

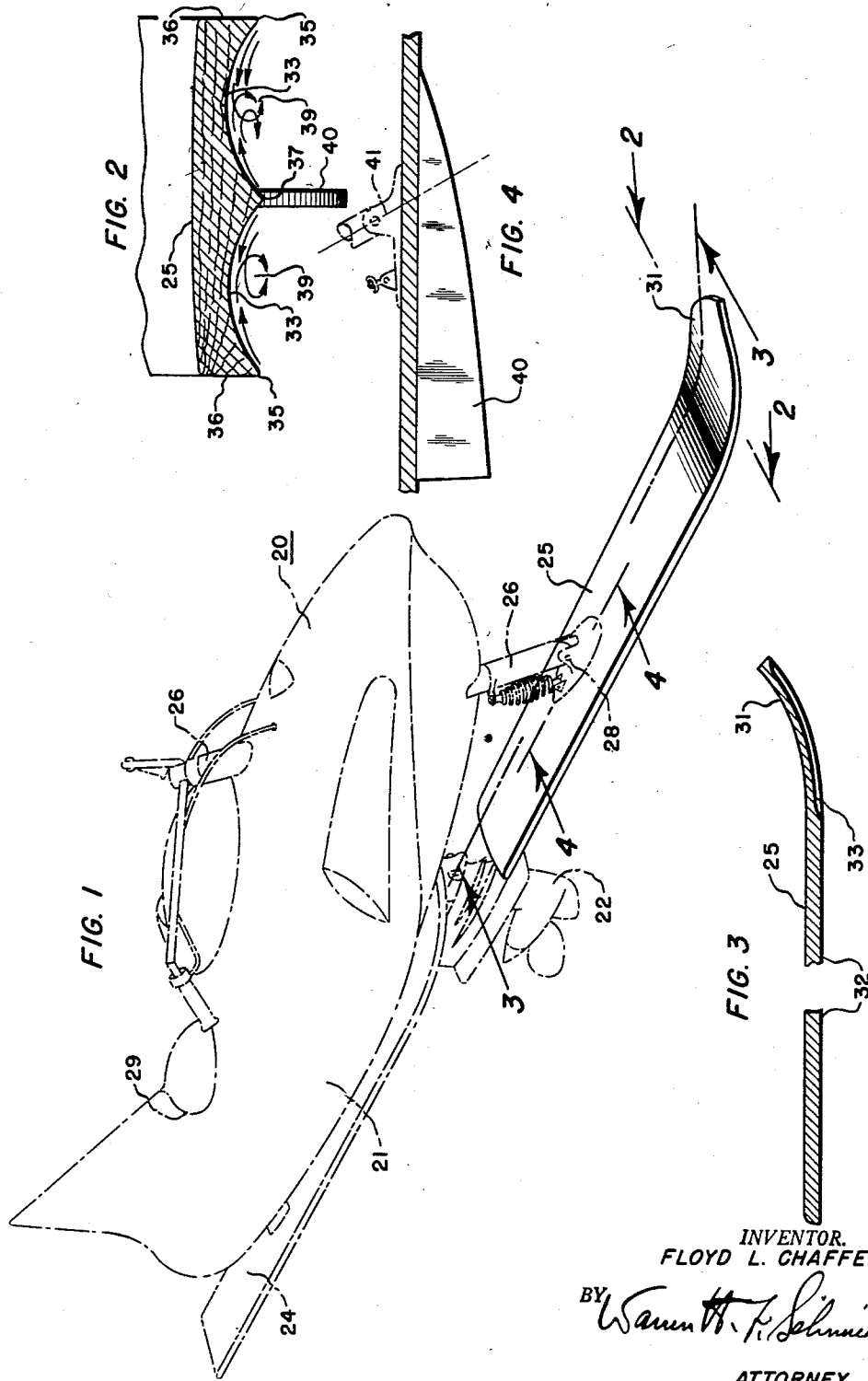
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F. L. CHAFFEE

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WATERCRAFT

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INVENTOR.
FLOYD L. CHAFFEE

BY *Warren H. F. Schmieding*
ATTORNEY

1

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WATERCRAFT

Floyd L. Chaffee, 1860 Bay Front, San Diego, Calif.

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6 Claims. (Cl. 114—66.5)

The present invention relates to skis and particularly 15 to a water ski.

One of the objects of the present invention is to provide an elongated water ski having a plurality of parallelly arranged and longitudinally extending grooves in the underside of the front curved section only of the 20 ski, the grooves being arcuately shaped in cross-section.

In carrying out the above object, it is a further object to terminate the outer edges of the grooves at the side edges of the ski.

It is another object to substantially merge the inner 25 edge of one groove with the inner edge of the next adjacent groove.

Further objects and advantages will be apparent from the following description, reference being had to the accompanying drawings wherein a preferred embodiment of the invention is illustrated.

Fig. 1 is a perspective view of the improved ski, the ski being particularly useful with a watercraft, such craft being shown in phantom;

Fig. 2 is a sectional view of the ski, the section being 35 taken on line 2—2 of Fig. 1;

Fig. 3 is a sectional view of the ski, the section being taken on line 3—3 of Fig. 1; and

Fig. 4 is a longitudinal sectional view of the ski, the section being taken on line 4—4 of Fig. 1.

The instant ski is particularly applicable to a watercraft such as that shown in my application for patent Serial No. 468,755, filed November 15, 1954, now Patent Number 2,817,101, and my applications for design patents Serial No. D. 34,620, filed February 21, 1955, now abandoned, and Serial No. D. 37,585, filed August 19, 1955, now D. 180,709. This type of water craft 20 includes a hull 21 which houses an outboard motor, the lower part of which is shown at 22, a rear ski 24, a steerable front ski 25. Steering mechanism 26, similar to that employed on a motorcycle, is used to turn the front ski 25 through hub 26 to which the ski is pivotally attached by pin 28. The hull is provided with a seat 29. The craft is adapted to float on the hull while it is stationary or moving at relatively slow speed. As the speed increases, the skis lift the hull from the water, and, after a predetermined speed is attained, the craft rides on the skis.

Referring now in detail to the ski 25, it will be seen from Figs. 1 and 2 that it is horizontally elongated and that the front end 31 thereof is curved or bowed upwardly. The underside 32 of this curved portion is provided with a plurality of parallelly arranged grooves 33. These grooves preferably extend only throughout the length of the curved portion of the ski, as is shown in Fig. 3.

As seen in Fig. 2, the grooves 33 are arcuately shaped in cross-section. Preferably the outer edges 35 of these grooves terminate substantially at the side edges 36 of the ski, and the inner edges 37 substantially merge with one another.

It has been discovered that in shaping the grooves 33

2

as herein shown, substantially all spray, normally thrown upwardly and outwardly from the front and side edges of the ski, has been eliminated. Instead of throwing the water upwardly and sidewise, the apices 35 and 37 5 seem to cut the water and cause the same to swirl, as indicated by the arrows 39 in Fig. 2. Thus the energy, normally expended in throwing water in the form of a spray, has been substantially eliminated, resulting in arriving at planing speed more readily and further resulting in minimizing the energy expended during planing function, i.e., by so shaping the ski, the entire width of the horizontal portion is effective for planing, and the front portion is effective for minimizing upward and outward throwing of the spray.

It will be understood that both the front ski 25 and the rear ski 24 are each provided with a pair of grooves 33. The front ski is provided with a downwardly extending fin or keel 40 which extends longitudinally of the ski. The axis, about which the ski is turned and indicated at 41, intersects the keel at approximately one-third of the length of the keel from the forward end thereof. The positioning of the keel as illustrated, provides for the ready movement of the ski about its vertical axis. If the keel is too far rearward of the axis, far more energy must be exerted to impart the desired turning movement about the axis, and, if it is too far forward of the axis, water pressure on a side of the keel, caused by a slight turning only of the ski about the axis, is of such high degree as to effect a turning force greater than that which can be exercised by a normal human being, resulting in an upset of the watercraft and danger of injury to the rider. The rear ski is also provided with a fin or keel disposed adjacent the rear thereof.

While the form of embodiment herein shown and described constitutes a preferred form, it is to be understood that other forms may be adopted falling within the scope of the claims that follow.

I claim:

1. An article of manufacture comprising an elongated 40 water ski having an elongated horizontal section and an upwardly curved front section, said ski having a plurality of parallelly arranged and longitudinally extending grooves in the underside of the ski, said grooves being arcuately shaped in cross-section, the front of the grooves terminating at the extreme front end of the ski and the rear of the grooves terminating substantially at the junction of the horizontal and curved sections.

2. An article of manufacture comprising an elongated water ski having an elongated horizontal section and an upwardly curved front section, said ski having two parallelly arranged and longitudinally extending grooves in the underside of the ski, said grooves being arcuately shaped in cross-section, the front of the grooves terminating at the extreme front end of the ski and the rear of the grooves terminating substantially at the junction 55 of the horizontal and curved sections, the outer edges of the grooves terminating substantially at the side edges of the curved section of the ski.

3. An article of manufacture comprising an elongated water ski having an elongated horizontal section and an upwardly curved front section, said ski having two parallelly arranged and longitudinally extending grooves in the underside of the ski, said grooves being arcuately shaped in cross-section, the front of the grooves terminating at the extreme front end of the ski and the rear of the grooves terminating substantially at the junction 60 of the horizontal and curved sections, the inner edges of the grooves substantially merging with one another.

4. An article of manufacture comprising an elongated water ski having an elongated horizontal section and an upwardly curved front section, said ski having two parallelly arranged and longitudinally extending grooves 70

3

in the underside of the ski, said grooves being arcuately shaped in cross-section, the front of the grooves terminating at the extreme front end of the ski and the rear of the grooves terminating substantially at the junction of the horizontal and curved sections, the outer edges of the grooves terminating substantially at the side edges of the curved section of the ski, the inner edges of the grooves substantially merging with one another.

5. A watercraft including a main body; front and rear skis depending from said body, said skis being longitudinally aligned when the craft is moving forwardly; means pivotally supporting the front ski on the body about a vertically extending axis, said front ski having an elongated horizontal section and an upwardly curved front section, said front ski having a plurality of parallelly arranged and longitudinally extending grooves in the underside of the ski, said grooves being arcuately shaped in cross-section, the front of the grooves terminating at the extreme front end of the ski and the rear of the grooves terminating substantially at the junction of the horizontal and curved sections, said front ski including a longitudinally extending keel on the bottom thereof and disposed to extend forwardly and rearwardly of said vertically extending axis.

6. A watercraft including a main body; front and rear skis depending from said body, said skis being

4

longitudinally aligned when the craft is moving forwardly; means pivotally supporting the front ski on the body about a vertically extending axis, said front ski having an elongated horizontal section and an upwardly curved front section, said front ski having two parallelly arranged and longitudinally extending grooves in the underside of the ski, said grooves being arcuately shaped in cross-section, the front of the grooves terminating at the extreme front end of the ski and the rear of the grooves terminating substantially at the junction of the horizontal and curved sections, said front ski including a longitudinally extending keel on the bottom thereof and disposed to extend forwardly and rearwardly of said vertically extending axis.

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