Feb. 6, 1945. E. C. LINDEEN 2,369,060

WAVE-SET ENVELOPE

Filed March 1, 1943

Fig. 1.

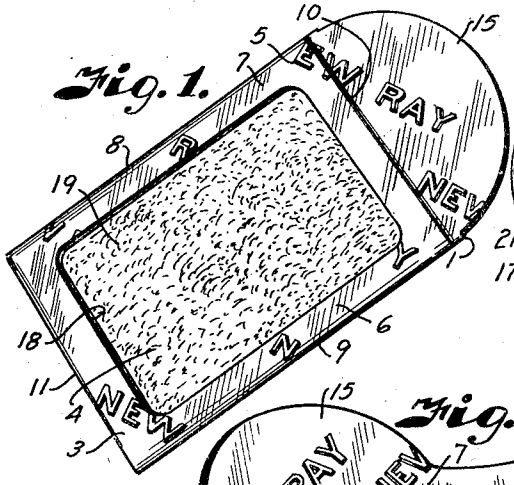


Fig. 2.

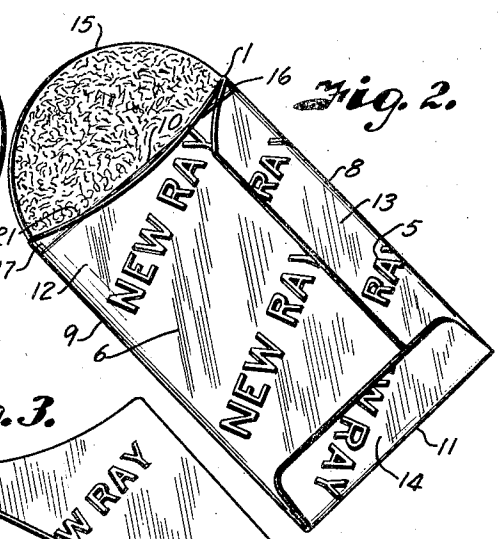


Fig. 3.

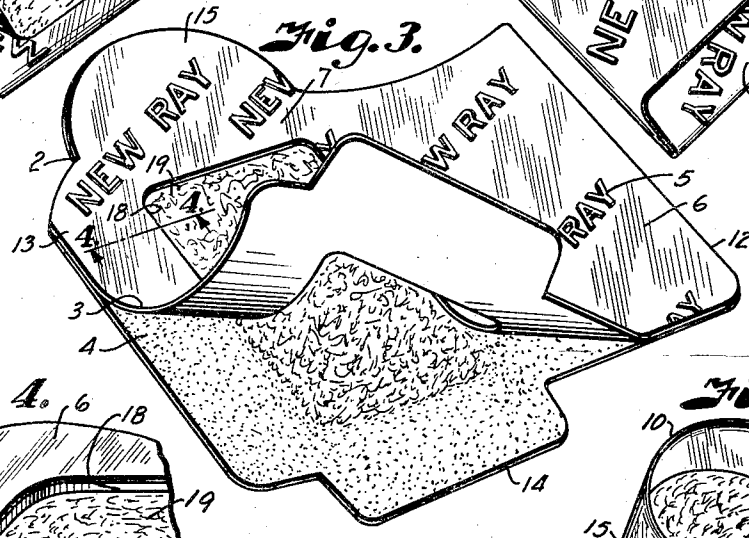


Fig. 4.

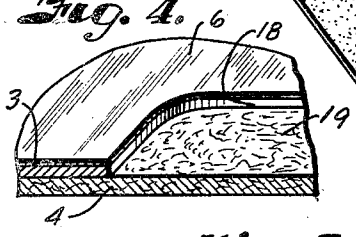


Fig. 5.

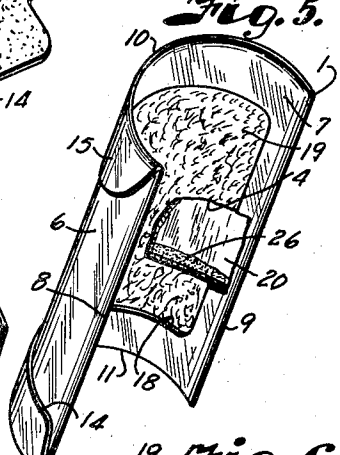


Fig. 7.

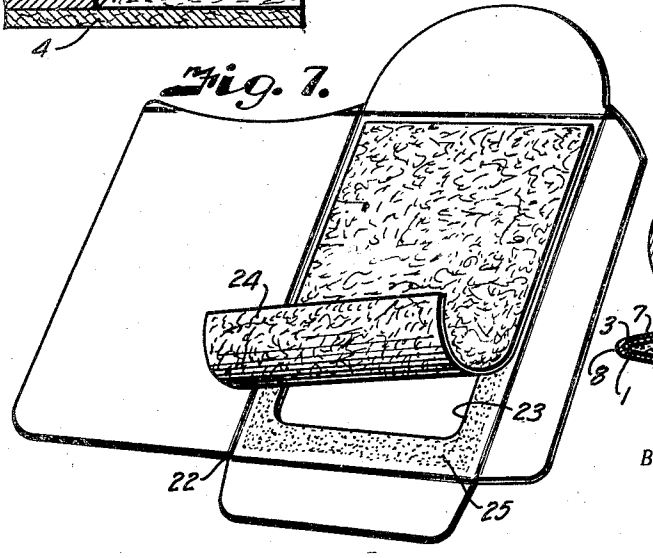
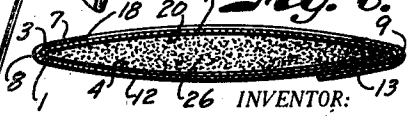


Fig. 6.



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WAVE-SET ENVELOPE

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Application March 1, 1943, Serial No. 477,506

3 Claims. (Cl. 132—36.2)

This invention relates to envelopes and particularly to envelopes for containing powder-like material capable of chemical reaction in the presence of a moistening liquid to generate heat, for example the heat necessary in setting waves in a head of hair. Such envelopes as heretofore manufactured have not been completely satisfactory since they must be constructed of a material capable of retaining the heat and moisture in contact with the wave being formed and at the same time admit the moistening liquid.

In attempting to provide an envelope having these characteristics metal foil or metalized paper have been used and have proved satisfactory in retaining the heat and moisture, but such materials will not admit the moistening liquid. This was solved by providing the inner face side of the envelope with perforations through which the moistening liquid might enter the envelope but the perforations allow sifting of the powder from the envelope during filling and handling with the result the exteriors were unsightly and there was substantial loss of powder before use. Also the perforations did not permit instant distribution to all portions of the powder contained within the envelope.

Other attempts have been made to construct the envelopes of a porous material through which the moisture could permeate and to treat selected surfaces thereof with metallic particles sufficient to retain the heat and moisture. While this type prevented sifting of the powder and allowed for passage of the moistening liquid, the envelopes are less attractive, have less merchandising appeal, could not be as attractively embossed and printed, and if made of heavy enough material to retain embossing, are not sufficiently pliant so they could be curved readily around the strand of hair wrapped within a wave set clamp.

It is, therefore, the principal objects of the present invention to provide an envelope of the character described which positively retains and prevents sifting of the powder, which admits the moistening liquid uniformly and substantially simultaneously throughout the contained powder, which is of attractive appearance, which can be embossed in any desired manner, and which may be efficiently manufactured on standard machinery.

It is a further object of the invention to provide an envelope structure which has substantial strength but is sufficiently pliant to facilitate application in a wave setting clamp.

In accomplishing these and other objects of the invention, as hereinafter pointed out, I have provided improved structure, the preferred forms of which are illustrated in the accompanying drawing, wherein:

Fig. 1 is a perspective view of one side of an envelope embodying the features of the present invention, the sealing flap being shown in open position.

Fig. 2 is a similar view of the opposite side of the envelope.

Fig. 3 is a perspective view of the blank from which the envelope is formed, a part of the non-absorbent layer being detached from the absorbent layer to better illustrate the construction.

Fig. 4 is an enlarged section through the blank taken on the line 4—4 of Fig. 3.

Fig. 5 is a perspective view of the envelope after it is curved and ready to apply in a wave set clamp, a part of the inner face thereof being broken away to illustrate the powder contained in the envelope.

Fig. 6 is a cross-sectional view through a filled envelope.

Fig. 7 is a perspective view of a blank for producing a modified form of the invention.

Referring more in detail to the drawing:

1 designates an envelope constructed in accordance with the present invention and especially designed for containing a powder-like chemical material capable of reaction in the presence of a moistening liquid and which envelope is constructed to freely admit the moistening liquid substantially uniformly and simultaneously to all portions of the contained powder while positively retaining the powder in the envelope.

The envelope is formed from a blank 2 having superimposed layers or plies of relatively thin sheet materials 3 and 4 forming the exterior and interior surfaces of the envelope respectively. The material 3 is substantially non-absorbent and preferably is a relatively thin metallic-like foil or metal covered paper which is capable of deflecting generated heat through a porous face later described. The material is capable of being embossed, as at 5, and has a sheen-like surface 6 which is of attractive appearance and may be decorated in any suitable manner to give the desired merchandising appeal. The material 4 is formed of relatively thin, pliant, porous material capable of passing moisture incidental to the capillary characteristics of the fibres thereof and maintaining its strength when moistened so as to retain powder material.

The blank is shaped to provide a substantially rectangular front portion 7 defined by longitudinal and transverse lines of fold 8—9 and 10—11. The blank also includes a back portion 12 extending from the line of fold 9 and of a size substantially conforming to the front portion 7, a side flap 13 coextensive of the line of fold 8, a bottom flap 14 coextensive of the line of fold 11, and a closure flap 15 coextensive of the line of fold 10. Attention is directed to the fact that the line of fold 10 extends through both the front and back portions of the envelope so as to form ears 16 and 17 which fold with the closure flap as later described.

The front portion 6 of the exterior ply 3 of the envelope has an opening 18 therethrough of slightly smaller dimensions than the face thereof to expose a covering portion 19 of the inner ply 4.

In constructing the blank, the outer ply may be formed of sheet material from which the openings 18 are died out, after which the inner face of the strip is covered with an adhesive and brought into sealing contact with a similar sheet forming the inner ply 4. The blanks may then be died from the laminated sheet to form the shape described and shown in Fig. 3. The blanks may then be used in an ordinary envelope folding machine whereby the back portion 12 is folded on the line 9 over the front portion with the absorbent ply innermost after which adhesive is applied to the inner faces of the side and bottom flaps 13 and 14 and they are folded over and sealed to the outer face of the back portion 12. When the blanks are thus formed, pockets 20 are provided having insert openings beneath the closure flap 15.

It is also possible to form envelopes embodying the present invention (see Fig. 7) on present window applying machinery known to the envelope industry. In this instance the outer ply 22 is died out with the opening 23 therein, after which patches 24 of absorptive material are applied to the inner face of the front portion of the envelopes by the adhesive as indicated at 25, Fig. 7. The blank is then folded and sealed as in the instance of the first form of the invention.

In using the envelopes constructed as described, the pockets 20 thereof may be filled with powder designated 26 through the openings 21 by the aid of standard filling machinery, after which the closure flaps 15 are gummed and closed on the line of fold 9 so that the ears 16 and 17 fold therewith to seal the openings 21 including the ends thereof. When the envelopes are sealed they positively retain the powder and there are no openings or pores through which the powder may sift, consequently the exterior surfaces of the envelopes are at all times free of sifted powder.

When the packaged envelopes are used in setting hair waves, the complete envelope may be dipped in a moistening liquid and curved longitudinally as shown in Fig. 5 to fit over a wound strand of hair (not shown) and retained by the customary wave setting clamp (not shown) as in conventional beauty shop practice with the portion 19 contacting the hair. The applied moisture passes uniformly through the entire area of the portion 19 and consequently the entire surface of the powder covered thereby is simultaneously activated so that the heat is generated uniformly and which heat is reflected by the metallic ply and thereby retained in contact with the wave being set.

It is thus apparent that I have provided a wave set envelope of neat and attractive appearance and which is capable of positively retaining the powder and at the same time capable of passing the moistening liquid uniformly into contact with the contained powder.

It is also obvious that the envelope is more readily applied in that the entire envelope may be dipped into the moistening liquid. It is understood, however, that if the operators desire, the customary moisture carrying pad (not shown) may be wetted and applied over the moisture admitting portion 19 of the envelope. It is also obvious that the envelope may be suitably embossed with trade-marks or various designs as desired.

What I claim and desire to secure by Letters Patent is:

1. A wave set envelope for containing a powdery wave setting chemical including a layer of substantially absorbent material impervious to said powdery chemical and having folds providing a plane front portion, a closure flap along one edge of the front portion and overlapping flaps on the remaining edges, said overlapping flaps being folded retractively in underlying relation with the rear face of said front portion and sealed together with an adhesive to form a back portion cooperating with the front portion to form a pocket adapted to contain a quantity of said powdery chemical, the portion of the pocket along said closure flap having an insert opening for insertion of said powdery chemical and adapted to be closed by said closure flap after the quantity of chemical is placed in said pocket, and a relatively non-absorbent material adhering to and covering said back portion and extending over and adhering in a single thickness to marginal edges of the plane front portion for restricting absorption of wetting liquid to the portion of said absorbent material remaining between the margins.

2. A wave set envelope for containing a powdery wave setting chemical including a layer of substantially absorbent material impervious to said powdery chemical and having folds providing a plane front portion, a closure flap along one edge of the front portion and overlapping flaps on the remaining edges, said overlapping flaps being folded retractively in underlying relation with said front portion and sealed together with an adhesive to form a back portion cooperating with the front portion to form a pocket adapted to be completely closed by said folds for containing a quantity of said powdery chemical, the portion of the pocket along said closure flap having an insert opening for insertion of said powdery chemical and adapted to be closed by said closure flap after the quantity of chemical is placed in said pocket, and a relatively non-absorbent material adhering to said overlapping flaps and extending in single thickness over marginal edges of the plane front portion of said pocket for providing a window in said front portion through which a wetting liquid is adapted to penetrate in said pocket for energizing said chemical.

3. A wave set envelope for containing a powdery wave setting chemical including an inner layer of substantially absorbent material impervious to said powdery chemical and an outer layer of substantially non-absorbent material, said layers having folds providing a plane front portion, a closure flap and overlapping side and bottom flaps, said overlapping flaps being folded retractively in underlying relation with said plane

front portion and sealed together with an adhesive to cooperate with the front portion for providing a closed pocket for containing a quantity of said powdery chemical, the portion of said pocket along said closure flap having an insert opening for said powdery chemical and adapted to be closed by said closure flap after the quantity of chemical is placed in said pocket, said non-absorbent layer having a metallic exterior surface and being provided with a window in one of said portions which expose the absorbent layer for permeation of a wetting liquid into said pocket to energize said chemical.

EDWARD C. LINDEEN