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### **(54) CURLING DEVICE**

VORRICHTUNG ZUM EISSTOCKSCHIESSEN  
PIERRE DE CURLING

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## Description

**[0001]** This invention relates to the game of curling and, in particular, to a new form of device for playing the game of curling or for use on a horizontal flat surface in a similar manner to bowls and curling.

**[0002]** A curling device is known from CH 450981 which comprises a body consisting of two half-shells which are secured together by bolts and in which three balls are mounted, a portion of each ball projecting from the surface of one of the half-shells. The join between the half-shells is concealed by a peripheral ring of hard rubber.

**[0003]** This prior device is expensive to manufacture and complicated in assembly and the present invention seeks to provide a cheaper alternative which avoids the need for complicated assembly.

**[0004]** According to the invention, there is provided a device for playing the game of curling, said device comprising a body portion having mounted on the underside thereof friction reduction means in the form of at least three ball or roller bearings, the body portion comprising an upper frusto-conical part and a substantially planar base, characterized in that the body portion is made of vulcanised rubber or plastics material in which a metal insert is embedded and in that each ball or roller bearing is mounted in a respective casing which is located in a respective socket in the material of the body portion. Preferably the body-portion is circular in plan.

**[0005]** According to a preferred embodiment, three ball bearings are provided on the underside of the device. By providing only three ball bearings, the points of contact of the balls with the playing surface are naturally in alignment.

**[0006]** The invention will now be described, by way of example, with reference to the drawings in which:-

Fig. 1 is an underneath plan view of one embodiment of a curling device according to the invention;

Fig. 2 is a section taken on the line A-A in Fig 1 in the direction of the arrows;

Fig. 3 is a side elevation of a pusher to be used in conjunction with the curling device shown in Figs. 1 and 2, and

Fig. 4 is a plan view of the pusher shown in Figure 3.

**[0007]** The curling device shown in Figures 1 and 2 comprises a body 10 having an upper frusto-conical part and a substantially planar base, the outer edge of the upper part being radiused. The body may be made of metal, wood, vulcanised rubber or a plastics material. A preferred size is a diameter of 18 cm and a height of 3.5 cm.

**[0008]** On the underside of the body 10 are mounted three ball-bearing units disposed 120° apart from each other. Each unit comprises a casing 12a, 13a, 14a and a ball 12b, 13b, 14b held captive by an inwardly extending flange 12c, 13c, 14c having an aperture of a diameter

less than that of the ball through which aperture the ball protrudes. The body is provided with sockets 11 for receiving the casings 12a, 13a, 14c, each casing having an outwardly extending flange 12d, 13d, 14d which abuts against the body, when the respective casing is located in a socket 11.

**[0009]** If the body 10 is made of wood, vulcanised rubber or a plastics material, it is preferably weighted by a metal insert 18 which may be embedded in the rubber or plastics material during manufacture. In this case, the sockets 11 may be formed in cylindrical extensions 15 which project from the base of the body 10.

**[0010]** A handle 20 is provided by which the curling device may be delivered during play and for ease of carrying.

**[0011]** A pusher 21, shown in Figures 3 and 4, is provided for manipulation of the curling devices when they are returned to the delivery area. Alternatively, the pusher may be used to project the curling device towards the target in actual play. In this event the handle 20 may not be necessary.

**[0012]** The curling devices may be used in a game in a similar manner to the usual game of curling on ice. However, in the present invention the device is intended for use on any flat horizontal surface such as in a sports hall or a carpeted room. Players deliver the curling devices in turn towards a target which may be of thin plastics material marked with coloured rings numbered in reducing value from the centre outwards by using a thin plastics sheet of a thickness of say less than 0.5 mm. Balls of say 3 cm in diameter can run from the playing surface on to the target sheet with little resistance offered by the edge of the sheet.

**[0013]** The curling devices may also be used in the manner of a game of bowls, in which case a jack may be used and the players bowling in "ends".

## Claims

1. A device for playing the game of curling, said device comprising a body portion (10) having mounted on the underside thereof friction reduction means in the form of at least three ball or roller bearings (12b, 13b, 14b), the body portion (10) comprising an upper frusto-conical part and a substantially planar base, **characterized in that** the body portion (10) is made of vulcanised rubber or plastics material in which a metal insert (18) is embedded and **in that** each ball or roller bearing (12b, 13b, 14b) is mounted in a respective casing (12a, 13a, 14a) which is located in a respective socket (11) in the material of the body portion (10).
2. A device according to claim 1, **characterized in that** the body portion (10) is essentially circular in plan.
3. A device according to claim 1 or claim 2, **character-**

**ized in that** three ball bearings (12b,13b,14b) are provided on the underside of the device.

4. A device according to any one of the preceding claims, **characterized in that** the upper part has an outer edge which is radiussed.
5. A device according to any one of the preceding claims, **characterized in that** a handle (20) is provided, said handle protruding from the upper part of the body portion (10).
6. A device according to any one of the preceding claims, **characterized in that** the ball or roller bearings (12b,13b,14b) protrude from the underside surface of the body portion (10) of the device.

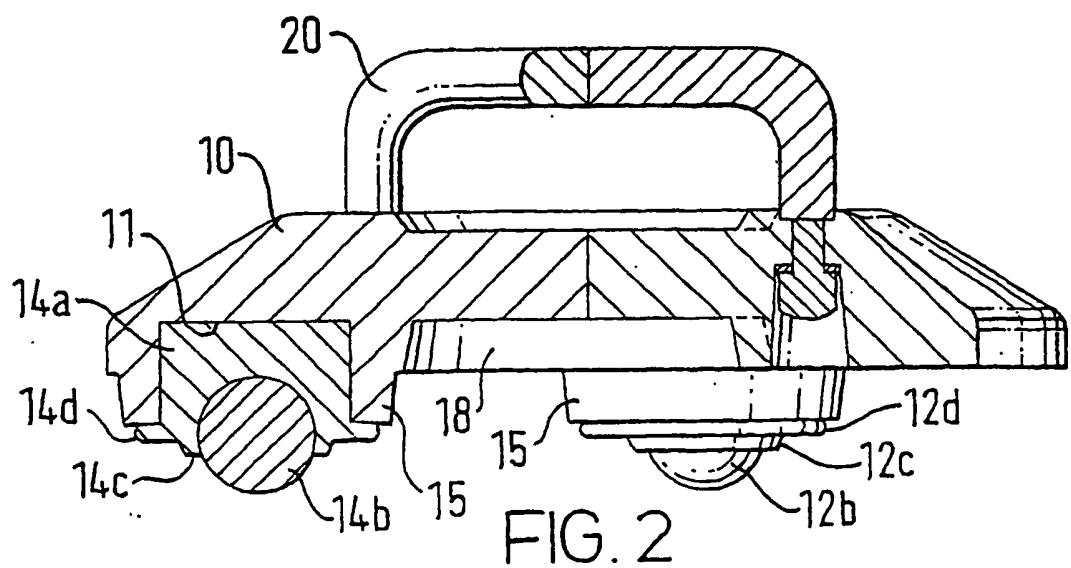
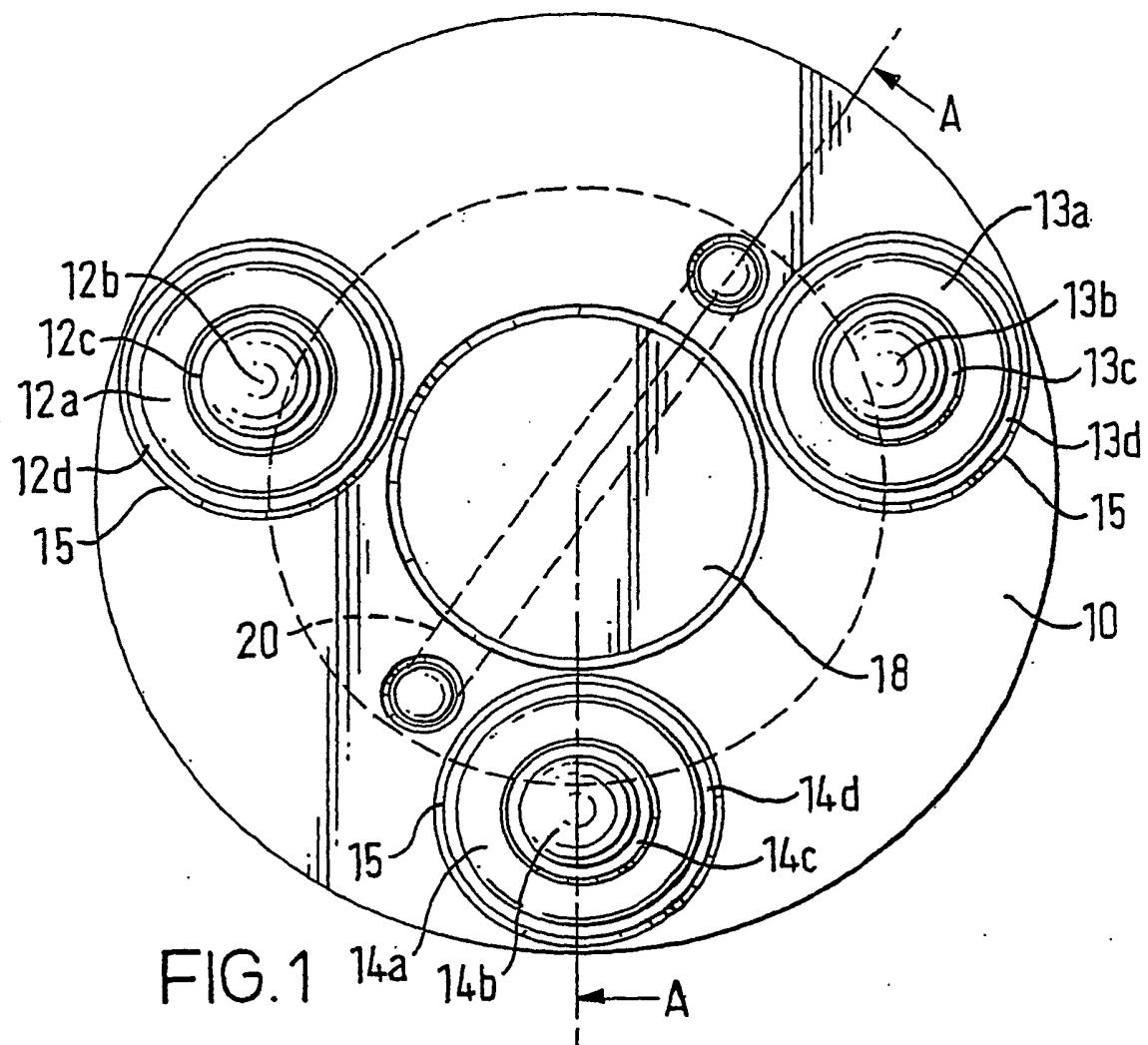
## Revendications

1. Dispositif pour jouer au curling, ledit dispositif comprenant une partie de corps (10) recevant sur son côté inférieur un moyen de réduction de frottement sous la forme d'au moins trois roulements à billes ou à rouleaux (12b, 13b, 14b), la partie de corps (10) comprenant une partie tronconique supérieure et une base globalement plane, **caractérisé en ce que** la partie de corps (10) est constituée de caoutchouc vulcanisé ou d'une matière plastique dans laquelle une pièce rapportée métallique (18) est intégrée et **en ce que** chaque roulement à billes ou à rouleaux (12b, 13b, 14b) est monté dans une cage respective (12a, 13a, 14a) qui est située dans une emboîtement respectif (11) dans le matériau de la partie de corps (10).
2. Dispositif selon la revendication 1, **caractérisé en ce que** la partie de corps (10) est essentiellement circulaire dans un plan.
3. Dispositif selon la revendication 1 ou la revendication 2, **caractérisé en ce que** trois roulements à billes (12b, 13b, 14b) sont prévus sur le côté intérieur du dispositif.
4. Dispositif selon l'une quelconque des revendications précédentes, **caractérisé en ce que** la partie supérieure comporte un bord extérieur qui est arrondi.
5. Dispositif selon l'une quelconque des revendications précédentes, **caractérisé en ce qu'** une poignée (20) est prévue, ladite poignée dépassant de la partie supérieure de la partie de corps (10).
6. Dispositif selon l'une quelconque des revendications précédentes, **caractérisé en ce que** les roulements à billes ou à rouleaux (12b, 13b, 14b) dépassent de la surface inférieure de la partie de corps (10) du

dispositif.

## Patentansprüche

- 5.1. Spielgerät für das Curling-Spiel, wobei das genannte Gerät einen Körper (10) hat, an dessen Unterseite Reibungsreduzierungsmitte in Form von mindestens drei Kugel- oder Rollenlagerungen (12b, 13b, 14b) angebracht sind, wobei der Körper (10) einen oberen, konisch zulaufenden stumpfförmigen Abschnitt und eine im Wesentlichen planare Basis aufweist,  
**dadurch gekennzeichnet,**  
**dass** der Körper (10) aus vulkanisiertem Gummi- oder einem Kunststoffmaterial besteht, in dem eine metallische Einlage (18) eingebettet ist, und dass jede Kugel- oder Rollenlagerung (12b, 13b, 14b) in jeweils einem Gehäuse (12a, 13a, 14a) angebracht ist, das in jeweils einer Aufnahme (11) im Material des Körpers (10) angeordnet ist.
2. Gerät nach Anspruch 1, **dadurch gekennzeichnet,**  
**dass** der Körper (10) im Wesentlichen in der Ebene kreisförmig ist.
3. Gerät nach Anspruch 1 oder 2, **dadurch gekennzeichnet,**  
**dass** die drei Kugellagerungen (12b, 13b, 14b) an der Unterseite des Geräts angeordnet sind.
4. Gerät nach einem der vorhergehenden Ansprüche,  
**dadurch gekennzeichnet, dass** der obere Abschnitt eine äußere Kante hat, die gerundet ist.
- 35.5. Gerät nach einem der vorhergehenden Ansprüche,  
**dadurch gekennzeichnet, dass** das Gerät einen Handgriff aufweist, der vom oberen Abschnitt des Körpers (10) absteht.
- 40.6. Gerät nach einem der vorhergehenden Ansprüche,  
**dadurch gekennzeichnet, dass** die Kugel- oder Rollenlagerungen (12b, 13b, 14b) von der Fläche an der Unterseite des Körpers hervorstehen.



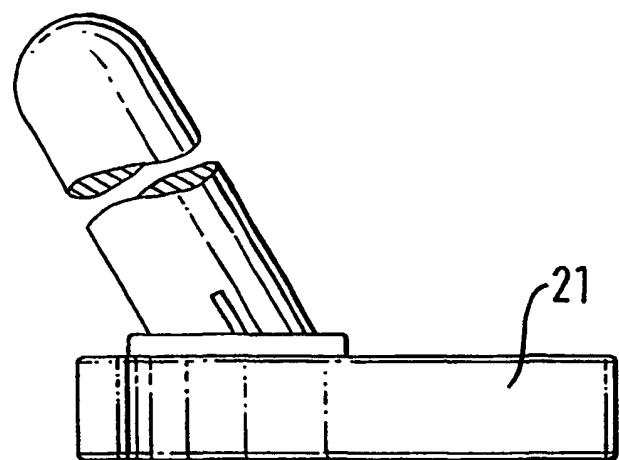


FIG. 3

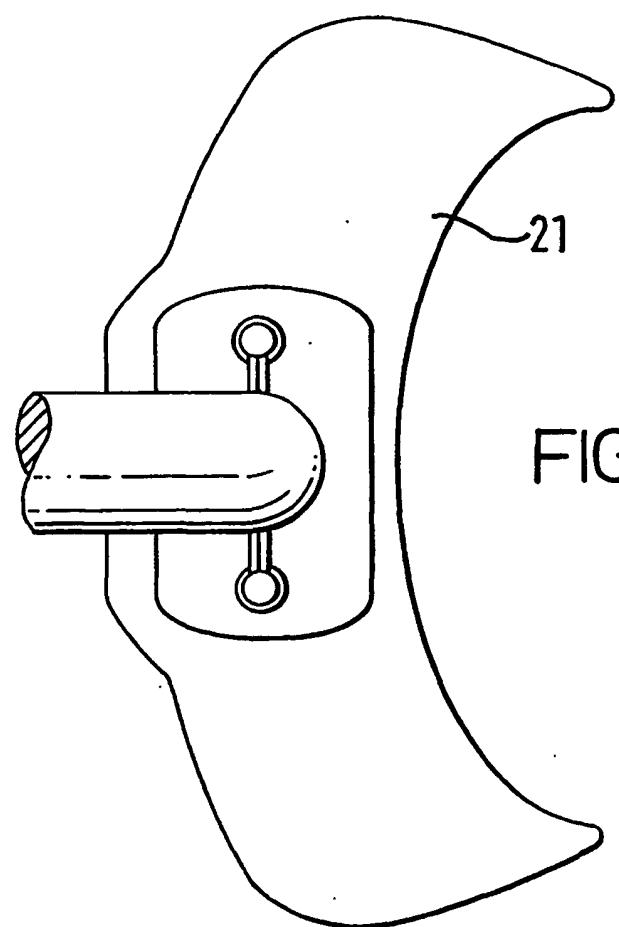


FIG. 4