July 23, 1929. W. B. SCHOFIELD 1,721,749

HOSE SUPPORTER

Filed Nov. 21, 1927

Fig. 1.

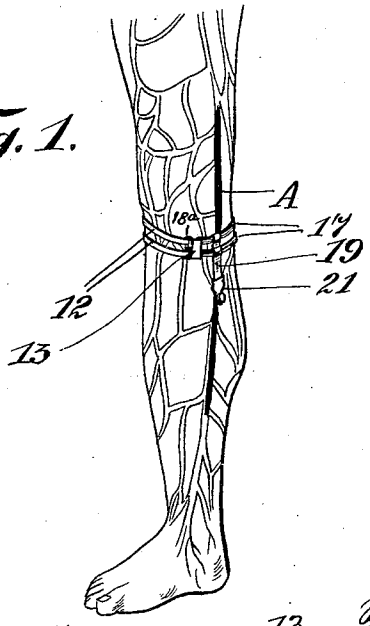


Fig. 2.

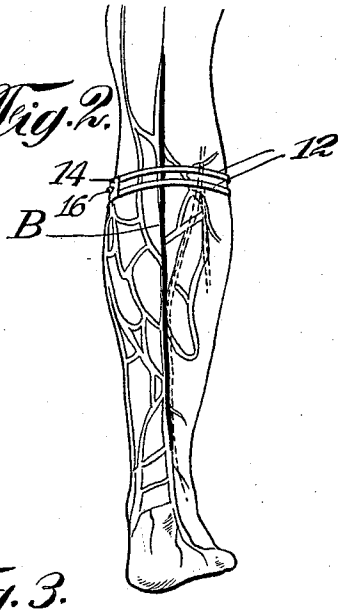


Fig. 3.

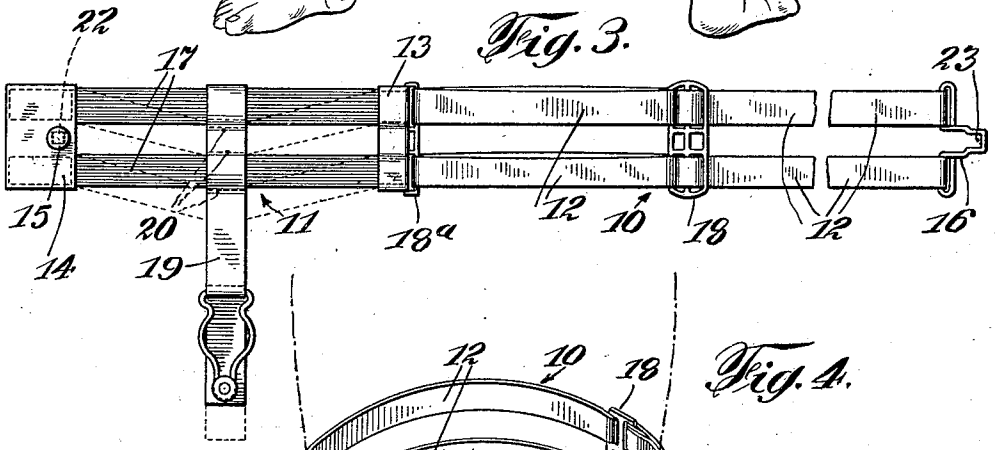
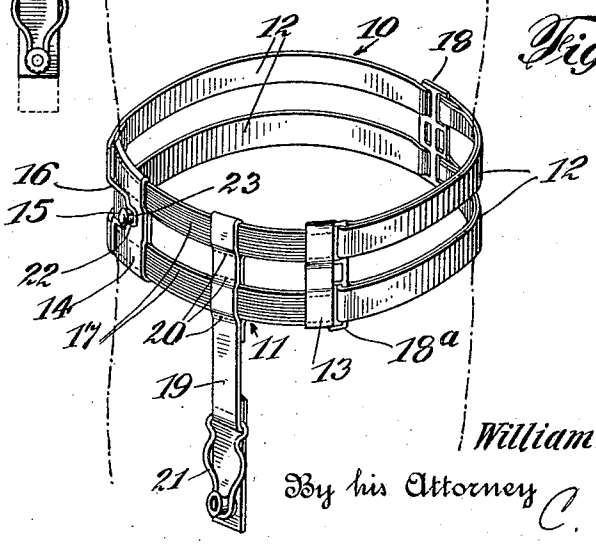


Fig. 4.



Inventor
William B. Schofield

By his Attorney C. F. Goepel.

Patented July 23, 1929. 1,721,749

UNITED STATES PATENT OFFICE.

WILLIAM B. SCHOFIELD, OF NEW YORK, N. Y.

HOSE SUPPORTER.

Application filed November 21, 1927. Serial No. 234,635.

This invention relates to improvements in garters, and has particular reference to such devices for use in supporting men's half hose.

The commercially available garters most commonly in use prior to this invention, comprise a relatively wide elastic band which encircles the wearer's leg just below the knee and which is characterized by a substantially triangular non-elastic body portion, from the lower end of which is a dependent hose supporting clamp. In use, said triangular portion is disposed usually at the inner side of the leg and is maintained in position by virtue of the tension of the elastic band. Such tension, however, is objectionable, because it exerts a pressure upon the veins of the leg, and the contractability of the elastic serves to accentuate this pressure, and tends to constrict the blood circulation, and this constriction is increased by the downward pull of the hose upon the attaching clasp. Therefore, in walking and in otherwise moving the leg, the pressure exerted inwardly by the leg encircling band is increased considerably over the tension actually necessary for the purpose of supporting the hose. It is this increased tension which has given rise to serious objections. Naturally, the constriction in the circulation is neither beneficial nor comfortable to the wearer, and in many instances, the use of such devices has been either directly or indirectly the cause of varicose veins and other ailments. In those garters of the prior art both the long and short saphenous veins are constricted, as the portions of the garter press directly down upon them. The foregoing and other objectionable features of the prior art are overcome by the present invention which has for one of its general objects, the provision of a garter which will more effectively hold the hosiery with less discomfort to the wearer, and in which the physiological relations of veins and bones are utilized to advantage.

Another object of the invention is to provide a garter which will be of simple construction, durable in service, capable of being economically produced and having qualities which from an anatomical standpoint, will excel those which have preceded it in the art.

With these and other objects in view, the invention resides in the novel construction and combination of parts hereinafter set forth, shown by way of illustration in the accompanying drawings and specifically pointed out in the appended claims.

In the drawings accompanying this specification—

Figure 1 is a view looking from the front toward the inner side of a human leg and illustrating the superficial veins, and my new garter in relation therewith,

Fig. 2 is a similar view, looking toward the back of the leg, also showing the veins and the new garter in relation therewith,

Fig. 3 is an elevation of one form of my improved garter with the parts extended in flat condition, and

Fig. 4 is a detail perspective view of the same garter, illustrating more clearly its condition of use.

Similar characters of reference indicate corresponding parts throughout the several views.

Referring particularly to Figs. 1 and 2, it will be observed that the internal or long saphenous vein A extends upwardly at the inner side of the human leg, while the external or short saphenous vein B extends in a similar direction at the back of the leg, and each of said veins communicates with numerous tributaries, as indicated in the drawings. These veins are very close to the surface, and therefore, not very well protected, and any slight pressure inwardly against them will serve to constrict the flow of blood in its natural passage. In the use of the prior art garters above mentioned, the leg encircling band has constricted not only the flow of blood through the saphenous veins, but also through a number of their tributaries. There must, of course, be a slight tension maintained upon the leg encircling portion, in order to properly support the hose, but such normal tension has been considerably increased by virtue of the fact that the pull of the hose during movement of the leg has been transmitted through the entire leg encircling band and translated into inward pressure particularly at the clasp portion sustaining member which has given rise to the objections above enumerated.

Referring now particularly to Figs. 3 and 4, it will be seen that the improved garter has a leg encircling or body portion 10 of non-elastic material and a depending hose supporting portion 11 of elastic material, so arranged that these parts when used on the leg prevent translation of movements into increasing tension on the leg encircling portion

and into movement transverse to the leg at the hose supporting clasp. The body portion of the improved garter preferably comprises a pair of spaced and relatively parallel narrow bands 12, which are composed of non-elastic material, and the lowermost member 12 may preferably be of slightly greater length than the upper member, in order to compensate for the difference in contour of the leg portions encircled by them. Said narrow bands 12 are definitely maintained in spaced relation. A pair of leather spacing members are shown at 13 and 14 respectively, said member 14 being preferably disposed at one end of the hose supporting portion and provided with a suitable button 15 for engagement by a metallic catch member 16. Said button 15 and catch 16 render the leg encircling band capable of easy securement and may be of any ordinary or preferred construction.

The spacing member 13 is suitably spaced from the member 14, as best shown in Figure 3 and connected thereto by elastic bands 17 which are capable of being laterally deflected, as indicated by dotted lines. It will be noted that said members 13 and 14 are in effect buttress members, which not only function to definitely space the parallel bands 17, but they define the longitudinal limits of the laterally deflectable portions 17. They support the elastic members 17, and the bands 12 are joined to the member 13. Although I have stated that the members 13 and 14 are formed of leather, I do not limit myself to this specific material, since other materials may be used with equal advantage, but it is important that these parts be definitely and permanently related to the parallel bands in their indicated positions. The buttress members 13 and 14 overlap the elastic bands, thereby causing increased thickness of the garter at those points.

The bands 12 may preferably be provided with an adjusting buckle 18 of any ordinary or preferred construction by means of which the length of said leg encircling portions may be varied, in accordance with the size of the wearer's leg, or to compensate for stretching of the material after it has been in use. Said adjusting buckle 18 is threaded over the parallel bands 12 intermediate their ends and is then secured to corresponding ends of the bands to form loops which are threaded through an attaching member 18ª on the buttress member 13. The clasp member 16 is secured to the other ends of the bands 12.

The hose supporting member 11 comprises a depending flexible band or tab 19 which is adjustably mounted on the portions 17 intermediate the buttress members 13 and 14 and preferably so formed as to be capable of movement upon said members 17. For this purpose, said member 19 may be formed of a relatively narrow band which is reversely bent so as to overlie both the inner and outer surfaces of said members 17 and suitably provided with spaced rows of stitching 20, providing loops for the sliding movement of said band. At its lower end, said member 19 carries a hose supporting clasp 21 of the usual form to which the hose of the wearer may be detachably secured.

The laterally deflectable portions 17 are normally in longitudinal alignment with the corresponding bands 12, and it is preferable that such alignment be substantially maintained as much as possible at all times. For this purpose, the button 15 is provided with a relatively square shank 22 of reduced diameter which is adapted to be snugly received within the end loop 23 of the clasp member 16 and in such a manner as to prevent relative rotation of said parts about the axis of the button 15. The result is that the buttress member 14 will at all times be maintained in the desired relation to the connecting ends of the bands 12 and any slight downward pull on the hose attaching portion 11 will be uniformly distributed to the elastic members 17, causing deflection thereof, but will not be transmitted beyond the buttress members 13 and 14, and therefore, will not result in increased inward pressure on the leg encircling portion 10. Between the buttress members 13 and 14, the elastic members 17, when the hose exerts a pull on the clasp member 16, move longitudinally of the leg and not transversely thereto. Hence, neither the clasp nor the supporting members 17 exert any transverse pressure on the front saphenous vein. The garter is applied to the leg so that one buttress is upon the tibia or shin bone and the other buttress on the muscle of the leg, whereby the elastic longitudinally moving portion spans the front saphenous vein. The buckle to adjust the length is so disposed that the remaining non-elastic portion spans the other saphenous vein.

While the illustrated and described embodiment of the invention employs two spaced parallel bands 12, it will be obvious that a single relatively wide non-elastic band may be used in place of said spaced parallel bands, and may be articulated with a pair of narrow elastic bands which are secured at their opposite ends to the buttress members 13 and 14, or to a single relatively wide elastic band similarly connected. In any event, the maintenance of the tension of the leg encircling portion and the provision for longitudinal deflection of the elastic portions are substantially the same. By virtue of the fact that when in use this garter will have no variable inward pressure against the wearer's leg but will have only the slight tension necessary to maintain it in position, and further by virtue of the fact that relatively vertical movement of the hose supporting portion 11 will not be transmitted to the leg or to the encircling

band, but will be maintained vertically and prevented from being translated to a transverse movement as in the garters of the prior art, the improved garter will be exceptionally comfortable and will constitute a substantial advance in the art.

The non-elastic members may preferably be formed of thin leather which has the property of stretching slightly when placed under tension. If the garter be pulled slightly when in its extended position, the leather will stretch, but the elastic will not, and by virtue of this fact the leg encircling portion will render the garter extremely comfortable in use. In certain cases, as in golf garters, or for women's wear, the garter may be formed of spaced parallel bands as previously described. but without the hose supporting clasp, in which case the garter is completely circular, that is, the elastic bands are in circumferential alignment with the non-elastic bands.

Obviously, the invention is susceptible of numerous further modifications in the details of construction and arrangement of parts, and the right is herein reserved to make such changes as fall within the scope of the appended claims without departing from the sprit of the invention.

What is claim is:—

1. A garter comprising a pair of non-elastic bands connected together in spaced parallel relation, a pair of elastic bands secured respectively to corresponding ends of said non-elastic bands, in longitudinal alignment with the non-elastic bands, buttress members connecting the ends of the elastic and non-elastic bands, the elastic portions being of such length that one buttress member may be disposed adjacent the shin bone of the wearer's leg and the other against the muscle on the inner side of the leg with the front saphenous vein between said members, and depending hose supporting means connected to said elastic bands intermediate their ends whereby to simultaneously deflect longitudinally of the leg, said elastic bands uniformly when tension is exerted thereon.

2. A garter comprising a pair of bands in spaced parallel relation constituting relatively long leg encircling portions of less length than the girth of the wearer's leg, a pair of relatively short and deflectable parallel elastic bands for completing the encircling of the leg and in longitudinal alignment with the first-named bands, a buttress member at each end of said pair of elastic bands and bridging same, one of said buttress members being united with one end of the first named bands and the other buttress member being adapted to be connected with the opposite end of the first-named bands, and means comprising a member looped at one end and extending around both of the elastic bands, intermediate their ends, permitting freedom of movement of the looped end in respect to the elastic bands, and having a hose-engaging part at the other end.

3. A garter comprising a pair of bands in spaced parallel relation constituting long non-elastic and leg encircling portions of less length than the girth of the wearer's leg, a pair of relatively short and deflectable parallel elastic bands for completing the encircling of the leg and in longitudinal alignment with the first named bands, a buttress member at each end of said pair of elastic bands and bridging the same, the plies of said buttress members overlapping the last named bands and increasing the thickness of the garter at the buttress member points, one of said buttress members being united with one end of the first named bands and the other buttress member being adapted to be connected with the opposite end of the first named bands, means comprising a member looped at one end and extending around both of the elastic bands centrally intermediate their ends, permitting freedom of movement of the looped end in respect to the elastic bands, and having a hose-engaging part at the other end.

In testimony that I claim the foregoing as my invention, I have signed my name hereto.

WILLIAM B. SCHOFIELD.