June 23, 1925. 1,542,857

F. CHATFIELD

UNDERGARMENT

Filed Oct. 1, 1920 2 Sheets-Sheet 1

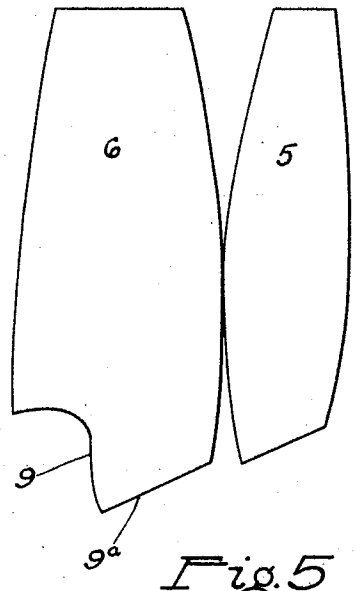


Fig. 5

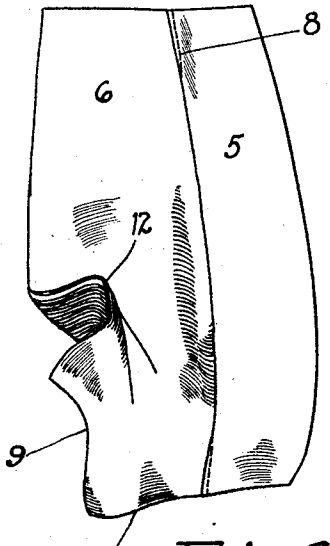


Fig. 6

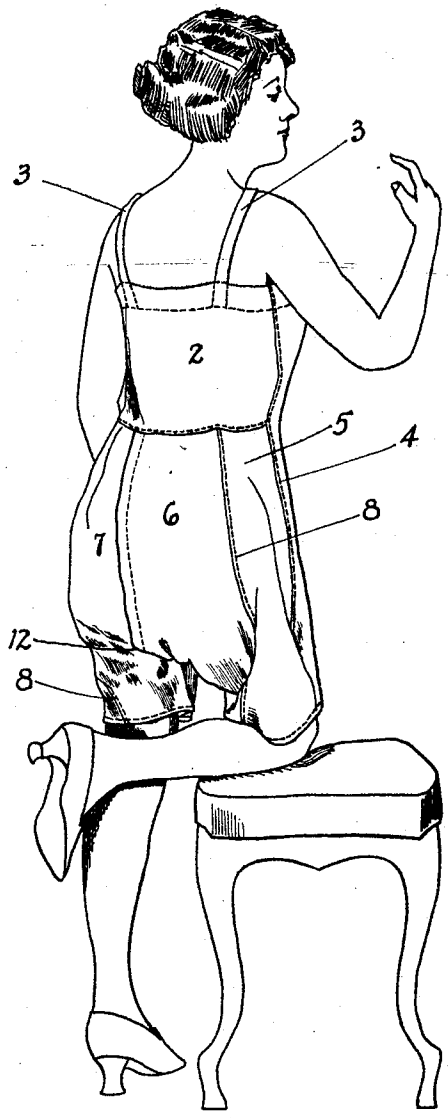


Fig. 1

INVENTOR.

FRANKLIN CHATFIELD

By Paul & Paul

HIS ATTORNEYS

June 23, 1925. 1,542,857

F. CHATFIELD

UNDERGARMENT

Filed Oct. 1, 1920 2 Sheets-Sheet 2

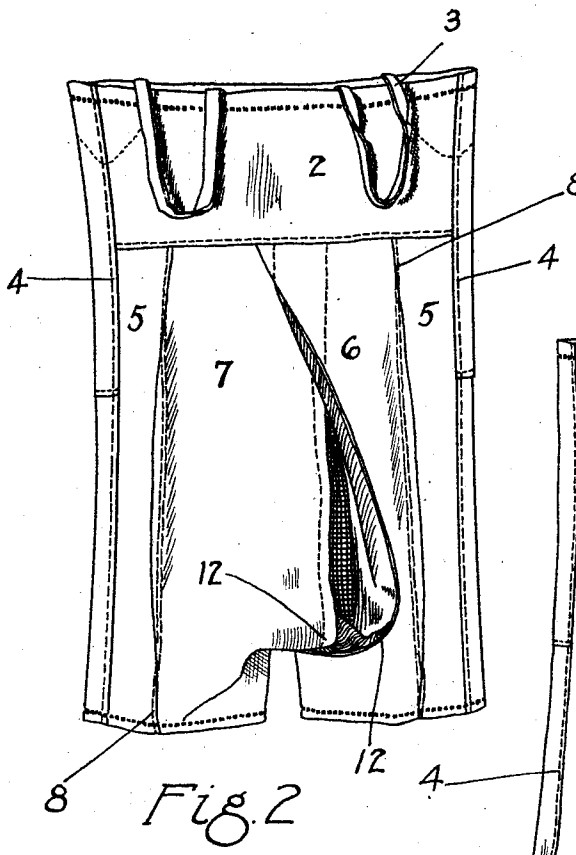


Fig. 2

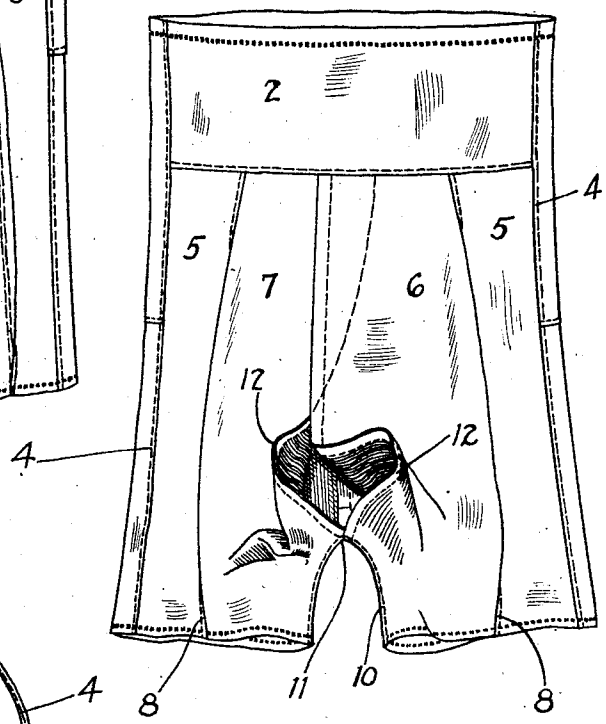


Fig. 3

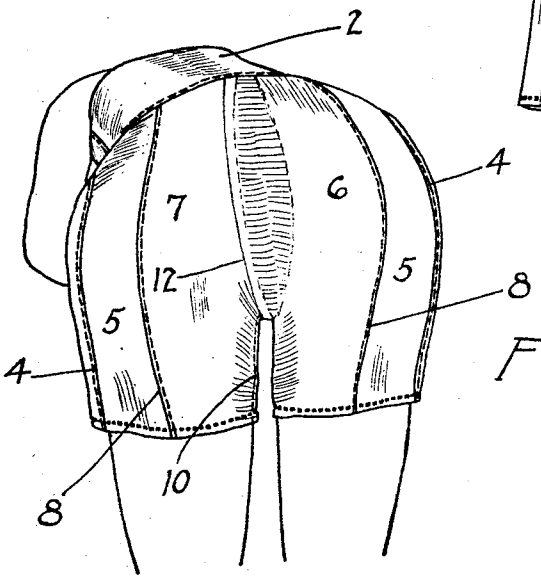


Fig. 4

INVENTOR
FRANKLIN CHATFIELD
By Cook & Paul
HIS ATTORNEYS

Patented June 23, 1925. 1,542,857

UNITED STATES PATENT OFFICE.

FRANKLIN CHATFIELD, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR TO MUNSINGWEAR CORPORATION, OF MINNEAPOLIS, MINNESOTA, A CORPORATION OF MINNESOTA.

UNDERGARMENT.

Application filed October 1, 1920. Serial No. 414,067.

To all whom it may concern:

Be it known that I, FRANKLIN CHATFIELD, a citizen of the United States, residing at Minneapolis, county of Hennepin, State of Minnesota, have invented certain new and useful Improvements in Undergarments, of which the following is a specification.

In making women's wovenwear undergarments, it is necessary to provide a certain amount of fullness at the seat to obtain which it has been customary to cut the gores with an upward slant at the top. By making this upward slant, the length of the gore from top to bottom is made greater along the vertical axis of the garment than at either outer edge. Joining these upwardly slanted gores to the lower edge of the yoke of the garment at the waist (this lower edge being cut horizontally at right angles to the vertical axis of the garment) creates a fullness over the seat because there is a greater amount of material distributed from the waist down immediately adjacent to the vertical axis of the garment than there is at either outer edge, but when these upwardly slanted gores are attached to the horizontal lower edge of the yoke, the natural tendency of the cloth is to gap along the seat opening, due to the fact that the upper corners of the gores nearest the vertical axis of the garment are cut at acute angles, causing the material below to diverge from the vertical axis of the garment in a V-shaped gap, the apex of the gap being at the intersection of the lower edge of the yoke and vertical axis of the garment.

To cover this V-shaped gap, it has been customary to lap the gores for a considerable distance at the waist line and along the line of their attachment to the yoke. This creates an opening which has a tendency to gap along its lower edges, while its full opening along the upper edges is restricted by the overlapping of the gores and the obstruction to the easy opening of the seat aperture to the extent necessary produces a severe strain upon the garment at the juncture of the yoke with the gores. It has been customary, therefore, to introduce a strip of knitted material to relieve this strain and overcome the restricted effect of the seat opening caused by the wide lapping of the gores. The knitted strip is built into the garment with the wales of the fabric running at right angles to the vertical axis of the garment, thereby producing a permanent strain on the knitted material at right angles to the wales. This crosswise strain causes the knitted material to assume a permanently widened form and causes the seat opening to gap more and more as the knitted strip widens and as the horizontal lower edge of the knitted strip gradually droops along that portion of its edge to which the lapped portions of the gores are attached. The knit strip will soon become permanently stretched out of shape, causing the garment to fit poorly and making it a source of positive discomfort to the wearer.

In providing the requisite fullness in the seat by the upward slanting of the gores, as described, the manufacturer finds that the fullness will increase with the degree of the slant, but the more the top is slanted, the greater will be the tendency to gap and the further the gores must be overlapped to counteract the tendency to gap. There is, however, a practical limit to the extent to which the gores may be overlapped, as too much lap will restrict the full and necessary seat aperture and will cause too severe a strain upon the garment when the seat is fully opened.

It is clear, therefore, that fullness at the seat absolutely necessary for comfort, when obtained by the upward slanting of the seat gores introduces elements of discomfort and garment strain, places a practical limit on the seat fullness and limits also the degree of comfort incidental to undergarments which do not chafe at the crotch or bind when stooping or sitting.

I have found that an undergarment of the type described, when made in the ordinary manner, is unsatisfactory, as the seat fullness is usually not sufficient for comfort and the seat opening will not remain closed along its middle portion, particularly when the wearer is sitting or stooping. I have also found that the seat portion is difficult to open to the extent necessary and any attempt to expand the seat opening causes a severe strain on the garment.

It often happens that purchasers of undergarments will purposely buy a size larger than necessary in an attempt to overcome discomfort due to lack of seat room and gaping gores caused by faulty construction.

To obviate all these objections incidental to the use of an ordinary woven undergarment and provide an article having ample fullness for the seat and one which will not gap or open when the wearer is sitting or stooping, except as desired, I have designed the garment shown in the accompanying drawings, in which,

Figure 1 is a rear view of the garment, showing substantially the manner in which it will hang on the person of the wearer,

Figure 2 is a rear view, showing one of the gores pulled to one side to partially expose the seat opening,

Figure 3 is a similar view, showing both gores pulled partially to an open position,

Figure 4 illustrates the position assumed by the gores when the wearer is in a stooping position,

Figure 5 is a view of the gores as cut from the pattern,

Figure 6 is a view showing how the gores are inserted into the garment to provide for the desired degree of fullness at the seat.

In the drawing, 2 represents the waist or yoke portion of the garment, having the usual shoulder straps 3 and side seams 4. The back of the garment below the waist consists of gores on each side of the seat opening, each gore being made in two sections, a section 5 stitched at the top to the waist and at one edge to the front of the garment, and a section 6 adjacent the seat opening, also stitched to the waist at the top and on one edge to the adjacent edge of the gore section 5, both of said sections being extended below the crotch to form the back of the leg. Both longitudinal edges of the sections 5 are curved or convex and the adjacent edges of the gores 6 and 7 are also convex, as indicated in Figure 5. When, therefore, these gores are stitched together and to the front of the garment, a fullness or bellied effect will be formed, extending vertically and horizontally through the garment for the purpose of shaping it to fit the form of the wearer and provide the requisite fullness for the seat and hips, particularly when stooping or sitting. This fullness is provided without any diagonal or oblique strain on the gores, which would tend to pull the seat opening portion of the gores apart or cause chafing or drawing of the garment on the person of the wearer.

The lower inner portions of the gore sections 6 and 7 are cut out, as indicated at 9, at the point where the gore is attached to the front portion of the garment by what is known as the inseam 10, the edge of the cutout portion being in the form of a curve, thereby lengthening the peripheral measurement of the gore and increasing the area of that portion lying adjacent to the vertical axis of the garment. Ample fullness at the seat is thus insured. This portion of the gores will normally hang down in a loose fold, sufficiently free to allow the wearer to stoop or sit without discomfort. In bending forward, the slack or fullness will be taken up without drawing in the crotch, while the front of the garment, normally fitting the person, will temporarily be made slack. When the wearer straightens up, the front of the garment will resume its normal position, while the fullness at the seat will hang as before, but with the seat opening fully closed.

The elimination at the waist line of surplus material due to inshaping of gores at the top, will dispense with any tendency to wrinkle and bunch up under the corset and belt, and the absence of the knitted fabric will also provide a more sightly garment and one which will be form-fitting and form-covering until worn out. Knitted strips, when employed, soon become stretched out of shape, allowing the back gores to gap and expose the seat opening, and generally detract from the neat form-fitting appearance of the garment. The major strain on these knitted strips is at right angles to the wales and it is impossible for the fabric to retain its elastic characteristics under such conditions, hence the stretching and sagging and generally poor fit of the garment having a knitted insert.

I am able to obtain the desired fit of the garment under all conditions by means of the downward slant at the bottom of the gores instead of the upward slant at the top, and by shaping the lower inner edges of the gores in the form of a curve instead of a straight line, thereby increasing the effective length of the gore and providing ample fullness.

I have also found that by making the back gore in sections (that is, 5, 6 and 7) with their meeting edges cut on curved lines, forming outwardly projecting curves, I am able to give a tailored effect to the garment—that is, the requisite vertical and horizontal fullness around the hips and the desired restriction at the waist. This vertical and horizontal fullness will amply compensate for the greater spread of the buttocks when the wearer is seated. The garment may also be fitted more closely at the waist and discomfort due to wrinkling or bunching under the belt or corset will be avoided.

The upper edges of the gores are at right angles with the edges on each side of, or which bound, the seat opening, and hence the gores will hang straight down from the yoke of the garment and have no tendency to gap, which would be the case where the upper edges are at an acute angle with those upon opposite sides of the seat opening.

It will be noted that the gores are built into the garment with the warp or weft of

the fabric, usually the former, running substantially parallel to the vertical axis, hence the gores will continue to hang in their original closed position after long service, there being no tendency for the fabric to twist itself out of line and out of shape as a result of diagonal strain or a bias cut fabric. The draped effect of the cloth allows the seat opening to remain closed naturally and wide lapping of the gores is unnecessary and at the same time the wearer of the garment can easily open the seat to its fullest extent. The garment being so constructed that the seat opening may be easily exposed, there is no undue strain placed on any portion of the garment, even when the seat opening is fully extended.

I claim as my invention:

1. A woman's undergarment having a front section and two back and two side gores extending from both sides and with the two back gores lapped over but free to form a seat opening with their lower ends slanting downwardly from side to rear of the garment, the upper edges of the gores extending horizontally and the meeting edges of each side and back gore cut on continuous convex curves extending from bottom to top of the gores there being cut-out portions bounded by concave curves extending from the lower part of the meeting edges to the bottom of each of the back gores.

2. A woman's undergarment having a front section and back and side gores on either side of a seat opening, all the gores having their side edges cut on convex curves to give the requisite fullness at the seat, the back gores overlapping the seat opening between them, said gores being hung from the waist with one set of threads of the fabric running parallel substantially with the vertical axis of the garment, the back gores being cut from near their bottom meeting edges on concave curves extending to their bottoms to form edges for attachment by inseams to the front of the garment.

3. An undergarment having back gores, the upper ends of said gores being cut across horizontally and secured to the waist portion at right angles substantially to those edges which bound the seat opening the lower ends of said gores being cut with a downward slant obliquely to the vertical axis of the garment and the lower edges of the gore adjacent the vertical axis of the garment being shaped to provide requisite seat fullness.

In witness whereof, I have hereunto set my hand this 13th day of September, 1920.

FRANKLIN CHATFIELD.