July 14, 1931. F. G. MURCH 1,815,027

TEXTILE MATERIAL AND PROCESS OF MAKING

Filed June 8, 1928

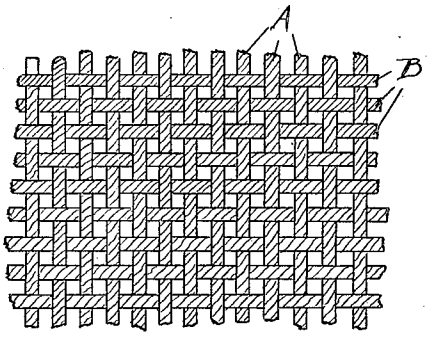


Fig. 1.

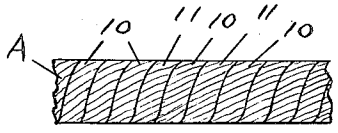


Fig. 2.

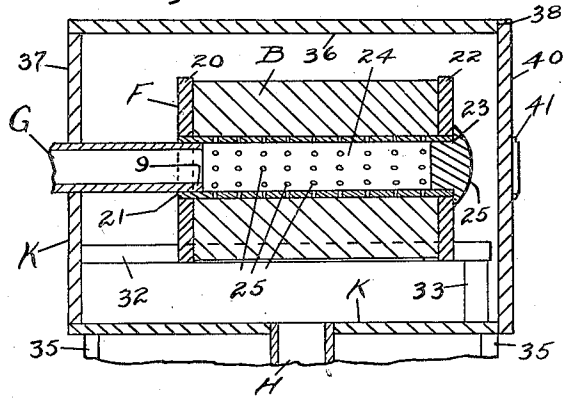


Fig. 3.

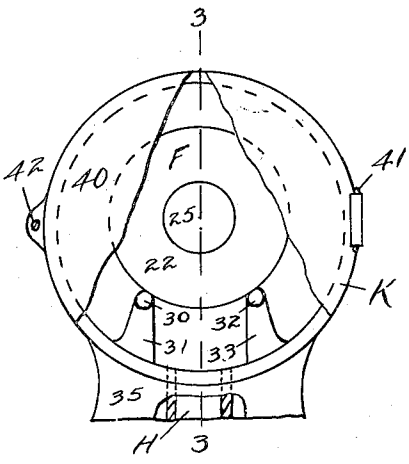


Fig. 4.

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TEXTILE MATERIAL AND PROCESS OF MAKING

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This invention relates to a particular type of cloth which is especially useful for wearing apparel of men and women.

It is rather harsh to the feel but has excellent wearing qualities and it will not shrink as much as other cloth made of woolen fibers, and will keep its shape much longer than most woven goods.

It is made of twisted yarn or cables the warp and the filling being sustantially the same, both being built up of a plurality of worsted threads twisted beyond the point of greatest tensile strength and almost up to the breaking point.

This yarn after being so twisted is wound upon a spool and steam is forced through the yarn mass on the spool until it has been fully set. It is then dried.

Yarn so twisted and set will not kink but is straight and firm. It will not untwist and has very little stretch either when wet or dry.

In the drawings, Fig. 1 is a plan view very much enlarged showing a small section of cloth of my construction.

Fig. 2 is a very much enlarged plan view of one of the strands of twisted yarn of my invention.

Fig. 3 is a vertical sectional view showing a spool being steamed in my preferred manner. This is a view from the left as on the line 3—3 of Fig. 4.

Fig. 4 is an end elevation as from the right of Fig. 3.

In the drawings, A represents the warp and B the filling, or B represents the warp and A the filling as both are made of substantially the same yarn.

In Fig. 2, I show a yarn built up of two threads 10 and 11 which threads have been spun in the usual manner.

These threads 10 and 11 are twisted on a twisting frame beyond the point of greatest tensile strength and almost to the breaking point.

After being so twisted or in the process of twisting they are wound on a spool such as F having the heads 20 and 22 with a barrel 24 through which are a large number of perforations 25. Preferably one end 23 is closed while from the other end 21 extends the pipe G to a vacuum machine which sucks the air out from the inside of barrel 24.

The whole device is preferably enclosed in a casing K into which by means of a pipe H steam is introduced at the same time that the vacuum is being created by the pipe G. The result is that clean steam passes through the yarn mass indicated at B, passing out through the holes 25 and the pipe G.

The end 23 of spool barrel 24 is preferably closed by a plug 25 and the casing K, as shown, rests on supports 35, 35, and is generally of cylindrical form as at 36 having the closed end 37 through which exhaust pipe G passes, and an open end 38 which can be closed by the door 40 hinged at 41 and having a latch or closing member 42 whereby it may be made tight while the operation is proceeding.

As shown, the spool F carrying the yarn mass B is slid into place on the rails 30 and 32 carried by supports 31 and 33 until the end 21 of spool barrel 24 engages the end 9 of pipe G.

I claim:

1. A woven cloth of which both the warp and filling yarn are made of a plurality of worsted threads twisted together beyond the point of greatest strength and almost to the breaking point, such twist having been permanently set in the yarn by treating with steam and then drying.

2. A yarn made of a plurality of worsted threads twisted together beyond the point of greatest strength and almost to the breaking point, such twist having been permanently set in the yarn by treating with steam and then drying.

3. The process of making twisted yarn for weaving which consists of twisting a plurality of worsted threads almost to the breaking point and of then forming a yarn mass thereof and of passing steam through the yarn mass to set the twist in the yarn and then drying the yarn.

4. A woven fabric for wearing apparel in which both the warp and filling yarn are made of a plurality of worsted threads having a substantially higher degree of twist

than cords of the same unit weight which have been twisted to avail them of their maximum tensile strength and almost to the breaking point of the yarn, such twist being permanently set in the yarn.

5. A worsted yarn for making woven wearing apparel made of a plurality of worsted threads twisted together having a substantially higher degree of twist than cords of the same unit weight which have been twisted to avail them of their maximum tensile strength and almost to the breaking point, such twist being permanently set in the yarn.

FRANK GILMAN MURCH.