



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : B25G 1/10, A63B 53/14, 59/00	A1	(11) International Publication Number: WO 00/01511 (43) International Publication Date: 13 January 2000 (13.01.00)
(21) International Application Number: PCT/AU99/00531 (22) International Filing Date: 1 July 1999 (01.07.99) (30) Priority Data: PP 4427 1 July 1998 (01.07.98) AU (71) Applicant (for all designated States except US): THE GRIP MASTER COMPANY PTY. LTD. [AU/AU]; 62-64 Oakover Road, Preston, VIC 3072 (AU). (72) Inventor; and (75) Inventor/Applicant (for US only): McCONCHIE, Ian, Ross [AU/AU]; 62-64 Oakover Road, Preston, VIC 3072 (AU). (74) Agent: RYDER, Jeffrey, Alan; Callinan Lawrie, Private Bag 7, Kew, VIC 3101 (AU).		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i>
(54) Title: GRIP FOR A HANDLE OR SHAFT		
(57) Abstract The invention provides a grip for a handle or shaft including a core means (10) adapted to be fitted to said handle or shaft and a strip of material (22) to form the outer surface for said grip, to be wound around said handle or shaft and/or said core (10) to provide, in use, a wound grip; wherein the core means (10) has a first end (16) and a second end (11) and a body (14) therebetween, and having a peripheral flange at the second end (11) in the form of a skirt (12); the skirt (12) adapted, in use, to be flexed over said wound strip (22) to prevent unwinding thereof from said handle or shaft and/or the core means (10).		

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GRIP FOR A HANDLE OR SHAFT

This invention relates to a grip to be applied to a handle or shaft and relates in one aspect, though not exclusively, to a grip for an article of sporting equipment.

The invention particularly relates to a grip which employs a strip of material
5 to be wound around the handle or shaft in an overlapping manner, as the outer component of the grip. Such grips will hereinafter be referred to as "wound grips".

Wound grips have been known and used on handles and shafts, especially on sporting equipment, for many years and as will be appreciated by those skilled in the art it is necessary to secure at least one, and preferably both ends of a wound
10 grip to prevent the grip from peeling from one or both ends and eventually unwrapping.

It is an object of the invention to provide a construction of wound grip which may be readily applied to a handle or shaft, which includes means for securing one end, or alternatively both ends, of the strip material used as the outer
15 component of the wound grip.

According to the invention there is provided a grip for a handle or shaft, said grip including a core means adapted to be fitted to said handle or shaft and a strip of material to form the outer surface of said grip, to be wound around said handle or shaft and/or said core to provide, in use, a wound grip; said core means having a
20 first end, a second end and a body therebetween, and having a peripheral flange at said second end in the form of a skirt, said strip to be wound on said handle or shaft and/or said core means; said peripheral flange adapted, in use, to be flexed over said wound strip to prevent unwinding of said strip from said handle or shaft and/or said core means.

25 In a preferred embodiment of the invention the core means is positioned over said handle or shaft in the area where the grip is to be applied.

In another preferred embodiment of the invention the core means, other than the end carrying said peripheral flange, is positioned within the handle or shaft.

In a further preferred embodiment of the invention the core means
30 positioned over the handle or shaft is provided at its first end with an enlarged

collar, against which said strip of material is abutted when commencing winding thereof on said core means.

In a still further preferred embodiment of the invention the core means is formed of resilient material so as to be readily applied over a handle or shaft and also to provide a "soft" component to the feel of the finished grip.

The invention also provides a method of forming a grip on a handle or shaft which includes the steps of:

(i) positioning a core means on or partly in a handle or shaft in the area where a grip is required; said core means having a first end, a second end and a body therebetween, and having a peripheral flange at said second end in the form of a skirt;

(ii) winding a strip of material in an overlapping manner over said handle or shaft and/or said core means, towards said second end;

(iii) flexing said skirt so that it is positioned over said wound strip of material, to hold said strip of material against said handle or shaft and/or said core means and prevent unwinding thereof.

Those skilled in the art will appreciate that an adhesive material may be provided on the underside of the strip material so that the strip material is to some extent adhered to the core or the handle or shaft as it is wound thereupon.

The invention will be further and more fully described with reference to the following preferred embodiments, which are not to be considered in any way limiting on the invention.

Reference will be had to the accompanying drawings in which:

Fig. 1 shows a core means in accordance with a first embodiment of the invention designed to be used to produce a grip on the shaft of a golf club;

Fig. 2 shows one end of the core means of Fig. 1 showing the skirt in its flexed away position;

Fig. 3 shows the end of a finished grip utilising the core means shown in Fig. 2, with a wound strip material thereon and the skirt flexed back;

Fig. 4 shows a core means in accordance with a second embodiment of the invention; and

Fig. 5 shows a core means in accordance with a third embodiment of the invention intended for use with a golf club shaft having a hollow portion at the grip end thereof.

Referring now to Figs. 1 and 2 of the drawings, there is shown a core means 10 having a body 14, a first end 16 and a second end 11, and having a flange formed as a skirt 12 at end 11 which overlies part of body 14.

Core 10 is hollow (not seen in the drawings) and, in use, is fitted over one end of the shaft of a golf club, in order to provide a grip to the shaft. Core 10 is made from a resilient material and is applied to the shaft using known techniques, which may involve use of a lubricant / adhesive composition.

First end 16 is provided with an enlarged collar 18.

Referring now to Fig. 1, it will be seen that adjacent collar 18, body 14 is recessed at 20 to accommodate the starting end of a strip material 22 which is to be used to provide the wound grip of the invention. Recess 20 allows the starting end of strip material 22 to be accommodated underneath the initial overlap as strip material 22 is wound onto core 10, without creating a lump or bulge in the finished grip at that position. Collar 18 is slightly tapered and shoulder 24 of collar 18 is of the same dimension as the thickness of strip material 22 so that in the finished grip the outer surface of strip material 22 is flush with collar 18 where they abut.

Fig. 2 shows skirt 12 flexed back and away from second end 11 and core 10, in order to allow strip material 22 to be wound to the end of body 14. Strip 22 is then trimmed to finish where it abuts skirt 12, or, is of a length which only extends as far as skirt 12. While strip material 22 is held against body 14 skirt 12 is flexed back over body 14 to the position shown in Fig. 3, over the end of strip material 22, to hold strip material 22 in place against body portion 14 and prevent strip material 22 from unwinding.

Referring now to Fig. 4 there is shown a second embodiment of the invention, (where like parts are referred to by like numbers with a prefix of 1) in

which, in use, body 114 of core 110 again is fitted over one end of a shaft of a golf club but only extends down to form the grip is applied directly to the shaft for the substantial majority of the grip.

Core 110 is positioned at the end of the golf club shaft and winding of the strip material commences further down the handle or shaft towards core 110 and finishes when body 114 is covered by the wound strip material, in like manner to that described in Figs. 1 to 3. Skirt 112 which has been flexed away from second end 111 and body 114 is then flexed back over the wound strip material to hold the strip material (not shown in Fig. 4) in place against body 114. While a slight enlarging of the finished grip may occur at the end where core 110 is positioned, this is considered acceptable in situations where core 110 is employed.

Fig. 5 shows a third embodiment of the invention, (again like parts are referred to by like number with a prefix of 2). There is seen a core 210 having a body 214 which is positioned inside shaft 224 (shown in cut-away section) such that core 210 is at the end of shaft 224, so that shaft 224 is ready to receive the strip material (not shown) which forms the outside surface of the grip. As in the second embodiment of the invention referred to above, the strip material is applied directly to shaft 224.

When the strip material is wound on shaft 224 to reach core 210 it is trimmed to the end of shaft 224 (if necessary). Skirt 212 is flexed back in a similar manner described above, to hold the wound strip material in place against shaft 224.

A further advantage of this preferred embodiment of the invention, and particularly in relation to golf clubs, is that by commencing winding of the strip material down the shaft of the golf club and winding back toward the end of the shaft, the overlapping of the strip lies in such a way that, in use, the grip of the golf club is formed so that water running down the grip from the end of the shaft, such as when using the golf club in the rain, runs over the overlap in the grip without being directed under the strip material. As will be appreciated by those skilled in this art, in previously wound grips, which commence winding and overlapping from

the end of the shaft, the overlap configuration tends to direct water running down the grip underneath the wound material which forms the grip.

To assist in holding the strip material 22 on core 10 adhesive may be applied to the underside of strip 22, or to the outer surface of body 14, in a known manner.

Also, the invention provides for a further embodiment of the invention in which a core member as described in Figs. 1 to 3 may be provided at both ends with a peripheral skirt which, in both cases, can be flexed away from the body portion of the core to allow wrapping of the strip material onto the core, and then be flexed back to hold the ends of the strip material against the core, and prevent the strip material from peeling away and eventually unwinding.

While the above described preferred embodiments have been described in relation to the grip for a golf club, it will be appreciated that all sporting articles which have a handle or a shaft portion which requires a grip, such as tennis racquets, squash racquets, badminton racquets, hockey sticks, baseball and softball bats, and the like may be provided with a grip in accordance with the present invention.

Also, items such as the handle-bars of bicycles, the handle portion of hand tools, the throwing grip portion of a javelin, and, in fact, any article or device having a handle or shaft portion on which a grip is desirable, may employ the grip of the present invention, and employ the method of forming a grip as provided for by the present invention.

CLAIMS

1. A grip for a handle or shaft, said grip including a core means adapted to be fitted to said handle or shaft and a strip of material to form the outer surface of said grip, to be wound around said handle or shaft and/or said core to provide, in use, a wound grip; said core means having a first end and a second end and a body therebetween, and having a peripheral flange at said second end in the form of a skirt; said strip is wound on said handle or shaft and/or said core means and; said peripheral flange adapted, in use, to be flexed over said wound strip to prevent unwinding of said strip from said handle or shaft and/or said core means.

2. A grip as claimed in claim 1 wherein said core means is fitted over said handle or shaft.

3. A grip as claimed in claim 1 wherein said core means, other than said second end thereof and said skirt, is positioned within the end of said handle or shaft.

4. A grip as claimed in claim 1 wherein said core means is formed from resilient material.

5. A method of forming a grip on a handle or shaft which includes the steps of:

(i) positioning a core means on or partly in a handle or shaft in the area where a grip is required; said core means having a first end, a second end and a body therebetween, and having a peripheral flange at said second end in the form of a skirt, which skirt, in use, partly overlies said core means or part of said handle or shaft;

(ii) winding a strip of material in an overlapping manner over said handle or shaft and/or said core means, towards said second end;

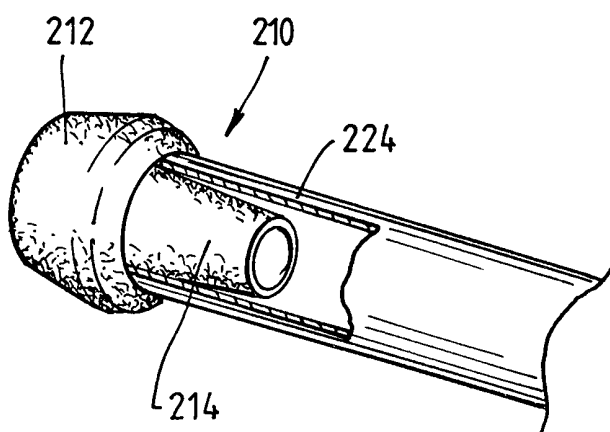
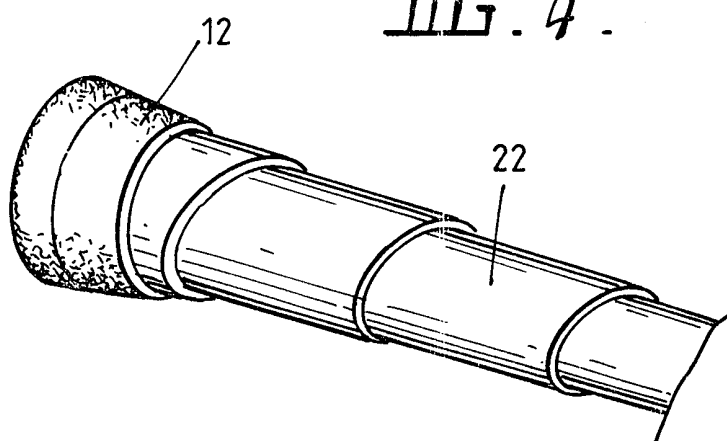
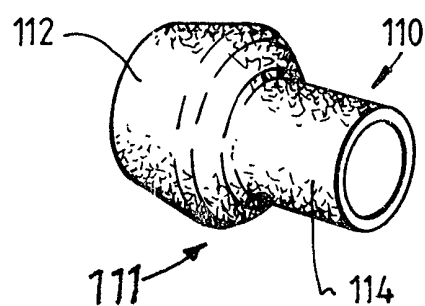
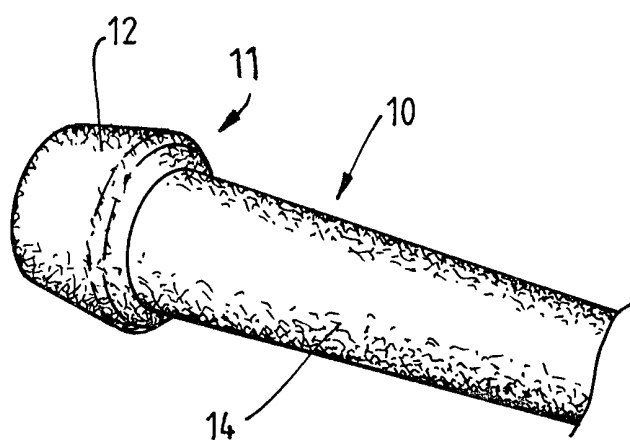
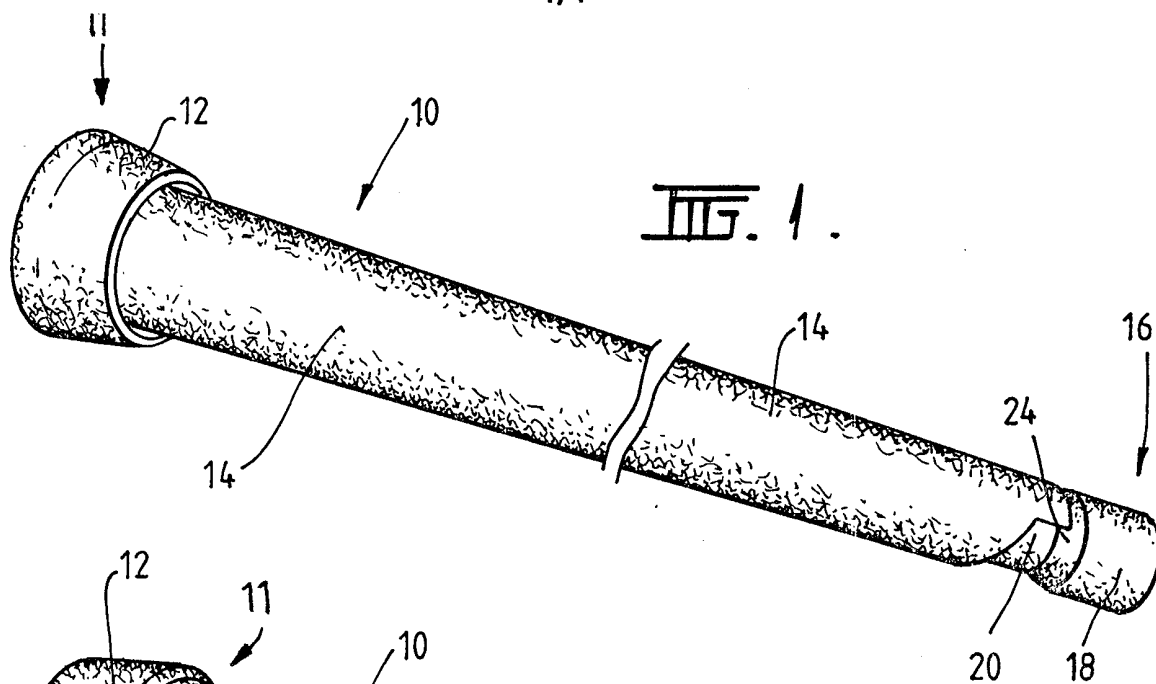
(iii) flexing said skirt so that it is positioned over said wound strip of material, to hold said strip of material against said handle or shaft and/or said core means and prevent unwinding thereof.

6. A method as claimed in claim 5 wherein said core means is fitted over said handle or shaft.

7. A method as claimed in claim 5 wherein said core means, other than said second end thereof and said skirt, is positioned within the end of said handle or shaft.

8. A method as claimed in claim 5 wherein said core means is formed
5 from resilient material.

9. A grip when made by the method claimed in claim 5.



INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU 99/00531

A. CLASSIFICATION OF SUBJECT MATTER																						
Int Cl ⁶ : B25G 1/10, A63B 53/14, A63B 59/00																						
According to International Patent Classification (IPC) or to both national classification and IPC																						
B. FIELDS SEARCHED																						
Minimum documentation searched (classification system followed by classification symbols) IPC: A45B 9/02, A63B 53/14, A63B 59/00, 59/18, B25G 1/10, B62B 9/20, B62K 11/14, 21/26																						
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched AU: IPC as above																						
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) WPAT: WOUND (GRIPS OR STRIPS)																						
C. DOCUMENTS CONSIDERED TO BE RELEVANT																						
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.																				
A	US 4159115 A (TICKTIN et al) 26 June 1979 Column 2 lines 46-55, figure 1																					
A	US 5671923 A (HUANG) 30 September 1997 Column 5 lines 11-39, figures 10-13																					
☐ Further documents are listed in the continuation of Box C ☒ See patent family annex																						
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Date of the actual completion of the international search 23 July 1999		Date of mailing of the international search report -3 AUG 1999																				
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200 WODEN ACT 2606 AUSTRALIA Facsimile No.: (02) 6285 3929		Authorized officer D.G. FRY Telephone No.: (02) 6283 2130																				

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/AU 99/00531

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report				Patent Family Member			
UA	4159115	AU	33028/78	CA	1072144	GB	1592106
		JP	53102131				
US	5671923	US	5695418	US	5797813	US	5374059
		US	5397123	US	5645501	US	5730669
		US	5772524	US	5785607	US	5803828
		US	5813921	US	5816934	US	5827129
		US	5890972	US	5895329	US	5910054
		EP	755702	US	5584482	EP	781577
		CN	1164431	US	5816933	US	5857929
		EP	865805	DE	4433717	JP	7227441
		US	5618041	AU	62456/98	US	5881681
		WO	9833010	EP	882475	US	5571051
END OF ANNEX							