Feb. 2, 1960 E. A. DORR 2,923,292

SHIELDS FOR CORNS AND THE LIKE

Filed Nov. 8, 1957

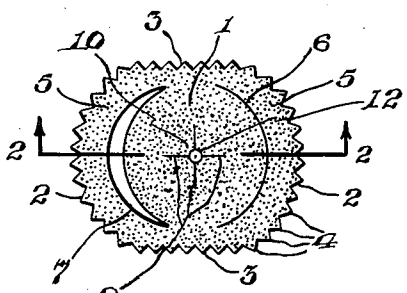


Fig. 1.

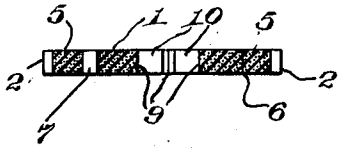


Fig. 2.

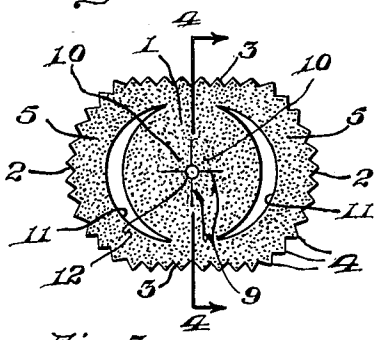


Fig. 3.

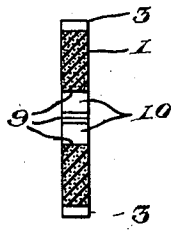


Fig. 4.

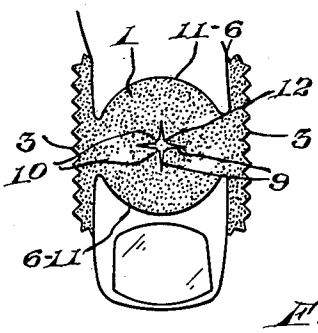


Fig. 5.

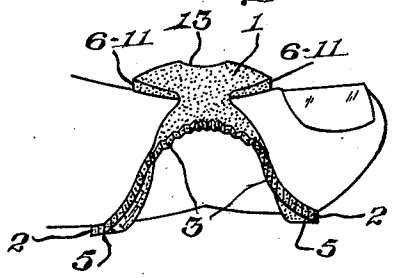


Fig. 6.

INVENTOR,
Emma Ashton Dorr,
BY
J. Stuart Freeman,
Attorney.

United States Patent Office 2,923,292 Patented Feb. 2, 1960

2,923,292

SHIELDS FOR CORNS AND THE LIKE

Emma Ashton Dorr, Philadelphia, Pa.

Application November 8, 1957, Serial No. 695,465

4 Claims. (Cl. 128—153)

The object of the invention is to provide improvements in shields for corns, growths of various sort and other such diseased conditions, hereinafter referred to by the generic term corns, particularly but not exclusively limited to those occurring upon the human toe or finger, this application being a continuation-in-part of applications bearing the respective Serial Nos. 464,419, 521,120 and 610,970, all now abandoned.

Another object is to provide a shield of this general class, that can be operatively attached to a toe or finger without the use of an adhesive of any sort, and which can be both attached to and detached from such digit without destruction or substantially permanent deformation of the shields as originally formed, and which shield can therefore be used and reused two or more times, especially as when no medicament is received and present, and the shield is required to and does function merely as a protective device.

A further object is to provide in one form a shield that comprises an elongated disk, tab, or strip, of an ultra-soft, yielding and preferably elastic material such as, but by no means limited to, foam latex, cotton and similar materials in the fiber category, each of which is capable of protecting a diseased or inflamed area without abrading or otherwise injuring the same in the slightest degree, said disk or the like being provided in each of its opposite end areas with a preferably transversely extending slit or abbreviated partial severance, from which little or preferably no material is removed, and so related as to provide between them a sufficient area or space capable of completely covering and protecting the corn. When the improved shield is formed of foam latex or the like, it may be considered advantageous to incorporate in the mass a suitable soft reinforcing fiber of high tensile strength and resistant to deterioration, such as can result from extreme atmospheric and temperature conditions.

A still further object is to provide a shield of this character in which the slits or partial severances are of sufficient distance from the opposite ends of the disk, that such end portions naturally project in opposite directions and in any case lie flat and closely against the opposite and usually the under surface of the toe or other digit, after the central portion of the disk has been bent or rounded into such shape as is represented by an inverted U, so that its central portion overlies the affected area of the digit, and the slits or partial severances being distended sufficiently for spaced portions of a digit to pass through them.

And a still further object resulting from the employment of slits, as distinguished from apertures from which sufficient material has heretofore been actually removed to pass spaced portion of the toe or other digit, is to provide a product which has been proved to hold its predetermined initial shape during ordinary handling, storage and transport, and which when removed after a given period of use will tend to and in fact does almost invariably resume its initial shape, as originally produced preferably by reciprocatory dies or rolls, and thereby

lends itself to repeated use and resulting economy when either necessary or desirable.

And yet a further object is to provide a relatively soft and compressible protective shield of this general type, which is characterized substantially centrally by two or more intersecting slits or partial severances providing an X or star arrangement of highly flexible ears, which ears when positioned over a corn of similar enlargement are readily adapted to flex outwardly, or transversely of the general plane of the adjacent portions of the shield, in order to thereby accommodate themselves in angular position and compressed thickness to the depth, length, width and possibly other details of the shape and size of the enlargement, the presence and characteristics of such ears being independent of the position and method of attachment of the shield to the digit, though their combined presence in a shield contribute towards a degree of efficiency heretofore unattained, as evidenced by long and widely proved clinical research and practical usage.

With the objects thus briefly stated, the invention comprises further details of construction, which are hereinafter brought out in the following description, when read in conjunction with the accompanying drawings, in which Fig. 1 is a plan view of a preferred form of the invention, showing one of the initially and normally fully closed terminal arcuate slits slightly distended, as its adjacent free end portion is pulled longitudinally away from its central portion, as a first step in passing a toe or other digit through it; Fig. 2 is a section on the line 2—2 of Fig. 1; Fig. 3 is a plan view of a slightly modified form in which, instead of fully closed slits, narrow crescent-shaped transverse end apertures are provided, which are to be individually distended further when necessary to insert spaced portions of the toe or finger through them; Fig. 4 is a section on the line 4—4 of Fig. 3; Fig. 5 is a top plan view of an improved disk after it has been extended and rounded into a substantially inverted U-shape for attachment to a toe as shown; and Fig. 6 is a side elevation of the same, in which the corner of the central portion is provided with an aperture, the corresponding central portions of the preferred forms being provided with intersecting slits, that provide deflectable angular tongues, that can yield transversely of their common plane so as to better conform to the surface of the corn or other enlargement beneath it and thereby eliminate whatever pressure might otherwise be applied to such surface. At this point it should be noted that it is difficult to correctly illustrate a product of this nature, which by reason of its elasticity, compressibility and general softness does not have its exact initial thickness preserved at all times, as unequal and unanticipated pressures and tensions may be applied during the ordinary application, use and wearing of the product.

Referring to Figs. 1 and 2, a disk of any desired shape is cut from a sheet or layer of a very soft material such as but not limited to foam latex, cotton, or the like, said disk being reinforced if desired and embodying any suitable outline, but here shown as having a central body portion 1, having rounded end edges 2, which may be and preferably are connected by generally parallel or but slightly convexly curved side edges 3, said end and side edges being also preferably cut in scalloped or sawtooth form, so as to permit their relatively freely projecting portions 4 to spread laterally, as they are compressed by the pressures to which they are normally subjected, when worn and covered by either or both a stocking and a shoe or slipper.

Each of the end portions 5 of said disk is provided with a generally transversely extending arcuate slit 6, of preferably crescent shape, and from which preferably no material is removed as in the case of an ordinary aperture, and which may be easily distended or

widened to provide an actual opening. Such a slit in its initial form and closed condition is shown as positioned in the right hand end of said disk, while the corresponding slit **7** in the left hand area is shown after having been slightly opened by the manual separation of the adjacent end portion **5** from the central body portion **1** of said disk, and which slightly opened condition may be temporarily expanded to form a generally crescent-shaped or even a circular aperture for the reception of a toe or finger, said adjacent end portion automatically returning when released to its initially closed normal position, as a result of the elasticity of the material of which it is made.

It should be especially noted that the marginal end portions **5** are of such transverse extent longitudinally of the disk as a whole, that when deflected so as to be positioned upon the opposite and usually lower or under surface of a toe they lie flat and closely against said surface (see Fig. 6) as distinguished from otherwise tending to stand upon their edges and thereby cause more unnatural localized pressure than is desirable, and which is substantially entirely avoidable when lying flat and at the same time is formed from ultra-soft and yielding material such as above mentioned. This preferred form may also, if desired, be provided with a pair of intersecting, centrally positioned, crossed slits **9**, that together provide outwardly yieldable tongues **10**, that adequately protect but readily yield so as to conform to the surface of a corn of the like and relieve possible pressure thereon, while said tongues may initially terminate centrally in a small, central aperture **12**, that serves both as an aid towards "breathing" by the affected area and also eliminates the otherwise sharply angular terminals of said tongues, which might tend to fray if the radially inner portions of such tongues were characterized by angles of 90 degrees or less.

Referring to Figs. 3 to 6, parts similar to those shown in Figs. 1 and 2 are likewise similarly numbered. However, in this form the product is provided with a pair of narrow crescent-shaped apertures **11** in lieu of the transverse arcuate slits **6** above described, while the end portions **5** are of substantially greater width than was previously considered advisable, as such wider end portions easily lie flat against the opposite side of the toe, as shown in Fig. 6 and hereinbefore described, and regardless of which of the ultra-soft substances is used, and whether reinforced as by ramie or similar fiber, the compressed flat end portions are so completely compressible as to be practically undetectable.

In Fig. 6 the body portion is shown as being provided with a fully cutout central aperture **13** for those who prefer it in lieu of the intersecting slits **9** of the forms first described.

Having thus described my invention, what I claim and desire to protect by Letters Patent of the United States is:

1. A corn shield, comprising an elongated disk of ultra-soft and highly flexible material provided with generally transversely extending normally closed arcuate slits in well spaced relation to its opposite ends, a generally circular central protective portion between sufficiently wide terminal portions that are capable of lying flat against the opposite surface of a toe or finger, when said disk is rounded into a U-shape and spaced portions of a toe or finger have been inserted through said slits after said slits have been transversely expanded.

2. A corn shield, comprising an elongated disk of ultra-soft and highly flexible material having initially oppositely directed curved end portions and normally closed arcuate slits in well spaced relation with said ends, to provide a central portion and sufficiently wide terminal portions capable of lying flat against a surface of a toe or finger, when the central marginal portion of said disk is rounded into a U-shape, and spaced portions of a toe or finger have been inserted through said slits after said slits have been transversely expanded, and a plurality of intersecting slits providing deflectable angular tongues centrally of said shield.

3. A corn shield, comprising an elongated disk of ultra-soft and highly flexible material provided with generally transversely extending normally closed slits in well spaced relation to its opposite ends, to provide sufficiently wide terminal portions capable of lying flat against the surface of a toe or finger, when the marginal portion of said disk is rounded into a U-shape, and spaced portions of a toe or finger have been inserted through said slits after said slits have been transversely expanded, and a plurality of slits intersecting in an initially central small aperture, to provide deflectable angular tongues substantially centrally positioned in said shield.

4. A corn shield, comprising a disk of ultra-soft and highly flexible material, having a plurality of centrally disposed intersecting slits providing independently deflectable angular tongues in close juxtaposition at the center of the disk and of substantially the same thickness as that of the surrounding portions of the shield, and being transversely yieldable to accord with the variable elevational enlargements of corns.

References Cited in the file of this patent

UNITED STATES PATENTS

958,199	Ward	May 17, 1910
2,539,115	Brachman	Jan. 23, 1951

FOREIGN PATENTS

43,325	Norway	Nov. 1, 1926
625,969	France	May 2, 1941
113,506	Australia	July 31, 1941