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3,055,035

APPLICATORS

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FIG. 1

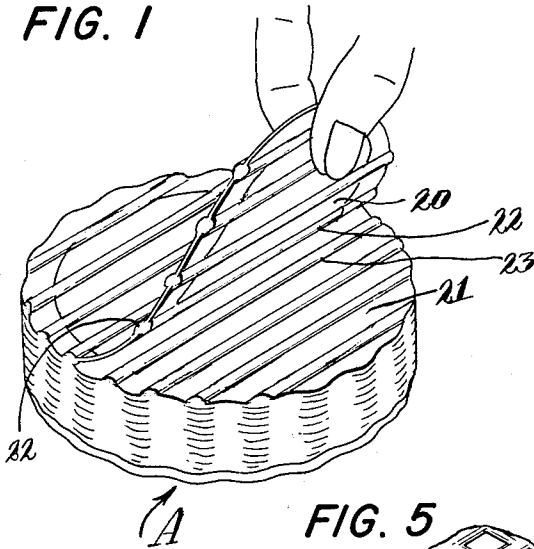


FIG. 2

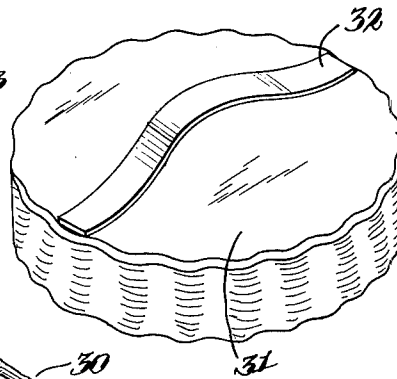


FIG. 5

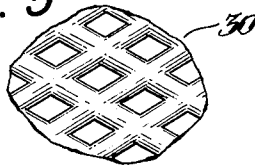


FIG. 3

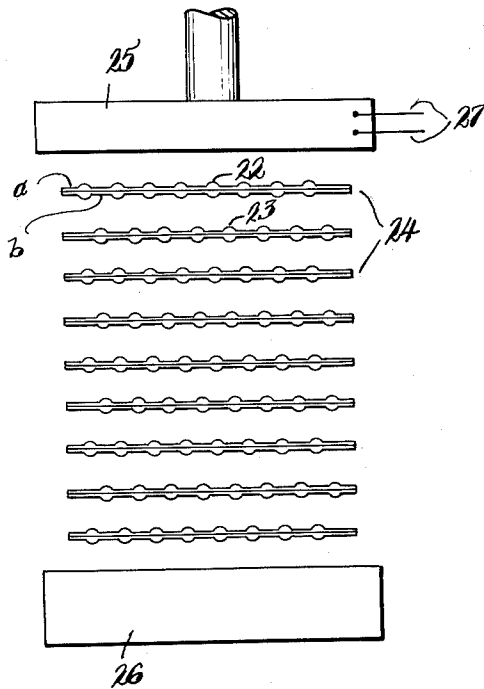
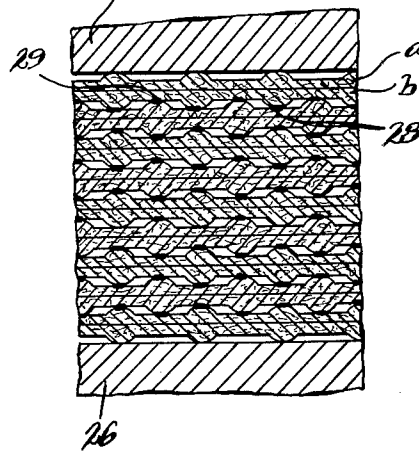


FIG. 4



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5 Claims. (Cl. 15—209)

This invention relates generally to applicators, but more specifically to applicators of the multi-ply type wherein fresh, soft and flexible surfaces become available for use by severing and discarding the overlying and used plies, and is an improvement over copending U.S. application Ser. No. 624,116 filed November 23, 1956, and now abandoned.

An object of the invention herein resides in the provision of a multi-ply type of cosmetic applicator formed of a plurality of severable and similar, soft, pliable, flexible and vertically stacked plies of facing material of fibrous or molded texture, soft to the tender skin of a face when applied thereto and characterized by absence of stiff or harsh areas during application of the top ply, the underlying plies also serving as a soft padding therefor.

Another object of the invention resides in the method of manufacture of such a multi-ply type of cosmetic applicator.

A further object of the invention is to provide a multi-ply or pad type of applicator having severable leaves, each leaf being serviceable for receiving, holding, distributing cosmetic material at the surface thereof, thereby effecting a cosmetic or powder puff capable of having a sanitary and fresh application surface whenever desired by a leaf stripping action.

A further object of the invention resides in the provision of a powder pad or puff which affords sanitation without washing, which is convenient to use and efficient in operation.

Another object of the invention resides in the provision of a multi-ply type of cosmetic applicator wherein each ply is formed of a selective, fibrous, molded or any other type of textured material having soft, fibrous and flexible characteristics for retaining and applying a cosmetic material such as powder to the face of a user without irregular, stiff or harsh areas or edges and wherein each ply may be stripped from the underply and discarded for presentation of a new similar surface for subsequent use.

A further object of the invention resides in the provision of a powder pad or other type of cosmetic applicator and method of making the same and which is economical to use, sanitary and capable of assuming aesthetic form, and efficient in use.

Another object of the invention resides in the adaptation of a fibrous and embossed material having a thermoplastic bonding agent therein for reactivation to strippably bond several plies of such material together under suitable conditions of heat and pressure.

These objects and other incidental ends and advantages of the invention will hereinafter appear in the progress of the disclosure and as pointed out in the appended claims.

Accompanying this specification are drawings showing preferred forms of the invention wherein:

FIGURE 1 is a view in perspective of one type of multi-ply applicator embodying features of the invention herein and shown as an integrated and strippable pad per se with an upper ply in process of removal;

FIGURE 2 is a view in perspective of the pad having a backing thereon and an optional holding loop;

FIGURE 3 is a diagrammatic view showing a heated press structure for strippably securing a plurality of plies toward the formation of a pad structure;

FIGURE 4 is a sectional view of the plurality of plies shown in FIGURE 3 under compression by the press

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structure and showing areas of bondage of the thermoplastic material in the plies between contacting portions of the embossed plies; and

FIGURE 5 is a fragmentary view in perspective showing the ply material having an embossed design differing from that shown in FIGURE 1.

In accordance with the preferred forms of the invention as shown in the drawings, FIGURES 1-5 show a composite applicator or pad formed of a plurality of independent application surfaces, each of which is independently usable for cosmetic materials such as powder, rouge or the like, the underplies reserved for future use at the same time serving as a soft bedding for the outermost or top ply.

As shown in FIGURES 1-5 each of the plies of pad A is indicated by 20, the plies being in vertically stacked relationship. Thus ply 20 is shown formed of any suitable, soft and inert material which is flexible and which may be applied to feminine skin without injury or abrasion thereto. Each of such plies may be formed of any suitable material such as integrated fiber, pile or any texture suitable for the purposes herein. Moreover, the plies may be formed of cellulosic fibrous materials, plastic fibrous materials or even of soft pliable elastomeric materials both molded and fibrous, said ply material having included therein a bonding or matrix agent of thermoplastic material such as a copolymer of vinyl acetate resin or the like.

As heretofore mentioned, a main feature of the invention resides in the means of connecting all the layers together so that a pad of disposable applicators in unitary and sanitary form is presented, each leaf thereof being capable of removal or strippability from the remainder by a clean stripping or tearing action.

As seen in FIGURE 1, the uppermost layer 20 is shown in the process of being stripped from the adjacent underlayer 21. It is to be noted that the strippable adhesion is substantially localized at preselective areas between adjacent layers or strips as indicated at 22 and 23 in order to make stripping facile and to avoid defacing and deformation of the involved adjacent strips.

Adhesion, in the instant invention is effected by utilization of the thermoplastic bonding agent already existing and inherent in the fibrous material of which the several plies of the pad are made.

As best seen in FIGURES 3 and 4, several plies such as illustrated by numeral 24 are vertically stacked between ends 25 and 26 of a press, the upper movable portion being provided with heating means as indicated by electrical leads 27.

One method of operation is to introduce a plurality of vertically stacked blanks such as fifteen to twenty between press ends and apply about fifty pounds of pressure per square inch at about 275° F.-300° F. for an interval of about four to ten seconds at which time the thermoplastic bonding agent in the plies 24 are thermally and pressure reactivated to cause a bonding between spaced areas of the adjacent plies, the bonding between spaced areas being induced by the embossing pattern as indicated by numerals 22 and 23 and as best seen in the compressed condition of the press of FIGURE 4. Areas of bonding in FIGURE 4 are indicated by numerals 28 and 29.

Of course, the pressures and temperatures applied are dependent upon the thickness and thermoplastic ingredient of the plies, the number of plies and the control of the strippable adhesive characteristics required.

Various embossed designs may be on plies 20 and 21 such as the waffle design shown in FIGURE 5 and indicated by numeral 30.

As to the structure and composition of the layers or

strips 20 and 21, same may be formed of soft natural or synthetic fibers formed by passing one or more treated webs of fibers having a bonding compound such as a colloidal solution of suitable resin or mixtures of resins of thermoplastic nature through heated calendar rolls, which rolls may have embossing dies of suitable design on the surfaces. Thus each ply of the invented pad may be of single or compound layers, but as shown is of layers *a* and *b*.

Of course, the invention has no relationship to the manner of forming the ply material such as kneading, ageing and calendaring operations. However, in the instant embodiment of the invention, the binder of the ply material used is a vinyl acetate copolymer emulsion which results in a non-abrading, soft, thermoplastic reactivatable for purposes of the invention for ply-bonding purposes. The fibers of the ply material such as cotton or suitable plastic are adapted to be soft, sterile and non-abrasive to the face while the thermoplastic bonding material is adapted to have the same characteristics.

As shown in FIGURES 1 and 2, the bonded plies of preselected number form the subject of a powder-puff pad by applying a flexible bottom wall 31 thereon of any suitable material as by an adhesive to the lowermost ply. Moreover, if desired, a handling loop 32 may also be furnished and suitably applied as by an adhesive to bottom wall 31.

It is understood that plies of large overall dimensions may be stacked for strippable integration in the press 25—26 and thereafter be divided by a suitable single or compound clicking or cutting machine to arrive at the product A. On the other hand a stack of finally sized plies may be introduced into the press 25—26 for strippable bondage.

The size and shape of such stacked plies may vary so that instead of providing a strippable powder puff, a strippably bonded unit of napkins, table cloths and other strippable items for other uses may be provided, same coming within the scope of the invention herein.

I wish it understood that minor changes and variations in the integration, material, size and arrangement of parts as well as changes and variations in the method of production.

I claim:

1. An applicator comprising a plurality of similar and stacked soft and pliable layers of fibrous material having impregnated in and throughout the body thereof a soft and pliable activatable thermoplastic bonding agent,

means to strippably secure said layers to adjacent ones at preselected spaced areas and comprised of said thermoplastic after reactivation, said layers being adapted for successive removal and disposal from the underlying layer without deformation and defacing of said underlying layer.

2. An applicator comprising a plurality of similar and stacked soft and pliable layers of fibrous material having impregnated in and throughout the body thereof a soft and pliable reactivatable thermoplastic bonding agent to serve as a face powder puff, means to strippably secure said layers to adjacent ones at preselected spaced areas and comprised of said thermoplastic after reactivation, the uppermost layer serving as the operative surface for the puff while utilizing the underlayers as a soft support, said layers being adapted for successive removal and disposal from the underlying layer without deformation and defacing of said underlying layer.

3. A multiply cosmetic applicator comprising a plurality of similar and stacked soft and pliable fibrous plies, said plies each having as an ingredient in the manufacture thereof a soft and pliable reactivatable bonding agent, non-abrasive and soft integrating means for all the plies for successive and individual removal and disposal of each ply from the underlying one after usage, said means being the bonding agent after reactivation.

4. A multiply cosmetic applicator comprising a plurality of similar and stacked soft and pliable fibrous plies each having an embossed design thereon, said plies each having as an ingredient in the formation thereof a soft and pliable reactivatable bonding agent, non-abrasive and soft integrating means effective at spaced areas for all the plies for successive and individual removal and disposal of each ply from the underlying one after usage, said means being the bonding agent after reactivation.

5. A multiply cosmetic applicator as set forth in claim 4 wherein the integrating means at the spaced areas include the embossing areas.

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