

Nov. 15, 1966

A. DASSLER
SPORT SHOE

3,284,931

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2 Sheets-Sheet 1

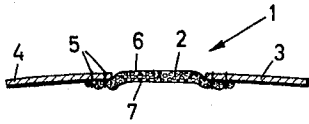


Fig. 3

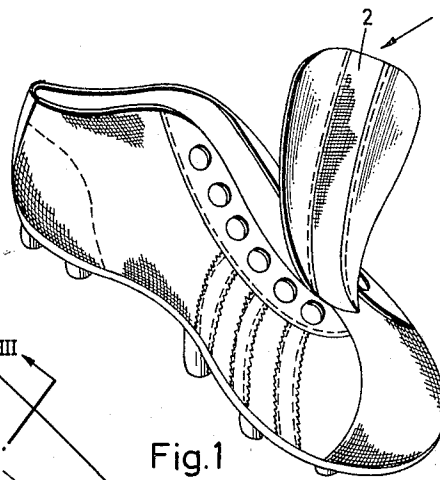


Fig. 1

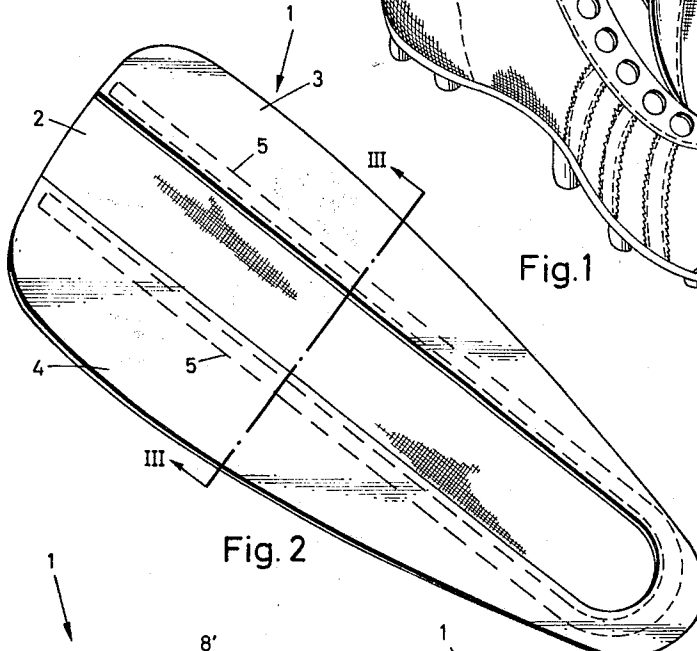


Fig. 2

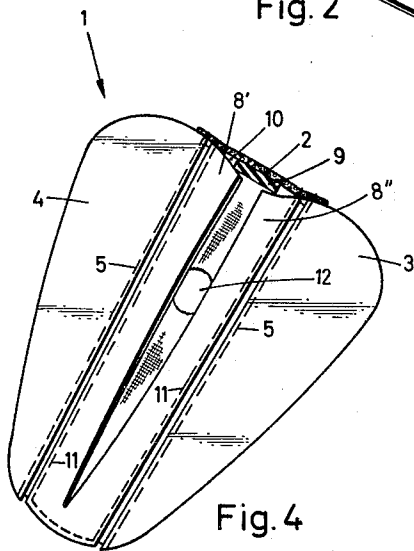


Fig. 4

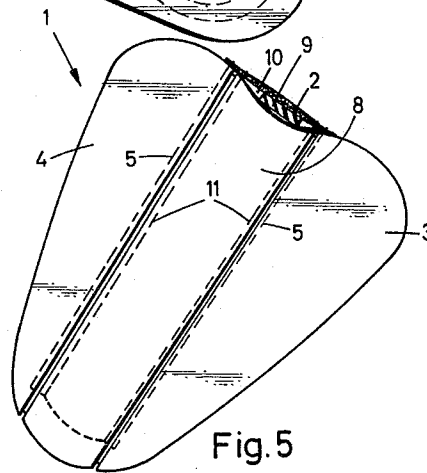


Fig. 5

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2 Sheets-Sheet 2

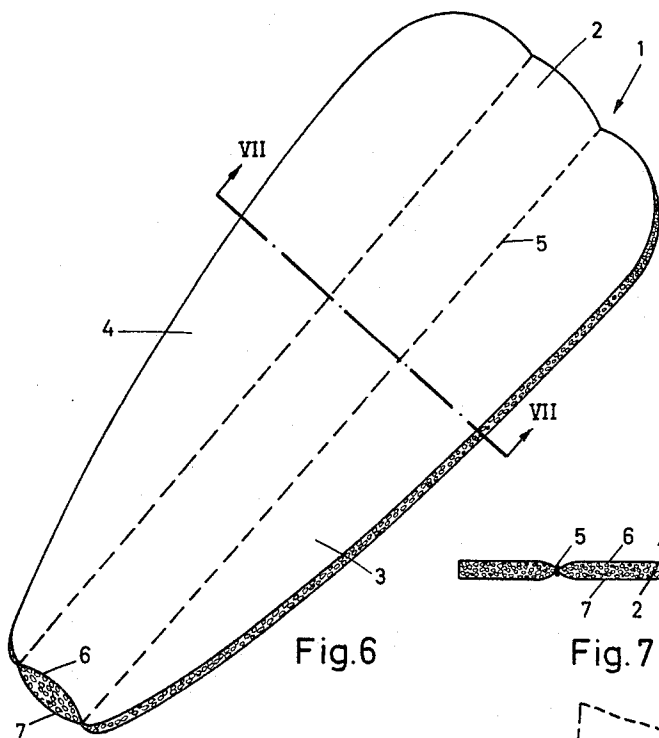


Fig. 6

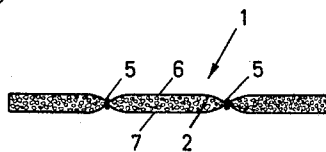


Fig. 7

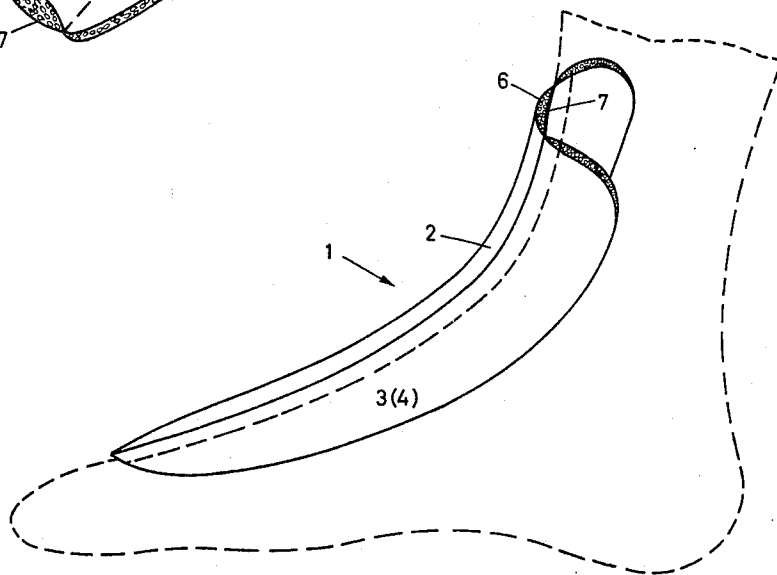


Fig. 8

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1

3,284,931

SPORT SHOE

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1 Claim. (Cl. 36-54)

The present invention relates to a novel structural design for the flap or tongue which is generally provided in a sport shoe for the purpose of covering the lacing aperture thereof.

In sport shoes the lacing aperture usually extends downwardly to a point shortly before the toes. The provision of such a long lacing is to ensure a tight fit of the laced-up shoe on the wearer's foot. Furthermore, the lacing aperture is mostly cut to be relatively wide so that the upper of the shoe may satisfactorily adapt itself to different foot widths. Of course, such a wide lacing aperture requires the provision of a correspondingly large flap which is consequently designed to be much longer and wider in sport shoes than is the case in normal ordinary footwear.

The provision of such a relatively large-sized sport shoe flap entails a number of particular problems and difficulties. Thus, in conventional sport shoes, the flap which is generally made of leather and continuously extends in one piece over the entire length and width thereof, cannot smoothly apply itself against the instep of the foot because of the inherent stiffness of leather. Due to the large width of the flap, longitudinal creases will, therefore, form when the lacing is tightened and these creases will extend along the entire length of the instep of the foot, where they are particularly annoying and adversely affect a satisfactory blood circulation in the wearer's foot, if the shoe is worn on the naked foot, which is, for instance, customary with track shoes. These creases will permanently stay in the flap and the formation and deepening thereof is further enhanced by the influence of moisture, for example by sweat exuded by the wearer's foot. Aside from the longitudinally extending creases, there will also form transversely extending creases in the flap, which again will cause an undesirable shortening of the flap length.

Now, the existence of such creases in the flap will not only cause painful pressure on the wearer's foot; another deficiency caused thereby is that, once the flap has been deformed, the correct, i.e. the exactly central fit of the flap on the instep of the foot can never again be ensured. As a result thereof the flap will be displaced to adopt an oblique position when the lacing is tightened and will gradually slide laterally off the instep towards the outer side of the foot, i.e. towards the outer ball portion of the foot, which displacement may occur all the more easily, as the relatively long and wide flap is connected to the upper of the shoe only by a relatively short seam, directly adjacent the toes, which seam, naturally, cannot oppose the requisite resistance against any distortion of the flap. As said seam is located immediately adjacent the toes, it cannot be enlarged by simply enlarging the lower flap end, because this would again result in painful pressure being exerted on the delicate toe portion of the foot.

Finally, account must be taken of the fact that the flaps are frequently neglected when the shoes are being cleaned, so that the flap will become increasingly brittle already after a relatively short time of use.

Now, it has already been tried to solve this problem by padding the flap in sport shoes, on the side facing the instep of the foot, for instance with a plastic material

2

of the foam-structure type such as foam rubber or foam plastic, in order to thus alleviate the painful pressure exerted by the lacing on the wearer's foot. It has, however, hitherto been impossible to thereby equally solve the problem arising in view of the creases. In previously known designs the flap was frequently provided with a tongue which was fastened thereto shortly below the upper end thereof on the side facing the foot, said tongue being adapted to be folded over outwardly of the shoe, with such folded portion equally comprising an aperture through which the lacing was to be passed. Thus, both the flap itself and the folded portion connected thereto were held tight when the shoe was laced. Quite irrespective of the fact that, when a flap of this type is provided, the lacing of the shoe involves considerable difficulties for the sportsman wearing such a shoe, such a design still does not solve the basic problem encountered with conventional leather flaps, namely their completely insufficient adaptability to the shape of the instep of the wearer's foot.

It is now the object of the present invention to overcome this deficiency and, moreover, it is to further improve such flaps for sport shoes also in a number of other respects.

The flap of the present invention is quite generally characterized in that it is subdivided, in its longitudinal direction, into a padded central portion extending across the width of the upper arch surface or instep of the foot, and two lateral portions which are adapted to be folded downwardly from the padded central portion of the flap towards the sole of the shoe. The pad which is made, for instance, of foam rubber or plastic foam material may be cut in the form of strips. Due to the fact that the lateral portions of the flap are adapted to be folded downwardly because of the subdivision of the flap, the flap of the present invention may smoothly apply itself against the upper arch surface or instep of the foot as well as against the lateral foot portions adjacent the instep, without any creases being formed thereby. Any shortening of the length of the flap, which was frequently encountered in continuously cut, relatively stiff conventional leather flaps is positively prevented by the elastic padded central portion such as provided in the flap of the present invention.

The lateral portions of the flap may be made of leather or of any other material that is suited for this purpose, for instance of a synthetic plastic material. The padded central portion and the lateral portions of the flap may, however, also be constituted by a single piece of material having a shape corresponding to the shape of the flap and being provided with suitable seams which subdivide said flap into a central pad portion and lateral portions.

In cases where the upper is cut to extend up relatively high on the wearer's foot, for instance in boxer's boots, and wherein the flap, too, is of a relatively great length, it is desirable to manufacture the flap in such a manner that, from its lower to its upper end, it will be of arcuate configuration that corresponds to the contour of the upper arch surface or instep of the foot, which object may easily be achieved by simply providing for suitable narrowing seams. This measure will, at the same time, also contribute to preventing the formation of creases.

In an advantageous embodiment of the present invention the padded central portion of the flap is constituted by a pad the two surfaces of which are covered or lined with a non-extensible and stretch-resistant fabric. Due to the stretch-resistance of said fabric which may, for instance, consist of a polyamide fibre, preferably of nylon, any distortion of said lateral portions towards said padded central portion is positively prevented.

It is true that it is already known to provide sport shoe

flaps which are composed of two elongated half-portions. In this instance the connecting seam which holds the two portions together, extends precisely along the centre line of the instep. Thus, in the conventional flaps, no provisions are made for a subdivision of the flap such as provided by the above-described invention, wherein a padded central portion which is set off with respect to the lateral portions thereof, extends across the entire width of the upper arch surface or instep of the foot. Furthermore, in the conventional flaps, the lengthwise subdivision thereof was effected in view of a consideration which had nothing to do with the basic concept of the present invention; in fact, the reason for such previously used subdivision was the circumstance that it was to permit the use of waste leather pieces for the flaps, because in this manner it was possible to piece said flaps together from otherwise unusable material. In the conventional flaps, the longitudinal seam was frequently covered by a leather strip which, of course, further impeded the adaptation of the flap to the shape of the instep.

Depending on the particular anatomic shape of the foot of a football player, it appears furthermore necessary to make additional provisions on the flap, in order to thereby ensure a safe protection of the bones that form the instep portion of the foot (particularly the metatarsal bone). In this connection account is to be taken of the fact that these bones are subjected to excessive stress and strain and thus to an increased risk of injury, when the player is effecting a so-called full instep kick. This very frequently entails a deformation of the metatarsal bone which extends along the central instep portion of the foot, with the result that the bone will eventually form a bulge on the instep, which reacts, of course, very delicately upon the influence of pressure and is easily irritated thereby. Thus, the football player is, in many instances, hindered from actively taking part in football games over prolonged periods of time, which, in view of the great value which football players represent nowadays for their clubs, may involve serious financial losses.

In contradistinction to previously known flaps, the flap of the present invention is to be designed not only so that it will substantially completely prevent any injuries of this type on the instep portion of the foot, but that it will, at the same time, also alleviate any impediment which a sportsman may already be suffering from, to such an extent that the sportsman will again be able to fully participate in sports activities. For this purpose the present invention firstly suggests that the padded central portion of the flap be covered, on the side remote from the upper arch surface or instep of the foot, with a strip consisting of a relatively stiff and shape-retaining material, preferably leather. Advantageously, a pocket which extends in the longitudinal direction of the flap, is provided between said relatively stiff and shape-retaining cover strip and said padded central portion of the flap, said pocket serving to receive a further strip-shaped pad. In order to further improve the protective effect of this strip-shaped pad, the same is conveniently made of a material which is somewhat less compressible than foam type material, for instance of compact rubber. As said strip-shaped pad is fixed within said pocket, it cannot be displaced when a ball kick is effected. This is especially important in those cases where the bulge that is caused on the instep of the foot by the deformed metatarsal bone, is to be compensated for by means of a bolster pad which is applied around said bulge. The bolster pad in this instance comprises an aperture which is located exactly above said instep bulge and which must absolutely be retained in this position also during a game.

This requirement is now positively complied with due to the fact that the bolster strip, in accordance with the present invention, is placed within a pocket. Furthermore, the thickness of said bolster piece may be limited to the absolutely necessary degree so that the player's ball control is not unnecessarily impaired.

A number of embodiments of the present invention will now be further described in detail, merely by way of example, reference being had to the accompanying drawings, in which:

FIGURE 1 shows a perspective view of a football shoe provided with a flap according to the present invention;

FIGURE 2 shows a top plan view of said flap;

FIGURE 3 shows a cross-sectional view taken substantially along the line III—III of FIGURE 2;

FIGURES 4 and 5 show top plan views of flaps comprising a relatively stiff and shape-retaining covering or lining on the padded central portion thereof;

FIGURE 6 shows a top plan view of another embodiment of the flap according to the present invention;

FIGURE 7 shows a cross-sectional view taken substantially along line VII—VII in FIGURE 6; and

FIGURE 8 shows a view illustrating how the flap of the present invention engages the wearer's foot, with the lateral flap portions being folded downwardly of the padded central portion thereof.

With reference to the embodiments shown in FIGURES 2 to 5 of the drawings, the flap which is generally denoted by reference numeral 1, is composed of the strip shaped padded central portion 2 and of the lateral portions 3, 4 which are attached to the longitudinally extending edges of said central portion 2. Flap portions 2, 3 and 4 are connected with each other by means of seams 5. The lateral portions 3 and 4 are so cut that the overall shape obtained will be in the form of a normal flap.

As will best be seen in FIGURE 3, the bolster or pad proper is, on both surfaces thereof, covered or lined with textile strips 6, 7 which are equally sewn to the lateral portions 3 and 4.

With reference to the embodiment shown in FIGURE 2 of the drawings, the flap is not subdivided along its entire length. Instead, the lateral portions 3 and 4 still cohere with each other at the lower flap end. The gap between the portions 3 and 4, which serves to accommodate the padded central portion 2, may be obtained by a punching operation from a correspondingly cut piece of material, for instance of leather. The circumstance that the lateral portions 3 and 4 still cohere at the lower flap end does not cause any inconvenience inasmuch as the upper arch surface or instep of the foot at this point, directly adjacent the toes is still very flat and consequently the flap cannot slide off laterally.

In the embodiments illustrated in FIGURES 4 and 5 of the drawings, in which the flap is subdivided along its entire length, a cover 8 (FIG. 5) is provided on the surface of the padded central portion 2 remote from the instep of the foot, said cover 8 consisting of a material which is somewhat stiffer and more shape-retaining than the pad or bolster body 2, such as leather plastic or a similar suitable material. In the embodiment shown in FIGURE 4, this cover is slit lengthwise, whereby the portions 8' and 8'' are obtained. It is between said two latter portions and the padded central portion 2 that a pocket 10 is formed into which a further bolster strip 9 is inserted which is made of a less compressible material such as rubber than the pad body 2 which generally consists of a foam type material. Since the cover 8 is slit, the strip 9 may easily and readily be inserted into said pocket 10. The strip 9 is provided with an aperture 12 which, in the case where the wearer of the shoe suffers from a deformation of the metatarsal bone, is located above such deformed area.

In the embodiment of FIGURE 5, the cover 8 is made of one continuous piece of material so that the strip 9 must be introduced from the front end into the pocket 10 which is formed between said cover portion and said padded central portion 2.

The cover portion 8 is conveniently connected or sewn along seams 11 only to the padded central portion 2 of the flap so that the downward foldability of the lateral portions

5

3, 4 from said padded central portion 2 is not impeded in any way.

The subdivision of the flap along the entire length thereof further provides for the advantage that the lower end of the padded central portion 2 may be utilized for sewing the flap into the shoe. Due to the compressibility of the padded central portion, no pressure areas will be caused on the foot underneath the seam, such as, in contradistinction thereto, is the case when leather must be sewn to the shoe at the point where the flap is fastened inside the shoe. For this reason it has, in many cases, been common practice to scarf the leather at the point where the connecting seam was to be applied. This again used to result in the deficiency that, as soon as a somewhat stronger tensional stress is applied to the flap, the same may easily be torn off along the seam. This shortcoming is positively avoided when using the flap of the present invention since, despite the fact that they are thinner than leather, the stretch-resistant textile strips which line the pad or bolster are so strong that when the lower end of portion 2 is sewn to the shoe, the danger of tearing along the seam is greatly reduced.

FIGURES 6 and 7 illustrate another embodiment of a flap according to the present invention, wherein the padded central portion 2 and the lateral portions 3, 4 are made of one piece of material which is made to correspond to the desired shape of the flap, said piece of material, in view of providing for the subdivision of the flap, being provided with seams 5 that separate the central pad portion from the lateral portions of the flap. In this instance the flap is not composed of several parts. The piece of material from which the flap is produced may be made of a foam type material having both surfaces thereof lined with a stretch-resistant textile 6, 7, for instance of nylon.

FIGURE 8 shows the flap of the present invention in use, i.e. such as it is applied against the wearer's foot. The padded central portion extends in the longitudinal and transversal directions across the central part of the instep. The part of the foot adjacent said central part of the instep is covered by the lateral portions 3, 4 which are adapted to be folded downwardly from the padded central portion, in a direction towards the sole of the shoe.

6

Although the present invention has been illustrated and described with reference to preferred embodiments thereof, it is to be understood that it is by no means limited to the details of such embodiments, but is capable of numerous modifications within the scope of the appended claim.

Having thus fully disclosed my invention, what I claim is:

In a shoe, particularly in a soccer shoe, an upper having an elongated lacing aperture bounded by two facing edges and having a closed lower end, said upper having adjacent said facing edges lacing regions; an elongated tongue composed of an elongated padded central portion having a lower end and opposite edges and a substantially U-shaped unpadded portion secured to said elongated padded central portion along said lower end and said opposite edges thereof and being substantially thinner than said padded central portion of said tongue; and means for securing said unpadded U-shaped portion in the region of said lower end of said padded central portion to the inner face of the upper in the region of said closed lower end of said lacing aperture so that said padded central portion of said tongue underlies said lacing aperture and said unpadded U-shaped portion underlies mainly said lacing regions of said upper.

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