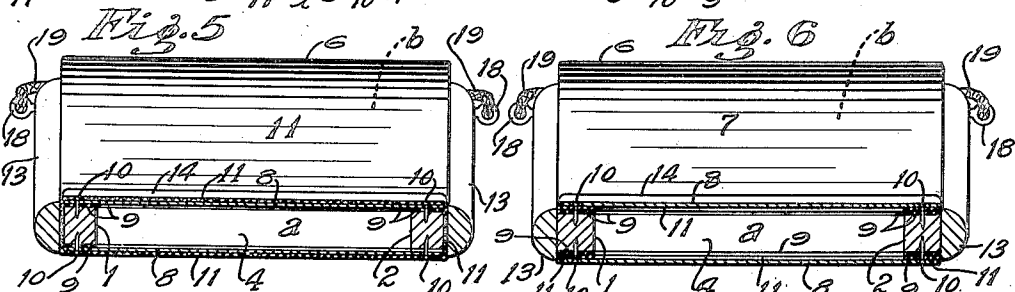
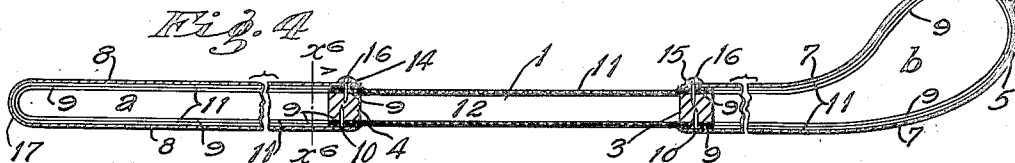
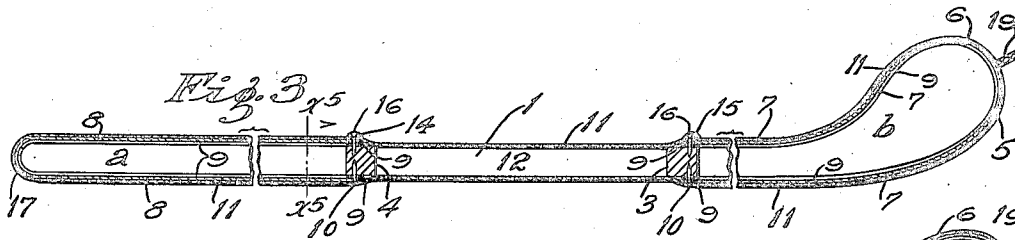
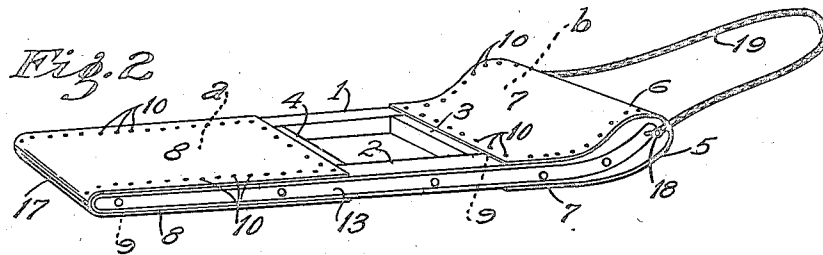
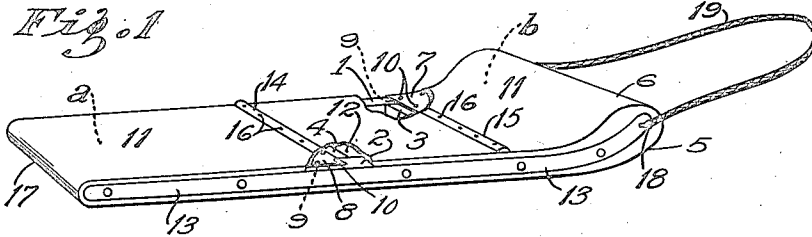


A. N. NELSEN.
SURF COASTER.
APPLICATION FILED APR. 24, 1913.

1,104,441.

Patented July 21, 1914.

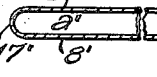


Witnesses

Thor J. Jorgensen

L. Belle Weaver

Fig. 7



Inventor
Alfred N. Nelsen

by
James R. Townsend
his atty

UNITED STATES PATENT OFFICE.

ALFRED N. NELSEN, OF LONGBEACH, CALIFORNIA, ASSIGNOR OF ONE-HALF TO
HENRY J. WOODS, OF HOLLYWOOD, CALIFORNIA.

SURF-COASTER.

1,104,441.

Specification of Letters Patent.

Patented July 21, 1914.

Application filed April 24, 1913. Serial No. 763,450.

To all whom it may concern:

Be it known that I, ALFRED NICHOLAS NELSEN, a citizen of the United States, residing at Longbeach, in the county of Los Angeles and State of California, have invented a new and useful Surf-Coaster, of which the following is a specification.

This invention relates to coasters for use in the surf at beaches to enable the user to ride the breakers.

It is designed to serve as a pleasure device and as a life saving device for the use of bathers and others at pleasure resorts and elsewhere.

An object of the invention is to provide a surf coaster of cheap, simple and strong construction which is superior in buoyancy to surf coasters heretofore made and which will be easier to handle, affording a more certain hold to the hands of the user; which will be more comfortable to the body of the user, and which will not be likely to dip into the water or into the sand while the user is coasting the breakers or otherwise using it. In devices of this character heretofore invented the desirable up-tilting of the forward end of the coaster enabling it to skim over the water was effected in some instances by up-bending or curving the forward end of the coaster.

In contradistinction to the foregoing an object of this invention is to maximize the skimming effect and this I do by making the buoyant chambers at the ends of different buoyant values and in other words by making the front chamber larger than the rear chamber so that even when the coaster is not progressing over the water the front end will tend to rise and ride upon the water.

Other objects and advantages may appear from the subjoined detail description.

The invention may be variously constructed and embodied in different forms.

The accompanying drawings illustrate the invention in two forms.

Figure 1 is a perspective view of a hydro-surf coaster constructed in accordance with this invention, parts being broken away to expose parts that would otherwise be hidden.

Fig. 2 is a perspective of the rigid structure of said coaster. This structure is capable of use as a coaster. Fig. 3 is a longitudinal midsection of the coaster as shown in Fig. 1. Fig. 4 is a longitudinal mid-section of a coaster embodying the invention in

another form. Fig. 5 is an enlarged cross-section on line x^5 , Fig. 3. Fig. 6 is an enlarged section on line x^6 , Fig. 4. Fig. 7 is a fragmental view partly in longitudinal mid-section showing a form in which the coaster is cast aluminum.

It is understood that the coaster may be made of various materials and of various dimensions without departing from the spirit of this invention.

The rigid frame comprises two side members 1, 2 made of wood or aluminum or any other suitable light rigid material, but are preferably of wood, said side members being fastened together by cross bars 3, 4, one of which is located between the transverse mid-line and the front end of the coaster, and the other between said mid-line and the rear end of the coaster. The front ends of the side members are rounded and are of increased dimensions, being formed with a forward and upward curved surface 5 at their under edges and with a swell 6 at their upper edges.

Air compartments forming impervious sheets 7, 8 which may be of sheet metal or other suitable material are applied to and bent around the rear and front portions of the rigid frame and are hermetically sealed to and fastened on the edges of the side members 1, 2, at top and bottom and around said ends, and are also fastened to and hermetically sealed on the front and rear cross bars 3, 4, respectively. One manner in which the hermetical sealing may be effected is to apply strips 9 of adhesive tape along the edges over which the sheets 7 and 8 are to be applied and then to fasten the sheets in place by nails 10 driven through the sheets and tape and into the frame. When the frame is thus completed, as shown in Fig. 2 it constitutes in itself a kind of surf coaster and is capable of certain uses in this relation; being thus constructed with two buoyant chambers a , b of different buoyant values at the rear and front respectively and the middle portions of the side bars 1, 2 between the cross bars afford excellent handles to be grasped in order to handle the coaster. It is found preferable, however, to further extend the invention and the comfort of its use in the general sport of surf coasting by adding a third cover 11 to form at the middle of the coaster a third hermetically sealed air chamber 12. This may be effected in

various ways, and it is at present deemed preferable to form the middle air chamber by means of a flexible cover which also envelops the frame and the other two covers as shown in Figs. 1 and 3. The third cover is preferably made of closely woven canvas which for the purpose of excluding water from the middle buoyant chamber is treated with a water proof material as, for instance, by immersing the sheet of canvas in a bath of melted paraffin removing the sheet and allowing the paraffin to congeal. It is understood, however, that any method of making canvas or other flexible material impervious to water and air may be employed, and in applying the third sheet or cover to the coaster frame, said frame and the sheets 7, 8 may be coated with thick paint before the third sheet or cover 11 is applied. Said third sheet 11 may be formed of a single strip of canvas somewhat wider than the coaster frame, the edges of said canvas being folded over the sides of the frame and tacked or otherwise secured to the sides of the side bars. Said canvas sheet will preferably be stretched tightly over the frame and may be further secured in place by moldings 13 which may be of half round or other cross section and sufficiently broad to cover the seam between the turned over edges. Furthermore, cross strips 14, 15 may be applied at the top and along the cross bars and tacked thereto by tacks, nails or other suitable fasteners as indicated at 16. The under side of the coaster is free from projections which might form obstructions against a smooth passage of the coaster on the water. After applying the canvas and the strips of molding designed to strengthen the fastenings of the canvas upon the frame, the coaster is allowed to season until the paint becomes thoroughly dried. Then the device is ready for use.

In practical use the user will grasp the appliance at the middle where the canvas will yield under the hands, thus enabling the user to fix his grasp upon the side rails; and when the bather proposing to use the coaster has reached his station at or beyond the breakers he will place the rounded end 17 against his middle and then extending the coaster forward he will allow it to plunge forward in the usual manner of coasting, whereupon the buoyant coaster will carry him shoreward. Screw eyes 18 may be screwed into the front ends of the side bars and a line 19 attached thereto. Said line may be in the form of a loop by which the coaster may be drawn out or back by the bather or by an attendant.

By reason of the swell 6 at the front end of the side bars, the front of the air chamber *b* is of larger dimensions than the rear air chamber *a*; and since the front sheet is bent over the enlarged ends of the side bars

so as to keep the same contour, they provide an enlarged or bulbous air chamber at the front end of the coaster so that said front end is more buoyant than the rear end thus tending to keep the front end of the coaster up when in the water. While it is understood that the dimensions may be varied, a convenient size will be such that the coaster corresponds in width to the width of the body of the person to use it and in length to the length of the trunk, neck and head of the body of the person to use the coaster; so that the air chamber at the front will extend as a protection for the head of the bather thus preventing liability of diving into the sand. The rounded under side of the front chamber also serves after the nature of a toboggan to enable the appliance to slide easily over the water and over the sand as the coaster approaches and reaches the shore.

In practical use the bather will place the rounded rear wall of the rear chamber against his middle where it will rest comfortably, while the bulbous air chamber extends up above and in a measure over his head. Then with a forward lunge or diving motion he will bring the coaster onto the water and will ride thereon in such manner as may be desirable or practicable. The half rounds 13 assist in giving a rounded form to the handles formed by the side bars and serve as a finish as well as a means of securing the seam of the cover.

In the form shown in Fig. 7, the elements which occur therein are marked with characters corresponding to those marking similar elements in the other views; an index being added to distinguish the cast parts from those otherwise constructed.

I claim:—

1. A surf coaster provided at its front end with a bulbous air chamber larger at the front than at the rear.
2. A surf coaster provided at its ends with air chambers, the air chamber at the front end being of greater buoyant value than the air chamber at the rear end.
3. A surf coaster provided at its ends with stiff walled air chambers, and between said ends with a flexible walled air chamber extending from one stiff walled air chamber to the other, there being at the side of said flexible walled chamber bars to serve as handles.
4. A surf coaster comprising a frame composed of side-bars, and cross-bars spaced apart from the ends of the side-bars and from each other, a flexible cover extending over the frame from one cross-bar to the other, and metal sheets fastened to the frame and bent around the ends thereof to form air chambers.
5. A surf coaster comprising a frame composed of two side bars and two cross bars

uniting the frame and spaced apart from each other, metal sheets applied on and hermetically sealed and fastened to the side bars and cross bars and spaced apart from each other, and a flexible cover over the intermediate space to form an intermediate air chamber.

10 6. A surf coaster comprising a frame composed of two side bars and two cross bars uniting the frame and spaced apart from each other, metal sheets applied on and hermetically sealed and fastened to the side bars and cross bars and spaced apart from each other, and an impervious sheet forming an

outside cover for the frame and the air 15 chamber.

7. A surf coaster comprising a frame, buoyant devices at the end of the frame, and a flexible cover extending over the frame between said buoyant devices. 20

In testimony whereof, I have hereunto set my hand at Los Angeles, California, this 15th day of April, 1913.

ALFRED N. NELSEN.

In presence of—

JAMES R. TOWNSEND,
L. BELLE WEAVER.