July 4, 1972 W. J. MATTES 3,674,617

COSMETIC WIPE

Filed Dec. 11, 1969 3 Sheets-Sheet 1

Fig. 1

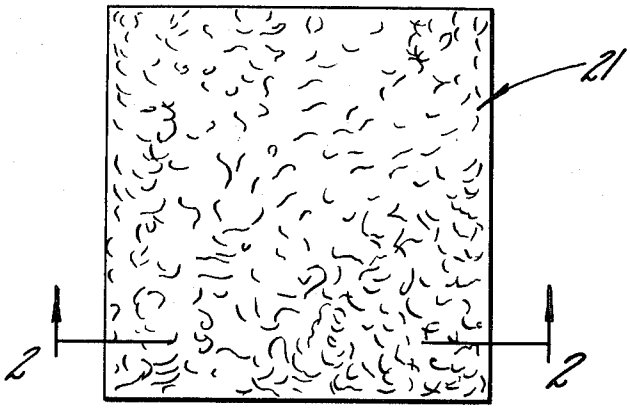
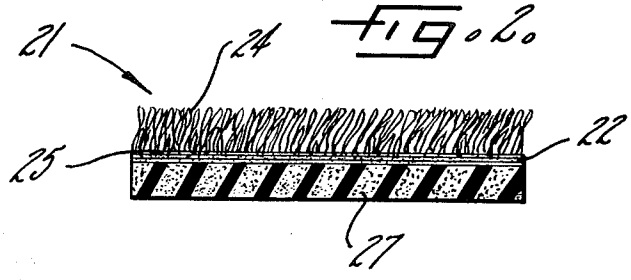


Fig. 2



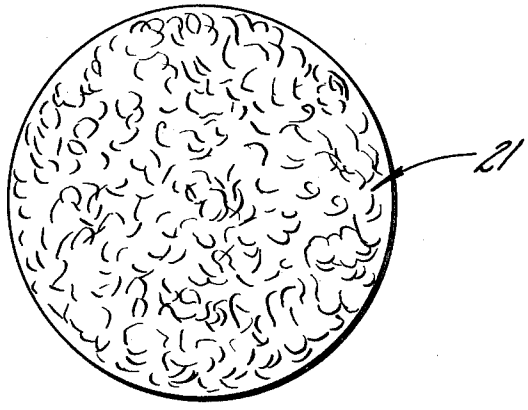


Fig. 3

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COSMETIC WIPE

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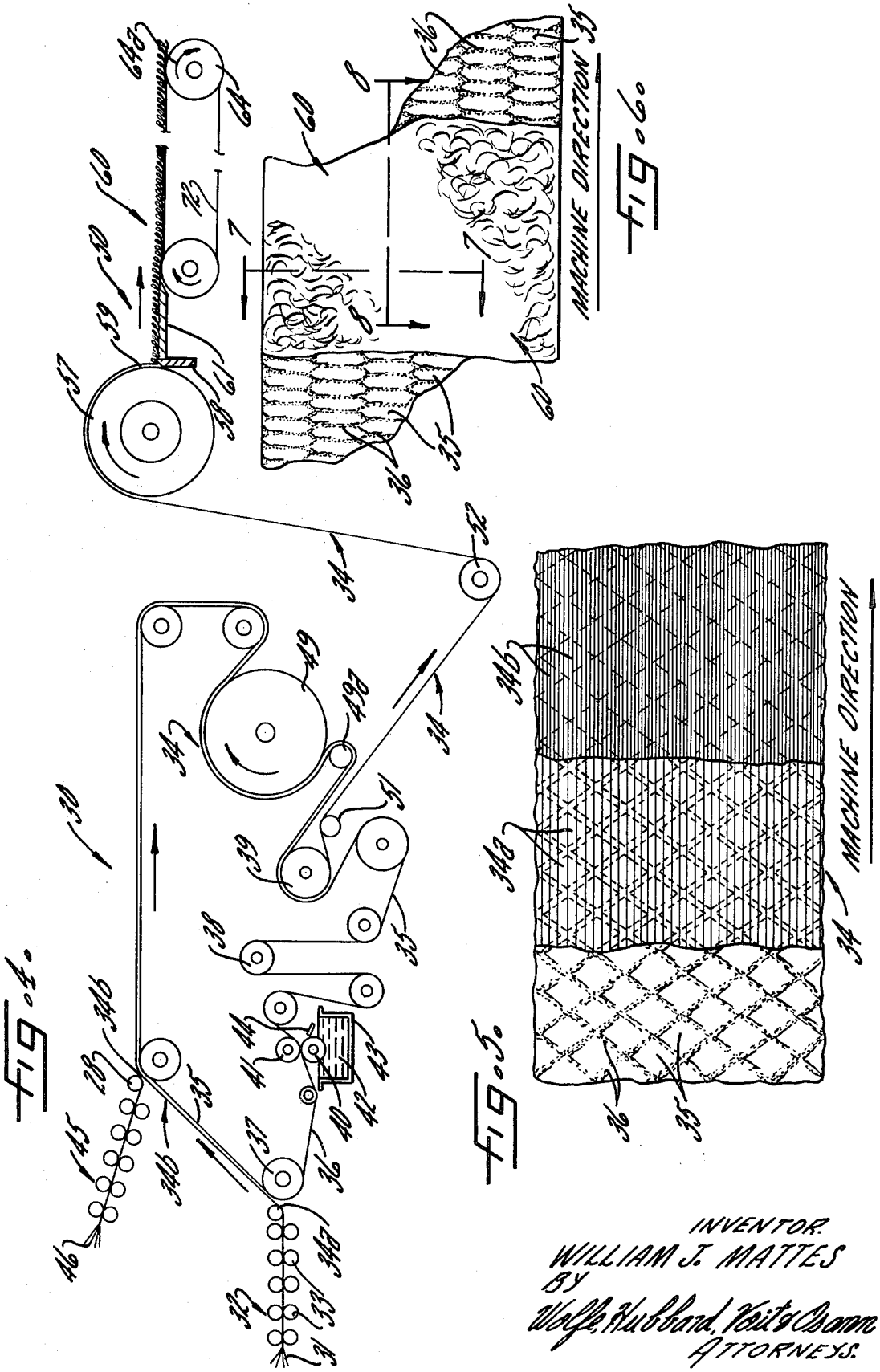


FIG. 6.

FIG. 5.

FIG. 4.

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COSMETIC WIPE

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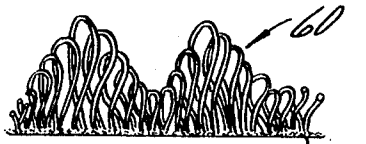


Fig. 8.

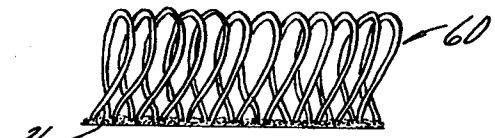


Fig. 7.

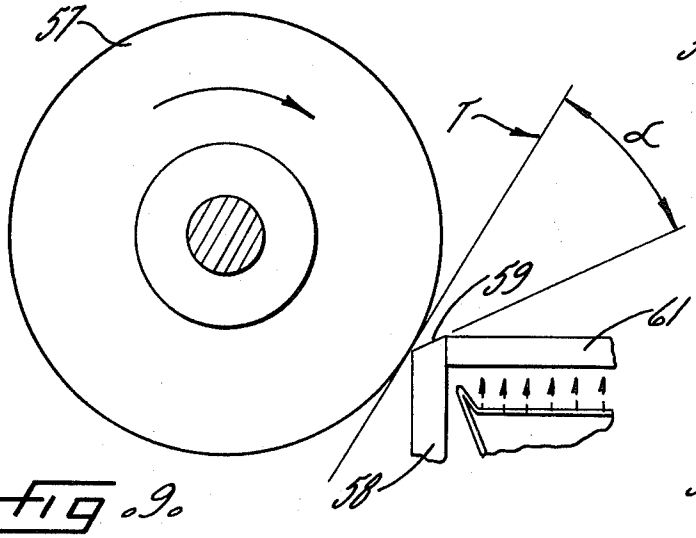


Fig. 9.

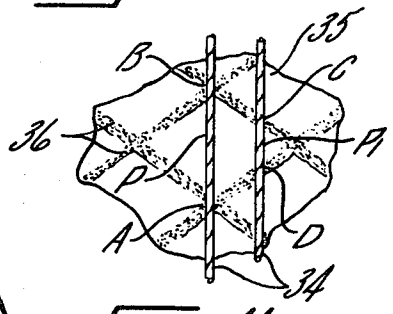


Fig. 11.

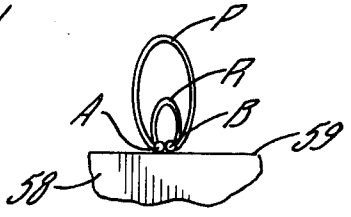


Fig. 12.

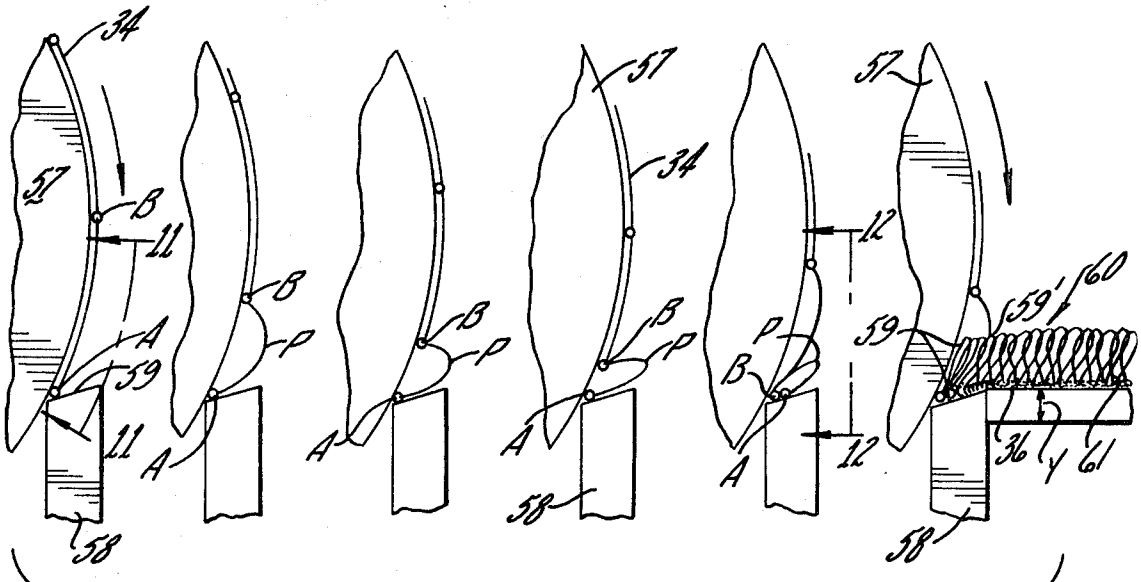


Fig. 10.

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United States Patent Office 3,674,617 Patented July 4, 1972

3,674,617

COSMETIC WIPE

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Filed Dec. 11, 1969, Ser. No. 884,225
Int. Cl. B32b 5/12
U.S. Cl. 161—62 6 Claims

ABSTRACT OF THE DISCLOSURE

A cosmetic wipe comprising a top layer of high-loft, nonwoven fabric having a substantially continuous backing of flexible adhesive. The high-loft fabric includes a multiplicity of fibers individually looped outwardly from the backing layer, with the ends of each loop embedded in the backing layer, and with the loops lined in substantially parallel planes. The adhesive backing is laminated to a base layer of fluid absorbent elastic foam material, such as polyurethane foam for example.

DESCRIPTION OF THE INVENTION

This invention relates to cosmetic cleansing and applicator swatches and, more particularly, to cosmetic wipes.

Most women use some type of wipe to apply and/or remove make-up; typical wipe materials are facial tissue, a face cloth, cotton balls, toilet tissue, single-ply embossed cellulosic swatches, or the like. However, it has been found that each of these materials is not entirely satisfactory as a wipe. Tissue such as facial tissue and toilet tissue are too thin to remove heavy make-up and often tear when used for that purpose. Face cloths, not being disposable, often "sour" while being stored for laundering for reuse. Also face cloths are not as soft to the touch as are tissues and sometimes are abrasive to the skin of the user. Cotton balls, while disposable often pull apart in use or stick to the face of the user when used to remove heavy make-up, creams, or mud packs. Disposable, embossed single-ply cellulosic swatches, while suitable for removing the heaviest of creams and cosmetics, are often difficult to hold and nonabsorbent so that the cosmetic removed adheres to the surface of the swatches and is not absorbed into it.

It is, therefore, an object of this invention to provide a cosmetic cleansing wipe whose outer surface is soft and supple so as not to irritate the tender skin surface of a user's face, and, yet, is highly absorbent so that it can be used to effectively wipe off cosmetics, skin cream, mud packs and the like from a user's face.

It is also an object of this invention to provide a cosmetic wipe that may be used as either a cleansing wipe to remove cosmetics or as an applicator to apply powders, cosmetics and the like.

Other objects and advantages will become apparent as the following description proceeds, taken in conjunction with the accompanying drawings, in which:

FIG. 1 is a plan view of a cosmetic wipe embodying the present invention;

FIG. 2 is a cross section taken approximately along line 2—2 of FIG. 1;

FIG. 3 is a plan view of another cosmetic wipe embodying the invention;

FIG. 4 is a schematic side elevation of one form of apparatus which may be employed to manufacture the high-loft, nonwoven fabric employed in the present invention;

FIG. 5 is a fragmentary plan view of an illustrative web of base material, somewhat simplified and exaggerated for the sake of clarity of illustration, with portions broken away to expose the various layers;

FIG. 6 is a fragmentary plan view of the nonwoven, high-loft fabric employed in the present invention;

FIGS. 7 and 8, respectively, are greatly enlarged, simplified and somewhat exaggerated sections taken along the longitudinal line 7—7 and transverse line 8—8, respectively, of FIG. 6;

FIG. 9 is an enlarged schematic detail in side elevation of the forming drum and gathering blade of the apparatus shown in FIG. 4;

FIG. 10 is a further enlarged schematic side elevation illustrating in somewhat idealized fashion the sequence of gathering and looping of individual fibers;

FIG. 11 is an enlarged schematic fragmentary view taken along the line 11—11 of FIG. 10 showing a fragment of the web fiber and adhesive pattern with illustrative fibers attached to the adhesive; and

FIG. 12 is a simplified schematic view taken along the line 12—12 of still another sequence as shown in FIG. 10.

While the present invention is susceptible of various modifications and alternative forms, a specific embodiment thereof has been shown by way of example in the drawings and will herein be described in detail. It should be understood, however, that it is not intended to limit the invention to the particular form disclosed, but, on the contrary, the intention is to cover all modifications, equivalents and alternatives falling within the spirit and scope of the invention.

Turning now to the drawings, there is illustrated in FIGS. 1 and 2 cosmetic cleansing swatches of rectangular and round shapes, respectively. Of course, those skilled in the art will appreciate that the shape of cosmetic cleansing swatches is not really important, but rather what is important is that the absorbent cosmetic swatch be soft, supple and non-irritating to the skin of the user, but yet be highly absorptive of creams, fluids, greases and the like.

In accordance with the present invention there is provided a cosmetic cleansing wipe comprising a laminate of an outer layer of a high-loft, nonwoven fabric 21 having a backing layer 22 of flexible adhesive and a multiplicity of fibers 24 individually looped outwardly from the backing layer 22, with the ends of each loop 25 embedded in the backing layer 22, and a second layer of urethane foam 27 (see FIG. 3). Of course, those skilled in the art will appreciate that other elastic foam materials may be employed in place of the urethane foam. The high-loft, nonwoven fabric 21 may be laminated to the urethane foam 27 by merely softening the flexible adhesive backing 22, by means of a heat roll or the like, applying the layer of urethane foam 27 to the softened adhesive 22 and allowing the adhesive to set.

In the preferred embodiment, the urethane foam layer 27 is between about 0.025 and about 0.040 inch in thickness, and weighs from about two (2) to about three (3) pounds per cubic foot. Urethane foam of about this thickness and weight has been found to impart to the laminated cosmetic wipe a suitable absorptive quality.

The high-loft, nonwoven material 21 employed in the present invention is preferably prepared by the method and apparatus illustrated in FIG. 4. This apparatus includes a web forming section 30 and an adhesive compacting and fiber looping section 50. The web forming section 40 is generally similar to the apparatus disclosed in copending applications Ser. No. 498,929, now abandoned and replaced by Ser. No. 79,287 and Ser. No. 553,483 which has been issued as U.S. Pat. 3,553,065.

Multiple slivers 31 of heat-settable textile fibers are drawn from their respective supply cans (not shown) into a draw frame 32 which comprises a series of pairs of grooved rolls 33, the rolls of each pair being driven by appropriate gearing well known in the art, at a peripheral rate of speed slightly faster than the rate of operation of

the preceding pair. As the juxtaposed slivers pass through draw frame **32**, the individual fibers are drafted and spread out to form a flat striated web of substantially alined fibers as shown at **34**. The web **34** is maintained adajcent a supporting conveyor sheet **35** on the surface of which a patterned adhesive has been previously applied.

In the illustrative arrangement the conveyor sheet **35** comprises an endless conveyor belt treated on at least its upper surface with a release agent, e.g., a woven glass fiber with a surface coating of tetrafluoroethylene resin. Other release coatings are well known, and comprise such materials as silicone, fatty acid metal complexes, certain acrylic polymers, and the like. Heat resistant films or thin metal sheets treated with release agents may also be used as the carrier sheet.

Prior to the time the web **34** is picked up by the belt **35**, the latter has imprinted on its release-treated surface a pattern of flexible thermoplastic adhesive such as is shown at **36** in FIG. 5. It is understood that the adhesive is actually on the underside of belt **35** which becomes the upper surface after passing around roll **37** whereby the adhesive pattern **36** directly contacts the fibers web **34** (shown in the pattern as being visible in FIG. 5 only for illustrative purposes).

The belt **35** is fed around roll **37** at a speed slightly in excess of the delivery speed of the final pair of rolls **33** in order to maintain web **34** under slight tension whereby the individual highly-drafted fibers are retained in the alined and tensioned condition. Drive rolls **38**, **39** are rotated to drive belt **35** at a speed sufficient to maintain the proper tension on the web **34**.

In the method shown for applying adhesive, the belt **35** is fed through a nip formed between a printing roll **40** and a back-up roll **41** maintained in very light pressure engagement therewith. The surface of printing roll **40** is provided with an intaglio pattern which picks up adhesive **42** from dip pan **43**. Part of the adhesive thus applied is removed by a doctor blade **44** leaving only the intaglio patterned surface filled. The printing roll **40** then transfers this metered amount of adhesive in a preselected pattern to the underside of release coated belt **35**. The pattern shown in FIG. 5 is in the form of an open diamond pattern of adhesive.

Since the surface of belt **35** is treated with a release coating, the adhesive remains substantially on the surface with no penetration therein and is preferably in a somewhat tacky condition. The printed belt is drawn from the printing nip around roll **37** positioned closely adjacent the output end of draw frame **32**, and, as stated above, at a speed slightly in excess of the delivery speed of the last two rolls in the draw frame. The web **34** emerging from the draw frame **32** is deposited on the tacky adhesive **36** on belt **35** and held in tensioned engagement therewith by the adhesive and the above-mentioned speed differential. This continuous tension prevents the fibers in the web from losing their highly-drafted and alined condition.

If desired, additional alined and highly-drafted fibers may be added to the web **34** on the adhesively printed belt **35**. For this purpose a second draw frame **45** similar to the draw frame **32** is provided to draw additional slivers **46** of fibers from their supply can (not shown) and, after drafting and alining them, deposit the fibers on the moving web **34** carried by the belt **35** (illustrated at **34*b*** in FIGS. 4 and 5). In such cases, the amount of adhesive printed on the belt **35** is increased so that some penetrations of the adhesive pattern reach the fibers from the second draw frame **45**, and together with the speed differential of the belt **35** relative to the last pair of rolls in the draw frame **45**, maintains these fibers under slight tension whereby they also maintain their highly-drafted and alined condition.

An example of the web **34** formed by the apparatus **30** is shown in FIG. 5. As previously mentioned, a series of parallel and diagonally disposed lines of adhesive are printed in criss-cross fashion on the belt **35** to form pattern **36** of adhesive having substantial open spaces in the configuration of diamonds. It should be appreciated, of course, that FIG. 5 is only intended to be illustrative and, while the lines representing the fibers **34** are spaced apart for clarity, in practice the highly-drafted fibers of both components are very close to one another. Following deposit of the web components **34** on the adhesive printed belt **35**, the belt is drawn around a heated drum **49** where fusing and curing of the adhesive is substantially completed while the web **34** is maintained in firm contact therewith to bond the individual fibers. To insure effective heating and fusing of the adhesive, it is desirable that travel of the combined belt and web be around a substantial portion of the drum **49**. In the illustrated embodiment, a fly roll **49*a*** is disposed to provide wrap for the combined belt and web as they travel around the drum **49** to insure complete embedment of the fibers in the adhesive. The fibers of the web **34** are thus bonded together while retaining their highly-drafted and substantially alined condition in the particular pattern in which they were deposited on the open pattern of adhesive **36** printed on the belt **35**.

After leaving the fly roll **49*a***, the combined web **34** and belt **35** are preferably passed over the drive roll **39** which also serves as a cooling drum, to cure and set the adhesive. The bonded web **34** is stripped from the release coated surface of the belt **35** by the guide roll **51** as the web leaves the cooling drum **39**.

In general, any of the various known adhesives may be employed. It should, however, be appreciated that the particular adhesive used is dependent upon the characteristics of the flexible heat-settable fibrous web that is being employed, i.e.—the adhesive should be reactivatable and softened in the heat-setting range of the particular fibrous material being used. In addition, the adhesives should also: be applicable to the base web **34** by procedures which will not disarrange the fibrous structure of the web; be reactivatable in the subsequent adhesive gathering and partial consolidation stage of the process; and form a flexible backing layer for the finished fabric and should strongly bond the fiber loops in place.

While various well-known adhesives may be employed in the foregoing process, advantages reside in the use of plastisols, which are colloidal dispersions of synthetic resins in a suitable organic ester plasticizer, and which under the influence of heat provide good binding power while remaining soft and flexible. While many adhesives of this type are known, those found particularly useful for incorporation in the product of the invention include vinyl chloride polymers, and copolymers of vinyl chloride with other vinyl resins, plasticized by organic phthalates, sebacates, or adipates. These provide a fast curing plastisol adhesive characterized by relatively low viscosity, low migration tendencies, and minimum volatility. Such adhesives remain soft and flexible after curing, and can be reactivated by subsequent heating.

It has been found that other adhesive systems may be employed in the process, such as organosols, utilizing resins such as the vinyl chloride polymers, and copolymers. Furthermore, other adhesives may be employed provided that they satisfy specified characteristics in the base web produced in the web forming stage, and in the finished fabric produced in the adhesive compacting and fiber looping stage. For example, emulsions of thermoplastic resins such as acrylics and rubber-like compounds, illustratively ABS, have the requisite properties to serve as the bonding adhesive for the web **34**.

The base material made as heretofore described and comprising a web of highly-drafted, heat-settable, fibers embedded in an open adhesive pattern, is then fed into the adhesive consolidating and fiber looping section **50** of the system shown in FIG. 4. The web **34** while still under tension is fed around an idler roll **52** and onto the surface of a heated forming drum **57**.

The forming drum is maintained at a temperature which will soften the adhesive to a tacky state so that it adheres to the drum surface while also heating the fibers sufficiently to bring them into their heat-setting range. It is preferred that the drum **57** be made of metal with a highly polished chromium plated surface which is internally heated. Also, the web **34** is desirably arranged to travel a substantial distance around the drum **57** (i.e.—have a relatively high degree of wrap) with the open pattern of adhesive **36** in contact with the heated drum surface to provide adequate residence time.

As the web **34** is fed onto the drum **57** the heat from the drum surface raises the fibers into their heat-setting temperature range and reactivates and softens the adhesive printed on the underside of the web causing it to become tacky and to adhere slightly to the drum surface thereby maintaining the web under constant tension. The drum temperature should be maintained below the melting point of the adhesive to prevent dispersion of the adhesive into the fibers of the web and to minimize bonding of the adhesive lines as will hereinafter be described in greater detail. The web of fibers and softened adhesive is reformed by the cooperative action of the drum **57** and a gathering blade **58** having a flat edge **59**. The blade edge **59** operates to consolidate the open adhesive pattern **36** into a backing layer of adhesive while simultaneously looping the fibers of the web outwardly from the open spaces in the original adhesive pattern. The reformed and consolidated material **60** then leaves the blade edge **59** and onto a flat take-off surface **61** and an endless discharge conveyor **62** traveling around power drum **64** in the direction of arrow **64***a*.

As shown in FIG. 4, the fabric is carried along the take-away surface **61** by the action of the conveyor **72**. Since the adhesive backing is hot and tacky as the fabric flows onto the take-away surface **61**, that surface may be treated with a non-stick or release coating to insure that the fabric may be drawn smoothly along the surface. To cool the belt of the conveyor **72** and prevent it from becoming overheated from the hot adhesive back of the fabric **60**, streams of air may be blown against the underside of the belt from suitably placed air nozzles. This will also serve to cool the fabric **60**, although it may be necessary or desirable to pass the fabric through a cooling station or zone to cool the adhesive and thermoplastic fibers clearly below their softening temperatures or to eliminate tackiness of the adhesive.

Turning now to FIGS. 10–12, the method of making the high-loft, nonwoven fabric **60** will be explained in greater detail in connection with an illustrative sequence of the gathering and looping of a single fiber of the web **34** and the consolidation of its two original points of adhesive attachment in the pattern **36**. As seen in FIG. 11, the fiber has a portion P which extends across the open space of the diamond pattern of adhesive **36** from point A to point B where it is embedded in the adhesive. Referring to FIG. 10, the series of views in this figure illustrates how the portion P of the fiber is formed into a loop; when point A being carried around the heated drum **57** impinges against the gathering blade edge **59**, its forward motion is halted and it is scraped along the surface of the drum. Point B continues to advance with the drum surface since due to its softened and tacky condition it adheres to the smooth drum surface.

As point B advances relative to point A, the portion P of the fiber between points A and B is caused to bow outwardly from the drum surface. Finally, point B overtakes point A and these points of adhesive are substantially consolidated as seen in FIG. 12. In the meantime, fiber portion P has been looped outwardly from the drum surface. While this is occurring, of course, additional adhesive points C–D, etc., travelling around the drum **57** impinge against the gathering blade edge **59** causing a consolidation of these adhesive points and looping of their intermediate fiber portions P_1 as is also indicated in FIG. 12. This occurs simultaneously at all points across the web at the blade edge producing a substantially continous layer of adhesive from which extends the multiplicity of loops formed by the fibers of the base web. The consolidated layer of adhesive is carried away from the blade edge along the take-off surface **61** and provides a backing layer for the outwardly looped fibers, thus producing the fabric **60**.

Another important feature is that not only does each fiber portion P loop outwardly from the drum surface, but also as the loop is formed it turns, reaching a position in the fabric **60** generally perpendicular to the direction of the original alinement of fiber portion P. Thus, the fiber loops arrange themselves so that the plane of each loop is substantially normal to the original fiber alinement shown in FIG. 11. The reason for the loop twisting as it is formed may be explained by this observation. If two spaced points of a single fiber not in a web are brought together, it has been observed that the fiber will form a loop, and as the loop is formed it twists towards a position of minimum internal stress, turning through an angle approaching 180°. In carrying out the method of the invention, because of the great number of fibers in the web and their proximity one to another, each fiber loop engages the neighboring fiber loops with the result that all the loops are blocked from turning beyond a plane substantially normal to the machine direction, and are constrained in that position by the interference between the loops. In practice, of course, actual direction and degree of loop twist depend upon the characteristics of the fibers in the original web **34**.

It is important to note, however, that throughout the fabric the heights of the fiber loops vary according to the spacing between the points of attachment of each fiber to the open adhesive pattern in the base web. Referring to FIGS. 11 and 12, it will be seen, for example, that the loop formed by the fiber portion P_1 between the points of adhesive attachment C, D will have a lower height than the loop formed by the longer fiber portion P between the points A, B.

This results in a dense fabric with the lower loops supporting and filling around the higher loops and the top surface of the fabric being formed by the tops of the higher loops. The appearance of a fabric so constructed depends not only on the height of the fiber loops but also on the type and denier of fiber used in the base web, and one of the features of the invention is that the depth of the fabric and the evenness of the surface may be varied by adjusting the control parameters, as will be explained below. In general, it may be said that for moderate and low-loft materials which have been produced with the illustrative method, the fabric appears to have a uniform thickness with a somewhat uneven surface texture. With very deep high-loft fabrics, particularly when made from flexible, low denier fibers, the higher loops tend to lay one over the other providing a very soft, napped, fuzzy, fibrous surface.

As a result of trying different blade edge angles, it has been determined that the preferred blade edge angle is between about 17° and about 34°. With blades having edge angles within this preferred range, fabrics have been produced with a uniformly consolidated adhesive backing layer having no fissures or gaps and with a dense, regular mass of loops that provide a textured, somewhat uneven surface.

With blades having edge angles less than 17°, difficulty has been experienced in obtaining a uniformly consolidated adhesive backing layer. This appears to be the result of insufficient relief between the blade edge and the drum surface for the fabric to flow evenly and smoothly off the drum surface as the result of the action of the blade, which produces varying degrees of consolidation of the adhesive and a non-uniform layer with fissures and gaps and scattered areas where the looping is irregular tending to spoil the surface appearance of the fabric.

With blades having edge angles substantially above 34°, both the problem of non-uniform adhesive consolidation and poor loop formation has been experienced. There is also a tendency as the angle of the blade edge is increased substantially above 34° for the fabric to be formed with pronounced ridges, which may impart an undesirable tactile quality to the cosmetic wipe.

In keeping with one aspect of the present invention, the adhesive backing **22** on the high-loft material is thermoplastic, and the foam layer **27** is laminated directly to the adhesive backing **22** by passing both the high-loft material and the foam sheet through a single nip while the adhesive backing **22** is at a temperature sufficiently high to soften the adhesive sufficiently to bond the same to the foam material. The rolls that form the nip through which the two materials are passed are typically fixed to define a constant nip width so that the resulting laminated product is of substantially uniform thickness. The heating of the adhesive backing on the high-loft material may be effected by passing the high-loft material around a heating drum before it enters the laminating nip or, if desired, the heating may be effected by the laminating rolls.

The present invention may be more completely understood from the following example, which is illustrative of the invention but is not intended as limiting the scope of the invention. The method and apparatus of FIG. 4 was employed for forming the high-loft material utilized in the product described in the enusing example. The adhesive used was a plastisol formulation including, by weight: "Geon 135" polyvinyl chloride resin (manufactured by B. F. Goodrich, Akron, Ohio), about 60 parts per 100 parts resin of "GP-261" dioctyle phthalate plasticizer (B. F. Goodrich), about 2.5 parts per 100 parts resin of "Cab-O-Sil" pyrogenic silica (Cabot Corporation, Boston, Mass.) and a sufficient amount of mineral spirits to bring the viscosity into the desired range (generally from about 3 to 5 percent by weight, based on the total weight of the other components for a viscosity range of 3500–4000 c.p.s.). The viscosities were measured with a Brookfield viscometer using a #4 spindle and operating at 20 r.p.m. The elastic foam material used in the example was 40 mil thick polyurethane foam having a density of 2 lbs./cubic foot (Reeves Bros., Cornelius, N.C., "Grade 5080").

A base web was made from 3" staple length, rayon "40" fiber and had a weight as it came off the preheat drum of 14 grams/sq. yd. This weight was made up of 7 grams of fiber and 7 grams of adhesive in the base material web. The adhesive was applied in diagonal lines ¼" apart in both directions, forming a diamond pattern. The preheat drum **49** in the first stage of forming the base web **34** was operated at 300° F. at a surface speed of 24 ft./min. The base web **34** was thus carried at 24 ft./min. lineal speed to the heating drum **57** which was operated at 250° F., and around the drum to the gathering blade **58**. The lip of the take-away surface was positioned tight against the blade edge and less than 1/32" below the corner of the blade edge, and the edge angle on the blade was about 34°. The take-away speed of the fabric from the blade **58** was about 1⅜ ft./min. so that the ratio of the surface speed of the heating drum **57** to the take-away speed of the fabric was about 17.5 to 1.

The resulting high-loft material was then laminated to a sheet of the aforedescribed polyurethane foam by passing both materials through a fixed 0.010-inch nip at a temperature of 325°–350° F. The materials were drawn through the nip at a speed of 20 ft./min. and then cooled. It was found that in the resulting laminated product the foam material was firmly and continuously bonded to the adhesive backing on the high-loft material.

This laminated product was then cut into circular pads of about 2" diameter and used as cosmetic wipes. The results of these subjective tests indicated that the wipes were soft, absorbent, and strong, and had good cosmetic cleansing properties. In addition, the wipes were judged extremely convenient to use, and did not irritate the skin. Moreover, the wipes can be produced at a cost which renders them disposable.

I claim as my invention:

1. A cosmetic wipe comprising a laminate having a first layer comprising a high-loft, nonwoven fabric having a substantially continuous backing layer of a consolidated open pattern of flexible thermoplastic adhesive, and a multiplicity of fibers individually looped outwardly from said backing layer with the ends of each loop embedded in said backing layer, said loops laying in substantially parallel planes, the portions of said loops immediately adjacent said embedded ends substantially contacting each other and portions of adjacent loops, and a second layer of fluid absorbent elastic foam material laminated to said backing layer of consolidated flexible thermoplastic adhesive, said foam material having a thickness within the range of about 0.025 and about 0.040 inches and weight within the range of about 2 and about 3 lb./ft.^{3}.

2. A cosmetic wipe as set forth in claim **1** wherein the fluid absorbent material comprises a polyurethane foam.

3. A cosmetic wipe comprising a laminate having a first layer comprising a high-loft, nonwoven fabric having a substantially continuous backing layer of a consolidated open pattern of flexible thermoplastic adhesive, and a multiplicity of separate, staple length heat-settable fibers individually looped outwardly from said backing layer, said loops being twisted to lie in planes extending in the cross-direction of the fabric, and the second layer of fluid absorbent elastic foam material, said flexible thermoplastic adhesive backing layer bonding said foam material thereto, said foam material having a thickness within the range of about 0.025 and about 0.040 inch, and a weight within the range of about 2 and about 3 lb./ft.^{3}.

4. A cosmetic wipe as set forth in claim **3** wherein the fluid absorbent material comprises a polyurethane foam.

5. A cosmetic wipe as set forth in claim **1** in which the length of the fibers forming said loops varies regularly in the cross direction throughout the high-loft, nonwoven fabric layer, the embedded ends of said loops lying essentially in the same plane.

6. A cosmetic wipe as set forth in claim **3** in which the length of the fibers forming said loops varies regularly in the cross direction throughout the high-loft, nonwoven fabric layer, the embedded ends of said loops lying essentially in the same plane.

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