May 11, 1954 M. B. RICHARDSON ET AL 2,677,825

HOSIERY PROTECTOR FOR ARTIFICIAL FEET

Filed March 14, 1951

FIG. 1

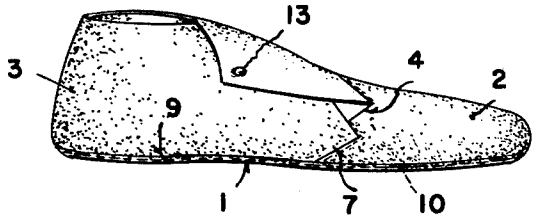


FIG. 3

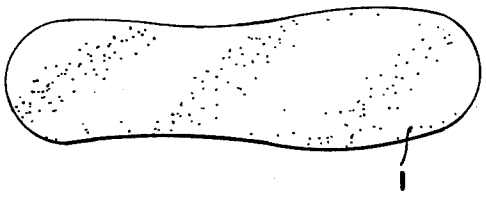


FIG. 2

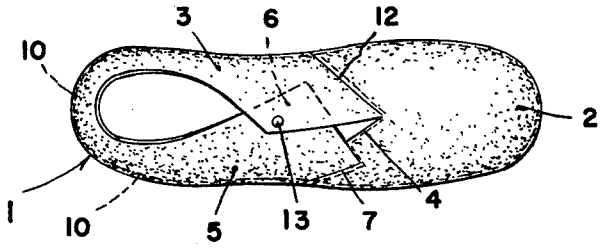


FIG. 4

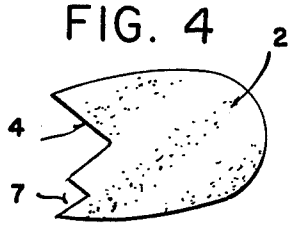


FIG. 5

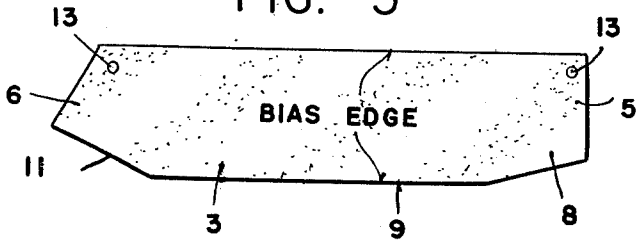
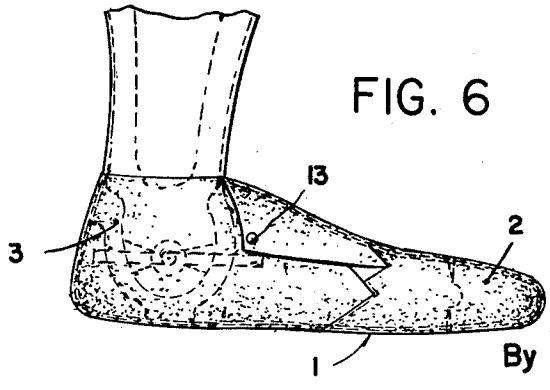


FIG. 6



Inventors
Morris B. Richardson,
Grace J. Richardson,

By

Attorney

Patented May 11, 1954

2,677,825

UNITED STATES PATENT OFFICE

2,677,825

HOSIERY PROTECTOR FOR ARTIFICIAL FEET

Morris B. Richardson and Grace J. Richardson, Silver Spring, Md.

Application March 14, 1951, Serial No. 215,558

3 Claims. (Cl. 2—61)

1

This invention relates to a means for protecting hosiery against unusual wear when worn on artificial foot or the like, and more specifically to a removable, form-fitting covering for such members to be worn under the sock or hose.

One having an artificial foot wants the same, at least, from outward appearances, to resemble the normal foot as near as possible when covered with a shoe and also to be concealed while in a sitting or relaxed position. This is especially true where a foot member extends partly up the lower leg. In a sitting or relaxed position the trouser leg or skirt, as the case may be, is raised to some extent and for that reason it is desired to wear a sock or hose over these artificial members.

These artificial members are made of wood or metal or a combination of these materials so that when a sock is worn over the artificial foot it is subject to a cutting or abrading action due to the inherent characteristics and shape of the artificial member, which necessarily results in the wearing out of the sock or hose in a very short time as compared to a sock worn over the normal foot. In addition, most of these artificial foot members are constructed with hinged toe and ankle sections which present a further hazard in that often the sock or hose is pinched or clamped to the extent that the upper portion of the same is rendered unserviceable in a very short time as well as the lower foot portion.

The object of the present invention is to provide a removable protective covering for the entire artificial foot and ankle portions to be worn under the sock or hose.

Another object is to so construct the protector that it will snugly and smoothly embrace the artificial member yet be easily applied and removed with the minimum amount of adjustment, and securing.

A further object resides in the novel form of the blank or blanks cut in such a manner that the same, when in assembled and completed form, can be readily drawn over the artficial member without undue effort and strain, and yet capable of providing a form-fit from the toe to the heel and to a point above the ankle joint.

A still further object is to provide a smooth, form-fitting hose protector, including an ankle encircling portion of a strong non-woven and relatively non-stretchable material adapted to be secured in position by a single fastening.

It is also to be understood that the use of the herein described protector will not only materially reduce the wear on socks and hose worn with

2

the artificial member, but will also prevent the cutting out and excessive wearing of the lining and leather of the shoe.

The preferred embodiment of the invention is illustrated in the accompanying drawings in which—

Figure 1 is a side elevational view of the assembled device.

Figure 2 is a top plan view thereof.

Figure 3 is a view of the bottom blank including the sole and heel portions.

Figure 4 is a view of the blank comprising the vamp portion.

Figure 5 is a view of the blank comprising the combined rear foot portion, heel encircling portion and ankle portion; and

Figure 6 is a view showing the device as applied to an artificial foot.

Referring to the drawings in detail, the improved protector is formed of three blanks each cut to the shape as shown, 1 representing the sole and heel portion, 2 the vamp portion and 3 the combined rear foot and ankle portion. All of these blanks are preferably made of a relatively strong, non-woven and relatively non-stretchable sheet material such as light leather or similar material and sufficiently tough to resist to a maximum degree abrasion or disintegration due to friction.

As herein above stated, artificial foot members are made of hard wood or metal or a combination thereof, with jointed toe and ankle sections presenting quite a problem when a sock is worn over these relatively moving parts of a non-resilient or non-compressible character, as distinguished from the normal foot which is soft and pliable.

To provide a removable protective covering for these artificial members, having the necessary wear-resisting qualities, it will be obvious that said protectors cannot be made of a textile fabric either woven or knitted, for to cut one thread would be sufficient to destroy the protector and the present purpose for which it is intended.

It is therefore desirable to make the protector of a strong close-grained sheet material such as light leather or the like. This material, however, is relatively non-stretchable and in order to use the same for a removable protective covering for artificial members, the various blanks have been designed to facilitate, when assembled, the easy application or adjusting of the protector to the foot and ankle portions of the artificial member, having in mind that there is no give or compressing of the artificial foot as distinguished from the normal foot.

To accomplish this purpose the vamp portion 2, where it joins the rear foot and ankle portions 3, is cut with a relatively deep V 4 extending toward the toe portion of the protector.

Associated with this relatively deep V cut 4 is a smaller V cut 7 adapted to have secured thereto the lower forward corner 8 of the end flap 5 of the blank 3, the remaining lower edge 9 of said blank 3 being extended around and secured to the edge of the bottom blank as shown at 10.

The forward lower corner of the other flap 6 is provided with a slightly angled edge 11 which, when the parts are assembled, extends upwardly from the bottom blank 1 and is secured to one side of the V cut 4 as shown at 12 (Fig. 2).

With this construction and arrangement, when the flaps 5 and 6 are separated, a relatively long and wide closure opening will be provided extending down to the widest part of the foot permitting the protector to be adjusted to the artificial foot member with little effort and little or no stretching. At the same time, with these relatively large overlapping flaps 5 and 6, in conjunction with the single flat fastener 13, this closure opening can be materially reduced and closed to provide a tight and smooth fit around the ankle joint of the artificial member.

It is also to be noted that any pull-over strain on the flap 6 will be at right angles to the seam or connection 12, whereby said strain will be distributed equally along the entire seam and not at one end only of said seam.

Likewise, the V connection 7 for the lower corner of the flap 5 will prevent any ripping or breaking of this seam when said flap 5 is pulled over the ankle joint to produce a tight fit in conjunction with the overlying flap 6.

These same strains and stresses will also be present at times during the wearing of the protector and the importance of a strong and well designed connection at these respective points 7 and 12 will be apparent.

Another important feature from a standpoint of proper fit and a maintaining of that fit under working conditions, is that the upper and lower edges of the blank 3 are cut on the bias. Although, as herein before stated, the material from which the protector is constructed is made of a relatively non-stretchable material, a limited amount of edge stretch at certain points is desirable and can be obtained where it is needed, by cutting, particularly the upper edge of the blank 3, on the bias, giving the proper amount of stretch around that edge portion surrounding the ankle. Under walking conditions, when the artificial member bends at the ankle joint, this limited amount of stretch will permit of free movement of the member yet at the same time provide a close fit around the ankle when the foot member is in relaxed position.

Although light leather is mentioned as the preferred material, it is to be understood that any other non-woven material of a similar nature, that will produce the desired result, may be employed. Furthermore, applicants are not to be limited to the specific manner of forming the closure and closure opening so long as said opening extends down past the widest part of the foot when said protector is in its adjusted position.

What we claim is:

1. A protector for hosiery to be worn with an artificial foot, comprising a relatively thin flat sole and heel portion, a vamp portion and a combined rear foot portion, heel encircling portion and ankle embracing portion, all of said parts being of the same form-fitting material and said parts when secured together being constructed and arranged to provide a closure opening comprising overlapping flaps and a lower open V extending down into said vamp portion to a point below the overlapping portions of said flaps and contiguous with said closure opening.

2. A protector for hosiery to be worn with an artificial foot, comprising a relatively thin flat sole and heel portion, a vamp portion secured to said flat sole portion, a combined rear foot portion, heel encircling portion and ankle embracing portion, all of said parts being of the same, substantially non-stretchable form-fitting material, the lower edge of said combined rear foot portion being secured to said flat heel and sole portions and to said vamp portion in a manner to provide a closure opening, with engaging flaps, in the front of said ankle embracing portion and rear foot portion and terminating in a lower open V extending down into said vamp portion, to a point below the overlapping portions of said flaps.

3. A protector for hosiery to be worn with an artificial foot comprising a relatively thin flat sole and heel portion, a vamp portion secured to said flat sole portion, a combined rear foot portion, heel encircling portion and ankle embracing portion, all of said parts being of the same form-fitting non-woven material but possessing a grain structure, the upper and lower edges of said combined portion being cut on the bias and the lower edge secured to said flat heel and sole portions and to said vamp portion in a manner to provide a closure opening with engaging flaps, in the front of said ankle embracing portion and rear foot portion and terminating in a lower open V extending down into said vamp portion, to a point below the overlapping portions of said flaps and means for securing said flaps in overlapping adjusted position.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
2,162,008	Golden	June 13, 1939

FOREIGN PATENTS

Number	Country	Date
175,184	Germany	Sept. 13, 1906
28,481	Austria	May 25, 1907