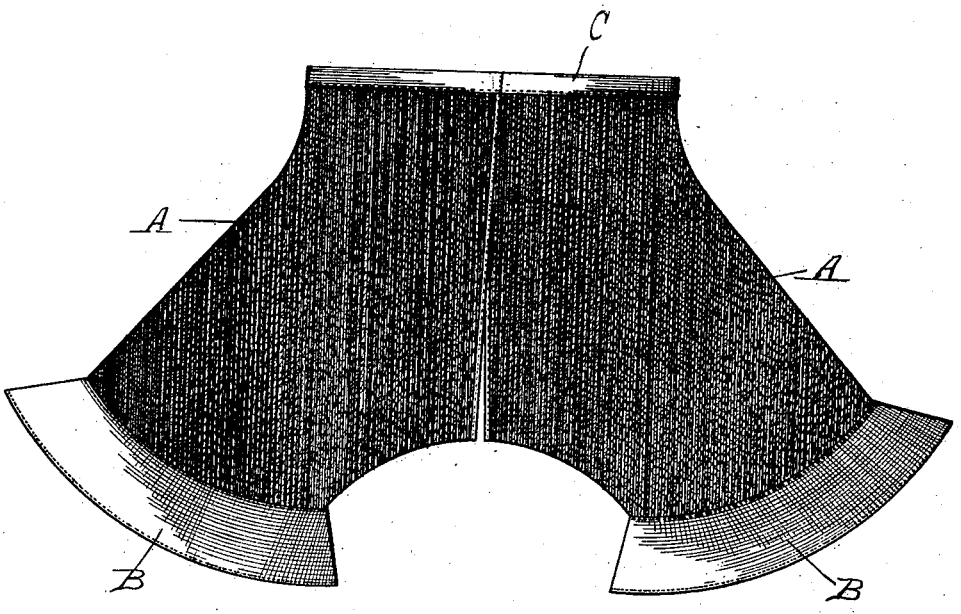
No. 648,139. Patented Apr. 24, 1900.

C. ARNOLD.

LADY'S DRAWERS.

(No Model.) (Application filed Feb. 3, 1899.)



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UNITED STATES PATENT OFFICE.

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LADY'S DRAWERS.

SPECIFICATION forming part of Letters Patent No. 648,139, dated April 24, 1900.

Application filed February 3, 1899. Serial No. 704,351. (No model.)

To all whom it may concern:

Be it known that I, COLLINS ARNOLD, a citizen of the United States, residing at Albany, county of Albany, and State of New York, have invented certain new and useful Improvements in Ladies' Drawers, of which the following is a specification.

The invention relates to such improvements; and it consists of the novel construction and combination of parts hereinafter described and subsequently claimed.

Reference may be had to the accompanying drawing, and the letters of reference marked thereon, which forms a part of this specification.

The single figure of the drawing is a plan view of my improved garment laid out flat.

My invention applies more especially to the short light drawers adapted for use in the warm season.

As heretofore constructed the whole garment has been made of smooth woven fabric and the lower extremities provided with a heavily-starched, stiff, and comparatively-inelastic border, generally given an outward flare like an umbrella. This border serves in some degree to keep the other portions of the garment out of contact with overheated parts of the body, but a large part of the garment would persistently adhere to the person of the wearer wherever perspiration moistens the body. It adheres so strongly that a change of position, even from sitting to standing, will not shake it off. The wearer must either endure the torture or venture an attempt to pull the garment away by grasping it through her outer clothing, a very difficult feat to accomplish without danger of criticism. The garment when made of woven fabric is comparatively smooth, thin, inelastic, and stiff as it comes from the laundry, and frequently contains starchy matter with all the conditions favorable for uncomfortable adherence. I have ascertained that when the body part of the garment is made of a comparatively soft, pliable, and elastic fabric with an uneven surface, such as knitted fabric, and provided at the lower extremities with a border of relatively stiff and inelastic fabric, such as woven starched fabric, the body part will absorb and evaporate the moisture without becoming saturated, and when the wearer changes her position, as from a sitting to a standing posture, the stiffer border will loosen the knitted fabric from the person and cause it to stand out, so as to leave an appreciable air-space between the knitted fabric and the person. The border being nearer the extremities of the wearer, where there is less warmth and perspiration, retains its stiffness and shape, and being made large to fit loosely upon the limbs it necessarily forces the knitted fabric to change its position upon the wearer when the position of the border is changed by a movement of the limbs of the wearer. Such movement of the parts may be increased by giving the border a conico-cylindrical shape, as shown in the drawing.

It is a well-known peculiarity of knitted fabrics that they are inclined to change their form while in use, due to the size and elasticity of the loops formed on the needles during the process of knitting, and that the tendency is for the loops to shorten lengthwise and elongate widthwise, which causes a garment made of knitted fabric the wales of which run longitudinally thereof, even when the material is cotton, to shorten lengthwise of the garment as such garments have heretofore been constructed. I have ascertained that when the fabric is secured by some comparatively-inelastic material, as woven fabric running transversely of the wale of the knitted fabric, the latter fabric is prevented from stretching widthwise sufficiently to permanently change the form of the loops, and consequently shortening of the fabric is prevented. In my improved garment the wale runs lengthwise and the knitted fabric is secured transversely of the wale at both ends by relatively-inelastic material, as at the upper end by the waistband C and at its lower extremities by the relatively-inelastic border B, and the garment is made unusually wide and loose, so that there is little side strain upon the fabric between the bound upper and lower ends, thereby insuring a constant and approximately-unchanging length of the garment. This is of great importance in this class of garments, because they are made very short and great particularity is required in fitting the wearer. Should a comfortably-

fitting garment shorten an inch or two, it might become so uncomfortable as to be worthless.

A represents the knitted body portion of the garment, B the woven stiff border at the lower extremities of the garment, and C the waistband, which is made of a comparatively-inelastic material, as woven fabric.

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

The herein-described garment, for ladies' underwear, comprising the loosely-fitting body part formed of knitted fabric the wales of which run longitudinally of the garment, a relatively-inelastic waistband and a loosely-fitting border secured to each of its lower extremities transversely of the garment, and formed of a relatively-inelastic fabric, substantially as described.

In testimony whereof I have hereunto set my hand this 21st day of January, 1899.

COLLINS ARNOLD.

Witnesses:
GEO. A. MOSHER,
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