

Sept. 29, 1936.

D. MEYER

2,055,772

POWDER PUFF AND METHOD OF MAKING THE SAME

Filed Jan. 4, 1935

2 Sheets-Sheet 1

Fig. 1



Fig. 2

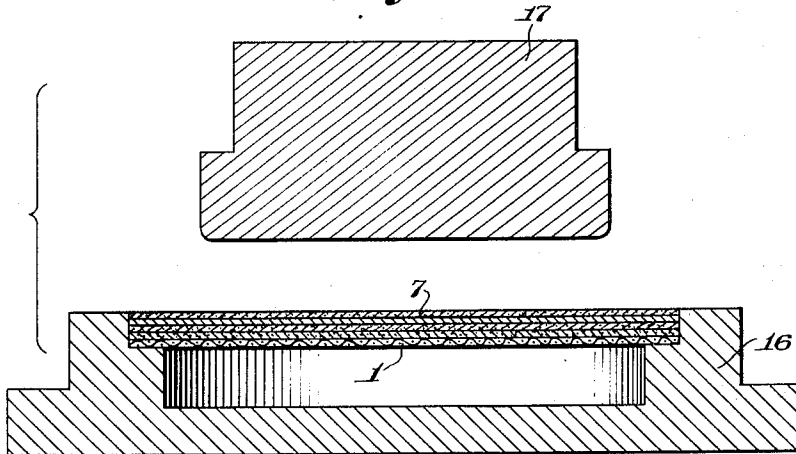


Fig. 3

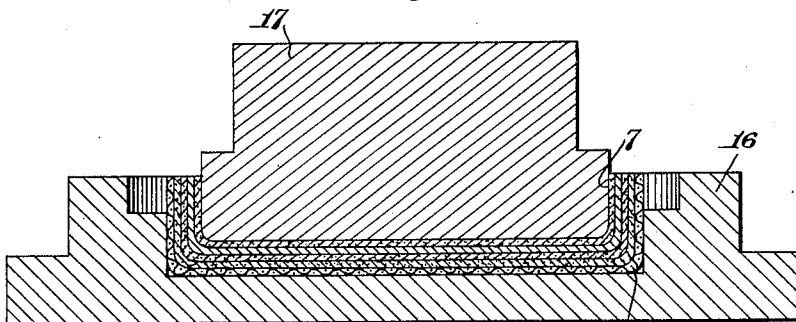


Fig. 4

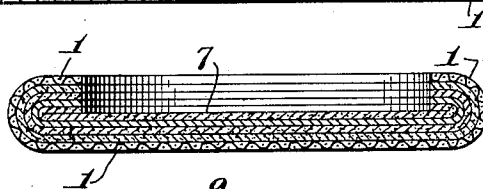
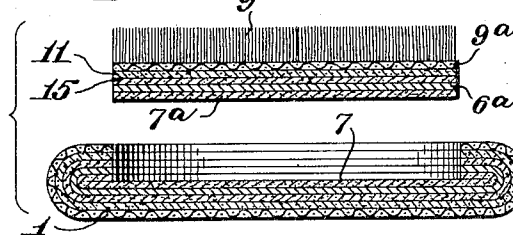


Fig. 5



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2 Sheets-Sheet 2

Fig. 6

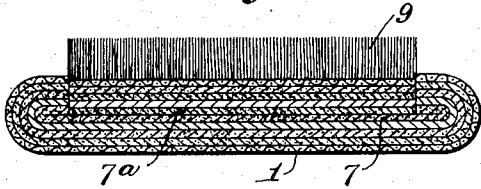


Fig. 10

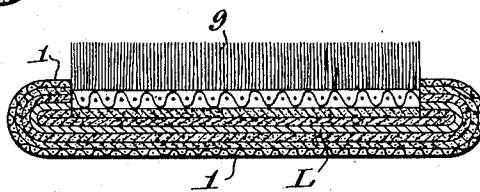


Fig. 7

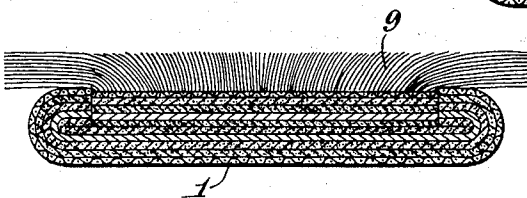


Fig. 11

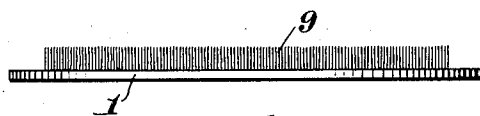


Fig. 8

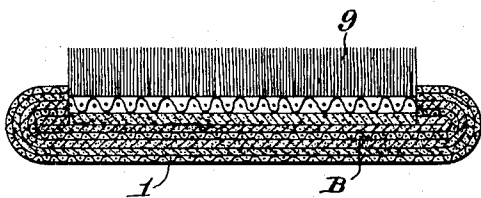


Fig. 12

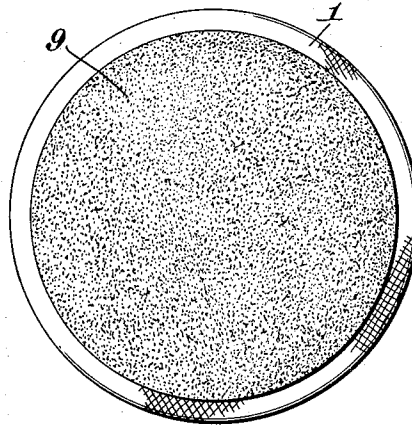
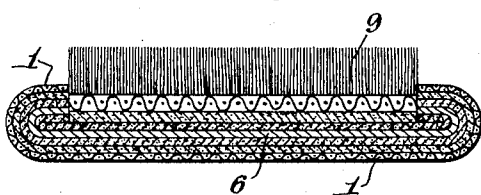


Fig. 9



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UNITED STATES PATENT OFFICE

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POWDER PUFF AND METHOD OF MAKING
THE SAME

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Application January 4, 1935, Serial No. 333

3 Claims. (Cl. 132—78.5)

My invention relates to a new and improved powder puff, and a new and improved method of making the same.

One of the objects of my invention is to provide a stitchless powder puff, whose parts can be assembled by means of pressure and the use of a suitable adhesive or adhesives.

Another object of my invention is to provide a powder puff having a base, to one side of which a piece of pile material is connected. The invention also applies to powder puffs having two pieces of pile material or "plush", as said material is called in the trade.

Another object of my invention is to provide a simple and cheap method for manufacturing my improved article.

Other objects of my invention will be set forth in the following description and drawings which illustrate a preferred embodiment thereof, it being understood that the above statements of the objects of my invention are intended to generally explain the same without limiting it in any manner.

Fig. 1 is a sectional view showing a composite piece of material, which comprises assembled strips.

Fig. 2 is a sectional view illustrating the dies which are used for shaping the piece of material shown in Fig. 1.

Fig. 3 is a sectional view illustrating how the piece of material which is shown in Fig. 1 and in Fig. 2, has been formed into cup-shape.

Fig. 4 is a sectional view showing how the rim of the cup-shaped piece of material illustrated in Fig. 3, may be flattened.

Fig. 5 is a sectional view which shows the member which is illustrated in Fig. 4, and which also shows a piece of pile material.

Fig. 6 is a view similar to Fig. 5, and showing how the pile material, together with the paper backing thereof, has been nested within the piece of material illustrated in Fig. 4.

Fig. 7 illustrates a modification, showing a piece of plush material which has been cut by means of a slitting instrument, which cuts out only the base of the pile material and without cutting the pile fibres.

Fig. 7 also shows how the pile fibres spread outwardly beyond the periphery of the base.

Figs. 8-10 are sectional views which illustrate modifications of the previously described embodiments.

Fig. 11 is a side elevation of the completed puff. Fig. 12 is a top plan view of Fig. 11.

Fig. 1 shows a strip of a suitable woven fabric

1, which may be a cotton fabric. Said strip 1 is provided at one face thereof with a layer 2, which is a suitable adhesive. This adhesive may be a rubber cement.

A sheet of heavy and flexible paper 6, such as bond paper, is also provided with a layer of adhesive 7, and said adhesive may be the rubber cement which has been previously specified.

The other side of the paper strip 6 is provided with a layer of adhesive 8, which may be the rubber cement which has previously been specified.

The strips 1 and 6 are connected by means of the adhesive layers 2 and 8, leaving the strip 6 with an exposed adhesive layer 7.

If rubber cement is used the layers 2 and 8 can be dried without vulcanizing them, so that they remain tacky.

Fig. 5 shows the pile fabric 9, having its base coated with a layer of latex adhesive 11. This latex adhesive may be replaced by a suitable artificial rubber emulsion, and suitable ingredients can be added to the latex or to the rubber emulsion, so as to provide a heavy coating material which closes the pores or interstices of the woven base 9a of the pile fabric 9.

The latex composition or the like is sufficiently heavy or viscous so that it does not seep through said woven fabric base 9a. In order to secure this desired viscosity, a part of the water in the latex may be evaporated or suitable filling ingredients may be added. Said rubber adhesive layer 11 may also have a suitable vulcanizing agent therein, and said layer 11 may be vulcanized by heating the same at a temperature of 110° C.-120° C. for a period of from fifteen minutes to twenty minutes.

After the pile material has been coated with the latex composition 11, said fabric may be passed through a tentering frame which is located in a heated chamber. This tentering frame stretches the pile material in the direction of the filler threads. The coated pile material is thus passed slowly through the heated chamber, so that the latex is vulcanized before the coated pile material is wound upon a suitable roller. The effect of the tentering is to provide a coating of latex of uniform thickness, which is firmly anchored to the fabric base 9a, but without passing through said base 9a to the pile fabric. The tentering does not materially increase the width of the coated pile fabric. Said chamber is heated by hot air which is blown through said chamber so as to maintain said temperature of 110° C.-120° C.

Fig. 5 shows how a strip of paper 6a, which has been provided with a layer of adhesive 7a, is connected to the coating 11 of the pile material 9. The paper 6a is connected to the latex layer 11, by means of a suitable layer of adhesive 15. The adhesive 15 and the adhesive 7a may be identical with the adhesive material 7.

In connecting the pile fabric to the paper, the rubber cement 15, which is used as an adhesive, may be wet, so as to secure firm connection between said cement and the vulcanized layer 11. That is, in connecting two layers of rubber cement to each other, said layers can be in the dry condition. However, when it is desired to connect a layer of rubber cement to a layer of vulcanized latex, it is desirable to have the rubber cement moist, by causing insufficient evaporation of the naphtha or other solvent. The paper strip 6a can be connected to the latex layer 11, at ordinary room temperature of about 70° F.

The blank which is illustrated in Fig. 1 is now placed within the opening, and upon the shoulder of a female die 16. The male die 17 is then utilized in the manner shown in Fig. 3, so that the blank is given a cup-shape.

In so shaping the blank it is placed within the female die 16 with its paper side uppermost, so that the male die contacts directly with the paper.

The dry cement layer 7 does not adhere to the pressing surface of the male die 17. The dies 16 and 17 may be made of any suitable metal such as brass, bronze or steel.

The cup-shaped blank which is shown in Fig. 3 now has its rim inwardly bent and flattened by means of suitable dies.

The blank or piece of pile material, which is shown in Fig. 5, has a diameter which is substantially equal to the internal diameter or to the internal dimensions of the rim of the cup-shaped blank which is shown in Fig. 9, since the puff may be of any shape.

Hence, and as illustrated in Fig. 6, the upper blank Fig. 5, can be nested within the lower blank illustrated in said figure, in order to produce the assembly which is shown in Fig. 6. Since the layers 7 and 7a of adhesive consist of dry and unvulcanized rubber cement, they can be connected to each other with slight pressure, either by hand or by means of suitable dies, so that the pile fibres remain upstanding.

The pieces of material will remain assembled in the manner shown in Fig. 6, without vulcanizing the rubber cement by means of heat. However, and if desired, the rubber cement may be of the type which can vulcanize upon standing and without the application of heat.

The operations previously specified can be performed quite rapidly and in immediate succession so that the rubber cement is substantially unvulcanized prior to making the assembly shown in Fig. 6, if said cement has a vulcanizing ingredient. However, such vulcanizing ingredient is unnecessary.

Fig. 7 is similar to Fig. 6.

However, in forming a top blank which is similar to that shown in Fig. 5, a die is not utilized. Instead I can utilize any suitable cutting or slitting tool, which will cut only through the paper and the fabric base 9a, and without cutting or otherwise injuring the pile fibres. Likewise the pile fibres can be brushed or spread outwardly in any suitable manner. This may be also done in the embodiment shown in Fig. 6.

The embodiment of Fig. 8 is generally similar to Fig. 6, save that the fabric 1 has been connected to a backing of buckram or any other reinforcing material, instead of to a backing of paper. The buckram B is shown in Fig. 8.

Likewise, in this embodiment, the stiffening provided by the buckram is sufficient, to make it unnecessary to provide the pile fabric with the paper backing 6a.

Likewise, in the embodiment shown in Fig. 8, since it is not necessary to connect the pile fabric to paper, the fabric base 9a of the pile fabric can be provided with an adhesive layer of rubber cement, of the type previously specified. The use of latex is therefore unnecessary.

Fig. 9 represents an embodiment in which the base of the puff is made of paper-backed fabric. The plush member of the puff is not backed with paper.

This embodiment is therefore very similar to that shown in Fig. 8, and, as previously explained, the fabric base 9a of the plush is provided with a layer of ordinary rubber cement, instead of the latex.

I prefer to use latex adhesive for connecting the pile fabric to paper, because it is difficult to properly connect the pile fabric to a paper which has a smooth surface and which is relatively impervious.

In connecting the fabric base 1 to the paper 6, considerable pressure may be employed. However, substantial pressure cannot be employed in connecting the pile fabric to a stiffening base of buckram or paper, without injuring the pile fibres. For this reason I prefer to use latex adhesive, in connecting the pile fabric to paper or buckram or the like.

Fig. 10 shows an embodiment in which the paper 6 which is used for stiffening the fabric 1, is replaced by leather L. This material L may be artificial or imitation leather, of the type made by impregnating cloth with a suitable nitro-cellulose composition. If this natural or artificial leather is used, this has sufficient stiffness in order to form the base of the puff so that it is unnecessary to stiffen this material by means of paper or the like.

A blank of the type shown in Fig. 4 can be formed directly from the natural or artificial leather, after one side of the leather has been provided with a layer of rubber cement. This recessed base is then assembled with a piece of pile material, as previously described.

The fabric 1 may be tightly woven and smooth, so that the adhesive does not cling thereto, when a coated strip is wound spirally.

The sheets of paper and/or other material may be of any desired width.

The adhesive 15 may be a suitable rubber cement.

The latex may be intermixed with any suitable vulcanizer or vulcanizers, and with a suitable accelerator or accelerators. Hence, when the latex layer is dried at a suitable temperature, the water therein is evaporated, and the residue is vulcanized. The fabric base of the pile fabric is closely woven so that the latex does not penetrate through the same.

The latex may be replaced by any suitable rubber cement or other coating material, which preferably has a white color. All the materials used may have a white color, or any other color.

I do not wish to be limited to any particular coating material or adhesive.

The assembled pieces of material shown in Fig. 6 may be heated, in order to vulcanize the rubber cement, and such cement may contain a vulcanizing ingredient.

5 While I have shown a preferred method for making the improved article, the claims for the article are not to be limited to any specific method of manufacture.

10 As shown in Figs. 6-10, the piece of pile material has a fabric base or a composite base which may substantially fill the recess which is defined by the inner edge of the inturned rim of the base.

15 However, the thickness of the fabric base of the piece of pile material may be less than the height of said recess.

It will be noted that the fabric base portion of the piece of pile material is not connected to the inner edge of the inturned rim. Said inner edge of the rim and said fabric base form a butt joint.

20 Since the inner edge of the rim does not overlap the pile fabric, the fibres of said pile fabric may remain upstanding up to the edge thereof.

25 The improved puff is bendable but it has substantial resilience so that it maintains a predetermined normal shape.

It will be noted that when the rim of the base member is flattened, as shown in Fig. 4, the adhesive 7 serves to retain said rim in its flattened condition.

30 I have shown certain embodiments of my invention, but it is clear that numerous changes and

omissions can be made without departing from its spirit.

I claim:

1. A powder puff having a base provided with an inturned rim whose inner periphery defines a recess, a piece of pile material located in said recess and having its base wholly within said rim, and connected to said base by adhesive, the inner edge of said rim being connected to said base by adhesive. 5

2. A powder puff having a base provided with an inturned rim whose inner periphery defines a recess, a piece of pile material located in said recess and having its base wholly within said rim, and connected to said base by adhesive, the inner edge of said rim being connected to said base by adhesive, the fibres of the pile material at the edge thereof being uncut and extending laterally beyond the outer periphery of the base. 10

3. A method of making a powder puff which consists in shaping a planar piece of material so as to form a base having an inwardly turned rim so that the inner edge of said rim defines a recess, connecting said rim to said base by means of pressure and an adhesive, and then inserting into said recess a piece of pile material so that the base of said piece of pile material is located wholly within the inner edge of said rim, and connecting the piece of pile material to the base by means of pressure and an adhesive. 15 20 25 30

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