists of chromic acid, aqua-ammonia, sulphuric acid, ammonio-sulphate of copper, white paper, and water. Composition No. 2 consists of Russia isinglass dissolved in dilute acetic acid until the solution is of about the consistency of honey.

The compositions are made as follows: About forty grains of chromic-acid crystals are dissolved in four drams of water, and about four drams of aqua ammonia, F. F. F., are then added. To this mixture are then added about ten drops of sulphuric acid, (C. P.,) and, finally, one ounce of ammonio-sulphate of copper, and one dram of fine white paper, which latter partly dissolves in the cupric solution. The second solution is made by dissolving Russia isinglass in dilute acetic acid (one part acid to seven of water) over a water-bath.

Other and inferior forms and qualities of isinglass may be used; but the one described is to be preferred. The compositions are then applied to the envelope as follows: Composition No. 1 is placed on the body of the envelope, and No. 2 upon the flap, as shown in the drawing. The gumming may of course be done upon an ordinary envelope-machine, as to the flap; the composition No. 1 is preferably stamped upon the envelope.

The envelope is closed, in the ordinary way, by moistening the flap with the lips, and turning it over upon the body of the envelope.

The reaction ensuing between the two compositions forms a cement which defies the action of acids, alkalies, hot or cold water, or steam. In a word, the envelope is only to be opened by tearing or cutting.

My present invention is obviously equally adapted to securing stamps to envelopes or other articles. The stamp is coated with the gelatine solution, and the place for its attachment with the cupric composition. The isinglass coating is perfectly harmless, and is even alone a better mucilage than the usual dextrine gum. The compositions described are also admirably adapted to securing together the leaves of legal documents, wills, &c.

In another application for Letters Patent filed with the present one, I have claimed, broadly, the compositions, and, therefore, here claim only—

An envelope having upon its flap a composition which, reacting under the influence of moisture with another composition upon the body of the envelope, into contact with which it comes when the envelope is closed, forms with it an insoluble cement, substantially as described, and for the purpose set forth.

ADDISON C. FOX.

Witnesses:

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