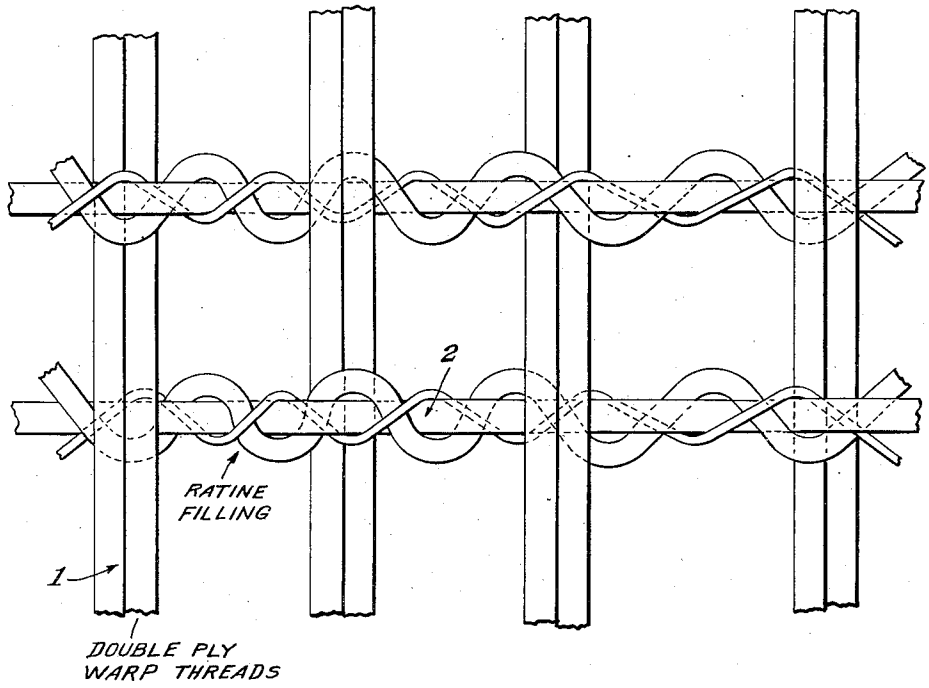
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FABRIC

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2 Claims. (Cl. 139—420)

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This invention relates to fabrics and methods of their manufacture.

The creation of spun glass posed the problem of producing fabrics which consist entirely of glass fibers. Such glass fabrics could be utilized most effectively for a variety of purposes in view of their non-inflammability, for example, as curtains or draperies for hotels, theaters, public halls, laboratories, exhibitions, public conveyances, as well as in homes. However, it was found impossible heretofore to make all-glass jacquard fabrics which would be of sufficiently attractive and ornamental appearance so that they could find ready acceptance in the use of draperies and the like. The reason for this situation resides in the inherent qualities of glass threads which make it most difficult if not impossible to provide fabrics which are not too heavy in weight and which show surface texture of sufficient density and depth needed in a decorative fabric.

It is therefore, an object of the present invention to provide an all-glass jacquard fabric having these properties to enable the use of the fabric for curtains, draperies and other decorative purposes.

Other objects of the present invention will become apparent in the course of the following specification.

The present invention is based in part, upon my discovery, that the utilization of the so-called ratine effect in glass yarns makes it possible to weave a jacquard all-glass fabric which is not too heavy in weight and is most attractive in appearance and adapted to carry all designs capable of being produced upon a jacquard.

According to a preferred embodiment of the inventive idea, the ratine effect is embodied in the filling, while the warp may consist of a straight two ply filament yarn which may be colored, if desired.

It should be pointed out in this connection that the ratine effect in its broad aspect is attained by twisting together threads of different lengths with the result that one thread is wound around the other in a form approximating that of a sine curve. Then the resulting yarn instead of being smooth will have the effect of a yarn with naturally protruding fibers. This effect is particularly important in order to produce the desired depth of texture which cannot be obtained with the use of straight spun glass filament, since the ratine yarn with its rough surface gives the ornamentation a raised appearance that otherwise would not be possible.

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The appended drawing consists of a diagram illustrating the following example of a fabric made in accordance with the present invention, said example being given, however, solely by way of illustration and not by way of limitation.

A fabric is woven on a jacquard with its warp 1 consisting of a straight colored 450 double two ply spun glass yarn. The filling 2 consists of fancy spun glass ratine yarn which is composed as follows (based on 10 inches of yarn):

The loop thread consists of 2 ends of 450 single two ply thread—4 to 5 turns per inch S direction, 10 to 10.6 inches of yarn, preferably—10.35 inches of yarn.

The base consists of 1 end of 100 two ply thread 9 to 10 turns per inch S direction, 14.5 to 15.2 inches of yarn, preferably 14.85 inches of yarn.

The loop thread and the base are twisted together approximately 15 to 25, preferably 20½–21 turns per inch S direction.

The binder consists of 1 end 450 single two ply thread—4 to 5 turns per inch S direction, 10.2 to 10.8 inches, preferably—10.5 inches of yarn.

The binder is twisted with the combined loop thread and base 10–11 turns per inch Z direction, thereby producing the completed ratine yarn.

The ratine yarn in the fabric may be white, while the warp is colored, as stated above. However, the filling may be also colored, if desired.

It is apparent that a satisfactory ratine yarn can be produced even though there may be some deviations from the above given figures. For example, the respective lengths of threads may vary at least to the extent of 0.3 inch on the basis of 10 inches of yarn. The number of turns with which the base and the loop thread are twisted may vary up to 5 turns either way. The individual components of the yarn, namely, the loop thread, the base and the binder may be each twisted a somewhat larger or smaller number of turns, namely, at least two turns either way. Other possible changes will be apparent to those skilled in the art.

A jacquard all-glass fabric made in accordance with the described example is comparatively light in weight, so that it can be conveniently used for draperies, curtains and for a variety of other purposes. The fabric has a most attractive feel and appearance and may be provided with any suitable ornamentation.

It is further apparent that other variations and modifications may be made in the above example without departing from the scope or intent of the present invention; all such variations and

modifications are to be included within the scope of the present invention.

What is claimed is:

1. As a new article of manufacture, an all glass jacquard fabric having a warp consisting of glass yarn, and a filling consisting of glass ratine yarn, the filling based on ten inches of yarn, including a loop thread consisting of 2 ends of 450 single two ply thread 4 to 5 turns per inch S direction, 10 to 10.6 inches of yarn, a base consisting of 1 end of 100 two ply thread 9 to 10 turns per inch S direction 14.5 to 15.2 inches of yarn, the loop thread and the base being twisted together from 15 to 25 turns per inch S direction, a binder consisting of 1 end 450 single two ply thread 4 to 5 turns per inch S direction 10.2 to 10.8 inches of yarn twisted with the combined loop thread and base 10–11 turns per inch Z direction.

2. As a new article of manufacture, an all glass jacquard fabric having a warp consisting of glass yarn, and a filling consisting of glass ratine yarn, the filling based on ten inches of yarn, including a loop thread consisting of 2 ends of 450 single two ply thread 4 to 5 turns per inch S direction, 10.35 inches of yarn, a base consisting of 1 end of 100 two ply thread 9 to 10 turns per inch S direction 14.85 inches of yarn, the loop thread and the base being twisted together 20½–21 turns per inch S direction, a binder consisting of 1 end 450 single two ply thread 4 to 5 turns per inch S direction 10.5 inches of yarn twisted with the combined loop thread and base 10–11 turns per inch Z direction.

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