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(54) **Curling stone**

(57) A stone for curling comprising a grip (1), a first plate (21) and a slide plate (27). The grip is attached to

the first plate (21) and the slide plate (27) is releaseably attached to the first plate (21) by a surface fastener (23,29).

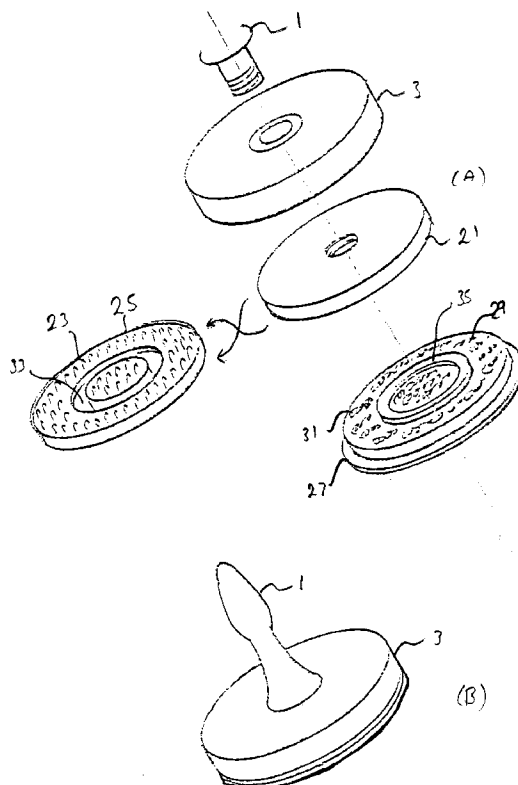


FIGURE 2

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Description

[0001] The present invention relates to cups (or curls) which are used in the sport of curling.

[0002] In curling, a cup or a curl is given an initial push to propel it along a surface. The surface in front of the moving cup is brushed in order to prolong movement of the cup.

[0003] A conventional cup has three parts, a handle or grip, a body and a slide plate. The body sits on top of the slide plate and the slide plate is in contact with the ground. The grip passes through the body and screws into the slide plate to fix the three parts of the cup together.

[0004] Curling is conventionally played on ice. However, it can also be played on asphalt. Different slide plates are required depending on whether the ground is asphalt or ice. Also, different slide plates can be used to give the required acceleration of the cup. Conventionally, three plates are used to give slow, medium or fast acceleration. Therefore, generally at least six different slide plates are needed. In total, there are (at present) twelve licensed slide plate types with different slide characteristics.

[0005] Professional curling requires frequent changing of the slide plate. With a conventional cup, the grip must be unscrewed from the slide plate, a new plate inserted underneath the main body and the grip is screwed back into the new slide plate. This can be quite time consuming.

[0006] In a first aspect, the present invention provides a cup for curling comprising a grip, a first plate attached to said grip and a slide plate releaseably attached to the first plate by a surface fastener.

[0007] Therefore, the slide plate can be easily changed without unscrewing the grip.

[0008] Preferably, the surface fastener comprises a first surface fastener part provided on the lower surface of the first plate and a second, complementary surface fastener part provided on the upper surface of the slide plate. More preferably, the first and second surface fastener parts are hook and loop type fastener parts.

[0009] The first plate could be manufactured from plastics and the hook-type fastener is preferably integral with the first plate.

[0010] Often, cups according to the present invention will also have a body section which sits above the first plate. The body section is a weight and is preferably interchangeable with other body sections of the same or different weights.

[0011] The grip is passed through a hole in the body section and preferably screwed into the first plate. This construction has the advantage that this new design of cup is completely compatible with existing cup designs. The first plate can be screwed onto the grip in the same manner as a conventional slide plate.

[0012] It will be appreciated by those skilled in the art that the body may be permanently attached to the grip.

Alternatively, the body and the ground plate may be integral with one another and both permanently attached to the grip.

[0013] In a second aspect the present invention provides a plate assembly for a cup for curling comprising a first plate with means for attaching a grip to said first plate, and a slide plate releaseably attached to the first plate by a surface fastener.

[0014] The new slide plate can be made much lighter than the conventional slide plate. This is advantageous for the professional curler who often needs to carry a full set of different slide plates.

[0015] In order for the slide plate to fit onto the first plate accurately, it is preferable if slide plate and ground plate have location means to locate the slide plate relative to the ground plate. These location means can, for example, be projections, holes, grooves etc. The slide plate is then provided with a corresponding projection, hole, groove etc., so that the slide plate can only engage with the first plate in one or more of a plurality of predetermined positions.

[0016] A particularly convenient design of location means is provided if the lower surface has a circular groove around the centre of the plate and the slide plate is provided with a corresponding circular projection.

[0017] The present invention will now be described by way of example only, with reference to the accompanying drawings, in which:

Figures 1A and 1B show a conventional cup for curling; and

Figures 2A and 2B show a cup for curling in accordance with the present invention.

Figure 1B shows a conventional cup for curling. An exploded view of the cup is shown in Figure 1A.

[0018] The cup has a grip 1 which passed through the disc shaped main body 3 and screwed into the disc shaped slide plate 5.

[0019] Specifically, the grip 1 is passed through a hole 9 in the main body 3. The grip 1 is provided with a screwthread 7 and the slide plate is provided with tapped hole 11 to accommodate screwthread 7. The grip defines a central axis 10 of the cup.

[0020] Similarly, Figure 2B shows a cup according to the present invention when fully assembled and Figure 2A shows an exploded view of the cup. The assembled, cup in Figure 2B looks similar to the assembled cup of Figure 1B.

[0021] Grip 1 is passed through the main body 3 and screws into the first plate or ground plate 21. The ground plate 21 is provided with hooks 23 of a hook and loop fastener on its lower surface 25. The ground plate 21 is made of plastics and the hooks 23 are integral with ground plate 21.

[0022] Slide plate 27 is provided with loops 29 (of a

hook and loop type fastener) on its upper surface 31. When the surfaces 25 and 31 are pushed together, the hooks and loops 23 and 29 engage with one another to releaseably engage the ground plate 21 with the slide plate 27.

[0023] To ensure that the slide plate 27 fits correctly onto the ground plate 21, location members are provided. The lower surface 25 of the ground plate 21 is provided with a circular groove 33 which is centred around the axis defined by the grip handle 1. The slide plate 27 is provided with a circular projection 35 which is designed to fit snugly into circular groove 33. Therefore, the slide plate 27 can be accurately located on the ground plate 21.

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Claims

1. A cup for curling comprising a grip, a first plate attached to said grip and a slide plate releaseably attached to the first plate by a surface fastener. 20
2. A cup for curling according to claim 1, wherein the surface fastener comprises a first surface fastener part provided on the lower surface of the first plate and a second, complementary surface fastener part provided on the upper surface of the slide plate. 25
3. A cup for curling according to either of claims 1 and 2, wherein the surface fastener is a hook and loop type fastener. 30
4. A cup for curling according to claim 3, wherein the first surface fastener part is a hook-type fastener part and said hook type fastener part is integral with said first plate. 35
5. A cup for curling according to any preceding claim, wherein the cup further comprises a body section which is located on an upper surface of the first plate. 40
6. A cup for curling according to any preceding claim, further comprising means for locating the slide plate relative to the first plate. 45
7. A cup for curling according to claim 6, wherein the means for locating are provided by projections and depressions on the upper and lower surfaces which correspond with one another. 50
8. A cup for curling according to claim 7, wherein the location member on the first plate is a circular groove on the lower surface and the location member on the slide plate is a circular projection on the upper surface such that the projection on the lower surface fits into the groove on the upper surface. 55
9. A cup for curling according to any preceding claim, wherein the grip is screwed into the first plate.
10. A plate assembly for a cup for curling comprising a first plate with means for attaching a grip to said first plate, and a slide plate releaseably attached to the first plate by a surface fastener.
11. A plate assembly for a cup for curling according to claim 10, wherein the means for attaching a grip comprises a tapped hole such that a grip can be screwed into the first plate.

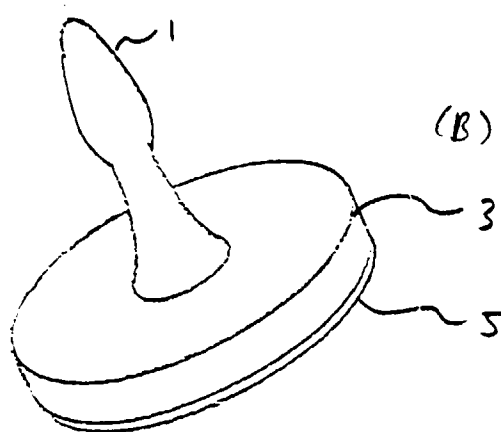
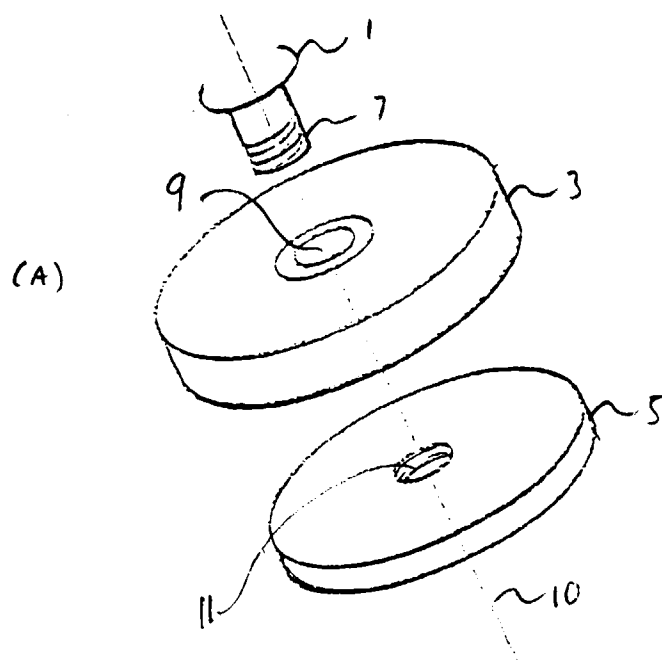


FIGURE 1

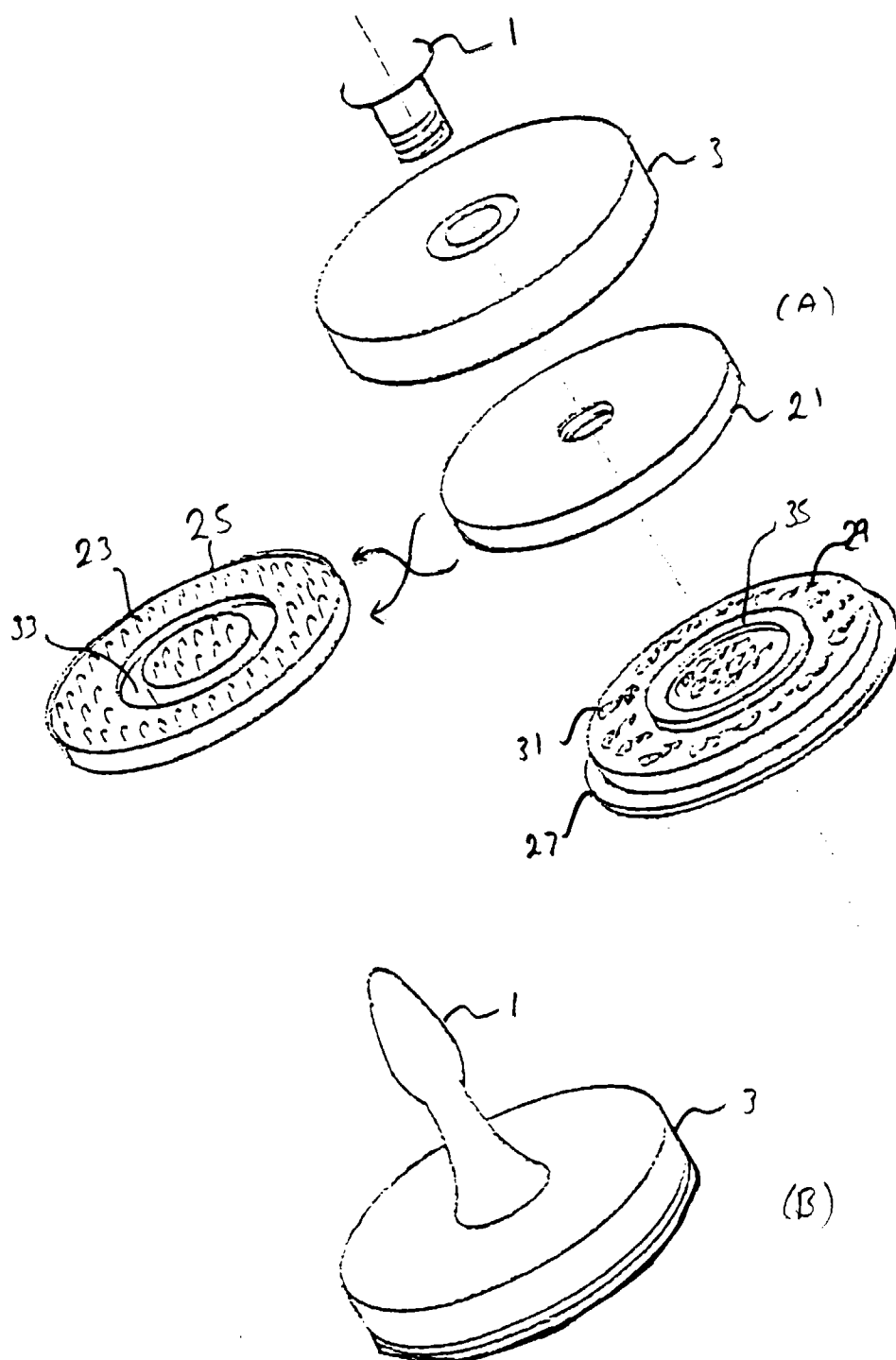


FIGURE 2



European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 99 30 4927

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
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The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 30 September 1999	Examiner Williams, M
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
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EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 99 30 4927

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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