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2,449,425

GARTER

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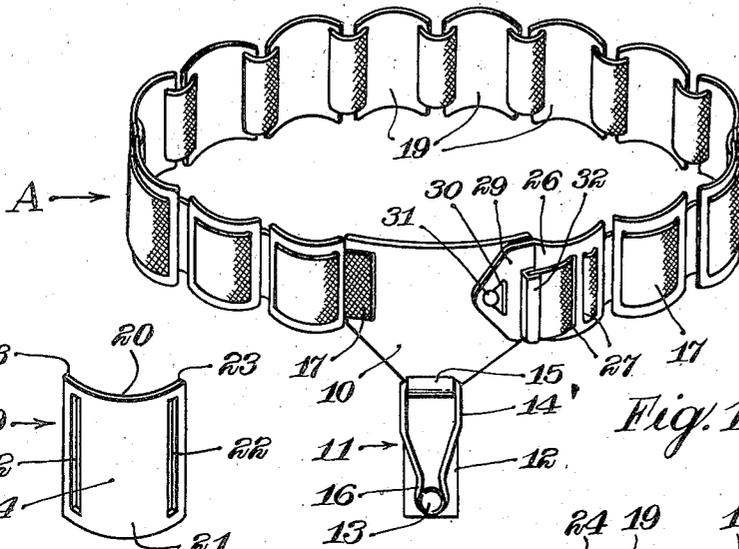


Fig. 1

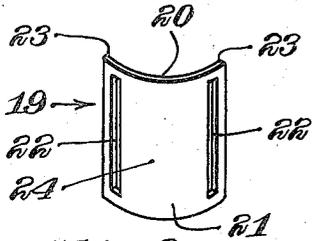


Fig. 3

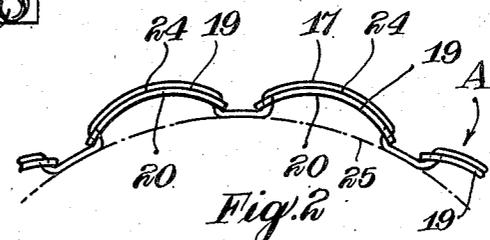


Fig. 2

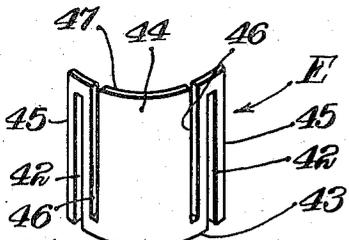


Fig. 8

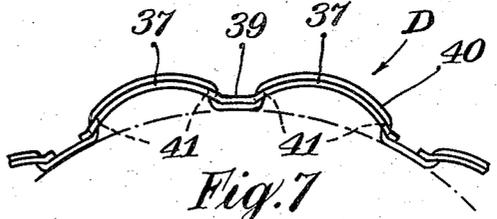


Fig. 7

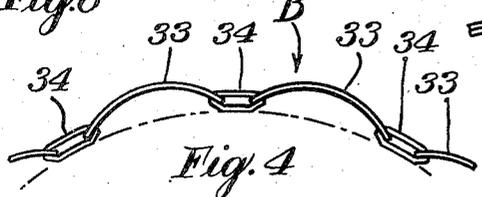


Fig. 4

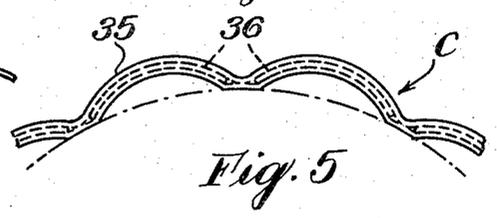


Fig. 5

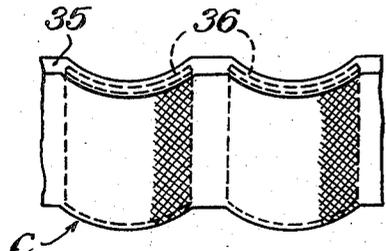


Fig. 6

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GARTER

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1 Claim. (Cl. 2—314)

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My invention relates to an improvement in garter construction wherein it is desired to provide a garter which will not create undue harmful pressure against the leg which it encircles.

There has been evidence to the effect that the pressure of garters upon the legs is a contributing factor in causing varicose veins. Certain of the veins extend longitudinally of the leg near the surface and numerous smaller veins are provided near the surface of the skin of the leg. The inward pressure of tight elastic garters against these veins tends to restrict circulation, thereby creating a condition which is considered by some to be a contributory factor in such ailments as varicose veins and the like.

It is the object of the present invention to provide a garter which engages the surface of the leg at angularly spaced points and which bridges the intervening portions of the leg. As a result the garters may be applied to bridge the large surface veins of the leg, thus obviating any former difficulty due to inward pressure of the garter.

A feature of the present invention resides in the provision of an arch or series of arches mounted upon the garter in such a way as to bridge a portion of the surface of the leg between the ends of the arch. As such an arch is positioned to bridge a large vein of the leg, no inward pressure is applied against this vein, and the blood circulation through the leg remains unimpeded.

A further feature of the present invention resides in providing a garter having more or less of the inner surface thereof out of contact with the portion of the leg encircled by the garter. This arrangement is particularly desirable during hot weather when the pressure of a wide band of elastic against the leg is extremely uncomfortable. My construction does not remove inward pressure against the leg, but considerably lessens the area covered by the garter and in contact therewith, and as a result much of the former discomfort is obviated.

I have found that much of the discomfort caused by the wearing of garters is not due to the inward pressure thereof, but is rather due to the large area covered by the elastic material. On the other hand, relatively narrow elastic bands are extremely uncomfortable due to the extremely small area of contact between the garter and leg, and such narrow bands are further impractical because of the tendency of such bands to tilt or slide out of proper position. With my construction the width of the band need not be reduced, but the pressure is concentrated into a series of angularly spaced relatively narrow areas which may be worn without undue pressure at any point.

I have found that if the width of the garter is decreased materially, the garter has a tendency to draw into the flesh, thereby having the effect

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of slowing or stopping the circulation of blood. However, by providing a garter with a similar relatively small area of contact, which area engages the leg at angularly spaced points, this previous difficulty can be corrected.

A feature of the present invention resides in the provision of such a garter engaging the surface of the leg at angularly spaced areas of contact.

A further feature of the present invention resides in the provision of arch means which may be either incorporated on a garter at the time of its manufacture, or which may be added to a conventional garter at any time. Thus any garter in common use may be equipped with my arch means to insure the desired results.

These and other objects and novel features of my invention will be more clearly and fully set forth in the following specification and claim.

In the drawings forming a part of my specification:

Figure 1 is a perspective view of a garter embodying the principles of my invention.

Figure 2 is a top plan view of a portion of the garter shown in Figure 1.

Figure 3 is a perspective view of an arch of the type used on the garter of Figures 1 and 2.

Figure 4 is a top plan view showing a modified form of garter construction.

Figure 5 is a top plan view showing a section of a second modified form of garter construction.

Figure 6 is a perspective view of the garter section illustrated in Figure 5.

Figure 7 is a top plan view of a construction very similar to that previously described, but incorporating a series of arches in a single element.

Figure 8 is a perspective view of a form of arch which may be applied to a garter of conventional type.

The garter A, illustrated in Figures 1 and 2 of the drawings, includes a clasp supporting portion 10 and a clasp 11 thereupon of any suitable type. The clasp 11 includes a flexible base portion 12 having a headed knob 13 projecting outwardly therefrom and a pivotal loop 14 pivotally supported at 15 and having an end 16 of reduced width to engage beneath the head of the knob 13. Any suitable garter clasp used for supporting stockings or socks may be substituted therefor.

An elastic band 17 of any suitable resilient material is attached to one edge of the clasp supporting portion 10. This elastic band 17 is designed to encircle the leg and be detachably connected to the clasp supporting portion 10 near the opposite extremity, as will be later described.

One or a series of arches 19 are mounted upon the band 17. The arches 19 are provided with a concave inner surface 20 and a parallel concave outer surface 21. A pair of slots or elongated apertures 22 are provided through the arch body

near opposite sides thereof. The elastic band 17 extends inwardly of the free lateral edges 23 of the arch 19, through the slots 22 and overlies the intermediate portion 24 of the convex surface of each arch. As a result the concave arches space the major portion of the band 17 from the surface of the limb which the garter encircles.

In Figure 2 of the drawings, I disclose the portion of the garter A encircling a limb, the broken line 25 indicating the approximate position of the outer surface of the limb. It will be seen that only relatively small angularly spaced areas of the band 17 contact the surface of the limb, the arches 19 spacing the major portion of the band therefrom.

In the form of construction illustrated, an arch 26 is provided near the free end of the band 17 which is provided with a pair of spaced apertures 27 near one edge thereof. The band 17 is threaded through both of these apertures, the apertures acting as a lock to hold the band from slipping relative to the arch 26. A projecting tongue 29 is provided on the arch 26 which is equipped with a key hole shaped aperture 30 therein. The aperture 30 is designed to accommodate a knob 31 on the clasp supporting portion 10 so as to hold the garter in encircling position. The aperture 30 is, however, of sufficient size to permit the knob 31 to be disengaged therefrom so as to permit the free end of the garter to be detached. An end binding 32 of metal or other suitable material is usually provided on the free end of the band 17 to prevent the band from raveling.

The arches 19 may be formed of any material which is relatively rigid and which will not collapse under the pressure usually applied thereto by the band 17. For example, many types of plastic, such as acetate plastic and the like have been used for the purpose, although the use of this material is in no way mandatory.

In Figure 4 of the drawings, I disclose a garter B which is somewhat similar to the garter A, but is formed in somewhat different manner. In the garter B, I provide a series of relatively rigid raches 33 which are connected by loops 34, preferably of resilient material. In the garter B, the arches 33 may be formed of somewhat resilient material so as to spread slightly in attaching or detaching the same. Preferably, however, part or most of the resilience of the garters is provided by the loops 34 connecting adjacent arches. It will be noted that the loops 34 extend over the opposed edges of the arches to prevent these edges from digging into the skin. The arches used may be identical with the arches 19 illustrated in Figure 3 of the drawings.

In Figures 5 and 6 of the drawings, I disclose a modified form of garter C. In this form of construction the elastic band 35 is tubular in cross section so as to permit a series of spaced arches 36 to be inserted therein to. The arches 36 space the major portion of the tubular band 35 from the surface of the limb which the band encircles, only the portion of the band between the ends of adjacent arches being in contact with the skin. If desired, this type of garter may include a single arch 36, or only a pair of arches, if it is so desired, to arch over main veins to be protected. Obviously the arches 36 may be moved longitudinally of the band 35 to position the arches at any point throughout the length thereof. These arches are similar to the arches 19 illustrated in Figure 3, but need not include the slots 22.

In Figure 7 of the drawings I disclose a garter construction D which is identical with the garter A, with the exception that two or more loops 37 are connected by an intermediate connecting portion 39. This connection portion 39 holds the arches 37 in properly spaced relation. One unit including two or more arches 37 may be provided on the elastic band 40 or the garter may comprise a series of spaced units. Slots 41 are provided in the loops 37 through which the elastic band 40 may be threaded, these slots being similar to the slots 22 illustrated in Figure 3.

In Figure 8 of the drawings I disclose the arch unit E which may be applied to any conventional type of garter. In this form of construction a slot 42 is provided communicating with one edge 43 of the arch body 44, near each of the opposed edges 45 of the arch body. A second slot 46 in spaced relation to the slot 42 communicates with the opposite edge 47 of the arch body. The garter of conventional type may be threaded through the slots 46 and the slots 42 in such a manner that the arch forms a bridge between two spaced points of contact with the limb encircled by the garter. The arch construction E is particularly designed for use on garters of conventional construction.

It will be noted that each of the forms of my construction have in common the fact that they permit areas of the encircled limb beneath the garter band or garter to be spaced from contact therewith. In each construction the garter engages the surface of the skin only at angularly spaced points of contact. As a result the garter may be arranged to provide substantially a free circulation of blood in the limb encircled.

In accordance with the patent statutes, I have described the principles of construction and operation of my garter construction and while I have endeavored to set forth the best embodiments thereof, I desire to have it understood that obvious changes may be made within the scope of the following claim without departing from the spirit of my invention.

I claim:

A garter comprising a flexible resilient band designed to encircle a limb, an arch of relatively rigid material having a radius of curvature substantially smaller than that of the limb mounted on said band, each arch having a pair of generally parallel slots at each end thereof, one of the slots of each pair communicating with one curved edge of the arch, and the other slot communicating with the opposite curved edge of said arch, the band underlying the concave surface of said arch between the parallel ends of the arch and the outermost slots overlying the convex surface of the arch between the slots of each pair, and underlying the arch between the innermost slots, said innermost slots being spaced sufficiently from the ends of the arch to space the portion of the band underlying the center of the arch from the surface of the limb.

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