

July 7, 1925

1,544,641

V. GUINZBURG

ANKLE REDUCER

Filed March 19, 1924

Fig. 1.

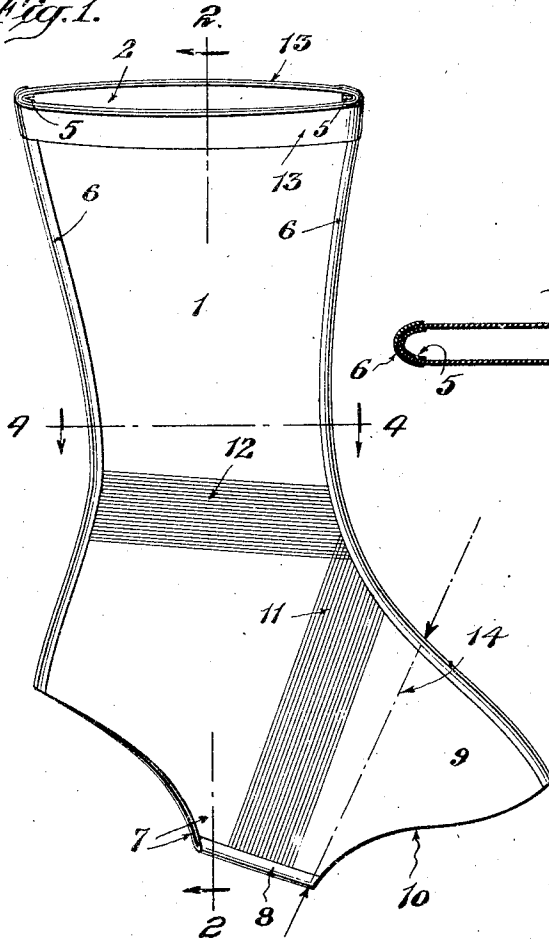


Fig. 2.

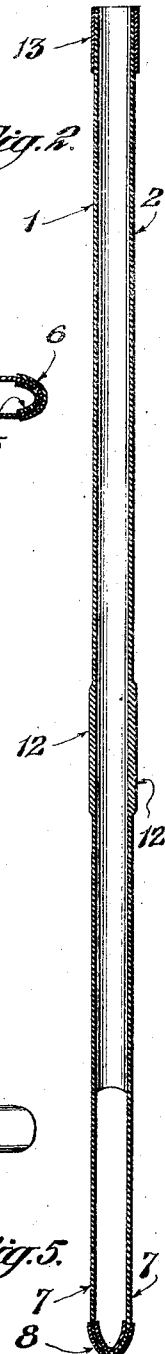


Fig. 4.

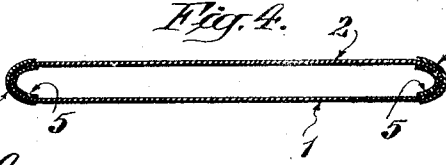


Fig. 3.

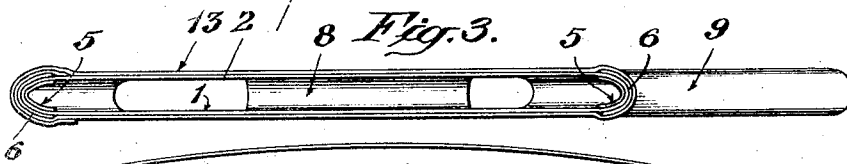
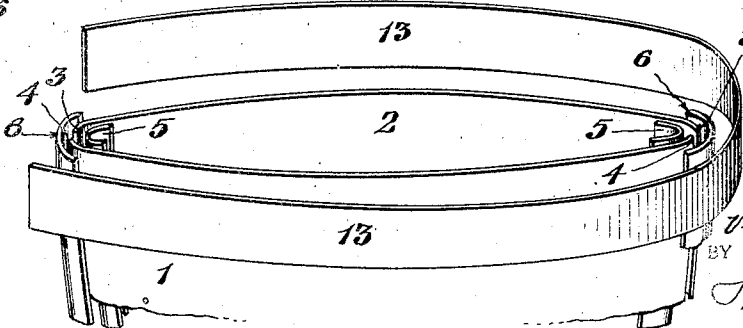


Fig. 5.



INVENTOR

Victor Guinzburg
BY Joseph L. Levy
his ATTORNEY

UNITED STATES PATENT OFFICE.

VICTOR GUINZBURG, OF NEW YORK, N. Y., ASSIGNOR TO I. B. KLEINERT RUBBER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

ANKLE REDUCER.

Application filed March 19, 1924. Serial No. 700,203.

To all whom it may concern:

Be it known that I, VICTOR GUINZBURG, a citizen of the United States, and a resident of the city, county, and State of New York, have invented a certain new and useful Improvement in Ankle Reducers, of which the following is a specification:

The object of this invention is to provide an ankle-reducing device which is of simple construction; which can be worn under the stockings and which will be indiscernible when worn, and which will, by reason of its particular construction, hold the bones of the foot under yielding compression and also support the arch of the foot.

A further object of this invention is to provide an elastic or all-rubber reducing stocking which will be so constructed as to provide suitable support for the foot, particularly at the arch thereof, so that the stocking when worn will support the arch and be of considerable aid for use in cases of fallen arches or "flat feet".

With these objects and such other objects as may hereinafter appear, in view, I have devised the particular arrangement of parts hereinafter set forth and more particularly pointed out in the claims appended hereto.

Reference is to be had to the accompanying drawing, forming a part hereof, in which

Figure 1 is a perspective view of my improved reducing device;

Figure 2 is a sectional view on the line 2-2 of Figure 1, looking in the direction of the arrows;

Figure 3 is a plain view of the reducer;

Figure 4 is a sectional view on the line 4-4 of Figure 1, looking in the direction of the arrows; and

Figure 5 is a perspective view of the upper end of the reducer with the various parts separated to disclose the manner in which these parts are assembled or connected together to produce the finished article.

Throughout the various views of the drawings, similar reference characters designate similar parts.

In the preferred embodiment of my invention as disclosed in the accompanying drawing, 1 indicates one of the side sections of the reducer and 2 indicates the opposite similar side section.

These two sections 1 and 2 are shaped so

that when they are connected together they provide a stocking which fits the foot smoothly and without wrinkling or folding and these two sections are made of any highly elastic impervious material, such as sheet rubber or the like.

The edges 3 and 4 of the side sections 1 and 2 are preferably joined together by vulcanization while the rubber is in a more or less plastic state and the "seams" or joints thus formed are reinforced by inside reinforcing strips 5 and by outer reinforcing strips 6, said strips being secured in position over the joints by vulcanization, by cementing, or in any other suitable manner. The construction just described produces a "stocking" of considerable elasticity, which, when worn, is stretched smoothly and in an unwrinkled condition over the foot, the ankle, and lower part of the leg, and by compression and exciting of perspiration tends to materially reduce the ankle and surrounding parts of the leg.

I have found it desirable to employ in the construction of my improved ankle reducer, a thin sheet rubber of a flesh color or of a color which is indiscernible through the hose of the wearer so that the reducer may be readily worn at all times without attracting attention.

Each of the side sections 1 and 2 is provided with a downwardly projecting strap portion 7, and the two portions 7 are connected together and reinforced on said seam as at 8. The two connected or joined portions 7 form a continuous strap which extends under the arch of the wearer's foot and when the stocking is worn, said strap exerts considerable pressure on the arch and acts to support the same.

The stocking is provided with a front extension 9 which projects forward over the upper part of the foot. This extension 9 projects into the shoe so that the front end of the reducing stocking is not visible through the outer hose and adjacent the edge of the wearer's shoe. This extension 9 also affords considerable bearing for the arch supporting strap, for when the foot is extended through the foot opening shown at 10, the extension 9 is under considerable tension and holds the arch strap (composed of the parts 7) under considerable diagonal

tension or strain as is diagrammatically indicated by the dotted line 14, so that said arch strap is held with considerable pressure against the arch of the wearer's foot.

5 To aid in providing additional support for the arch and bones of the foot, I provide foot-reinforcing bands corresponding in a way to surgical "strapping", said bands or straps being shown at 11 and 12.

10 The band 11 comprises an arch-supporting band and may consist of a continuous strap or band of elastic secured for its entire length to the face of the stocking, or it may, if desired, be made an integral part of the stocking by providing a thickening of the material of the stocking along the desired line to produce the band. In the accompanying drawing I have shown said band formed integral with the body of the stocking by providing the side sections 1 and 2, which make up the stocking, with integral thickened portions in the form of bands which unite to produce a continuous, integral arch-supporting band which en-
25 circles the foot, extending under the arch of the wearer's foot and over the instep thereof. This band 11, being of greater thickness than the body of the stocking, is consequently of greater tension or of less resiliency than the body of the stocking and acts as a surgical strapping for the arch of the foot, acting with a yielding firmness upon the metatarsal bones of the foot and firmly supporting the arch with a firm yet comfortable yielding pressure. I have described said band or strap 11 as being formed integral with the body of the stocking by thickening the body material to form said band. This is preferably done on the exterior face of the sections 1 and 2, but it will be understood that said band may be produced on the inner face of the stockings or it may consist of a separate strip of rubber vulcanized or cemented to either the inner face or to the outer face of the stocking.
45 ing.

The band 12 which extends about the leg of the wearer just above the ankle bones of the foot, is preferably formed similarly to the band 11, that is, by thickening the material of the body to form said band, and it acts to compress the ankle of the wearer, exerting a firm and yielding pressure which aids in both strengthening the ankle and in reducing the size of the same by its continuous compression. The two bands 11 and 12 meet or cross on the instep of the foot and resemble the surgical strapping usually employed in cases of fallen arches and weak ankles, but as these bands or straps exert a resilient or yielding pressure upon the foot they neither bind nor cause discomfort when worn.

65 At the top or upper edge of the stocking I provide a suitable binding or reinforcing

strip 13 which prevents the edge of the stocking from being torn while the same is being placed on or removed from the foot, and incidentally holds or binds down the upper end of the outer reinforcing strips disclosed at 5. 70

I have shown my improved stocking as terminating a short distance above the ankle, but it will be understood that the stocking may be full length if desired. 75

It will be seen from the foregoing that my improved ankle reducer is useful not only for the purpose of reducing the size of the ankle and attendant parts of the leg, but that it, while worn, acts to measurably support fallen arches and generally strengthen the foot. The bands 11 and 12 are so placed that they apply a firm and yielding pressure, said pressure being greater than the pressure applied by the other parts of the stocking, where greater pressure is required without in any way interfering with the movements of the leg and foot or in any way inconveniencing the wearer. 80 85 90

Having described my invention, what I claim is:—

1. An article of the class described comprising a stocking composed of an impervious elastic material adapted to cover the ankle of the wearer and extend upward above the same, said stocking having a thicker portion encircling the foot and extending under the arch of the foot and over the instep and a thicker portion encircling the ankle said thickened portions being adapted to exert greater pressure than the body of the stocking. 95 100

2. An article of the class described comprising a stocking composed of an impervious elastic material adapted to embrace the foot and ankle of the wearer and hold the same under a yielding compression and a band thicker than the body of the stocking and of less resiliency than the stocking, integral with said stocking and embracing portions of the foot of the wearer said band being adapted to exert greater compression than the body of the stocking. 105 110

3. An article of the class described comprising a stocking of flesh-colored sheet rubber adapted to cover the foot and ankle and having its upper end terminating a short distance above the ankle, and a supporting and compression band integral with said stocking, said band surrounding the leg of the wearer and extending over the instep and under the arch of the foot of the wearer. 115 120

4. An article of the class described comprising a sheet rubber stocking having integral thickened bands extending around the foot and ankle of the wearer for supporting and compressing said foot and ankle. 125 130

5. An article of the class described comprising a stocking composed of flesh colored elastic sheet rubber adapted to cover the ankle of the wearer and extend upward
5 above the same; said stocking having openings for the heel and the toes of the foot and an integral thickened portion adapted to

encircle the foot and extend under the arch of the foot, said thickened portion being adapted to exert greater compression than 10 the body of the stocking.

Signed at the city, county and State of New York, this 18th day of March, 1924.

VICTOR GUINZBURG.