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Lettman

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[54] **CANOE KNEE-SEAT**

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[52] **U.S. Cl.** **9/7**

[51] **Int. Cl.** **B63b 29/00**

[58] **Field of Search** ..... 9/2 A, 6, 7, 5

[56] **References Cited**

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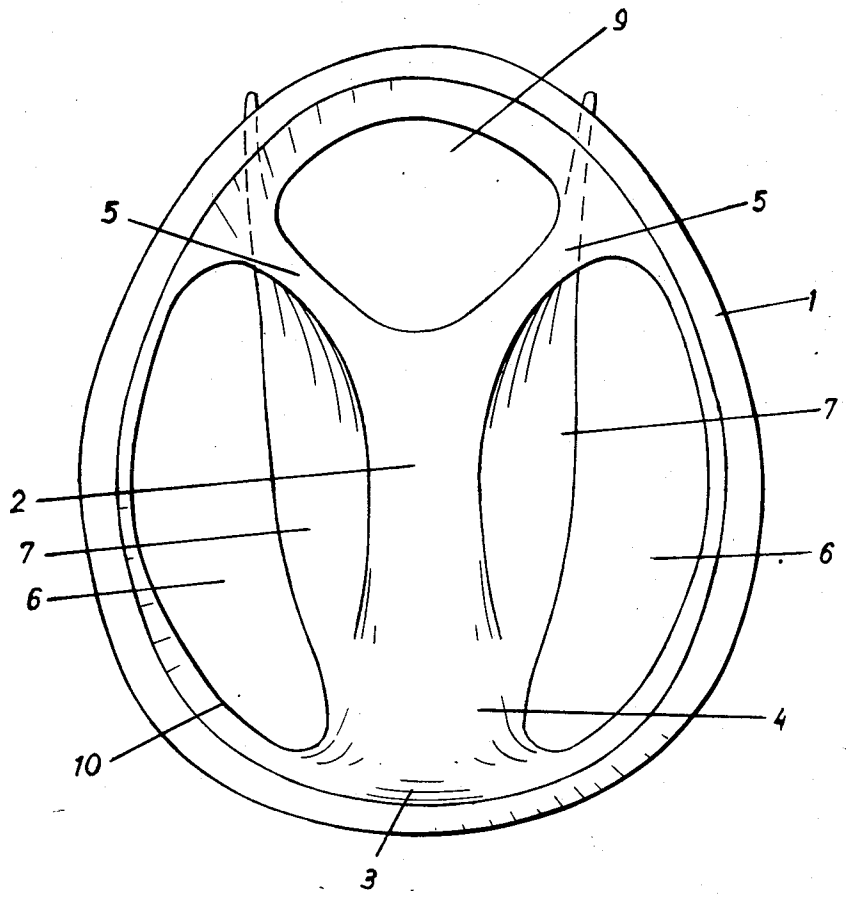
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[57] **ABSTRACT**

A knee-seat for Canadian canoes is formed from a cup-shaped, one-piece plastic molding having a ring-shaped sill. A seat section extends obliquely upward from the rear molding wall to the front part of the sill. Shaped seat support walls provide for support of the upper thigh, and leg insertion openings on each side of the seat section facilitate easy entrance and exit. Additional thigh support may be provided by shaped walls on the outside of the leg insertion openings.

3 Claims, 3 Drawing Figures



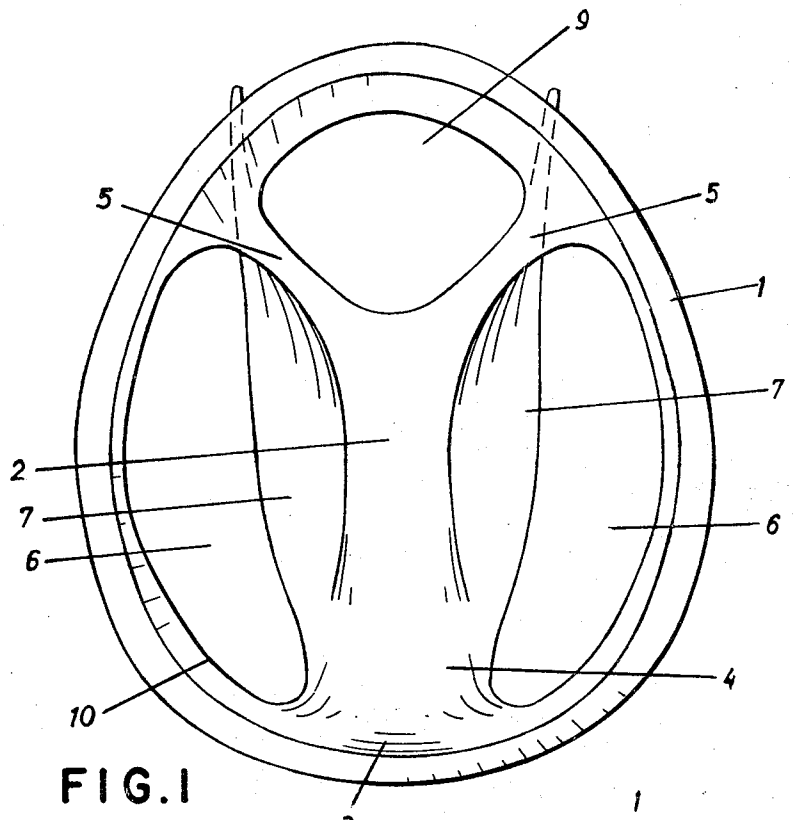


FIG. 1

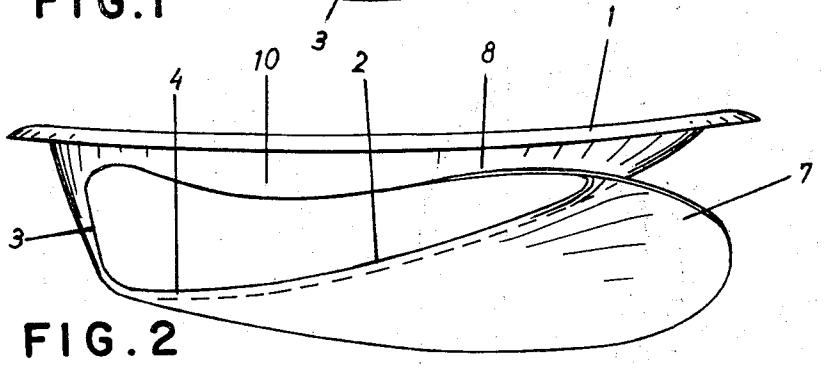


FIG. 2

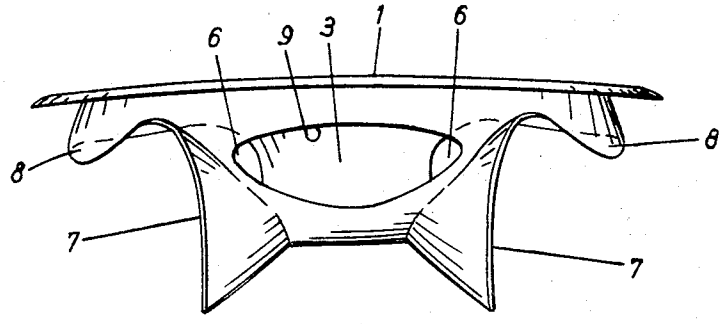


FIG. 3

CANOE KNEE-SEAT

The invention relates to a knee-seat for Canadian canoes, in particular slalom, white-water, and travelling canoes.

Canadian canoes for slalom, white-water and travel sport are usually provided with an opening in the deck for installation of a seat. In these boats, the sportsman kneels in the hull and braces himself with his buttocks against a seat surface. The known knee-seats consist of a cup-shaped, single-piece molding of plastic with a ring-shaped sill to which a rear wall is molded, which is provided with a seat section projecting forward. These known knee-seats are installed in the entrance openings of the boat hull and are attached to the boat hull by cementing or the like. With these knee seats mounting and dismounting is cumbersome. The sportsman must slide his feet and lower thighs underneath the seat before he is able to sit down on the seat surface. In order that his legs obtain the necessary support within the boat hull, brackets are attached to the floor of the hull which conform to the surface of the upper thighs. However, such a design has the disadvantage that it is difficult for the crew to get out of the boat in the event of capsizing. A further disadvantage was found in the difficult installation of the support brackets for the upper thighs.

In contrast, the present invention aims at developing a knee seat for Canadian canoes which permits simple mounting and dismounting, and which achieves particularly good leg support in the kneeling position.

This task is accomplished according to the invention by shaping the seat section in the form of a central ridge which is inclined upward toward the front part of the sill, a hole for inserting the legs being provided on each side of said ridge, and each side of the central ridge being provided with support walls inclined obliquely toward the outside and adapted to the shape of the upper thighs.

This configuration has the advantage that the sportsman merely needs to insert his legs in a simple manner through the leg access openings, which provide considerable freedom of motion. In the kneeling position his upper thighs are supported from the inside as well as the outside, down to his knees, so that he is firmly held and forms a unit with the boat hull. His strokes can therefore be transmitted much more effectively to the boat hull. A further important advantage is the fact that the sportsman is able to leave the boat easily in the event of capsizing or other emergency situation. Since the leg insertion openings extend almost to the feet, it is no longer necessary to pull the lower thighs out from underneath the seat when leaving the boat. Instead, the sportsman sits on the central ridge as in a saddle, and the leg insertion openings give him considerable freedom of motion during mounting and dismounting, while the support walls provide the necessary hold in the kneeling position.

In one embodiment of the invention the leg insertion openings are expediently surrounded on their outside by a wall segment of the sill which is adapted to the shape of the upper thighs. This ensures that the legs will also obtain the required support with respect to the sides of the boat hull. The central ridge is most advantageously fork-shaped at the front. The cutout which is thereby created achieves a considerable savings in weight.

The novel knee-seat can be installed in single seat Canadian canoes, as well as in multiple seat designs.

Other objects, features and advantages will occur to one skilled in the art from the following description of a preferred embodiment of the invention, taken together with the attached drawing thereof, in which:

FIG. 1 is a top view of a knee-seat embodying the invention;

FIG. 2 is a side elevation view of the subject of FIG. 1; and

FIG. 3 is a front view of the subject of FIG. 1.

The knee-seat shown in FIGS. 1 to 3 is made as a one-piece molding of plastic. Around its upper periphery is a ring-shaped sill **1**, which is attached to the edge of a cut-out in the boat deck by cementing or the like. In the rear section of the molding there is provided a rear wall **3**, which is rounded in the shape of a cup. Starting at the lower edge of the rear wall **3**, a center ridge **2** extends obliquely upward to the front part of the sill **1**, where it merges into the sill. The upper part of center ridge **2** forms a seat surface **4**. The center ridge **2** is forked in its front region, the two forked ridges **5** surrounding a cut-out **9**.

At each side of the center ridge **2** there are provided elongated leg insertion openings **6**. These extend almost over the entire length of the seat, and reach as far back as the region of the rear wall **3**. To each side of the center ridge **2**, there are attached molded support walls **7**, which are adapted to conform to the inner surface of the upper thigh. The support walls have a concave surface and reach with their front ends to about the front edge of the sill **1**. This surface merges into a point in the region of the seat surface **4**. In addition, each of the leg insertion openings **6** is bounded on its outside by a wall section **8** of the sill **1** which conforms to the shape of the upper thigh. These wall sections **8**, which are inclinded obliquely away from center are located in the front region of the leg insertion openings, while the walls **10** at the rear portion of the sill **1** are inclined slightly inward and are adapted to the shape of the buttocks or the back, respectively.

The object of the invention is not limited to the embodiment illustrated in the drawing; numerous modifications are possible without exceeding the scope of the invention. It is thus possible, for example, to improve the support walls **7** and wall parts **8** by providing cushions of sponge rubber, plastic foam, or the like. The knee-seat may also have a different plan view shape and the protruding parts of support walls **7** may have other shapes instead of the rounded edges shown. It is also possible to incline the rear wall **3** and the wall sections **10** at the rear portion of the sill **1** obliquely toward the inside, so that the sportsman is forced to slide forward against the support walls **7**. Other embodiments will occur to those skilled in the art and are within the following claims.

What is claimed is:

1. A knee seat for Canadian canoes comprising a cup-shaped plastic molding, said molding including a ring-shaped sill, a seat section adjacent to the rear wall of said molding, said seat section shaped in the form of a central ridge extending obliquely upward from said rear wall to the front part of said sill, a leg insertion opening on each side of said ridge, molded support walls extending obliquely outward to each side of said central ridge, said support walls conforming to the shape of the upper thigh.

2. A knee seat according to claim **1**, wherein a wall is provided on said sill, said wall bounding each of said leg insertion openings on the outer side thereof, said wall adapted to the shape of the upper thigh.

3. A knee seat according to claim **1**, wherein said front portion of said center ridge is divided fork-like.

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