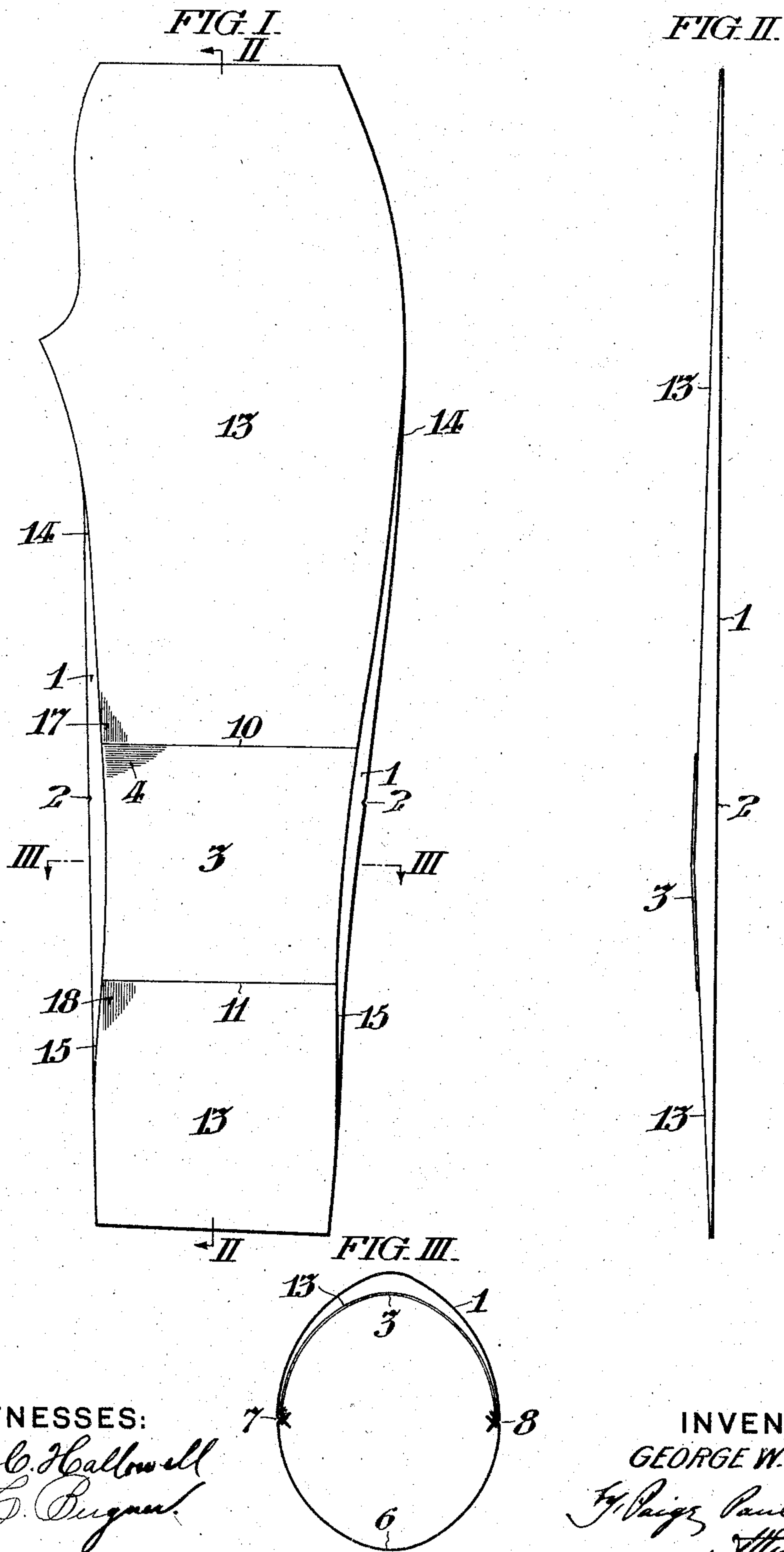


No. 781,017.

PATENTED JAN. 31, 1905.

G. W. PAIGE.  
GARMENT SHAPE RETAINER.  
APPLICATION FILED JAN. 11, 1904.



# UNITED STATES PATENT OFFICE.

GEORGE W. PAIGE, OF PHILADELPHIA, PENNSYLVANIA.

## GARMENT SHAPE-RETAINER.

SPECIFICATION forming part of Letters Patent No. 781,017, dated January 31, 1905.

Application filed January 11, 1904. Serial No. 188,465.

*To all whom it may concern:*

Be it known that I, GEORGE W. PAIGE, of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Garment Shape-Retainers, whereof the following is a specification, reference being had to the accompanying drawings.

My improvements relate to devices for retaining the shape of the outer layer of fabric in the regions of garments ordinarily subjected to deforming strains, such as the knees of trouser-legs and the elbows of coat-sleeves. I am aware that it is old to provide such garments with devices for the purpose described; but so far as I am aware such prior devices have been so attached to garments that either the devices or the means connecting them with the garments are visible from the exterior of the garments or they have been so disposed as to interfere with the use of the garments.

It is the object of my invention to provide such a device which will be wholly concealed within the garment without any exterior indication of its location in or means of attachment to the garment and which will not present any free edge or end to entangle the wearer.

My invention contemplates the provision at the region of strain in a garment of the class described of a peculiarly-arranged lining fabric of less transverse extent than the exterior fabric whose shape is to be retained.

As hereinafter described, the shape-retaining device comprises a band or web of fabric extending transversely with respect to the garment, with its center more remote from the body of the wearer than the region of the joint which causes the strain and preferably with its warp-threads extending transversely with respect to the garment.

My invention comprehends the various novel features of construction and arrangement hereinafter more definitely set forth.

In the drawings, Figure I is a plane inner face view of the front half of a trouser-leg and shows the relative proportions and arrangement of the shape-retaining device to be used in connection therewith. Fig. II is a vertical sectional view taken on the line II II in Fig. I. Fig. III is a transverse sectional view

through a trouser-leg embodying the members shown in Fig. I sectioned at the region indicated by the line III III in Fig. I.

In said figures, 1 is the outer layer of fabric whose shape is to be retained and which may be cloth of loosely woven or sleazy character. Said garment member 1 is so proportioned that the knee-joint of the wearer comes at the region indicated by the notches 2 2 in Fig. I. The shape-retaining device comprises the band or web of fabric 3, extending transversely with respect to the outer layer of fabric 1, and with its warp-threads 4 extending transversely with respect to the length of the garment. Said inner fabric 3 must be of less transverse extent in the garment at the region of strain than the outer fabric 1 which it is to protect, and in practice the difference may be approximately one inch, so that when in the completed garment said two pieces of fabric 1 and 3 are connected with the rear member 6 by seams 7 and 8 (the outer edges of the pieces 13 and 3 being caused to coincide with the outer edges of the front fabric 1, as indicated in Fig. III,) said band 3 forms an inner diaphragm of less transverse extent than the outer fabric 1 of the garment and prevents the knee of the wearer from exerting pressure upon said fabric 1. If said transversely-extending fabric band 3 were directly connected with the exterior fabric 1 at its upper and lower edges 10 and 11, (indicated in Fig. I,) the stitches or other attaching means would visibly mark the exterior of the garment, and if said upper and lower edges were left free the foot of the wearer would be thereby caught in putting the garment on or off. Therefore in order to present a continuous inner surface from the top to the bottom of the garment I connect said band 3 with another piece of fabric 13, whose warp-threads extend longitudinally with respect to the garment and at right angles to the warp-threads 4 in the retaining-band 3. As shown in Fig. I, the side edges 14 of the upper portion of said fabric 13 diverge upwardly to the full dimensions of the outer fabric 1, and the side edges 15 of the lower portion of said fabric 13 diverge downwardly to the full dimensions of the outer fabric 1.



Inasmuch as a garment of the class herein contemplated is drawn toward the body of the wearer by the contraction of the joints within it, I find it preferable to locate the narrowest transverse extent of the retaining device (that is to say, the center of the vertical height of the band 3, as shown in Fig. I) more remote from the body of the wearer than the region occupied by the center of the joint in normal straight position, the latter location being indicated by the notches 2 2 in said figure. In practice this eccentricity may be approximately one and one-half inches.

Referring to Fig. II, it may be noted that the effect of the construction above described is to provide a diaphragm comprising the members 13 and 3, which serves as a barrier extending from the top to the bottom of the garment to prevent strain upon the exterior fabric 1, said barrier being most remote from the exterior fabric at a region more remote from the body of the wearer than the region 2 of the garment normally occupied by the center of the joint.

My invention will find its most advantageous use in garments comprising exterior fabrics of loosely-woven woolen material of light or so-called "summer weight," and I find it important to construct the retaining device of material which is as light and thin as possible consistent with the performance of its function, and I prefer to employ cotton holland as a material which is efficient for the purpose described and which is comparatively low in cost, although it is to be understood that efficient devices of the character described may be made of silk, linen, or other fabric.

It is obvious that various modifications may be made without departing from the essential features of my invention. Therefore I do not desire to limit myself to the particular embodiment thereof herein set forth.

I claim—

1. In a garment, the combination with front and back members; of a shape-retaining device fitted within said front member, extending from the top to the bottom thereof, of the full width of said front member at the top thereof, and of less breadth than said front member at a predetermined region intermediate of the length of said front member, said retaining device comprising two pieces, one piece located at the narrowest region of said

device and having its warp-threads extending transversely with respect to the garment, and the other piece connected with opposite edges of said first piece and having its warp-threads extending longitudinally with respect to said garment, substantially as set forth.

2. In a garment, the combination with a shape-retaining device having warp-threads extending transversely with respect to the garment and of less transverse extent than the outer member of said garment whose shape is to be retained; and, means invisible from the exterior of the garment, connecting opposite edges of said shape-retaining device with the garment, at the top and bottom thereof, consisting of fabric whose warp-threads extend longitudinally with respect to the garment, between said inner transversely-extending member and said outer member of the garment, substantially as set forth.

3. In a garment, the combination with an outer layer of fabric; of an inner layer of cotton holland having warp-threads extending transversely with respect to the warp-threads in said outer layer and forming a diaphragm of less transverse extent than said outer layer, having its longitudinal edges separate from said outer layer; and means invisible from the exterior of the garment connecting the longitudinal edge of said diaphragm with the garment, substantially as set forth.

4. In a garment, the combination with an outer layer of fabric; of an inner layer of thin inelastic fabric having warp-threads extending transversely with respect to the warp-threads in said outer layer and forming a diaphragm of less transverse extent than said outer layer, having its longitudinal edges separate from said outer layer; and, means invisible from the exterior of the garment connecting the longitudinal edge of said diaphragm with the garment, comprising a distinct piece of fabric secured at its respectively opposite ends to said diaphragm and to said garment, substantially as set forth.

In testimony whereof I have hereunto signed my name at Philadelphia, Pennsylvania, this 7th day of January, 1904.

GEORGE W. PAIGE.

Witnesses:

ARTHUR E. PAIGE,  
A. F. GETZFREAD.