

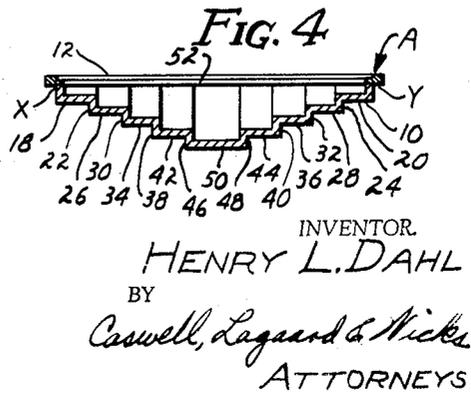
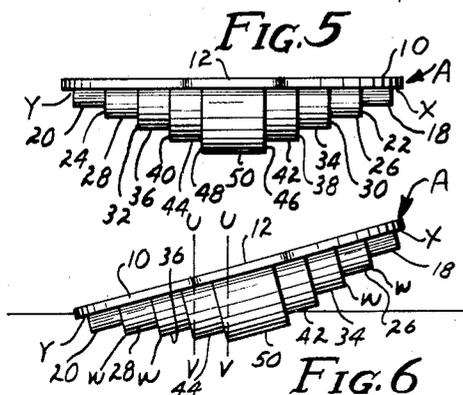
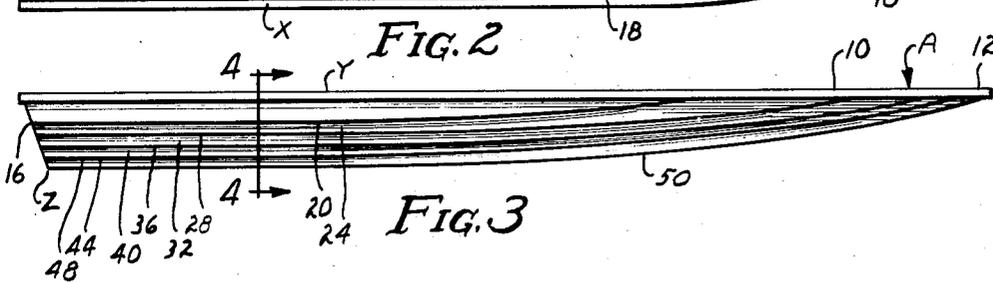
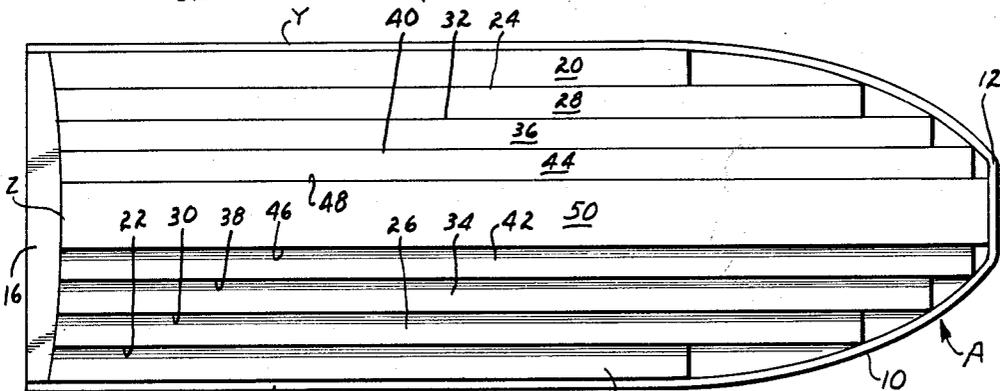
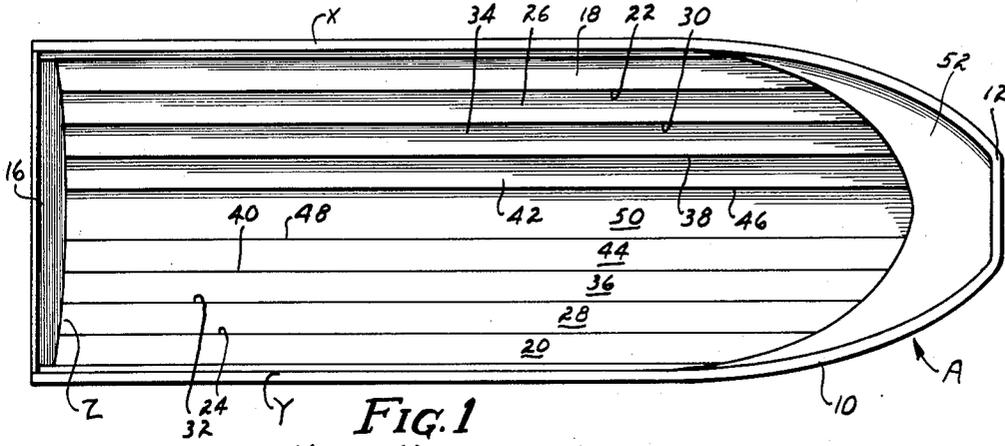
Sept. 1, 1964

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3,147,020

STEERABLE TOBOGGAN

Filed June 25, 1962



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3,147,020

STEERABLE TOBOGGAN

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Filed June 25, 1962, Ser. No. 204,751

5 Claims. (Cl. 280-18)

The invention relates broadly to vehicles caused to slide and in which humans may be transported and more particularly to a relatively flat shallow body member which is steerable by an occupant thereof by simply changing the attitude of the body on the ground or water over which the body member is caused to move relative to the perpendicular.

It is an object of the invention to provide a body member having a bottom surface which is generally arcuate transversely and arcuate longitudinally from the rear end upwardly to the front end or bow. This may be in one form a toboggan-like hull body for use in sliding downhill on snow.

It is a further object of the invention to provide the bottom surface of the body member with a series of parallelly disposed step formations extending transversely of the bottom and throughout substantially the length of the bottom of the body member, the bottom curving upwardly from the rear to the front with the edges of said step formations being perpendicular to the horizontal transverse axis of the body member. In providing said bottom hull formation, the hull may be directed to one side or the other by tilting the same transversely in the direction it is desired to go whereby the perpendicular parallel step edges become lines which are curved with relation to the previous perpendicular position and direction of travel. As these curved line step edges contact snow, for example on a hill, the body member is caused to travel in the direction of the curved line formed by the arcuate step edge. Briefly, the straight perpendicular edges of the arcuate step formations become curved parallel lines relative to the perpendicular.

It will not be here attempted to set forth and indicate all of the various objects and advantages incident to the invention, but other objects and advantages will be referred to in or else will become apparent from that which follows.

The invention will appear more clearly from the following detailed description when taken in connection with the accompanying drawings, showing by way of example a preferred embodiment of the inventive idea wherein like numerals refer to like parts throughout.

In the drawings forming part of this application:

FIGURE 1 is a top plan view of the toboggan.

FIGURE 2 is a bottom plan view of the toboggan.

FIGURE 3 is a longitudinal side elevational view of the same.

FIGURE 4 is a section on the line 4-4 of FIGURE 3.

FIGURE 5 is a front elevational view of the toboggan.

FIGURE 6 is a view similar to FIGURE 5 but with the attitude changed transversely.

Referring to the drawings in detail the letter A designates the toboggan which includes the body 10. The body 10 may be monolithic and formed in one piece of glass fiber, plastic or the like and is generally arcuate transversely from point X to point Y, FIGURE 4. The body 10 is substantially arcuate in formation longitudinally from point Z at the rear upwardly to and including the bow 12. Reference numeral 16 designates a transom-like rear end.

The body 10 has formed in the outer arcuate surface thereof a series of step formations running longitudinally of the bottom from point Z to the bow. The step formations include the horizontal outboard steps 18 and 20, terminating inboard in the vertical riser edge portions

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22 and 24, respectively. Extending from the riser edges 22 and 24 are the horizontal step portions 26 and 28, respectively, which terminates inboard in the vertical riser edge portions 30 and 32, respectively.

Extending from the riser edges 30 and 32 are the horizontal step portions 34 and 36, respectively, which terminate inboard in the vertical riser edge portions 38 and 40, respectively, and extending from the riser edge portions 38 and 40 are the horizontal step portions 42 and 44, respectively. The step portions 42 and 44 terminate inboard in the vertical riser edge portions 46 and 48, respectively, which terminate in the central step plate 50. It will be seen that the vertical riser edges described form shoulders and are easily drawn over snow or water and that the step portions terminate at points short of the extreme front of the bow 12 curving upwardly into the body 10 and terminating at a plane forming the top edge of the toboggan A. It will be seen that the longitudinally extending riser edges are parallel.

The points at which the step portions and riser edges join, e.g. at W, are substantially a true arc beginning at the transom and extending upwardly and forwardly which provides a pivot point of the lever of turning which is at the extreme rear end at the transom 16. In addition the points W are on an arc scribed laterally.

The body 10 may be for the most part open with a small forward deck portion 52 or the same may be completely open. The body may vary from one to two feet in width and from two to six feet or so in length, the depth being in proportion from about two to eight inches.

In using the toboggan A to travel down a hill having snow on it for example, the user sits in the body 10 facing the bow 12. As the toboggan A slides down the hill, the same may be turned to the right, for example, by the user leaning or shifting his weight from the center of the toboggan to the right. This causes the body 10 to rotate on a lateral arc formed by the points W, and as this is done the toboggan assumes an attitude somewhat that of FIGURE 6. As a result, the straight parallel vertical riser edges 24, 32, 40, and 48 become parallel curved lines in relation to the perpendicular, see U-V, FIGURE 6, and it is this change that causes the toboggan to turn.

Briefly, as the body 10 is rotated, the riser edges "bite" into the snow to cause the body 10 to turn, and a greater amount of rotation of the body 10 on a lateral arc produces a greater degree of curved line of the riser edges and a resultant sharper or greater degree of turn.

The invention is not to be understood as restricted to the details set forth since these may be modified within the scope of the appended claims without departing from the spirit and scope of the invention.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. In a steerable toboggan, a body member in which the user sits, the outer surface of said body member being generally arcuate transversely and arcuate longitudinally substantially throughout its entire length, a multiplicity of step formations formed on the arcuate surface of said body member on each side of the longitudinal centerline thereof, each of said step formations including a substantially horizontal portion extending longitudinally throughout the arcuate length of the body member and terminating in a substantially vertical riser edge coterminous therewith, said riser edges being parallel and normally in a straight line attitude, said riser edges changed to a curved line relative to the perpendicular as said body member is rotated on its longitudinal axis to thereby cause said toboggan to change its forward direction of travel to one side or the other.

2. In a steerable toboggan, a body member, the outer

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surface of said body member being arcuate transversely and arcuate longitudinally substantially throughout its length, the outer surface of said body being formed with a multiplicity of step members extending longitudinally of the body member on each side of the longitudinal centerline of said body member, each of said step members having a substantially horizontally disposed flat portion curving upwardly to the bow of said body member and terminating in a substantially vertical riser edge coterminous therewith said vertical riser edges being parallelly disposed.

3. In a steerable toboggan, a body member the outer surface of which has an arcuate formation longitudinally thereof substantially throughout its length and an arcuate formation transversely thereof, a multiplicity of spaced shoulder means extending longitudinally on said body member on each side of the centerline thereof, said spaced shoulder means being parallelly disposed.

4. In a steerable toboggan, a body member the outer surface of which is formed with an arcuate formation extending longitudinally substantially throughout the entire length thereof and an arcuate formation transversely thereof, a multiplicity of vertical shoulder means extending longitudinally on said body member on each side of the centerline thereof, all of said vertical shoulder means being parallelly disposed and extending substantially throughout the length of said body member.

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5. In a steerable toboggan, a body member in which the user sits, the outer surface of the body member having a multiplicity of step formations extending longitudinally and arcuately throughout substantially the entire length of the outer surface of the body member on each side of the center line of said body, said body member being generally arcuate transversely, each of said step formations including a substantially horizontal portion extending throughout the arcuate length of the body member and terminating in a substantially vertical riser edge coterminous therewith, said vertical riser edges being parallelly disposed and normally in a straight line attitude, said riser edges changed to a curved line relative to the perpendicular as said body member is rotated on its longitudinal axis to thereby cause the toboggan to change its forward direction of travel to one side or the other.

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