April 22, 1952 I. KIWAD 2,593,767

TOE PROTECTOR

Filed Dec. 14, 1948 2 SHEETS—SHEET 1

Fig. 1

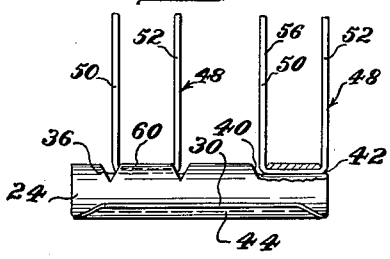


Fig. 2

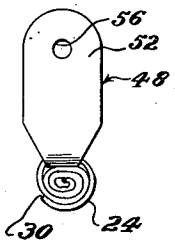
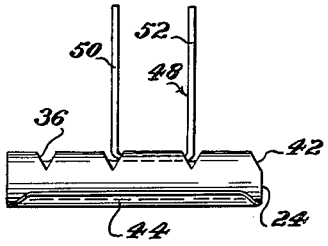


Fig. 6



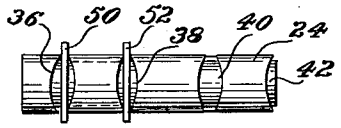


Fig. 3

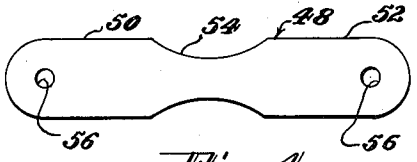
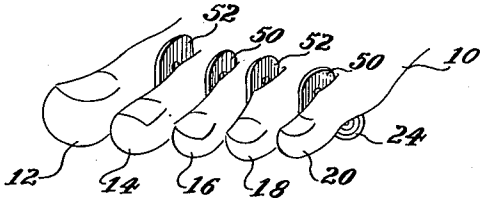


Fig. 4

Fig. 7



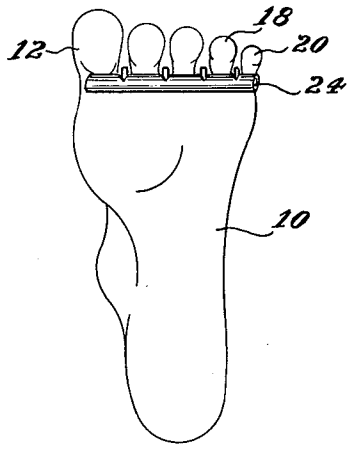
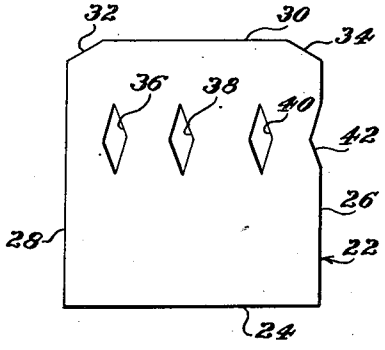


Fig. 8

Fig. 5



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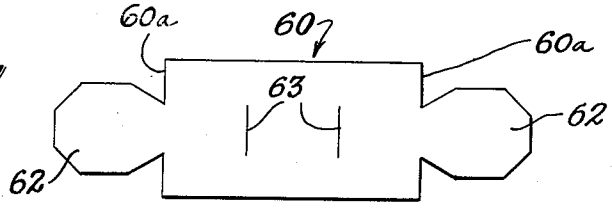
ATTORNEY

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TOE PROTECTOR

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Fig. 9



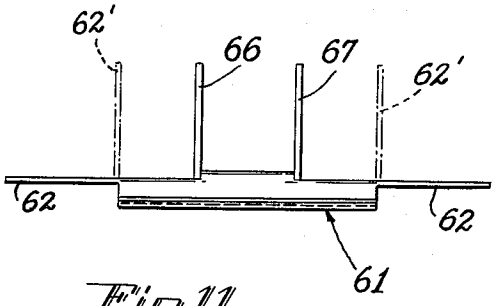


Fig. 11

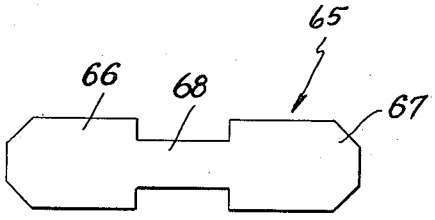


Fig. 10

Fig. 13

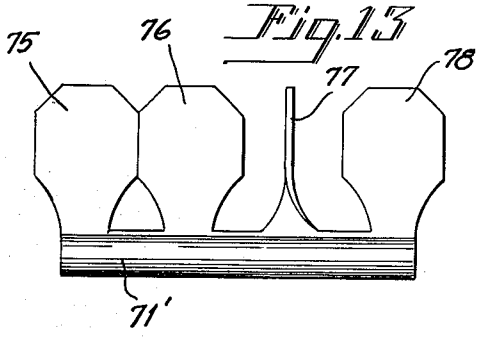
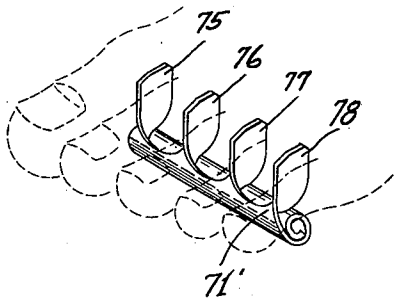


Fig. 14



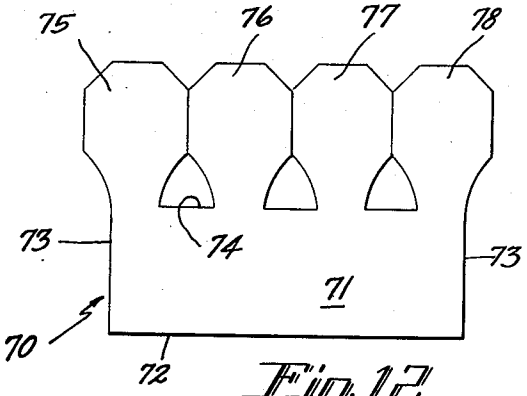


Fig. 12

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UNITED STATES PATENT OFFICE

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TOE PROTECTOR

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Application December 14, 1948, Serial No. 65,250

5 Claims. (Cl. 128—81)

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This invention relates generally to devices adapted to be worn upon the feet to protect the members thereof.

An object of the invention is to provide an improved toe protector including a main body portion with a plurality of extensions carried by the main body portion and adapted to extend between adjacent toes of the foot, thus affording protection therefor.

Another object of the invention is to provide an improved toe protector including a plurality of toe shields adapted to extend between adjacent toes of the foot to protect the surfaces thereof and to provide a degree of mutual spacing therebetween, the toe shields being carried upon a main body adapted to underlie several of the toes.

A further object of the invention is to provide a toe protector which includes a main body of soft material and a plurality of toe shields which are themselves removable and capable of being moved to any desired portion of the main body to accommodate less than all the toes as needed.

Still another object of the invention is to provide a toe protector which acts as an insulator between the toes, reduces perspiration and prevents corns therebetween.

A further object of the invention is to provide a toe protector which is simple in design, inexpensive to manufacture, and effective for the purpose intended.

Other objects and advantages of the invention will become apparent from the following description of a preferred embodiment thereof as illustrated in the accompanying drawings, and in which,

Fig. 1 is an elevational view of my improved toe protector, a portion being cut away to illustrate its construction,

Fig. 2 is a right end elevation of the toe protector shown in Fig. 1,

Fig. 3 is a top plan view of the toe protector of Fig. 1, the right hand pair of toe shields being removed,

Fig. 4 is a plan view of a single pair of integral toe shields spread out flat,

Fig. 5 is a developed flat view of the blank from which the main toe protector body is formed, prior to rolling it up and stitching it as shown in Fig. 1,

Fig. 6 is a view similar to that of Fig. 1, but showing one of the pairs of toe shields removed, and the other moved to the central two openings in the main body,

Fig. 7 is a perspective fragmentary view of a portion of a foot with my improved toe protector in position thereon,

Fig. 8 is a bottom plan view of the foot of Fig. 7, showing the toe protector in position thereon as seen from underneath the foot,

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Figs. 9 and 10 are views similar to Figs. 4 and 5, respectively, but illustrating a modified form of my invention,

Fig. 11 is an elevational view of my improved toe protector assembled in accordance with the Figs. 9 and 10 form of invention,

Fig. 12 is a developed flat view of a blank similar to Figs. 5 and 9 but illustrating still another form of my invention,

Fig. 13 is an elevational view of the Fig. 12 form of invention showing the same assembled and showing one of the toe shields twisted for effective use, and

Fig. 14 is a perspective view of the form of my invention shown in Fig. 13 and illustrating the effective use of the same.

In the treatment of foot ailments, it is frequently observed that some relief may be obtained if some material is placed between the toes to space apart their adjacent surfaces. This will lessen the danger of infection, prevent corns between the toes, and may also straighten out hammer toes. The present invention discloses means for accomplishing these desirable results at low cost.

In order to understand clearly the nature of the invention, and the best means for carrying it out, reference may now be had to the drawings, in which like numerals denote similar parts throughout the several views.

As seen, in Figs. 7 and 8, there is the foot **10**, having toes numbered **12**, **14**, **16**, **18** and **20** respectively. My purpose is to provide means for effecting the objects of the invention with relation thereto. First, I form a blank **22** as shown in Fig. 5, for the main body **24** of the toe protector. The blank **22** may be formed of any suitable soft sheet material, such as felt, cotton, silk, rayon, nylon, wool, any knitted or woven fabric, or even rubber, wood, leather or plastic fabric. Felted material has certain obvious advantages, being soft and pliable, and may be preferred, though the other materials may also be used, and may have certain advantages or special desirability for certain purposes.

The blank **22** has sides **24**, **26**, **28** and **30**, the two corners thereof being cut off as shown at **32** and **34**. In addition, openings are formed in the blank as at **36**, **38** and **40**, and an indentation is formed in side edge **26** at **42**. The blank **22** is then rolled up in the manner shown in Figs. 1, 2 and 3, with the edge **30** outermost, and stitched in position to one or more of the other layers by stitching **44**, to permanently retain the rolled form.

Looking at Figs. 1 and 2, it will be seen that the openings **36**, **38** and **40** now afford access to the inside of the roll **24** beneath the top layer for the insertion and removal through said openings and the partial end opening **42**, of the shield

bodies 48, shown in plan flat, in Fig. 4. These shield bodies 48 include two toe shields 50 and 52 integral with the web portion 54 which is somewhat narrower as shown, these bodies also being made of soft material, such as felt, or other material similar to that forming the roll 24.

Openings 56 may also be formed in the toe shields 50 and 52 as shown, to provide ventilation, and also to accommodate corns where needed. One of the toe shield bodies 48 is shown inserted through the two left hand openings 36 and 38 so that its web portion 54 underlies the roll surface 60 therebetween as in Figs. 1 and 2, with its toe shields 50 and 52 upstanding as illustrated, to extend between toes 12 and 14, and 14 and 16 respectively. Similarly, the other toe shield body is inserted as shown in Fig. 1, between openings 40 and 42, with its toe shields outstanding for insertion between toes 16 and 18, and 18 and 20 respectively.

The main body or roll 24 lies beneath the toes, as seen best in Fig. 8, in the space located thereat on the foot, being hence held in position against dislodgment. If it is desired to protect only some of the toes, then one toe shield body may be removed, and the remaining one left in position, or moved to the center two openings, as shown in Fig. 6, depending upon which toes are to be protected.

In Figs. 9 through 13 I have shown a modified form of my invention which in principle is similar to that shown and described in connection with the Figs. 1 through 8 form of invention above described. As noted in Fig. 9 the blank 60 from which the main body or roll 61 is formed comprises a main body portion and integral tabs 62 extending from opposite sides, the said tabs being adapted to be used as toe shields when desired by folding the same inwardly from their full line positions 62 shown in Fig. 11 to their dotted line position 62^1. As noted in Fig. 9, the main body portion of the blank 60 is provided with a pair of transverse slits 63 and 64 spaced apart a distance from each other equal to the distance of each slit from its adjacent transverse edge 60*a* of the blank 60. The opposite longitudinal edges of the main body are rolled inwardly toward each other as shown in Fig. 11 with the said slits 63 and 64 uppermost, the said slits 63 and 64 being designed to receive therethrough the shield unit 65 shown in blank in Fig. 10, which is similar in function and design to that of the unit shown in Fig. 4. The said unit 65 comprises a pair of oppositely extending shields 66 and 67 interconnected by a neck portion 68.

In Figs. 12 through 14 I have shown still another modified form of my invention in which the distinguishing feature is to be found in the fact that the entire toe protector is formed from a single blank. Such blank 70 is shown in Fig. 12 and comprises a main body portion 71 adapted to be rolled into a longitudinal roll 71^1 (see Fig. 14) and having a bottom longitudinal edge 72, transverse edges 73 and a top longitudinal edge 74. Integral with and projecting upwardly from the top longitudinal edge 74 are four toe shields 75, 76, 77 and 78, similar in design and function to that of the shields 50, 52, 62, 66 and 67. As noted in Fig. 13, when the main body portion 71 is rolled into the longitudinal roll 71^1 the said toe shields 75 to 78 are normally flat and in the same plane as that of the main body portion 71. However, when using the toe protector the roll 71^1 is placed under and across the toes and the shields are then twisted to lie in a plane at right angles to that of its normal form. In Fig. 13 I have shown only the shield 77 twisted, whereas in Fig. 14 all of the shields have been twisted for effective positioning between the toes.

It will be seen that by the use of my device, ample protection is afforded for the toes, at low cost, with maximum convenience and comfort.

Although I have described my invention in specific terms, it will be understood that variations may be made in size, shape, materials and arrangement without departing from the spirit and scope of the invention as claimed.

I claim:

1. A toe protection device comprising a longitudinal main body portion made of yieldable material, a plurality of toe shields extending upwardly from said main body portion and adapted to be disposed between pairs of adjacent toes, said main body portion comprising a flat sheet of material rolled up on itself to form a member which is resilient to pressure and also bendable along its length and thereby adapted to lie across the under surface of the toes and in the hollow areas at the bases thereof, and means forming a part of said device for maintaining said main body in such rolled up condition.

2. A toe protection device comprising a main body formed of soft sheet material rolled upon itself, fastening means forming a part of said device for securing said sheet material in roll form against unrolling, and having a plurality of openings formed in said rolled body, at least one toe shield body carried by said rolled main body and engaging at least some of the said openings, and including toe shields integral with said toe shield body and adapted to project from said rolled main body between adjacent toes of the foot.

3. The construction according to claim 2, characterized further in that each toe shield body comprises a pair of toe shields integral with and interconnected by a central web portion.

4. The process of forming a toe protector, comprising the steps of forming a blank of sheet material having at least four sides, forming a plurality of openings in said blank, rolling said blank upon itself to form a main rolled body with said openings exposed to view from the outside, securing said roll against unrolling, forming toe shield bodies including toe shields interconnected by a central web portion, and inserting at least one of said shield bodies through adjacent of said openings with its toe shields projecting from the rolled body.

5. A toe protection device according to claim 1 in which the said main body and said toe shields are formed from a single sheet of material.

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