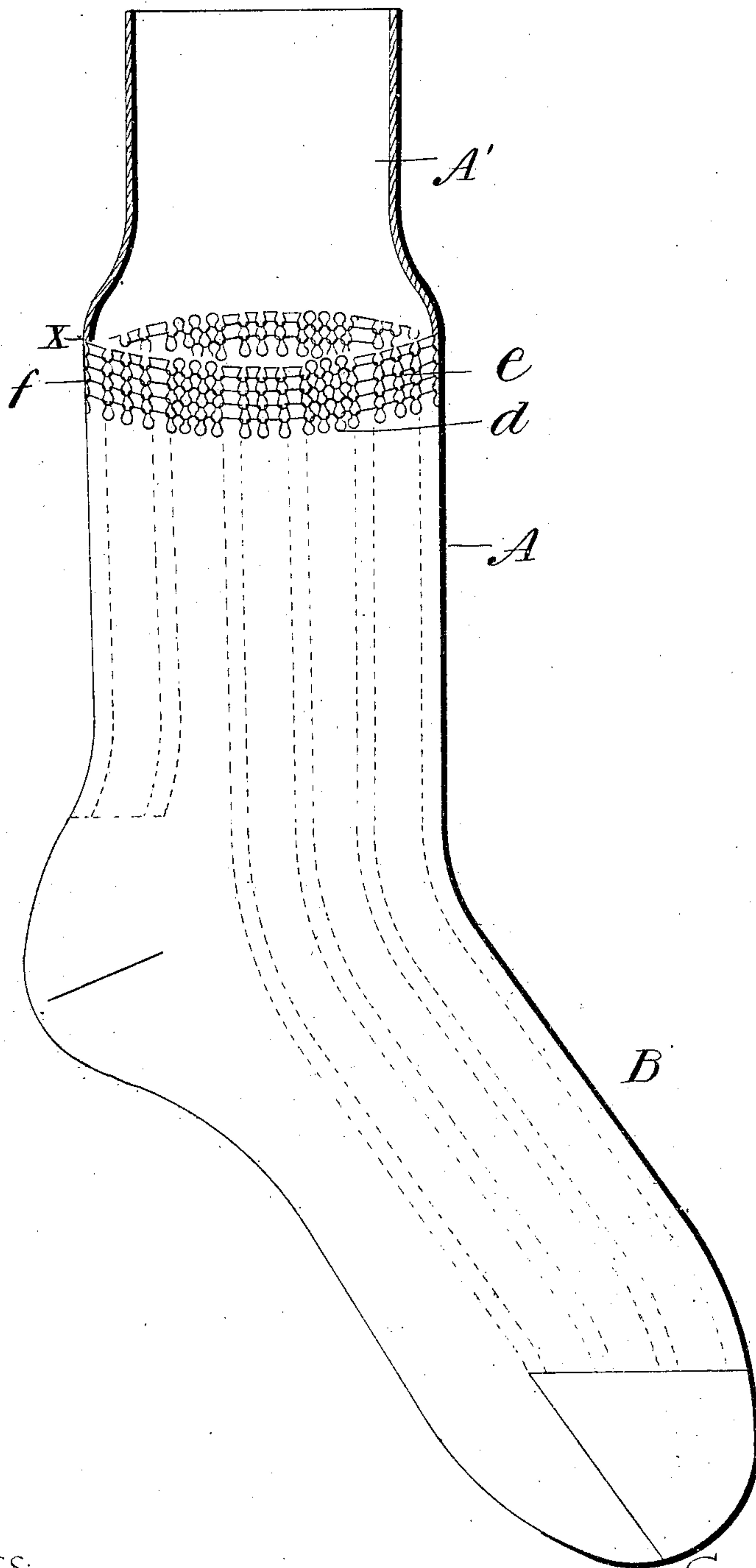


No. 822,663.

PATENTED JUNE 5, 1906.

G. H. GILBERT.
SEAMLESS HOSIERY.
APPLICATION FILED JUNE 7, 1901.



WITNESSES:

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GEORGE H. GILBERT, OF GERMANTOWN, PENNSYLVANIA, ASSIGNOR TO
THE KILBOURN KNITTING MACHINE COMPANY, OF NEW BRUNSWICK,
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SEAMLESS HOSIERY.

No. 822,663.

Specification of Letters Patent.

Patented June 5, 1906.

Application filed June 7, 1901. Serial No. 63,623.

To all whom it may concern:

Be it known that I, GEORGE H. GILBERT, a citizen of the United States, residing at Germantown, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Seamless Hosiery; 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.

My invention relates to machine-made seamless hosiery, and has for its object an improved ornamental effect which manufacturers have heretofore been unable to secure. Hitherto manufacturers of ornamental seamless hose and half-hose have been able to make ornamental open-work on the front of the leg, ankle, and foot only. I am, however, able to produce articles of this class having the ornamental open-work around the entire leg, the said open-work on the front preferably extending down over the ankle and onto the foot.

In the drawing I have shown a stocking or half-hose embodying my invention, the ribbed portion of the stocking being shown in section and the upper portion of the leg in slight perspective to show the lacework at regular intervals around the stocking.

In the said drawing, A designates the leg of the stocking, A' the ribbed top, and B the foot, of the stocking. The entire leg of the stocking is formed of plain knitted sections *d*, united by interposed open-work sections *e*. The ribbed portion of the leg is knitted upon a rib-knitting machine in the usual manner and is then transferred in the customary way to a plain-knitting machine, preferably one having narrowing and widening devices. The remainder of the stocking is then knitted upon such machine, the loops of each course being formed in this instance in the following manner: Starting at the point X and passing to the right, four regular loops are first formed. The thread is then carried across the space of one or more regular loops to another series of plain loops, forming straight crossing threads *f*, three in number in this instance. The thread is then carried across another space of one or more regular loops to another section of regular loops, four in number, and this is continued entirely around the leg. This form of knitting is sometimes

termed the "Richelieu rib." The knitting may be effected by either removing one or more needles to form the spaces for the cross-threads on the front of the machine or by inserting, as I prefer, for such spaces needles having a straight upper end instead of being provided with the usual latch and hook.

To form the spaces for the cross-threads at the back of the stocking, I provide the needles for such cross-thread spaces with nibs of double the ordinary length. A pivoted cam, which will act only upon the needles having the extra-length nibs, is provided in a well-known way. Before the ribbed top is applied to the machine the pivoted cam is turned, and the needles having the extra-length nibs are thrown down below the point by having their nibs carried down into a straight groove below the knitting-cams. The ribbed top is then transferred to this knitting-machine, the stitches of the ribbed part in line with the open-work being placed upon the needles at the sides of such space. The stocking is then knitted down to the heel, and at the same time that the narrowing and widening is begun the pivoted cam is turned and the extra-nibbed needles are thrown into action. This is continued until the toe is finished, when the operation is repeated. The open spaces on the front of the stocking may also be provided by throwing the needles for such spaces out of operation, as at the back of the stocking, for the extent to which the open-work is desired, and then thrown into operation to complete the stocking. In such case where both back and front needles are thrown out of and into operation one or more courses of plain loops may be knit at the top of the leg before throwing the needles out of operation to form the open-work and may be thrown into operation before the toe is knitted to form courses of plain loops between the open-work portion and the toe. This is more especially desirable when knitting full hose or ladies' stockings. In this case the hem or welt finishing the stocking at the top and the short seam closing and completing the stocking are made in the usual way, and the stocking is stronger and more durable at the points mentioned.

The stocking may be made of one continuous thread, or the leg and foot may be made of one thread and the heel and toe of another,

or the leg and foot may be made of two or more threads and the heel and toe of another. The number of plain loops in the plain sections may also be varied to form
5 various patterns to suit the taste of the maker.

What I claim, and desire to secure by Letters Patent, is—

1. A machine-knit seamless stocking knit
10 in one continuous operation having the back and front of the leg of the stocking provided with open-work having drop-stitches therein, substantially as described.

2. A machine-knit seamless stocking having the back and front of the leg of the stocking provided with open-work, the heel, bottom of the foot and toe of the stocking being composed of solid plain knitting and the thread or threads of the foot portion of the
20 stocking being continuous with the thread or threads of the leg, substantially as described.

3. A machine-knit seamless stocking knit in one continuous operation, having the back and front of the leg of the stocking provided

with open-work forming part of the web of
the stocking, substantially as described. 25

4. A machine-knit seamless stocking having the back as well as the front of the leg of the stocking ornamented with open-work forming a part of the web of the stocking, the
open-work on the front of the stocking extending down upon the top of the ankle and foot of the stocking, substantially as described. 30

5. A machine-knit seamless stocking knit
35 in one continuous operation, having the back and front of the leg of the stocking ornamented with open-work forming a part of the web of the stocking, the open-work on the front extending down upon the top of the
ankle and the foot of the stocking, substantially as described. 40

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

GEORGE H. GILBERT.

Witnesses:

J. W. KILBOURN,
CHARLES H. WEISS.