

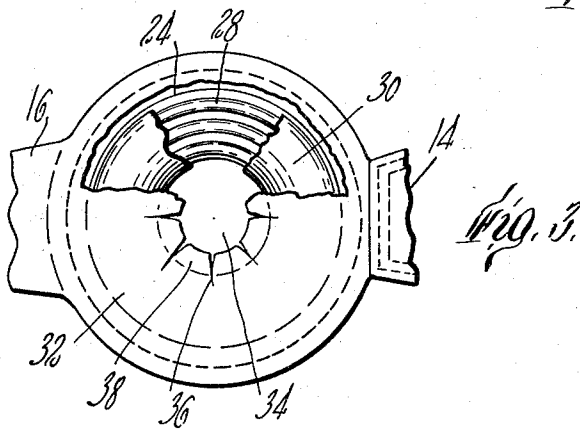
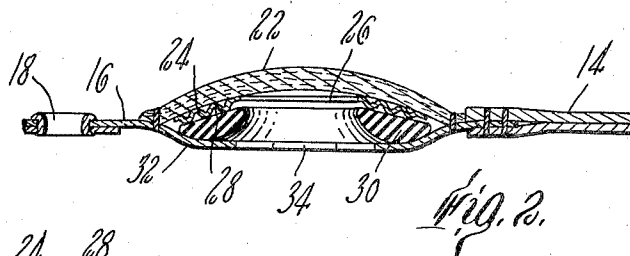
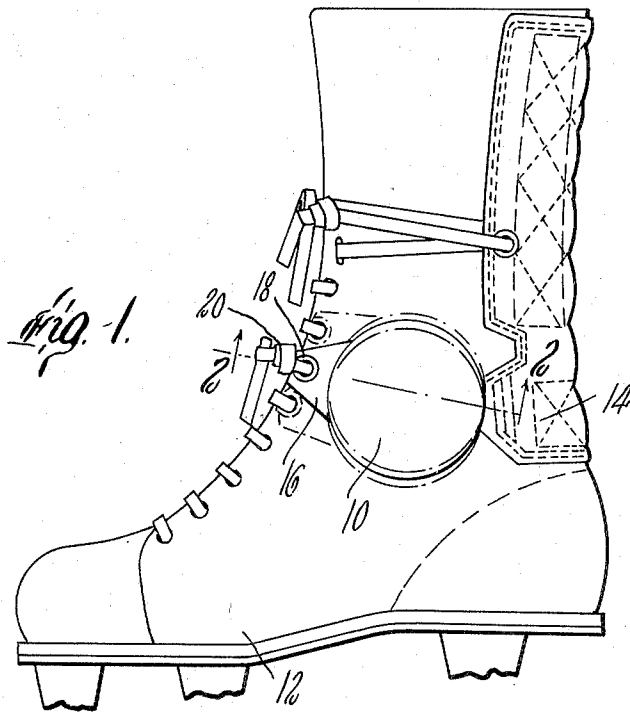
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R. A. HYDE

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ANKLE BONE PROTECTOR

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Inventor
Ralph A. Hyde
by *More Y. Artman*
Att'y.

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ANKLE BONE PROTECTOR

Ralph A. Hyde, Newton, Mass., assignor to A. R. Hyde & Sons Company, Cambridge, Mass., a corporation of Massachusetts

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4 Claims. (Cl. 36—8.5)

This invention relates to a device for athletic shoes such as are used for hockey, football, and the like, to protect ankle bones of the player. Participants in games of that kind are liable to crippling injuries when kicked or struck by a flying puck or swinging hockey stick. It is an object of the invention to provide effective protection at vulnerable points. To this end, circular pads are attached to the shoe to cover and protect the ankle bones, the circular pads being characterized by a rigid outer cover to distribute the force of impact of a puck or stick over a substantial area, and an annular soft cushion behind the rigid cover to absorb most of the force of such impacts. The ankle bone pads are attached in such a way that they can be adjustably secured at the proper height to register with the ankle bones, such bones not always being at the same height above the sole of the foot in different individuals.

For a more complete understanding of the invention, reference may be made to the following description thereof, and to the drawing, of which—

Figure 1 is an elevational view of a protective device embodying the invention;

Figure 2 is a section on the line 2—2 of Figure 1, on a larger scale; and

Figure 3 is an elevational view of the inner face of one of the ankle protectors, parts being broken away to show inner parts.

The protective device for the ankle bones of a foot comprises two units 10, one for each side of an athletic shoe 12, one such unit being shown in Figure 1. Another similar unit (not shown) is provided for the other sides of the shoe. These units are connected by a strap or other flexible connecting means 14, this strap being secured as by stitching to the back of the shoe at a proper height. A tongue 16 projects forward from each unit 10 and is provided with an eyelet 18 to receive a lacing 20 which serves to maintain the units at a proper level to protect the ankle bones with maximum effectiveness. As the dimensions of feet differ, even in feet of similar size, it is desirable that the ankle protecting units be adjustable up or down to some extent so as to accommodate the units to the ankle bones of the wearer of the shoe. Thus the lacings from any one of the eyelets of the shoe itself can be passed through the eyelets 18 in the tongues 16 so as to hold the units at adjusted heights. Different positions of adjustment of the unit 10 which appears in Figure 1 are indicated by dotted lines.

The preferred construction of each unit 10 is indicated in Figure 2. As therein shown, each unit comprises an outer layer 22 of molded sole leather. This layer of heavy sole leather is saucer shaped and is convex outwardly. Against the inner concave surface of this layer is a disk 24 of stiff metal which has a central hole 26 of substantial size therein, the diameter of this hole being approximately half the diameter of the disk itself.

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The disk is dished in shape to fit against the concave face of the leather disk 22. If desired, the metal disk 24 may be provided with a series of concentric circular corrugations 28 which provide considerable extra stiffness to the disk without an increase of weight. Against the inner face of the metal disk 24 is a pad 30 of soft resilient material such as foam rubber. As shown in Figure 2, this pad may have a thickness substantially equal to that of the outer leather layer 22 and preferably as a central aperture approximately registering with the aperture 26 of the metal disk. Furthermore, the inner and outer edges of the pad 30 are rounded as indicated for the comfort of the wearer of the shoe. The innermost layer of the unit is a thin soft sheet 32 of leather or the like which is secured to the sole leather disk 22 along the entire periphery of the latter. This layer 32 may be secured by stitching or otherwise to the strap 14 which passes around the back of the shoe. The inner layer 32 may also be integral with the tongue 16 which projects forward from the unit. The layer 32, as indicated in Figure 3, is preferably provided with a central hole 34 which is somewhat smaller than the aperture 26. From the hole 34 a number of slits 36 extend radially outward. These slits form a series of tongues 38 which easily yield inward when pressed by the ankle bone so that the bone bears on more of the surface of the soft ring 30 and thus adds to the comfort of the wearer.

I claim:

1. An ankle bone protector comprising a convex disk of heavy sole leather, a metal disk having a substantial central aperture fitted against the inner face of said leather disk, a disk of soft resilient material having a central aperture approximately registering with the aperture in the metal disk, the soft disk bearing against the inner face of the metal disk, and an inner layer of soft leather joined to the sole leather disk along the periphery thereof.

2. An ankle bone protector as described in claim 1, said metal disk having a series of concentric corrugations.

3. An ankle bone protector as described in claim 1, said inner layer of soft leather having a central hole smaller in diameter than said apertures and short radial slits extending from said central hole.

4. An athletic shoe having means for protecting ankle bones from injury, said means comprising a protective unit on each side of the shoe upper, a flexible band passing from one unit around the back of the shoe to the other and secured to the back of the shoe, a narrow neck joining each unit to said band whereby said units are vertically adjustable, a tongue projecting forward from each said unit with an eye to receive a lacing whereby to hold the unit against the side of the shoe, each said unit comprising a convex outer layer of heavy leather with a concave inner face, a metal disk with a central aperture of substantial size fitted against said inner face, a disk of soft resilient material having a central aperture approximately registering with the aperture in the metal disk, and an inner layer of thin soft leather secured to said sole leather disk along the periphery thereof.

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