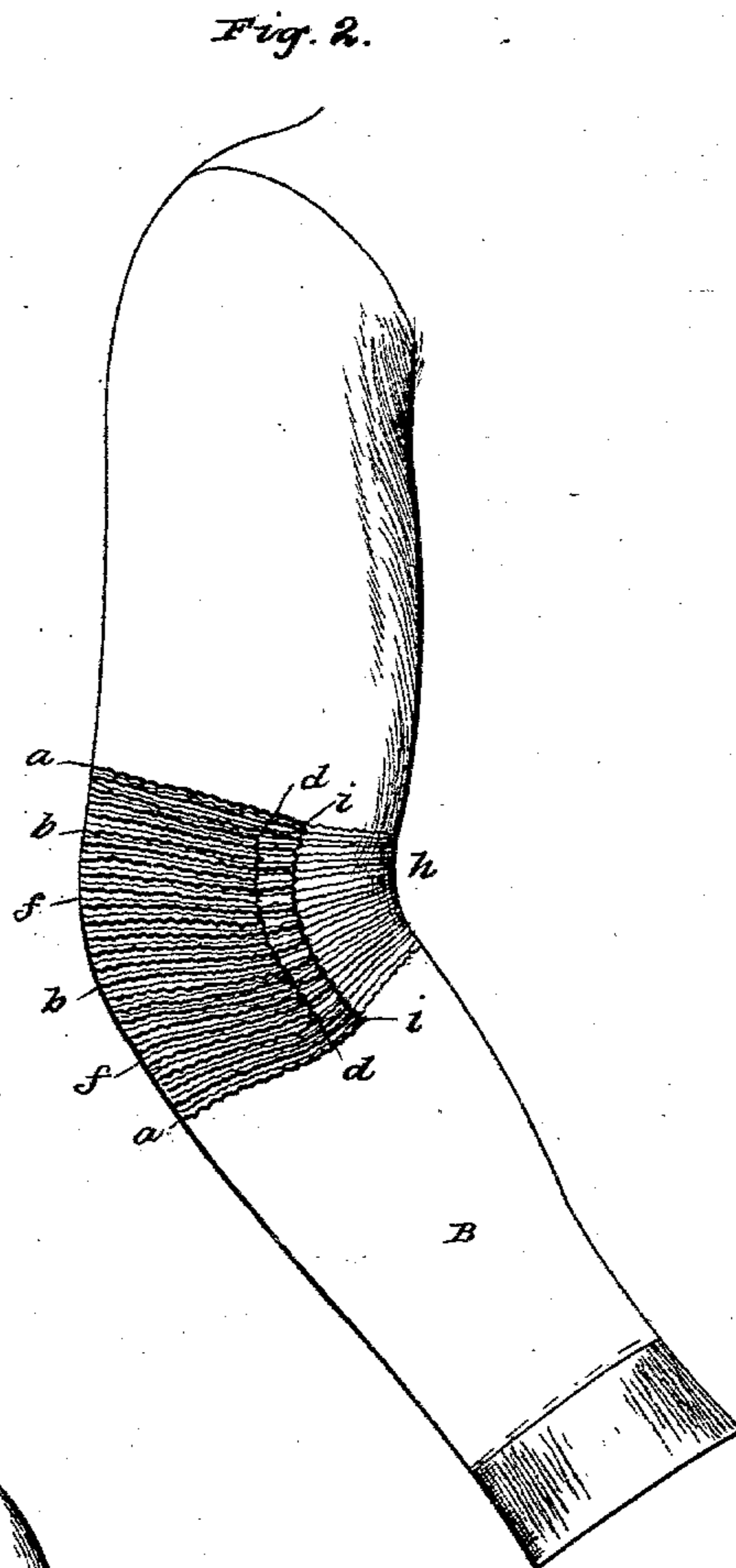
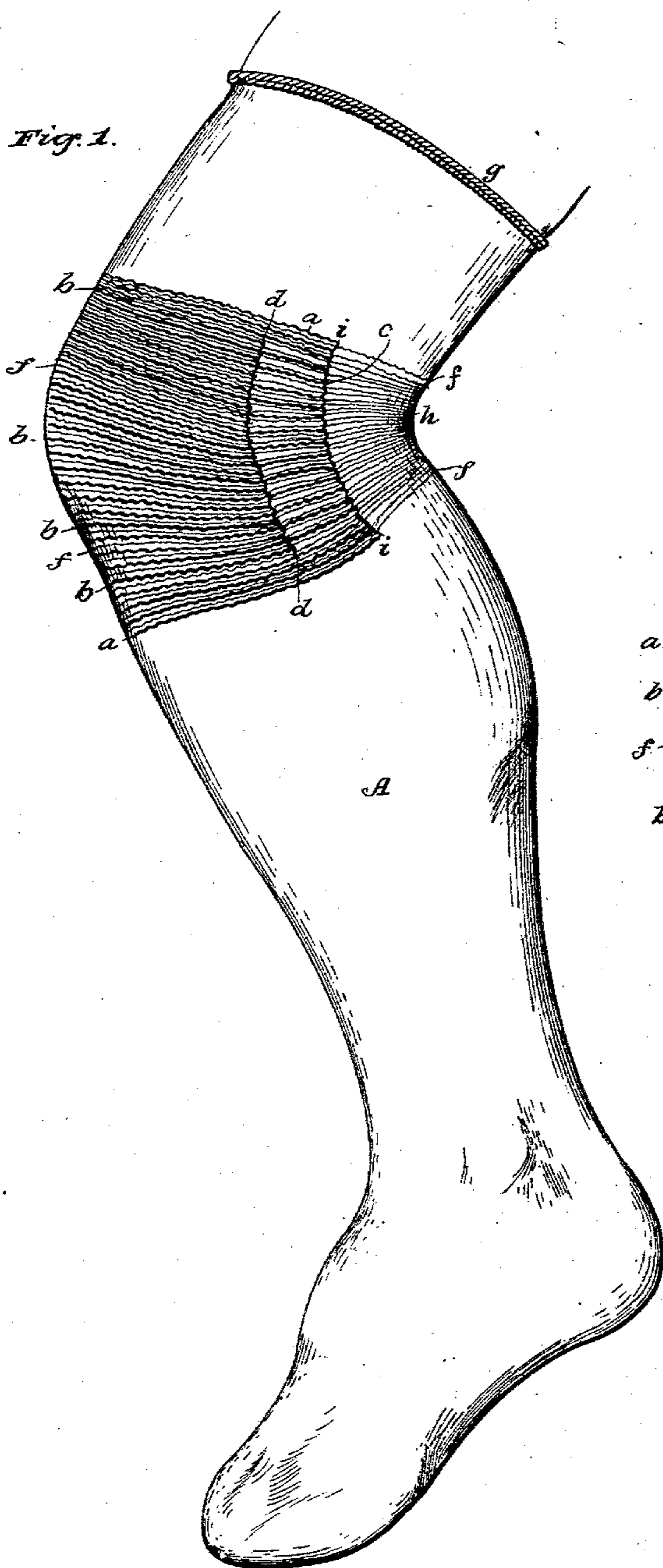


(Specimens.)

J. BOURNE
STOCKING, &c.

No. 455,700.

Patented July 7, 1891.



ATTEST.
Victor J. Evans
W. A. Redmond

INVENTOR.
Jane Bourne
By *W. A. Redmond* Atty.

UNITED STATES PATENT OFFICE.

JANE BOURNE, OF SILVER CLIFF, COLORADO, ASSIGNOR OF ONE-HALF
TO ALBERT MATTHEW DE BORD, OF SAME PLACE.

STOCKING, &c.

SPECIFICATION forming part of Letters Patent No. 455,700, dated July 7, 1891.

Application filed February 18, 1890. Serial No. 340,839. (Specimens.)

To all whom it may concern:

Be it known that I, JANE BOURNE, a citizen of the United States, residing at Silver Cliff, in the county of Custer and State of Colorado, have invented certain new and useful Improvements in Stockings, &c.; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to knitted goods of personal apparel—such as stockings, underwear, jerseys, and the like—which fit the limbs of the wearer closely; and it has for its object to produce articles of the kind named adapted at all times, no matter what the position of the limb, to fit the wearer closely at the limb-joints, particularly at the knee and elbow joints, and at the same time produce a more durable article of apparel without increasing the thickness of the material at any point, thus avoiding bulkiness at any point, as is the result when the article is thickened or re-enforced at any particular point of strain, and also rendering great elasticity to that part of the article exposed to the greatest strain while in use; and it consists in shaping the article to the limb-joints by the knitting therein at the desired points of additional yarns or threads arranged in two series of courses of different lengths in such a manner as to form the article at these points to the shape of the limb-joints, as will be more fully hereinafter described and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a side view of a stocking embodying my invention, and Fig. 2 a side view of a sleeve also embodying my invention.

Similar letters refer to similar parts throughout the several views.

As is well known, all articles of apparel—such as undershirts, drawers, jerseys, and stockings—which are made of knitted goods and adapted to fit the person of the wearer closely, usually wear out or break at the knees and elbows, owing to the almost constant strain on them at these points, before they do at other parts, this being especially the case with children's stockings and ladies' jerseys. An attempt has been made to obviate

these objectionable features in stockings by doubling or re-enforcing the material at the knee. This is objectionable because it renders the stocking clumsy and bulky at the knee-joint in whatever position the limb may be, either straight or bent. It has also been attempted to give the stocking the shape of the limb and also greater strength or durability by inserting a thickened gore at the knee. This is objectionable for the reason that the thickening of the material at any particular point renders the stocking bulky and clumsy at that point, and also because no provision is made for the return of the limb to a straight position after it has been bent at the knee—that is, the gore having no elasticity or tendency to exert a tension in the direction of the length of the stocking will not take up or contract the bagginess formed by the knee in bending, its only tension being in the direction of the width of the stocking which in bending the knee is not increased or stretched, and the part stretched, which is that portion over the knee-cap, will remain stretched, so far as the gore exerts any tendency to contract it. By my invention I effectually obviate these objectionable features in wearing-apparel of knitted materials by knitting in the article at the point exposed to the greatest strain in bending the limbs additional yarns or threads in numbers varying according to the size of the article, said yarns or threads being preferably knitted in two series of courses of different lengths.

A represents a knitted stocking formed according to my invention, in which *a* indicates the additional or extra yarns forming the long series of rows or courses, and *b* the additional yarns forming the short series of rows or courses, the long series of courses terminating at the line *c* and the short series of courses at the line *d*, the original yarn or courses being indicated by the letter *f*.

In order to form a stocking according to my invention, I first cast seventy-five stitches to form the top *g* of the stocking and then knit fifty rounds or courses, a purl-seam or reversed stitch *h* being formed at the rear of the leg of the stocking, which brings the work down to the point *i*, at which point I begin to form the angle or give the stocking the shape

of the leg by knitting nine stitches past the seam to the line *c*, where I leave the original yarn *f* and take an extra yarn *a* and knit a course round the stocking to within nine stitches of the seam on the opposite side. The yarn *a* is then cut off so as to leave the ends about one and one-half inch in length. I then slip without knitting onto my needle nineteen stitches, one of these being the seam or reversed stitch, which brings me to the line *c*, where I take up the original yarn *f*, and knit a course entirely round the stocking. This operation is repeated three times, forming the three rows or courses of additional yarn *a* and the three rows or courses of the original yarn *f*. I then knit eighteen stitches of the original yarn *f* from the seam to the line *d*, where I leave the original yarn and take an additional or extra yarn *b* and knit round the stocking to within eighteen stitches of the seam. Then cut off the yarn, leaving its ends about one and one-half inch in length and slip thirty-seven stitches, one of these being the seam or reversed stitch on my needle without knitting, which brings me to line *d*, where I take up the original yarn *f* and knit a course round the stocking to line *c*, where I take an extra yarn *a* and repeat the operation described above. Thus when I commence forming the bend or angle in the stocking I put in three extra courses or rows which commence and end nine stitches on the seam on each side of the stocking and knitting a row or course of the original yarn entirely round the stocking between the extra or additional rows thus formed. I then put in ten or more extra or additional courses of yarn *a*, running from line *c*, and ten or more courses of yarn *b*, running from line *d* alternately, and a row or course of the original yarn *f* being knitted entirely round the stocking between the extra courses of yarn, after which I knit in three rows or courses of yarn *a*, similar to the first three rows, to complete the angle, and then fashion the rest of the stocking as is customary.

As will be observed from the foregoing description, the original yarn is never broken, and by being knitted in between the extra courses of yarn will maintain the shape thus given the stocking and furnish a more durable, comfortable, and economical stocking, in which a uniform curve is formed to correspond to the curve of the knee when bent without unduly increasing the longitudinal tension of the stocking, while it fits closely to the leg when in a straight position and does not gather or form a fullness over the knee.

The stocking described above is adapted in size for a child of about seven or eight years of age, and the number of stitches required to form a stocking after my invention will of course vary according to the size of the stocking desired.

In Fig. 2 is shown a sleeve B of an undershirt or jersey coat embodying my invention, the only difference in the construction of which from a stocking being that the angle is formed on the rear or outer side of the sleeve to cover the elbow, the additional rows or courses of stitches terminating near the front or inner side of the sleeve instead of the rear, as in the case of a stocking.

This invention is applicable to all knitted articles of apparel having legs or sleeves, and I do not therefore desire to be limited to any particular article of apparel nor to the formation thereof by hand.

Having thus described my invention, its construction, and advantages, what I claim as new, and desire to secure by Letters Patent, is—

1. A tubular knitted article of wearing-apparel having the shape of the limb-joint formed therein by a series of short discontinuous courses or rows of the same length, each lying between two adjacent continuous rows or courses extending round the garment, and a series of long discontinuous courses or rows of the same length alternating with said short courses and each lying between two continuous courses, substantially as described.

2. A tubular knitted article of wearing-apparel having the shape of the limb-joint formed therein by a series of short discontinuous rows or courses over the joint, each of which is of the same length, lying between continuous rows or courses extending round the garment, a series of long discontinuous rows or courses, each of which is of the same length and lying between two adjacent continuous rows or courses, and a series of long discontinuous rows or courses of the same length formed above and also below the joint, and each of which rows or courses lies between two adjacent continuous rows or courses, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JANE BOURNE.

Witnesses:

JOHN DIETZ,

JOHN G. SCHWEIGERT.

It is hereby certified that in Letters Patent No. 455,700, granted July 7, 1891, upon the application of Jane Bourne, of Silver Cliff, Colorado, for an improvement in "Stockings, etc.," an error appears in the printed specification requiring correction, as follows: In line 32, page 2, the word "on" following the word stitches should read *from*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 14th day of July, A. D. 1891.

[SEAL.]

GEO. CHANDLER,
Assistant Secretary of the Interior

Countersigned:

NATH'L L. FROTHINGHAM,
Acting Commissioner of Patents.