

UNITED STATES PATENT OFFICE

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MANUFACTURE AND PRODUCTION OF
FILAMENTS, THREADS, BANDS AND THE
LIKE FROM VISCOSEHorace James Hegan and John Henry Taylor,
Coventry, England, assignors to Courtaulds
Limited, London, EnglandNo Drawing. Application August 31, 1929, Serial
No. 389,874, and in Great Britain October 22,
1928

6 Claims. (Cl. 106—40)

In the specification of the application of Glover and Heaven, Serial Number 161,020 filed January 13th, 1927 it has been proposed to produce viscose threads, filaments and the like possessing a reduced lustre, by employing viscose containing a small proportion of a high boiling non-solid petroleum body such for instance as liquid petroleum or petroleum jelly, or a mixture of both. In the said specification a method is described in which the petroleum body is added to the viscose and the whole is mixed until the petroleum body is thoroughly emulsified throughout the viscose. Further, in the specification of British Letters Patent No. 294,805, we have stated that the presence of a small proportion of cyclohexanol in the mixture of viscose and petroleum body assists in the obtainment of a better emulsion.

We have now found that certain advantages can be obtained if, in addition to the said petroleum body, a proportion of at least one component of a blown saponifiable oil be used in admixture with the viscose. As an example of such blown saponifiable oil, we specify blown sperm oil, that is to say, sperm oil through which, while in the heated condition, air has been blown. A suitable proportion of blown sperm oil to be used according to this invention is 25 parts of the blown sperm oil to 75 parts of the petroleum body employed. Among the advantages obtained by the addition of the blown sperm oil to the petroleum body and viscose the following may be mentioned. The petroleum body is more easily emulsified throughout the viscose, and the emulsion is more stable, and further, the threads obtained from such mixture of viscose, petroleum body and blown sperm oil possess special dyeing properties, in that they are capable of taking up certain dyes, which are not taken up, or not taken up to the same degree, by ordinary viscose silk, so that cross-dyeing effects can be readily effected with filaments and the like obtained according to this invention.

Instead of blown sperm oil, other blown animal or vegetable oils may be employed according to this invention, although it should be understood that all such blown oils do not give equally good results. Generally speaking, we have found blown sperm oil to be the most suitable for the purposes of this invention, but blown cottonseed oil, rape oil, olive oil and whale oil also produce the same result to a greater or lesser degree. The process of blowing sperm oil and other oils of a similar nature appears to cause some saponification of the oil, splitting it up partially into the corre-

sponding alcohol and acid, and it also appears to cause some oxidation, since the iodine value of the oil is reduced, while the acetyl value is increased by the action of blowing. It will therefore be understood that instead of employing the blown oil, the invention also comprises the use of a mixture of such ingredients as occur in blown oil with corresponding advantages at least to some extent. In some cases a considerable advantage is obtained by employing only one or some of the ingredients; for example, we have found that an advantage according to this invention can be obtained by employing blown oleic acid, instead of blown olive oil.

The following example will further illustrate how the said invention may be carried out in practice but the invention is not limited thereto.

75 parts of liquid petroleum having a boiling point above 300° centigrade are mixed with 25 parts of blown sperm oil which has been obtained by blowing a current of air at 70° centigrade for 40 hours through sperm oil heated to 95° centigrade. The mixture so prepared is introduced into a filtered and evacuated viscose in such proportions that 1 part of the mixture is mixed with 100 parts of viscose, the mixing being conveniently effected as described in the application of William Henry Stokes, Serial Number 236,880, filed November 30th, 1927.

What we claim is:—

1. In a process for the manufacture and production of filaments, threads, bands and the like from viscose, the step of mixing with the viscose a high-boiling non-solid petroleum body and a blown saponifiable oil.
2. In a process for the manufacture and production of filaments, threads, bands and the like from viscose, the step of mixing with the viscose a high-boiling non-solid petroleum body and blown sperm oil.
3. In a process for the manufacture and production of filaments, threads, bands and the like from viscose, first filtering and evacuating the viscose, then adding a mixture of a high-boiling non-solid petroleum body and a blown saponifiable oil, and mixing the whole while avoiding any introduction of air into the solution to be spun.
4. In a process for the manufacture and production of filaments, threads, bands and the like from viscose, first filtering and evacuating the viscose, then adding a mixture of a high-boiling non-solid petroleum body and blown sperm oil, and mixing the whole while avoiding any introduction of air into the solution to be spun.
5. In a process for the manufacture and pro-

duction of filaments, threads, bands and the like from viscose, the step of mixing with the viscose a high boiling non-solid petroleum body and a constituent of a blown saponifiable oil, which constituent has a lower iodine and a higher acetyl value than the oil from which it is derived.

6. In a process for the manufacture and production of filaments, threads, bands and the like from viscose, first filtering and evacuating the vis-

cose, then adding a mixture of a high boiling non-solid petroleum body with at least one constituent of blown saponifiable oil which constituent has a lower iodine value and a higher acetyl value than the oil from which it is derived and mixing the whole while avoiding any introduction of air into the solution to be spun.

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