A metatarsal / dorsum protector for the foot comprises a moulded pad shaped to fit over the top of the foot from the beginning of the toes up to the ankle and covering the metatarsals. The pad may be sandwiched between two socks and may be kept in place by gluing or sewing. The pad may be made from silicone rubber. The pads are specifically designed for each foot and are not interchangeable.
FIG 1

- Ankle
- Upper Foot
- Outer Foot
- Toes
- Impact Pad
The Metasox were invented to help protect the upper part of the foot (Dorsum) from impact injuries contracted through sporting activities e.g. football. The Metasox can be utilised to protect the metatarsal from injury in many other sporting arenas and in industry, for Health and Safety reasons, where foot protection may be required.

Figure 1 shows design and shape of the impact pad (right foot). (Impact pads are specifically shaped/designed/moulded for right foot and left foot (not interchangeable)).

Figure 2 shows position of the impact pads on the upper part of the right and left foot (Dorsa) and areas protected.

Figure 3 shows the impact pad located in between the inner and outer socks covering the metatarsal area.

Figure 4 shows the impact pad located in between an outer sock and an inner slightly larger material patch covering.

Figure 5 shows the impact pad located on the Dorsum between below ankle inner sock and above ankle outer sock.

Figure 6 shows the impact pad located on the Dorsum between above ankle inner sock and knee high outer sock.

Figure 7 shows the impact pad located on the Dorsum between below ankle inner sock and knee high outer sock.

The Metasox design is mainly to help protect the feet from metatarsal fractures or bone chips and cuts or excessive bruising by dispersing the impact using an impact pad (see Fig 1) between two layers of socks (see Fig 3).

The impact pad (see Fig 1) is designed to fit the shape of the foot (can vary in size) from the beginning of the toes up to the ankle and covering the metatarsals 1 to 5 (see Fig 2). The impact pad (see Fig 1) is manufactured from moulded silicone rubber and the specific shape/design is crucial to provide maximum metatarsal cover and protection.

The impact pad (see Fig 1) is sandwiched between a thin inner sock and outer sock and kept in place by gluing or sewing the inner and outer socks together (see Fig 3). This can also be achieved with the use of an outer sock and a slightly larger material patch covering the impact pad and attached by gluing or sewing (see Fig 4). The first option would be preferable and more comfortable as there will be no inner seams or ridges.

The impact pad (see Fig 1) can be made from different types/grades of rubber etc. but the preference is for silicone rubber due to its characteristics e.g. weight, flexibility, strength, moulding capabilities etc.

The inner and outer socks can be manufactured from various materials e.g. Cotton, Linen, Rayon, Wool, Acrylic, Nylon, Polyester, Polypropylene, Spandex, Latex etc.

The Metasox can vary in size dependant on foot size and can be ankle or knee high (see Fig 5, 6 & 7) with the inner sock above or below the ankle line (see Fig 5, 6 & 7).
Claims

1.) The Metasox can help protect against metatarsal injuries by impact absorption/dispersion.
2.) The Metasox can be of varying sizes, dependant on foot size.
3.) Practical tests carried out on Metasox e.g. worn in football matches.
4.) Drop tests carried out to simulate impact protection gained from wearing Metasox (evidence available).
5.) The Metasox can be washed and used a number of times.
6.) The Metasox can be worn with most football boots, trainers and shoes.
Amendment to the claims have been filed as follows

CLAIMS

1. A pair of socks comprising a left sock and a right sock, the left sock having a left impact pad shaped to cover at least a portion of the dorsum of a wearer's left foot to protect the wearer's left foot from injury, the right sock having a right impact pad shaped to cover at least a portion of the dorsum of the wearer's right foot to protect the wearer's right foot from injury, wherein the left and right impact pads are shaped such that the left and right socks are not interchangeable.

2. A pair of socks as claimed in claim 1, wherein the left impact pad is configured to cover the majority of the dorsum of the wearer's left foot, and the right impact pad is configured to cover the majority of the dorsum of the wearer's right foot,

3. A pair of socks as claimed in claim 1 or 2, wherein each impact pad is configured to extend from the beginning of the toes to the ankle.

4. A pair of socks as claimed in claim 1, 2 or 3, wherein each impact pad is configured to protect the wearer's foot from an impact induced injury.

5. A pair of socks as claimed in claim 4, wherein each impact pad is configured to protect the wearer's foot from an impact induced injury by dispersing an impact force applied to the wearer's foot.

6. A pair of socks as claimed in any of claims 1 to 5, wherein each impact pad is arranged to cover five metatarsals of a wearer's foot, in order to protect the five metatarsals from injury.

7. A pair of socks as claimed in any of the preceding claims, wherein each impact pad is made from rubber.
8. A pair of socks as claimed in claim 7, wherein the rubber is silicone rubber.

9. A pair of socks as claimed in any of the preceding claims, wherein each sock comprises an inner sock layer and an outer sock layer, and each impact pad is positioned between an inner sock layer and an outer sock layer.

10. A pair of socks as claimed in any of claims 1 to 8, wherein each sock comprises an inner cover layer and an outer sock layer, and an impact pad is positioned between the inner cover layer and the outer sock layer.

11. A pair of socks as claimed in any of the preceding claims, wherein the impact pads are held in position by gluing.

12. A pair of socks as claimed in any of claims 1 to 10, wherein the impact pads are held in position by sewing.

13. A pair of socks as claimed in any of the preceding claims, wherein the socks are suitable for use during a sporting activity.

14. A pair of socks as claimed in claim 13, wherein the sporting activity is playing football.

15. A pair of socks a left sock and a right sock, the left sock having a left impact pad shaped to cover an upper part of a wearer’s left foot to protect the covered upper part of the left foot from injury, and the right sock having a right impact pad shaped to cover an upper part of a wearer’s right foot to protect the covered upper part of the right foot from injury, wherein the left and right impact pads are shaped such that the left and right socks are not interchangeable.
16. A pair of socks as claimed in claim 15, wherein each impact pad is configured to extend from the beginning of the toes to the ankle.

17. A pair of socks as claimed in claim 15 or 16, wherein each impact pad is configured to protect a covered upper part of a foot from an impact induced injury.

18. A pair of socks as claimed in claim 17, wherein each impact pad is configured to protect the covered upper part from an impact induced injury by dispersing an impact force applied to the wearer’s foot.

19. A pair of socks as claimed in any of claims 15 to 18, wherein each impact pad is arranged to cover five metatarsals of a wearer’s foot, in order to protect the five metatarsals from injury.

20. A pair of socks as claimed in any of claims 15 to 19, wherein the impact pad is made from rubber.

21. A pair of socks as claimed in claim 20, wherein the rubber is silicone rubber.

22. A pair of socks as claimed in any of claims 15 to 21, wherein each sock comprises an inner sock layer and an outer sock layer, and each impact pad is positioned between an inner sock layer and an outer sock layer.

23. A pair of socks as claimed in any of claims 15 to 21, wherein each sock comprises an inner cover layer and an outer sock layer, and each impact pad is positioned between an inner cover layer and an outer sock layer.

24. A pair of socks as claimed in any of claims 15 to 23, wherein the impact pads are held in position by gluing.
25. A pair of socks as claimed in any of claims 15 to 23, wherein the impact pads are held in position by sewing.

26. A pair of socks as claimed in any of claims 15 to 25, wherein the socks are suitable for use during a sporting activity.

27. A pair of socks as claimed in claim 26, wherein the sporting activity is playing football.

28. A pair of socks, suitable for use in playing football, comprising a left sock and a right sock,
the left sock having a left impact pad shaped to cover at least a portion of the dorsum of a wearer’s left foot to protect the wearer’s left foot from injury,
the right sock having a right impact pad shaped to cover at least a portion of the dorsum of the wearer’s right foot to protect the wearer’s right foot from injury,
wherein the left and right impact pads are made from silicon rubber, and the left and right impact pads are shaped such that the left and right socks are not interchangeable.

29. A pair of socks substantially as hereinbefore described with reference to the accompanying drawings.
Application No: GB0808287.7
Claims searched: 1-6

Examiner: Hayley Yates
Date of search: 30 September 2008

Patents Act 1977
Amended Search Report under Section 17

Documents considered to be relevant:

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<tr>
<th>Category</th>
<th>Relevant to claims</th>
<th>Identity of document and passage or figure of particular relevance</th>
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</table>
| X        | 1-6               | GB2390530 A
Dowson; see figures and page 6 line 19 to page 7 line 23 |
| X        | 1-6               | US5771495 A
Burton Corp; see figure 1, column 3 line 51 to column 4 line 4 |
| X        | 1-6               | US5007111 A
Adams; see figure 3 and column 4 lines 13-58 |
| X        | 1-6               | US 5211672 A
Andujar; see figures 1-3 and column 2 line 58 to column 3 line 2 |
| A        | -                 | DE 202007009262 U
Hsei; see figure 3 |
| A        | -                 | FR 2546725 A
Antoni; see figures and abstract translation |
| A        | -                 | WO 2006/015883 A
Butler; see figure 4 and page 8 line 10 to page 9 line 10 |
| A        | -                 | US 4669126 A
Jones; see figures 4-11 |

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Search of GB, EP, WO & US patent documents classified in the following areas of the UKC^X^: 
Worldwide search of patent documents classified in the following areas of the IPC
A41B; A41D; A63B

The following online and other databases have been used in the preparation of this search report
WPI & EPODOC

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