

(Specimens.)

J. COLLINS.

MITTEN AND THE ART OF KNITTING THE SAME.

No. 353,020.

Patented Nov. 23, 1886.

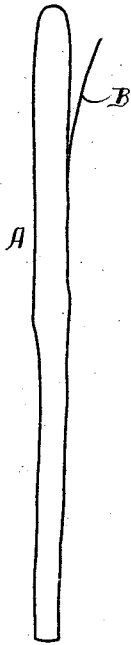


Fig. 1.

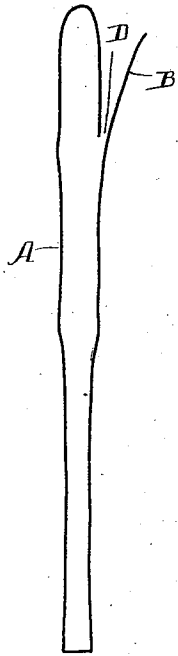


Fig. 2.

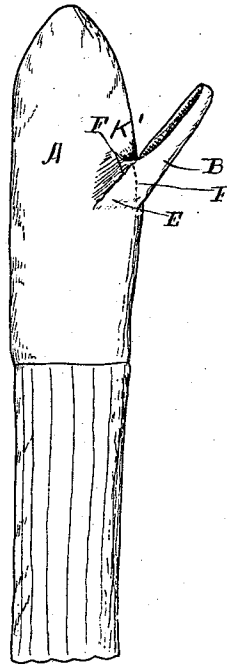


Fig. 3.

Fig. 4.

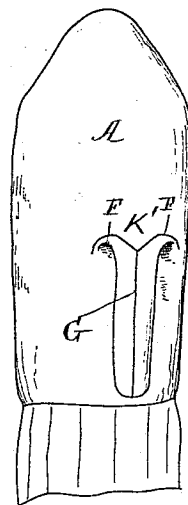
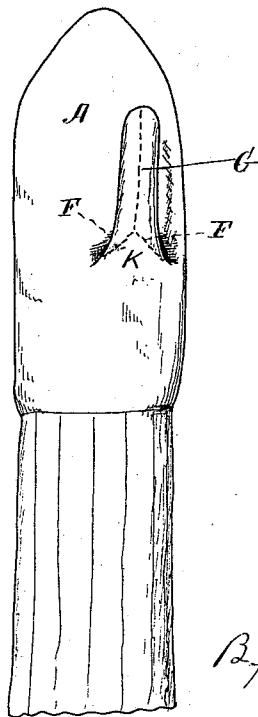


Fig. 5  
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WITNESSES:  
H. Brown.  
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# UNITED STATES PATENT OFFICE.

JOHN COLLINS, OF MALDEN, MASSACHUSETTS.

## MITTEN AND THE ART OF KNITTING THE SAME.

SPECIFICATION forming part of Letters Patent No. 353,020, dated November 23, 1886.

Application filed August 24, 1885. Serial No. 175,126. (Specimens.)

*To all whom it may concern:*

Be it known that I, JOHN COLLINS, of Malden, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Mittens and the Art of Knitting the Same, of which the following is a specification.

My invention relates to mittens; and it consists in an article of that character, as herein after described, and subsequently pointed out in the claims.

My invention also includes the herein-described method or process of manufacturing mittens.

The ordinary mitten has the thumb formed on the edge of the hand portion, and the thumb-opening is lengthwise of such edge. My mitten has the thumb on the inner side of the hand, and the opening crosswise thereof.

The drawings illustrate the invention, and show also the mode pursued by me in producing my improved mitten, Figure 1 showing in section the mitten with the flat thumb-strip simply knitted to it endwise, and Fig. 2 showing the next stage of manufacture, when the stitches under the thumb-strip have been cut preparatory to uniting and closing the thumb. Fig. 3 represents the thumb-strip seamed edgewise to the side of the opening thus cut, and the thumb ready to be closed. Fig. 4 shows the mitten complete. Fig. 5 shows the mitten complete, the thumb being turned down to show its inner side.

The body of the mitten is formed, as usual, on a circular-knitting machine, beginning at the tip. At the proper distance from the tip I ingraft the thumb upon the inner face of the hand by taking a flat strip, B, of knit goods of like texture with the mitten, and engaging the endmost series of stitches of the strip with corresponding needles of the machine, so that the next round of stitches formed will take into those of the strip and make it integral with them. Having thus incorporated the thumb-strip stitches with those of the mitten-body at a line along the inner or palm portion thereof, I proceed with the regular formation of the remaining portion of the body and wrist by the usual action of the machine, leaving for the time being the flat strip B protruding therefrom, as in Fig. 1.

When the body and wrist have been formed and the mitten removed from the machine, I complete the attachment of the thumb-strip B to the body A, and close or finish the thumb by first cutting away the series of stitches beneath said strip, by which, as in Fig. 1, it had been connected to the palm or hand portion of the mitten, and producing the slit D. (Shown in Fig. 2.) This act does not sever the stitches originally belonging to the strip B, which were taken up on the needles when it was incorporated into the mitten, and consequently the strip is not detached from the outer or wrist portion.

The slit D represents the opening from the body of the mitten into the thumb, and to make the thumb tubular the edges of the strip at its inner end are next turned or drawn in, and joined by seams F F (see Figs. 3, 4, and 5) to the adjacent edge of the slit, working from each end of the slit to the center, thus leaving or forming a substantial gusset or gore, K', on the upper or palm portion of the base of the thumb, as illustrated in Figs. 3 and 5, and by dotted lines in Fig. 4. The strip being knitted endwise to and integral with the wrist portion, and stitched sidewise or edgewise to the opposite edge of the slit, gives the effect of a triangular gusset or gore, K', also at the lower portion of the base of the thumb, as well as at the palm portion thereof, as described, so as in use to permit the thumb to be turned out at right angles to the hand portion. After the thumb-strip is thus secured to the mitten-body the final operation is the closing of the single seam C, running lengthwise of the uniform tubular part of the thumb to its tip. Fig. 3 shows the edges flaring open, ready to be closed by this seam, and finished off at the tip.

Instead of cutting away the stitches beneath the thumb-strip, as described, to form the thumb-opening, said stitches may be cast off or dropped from the given needles just before the strip is attached, thus leaving the open slit D without any cutting. The edges of the thumb-strip are then connected to those dropped stitches and the thumb-seam closed, similarly to what has been described.

I am aware that mittens have heretofore been produced with thumbs of uniform size from base to tip—*i. e.*, without a gore or gus-

set at the base—which thumbs are first formed as a separate piece, and subsequently secured to the hand portion by attaching it thereto at a point where a cross-cut has been made in the same. I am also aware that a mitten has been knit without seam, except at the finger-end portion and along both sides of the thumb, the latter having a portion only of its seat enlarged. In the former construction, however, there is no enlargement at the base of the thumb, and in the latter the outer or back portion only of the thumb's base is enlarged, no provision being made in the front or forward part of the base of the thumb to correspond with the form of the hand at this point, or to allow of the thumb of the wearer's hand, when the mitten is thereon, being thrown out so as to extend at substantially right angles to the palm portion without strain on the fabric at the point where the inner portion of the base of the thumb joins the hand portion, as is the case with my construction, occasioned by the gusset or gore formed in the palm portion above or forward of the base of the thumb, as well as at the opposite point.

I claim—

1. The improved mitten having the thumb formed on the inner face of its hand portion, with the gussets or gores K' K' at the base of the thumb, the former being formed below the wrist portion of the mitten, and the latter on the upper or palm portion of the base of the

thumb, and with the thumb united to the palm portion by the seams F F, and the uniform tubular part of the thumb having a single seam extending from the junction of the seams F F to the top of the thumb, as set forth.

2. The herein-described improvement in the art of manufacturing mittens, which consists in knitting the hand portion of the mitten-body, then knitting thereto the end of a flat strip of like fabric along a line transverse to said body, then completing the body and wrist portion of the mitten, then cutting away the series of stitches beneath said strip by which it had been connected to the palm or hand portion of the mitten, then turning or drawing in the edges of the strip at the inner or lower end thereof, and joining it to the adjacent edge of the slit, working from each end of the slit to the center, forming the seams F F, and completing the thumb by uniting the remainder of the edges of the strip to each other, forming a single seam, C, extending from the junction of said seams F F to the tip of the thumb, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 21st day of August, 1885.

JOHN COLLINS.

Witnesses:

C. F. BROWN,  
H. BROWN.