H. J. COLLIS.

ANKLE SUPPORT AND PROTECTOR.

APPLICATION FILED NOV. 15, 1911.

1,090,906. Patented Mar. 24, 1914.

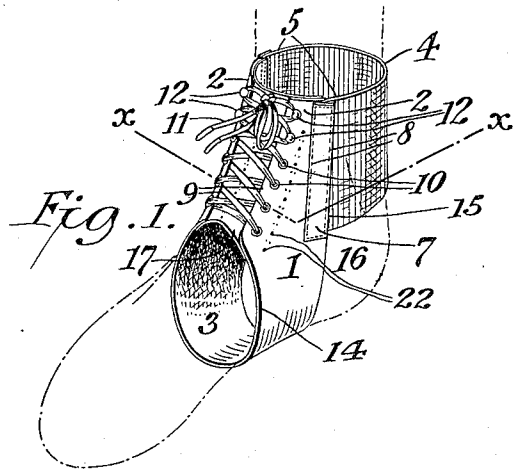


Fig. 1.

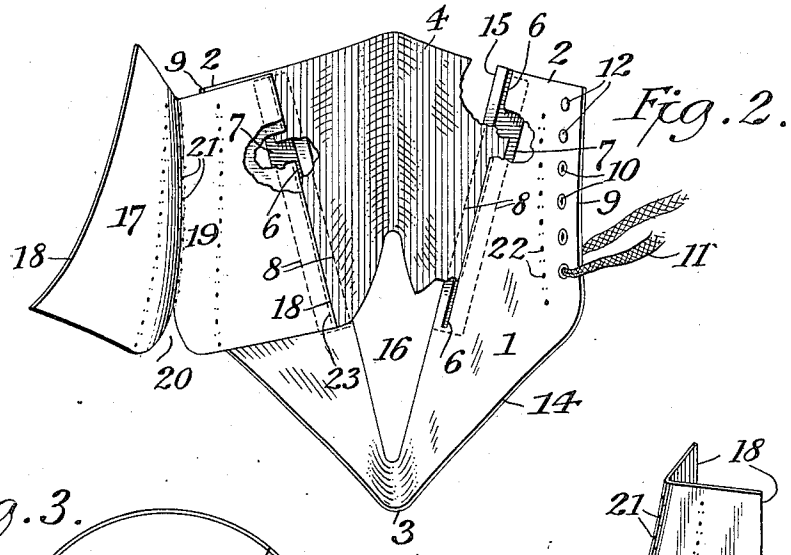
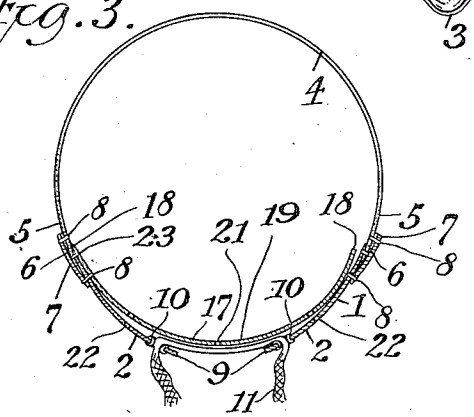


Fig. 2.

Fig. 3.



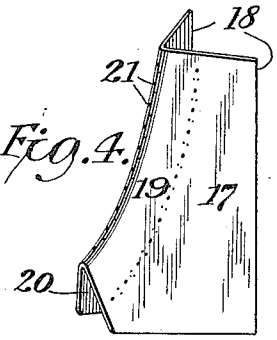


Fig. 4.

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ANKLE SUPPORT AND PROTECTOR.

1,090,906. Specification of Letters Patent. Patented Mar. 24, 1914.

Application filed November 15, 1911. Serial No. 660,333.

To all whom it may concern:

Be it known that I, HENRY JAMES COLLIS, a citizen of the United States, and resident of Taunton, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Ankle Supports and Protectors, of which the following is a specification.

This invention relates to devices for supporting and protecting ankles, and it has particular relation to an improved device of this class which is adapted for use in athletic sports and under all other conditions and circumstances where a protection and support is desired for the ankle.

The object of my present invention is to provide a simple and improved ankle support and protector which will more readily conform to the shape of the ankle portion of the foot and afford particular adaptability, comfort and effectiveness in use, which will be simple and inexpensive in construction, and which will furthermore possess advantages in point of strength, convenience, effectiveness and general efficiency.

In the drawings Figure 1 is a perspective view illustrating the device in use. Fig. 2 is an inside view of the device, parts being broken away to show the features of construction. Fig. 3 is a detail cross-section, taken on the line *x*—*x* of Fig. 1. Fig. 4 is a perspective view of the crimped tongue member, detached.

Corresponding parts in all the figures are denoted by the same reference characters.

Referring to the drawings, 1 designates the front member of the device, which is constructed of soft pliable and non-elastic material, such as leather or a suitable fabric. This front member is preferably formed of a single thickness of material, and in one piece from a single sheet or blank, and it constitutes a continuous strip forming the front retaining members at the respective sides of the open front portion of the body of the device, as at 2—2, and a strip, as at 3, which passes under the instep, the front retaining members 2 being constituted by the upper terminal portions of the one-piece pliable and non-elastic sheet or blank 1 while the instep strip 3 is constituted by the lower central portion of said blank. The entire front portion of the device thus consists of the pliable and non-elastic member which constitutes both the front retaining members at which the fastening means is provided and the instep strip which operates in conjunction with said fastened retaining members to secure the device in position, and the latter feature involved in this simple construction is advantageous in that it eliminates the employment of a separate elastic strip to pass under the instep and connect the front retaining members, as heretofore employed in ankle supports of the class to which my present invention and improvements particularly relate, and furthermore provides a pliable and non-elastic instep strip which has special advantages in strength and operative service over an elastic securing strip at the instep.

The main body, 4, of the device consists of elastic material secured to and carried by the upper portions 2 of the pliable non-elastic front member 1 which forms the retaining members 2 and the instep strip 3. The elastic body 4 is preferably formed of webbing in strip or band shape, and extends between the rear edges of the respective upper portions 2 of said front member 1. This elastic strip body-portion is adapted to extend around the ankle and conform thereto. The front edges, 5—5, of the elastic body strip 4 may be secured to said front member 1 in any suitable or desired manner, but in the preferred construction the upper portions 2 of said front member 1 are provided near their rear edge with a slit or slot, as at 6, in which the edge 5 is inserted from the inside, and the edge thus exposed at the outside of the portion 2 is covered by a stay strip, 7, extending longitudinally of the rear edge portion of the portion 2, said connected parts being secured together by suitable stitching, as at 8.

The construction just described provides a secure connection, and the stay strip 7 imparts additional strength, while there is no impairment of the pliable and soft status of the device at the point of connection between the elastic body strip 4 and said front member 1. At the front edges, 9, of the upper portions 2 of said front member 1, are provided suitable fastening means whereby the open front of the upper or body portion of the device can be fastened to secure the device in adjusted position upon the ankle, which fastening means co-act with the middle portion of the pliable and non-elastic front member 1, which forms the instep strip 3, to retain the device securely in position.

The preferred fastening, for the purpose just stated, consists of a series of eyelets, as at 10, in the edges 9, which are engaged by a lacing or cord, 11, hooks, as at 12, being provided at the top above said eyelets to enable greater facility in lacing. It will be understood that the front edge 9 of the upper portions 2 of the front member 1 is curved downwardly and forwardly, as herein shown, and that beneath this curved edge the front edge, 14, of the instep-strip portion preferably tapers toward the rear, while the entire rear edge, 15, of the front member 1, extending coincident with the upper retaining portions 2 and the instep portion 3 thereof, is preferably approximately straight and on a line substantially at right angles to the longitudinal plane of the elastic body strip 4. The relative construction as just stated provides an open space, as at 16, intervening between the bottom of the body strip 4 and the rear of the instep-strip portion 3, through which the heel of the wearer can project.

17 designates a tongue member, which extends as a protection beneath the fastening means. In my present improvements, this tongue member extends entirely across the front portion of the device, having rear edges, as at 18—18, coincident with the rear edges 15 of the upper portions 2 of the front member 1, and it is constructed of soft pliable and non-elastic material, such as leather or a suitable fabric. The tongue member of the construction just described covers with its middle or central portion, 19, the front portion of the ankle over the instep, and must therefore curve in conformity thereto, so that it substantially follows the curved line of the front edges 9 of the retaining portions 2, and this curvature of the middle or central portion of the tongue is preferably provided by crimping the leather or other material to permanently impart to it the curvature which will conform to the front portion of the ankle. The crimped tongue is therefore adapted to fit over the instep and conform to the shape thereof after the manner of a glove. To further enhance this conformity, the lower edge of the crimped central or middle portion 19 of the tongue member is recessed or cut away, as at 20, at the center, and said crimped portion is also preferably provided with a series of perforations, as at 21, extending longitudinally at different points thereof, to enhance the soft and pliable status thereof and for ventilation purposes. Similar perforations, as at 22, for the same purpose, may also be provided in the upper portions 2 of the front member 1. The tongue is operatively secured by having one of its rear edges 18 in connection with the front member 1 of the device, said edge being fastened on the line of the rear edge 15 of one of the upper portions 2 of said front member. The connection may be formed by a suitable stitching, as at 23, securing the tongue edge 18 to the inner face of one of the retaining portions 2, as herein shown, or this improved crimped tongue member may be fastened by means of the slot and extension construction as shown and described in my previous Patent No. 913,263, granted February 23, 1909. The tongue member 17 preferably extends from top to bottom coincident with the extent of the upper retaining portions 2 of the front member 1.

It will be understood that the pliable and non-elastic front member 1, constituting the upper retaining portions 2 and the lower instep strip 3, as well as the tongue member 17, may be formed of a washable material, such as linen or canvas, in lieu of leather or analogous material, whereby the complete device will be adapted to be washed or laundered when soiled, thus enhancing economy in use, and this washable type of the device is also especially adapted for very tender ankles, as the canvas or linen front member 1 and tongue member 17 will be more soft and pliable than leather in the operative use of the device.

The operation and advantages of my present invention and improvements will be readily understood. The improved construction presents a device in which all the advantages of an elastic body for surrounding the ankle are maintained, and in which the construction enables the economical manufacture of the elastic portion of the device from continuous lengths of elastic webbing in strip or band form, and at the same time it provides a much stronger and more effective and economical construction of the front member 1, by eliminating the employment of elastic in any part of said front member and by constructing the same wholly of pliable and non-elastic material the upper portion of which forms the front retaining members 2 and the middle or contral portion of which forms the instep strip 3, and the improved tongue member as herein shown and described also insures greater effectiveness and comfort in the protection of the tender front portion of the instep from the action of the fastening means.

I do not desire to be understood as limiting myself to the detail construction and arrangement of parts as herein shown and described, as it is manifest that variations and modifications therein may be resorted to, in the adaptation of my invention to varying conditions of use, without departing from the spirit and scope of my invention and improvements. I therefore reserve the right to all such variations and modifications as properly fall within the scope of my invention and the terms of the following claims.

Having thus described my invention, I claim and desire to secure by Letters Patent:

1. An improved ankle support and protector of the class described, comprising a pliable and non-elastic front member constituted by the front retaining portions 2 at the upper part thereof and the instep strip portion at the lower part thereof, said front member being in strip form whereby the top retaining portions 2 form narrow non-elastic members to cover the front of the ankle over the instep and the instep strip portion forms a narrow member to pass under the instep, the top retaining portions 2 of said non-elastic front member being provided with slits or slots extending continuously parallel with and adjacent to their respective rear edges, a main elastic body portion extending at right angles to said narrow non-elastic front member and forming a relatively broad band extending continuously to surround the sides and rear of the ankle, said elastic main body portion having its front end edges inserted in said slits or slots at the rear edges of the said front top retaining portions 2, and a stay strip secured longitudinally at the face of the rear edges of said front retaining portions 2 and covering the exposed edges of said elastic main body portion which project at the slit or slot.

2. An improved ankle support and protector of the class described, comprising a pliable front member adapted to extend at the front of the ankle over the instep and constituting front retaining members by which the body of the device which surrounds the ankle is secured in position and having an instep strip adapted to pass under the ankle, a body portion extending at an angle to said front retaining portions and adapted to surround the sides and rear of the ankle, fastening means at the front edges of said front retaining portions, and a pliable tongue member having one of its side edges secured in connection with and at the rear of one of said front retaining portions and extending longitudinally with relation thereto above the instep strip, said tongue member having its middle or body portion crimped to conform to the front of the ankle over the instep and extending across the open front of said front member beneath and between the front retaining portions which are constituted thereby.

3. An improved ankle support and protector of the class described, comprising a pliable front member adapted to extend at the front of the ankle over the instep and constituting front retaining members by which the body of the device which surrounds the ankle is secured in position and having an instep strip adapted to pass under the ankle, a body portion extending at an angle to said front retaining portions and adapted to surround the sides and rear of the ankle, fastening means at the front edges of said front retaining portions, and a pliable tongue member having one of its side edges secured in connection with and at the rear of one of said front retaining portions and extending longitudinally with relation thereto above the instep strip, said tongue member having its middle or body portion crimped to conform to the front of the ankle over the instep and extending across the open front of said front member beneath and between the front retaining portions which are constituted thereby and having its transverse area coincident with the area of said front retaining portions which are constituted by said front member.

In testimony whereof I have signed my name in the presence of the subscribing witnesses.

HENRY JAMES COLLIS.

Witnesses:
J. RANDALL DEAN,
JAMES T. CLAFFY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."