Feb. 20, 1940. R. E. THOMPSON 2,190,894

POWDER PUFF AND METHOD OF MAKING SAME

Original Filed Sept. 13, 1935 2 Sheets-Sheet 1

Fig. 1.

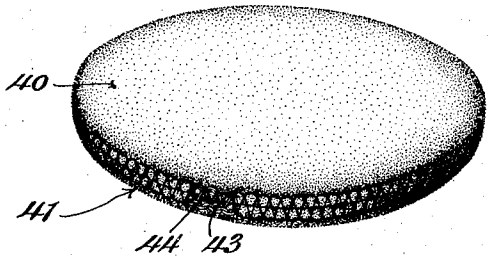


Fig. 2.



Fig. 3.

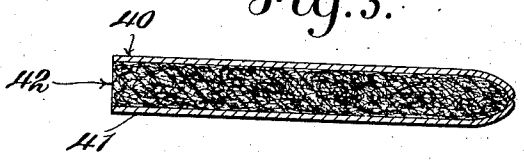
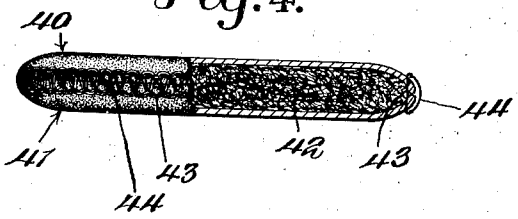


Fig. 4.



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Fig. 5.

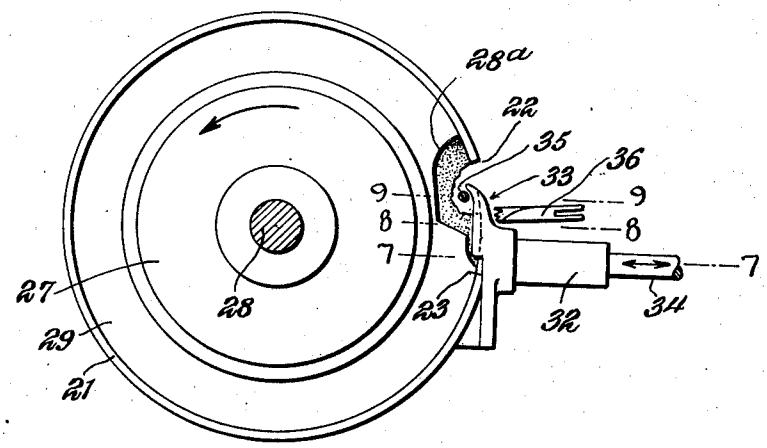


Fig. 6.

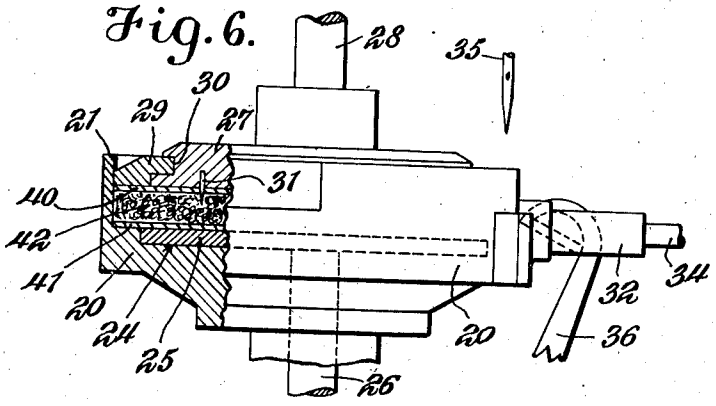


Fig. 7.

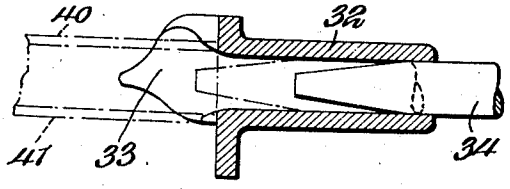


Fig. 8.

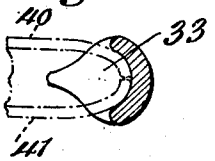
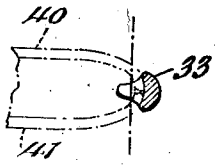


Fig. 9.



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UNITED STATES PATENT OFFICE

2,190,894

POWDER PUFF AND METHOD OF MAKING SAME

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Application September 13, 1935, Serial No. 40,483
Renewed June 15, 1938

10 Claims. (Cl. 132—78.5)

This invention relates to powder puffs and method of making the same.

Powder puffs such as now commonly on the market are made by superposing two circular discs of suitable material, such as velours, with the nap or pile sides or faces of the discs in contact, that is, wrong side out in respect to their position in the finished article. The discs so superposed are then presented to a sewing machine and secured together by a line of stitches formed by such machine about a quarter of an inch inside of the peripheral edges of the discs. The line of stitches is not continued completely around the peripheral edges of the discs but is discontinued to leave a sufficient opening through which the discs, or what is a bag at this stage of the operation, are turned right side out, that is, with the nap or pile sides or faces out. A suitable filling, such as cotton fiber, is then introduced through the opening and distributed between the discs to constitute a filling of as uniform density and thickness as it may be possible to obtain by such procedure. The opening left at the edges of the discs by discontinuing the machine-made stitches is then closed by hand-formed stitches.

The general objects of the present invention are the provision of an improved powder puff and method of making the same at minimum cost. These and other objects and advantages realized by the invention will be readily understood by reference to the accompanying drawings illustrative thereof and from the detailed description which follows.

In said drawings—

Fig. 1 is a perspective view of a powder puff of the present invention;

Fig. 2 is a cross-sectional view showing the first stage of the method of producing the puff of Fig. 1;

Fig. 3 is a similar view of the next stage of said method;

Fig. 4 is a similar view of the final stage of said method;

Fig. 5 is a top plan view of the apparatus of the invention;

Fig. 6 is a side elevation of Fig. 5, partly in vertical section;

Fig. 7 is a vertical section on line 7—7 of Fig. 5; and

Figs. 8 and 9 are detail sectional views on lines 8—8 and 9—9 respectively of Fig. 5.

Referring to Figs. 5 to 9, 20 is a stationary circular cup-like support including in its construction an upstanding peripheral flange 21 which is broken away or omitted between the points 22 and 23 to provide space for a part of the apparatus presently described. The bottom of said support has a circular recess 24 in which a circular plate 25 is rotatable by means of a vertical shaft 26 to the upper end of which said plate 25 is secured. 27 is a circular top plate having a recess 28a at one side (Fig. 5) and secured to the lower end of an upper vertical shaft 28 by which said plate is rotated. A stationary ring 29 engages in a groove 30 around the periphery of plate 27. A number of pins 31 (only one of which is shown in Fig. 6) are fixed to and distributed over the bottom surface of plate 27 and have downwardly projecting sharp points.

A horizontal tubular stationary bearing 32, open at both ends, fits against and is secured to the periphery of support 20 and has thereon, preferably as an integral part thereof, a horizontal tapered finger or tongue 33 positioned in the space between the points 22 and 23 of flange 21. Finger 33 projects in the direction of rotation (indicated by the arrow on Fig. 5) of the plates 25 and 27 and their shafts 26 and 28 respectively. Tongue 33 has a concave inner face, as clearly shown. 34 is a pusher supported by and reciprocated in bearing 32 by suitable means not shown.

35 is a fabric penetrating vertically reciprocating thread-carrying needle, the path of travel of which is close to and just back of the point of finger 33, as shown in Fig. 5 and by dot-and-dash line in Fig. 9. 36 is a thread-carrying looper which cooperates with the needle, in a manner well known in respect to machines for forming overedge or overcast stitches, that is, stitches including thread which is carried one or more times around the edge of the fabric at each stitch. The means for imparting movements to the needle 35 and the looper 36 is not shown, but may be of a character well known in overseaming machines such as are on the market. The shaft 26 and its plate 24 and the shaft 28 and its plate 27, with materials (such as described hereinafter) to be formed into a pad interposed between the plates 25 and 27 and penetrated by the pins 31 to insure rotation with the plates between which said materials are clamped, are rotated intermittently (in the direction of the arrow shown in Fig. 5) or step-by-step, or stitch-by-stitch, by suitable means of well known character but not shown in the drawings. Such intermittent feed movements take place while the needle is up and out of the materials for forming the pad and the looper is in corresponding position. In this

manner the peripheral edges of the materials of which the pad is to be constituted are fed to and by the needle and stitches are formed therein.

In the method of producing powder puffs according to the present invention and as illustrated in the drawings, two circular discs 40 and 41 of suitable fabric, such as velours, are brought together with an interposed circular body of fiber 42 (such as cotton fiber) and with the right sides of the fabric discs (that is, the pile or nap sides) out. As shown in Fig. 2, the fabric discs and the cotton filling are all of the same diameter, which is approximately the diameter of the finished pad made therefrom. The filling is preferably made from cotton fiber in sheet form and of approximately uniform thickness and density. The fabric discs and the circular cotton filling may be formed separately and then assembled in the relationship to each other shown in Fig. 2, or they may be stamped or cut in one operation from previously superposed sheets of fabric and interposed cotton filling. The outline or shape of the fabric discs or pieces, such as 40 and 41, as well as the cotton filler 42, may be other than circular if desired.

The assembled fabric discs and cotton filling of Fig. 2 are next placed and clamped between the rotatable plates 24 and 27, as shown in Fig. 6. As said plates, and with them the fabric and cotton discs, are rotated intermittently, the peripheral edges of said discs are carried step-by-step past the inner open end of the tubular bearing 32, the tongue 33 and the needle 35. The pusher 34 is so actuated that during each period of rest between feed movements it is moved forward to the approximate position shown in dotted lines in Fig. 7 and then retracted to the approximate position shown in full lines in said figure. By such movement the pusher engages and crowds the fibrous or cotton filling inward at its peripheral edge sufficiently to facilitate the turning or bending of the peripheral edges of the fabric discs inward toward each other in the manner next described. As the edges of the fabric and cotton filling engage and slide past the inner concave surface of the tongue 33, which concavity gradually increases toward the free end of the tongue, said concave surface acts upon the peripheral edges of the fabric discs to gradually turn or bend them toward each other to the approximate position shown in the drawings. In other words, the edge portions of the fabric discs are turned into a plane approximately at right angles to the plane of the main body of each disc and the two edges are preferably brought into approximate abutment by the time they reach the needle. The needle then passes its thread 43 through said edges of the fabric discs and the looper passes the looper thread 44 back and forth across the tongue or finger 33 and into positions for interlocking engagement with the needle thread where the latter is projected through and below the lower fabric disc 41 and then with the needle thread above the upper fabric disc 40, and so on.

The carrying of the looper thread back and forth across the tongue 33, and the presence of said tongue at a time when the threads and stitches are set, prevents the formation of stitches of undesirable tightness such as to mar the appearance of the seam or be otherwise objectionable. The feeding of the materials past the finger 33 causes the looper threads to slide along and off the free end of said finger, which also serves the usual function of a chaining-off finger.

Some of the advantages realized by the present invention are as follows:

(*a*) There is a saving of the considerable quantity of relatively expensive fabric (such as velours) that is left beyond the line of stitches and then turned to the inside in machine-made powder puffs as now commonly manufactured. It is the practice to leave as much as one quarter of an inch margin beyond the line of stitches, which means one-half inch in the diameter of the pads. The present invention eliminates any such margin with a considerable saving in the amount of relatively expensive fabric required.

(*b*) The present invention eliminates the step of turning puffs right side out through an opening provided for that purpose, which is a step in the production of puffs as now commonly manufactured.

(*c*) The present invention dispenses with the operation of inserting the fibrous filling (such as cotton) through said opening after the puff is turned right side out and of distributing said filling within the pad.

(*d*) The present invention avoids and saves any operation of hand sewing to close said opening. This hand sewing, even when expertly done, does not preserve the true circular outline, in other words, results in an irregular patchy outline which mars the appearance of the finished article.

The invention relates particularly to powder puffs, but that term is to be understood as embracing any other articles to the production of which the invention is applicable.

What is claimed as new is:

1. A powder puff including in its construction two discs or pieces of suitable fabric and of similar outline, each disc along its border being turned or bent out of the plane of its main body and toward the other disc and the outer edges of the two discs being in contact with each other; and stitches passing through said outer edges and securing the fabric discs together.

2. A powder puff including in its construction two discs or pieces of suitable fabric and of similar outline, each disc along its border being turned or bent out of the plane of its main body and toward the other disc and the outer edges of the two discs being in approximate abutment with each other; and stitches passing through said outer edges and securing the fabric discs together.

3. A powder puff including in its construction two discs or pieces of suitable fabric and of similar outline, each disc along its border being turned or bent out of the plane of its main body and toward the other disc and the outer edges of the two discs being in contact with each other; and machine-made stitches passing through said outer edges and constituting a seam extending the length of said edges.

4. A powder puff including in its construction two discs or pieces of suitable fabric and of similar outline, each disc along its border being turned or bent out of the plane of its main body and toward the other disc and the outer edges of the two discs being in contact with each other; and overedge stitches including thread passing through said outer edges at each stitch and thread extending across the line of contact of said edges one or more times at each stitch and said stitches constituting a seam extending the length of said edges and securing the fabric discs together.

5. A powder puff including in its construction two discs or pieces of suitable fabric and of similar outline, each disc along its border being turned or bent out of the plane of its main body and

toward the other disc and the outer edges of the two discs being in contact with each other; and machine-made overedge stitches including thread passing through said outer edges at each stitch and thread extending across the line of contact of said edges one or more times at each stitch and said stitches constituting a seam extending the length of said edges and securing the fabric discs together.

6. A powder puff including in its construction two discs or pieces of suitable fabric and of similar outline, each disc along its border being turned or bent out of the plane of its main body and toward the other disc and the outer edges of the two discs being in approximate abutment with each other; and overedge stitches including thread passing through said outer edges at each stitch and thread extending across the line of approximate abutment of said edges one or more times at each stitch and said stitches constituting a seam extending the length of said edges and securing the fabric discs together.

7. A powder puff including in its construction a suitable filling material, two discs or pieces of suitable fabric and of similar outline between which said filling material is interposed, each of said discs along its border being turned or bent out of the plane of its main body toward the other disc and the outer edges of the two discs being in contact with each other; and machine-made stitches passing through said outer edges and constituting a seam extending approximately the length of said edges and securing the fabric discs together with said filling material interposed.

8. A powder puff including in its construction a suitable filling material, two discs or pieces of suitable fabric and of similar outline between which said filling material is interposed, each of said discs along its border being turned or bent out of the plane of its main body toward the other disc and the outer edges of the two discs being in approximate abutment with each other, and machine-made overedge stitches including thread passing through said outer edges at each stitch and thread extending across the line of abutment of said edges one or more times at each stitch and said stitches constituting a seam extending the length of said edges and securing the fabric discs together with said filling material interposed.

9. The method of making powder puffs including the steps of bringing together two discs or pieces of suitable fabric and of similar outline; then turning or bending each disc along its border out of the plane of its main body toward the other disc and bringing the outer edges of the two discs into contact with each other; and then forming stitches passing through said outer edges, said stitches being continued to constitute a seam extending the length of said edges and securing the fabric discs together.

10. The method of making powder puffs including the steps of bringing together two discs or pieces of suitable fabric and of similar outline; then turning or bending each disc along its border out of the plane of its main body toward the other disc and bringing the outer edges of the two discs into approximate abutment with each other; and then applying machine-made overedge stitches including thread passing through said abutting edges at each stitch and thread extending across the line of abutment one or more times at each stitch, said stitches being continued to constitute a seam extending the length of said edges and securing the fabric discs together.

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