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PROCESS OF MAKING ORNAMENTED FABRIC

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My invention relates to the process for the manufacture of weaves with plastic (relief) or frise-like effects.

The production of crepe or similar effects in weaves through shortening after the weaving process a part of the warp threads is well-known. This is accomplished by chlorinizing woolen threads that thereby have been preserved against shrinkage, and warping such threads together with threads that have not been chlorinized; or by warping heavily twisted yarns with yarns that have not been heavily twisted or by incorporating into the same warp mercerized, together with non-mercerized yarns, all of which processes provide for a wet treatment after the weaving process.

Compared with this the process according to invention differs insofar that, for the purpose of obtaining in weaves relief or frise-like effects there are warped over-stretched synthetic threads with synthetic threads that have not been over-stretched, subjecting thereafter the weave so manufactured to a simple wet treatment. The invention employs the natural elasticity of synthetic threads such as rayon of any structure or of rayon staple fibre spun similar to the cotton spinning process. Synthetic fibres of this nature are well-known to be definitely appreciably stretchable. It is equally well-known that when such rayon synthetic fibres are stretched in the wet state and afterwards dried they will go back to approximately their original length when thereafter again treated in a wet processing. This stretch, however, must not exceed a certain limit as otherwise the desired shortening or going back of the threads does not occur.

By using this property of synthetic threads or synthetic staple fibre threads the formation of relief or frise-like effects in small or large pattern in weaves is markedly simplified and cheapened when compared against existing processes. According to the invention one may proceed by taking a part of the warp threads of synthetic nature and warping the same upon a separate warp beam, subjecting thereafter the threads on such warp beam to a wet stretching process followed by drying the same while taut under stretching tension and thereafter incorporating these such threads on such warp beam with another part of a complete warp for weaving, such other part consisting of any desired yarn material which is unstretched. In other words such other yarn material is warped in the normal process. Such combined warp of over-stretched and unstretched yarns can be woven according to any desired

weave. As soon as the complete weave manufactured from such combined warp is subjected to a wet treatment, the over-stretched part of the warp goes back in length and is thereby shortened. The normally warped part of the warp, however, can not shorten. These last warp threads are therefore forced to bulge out of the surface of the weave on its right or left side which in turn causes at such places in the weave relief or frise-like effects. It is possible in this connection through properly preparing, placing and weaving the respective synthetic warp threads to make relief-like effects appear at any desired place of the weave in any desired form, extent and color. The weave itself can consist either wholly of synthetic yarns or synthetic staple fibre yarns but may be made also from synthetic yarns or synthetic staple fibre yarns in conjunction with other textile yarns, in any desired weave, single or multi-colored.

I claim:

1. Process for producing designs in weaves characterized by the fact that threads of artificial silk or artificial silk staple fibre are wetted after warping, are stretched in the warp and thereupon in such stretched state are dried and beamed, whereupon this part of the warp is woven together with another part comprising unstretched threads of any desired material which are beamed in their normal state, and the finished weave is subjected to a wetting and subsequent drying treatment, whereby the over-stretched threads of the warp are shortened in any desired place of the weave and frise or relief-like effects of raised designs of any desired form or dimensions is produced.

2. An improved process for the design of weaves characterized by the fact that threads made of artificial silk or of artificial silk staple fibre are wetted after having been warped, are tensioned in such warp which are thereupon dried and beamed in such tensioned condition, and combining such warp with another warp for a two beam weaving job, such other warp being made of threads of any desired material which is untensioned, i. e. in its normal spun state and properly beamed in warp shape, weaving such two-beamed weaving job in such a preconceived binding of all threads in such two-beam warp that with a wet after-treatment of the finished weave there is produced through the shortening of the warp threads that have been tensioned, frise or relief like design effects in any desired parts of the weave and in any desired form and dimension.

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