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Fig. 1

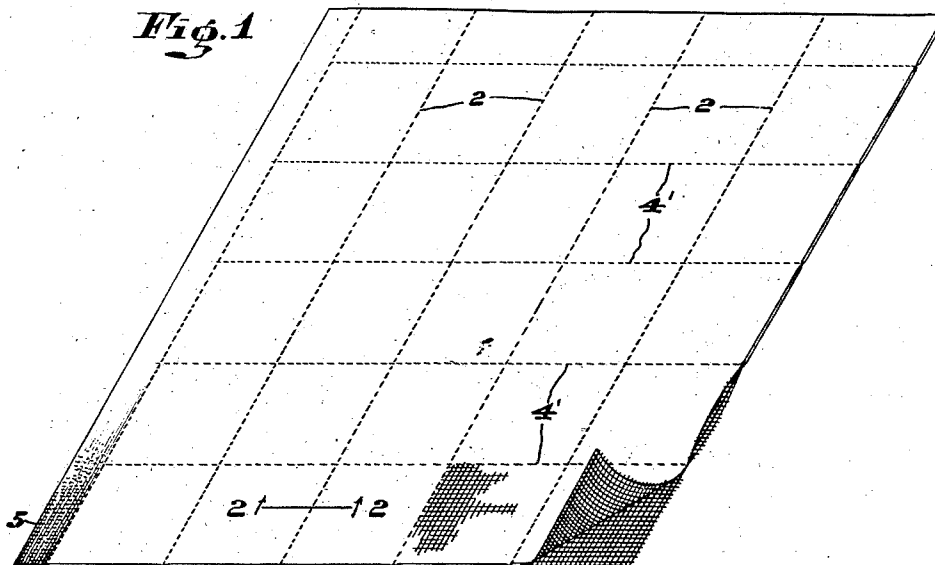
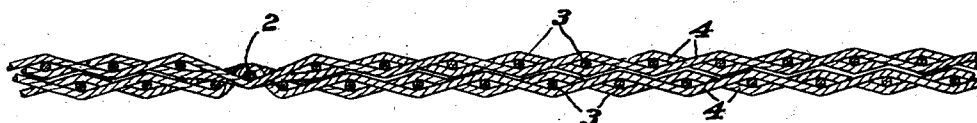


Fig. 2



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2 Claims. (Cl. 139-413)

This invention relates to fabrics and more especially to those designed primarily for use in articles worn by infants or used in caring for them.

5 An ideal fabric for these purposes must not only have those qualities essential to the health and comfort of the baby, but should also have other qualities which are important from the stand-
point of the mother. The comfort and well being
10 of the baby demands a fabric which is soft, non-irritating, light in weight, and highly pervious to air. Characteristics important to the mother, or other person caring for the baby, are ease of
laundrying, quick drying, and reasonable cost.
15 All of these qualities or characteristics indicate an open-mesh and highly porous type of fabric which will give the light weight, the necessary flow of air required for the proper regulation of the body temperature by evaporation, and will,
20 in addition, have the easy laundrying and quick drying characteristics mentioned. A further and extremely important requirement, however, is that the fabric shall have great absorbency. Since this property depends primarily upon a
25 large wettable area, it naturally suggests a relatively thick heavy fabric construction, entirely inconsistent with the requirements previously mentioned.

30 The present invention aims to devise a fabric in which these conflicting requirements will be reconciled and which, in addition, will be convenient to use in the actual making up of pads, towels, garments, and other articles.

35 The nature of the invention will be readily understood from the following description when read in connection with the accompanying drawing, and the novel features will be particularly pointed out in the appended claims.

In the drawing,

40 Figure 1 is an angular view of a portion of a web of fabric embodying this invention; and

Fig. 2 is a vertical, sectional view on the line 2-2, Fig. 1.

45 The fabric shown in the drawing consists of two plies which are secured together at suitably spaced intervals by interweaving threads common to both plies, the intervening portions of the plies being independent of, and free from, each other. Preferably these interwoven sections are given
50 the form of narrow bars extending both warpwise and fillingwise of the goods and giving the fabric a quilted appearance. The bonding of the two plies together may conveniently be effected by interweaving binder warps, such as those
55 shown at 2, at suitable intervals between the warp

threads 3 in the independent portions of the plies and by so operating the harnesses that filling picks 4 at appropriate intervals between the filling threads 4 in the two layers will be interwoven with all of the warps and thus produce the narrow fillingwise stripe or bar effect shown in Fig. 1. Only a single warp or a single filling pick need be interwoven to produce each warpwise or west-
10 wise bar. The number of threads can be increased in either bar, but it is preferable to reduce this number to a minimum. At the selvage edges of the goods all of the warp and filling threads preferably are interwoven to produce firm, narrow selvage strips, one of which is shown
15 at 5.

While the intervals separating adjacent bars may be varied materially, they should be sufficiently close together so that the web can be handled and cut as conveniently as a single ply fabric, and to ensure that neither ply will roll up or wrinkle upon the other in use. So long as these two conditions are satisfied, it is preferable in other respects to space the interwoven points as far apart as possible. A fabric of the construction shown in the drawing in which the interwoven bars are spaced apart by one inch
25 intervals has proved very satisfactory.

In a typical fabric of this construction each ply might have, for example, a 44 x 40 weave and be made of 30s warp yarn and 32s filling. Cotton is a suitable material but should be fully
30 bleached in order to improve its absorbency and softness. The weave can be varied considerably, and might be even as low in thread count as 32 x 28 or as high as 52 x 48. The yarns may vary between 18s and 40s, the higher numbers, of course, being used in the fabrics having the higher thread counts. For general use, the inter-
35 woven bars may include from one to eight threads and be spaced at intervals from one inch to three inches apart. However, for some uses it may be found desirable to vary the spacings between bars beyond the limits mentioned.

A fabric of this character satisfies the requirements above outlined. It will absorb a large
45 quantity of liquid in proportion to its weight, is soft, comfortable, light in weight, and affords a free circulation of air. It launders very easily and with exceptional thoroughness since the solids in the soiled areas are held chiefly in the meshes of the fabric between yarns and between
50 plies where it can be dislodged with a minimum of effort. Because of the large surface area exposed in proportion to weight, and the open mesh structure, the fabric rinses easily and dries quick-
55

ly. Also, since the bonding of the two plies to each other is produced by the interweaving of the threads of the plies themselves, the over-all compressed thickness of the fabric is substantially uniform and the irritation and discomfort which would be caused by the presence of stitched seams, if used to secure two plies of the same construction together, is avoided. A fabric of this nature can be manufactured economically in automatic looms of the common commercial forms, and the extra expense of stitching is avoided. Such a fabric also avoids the difficulty, encountered in stitching two separate plies of fabric together, of fitting the two plies to each other so perfectly that one does not wrinkle on the other.

While I have herein shown and described a preferred embodiment of my invention, it will be understood that the invention may be embodied in other forms without departing from the spirit or scope thereof. For example, the fabric shown is a two-ply structure, but the number of plies could be increased. For most commercial purposes, however, the two-ply construction is preferred.

Having thus described my invention, what I desire to claim as new is:

1. A light weight, multi-ply fabric for infants'

absorbent pads and the like, the plies of which have a porous weave, said plies being substantially alike and each being composed of bleached cotton yarn of between 18s and 40s in size, and the yarns of adjacent plies being interwoven with each other at regular intervals to produce narrow bars extending continuously both warpwise and weftwise of the fabric, said intervals being so spaced that the maximum distance between said bars is not over three inches, and the portions of the plies between said bars being independent of and free from each other.

2. A fabric for infants' absorbent pads and the like, comprising a plurality of substantially identical, open mesh, superposed, woven plies, each having a warp count of between 32 and 52 and a filling count of between 28 and 48 and composed of bleached cotton yarns of sizes between 18s and 40s, the yarns of said plies being interwoven with each other in both warp and weft directions to produce regularly spaced bars but the intervening portions of said plies being independent of and free from each other, said bars being less than eight threads in width and the spacing between bars being less than three inches.

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