W. STAFFORD & R. C. HOLT.

KNITTED FABRIC.

APPLICATION FILED SEPT. 8, 1915.

1,179,467.

Patented Apr. 18, 1916.

2 SHEETS—SHEET 1.

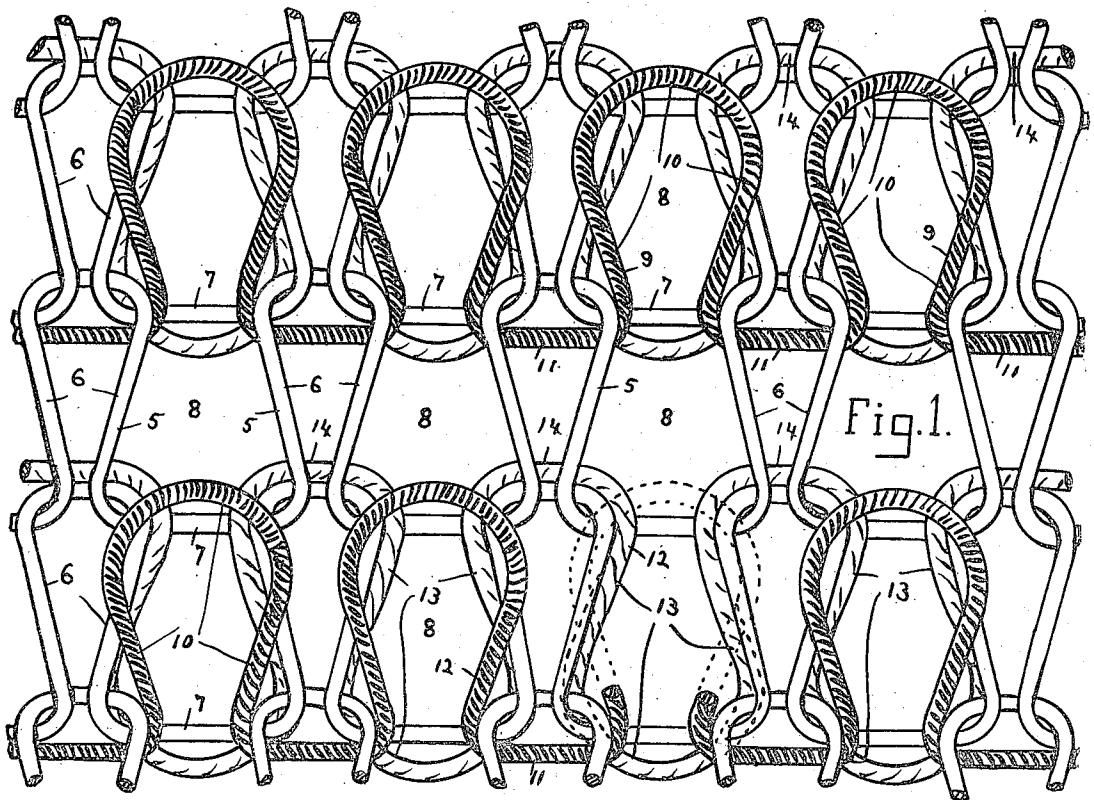


Fig. 1.

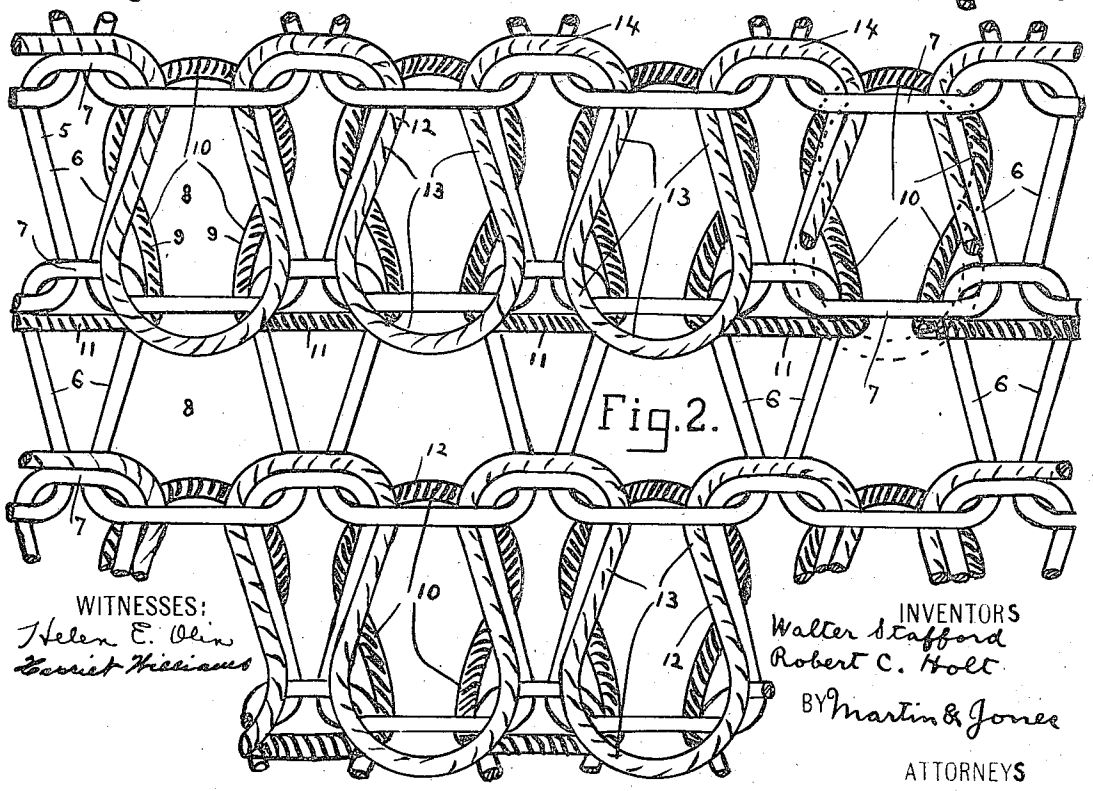


Fig. 2.

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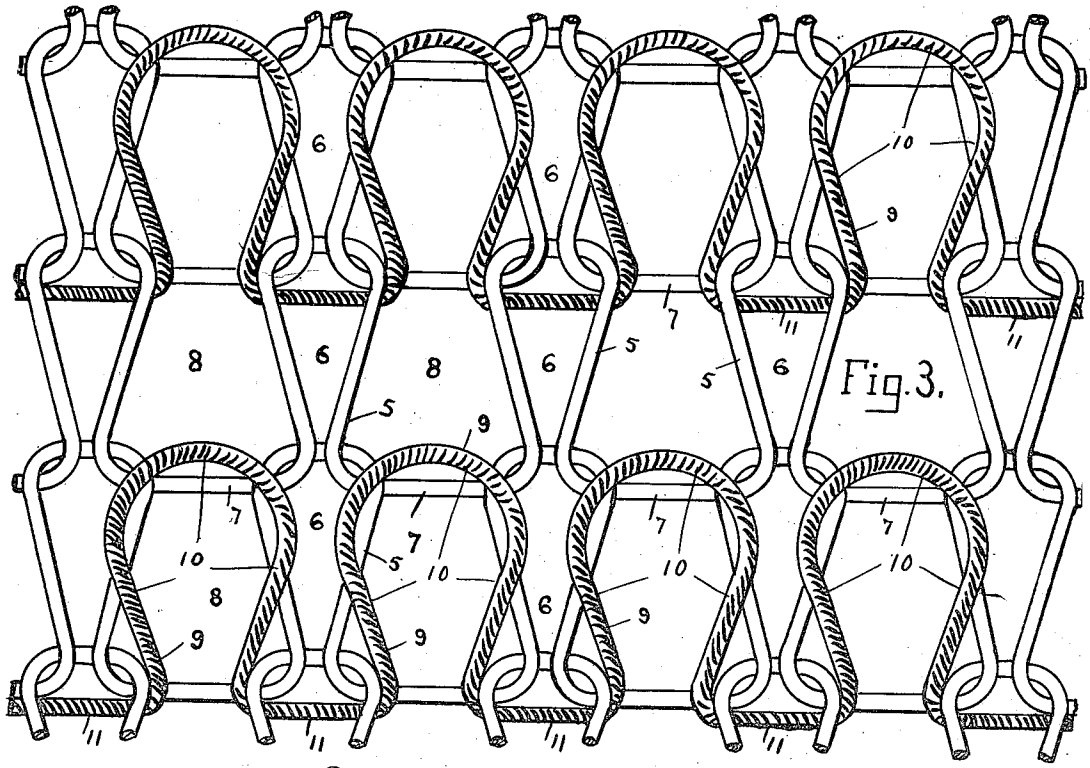


Fig. 3.

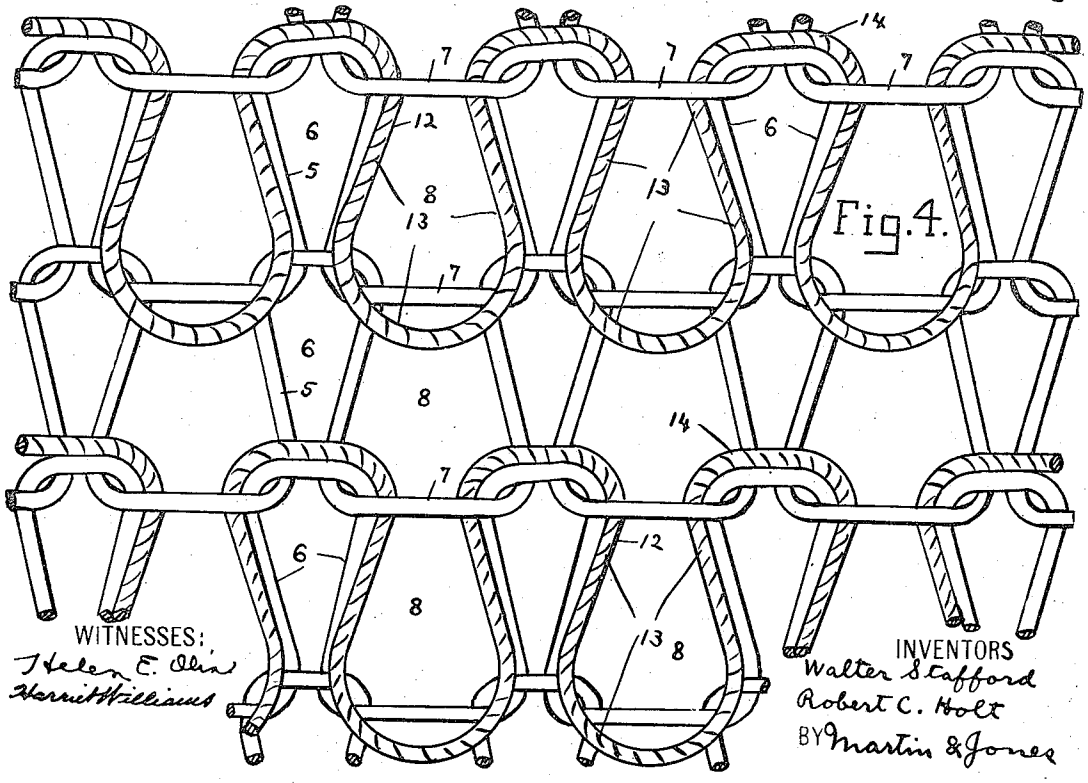


Fig. 4.

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UNITED STATES PATENT OFFICE.

WALTER STAFFORD AND ROBERT C. HOLT, OF LITTLE FALLS, NEW YORK.

KNITTED FABRIC.

1,179,467. Specification of Letters Patent. Patented Apr. 18, 1916.

Application filed September 8, 1915. Serial No. 49,616.

To all whom it may concern:

Be it known that we, WALTER STAFFORD and ROBERT C. HOLT, of Little Falls, in the county of Herkimer and State of New York, have invented certain new and useful Improvements in Knitted Fabric; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the reference numerals marked thereon, which form part of this specification.

Our present invention relates to that class of knitted fabrics composed of a basic web and two series of fleecing threads other than the basic web threads, and which fleecing threads are caught or laid into the basic web instead of being knitted into the stitches of said web.

The purpose of our invention is to provide an improved fabric of the class described and one which is economical in manufacture, durable in use and well adapted for many general and special purposes.

A further purpose is to provide a fabric of the class described wherein one series of fleecing threads projects in loops from one side only of the fabric and the other series of fleecing threads projects in loops from the other side only of the fabric.

Another purpose of our invention is to provide a fabric as described above wherein the attached ends of both series of fleecing thread loops are back of the wales of the basic web, one series of fleecing loops projecting past said wales to the front of the fabric and the other series passing in front of the connecting threads and through the meshes to the back of the fabric.

Further purposes and advantages of our invention will appear from the specification and claims herein.

Figure 1 is a view on a greatly enlarged scale of the front of a portion of knitted fabric embodying our invention. Fig. 2 is a view on a similar scale of the back of a portion of said fabric. Fig. 3 is a view on a similar scale of the front of a portion of said fabric with the back fleecing threads removed. Fig. 4 is a view on a similar scale of the back of a portion of said fabric with the front fleecing threads removed.

Referring to the drawings herein, it will be seen that the basic web of the fabric illustrated is the well-known simple plain web such as is commonly produced by a single series or circle of needles all knitting at each feed with one thread. From the basic web thread 5 there are formed vertical rows of stitches or wales 6 on one side of the fabric (hereinafter for convenience and definiteness called the front side of the fabric) and these stitches are severally connected to their adjacent stitches in the same horizontal course by the said basic web thread 5 extending horizontally as connecting threads 7 which are located on the other side of the fabric (hereinafter called the back side of the fabric).

The successive stitches of the basic fabric are formed of the thread 5 in loops passing to the front of the fabric through the loop of the preceding stitch and extending upwardly as shown in the drawings and there in turn receiving through its loop in a similar way the loop of a stitch in the next course of stitches. Between each two adjacent stitches in the same course and their two or upper end and lower connecting threads 7 are left meshes 8 which are shown in the drawing in the usual exaggerated form.

It will be evident that for a basic web many of those well known in the art may be used without departing from the spirit of our invention, but we consider the said plain basic web the preferred form of basic web for our complete fabric.

Formed from fleecing thread 9 and laid or caught into the basic web but not knit into the stitches thereof, is one series of fleecing loops 10 hereafter called the front fleecing loops in that they project from the front surface of the fabric. These fleecing loops 10 are in horizontal rows or courses and project through all or certain of the meshes 8 between the stitches in a horizontal course of stitches of the basic web and are held therein by the fleecing thread 9 extending as connecting threads 11 back of the wales 6. It will

be understood that in the actual fabric the wales 6 are closer together and the meshes relatively smaller than shown in the drawings so that the fleecing loops 10 when once formed remain in place with sufficient permanence to admit of the fabric being used for many purposes.

The front fleecing loops 10 are illustrated as inclining upwardly in the drawings as that is the direction they apparently naturally assume as the fabric is formed by our process of knitting. They may, however, be caused to incline the other way more or less if desired since it will be evident that a whole course of these loops may be rolled over bodily as it were with their connecting threads turning in the fabric without bending the loops, the extent of such change of direction depending upon the closeness of formation of the fabric and the character of the threads used.

It will be noted that the front fleecing loops come through the meshes 8 of one course toward the upper end (as viewed in the drawings) of said meshes and projecting upwardly will overlap the front of the fabric thereabove more or less according to the length of said loops. As illustrated said loops 10 substantially overlap the meshes 8 in the course next above the course of meshes from which said fleecing loops 10 project.

Formed from another fleecing thread 12 and laid or caught into the basic web but not knit into the stitches thereof, is the other series of fleecing loops 13 hereafter called the back fleecing loops because they project from the back surface of the fabric. These fleecing loops are in horizontal rows or courses and project through all or certain of the meshes 8 between the stitches in a horizontal course of stitches of the basic web but project from different courses than where the front fleecing loops 10 are located.

The back fleecing loops 13 are held in place in the basic web by the said fleecing thread 12 extending as connecting threads 14 between adjacent loops 13, in front of the connecting threads 7 of the basic web that is toward the front of the fabric but back of the said connecting threads 7 as they are seen in Figs. 2 and 4, and then back of the wales 6 that is toward the back of the fabric but in front of said wales 6, as they are seen in Figs. 2 and 4. It will be noted that while these back fleecing threads come out from the meshes 8 of one course of stitches, their connecting threads 14 pass upwardly, as viewed in the drawings and (as viewed in Figs. 2 and 4) back of the upper connecting threads 7 of the basic web and then in front (as viewed in Figs. 2 and 4) of the wales of the course next above that from between which said back fleecing loops project. This results not only in the said back fleecing loops inclining downwardly as illustrated in the drawings but holds them quite firmly in such downwardly inclined position. It will be obvious also that these loops are securely held into the basic web against accidental displacement.

It will be noticed that the back fleecing loops 13 come through the meshes 8 of one horizontal course of stitches toward the upper end of said meshes (as viewed in the drawings) and being inclined downwardly overlap the meshes from which they project more or less according to the length of said loops.

Where, as shown in the drawings which we consider the preferred form, the different series of fleecing loops are arranged in alternate courses of stitches, it will result from the arrangement of the different series of fleecing loops just above mentioned that apparently both series overlap one and the same course of stitches and leave alternate courses uncovered. This is true to the extent that decided ridges of fleecing loops may be produced, but it will be understood that in actual fabric the distance between courses is so short and the fleecing loops are made relatively longer and so effectively cover both surfaces of the fabric. We have shown in the drawings relatively very large spaces between the courses and short fleecing loops, in order to more clearly illustrate the structure of the fabric as made up of different threads and loops rather than to suggest a fabric thick, compact, and deeply fleeced on both sides as is the effect when the actual fabric is seen or handled.

What we claim as new and desire to secure by Letters Patent is:

1. A knit fabric comprising a basic web with its wales on its front side and its connecting thread on the back side and two series of fleecing threads, one of said threads laid into said basic web back of said wales and projecting therepast in loops on the front side of the fabric, the other thread forming projecting loops on the back side of the fabric and caught into the basic web by passing back of the wales and in front of the connecting threads.

2. A knit fabric comprising a basic web having wales on its front side and connecting threads on its back side and two series of fleecing threads, one series projecting in loops from between said wales and caught therebehind and the other series projecting in loops from between said connecting threads and caught thereinfront but back of the wales.

3. A knit fabric comprising a basic web having its wales on its front side and its

connecting threads on its back side and a plurality of fleecing threads, some of said fleecing threads projecting in loops from between certain of said wales and caught therebehind and the others projecting in loops from between certain of said connecting threads and caught thereinfront but back of the wales.

In witness whereof we have affixed our signatures, in the presence of two witnesses, this 12th day of June, 1915.

WALTER STAFFORD.
ROBERT C. HOLT.

Witnesses:
REUBEN E. FAILING,
IRVIN W. GETMAN.