Dec. 28, 1943. J. E. VALENTINE ET AL 2,337,695

POWDER PUFF AND SIMILAR ARTICLE, AND MEANS AND METHOD OF MAKING THE SAME

Filed June 23, 1941

Fig. 1.

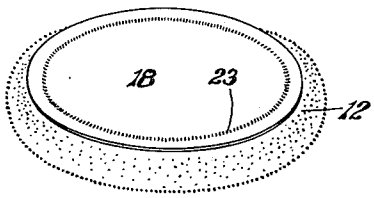


Fig. 2.

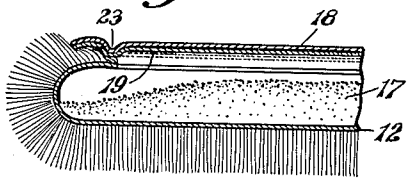


Fig. 3.

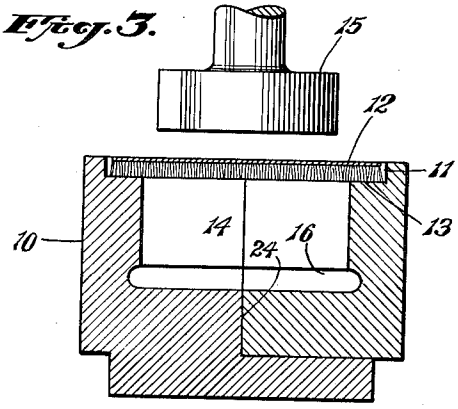


Fig. 6.

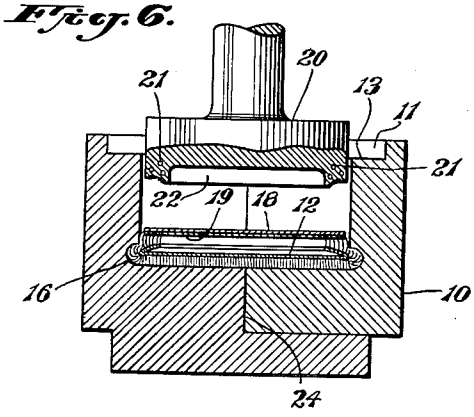


Fig. 4.

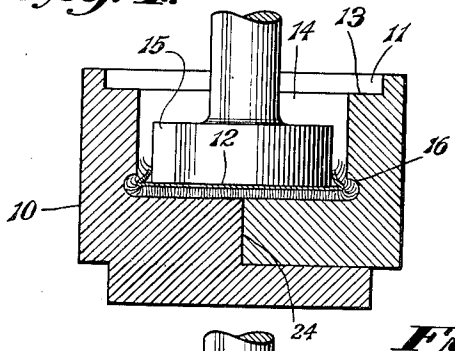


Fig. 7.

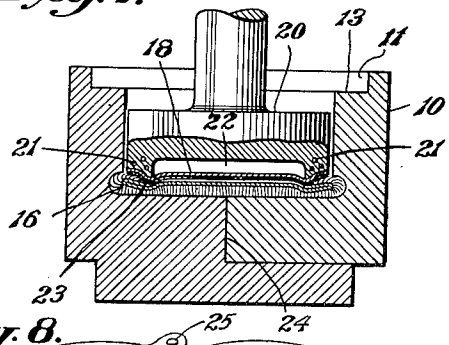


Fig. 5.

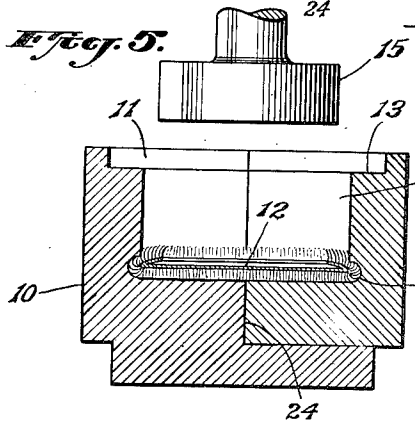
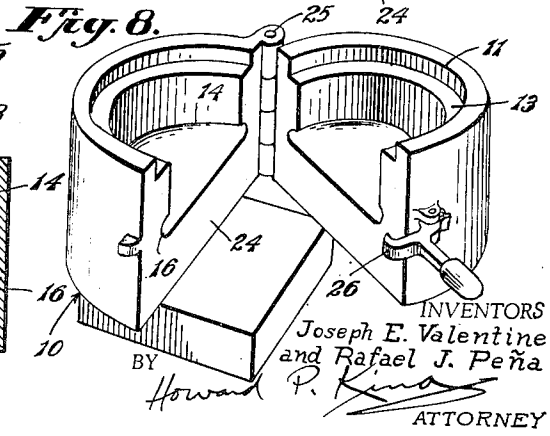


Fig. 8.



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POWDER PUFF, AND SIMILAR ARTICLE, AND MEANS AND METHOD OF MAKING THE SAME

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Application June 23, 1941, Serial No. 399,370

4 Claims. (Cl. 15—131.1)

This invention relates to powder puffs and similar articles, and to the means and method of making the same, and has particular adaptability to articles having the general characteristics of powder-puffs, sachet containers and the like, which employ a top or closure member over-lying the back of the powder-applying or other face member.

In the manufacture of powder puffs and similar articles various constructions and methods have been employed endeavoring to obtain a pliable container wherein the face or powder-applying surface is not only situated at one extensive area thereof (for convenience referred to herein as the face) but to also provide a peripheral edge which rounds from the front to back of the article with presentation of a continuation of the powder-applying or other face material. Difficulties of manufacture have been encountered in the endeavor and a satisfactory article at reasonable cost has heretofore not been made.

It has generally been found necessary to provide at least two parts in the making of articles having the general characteristics of powder puffs, and machine stitch them wholly or partly together but leave an opening either where stitched or elsewhere for enabling the article to be turned inside-out. Where the opening is left at the seam being stitched, it becomes necessary to complete the stitching by hand after the article has been turned, which not only introduces expensive hand work on the article, but also exterior stitching which spoils the uniformity of appearance both with respect to smooth materials such as silk, rayon, cotton, etc., and with respect to fuzzy materials, of which lamb's-wool, pile fabric including velour, velvet and the like are examples, and as to such fuzzy materials tends to bind in some of the ends of the fuzzy part thereof.

Another method of manufacture heretofore employed completes the peripheral machine stitching all the way around, but an opening is provided in the middle of the top member through which the article can be turned, that opening being subsequently covered by a top closure member. This mode of manufacture not only requires three pieces of material with additional time consumption of handling, assembling and stitching, but the further operation of applying and securing the top closure member centrally, neatly and permanently over the opening.

In both of the prior art methods above related, the final product still has the undesirable presence of a peripheral seam, and no matter how carefully the work is done, some of the pile or wool or other fuzzy ends gets caught between the materials at the seam, thus turning inward instead of standing outward as desired. All articles made by these methods have to be brushed at the seams to release, as much as possible, the turned-in ends of the pile or wool, this operation adding very considerably to the cost of manufacture. From a sales standpoint, the presence of the peripheral seam renders the article less attractive to a purchaser, as the seam gives the appearance of imperfection. From a use standpoint, particularly as a puff, the presence of the seam is objectionable as the doubled stitched material at the periphery, even though inside the article, presents a stiffness and harshness when applied to tender or sensitive parts of the anatomy, such as a lady's face, which is not only disagreeable but tends to prevent even spreading of the powder, rouge and so forth, since the stiffened part wipes more strongly than the softer parts of the article.

The objects of the present invention are to provide a rounded edge puff-like article overcoming the deficiencies of prior art articles of like nature in the several respects above enumerated; to construct a puff-like article of only two parts and yet present a rounded edge from face to top thereof; to avoid stitching, reduce hand work, and obtain an article with a thick soft feeling when held and when applied; to provide a means and method of manufacture which will produce the articles symmetrically shaped and assembled; to provide a means and method which will produce the articles economically and rapidly; to enable powder, padding, or other filler to be incorporated within the article during manufacture; to secure simplicity of construction of article, of means for making the same and in the steps of method utilized in manufacture thereof; and to obtain other advantages and results as may be brought out in the following description.

Referring to the accompanying drawing in which like numerals of reference indicate similar parts throughout the several views:

Figure 1 is a perspective view of a completed article, in this instance a puff, constructed in accordance with our invention;

Figure 2 is an enlarged section of a portion of the article made in accordance with our invention; and

Figures 3 to 8 inclusive show a means in successive steps of operation exemplifying the method of manufacture of the present invention.

In the specific embodiment of the invention illustrated in said drawing, and referring initially to Figure 3, a lower die 10 is provided having an upper blank-receiving cavity 11 substantially the size and shape of the pile fabric or other blank 12 for forming the face and body portion of the article being made. The cavity provides a peripheral marginal bottom ledge 13 on which the corresponding marginal portion of the blank 12 will rest, and in operation the operator places the blank on this ledge in this cavity which thereby positions the blank properly for subsequent operations.

At the bottom of said cavity, centrally thereof, is a cylindrical passage 14 of less diameter than said cavity. A plunger 15 is arranged to engage the upper surface of the blank and force it to the bottom of the passage, as shown done in Figure 4. It will be observed that the blank is placed in the cavity with the facing, or in this instance pile surface, directed downwardly and that the plunger engages the back of the fabric or other material constituting said blank which ultimately will be at the inside of the finished article. Inasmuch as the blank is larger in diameter than the passage 14, the peripheral margin of the blank is turned up, cup shape, as the plunger pushes it downward.

The lower end of passage 14 is undercut or peripherally enlarged, as at 16, and when the blank reaches that level there is a tendency for the bent peripheral edge to relieve the bending strain by an expansion laterally into said enlargement thereby tending to slope the circular edge of the blank inward toward the plunger. The expansion of the blank and, in the selected embodiment, of pile or the like into the enlargement is ample to retain the blank in the bottom of the passage as the plunger is raised as shown done in Figure 5. Removal of the plunger results in the edge of the blank assuming substantially the inturned position illustrated due largely to the presence of the basal enlargement 16 of the passage.

If the article is to be made with a filler, such as padding, sachet or powder contained therein, this is the stage of operation at which such filler is inserted. Illustrative thereof powder 17 as the filler is shown in Figure 2, but since the article may be made without powder or other filler therein and for this reason and for greater clarity in the drawing, no filler is shown in the article in Figures 6 and 7 but is shown in the larger illustration of Figure 2 only.

The article top or closure 18 is next applied within passage 14 upon the inturned marginal edge of the blank. As shown, this top piece is enough smaller than the passage so it will readily assume its place and yet be substantially centered with respect to the formed blank in the die. The under face or back of the top piece or closure 18 is coated with a material 19 which is rendered adhesive upon application of heat thereto and may for brevity be referred to as thermoadhesive. An upper die 20 substantially the diameter of the passage and article top piece or closure 18 is now brought down with compressive force on the margin of the top piece overlying the inturned marginal rim of the facing or pile member.

The upper die 20 is suitably heated and as exemplary thereof the drawing gives indication of electrical heater wires 21 around the marginal portion of the lower part of the die. The lower face of the die is suitably shaped to properly perform its function and is preferably hollowed out at the middle part of its underside, as at 22, so that only the marginal portion engages the puff. Consequently the middle portion of the article members are not sealed together by the thermoadhesive whereas the heat and pressure of the die will be effective to obtain adhesion of the rim margin of the top or closure member 18 to the upwardly-inwardly turned margin of the facing, and in the instance shown compresses the pile under said rim margin of the top member. For purpose of clarity in the selected embodiment to indicate presence of the pile between its base material and the closure member 18 in the completed article, both Figures 2 and 7 exaggerate considerably the ultimate thickness of pile affected by the adhesive. In actual practice the pile subjected to adhesion with the top piece is pressed flat, or substantially so. The bottom face of the die 20 may be shaped to emboss the top or closure member 18, as at 23, the depressed portion of the embossing being utilized to obtain an especially firm compression thereunder to assure adhesion next the inturned edge of the face member 12.

The lower die 10 preferably opens or separates, on a vertical diametric plane 24, for obtaining convenient removal of the completed article. The hinging of the die sections is indicated at 25 in Figure 8. A suitable semi-automatic latch 26, that is, one which will snap in locked position when the die sections close together, but which is readily unlatched when the operator desires to open the die, is provided at the front of said die sections opposite said hinge. Opening the die in this manner enables the operator to remove the article laterally to the die cavity and then snap the die closed again ready for repeating the cycle of operations above outlined.

After the article is removed from the die, its curled or rounded edge has a tendency to straighten out, and as a result the face or body of the face member and the top member assume the more distant or open relation shown in Figure 2, with the edge of the face member rounded and evenly fluffy. The spaced condition of the face and top members gives the desired soft and downy feeling to the article. The rounded part of the article at the edge has no double thicknesses or seams and is accordingly soft and fluffy and forms an unbroken surface just like the under surface or face of the article.

Since the various details of construction as well as the precise steps in the described procedure and method of manufacture are subject to variation and change without departing from the inventive concept or scope of the invention, it is intended that all the matter contained in the specification or illustrated in the drawing shall be interpreted as exemplary and not in a limiting sense. It is also to be understood that the following claims are intended to cover all of the generic and specific features of the invention herein shown and described and all statements of the scope of the invention herein set forth as a matter of language which might be said to fall therebetween.

We claim:

1. A puff or the like comprising a face member having a peripheral inwardly curled edge forming a cup-shaped body, and a closure disposed over the opening of said body and spaced from the front of said body and adhered to the said edge at a distance inwardly of the periphery of the closure, the curl thereby having a

tendency to straighten out in order to urge the said spacing.

2. A puff or the like comprising a face member having a peripheral inwardly curled edge forming a cup-shaped body, a closure disposed over the opening of said body and spaced from the front of said body and adhered to the said edge at a distance inwardly of the periphery, the curl thereby having a tendency to straighten out in order to urge the said spacing, and a free marginal edge portion on said closure extending outwardly of the line of adhesion and terminating short of the periphery of the puff.

3. A method of making articles of the general character of powder puffs comprising cup shaping a piece of facing material, sloping the up-turned cup-shaped edge inwardly to an extent that it will be expansible in final form, and adhering a top closure thereto on a line inwardly of the periphery of the latter on said inwardly sloping edge.

4. A method of making articles of the general character of powder puffs comprising cup shaping a piece of facing material, sloping the up-turned cup-shaped edge inwardly as an inturned rim to an extent that it will be expansible in final form, superposing a top member to overlap said rim, said top member having thermo-adhesive therein, and applying pressure and heat to the top member on a line inwardly of the periphery of the latter where juxtaposed on said rim and sealing the space within said facing material and top member by means arranged wholly exteriorly of the material without interior cooperating means and removable wholly from the completed article without puncturing the same.

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