R. W. SCOTT.

KNITTED WEB AND MAKING OF SAME.

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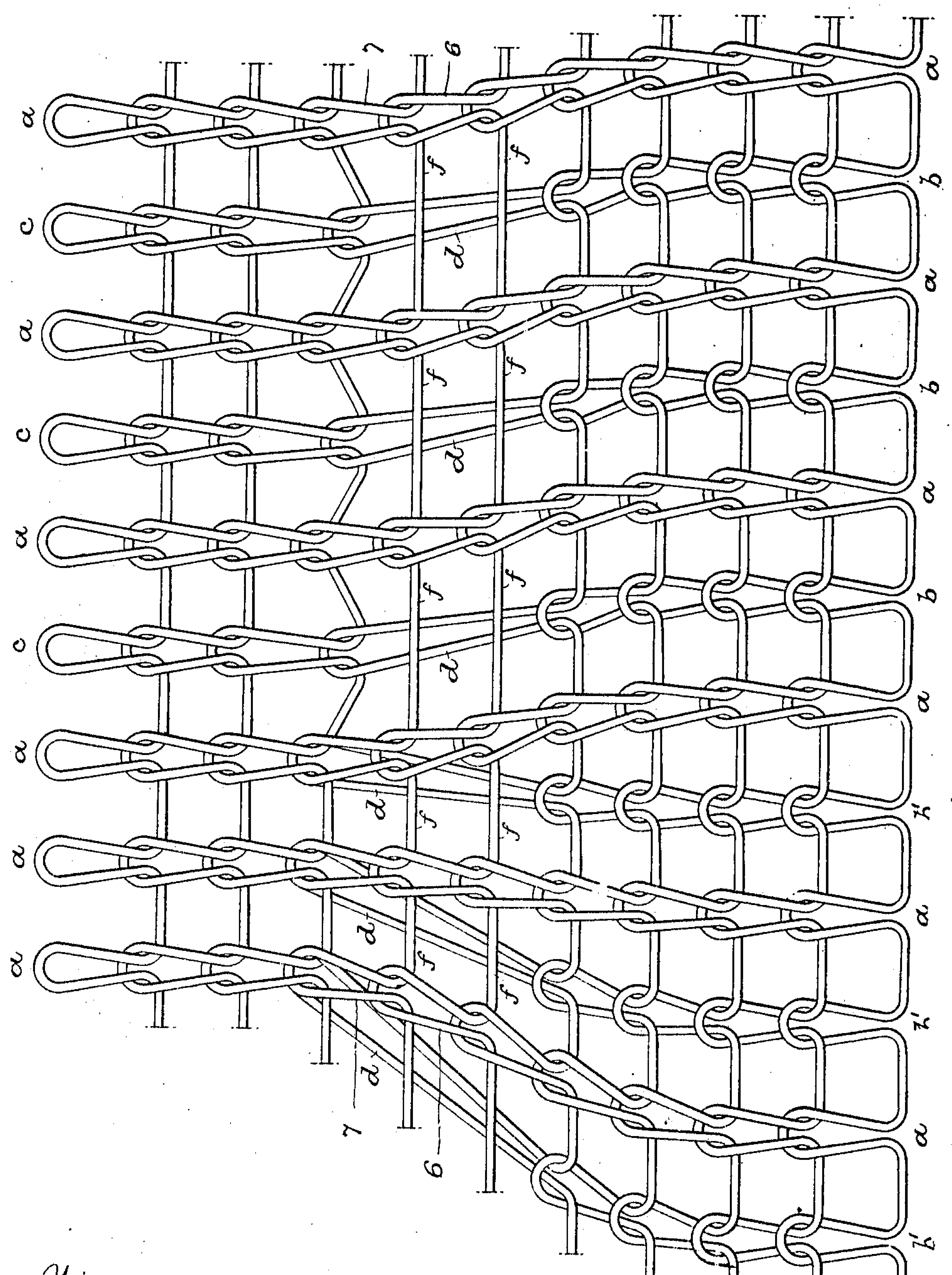
993,799.

Patented May 30, 1911.



Witnesses

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UNITED STATES PATENT OFFICE.

ROBERT W. SCOTT, OF LEEDS POINT, NEW JERSEY, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO SCOTT & WILLIAMS, INCORPORATED, OF CAMDEN, NEW JERSEY, A CORPORATION OF NEW JERSEY.

KNITTED WEB AND MAKING OF SAME.

993,799. Specification of Letters Patent. Patented May 30, 1911.

Application filed February 23, 1907. Serial No. 358,958.

To all whom it may concern:

Be it known that I, ROBERT W. SCOTT, a citizen of the United States, residing in Leeds Point, Atlantic county, New Jersey, have invented certain Improvements in Knitted Webs and in Making the Same, of which the following is a specification.

My invention relates to that class of knitted fabrics which are partly ribbed and partly plain, or in which there is a greater number of rib wales in one portion of the web than in another, or a change in the character of the rib in successive portions of the web, these results being effected by merging or transforming rib wales in one portion of the web into plain wales in an adjoining portion, or merging or transforming plain wales in one portion of the web into rib wales in an adjoining portion.

The object of my invention is to so knit such a web as to insure greater certainty in transferring stitches from one wale to another than in fabrics of this type as heretofore made.

The figure in the accompanying drawing represents, on a much exaggerated scale, a knitted fabric embodying my invention.

In the fabric shown in the drawing, a one-and-one ribbed web is transformed into a plain web having a lesser number of wales than the ribbed web, the change being effected partly by a straight transfer and partly by a doubling transfer of the rib stitches, "straight transfer" in this connection meaning one in which the stitches are transferred from the ribbing needles to corresponding and previously inoperative plain web needles, and "doubling transfer" meaning the transfer of stitches from the ribbing needles to previously operative plain web needles which therefore have stitches already formed upon them.

In the drawing, *a*—*a* represent continuous plain wales of the web, *b*—*b* rib wales which are transformed into plain wales *c* by a straight transfer, and *b'*—*b'* rib wales which are merged into adjoining plain wales *a* by a doubling transfer. One means of effecting such transfers is shown and described in my previous Letters Patent 830,373, 830,374 and 830,375, dated September 4, 1906. It has been found in practice, however, that the transfer of the stitches is attended with greater certainty if the stitch which is to be transferred is materially elongated before such transfer is attempted, and, in producing the fabric forming the subject of my present invention, I effect such elongation of the transferred stitches in the following manner:

Supposing that the web is to be transformed from a ribbed web into a plain web, the knitting upon the ribbing needles is arrested during the formation of one or more courses of stitches, and preferably during the formation of a plurality of courses of stitches, upon the plain web needles, such courses being represented at 6 and 7 in the drawing, and forming in connection with the transferred stitches what is termed a "welt." The formation of these courses of stitches upon the plain web needles results in a material elongation of the stitches hanging upon the ribbing needles, and, after the desired number of courses of stitches upon the plain web needles have been produced, the elongated stitches of the ribbed web, represented at *d* in the drawing, are transferred to the plain web needles either by straight or doubling transfer, as the case may be. In the case of a straight transfer, this elongation of the transferred stitches so isolates them from the previously knitted web that no defect in transfer is likely to result by reason of the receiving needle engaging a stitch other than that which it is intended to transfer to the same, and in the case of a doubling transfer this result is attended with the further advantage that the shogging angle of the transferred stitch is much less than it would be if the stitch was transferred into the receiving course directly from the last preceding course, the shogging or doubling transfer, in my improved fabric, being therefore effected with almost the same facility as a straight transfer whether the stitches are shogged individually or in a body.

The formation of eyelet holes at the transfer point, which might otherwise result from the elongation of the transferred stitches, is prevented by the barring effect of the sinker wales *f* intervening between the plain web wales which were formed while the knitting operation upon the ribbing needles was arrested.

Although I have illustrated my invention as embodied in a web in which change is

effected from ribbed web to plain web partly by a straight transfer and partly by a doubling transfer of stitches in a single course, some of the transfers may be of stitches in one course, and other transfers may be of stitches in a succeeding course, by arresting the knitting first upon a portion only of the ribbing needles, and then upon other ribbing needles, or the invention may be embodied in webs which are ribbed throughout but in which there are a less number of rib wales in one portion than in another, or to webs in which the character of the ribbed web is different in different portions, and all of the transfers may be straight transfers or doubling transfers depending upon the character of the web to be produced, or stitches may be transferred from plain web wales to rib wales or even from wales of one face of the web to other wales of the same face, the advantages arising from the elongation of the transferred stitches being substantially the same in either case.

I claim:—

1. A knitted fabric having stitches transferred from certain needle wales into adjoining wales, said transferred stitches being drawn across one or more sinker wales in courses intervening between that from which they are transferred and that into which they are transferred.

2. A knitted fabric having stitches transferred from certain needle wales into adjoining wales, said transferred stitches being drawn from a course which precedes by a plurality of courses that into which they are transferred and across a plurality of sinker wales in the intervening courses.

3. A ribbed knitted fabric having stitches of wales of one face transferred into wales of the other face, said transferred stitches being drawn across one or more courses intervening between that from which they are transferred and that into which they are transferred.

4. A ribbed knitted fabric having stitches of wales of one face transferred into wales of the other face, said transferred stitches being drawn from a preceding course which is removed by a plurality of courses from that into which they are transferred.

5. A knitted fabric having elongated stitches of certain needle wales transferred into adjoining wales, said elongated stitches being drawn across a plurality of sinker wales extending from the receiving needle wale to an adjoining needle wale.

6. A ribbed knitted fabric having stitches transferred from wales of one face to wales of the other face of the web, said transferred stitches being drawn across sinker wales intervening between wales of that face of the web into which the stitches are transferred.

7. A ribbed knitted fabric having stitches transferred from wales of one face to wales of the other face, said transferred stitches constituting part of a welt formation in the knitted web.

8. A ribbed knitted fabric having stitches of wales of one face transferred into wales of the other face by a doubling transfer, said transferred stitches being drawn across one or more courses intervening between that from which they are transferred and that into which they are transferred.

9. A ribbed knitted fabric having stitches of wales of one face transferred into wales of the other face by a doubling transfer, said transferred stitches being drawn from a preceding course which is removed by a plurality of courses from that into which it is transferred.

10. The mode herein described of effecting change in the character of a knitted web, said mode consisting in arresting the knitting temporarily upon certain of the needles while continuing the knitting upon the remaining needles, and, after the formation of one or more courses upon the latter needles, transferring the stitches from the temporarily retired needles onto the receiving needles.

11. The mode herein described of effecting change in the character of a knitted web, said mode consisting in first knitting ribbed web upon two sets of needles, then temporarily arresting the knitting operation upon needles of one set while continuing the knitting upon the remaining needles, and then transferring stitches from the needles thus temporarily put out of action onto needles of the other set.

12. The mode herein described of changing the character of a knitted web, said mode consisting in first knitting a ribbed web upon two sets of needles, then arresting the knitting operation upon needles of one set while continuing to knit upon the remaining needles, and then removing the stitches from the needles which were temporarily out of action and transferring said stitches to needles of the other set after a lateral displacement or shogging of said transferred stitches.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

ROBERT W. SCOTT.

Witnesses:
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