H. C. WHITMAN.

BLANKET.

APPLICATION FILED APR. 20, 1915.

1,249,266. Patented Dec. 4, 1917.

Fig. 1.

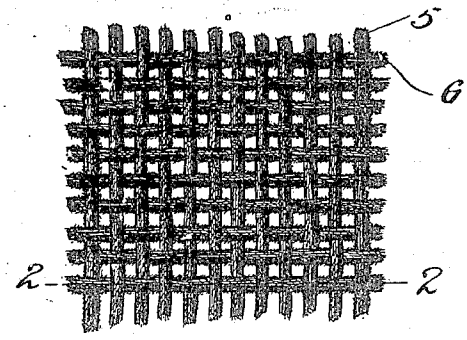



Fig. 2.




Witnesses:
G. V. Kammann
Ralph E. Clayton

Inventor:
HAROLD C. WHITMAN
By
Briesen & Schenk
Attorneys

# UNITED STATES PATENT OFFICE.

HAROLD C. WHITMAN, OF ESMOND, RHODE ISLAND.

## BLANKET.

1,249,266. Specification of Letters Patent. Patented Dec. 4, 1917.

Application filed April 20, 1915. Serial No. 22,650.

*To all whom it may concern:*

Be it known that I, HAROLD C. WHITMAN, a citizen of the United States, and a resident of Esmond, Rhode Island, have invented a certain new and useful Blanket, of which the following is a specification.

This invention relates to the production of a blanket of new constitution and manufacture, the object of the invention being to supply the people with a blanket which shall have many of the characteristics and valuable features of a woolen blanket, while avoiding some of the disadvantageous features of a blanket made of wool, the blanket being, however, composed throughout of relatively inexpensive fibers of vegetable origin.

Blankets as at present made are composed of cotton or wool, or mixtures of the two. While the wool blanket is rougher and warmer than the cotton blanket, it shrinks when washed and the cotton blanket, no matter how carefully made, never possesses either the feel or roughness of wool, nor the warmth-giving qualities of the animal hair.

I have now discovered that if I incorporate in a blanket having a cotton foundation a substantial amount of fine, short fibers composed of viscose, cellulose or a substance known as artificial silk, I am able to produce a blanket which has the feel and roughness of wool, which can be washed without shrinking, the added fibers, contributing tremendously to the warmth of the blanket, all at a price which would be approximately the same as that of cotton blankets.

In order to take advantage of this invention, it is first necessary to produce the manufactured vegetable fibers required as the characteristic ingredient of my new blanket. In the ordinary manufacture of artificial silk or other similar manufactured fibers, a series of extremely fine, chemically prepared threads are customarily, during the process of their creation, spun or otherwise united into a strand or thread which when finished is composed of a multiplicity of continuous, very delicate filaments. Threads of this character are not readily available for the purposes of my invention and I have therefore found it necessary to devise a process according to which I am able to obtain directly from the initial process of manufacture, such filaments as are appropriate for my purpose. Instead of forming the cellulose, viscose, etc., as the same first emerges from the minute orifices of the artificial silk-making machinery, I pass each filament individually through the finishing step and separate such filaments into short lengths so that I throughout deal only with unitary, filamentary structures. By proceeding in this way, I obtain a product which is directly fit for my uses. It is, of course, possible in order to secure the short fine fibers which I require for my invention, to employ the artificial silk as at present made, but the expense of producing such silk is so largely attributable to the necessity of combining a series of minute continuous filamentary bodies into a single thread that my process for forming the short, non-continuous, individual, minute units is a substantial improvement in the art relating to the formation of artificial fibers from vegetable origin.

Where I use artificial silk of the kind now manufactured, it is not necessary to employ the fibers as they appear upon the market, but the most advantageous form of that product for the purpose of reducing expense, is found in the waste product of the artificial silk factories. This waste product is, of course, composed of a number of individual continuous filaments just as the finished artificial silk is, but it is considerably cheaper. This waste usually appears in the form of tangled threads and when it is used for the purposes of my invention, it is first placed in a machine of the same character as is employed for tearing up ordinary cotton threads. The result of this treatment is to tear the threads into small lengths and furthermore to divide them into their individual filamentary constituents. This process breaks up the filaments in the threads and results in the production of a very fine unitary, individual, but spinnable stock. This stock is now in substantially the same condition as the stock which is produced by my special process, which begins and finishes in the factory which makes the artificial filament as above described.

These fine filaments are next mixed with cotton in appropriate percentages. The particular example which I will specify as being advantages being 60% fibers and 40% cotton. After being thoroughly mixed, the product is put through the usual cards and spinning frames and it is then found they will properly cohere and produce a successful structural result. The material is then

woven into blankets and then napped in the usual fashion.

The yarn thus obtained from the above method has a considerably softer twist than other yarns used for other purposes and I do not herein intend to claim the fine yarns, irrespective of whether the same may be old or new, because in the making of blankets I am dealing with a special problem which could not be answered even if a fine yarn with a hard twist had already been produced any more than I could clearly say after having produced my blanket yarn that a similar yarn having a harder twist and very much finer could be used for other purposes. It is, of course, essential also that the fiber which I use shall be mixed with cotton and be of such a nature as to make it practical in the manufacture of a blanket. The experiments which I made and the results which I obtained have satisfied me that short, fine filamentary stock was capable of being mixed with cotton and spun into a small blanket yarn in the regular system of spinning, a fact as to which nothing heretofore known to me was able to supply me with any information whatsoever. A convenient length for the individual artificial fibers or filaments is from $1\frac{1}{2}$ to $2\frac{1}{2}$ inches. The blankets produced as above described have a rough woolly feel and combine the advantages of a cotton blanket with those of a woolen blanket, while avoiding some disadvantages inherent in each of these two. It is immaterial whether the blanket is made of plain or jacquard weave, or whether it is made from yarn spun in part or whole from artificial silk waste, or other viscose or cellulose fibers. Although cotton is preferred as a base, the invention as perfected may also be employed with other raw materials such as wool or flax, for example. When the filaments are made by the special process devised by me, the cellulose or viscose compound is dried directly in the form of fibers of the required length and thickness, whereas if an artificial silk waste is used, the thread after first being made is substantially cut or broken into smaller pieces or unitary fibers of approximately the dimensions specified. In each case, the object is to produce a fiber from cellulose, viscose, or the like, to make a unitary fiber and not to make a thread or threads as in the case of artificial silk or artificial horsehair, or that type of product.

In the drawing accompanying this application Figure 1 illustrates an enlarged plan view of a portion of the blanket with the spaces between adjacent fibers exaggerated and Fig. 2 represents a section of Fig. 1 on the line 2—2.

Referring to the drawings 5 indicates a weft thread comprising a mixture of cotton and short lengths of artificial silk as hereinbefore described and 6 a warp thread similar to 5.

What I claim is:

1. A blanket composed of napped yarn having a soft twist, the yarns being spun from a mixture of natural fibers and a relatively large proportion of artificially produced filaments of vegetable origin, the blanket having a surface which to the touch resembles the feel of a woolen blanket.

2. A blanket composed of napped yarn having a soft twist, the yarns being spun from a mixture of cotton fibers and a relatively large proportion of artificially produced filaments of vegetable origin, the blanket having a surface which to the touch resembles the feel of a woolen blanket.

3. A blanket composed of napped yarn having a soft twist, the yarns being spun from a mixture of natural fibers and a relatively large proportion of fibers of artificial silk, the blanket having a surface which to the touch resembles the feel of a woolen blanket.

4. A blanket composed of napped yarn having a soft twist, the yarns being spun from a mixture of natural fibers and a relatively large proportion of short lengths of fibers of artificial silk, the blanket having a surface which, to the touch, resembles the feel of a woolen blanket.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

HAROLD C. WHITMAN.

Witnesses:

JOHN A. PEARSON,

WILLIAM I. NIXON.