AQUAPLANE.

To all whom it may concern:

Be it known that I, FRED WALLER, a citizen of the United States, and a resident of the city, county, and State of New York, have invented an Improvement in Aquaplanes, of which the following is a specification.

The present invention relates to sporting devices and more particularly to aquaplanes of the type designed to be ridden when drawn through the water.

The sport of riding an aquaplane drawn behind a motor boat is becoming increasingly popular but there are certain disadvantages. Aquaplanes as now constructed are unstable and it is difficult to ride them. If the rider is not skillful, a slight shifting of the weight thereon will cause the plane to dip deeper in the water on one side, skid, and throw the rider. Furthermore, the aquaplane, as commonly constructed, does not offer opportunity for the practice of stunts and there is relatively little variety in the sport of riding one.

The present invention has for an object to provide an improved aquaplane which can be more easily ridden and further to make it possible to do a greater variety of stunts in order to increase the sport of riding.

The nature and objects of the invention will be better understood from a description of a particular illustrative embodiment of the invention for the purposes of which description reference should be had to the accompanying drawing forming a part thereof and in which:

Figure 1 is a perspective view indicating the manner of use of a selected embodiment of the invention;

Figure 2 is a plan view of the embodiment selected for description;

Figure 3 is a view in side elevation;

Figure 4 is a view in end elevation of the rear end of one of the boards of the device showing a detail;

Figure 5 is a plan view showing mechanism for moving the rudder angularly by a tilting movement of the foot; and

Figure 6 is a view in side elevation of the same.

The aquaplane shown for the purpose of illustrating the invention is constructed and arranged to provide two supporting boards, or skids, one for each foot, which boards are connected to permit relative movement of each independently of the other. As shown, the boards are connected at or near their forward ends to the bridle by flexible members such as cords 8. Footpads 9, consisting of rubber presenting a corrugated surface may be provided if desired to indicate a suitable position for the feet and to prevent slipping.

Guide cords 10 are provided to enable the rider to hold himself in upright position. They may conveniently be connected to the boards at or near their forward ends either directly or through the bridle. As shown, handles 11 are provided, one for each board, and connected from its two opposite ends by the cords 10 to the respective sides of the board and the rider may tilt the board on its longitudinal axis by pulling harder on one cord than the other thus causing the board to move sidewise enabling the rider to steer either or both boards to right or left. This being accomplished by merely twisting the handle 11 in the hand. If the board is rigid, then this operation will turn the whole board but if the board is more flexible, especially toward its forward ends, then if the foot is held flat the pulling on one of the cords 12 will twist the forward portion of the board, thus tending to steer toward the side toward which it is turned.

The rear ends of the boards are preferably turned up somewhat, as indicated at 13, to avoid any possible tendency of the board to dive or be drawn under the water.

In order to prevent lateral skidding of these boards and to stabilize the same in use, I find it advantageous to curve the rear ends of the boards transversely to provide a lower concave surface near the end as best shown in Fig. 4. Preferably also, a rudder 17 is provided at or near the rear end of each board to further prevent lateral skidding and to provide a more steady operation. Inasmuch as there is a tendency for the weight of the individual riding on the device to cause the boards to spread apart these rudders may advantageously be turned at a slight angle to the
longitudinal axis of the boards, being turned so that they converge inwardly. This tends sufficiently to draw the rear ends of the boards together to overcome the natural spreading tendency due to the weight of the rider. The rudders are shown as triangular in shape to provide a graceful appearance and are angularly adjustable. It is found that these rudders may be relatively short as compared with the full length of the boards.

If desired, instead of making the board perfectly straight with parallel sides, the sides may be curved to provide an outwardly concave surface and this surface may be used in steering the plane by tilting the board slightly to one side or the other to throw the one or the other curved surface into engagement with the water with greater pressure.

It will be understood that when the device is in use, as indicated in Fig. 1, if the board is turned slightly to one side, then the lower edge of the board will bear some what more forcibly against the water due to the action of the device in traveling through the water at high speed.

The yoke 7 comprises a spreader-bar and two converging cords to which the draft cord is attached.

In Figs. 5 and 6 is shown a mechanism for actuating the rudder by movement of the foot. As shown, a rod or shaft 17 is mounted rotatably in brackets on the board. One end of the rod or shaft carries a crank arm engaging with the free end of the rudder and the other end is provided with a crank arm which extends diagonally to one side and engages a slot in a member connected to be operated by rocking the foot forward and back. This rod may be rotated to shift the rudder to one side or the other.

The device shown can be operated to draw various stunts, for example, by spreading the two boards simultaneously, turning the same outwardly, both transversely and longitudinally.

The foregoing description of a particular embodiment is illustrative merely and is not intended as defining the limits of the invention.

What I claim is:

1. An aquaplane of the character described comprising, in combination, a towing bridle, a pair of boards connected at their forward ends to the towing bridle but free to move angularly relative to each other in a horizontal direction.

2. An aquaplane of the character described comprising, in combination, a towing bridle, a pair of boards connected to the bridle at their forward ends for universal pivotal movement relative thereto and relative to each other.

3. An aquaplane of the character described comprising, in combination, a towing bridle, a pair of boards and flexible elements connecting the boards to the bridle.

4. An aquaplane of the character described comprising, in combination, a towing bridle, a pair of boards connected to the bridle at their forward ends for universal pivotal movement relative thereto and relative to each other.

5. An aquaplane of the character described comprising, in combination, a towing bridle, a pair of boards connected thereto, each board being provided with a rudder.

6. An aquaplane of the character described comprising, in combination, a towing bridle, a pair of boards connected thereto, each board being provided with an angularly adjustable rudder.

7. An aquaplane of the character described comprising, in combination, a towing bridle, a pair of boards connected thereto, each board being formed to present a concave lower surface for a portion of its length.

8. An aquaplane of the character described comprising, in combination, a towing bridle, a pair of boards connected thereto, each board being formed to present lateral curved edges.

9. An aquaplane of the character described comprising, in combination, a towing bridle, a pair of boards connected thereto, each board being formed to present lateral curved edges.

10. An aquaplane of the character described comprising, in combination, a towing bridle, a pair of boards connected thereto, each board being provided at its rear end on the under side with a rudder extending at an angle to the longitudinal axis of the board.

11. An aquaplane of the character described comprising, in combination, a towing bridle, a pair of boards connected thereto, each board being formed to present outwardly concave edges.

12. An aquaplane of the character described comprising, in combination, a towing bridle, a pair of boards connected to be drawn thereby, a guide cord connected to the forward end of one of the boards and extending to within reach of the rider.

13. An aquaplane of the character described comprising, in combination, a towing bridle, a pair of boards connected to be drawn thereby, a pair of guide cords connected to the forward ends of the respective boards.

14. An aquaplane of the character described comprising, in combination, a towing bridle, a pair of boards connected to be drawn thereby, guide cords connected to the opposite edges of each of the boards for tilting the boards by pulling upon the cords.
15. An aquaplane of the character described comprising, in combination, a towing bridle, a pair of flexible boards, and means for twisting said boards.

16. An aquaplane of the character described comprising, in combination, a towing bridle, a pair of flexible boards, cords connected to the forward ends of said boards near the lateral edges thereof for twisting the forward portions of the boards.

In testimony whereof, I have signed my name to this specification this 19th day of August, 1925.

FRED WALLER.