H. J. COLLIS.

SKATE STRAP.

APPLICATION FILED NOV. 4, 1915.

1,187,817. Patented June 20, 1916.

Fig. 1.

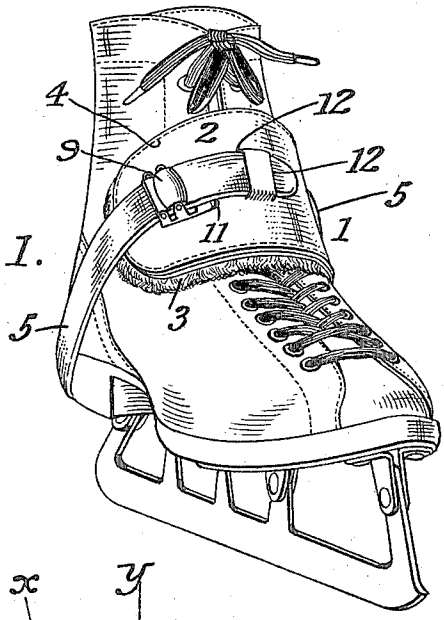


Fig. 2.

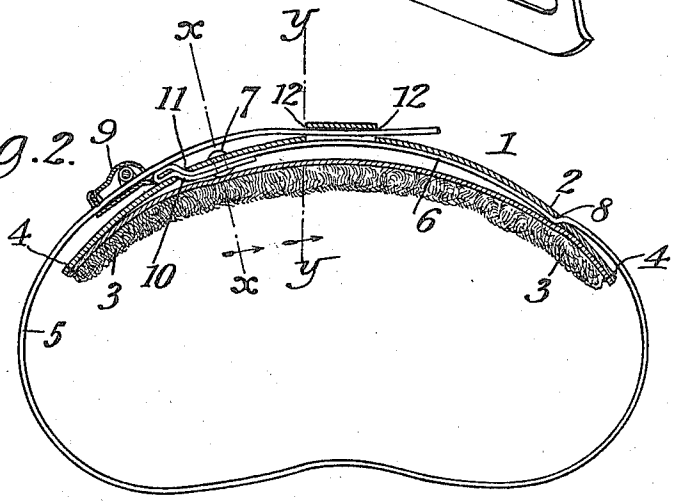


Fig. 3.

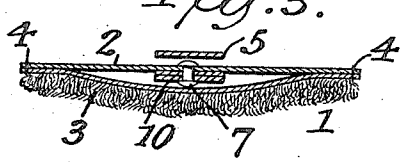
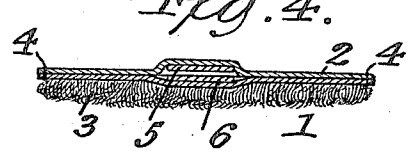


Fig. 4.



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SKATE-STRAP.

1,187,817. Specification of Letters Patent. Patented June 20, 1916.

Application filed November 4, 1915. Serial No. 59,511.

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 Skate-Straps, of which the following is a specification.

This invention relates to skate straps, and it has for its object to provide a simple and improved device of this character which will afford maximum comfort and security to the user and which will possess advantages in point of convenience, effectiveness, and general efficiency.

The skate straps heretofore in vogue have generally consisted of an ordinary buckle strap in which the strap length passes across the instep, and the narrow length of the strap extending and tightly secured over the instep is uncomfortable and inconvenient and does not afford definite conditions of security in position. To obviate these disadvantages, my improvements embody a device in which a pad body construction is provided to extend across and over the area of the instep and is held in operative position by a carrying strap and buckle construction operative from opposite ends of said pad body, whereby the skate-strap device will maintain a secure position and have an enlarged and comfortable bearing area over the instep, substantially as hereinafter described and particularly pointed out in the claims.

In the drawings, Figure 1 is a perspective view, illustrating my improved skate strap in operative position. Fig. 2 is a detail longitudinal cross-sectional view of the device. Fig. 3 is a detail transverse cross-sectional view, taken on the line *x*—*x*, Fig. 2. Fig. 4 is a detail transverse cross-sectional view, taken on the line *y*—*y*, Fig. 2.

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

Referring to the drawings, 1 designates a pad body member, which constitutes the main portion of the device and has a longitudinal and transverse area of sufficient size to extend over and cover the general area of the instep portion at the front of the foot of the wearer. The pad body may be of any suitable outline or shape, but is preferably oval in form as herein shown, and it is flexible or pliable, affording a soft body member conforming to and covering the instep. In general construction, said pliable body comprises an outer sheet or member, 2, which may be formed of leather or other suitable pliable material, carrying a pad, 3, suitably secured to and extending over the inner surface of said outer member. In the preferred construction, the pad is constituted by a sheet of soft wool, conforming in contour to the outer member 2 and suitably secured thereto by stitching, as at 4, at the edges of said members 3 and 2, but it will be understood that the pad may be formed of any suitable or adapted material and may be secured in any suitable manner in connection with the outer sheet or member 2.

The pad body 1 is carried by a securing strap, 5, by which it is secured in operative position as illustrated in Fig. 1, said strap and pad body thus forming a continuous skate-strap device. In the preferred construction, the securing strap is preferably a separate piece or strip, of leather or other suitable flexible material, secured in connection with said pad body member so that it extends from one end thereof. The attached connection of the securing strap with the pad body may be as desired, and I have herein illustrated a preferred construction in which the secured end of the strap extends beneath the outer sheet 2, as at 6, and is riveted, as at 7, or otherwise suitably secured to the body member. In the preferred construction shown, the riveted end of the strap is adjacent the end of the pad body member which is opposite from the end thereof from which the length of strap extends, to enable the attachment of the buckle construction at said opposite end portion by means of a single rivet or securing means operative for both said buckle construction and the strap, and the projecting extension portion of the strap emerges from within the pad body and beneath the outer sheet 2 through a slit, 8, in the latter adjacent the end which is opposite the buckle construction. When the strap thus has its fastened connection adjacent the buckle end of the pad body, its extension portion projecting to and from the opposite end of the pad body is preferably not secured at said opposite end but is left free from its fastening 7, and thus the operation of the strap as a securing means will not cause puckering or

disarrangement of the normal operative position of the pad body 1, as would be the case if the strap were also fastened to said body at the end portion thereof from which it projects.

A buckle construction, 9, is secured in connection with the pad body member 1, at the end portion which is opposite the end from which the securing strap 5 projects. The buckle device may be of any suitable or adapted construction for engaging and retaining the free end of the strap, and it may be mounted in connection with or secured to the pad body member in any suitable manner. In the preferred construction herein illustrated, the securing strap is extended as a continuous strip beyond the fastening rivet 7 (as shown in Fig. 2) and its end which projects beyond said rivet, as at 10, emerges from beneath the outer sheet 2 of the pad body member through a slit, 11, therein, and to this emerging and projecting end of the continuous strap strip the buckle device is secured so that it is positioned over the outer sheet 2 and adjacent the end thereof. Under these conditions of construction, the single securing means 7 serves to fasten both the strap and buckle members in connection with the pad body member, and a further advantage is that the pad body member underlies the buckle device and thus protects the instep of the wearer against uncomfortable pressure by the buckle. The pad body member is preferably provided with means for engaging and retaining the free end of the securing strap after the latter is passed through and fastened by the buckle, to present a neat appearance and carry said free end in flat position across the pad body. Such retaining means may be embodied in any suitable manner in the construction of the outer sheet or member 2 so that it is positioned at the face thereof, but I have herein shown a simple preferred construction in which said outer sheet 2 is provided with slits, as at 12—12, at a point intermediate of the slits 8 and 11 hereinbefore mentioned, and the portion of said outer sheet between said slits 12—12 forms a keeper for the strap end when the latter is passed through said slits and beneath said keeper portion. It will be noted that, in the construction as above set forth, the extension 6 of the securing strap 5, which extends from the fastening 7 beneath the outer sheet 2, underlies the keeper formed by the slits 12—12 and protects the inner surface of the pad 3 against damage by the insertion of the strap end.

It will be noted that the flexible pad body member in its enlarged area covers and bears over the general area of the instep portion at the front of the foot. For this purpose, its pad body has a longitudinal and transverse area corresponding to the area of the curve of the instep, and enlarged laterally with relation to the strap-length. Thus, the pad body is operative over the entire concave and curvature of the instep portion at the front of the foot, both vertically and laterally, and conforms thereto throughout its enlarged bearing area. This operative status not only provides a cushion over the general area of the instep, protecting against pressure of the securing strap, but it also compensates for the conditions which would result from a narrow length of strap extending tightly across the instep, the pressures being equalized and distributed by my improved device so that there is no retardation of circulation at any point. Aside from the effective distribution of pressures over the general area of the instep, the enlarged area of the pad body and its conformation to the instep more effectively resists and prevents any tendency of the device to slipping or displacement.

It will furthermore be noted that the leading function of the improved construction as above set forth, in which the enlarged pad body is operative over the area of the concave and curvature of the instep, is that it constitutes an effective ankle support and brace, aside from its functions as a skate strap which is operative to distribute pressures and cushion the binding action of the strap at the instep. In the operation of the device as an actual ankle support, the strap serves to retain and bind the pad body member as a brace in its enlarged general area extending across and covering and conforming to the concave and curvature of the instep area at the front of the foot, and there is furthermore no binding of the instep at a narrow point, nor retardation of circulation, which would be the case with a narrow strap or narrow pad. The device thus affords full support over the instep area from side to side of the ankle, conforming to the instep at all points where support is needed, and entirely precluding any possibility of chafing or a narrow line of direct pressure. The operation of the device as a support and brace over the instep area is indicated in Fig. 1, which illustrates the application of the supporting device in its relation to a skater's shoe which permanently carries the skate.

The operation and advantages of my invention will be readily understood. The pliable pad body member conforms to the instep of the user and extends as a soft cushion over the general area of the instep portion at the front of the foot, and thus serves to effectively protect the instep against pressure of the securing strap and of any parts of the device involved in the means by which it is secured over the foot. My improved skate strap is adapted to be used in the ordinary manner, by passing the

extension end of the securing strap downwardly at one side of the shoe and under the skate construction and upwardly at the other side of the shoe, after which it is securely drawn and fastened by the buckle and retains the pad body in operative position over the instep. The characteristics of the pliable pad body member also effectively serve to preclude slipping or any disarrangement of the effective operative position of the skate-strap device.

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 skate strap device, comprising a flexible pad body member having a longitudinal and transverse area corresponding to the area of the curve of the instep and adapted to conform to and operatively extend over the concave and curvature of the instep portion at the front of the foot both vertically and laterally, and securing means connected with said flexible pad body member and extending from the opposite end portions thereof and operative as a strap to compress and bind the same in operative position, the pressures exerted by the securing strap-length being distributed and equalized over the area of the concave and curvature of the instep by the corresponding enlarged vertical and lateral area of the pad body portion with relation to the strap-length, whereby the device constitutes a brace and support over the instep area.

2. An improved skate strap device, comprising a flexible pad body member having a longitudinal and transverse area corresponding to the area of the curve of the instep and adapted to conform to and operatively extend over the concave and curvature of the instep portion at the front of the foot both vertically and laterally, a relatively-narrow securing strap extending from one end of said flexible pad body member, and fastening means carried at the opposite end portion of said pad body member for engaging the free end of the strap, whereby the pressures exerted by the securing strap-length are distributed and equalized over the area of the concave and curvature of the instep by the corresponding enlarged vertical and lateral area of the pad body portion with relation to the relatively-narrow strap-length.

3. An improved skate strap device, comprising a flexible pad body member having a flexible outer sheet or surface member and a pad carried by and extending over the inner surface of said outer sheet, said flexible pad body member having a longitudinal and transverse area corresponding to the area of the curve of the instep and adapted to conform to and operatively extend over the concave and curvature of the instep portion at the front of the foot both vertically and laterally, a relatively-narrow securing strap in connection with said flexible outer sheet and extending from one end of said pad body member, and fastening means in connection with said flexible outer sheet at the opposite end portion thereof for engaging the free end of said strap, whereby the pressures exerted by the securing strap-length are distributed and equalized over the area of the concave and curvature of the instep by the corresponding enlarged vertical and lateral area of the pad body portion with relation to the relatively-narrow strap-length.

4. An improved skate strap device, comprising a flexible pad body member having a flexible outer sheet or surface member and a pad carried by and extending over the inner surface of said outer sheet, said flexible pad body member having a longitudinal and transverse area corresponding to the area of the curve of the instep and adapted to conform to and operatively extend over the concave and curvature of the instep portion at the front of the foot both vertically and laterally, and a relatively-narrow securing strap extending continuously in the longitudinal plane of said flexible pad body member and secured in connection with said flexible outer sheet, said strap having a free end portion extending from said pad body member and having at its opposite end fastening means for engaging said free end, whereby the pressures exerted by the securing strap-length are distributed and equalized over the area of the concave and curvature of the instep by the corresponding enlarged vertical and lateral area of the pad body portion with relation to the relatively-narrow strap-length.

5. An improved skate strap device, comprising an extended free relatively-narrow strap-length and fastening means for securing the same, and a flexible pad body member carried by said strap-length and constituting a central portion having a longitudinal and transverse area corresponding to the area of the curve of the instep and adapted to conform to and operatively extend over the concave and curvature of the instep portion at the front of the foot both vertically and laterally.

6. An improved skate strap, comprising a pad body member adapted to extend over the instep and having an outer sheet or surface

member and a pad carried by and extending over the inner surface of said outer sheet, said outer sheet and pad being secured together at their edges with the main body portion of the pad free from said outer sheet, a securing strap underlying said outer sheet and having a free end extending from one end of said pad body member, and fastening means secured to the strap and to the pad body member.

In testimony whereof I have signed the foregoing specification.

HENRY JAMES COLLIS.

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