Jan. 31, 1961 S. R. SNIDER 2,969,551

BOAT

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FIG. 1

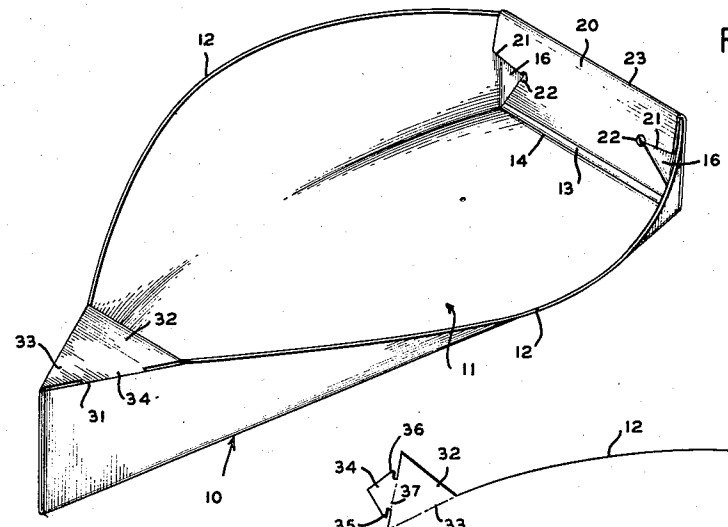


FIG. 2

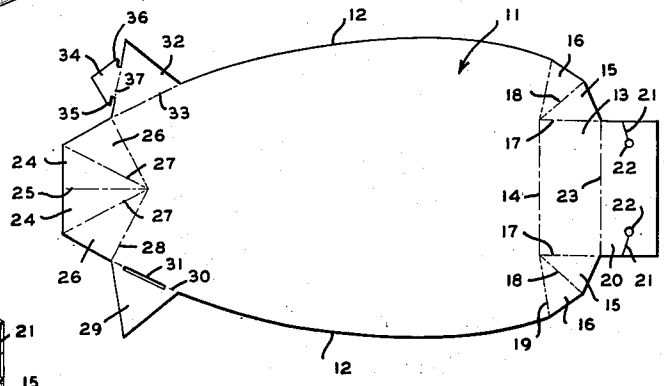
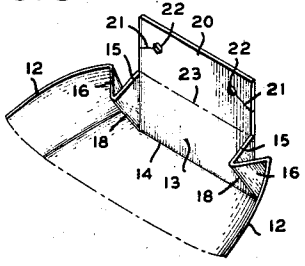


FIG. 3



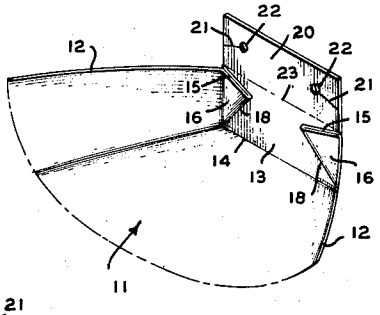
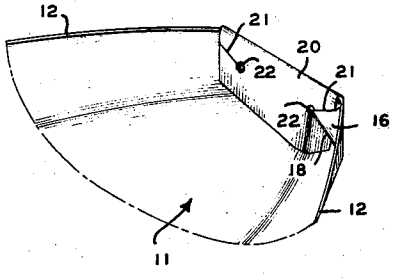


FIG. 4

FIG. 5



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FIG. 6

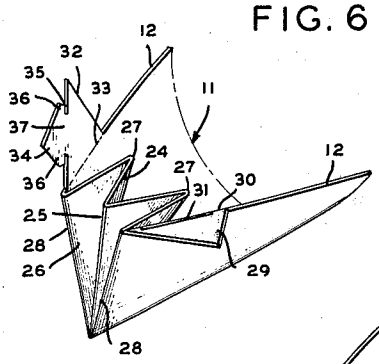


FIG. 7

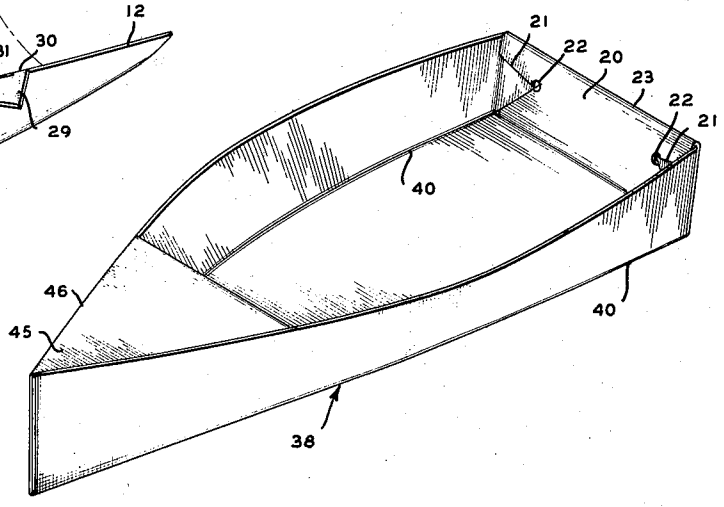
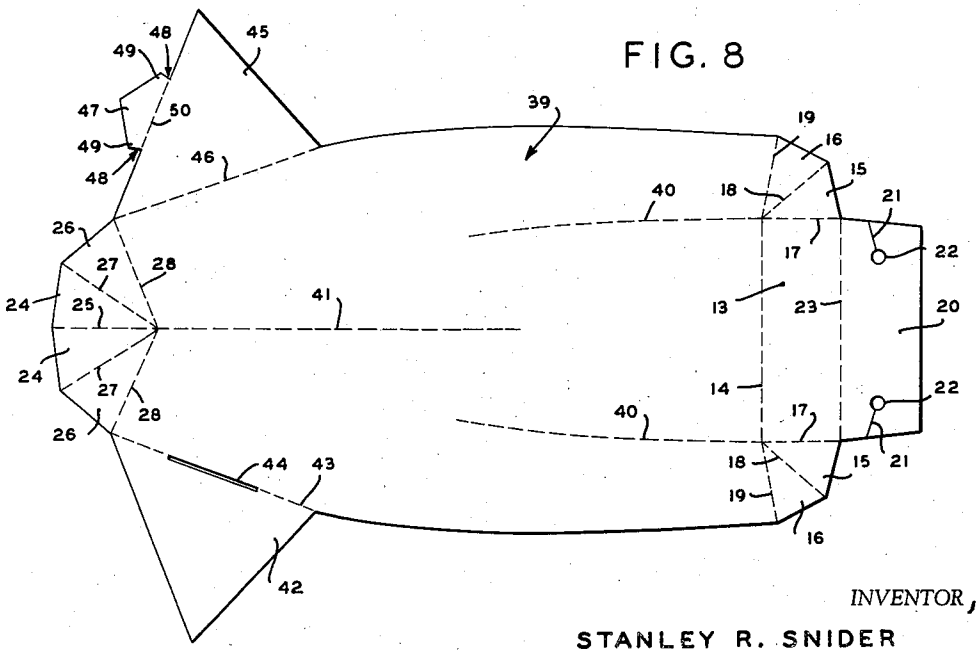


FIG. 8



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BOAT

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7 Claims. (Cl. 9—2)

This invention relates to a boat.

The object of the invention is to provide a boat which is adapted to be made of a single piece of suitable material such as a suitable plastic or the like, and wherein the material is adapted to be folded to assume the contour of a boat, there being a locking means for retaining the parts in their proper assembled position.

A still further object of the invention is to provide a boat which is adapted to be made of a single piece of suitable material, and wherein the piece of material is provided with pre-cut portions or sections which are adapted to be readily folded to a position so that the completed article will have the shape of a boat so that the boat can be used by persons to derive much pleasure or amusement therefrom.

A still further object of the invention is to provide a boat which can be folded from a blank piece of material and wherein there is provided means at the rear of the blank and means at the front of the blank for retaining the boat in its proper assembled or folded position.

A still further object of the invention is to provide a boat of the knock-down type which is easy to make or assemble, and wherein in one form of the invention the completed boat has a somewhat rounded bottom, while in another form of the invention, the completed boat has a bottom which is shaped differently so as to have a somewhat streamlined effect.

A still further object of the invention is to provide a boat which is adapted to be made of folded sheets of plastic such as glass reinforced polyester types of plastic and wherein when the boat is in folded position, the completed boat is water-tight so that water cannot accidentally seep into the completed article or boat.

A further object of the invention is to provide a boat which is extremely simple and inexpensive to manufacture.

Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawings, forming a part of this application, and in which like numerals are used to designate like parts throughout the same:

Fig. 1 is a perspective view loking down on the top of the boat and showing the completed boat.

Fig. 2 is a plan view showing the blank for making the boat of Fig. 1.

Fig. 3 is a fragmentary perspective view showing the back portion of the boat partially folded.

Fig. 4 is a fragmentary perspective view illustrating the next step in folding the back portion of the boat.

Fig. 5 is a view similar to Fig. 4, but showing the next step in folding the back of the blank to form the completed boat.

Fig. 6 is a fragmentary perspective view showing the folding or construction of the front portion of the boat.

Fig. 7 is a perspective view illustrating a modified boat, and showing the boat in folded or completed position.

Fig. 8 is a plan view showing the blank for making the boat of Fig. 7.

Referring in detail to the drawings, and more particularly to Figs. 1–6 of the drawings, there is shown a boat which is indicated generally by the numeral **10**, and the boat **10** is adapted to be made of a single piece of suitable material such as plastic or the like. In Fig. 2 there is illustrated the one-piece blank which is adapted to be folded so as to provide the completed boat **10**, and the blank in Fig. 2 includes a main or body portion **11** which is provided with arcuate side edges **12**.

Arranged at the rear of the body portion **11** is a rectangular first portion **13** which is integrally connected with the body portion **11** through the medium of a fold or crease line **14**.

Arranged adjacent each end of the first portion **13** are second and third portions **15** and **16**, and the portions **15** and **16** each have a triangular shape. The portions **15** are integrally connected with the first portion **13** through the medium of a fold or crease line **17**, and a fold line **18** connects the portions **15** and **16** together. The third portions **16** are connected with the body portion **11** through the medium of a fold line **19**.

The blank further includes a fourth portion **20** which is of rectangular shape, and the fourth portion **20** is connected to the first portion **13** through the medium of a fold line **23**. The fourth portion **20** is provided with a pair of inclined slots or slits **21**, and each of the slots **21** terminates in an enlarged circular opening **22** for a purpose to be later described.

A means is provided for maintaining the front of the boat in its proper assembled position, and this means comprises a first pair of triangular sections **24** which are interconnected together by means of a fold line **25**. A second triangular section **26** is connected to a corresponding first section **24** by means of a fold line **27**, and the sections **26** are connected to the body portion **11** by means of fold lines **28**.

The locking means for the front of the boat includes a first flap **29** of triangular fromation, and the flap **29** is connected to the body portion **11** by means of a fold line **30**, there being a groove or cut-out **31** adjacent the fold line **30**. A second flap **32** of triangular formation extends from the opposite portion of the boat, and the flap **32** is connected to the body portion **11** through the medium of a fold line **33**. A triangular shaped tab **34** is connected to the flap **32** by means of a fold line **37**, and portions of said tab **34** adjacent said fold line **37** are cut out or recessed as at **35** so as to define locking shoulders **36**. The tab **34** is adapted to be inserted through the opening or slot **31** in order to retain the front portion of the boat in its proper assembled position.

Referring to Figs. 7 and 8 of the drawings, there is shown a modified boat which is indicated generally by the numeral **38**. The boat **38** is adapted to be made from the foldable blank **39**, Fig. 8, and the blank **39** is provided with spaced apart crease lines **40** which extend from the rear of the body portion forwardly, and there is further provided in the front section of the body portion **39** a crease line **41**. The crease lines **40** and **41** serve to provide the completed boat **38** with a bottom which has a somewhat streamlined effect, in contrast to the bottom of the boat **10** which does not have this construction.

Otherwise, the construction of the boat **38** is substantially the same as the boat **10**. However, there is provided a slightly different locking means for the front of the boat **38**, and this means comprises a first tab **42** which extends from one side of the body portion **39** and which is connected thereto by means of a fold line **43**. The tab **42** is of triangular formation but is larger than the previously described tab or flap **29**. A second flap **45** is connected to the opposite portion of the boat by means of a fold line **46**, and a tab **47** is connected to the flap **45** by means of a fold line **50**. Portions of the tab **47** are

cut away or recessed as at 48 so as to define locking shoulders 49, and the tab 47 is adapted to be inserted through the slot 44 adjacent the fold line 43 in order to maintain the front portion of the boat in its proper assembled position.

From the foregoing, it is apparent that there has been provided a boat which is adapted to be made from a single piece of foldable material such as a plastic material. In use, the blank shown in Fig. 2 can be formed in any suitable manner and with the blank in the position of Fig. 2, it will be seen that there is provided a plurality of portions and sections which can be folded in such a manner as to provide the completed boat 10 shown in Fig. 1.

The various portions or sections are provided with fold or crease lines whereby the parts can be readily folded to their proper positions, and after the boat has been completed, interengaging locking means is provided for retaining the parts in their folded positions. To form the boat 10 as shown in Fig. 1, from the blank shown in Fig. 2, the portion 20 can be arranged as shown in Fig. 3, and the portions 15 and 16 can be further folded inwardly as shown in Fig. 4. Then, the portion 20 is folded along the fold line 23 so that it occupies a position which is immediately forward and adjacent to the portion 13. Then, the portions 15 and 16 are adapted to be arranged in engagement with the slots 21 and openings 22 as for example as shown in Fig. 5 so that the back of the boat will remain in its proper assembled position. The interengagement of the portions 15 and 16 with the slots 21 and openings 22 serves to prevent accidental opening or unfolding of the parts.

Similarly, the front of the boat is formed as for example as shown in Fig. 6. Thus, with the parts initially in the position shown in Fig. 2, the sections 24 are folded together along the crease line or fold line 25, and then these sections 24 are moved rearwardly so that the sections 26 are adjacent the sections 24, the sections 26 folding about the lines 27. Next, the flap 29 is folded about the line 30 so that it extends over the tops of the sections 26 and 24, and these sections provide a support for the flap 29. Then, the flap 32 is arranged in overlying relation with respect to the flap 29, and the tab 34 is extended through the slot 31 and then by moving the tab 34 slightly, the shoulders 36 will engage adjacent surfaces so as to prevent accidental unfolding of the front of the boat. With the parts in the position shown in Fig. 1 for example, it will be seen that the boat has a somewhat rounded shape in cross section and the boat includes sides as well as a front and back.

In the modification shown in Figs. 7 and 8, the boat 38 is adapted to be formed from the blank shown in Fig. 8, and the blank of Fig. 8 is provided with the crease lines 40 and 41 so that the completed boat 38 will have substantially upstanding side portions which are arranged in more of a vertical direction, than are the sides of the boat 10. Otherwise, the construction of the boats 38 and 10 is substantially the same. The flaps 42 and 45 serve the same purpose as the previously described flaps 29 and 32, but the flaps 42 and 45 are larger. Also, the tab 47 is provided with locking shoulders 49 which serve the same purpose as the previously described shoulders 36 but which have a slightly different shape.

The parts can be made of any suitable material and in different shapes or sizes.

The boat of the present invention can be readily assembled, and the boat can be sold in any desired form so that it can be readily assembled whereby persons and the like will derive much pleasure and amusement therefrom. The boat includes the interlocking means for retaining the boat in the proper assembled position, and in one form of the invention the boat has a somewhat curved bottom, while in the other form the boat has a more or less triangular shaped bottom. The blanks are pre-cut to the desired shape and the various fold or crease lines are provided whereby the blank can be readily folded as previously described.

As a specific example of the making of the boat of the present invention, sheets of glass reinforced polyester plastic may be folded so as to provide a boat which is large enough to carry several persons. The sheet material from which the boat is made is adapted to be folded. The device can be made of any suitable material. After the boat is folded into the desired shape, the nature of the folds is such that when the boat is folded and placed in the water, the folds interlock so that no water can accidentally enter the interior of the boat through any of the folds.

I claim:

1. As a new article of manufacture, a boat fabricated of a single piece of material and shaped to include a body portion having arcuate longitudinal side edges, a first rectangular portion arranged at the rear of the body portion and interconnected therewith by means of a fold line, second and third triangular portions arranged adjacent each end of said first portion and connected by fold lines, a fourth portion of rectangular shape arranged adjacent said first portion and connected therewith by means of a fold line, there being a pair of inclined slots in the ends of said fourth portion, each of said slots terminating in a circular opening for receiving said second and third portions, the front of the body portion being shaped to include a first pair of triangular sections adapted to be arranged contiguous to each other, a second section extending from each of said first sections and connected therewith by means of the fold line, a triangular flap extending from the front of the body portion and connected therewith by means of a fold line having a cut-out therein, a second triangular flap extending from the opposite side of the body portion and adapted to overlie said first flap, and a tab extending from said second flap for insertion through said cut-out, there being recesses adjacent the juncture of said tab with said second flap defining locking shoulders.

2. As a new article of manufacture, a boat fabricated of a single piece of material and shaped to include a body portion having arcuate longitudinal side edges, a first rectangular portion arranged at the rear of the body portion and interconnected therewith by means of a fold line, second and third triangular portions arranged adjacent each end of said first portion and connected by fold lines, a fourth portion of rectangular shape arranged adjacent said first portion and connected therewith by means of a fold line, there being a pair of inclined slots in the ends of said fourth portion, each of said slots terminating in a circular opening for receiving said second and third portions, the front of the body portion being shaped to include a first pair of triangular sections adapted to be arranged contiguous to each other, a second section extending from each of said first sections and connected therewith by means of the fold line, a triangular flap extending from the front of the body portion and connected therewith by means of a fold line having a cut-out therein, a second triangular flap extending from the opposite side of the body portion and adapted to overlie said first flap, and a tab extending from said second flap for insertion through said cut-out, there being recesses adjacent the juncture of said tab with said second flap defining locking shoulders, and a pair of spaced apart crease lines in said body portion extending forwardly from the rear thereof, and a crease line in the center of the body portion extending rearwardly from the front thereof.

3. As a new article of manufacture, a boat fabricated of a unitary piece of material and comprising a bottom, upright sides integral therewith, and an upright transverse rear portion integral with said bottom and sides, said bottom portion tapering toward the front of said boat so that the forward edges of the sides meet, the forward edges of the sides being interconnected by a plurality of superposed vertical triangular sections, said

sections being interconnected by fold lines to form accordion folds, the fold lines radiating upwardly from the forward extremity of said bottom, said triangular sections being integral with the forward edges of the sides and bottom, the lateral edges of the rear portion being interconnected with the rear edges of the sides by a plurality of vertical folds, the folds being integral with said edges of the rear portion and the rear edges of the sides, and means for maintaining the folds at the front and rear of the boat in the folded condition.

4. A boat as recited in claim 3 wherein the means for maintaing the folds at the front of the boat in folded condition comprise flap means interengaging the upper edges of the sides near the front of the boat.

5. A boat as recited in claim 3 wherein the means for maintaining the folds at the rear of the boat in folded condition comprise flap means integral with the upper edge of the rear portion, said flap means at least partially overlapping the folds at the rear of the boat and thereby maintaining said folds in the folded condition.

6. As a new article of manufacture, a boat fabricated of a single piece of material and shaped to include a body portion having arcuate longitudinal side edges, a first rectangular portion arranged at the rear of the body portion and interconnected therewith by means of a fold line, second and third triangular portions arranged adjacent each end of said first portion and connected by fold lines, a fourth portion of rectangular shape arranged adjacent said first portion and connected therewith by means of a fold line, there being a pair of inclined slots in the ends of said fourth portion, each of said slots terminating in a circular opening for receiving said second and third portions, said fourth portion at least partially overlapping said second and third triangular portions,

said second, third and fourth portions being maintained in position by having said second and third portions positioned in said slots, said boat having a forward portion defining the front end of the boat.

7. As a new article of manufacture, a boat fabricated of a single piece of material and shaped to include a body portion having arcuate longitudinal side edges, the front of the body portion being shaped to include a first pair of triangular sections adapted to be arranged contiguous to each other, a second section extending from each of said first sections and connected therewith by means of a fold line and connected to the body portion by means of a fold line, a triangular flap extending from the front of the body portion and connected therewith by means of a fold line having a cut-out therein, a second triangular flap extending from the opposite side of the body portion and adapted to overlie said first flap, and a tab extending from said second flap for insertion through said cut-out, there being recesses adjacent the juncture of said tab with said second flap defining locking shoulders, said boat having a rear portion defining the rear end of the boat.

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