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2,544,797

COMFORTER

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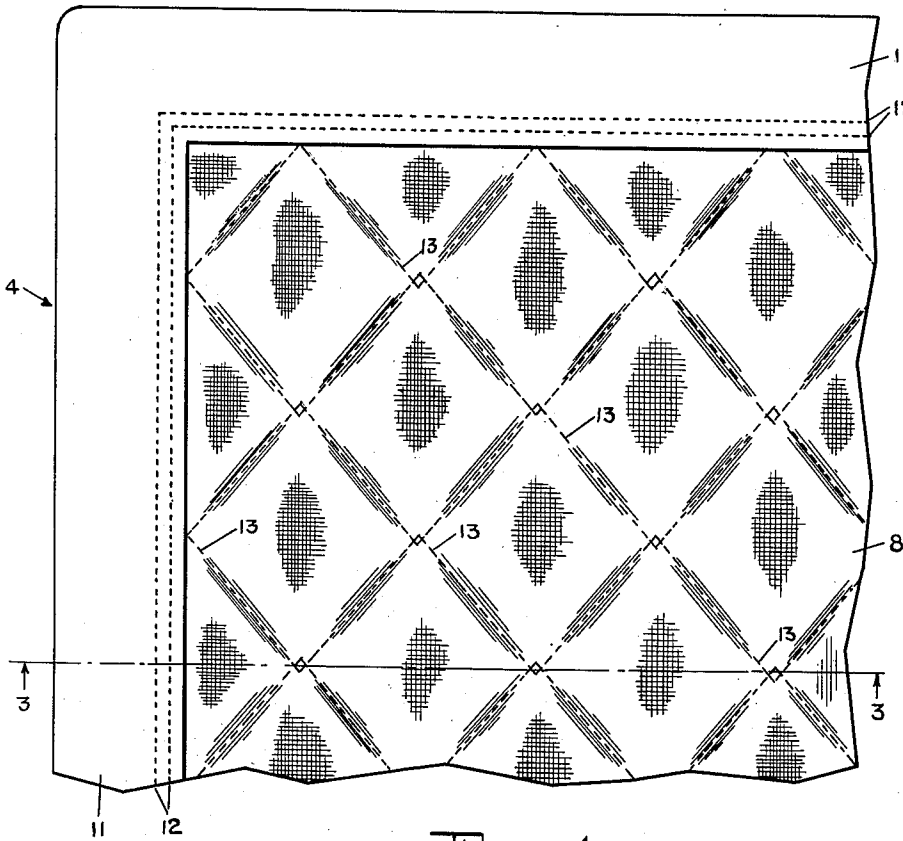


Fig-1

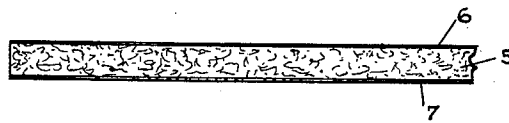


Fig-2

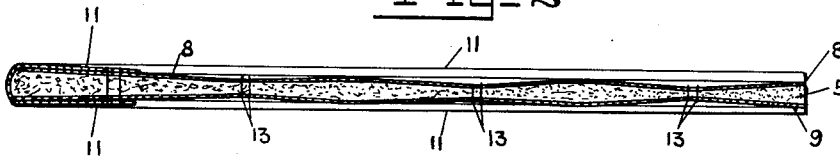


Fig-3

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COMFORTER

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2 Claims. (Cl. 5—334)

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This invention relates to comforters, quilts and the like, and relates more particularly to comforters, quilts and the like comprising an assembly of textile materials.

An important object of this invention is to provide an improved comforter, quilt or the like, of excellent insulating properties.

Other objects of this invention will appear from the following detailed description.

The comforters of the present invention comprise an inner layer or web of interlaced or matted staple fibers, at least the major portion of which has a basis of a thermoplastic material, which layer or web is covered by textile fabric. The inner fibrous layer has its surfaces so modified as to form skins thereon which prevent any staple fibers from slipping out through the fabric covering. The fabric comprising the covering may be of any suitable fabric and need not be of close weave since, as indicated above, the staple fibers will not have any tendency to pass through the fabric, being confined by the surface skins. However, it is preferred to employ a warp-knit fabric, such as jersey, as such a fabric has been found to give highly desirable decorative and utilitarian results.

The inner fibrous layer or web may be prepared in any suitable manner. For example, staple fibers, at least the major portion of which has a basis of a thermoplastic material, in the form of bundles or pencils may be blown into a chamber where they are opened up and maintained in a turbulent condition, i. e. in the form of a loose, whirling mass. The loose mass may be continuously drawn down by suction on to a foraminous belt, the yarn of the fibers within the chamber causing the fibers to deposit on said foraminous belt in interlaced or interlocked condition which is necessary to maintain them in the form of a batting. The batting is then subjected to a degree of heat and pressure sufficient to coalesce the thermoplastic organic derivative of cellulose staple fibers on the surfaces of the batting to form on said surfaces a skin which binds the surface fibers together, without causing any substantial coalescence of the staple fibers between the skins.

While the thermoplastic fibers employed preferably may comprise any organic derivative of cellulose as, for example, cellulose esters such as cellulose acetate, cellulose propionate and cellulose butyrate, mixed esters such as cellulose acetate-propionate and cellulose acetate-butyrate, and cellulose ethers such as ethyl cellulose and benzyl cellulose, fibers of other thermoplastic

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materials may also be employed. Examples of such other thermoplastic materials are synthetic linear polyamide condensation products, polymeric vinyl halides such as polyvinyl chloride or copolymers of vinyl chloride and vinyl acetate, polymerized vinylidene chloride, polymerized methacrylic acid esters such as polymerized methyl methacrylate and the like. Fibers of non-thermoplastic materials which may be mixed with the thermoplastic materials may be cotton, silk, wool, regenerated cellulose and like materials.

In the accompanying drawing, which serves to illustrate this invention,

Fig. 1 is a view of a portion of a comforter made in accordance with the present invention,

Fig. 2 is a side-elevational view of the inner layer or web employed, and

Fig. 3 is a cross-sectional view taken on line 3—3 in Fig. 1.

Like reference numerals indicate like parts throughout the several views of the drawing.

In the drawing, reference numeral 4 indicates generally a portion of a comforter. The comforter 4 comprises an inner fibrous layer 5, the surfaces of which have been treated to form skins 6 and 7 thereon. The fibrous layer or web is covered top and bottom with fabric covers 8 and 9. The edges of the comforters are finished with a binding 11 of suitable material, such as satin ribbon, which is stitched to the inner fibrous layer or web and the fabric coverings as shown at 12. Decorative stitching may be applied to the comforter as shown at 13 which stitching has a utilitarian effect as preventing migration of the staple fibers within the layer or web 5.

The comforter made in accordance with the present invention is characterized by being light in weight and yet giving the same insulating qualities as a wool blanket of similar weight. Moreover, by employing an inner layer or web of fibrous materials, the surfaces of which web are coalesced into the form of skins, it is not necessary to employ fabrics of closely woven structure in order to prevent staple fibers from passing through the outer coverings. This feature is very important since a much lighter and more satisfactory comforter may be obtained.

It is to be understood that the foregoing detailed description is given merely by way of illustration and that many variations may be made therein without departing from the spirit of my invention.

Having described my invention, what I desire to secure by Letters Patent is:

1. A comforter, quilt and the like, comprising

an inner layer of interlaced thermoplastic staple fibers, said inner layer having surfaces, each of which is coalesced into the form of a thin skin, and a staple fiber stratum between said surfaces, said stratum being of substantial thickness as compared to the thickness of said skins and being composed of substantially uncoalesced staple fibers, a covering of textile fabric enveloping said inner layer, and stitching across the surface of the textile fabric covering, extending from cover to cover through said inner layer.

2. A comforter, quilt and the like, comprising an inner layer of interlaced cellulose acetate staple fibers, said inner layer having surfaces, each of which is coalesced into the form of a thin skin, and a staple fiber stratum between said surfaces, said stratum being of substantial thickness as compared to the thickness of said skins and being composed of substantially uncoalesced staple fibers, a covering of textile fabric enveloping said inner layer, and stitching across the

surface of the textile fabric covering, extending from cover to cover through said inner layer.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
365,625	Palmer	June 28, 1887
2,321,108	Schneider	June 8, 1943
2,430,868	Francis	Nov. 18, 1947
2,438,771	Topjian	Mar. 30, 1948
2,483,404	Francis	Oct. 4, 1949
2,497,117	Dreyfus	Feb. 14, 1950

FOREIGN PATENTS

Number	Country	Date
582,006	Great Britain	Nov. 1, 1946