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(54) Printing process on a transparent or semi-transparent open-mesh fabric and product obtained

(57) It comprises an inflation embossment technique and the application of embossment auxiliary thickening paste producing the wrinkled embossment, the embossing paste comprising from 40 to 50% of weigh of solid contents and a viscosity ranging from 15000 to 45000 centipoises (CP), being resistant to temperatures of up to 180° C and allowing preforming, its application being carried out with a distribution ranging from 10 to 40 grams per square metre.

Fig. 1

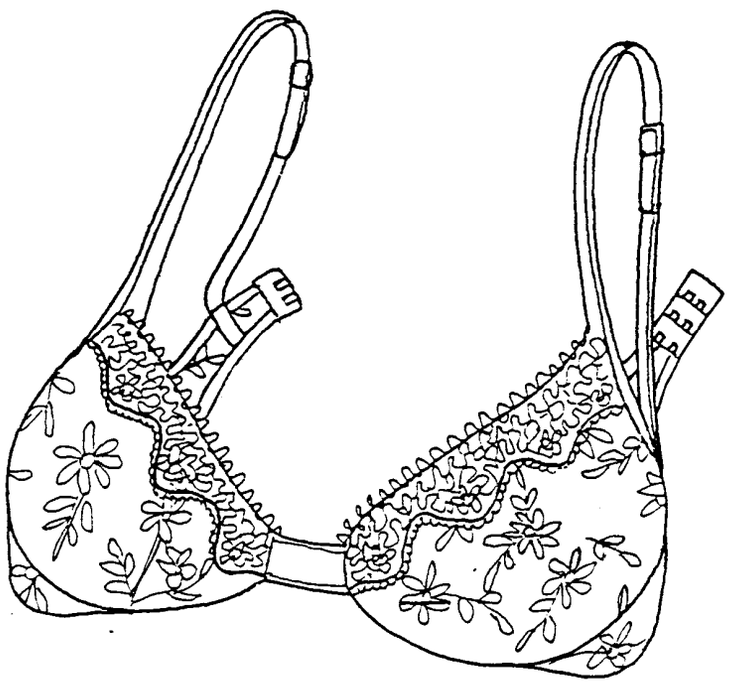

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Fig. 1a

Description

[0001] This invention relates to a process designed for obtaining an embossment, namely a wrinkled embossment on a fabric with a thread interlacing offering an open texture. The invention also covers the product obtained by means of said process, mainly applicable to the linen sector, said product despite it includes a wrinkled embossment keep the qualities of transparency or half-transparency and it has a soft touch on one of its faces designed to be contacting the user's skin.

[0002] In particular, the fabric used is tulle, gauze or an unwoven fabric. Said fabrics are very soft, their characteristic is given by the fact they have above very open thread interlacing condition. In addition, the fact that said fabrics are transparent or half-transparent makes that they are very appreciated in the linen sector in which this invention will mainly find its application.

[0003] Also the inflated wrinkled embossment is known in the textile world and it is applied to the bathing suits where fabric transparency is not sought as in linen and where the softness of the bathing suit is not so much a substantial element because fabrics are used which have opaque and closed thread interlacing allowing the fabric involved can be internally lined.

[0004] The inflated wrinkled embossment is much cheaper than an embroidery, providing however an end appearance very similar which explains that said technique is so much used and which is used in this case to a fabric very transparent with a very open and soft thread interlacing, such as tulle, gauze and unwoven fabric.

[0005] If it is proceeded to a wrinkled embossment by means of the traditional inflation on said fabric, it is achieved that both faces of the fabric are embossed with wrinklings, because said fabrics have a very open thread interlacing, they are very transparent, losing one of the advantages of said fabrics, the softness, on its internal face, because as the net is very open, it allows that the embossment paste passes throughout the fabric.

[0006] The applicant overcame this problem of the embossing paste crossing to the internal face of the fabric, by limiting its arrangement to the external face of the fabric, through this process, obtaining with it a fully new product.

[0007] In order to facilitate the explanation four sheets of drawing are appended to this description in which nine practical cases of embodiment are illustrated, which are stated for example purpose only which do not limit the scope of this invention.

[0008] The figure shows a general view of a brassiere with the embossment.

[0009] Figure la shows a section for the brassiere of figure 1, in which the limited wrinkled effect of the external face thereof can be seen.

[0010] Figure 2 shows a general view of another kind of brassiere to which the invention is applied.

[0011] Figure 3 shows a general view of a brassiere without ring.

[0012] Figure 4 shows a general view of a brassiere with rings.

[0013] Figure 5 shows a general view of a slip.

[0014] Figure 6 shows a general view of a small brief-shaped panty.

[0015] Figure 7 shows a general view of a small brief-shaped panty.

[0016] Figure 8 shows a general view of a panty with waistbands.

[0017] Figure 9 shows a general view of a G-string-shaped panty.

[0018] In every case the wrinkled configurations provide an embroidery like appearance and the section through the parts involved will be equivalent to that of Fig. la above.

[0019] After a number of studies and tests in laboratory, the applicant found a process for matching softness fabrics with structures having open thread interlacing and saving cost with the technique of inflated embossment.

[0020] The variables to be determined were a great number of them because the resulting paste had to have a sufficient consistency not to cross, from one side of the threads netting (external face when defining the garment) to the other side (internal face), being at same time capable to stand temperatures close to 180° C, allowing in addition preforming.

[0021] The applicant developed an embossment paste which has following technical characteristics:

1. it possesses from 40 to 50% in weigh of solid contents.
2. it has a viscosity ranging from 15000 to 45000 centipoises (CP),
3. it offers a resistance to temperatures up to 180° C,
4. it allows preforming, and
5. it carries out its application with a distribution ranging from 10 to 40 grams of the compound per square metre of the fabric.

[0022] If we add that the material on which the embossment is carried out is tulle, gauze or unwoven fabric, which is characterized in that it is very soft as it has very open thread interlacings and therefore an embossment paste is achieved which allows on the side contacting the skin the innate characteristics of said materials are kept and that on the other side low-cost embossment aesthetic effects can be obtained by means of the inflated wrinkled, the speciality of this invention can be understood.

[0023] A new product is obtained thus which is characterized essentially in that it is a transparent or half-transparent fabric having an open thread interlacing, including a wrinkled embossment carried out on the external face of the structure for the garment, said em-

bossment not surpassing the internal face of said structure, so that said internal face keeps intact its characteristics of surface evenness and/or softness.

[0024] That is to say, it is a product which allows to use wrinkled embossment on materials such as tulle, gauze or unwoven fabric, so that on its external face the wrinkled embossment can be clearly seen and there exists no protuberances arising from said embossment on the internal face, preventing users'skin irritation which could be caused by said embossment wrinkled parts rubbing, if any.

[0025] The patent, within its essence, can be carried out in other ways of embodiment which differs only in details of the stated only for example purpose, the protection sought covering them also. Thus said embossment process on the transparent or half-transparent fabric can be carried out with the open thread interlacing and the product obtained, in any shape and size, with the more suitable means and materials, and with the more convenient fittings, as they are all included in the spirit of following claims.

Claims

1. Process for embossing on a transparent or half-transparent fabric with open thread interlacing, using the inflating technique and applying an embossment auxiliary thickener producing a wrinkled embossment characterized in that said embossment paste comprises from 40 to 50% of weigh of solid contents and has a viscosity ranging from 15000 to 45000 centipoises (CP), it has a resistance to temperatures up to 180° C, it allows preforming and in that its application is ranging from 10 to 40 grams per square metre of the fabric.

2. Process according to claim 1, characterized in that said transparent or half-transparent open thread interlacing on which the embossment is carried out is tulle.

3. Process according to claim 1 characterized in that said transparent or half-transparent open thread interlacing on which the embossment is carried out is gauze.

4. Process according to claim 1 characterized in that said transparent or half-transparent open thread interlacing on which the embossment is carried out is unwoven fabric.

5. Structure for a garment, produced in a transparent or half-transparent fabric with the open thread interlacing characterized in that it includes a wrinkled embossment carried out on the external face of the structure for the garment and in that said embossment does not cross to the internal face of said structure, so that said internal face keeps intact its surface evenness characteristics.

6. Structure for a garment, produced in a transparent or half-transparent fabric with the open thread interlacing according to claim 5 characterized in that said structure for garment is produced in tulle.

7. Structure for a garment, produced in a transparent or half-transparent fabric with the open thread interlacing according to claim 5 characterized in that said structure for garment is produced in gauze.

8. Structure for a garment, produced in a transparent or half-transparent fabric with the open thread interlacing according to claim 5 characterized in that said structure for garment is produced in unwoven fabric.

9. Structure for a garment, produced in a transparent or half-transparent fabric with the open thread interlacing according to claim 5 characterized in that it is an underwear.

Fig. 1

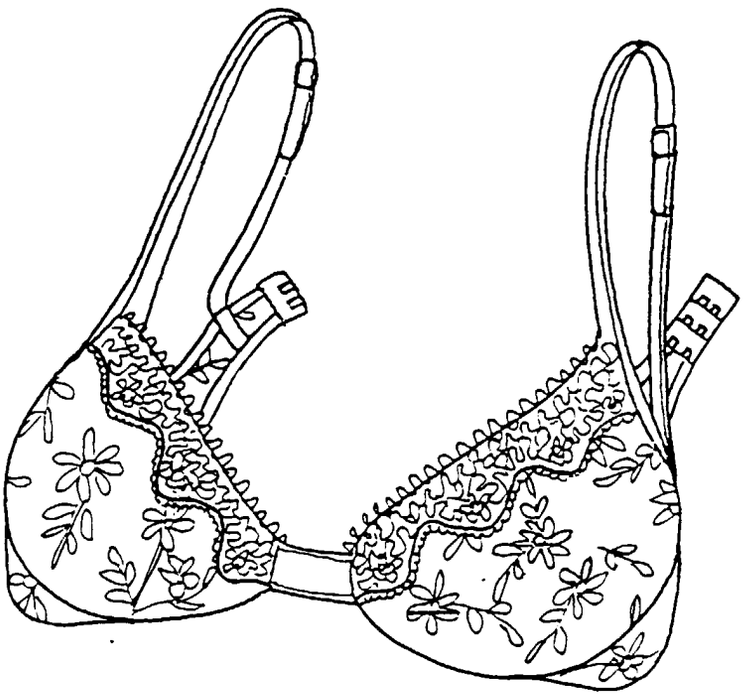

Fig. 1a

Fig. 2

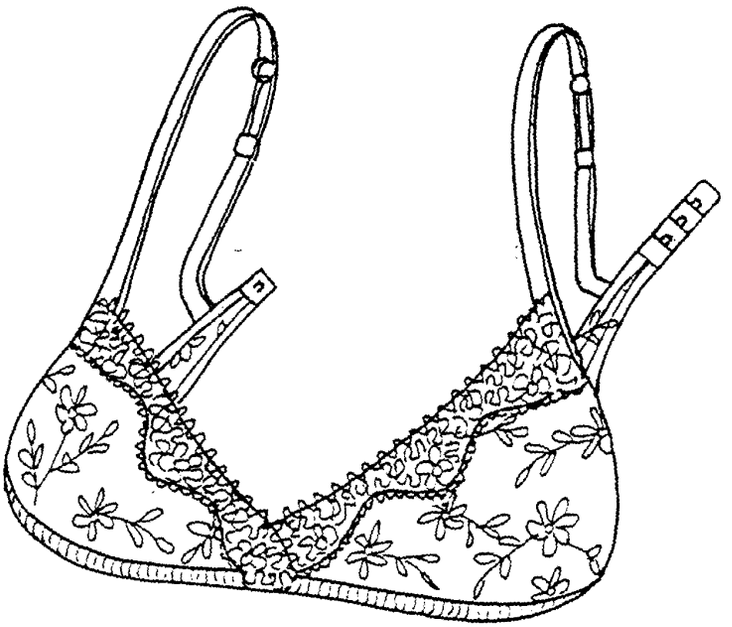

Fig. 3

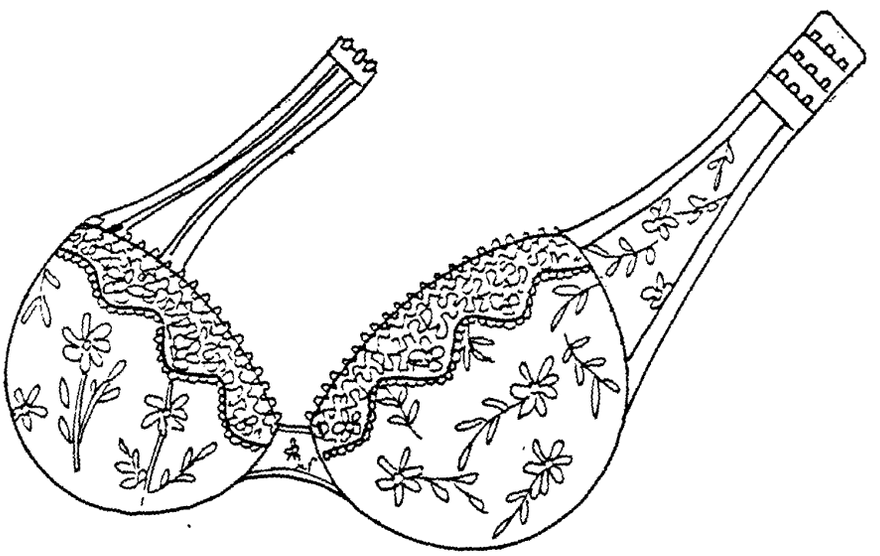

Fig. 4

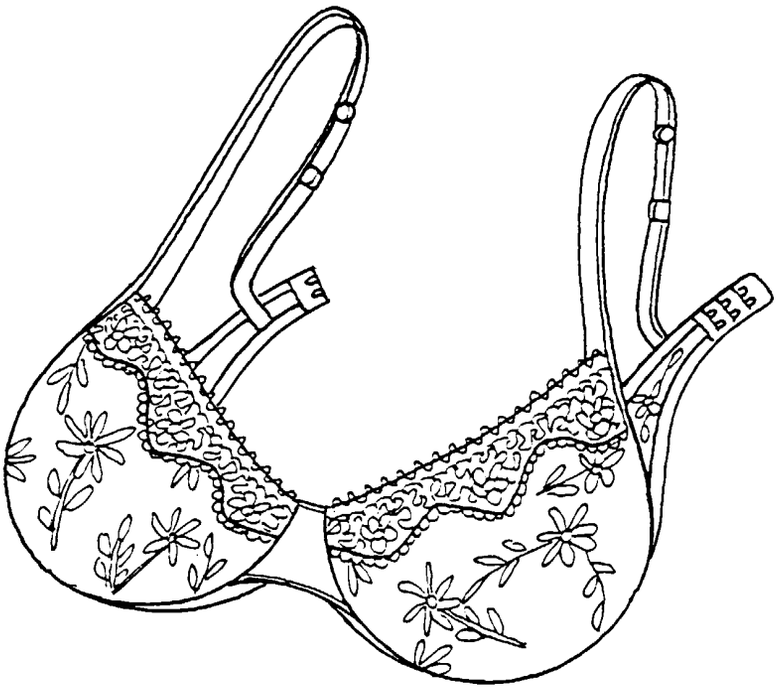

Fig.5

Fig. 6

Fig. 7

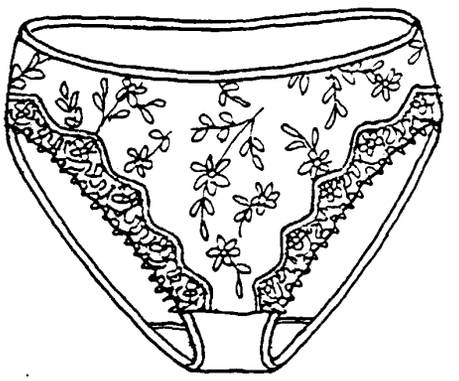

Fig. 8

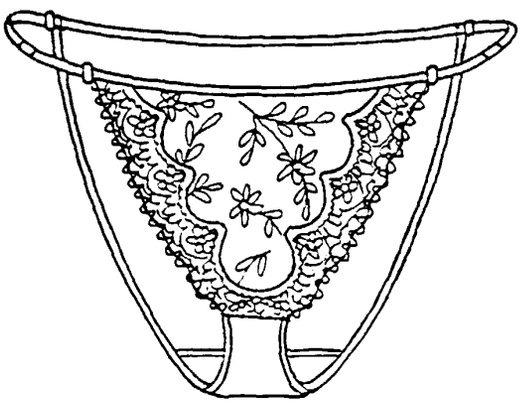

Fig. 9