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PROCESS FOR OBTAINING CREPE EFFECTS
ON FABRICS

Hans Altwegg, Paris, France, and Armin Eichler,
Freiburg in Breisgau, Germany, assignors to
E. I. du Pont de Nemours & Company, a cor-
poration of Delaware

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Crepe effects are generally obtained on mate-
rials by the use of highly twisted warp or weft
threads and special effects are obtained by defi-
nite alternation of warp or weft yarns, highly
twisted to left and to right. This process can be
applied to artificial silks which, like viscose silks,
for example, consist of regenerated cellulose.

Fabrics which contain as their warp or weft
highly twisted viscose yarns show a valuable crepe
effect on being treated with warm water, that is,
for example, after having been subjected to a
process for removing the dressing or to a dyeing
process. This results from the fact that highly
twisted viscose yarns possess the property, on be-
ing treated with water or with aqueous solutions
of all kinds, of curling and simultaneously shrink-
ing on drying. If such yarns are present as warp
or weft in the fabric and if these fabrics are
treated in the way indicated, distortion of the
fabric takes place resulting in the so-called crepe
effect.

However, if this method of treatment is applied
to fabrics, the warp or weft of which consists
of highly twisted threads of acetyl cellulose, the
crepe effect either does not occur at all or else
only to an extent which is hardly noticeable.
The highly twisted acetate silk threads do not
possess therefore, or in any case only to a slight
extent, the property of curling and shrinking in
contact with warm water.

It has now been found that highly twisted
threads of acetyl cellulose acquire the property
of producing valuable crepe effects in fabrics
when treated with water if they contain sub-
stances which have for water a high affinity.
Such substances belong to various classes of bodies
and include, for example, inorganic salts, such
as calcium chloride or nitrate, or salts of or-
ganic acids, such as those of lactic acid.

The selected substance may be incorporated
into the threads in various manners. Prefer-
ably, the selected substance is incorporated in
the threads prior to the weaving of said threads
into fabrics and prior to the high twisting of the
yarn. Specifically, the selected substance is in-
corporated in the yarn by impregnating a skein
of the yarn with a solution thereof or passing
the yarn through a solution thereof during the
throwing operation or it is incorporated into the
spinning solution from which the thread is spun.

In order to obtain crepe effects, acetate silk
yarns which contain such substances as have been
mentioned above are highly twisted and made
to constitute the warp or weft of the fabric. The
fabric thus obtained is thereupon subjected to a

treatment with an aqueous medium. The treat-
ment can be performed separately or simulta-
neously with another step in manufacture, as, for
example, with the treatment in the bath for
removing the dressing or in the dye bath.

Example I

Ordinary acetate silk threads of 75 deniers
with 24 individual threads and an arrangement
of 51 threads to the centimeter are used for the
warp of a fabric, the weft consisting of acetate
silk thread containing 10% sodium lactate, twisted
alternately left and right, of the same standard
of fineness, having 2800 twists per meter and an
arrangement of 30 threads to the centimeter.
After weaving, the material is treated in a bath
with pure water at 85° C. In this way a beau-
tiful crepe effect similar to crepe-de-Chine is ob-
tained.

Example II

A skein of 100 denier cellulose acetate thread
consisting of 32 filaments twisted 2.5 turns per
inch, is immersed in an aqueous bath containing
15% by weight of sodium lactate and is allowed
to soak 30 minutes at 120° F. The skein is then
taken from the bath and whirled for 20 minutes
in an extractor to remove the major portion of
the water. The damp, modified thread, contain-
ing approximately 10% sodium lactate by weight
on the basis of the dry cellulose acetate, and
optionally a standard yarn dressing composition,
is given a crepe twist, for instance, 60 turns per
inch, and is employed as the weft in a fabric con-
taining lowly twisted regenerated cellulose threads
as the warp. By means of the customary boil-
off, a retraction of as much as 15% occurs with
the formation of desirable crepe effects on the
fabric.

Example III

Approximately 5% by weight of sodium lactate
is applied to 100 denier cellulose acetate thread
consisting of 32 filaments twisted 2.5 turns per
inch during the thread travel to a takeup bobbin
in a coning, spinning or crepe twisting operation.
The sodium lactate is applied to the thread from
a 15% aqueous solution of sodium lactate by
means of a rotating roller, capillary wipers or
like device in which the upper portion of the
applying device contacts the thread and the
lower portion contacts the sodium lactate solu-
tion. After inserting a crepe twist of about 60
turns per inch and after weaving into a fabric,
a good quality crepe is secured by submitting
the fabric to a customary aqueous boil-off.

Example IV

Sodium lactate, dissolved in a mixture of acetone and water, is added in sufficient amount to a cellulose acetate spinning solution to yield a spinning solution consisting of 2% sodium lactate and 20% cellulose acetate dissolved in a solvent mixture of 85% acetone and 15% water. The modified spinning solution is converted into a 75 denier thread consisting of 24 filaments and the thread is given a crepe twist of about 60 turns per inch. After weaving the crepe twisted thread into fabrics, and after treating the resulting fabrics with an aqueous bath at a temperature of 85° C., a beautiful creped effect similar to crepe-de-Chine is obtained.

It is to be understood that the invention is not restricted to the specific details set forth in the examples. For example, by varying the concentration of the sodium lactate solution or time of immersion of the yarn in the solution, a greater or lesser quantity of sodium lactate may be incorporated into the yarn. Satisfactory results have been secured in processing skeins as described in Example II by incorporating 4.5%

to 24.3% by weight of sodium lactate on the thread by using an aqueous bath containing 5% to 30% sodium lactate. Also, in the travelling thread method as described in Example III, satisfactory results have been obtained by using 15% to 25% aqueous solutions of sodium lactate to incorporate 4.8% to 5.6% by weight of sodium lactate on the dried threads.

This application is a division of application Serial No. 528,240, filed April 6, 1931, now Patent No. 2,107,657.

We claim:

1. A process for producing crepe effects on fabrics which comprises fabricating highly twisted cellulose acetate yarns containing sodium lactate into a fabric, and treating the fabric with an aqueous medium.

2. A process for producing crepe effects on fabrics which comprises fabricating highly twisted cellulose acetate yarn containing up to approximately 10% sodium lactate into a fabric and treating the fabric with an aqueous medium.

HANS ALTWEGG.
ARMIN EICHLER.