

A. J. HARWOOD.
 UNION UNDERGARMENT.
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1,040,319.

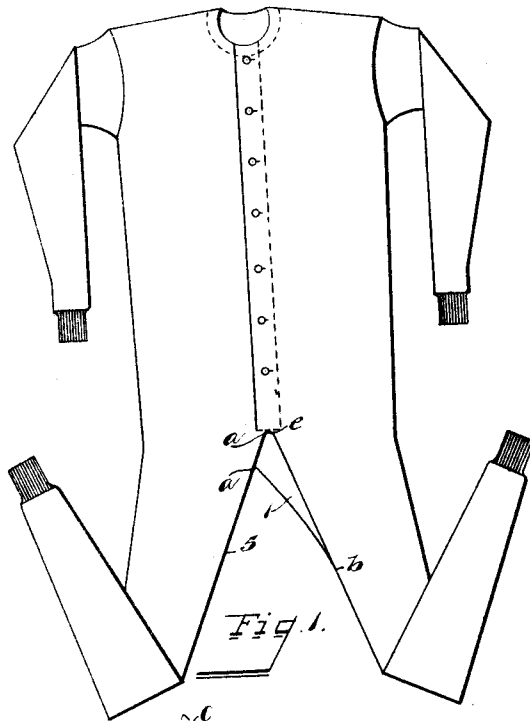


Fig. 1.

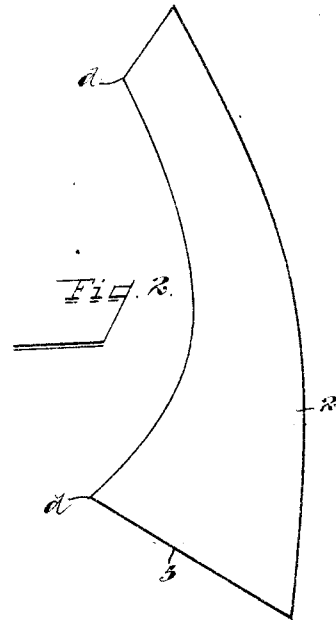


Fig. 2.

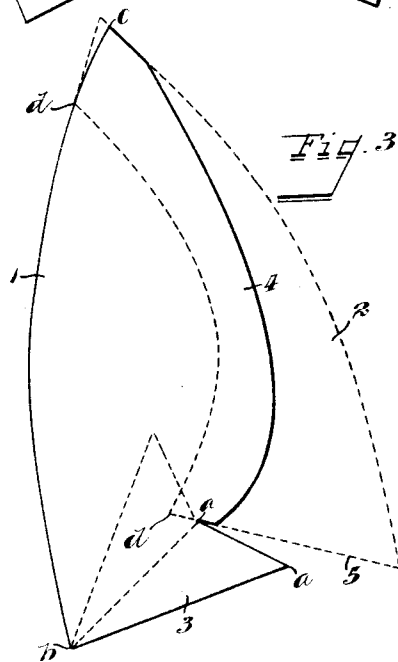


Fig. 3.

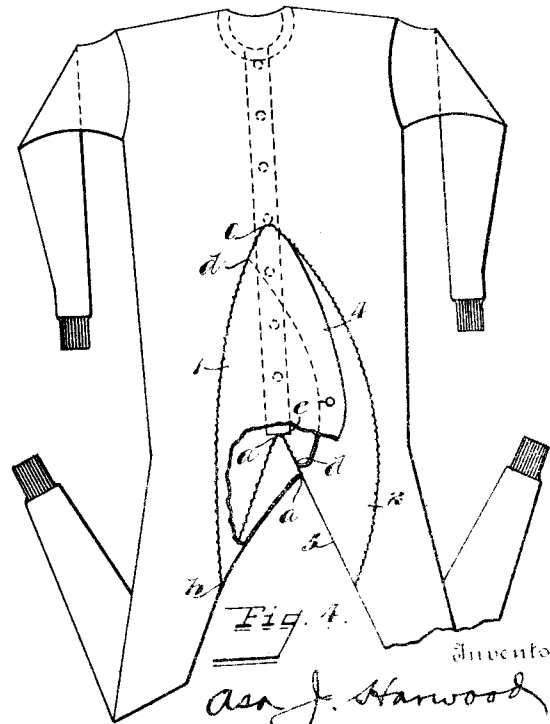


Fig. 4.

Witnesses
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UNITED STATES PATENT OFFICE.

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UNION UNDERGARMENT.

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To all whom it may concern:

Be it known that I, ASA J. HARWOOD, a citizen of the United States, residing at Richmond, in the county of Wayne and State of Indiana, have invented certain new and useful Improvements in Union Undergarments, of which the following is a specification.

This invention relates to improvements in union suit underwear and especially to what are known as "closed crotch" garments.

Various different kinds of union suits have been devised and a number of different constructions of the closed-crotch type have also been used, the closed crotch garment being one in which the front opening and the rear opening of the suit are separated by a part of the garment which extends along at the perineum of the wearer. All of the garments of this character with which I am familiar are objectionable on one or more grounds—either they fail to properly fit the wearer, or they present considerable difficulties in the opening and closing of the garment under different conditions of use, and also present many difficulties in manufacture.

When these garments are intended for men, there are certain peculiarities in the anatomy which makes it desirable that both sides of the garment should not be alike, that is, that there should be more room on one side than on the other, or that the crotch of the garment should not, therefore, be in the exact center of the garment. It is also desirable that the posterior opening should be so constructed that it will fit the anatomy of the wearer and remain closed, while at the same time ample provisions be made for opening the same with ample room for the wearer to get partly out of the garment in a stooped position.

I attain these objects by the constructions shown in the accompanying drawings, in which—

Figure 1 is a front view of a garment embodying my invention. Fig. 2 is a detail of one of the parts of the same. Fig. 3 is a detail of one of the parts to form the posterior opening and showing in dotted lines the manner of assembling the same. Fig. 4 is a rear view of the complete garment partly broken away.

Like parts are represented by similar characters of reference in the several views.

Briefly stated, in constructing my garment the fabric is woven in the form of a cylindrical web in the usual way, after which it is cut to form the legs of the wearer after the usual manner, and is also cut in the front and rear straight up the center to a point near the waist line; both sides, front and back, being exactly alike, which makes it possible to cut these garments in large quantities, as they must be for economical manufacture. I then cut from the same line of fabric two parts which are sewed into the back to give the necessary fullness and also form the posterior opening. Both of these parts are adapted to be sewed into the leg seams at their lower ends, and both extend to a point near the waist line, each being sewed at one side to a cut edge of the fabric to form a side of the posterior opening, and also sewed together to form the top and bottom of said opening, which is at the center of the garment; one of the special features of the invention lying in the particular manner of forming the lower portion of these parts by which I construct a closed crotch and also a posterior opening with ample fullness and with a flap for covering the same, and this I do as follows: The larger piece, marked 1, is made of such dimensions that when sewed into position it will lap over the other part, 2 and form the posterior flap. I make an incision in this part, 1, on the line *a-a* in Fig. 3, and this forms what might be termed a secondary flap, 3, which is folded toward the front of the garment and is sewed to the front side of the leg, forming a continuation of the leg seam, while the other part of this portion, 1, is sewed to the rear cut edge of the garment and extends from the leg seam, at *b*, up to a point at or near the center of the back of the garment in proximity to the waist line, at *c*. This secondary flap, 3, it will be seen forms a fullness at the top of one leg, preferably the left leg; the other portion of the part, 1, or flap proper, 4, which is above the incision *a-a*, being adapted to fold over and cover the posterior opening. The other inserted part, 2, which may be called a gusset, is cut along the line *d-d*, substantially of the shape of the edge of the posterior opening, and has one side, 5, cut on a diagonal line which is adapted to be sewed into the upper portion of the right

leg and joined to the part, 1, and form a continuation of the line *a-a*, which is also a continuation of the (right) leg seam up to the point *e*, where it terminates at the bottom of the front opening, which extends from that point up to the neck of the wearer in the usual way. It will thus be seen that the garment is closed from the point *e* down to the point where the side 5 of the gusset joins onto the side *a-a* of the auxiliary flap of the main part, 1, and that the crotch proper is at one side of the center of the garment, and that the posterior opening extends from a point in the center of the garment slightly above the crotch to a point in the center of the garment at or near the waist line, while the front opening extends in the usual way from a point above the crotch to the neck. By this peculiar arrangement of parts it will be seen that there is a fullness at one side of the crotch, preferably on the left, which results in comfort to the wearer, while the garment may be made to fit accurately. The particular form of the gusset 2, in connection with the part 1, having the main and auxiliary flaps, as described, being joined together to form the closed crotch, and the posterior opening extending from a point in the center line of the garment at the top to a point slightly above the crotch at the bottom, produces the necessary fullness to conform to the shape of the wearer and at the same time to properly fit the wearer and give ready access through the posterior opening without unduly stretching the parts, while at the same time the parts will naturally set together by reason of the fact that they are joined at the logical point, namely, at the center line of the garment and on the line of the perineum of the wearer, that is, the line *a-e*. I have shown this part, 1, formed of a single piece with the incision *a-a* which enables it to be folded over and sewed in as described. It is obvious that these parts might be separate pieces and accomplish the same result, but there would be apparently no advantage in making them separate, as it would require additional seams with probably no saving of material. It will be noticed that in having these divisions all at the center of the garment, the advantage in manufacture is very great, as, in cases where the posterior opening is cut diagonally or on a different line from the front opening,

it is impossible to cut the garments in quantities, the posterior opening being necessarily formed in such cases by a separate operation for each garment.

Having thus described my invention, I claim:—

1. In a union suit, a main body piece having front and posterior openings formed on the same line, two back pieces sewed in the posterior opening and extending from a point near the waist line to a point in each leg below the crotch, respectively, one of said pieces being formed with an auxiliary flap which is sewed to the upper end of one leg portion and forms a continuation of one leg, the other piece being sewed to the other leg and also to the auxiliary flap and formed on its free edge to form a side of the posterior opening, substantially as set forth.

2. An undergarment formed of a cylindrical webbing cut centrally at the front and rear to form front and rear openings, and separate pieces sewed to the cut edge of the back of the garment and extending into the leg portions thereof, one of said parts being curved on its free edge to form a side of the rear opening and the other part being extended to overlap the first part and form a cover, said second part being also formed with an auxiliary portion adapted to be joined to the front and rear of one leg portion to form an enlarged continuation of the leg thereof and also joined to the perineum portion and to the other part to form a closed crotch with the enlarged portion at one side of the crotch, as set forth.

3. In a union suit, a closed crotch and posterior opening formed by inserting two pieces in the rear portion of the garment which is cut centrally, said parts being joined together at the top and bottom of said rear opening and also joined respectively to the leg seams, one of said parts being provided with an auxiliary flap to form a continuation of one leg which extends to one side from the center or crotch of the garment, as set forth.

In testimony whereof, I have hereunto set my hand this 1st day of December, A. D. 1911.

ASA J. HARWOOD.

Witnesses:

ALFRED L. FLESH,
ARTHUR C. LINDEMUTH.