Nov. 28, 1950 I. KIWAD 2,531,851

TOE PROTECTOR

Filed Oct. 26, 1949

FIG. 1.

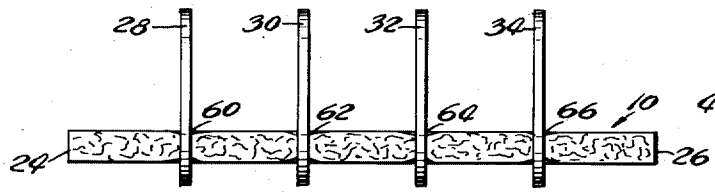


FIG. 2.

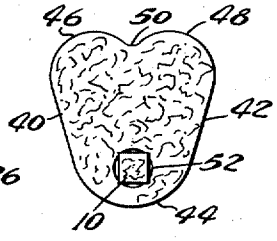


FIG. 3.

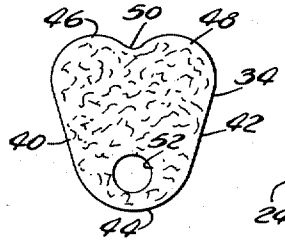


FIG. 4.

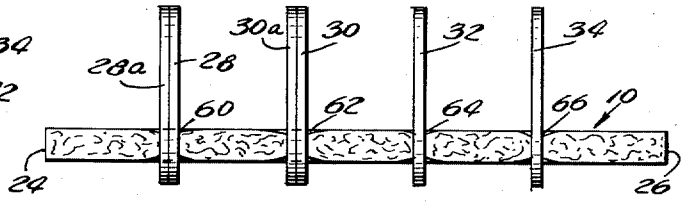


FIG. 5.

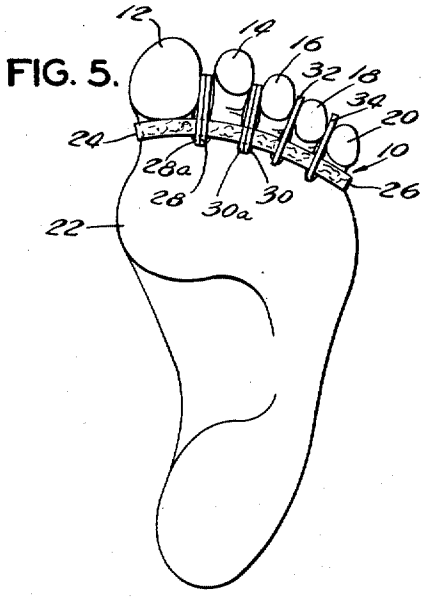
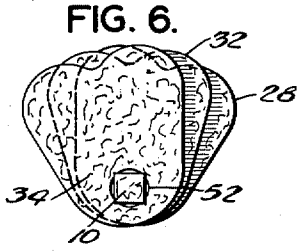


FIG. 6.



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TOE PROTECTOR

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Application October 26, 1949, Serial No. 123,694

2 Claims. (Cl. 128—81)

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This invention relates 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 which includes a main body member and a plurality of toe spacing and protecting members, the toe spacing and protecting members being capable of being arranged in any desired spacing to conform to the needs of the wearer and the dimensions of his feet.

Another object of the invention is to provide a novel and improved toe protector in which there are a number of toe spacing and protecting members, so that one or more thereof may be disposed between adjacent toes, permitting the toes to "breathe" and making for the utmost in comfort and convenience in the wearing of the toe protector.

A further object of the invention is to provide a novel and improved toe protector which is so designed and constructed as to maintain the proper spacing between the toes, helping to keep them straight, as nature intended, and at the same time allows the toes to move freely, so as not to interfere with blood circulation.

Still another object of the invention is to provide a novel and improved toe protector which will minimize friction between adjacent toes and which is capable of being impregnated with a medicament for the treatment of any local condition of the feet or toes.

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

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 toe protector, with four individual toe spacers in position.

Fig. 2 is a right end elevation of the device shown in Fig. 1.

Fig. 3 is a detail face elevation of one of the toe spacers shown in Figs. 1 and 2, apart from the main support.

Fig. 4 is an elevational view similar to that of Fig. 1, but showing additional individual toe spacers mounted on the main support to give added inter-toe spacing.

Fig. 5 is a bottom view of a foot with my improved toe protector as shown in Fig. 4, in position thereon.

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Fig. 6 is an end elevational view similar to that of Fig. 2, but showing the possible angular displacement of the toe spacers, to conform with the foot, or to take care of unusual conditions present.

Where foot ailments are to be treated, it is important that the toes be spaced from each other, to allow free circulation of air therebetween. In addition, it prevents infection due to rubbing and the presence of foreign matter between the toes, prevents corns between the toes, and may prevent deformation of the toes by misalignment thereof. The present invention discloses means for accomplishing these desirable results, and is a continuation-in-part of my copending patent application filed December 14, 1948, under Serial No. 65,250, and entitled Toe Protector.

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 reference numerals denote similar parts throughout the several views.

As illustrated, I provide a main longitudinal support member generally indicated at 10. This main support member 10 may be made of relatively soft or resilient material such as cotton, wool, nylon, rayon, silk, preferably felted, and may be non-circular in cross section such as for example the rectangular cross-section as seen best in Fig. 2. The main support member 10 should have sufficient length as seen best in Fig. 5, to extend right across below the toes 12, 14, 16, 18 and 20. It will be observed that the cross section or thickness of the main support member 10, should only be sufficient to enable it to fit easily into the recesses between the ball 22 of the foot and the depending portions or pads of the toes.

As shown in Fig. 5, the ends 24 and 26 of the main support member 10 may extend very slightly beyond the adjacent portions of the foot, but if so, it should be very little therebeyond. From Fig. 5, it is also seen that the material of which the main support member 10 is made should be flexible enough to assume the curve of this lateral channel beneath the toes as shown.

A number of independent toe spacers or separators such as those shown at 28, 30, 32 and 34, are mounted on the main support member 10. Each of these toe spacers is formed of flexible sheet material, preferably fabric or felted cotton, wool, nylon, rayon or silk, generally and

preferably having the face contour shown in Fig. 3. As seen there, the toe spacers have sides **40** and **42** which may be straight for a portion of their extent, and intersect convergently with the curve **44** at the bottom. At the top the sides **40** and **42** diverge, and intersect with the curves **46** and **48** which meet in a notch **50**.

An aperture **52** is formed through the entire thickness of the toe spacers such as **34**, near the lower curve **44**. This aperture **52**, which may be circular, is slightly smaller in diameter than the included circle of the four corners of the rectangular cross section of the main support member **10**, so that upon insertion of the main support member **10** through the apertures **52** in each of the toe spacers **28**, **30**, **32** and **34** in the manner of Figs. 1 and 2, it is seen that the corners of the main support member bear into the edges of the apertures **52**, and may be slightly compressed thereby, as at **60**, **62**, **64** and **66**.

The toe spacers such as **34** are moved along the main support member **10** until they assume their relative positions conforming to the spacing between the toes of the foot as seen in Fig. 5, so as to be received therebetween as shown. The special arrangement with the square cross sectional main support member **10** and the circular apertures formed in the members **28** and **34** mounted thereon, permits sufficient frictional engagement therebetween, as to keep the members **28** and **34** in any desired positions. They may also be turned about the axis of the main support rod **10** to any angle, as seen in Fig. 6, to take care of any special conditions.

As shown in Figs. 4 and 5, where the spacing between adjacent toes may vary, it is possible to mount more than one toe spacer at any spacing position. For example, to separate the big toe **12** and the next toe **14**, there may be two spacers **28** and **28***a*, and similarly, there may be two spacers **30** and **30***a* at the next spacing position. The spacers **28***a* and **30***a* will be in all respects just like the spacers **28** and **30**.

The device is interchangeable, and may be used

on either foot, and fits all toes, so that it is not necessary to make up special sizes. It gives the toes a chance to move freely and the blood a chance to circulate, and helps keep the toes straight. Further, medicine may be impregnated in or applied on any of the toe spacers to treat any local condition.

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 support member having a length sufficient to extend transversely below a plurality of toes, a plurality of relatively thin flat toe spacing members movably disposed upon the main support member and adapted to extend between adjacent toes to maintain the same in spaced relationship, said spacing members being further adapted to be moved adjacent to each other to provide a composite spacing member of increased thickness comprising a plurality of individual spacing members having their adjacent flat surfaces in contact with each other.

2. A toe protection device according to claim 1 in which the said toe spacing members are in frictional engagement with said main support member whereby when a composite spacing member is built up of individual toe spacing members they will be maintained in composite contacting relationship.

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