CLAIMS

1. An artificial wave facility for the practice of surfing, comprising:

- a support (11; 55) having an upper surface (14) comprising an edge zone (15), a wave progression zone (16) and a culminating zone (17), the wave progression zone (16) extending, in an upwards slope, from the edge zone (15) to the culminating zone (17);

- water situated over said edge zone (15) and said wave progression zone (16);

- an artificial wave generator (12) comprising at least one water driving member (20) movable over the edge zone (15) along a predetermined path (21), said wave generator (12) and said upper surface (14) of the support (11; 55) being configured such that when the wave generator (12) is at rest the culminating zone (17) is emerged and when the wave generator (12) is in use, the movable member (20) is laterally followed by a wave (22) moving in the water towards the wave progression zone (16) in contact with which the generated wave (22) breaks towards the culminating zone (17);

wherein:

- said water situated over the edge zone (15) and the wave progression zone (16) forms part of an aquatic environment (23) which, externally of the support (11; 55) along the edge zone (15), comprises a region (25), hereinafter called upper outer aquatic region, situated higher than the edge zone (15) and a region (26), hereinafter called deep outer aquatic region, situated lower than the edge zone (15), the upper outer aquatic region (25) and the deep outer aquatic region (26) being horizontally contiguous;

- the upper outer aquatic region (25) and the region (24) of the aquatic environment (23) situated over said edge zone (15) and said wave progression zone (16), hereinafter called inner aquatic region, are vertically contiguous;

- the upper surface (14) of the support (11; 55) further comprises a crest (30) and a depressed zone (31) which is depressed relative to the crest (30), which crest (30) is located between the culminating zone (17) and the

depressed zone (31), the culminating zone (17) and the depressed zone (31) being configured such that when the wave generator (12) is in use, the water at the end of travel of the waves (22) gets past the crest (30) and falls into a volume (32) delimited by the depressed zone (31), hereinafter called reception volume of the support; and

- fluidic communication (27; 57) situated below the upper surface (14) of the support (11; 55) connects said deep outer aquatic region (26) to an opening (33, 39; 58) which is open to said reception volume (32) of the support.

2. A facility according to claim 1, wherein said support is a platform (11); said aquatic environment (23) comprises, under the platform (11), a region (27), hereinafter called underlying aquatic region, the deep outer aquatic region (26) and the underlying aquatic region (27) being vertically contiguous; and said opening (33, 39) that is open to the reception volume of the support (32) is open to the underlying aquatic region (27), said fluidic communication situated below the upper surface (14) of the support (11) being implemented by the underlying aquatic region (27).

3. A facility according to claim 2, wherein said platform (11) is a floating platform.

4. A facility according to claim 3, wherein said platform (11) comprises an opening (39) in which is disposed a pile (38) fastened on the bottom (35) of the underlying aquatic region (27), the platform (11) and the pile (38) being configured for the platform (11) to slide relative to the pile (38) when changes occur in the surface level of the aquatic environment (23).

5. A facility according to claim 4, wherein said path (21) of said movable member (20) is annular, said edge zone (15) is situated at the periphery of the support (11;55) and said culminating zone (17) is situated towards the center of the support (11;55).

6. A facility according to claim 3, wherein said path (21) of said movable member (20) is annular, said edge zone (15) is situated at the periphery of the support (11;55) and said culminating zone (17) is situated towards the center of the support (11;55).

7. A facility according to claim 2, wherein said path (21) of said movable member (20) is annular, said edge zone (15) is situated at the periphery of the support (11;55) and said culminating zone (17) is situated towards the center of the support (11;55).

8. A facility according to claim 1, wherein said support is a substrate (55) in which is provided at least one pipe (57) to perform said fluidic communication situated below the upper surface (14) of the support.

9. A facility according to claim 8, wherein said path (21) of said movable member (20) is annular, said edge zone (15) is situated at the periphery of the support (11;55) and said culminating zone (17) is situated towards the center of the support (11;55).

10. A facility according to claim 1, wherein said path (21) of said movable member (20) is annular, said edge zone (15) is situated at the periphery of the support (11;55) and said culminating zone (17) is situated towards the center of the support (11;55).

11. A facility according to claim 10, further comprising a groin (40) connected to said support (11), said groin (40) projecting upwardly from the wave progression zone (16) while extending crosswise of the inner aquatic region (24) from the culminating zone (17) towards the edge zone (15).

12. A facility according to claim 11, wherein said groin (40) has an upper surface (41) comprising a first lateral zone (42), a second lateral zone (43) situated on the opposite side to the first lateral zone (42) and an

intermediate zone (44) extending from the first lateral zone (42) to the second lateral zone (43), said intermediate zone (44) comprising at least one crest (45, 46) that is emerged when the wave generator (12) is at rest.

13. A facility according to claim 12, wherein said intermediate zone (44) comprises a first crest (45) and a second crest (46), each of which is emerged when the wave generator (12) is at rest, and comprises a depressed zone (47) which is depressed relative to the first crest (45) and the second crest (46), the first crest (45) being located between the first lateral zone (42) and the depressed zone (47), the second crest (46) being located between the second lateral zone (43) and the depressed zone (47); the first crest (45), the second crest (46) and the depressed zone (47) being configured such that when the wave generator (12) is in use, the water at the end of travel of the waves (22) gets past the first crest (45) or the second crest (46) and falls into a volume (48) delimited by the depressed zone (47), hereinafter called reception volume of the groin;

- said water situated over the edge zone (15) and the wave progression zone (16) forms part of an aquatic environment (23) which, externally of the support (11;55) along the edge zone (15), comprises a region (25), hereinafter called upper outer aquatic region, situated higher than the edge zone (15) and a region (26), hereinafter called deep outer aquatic region, situated lower than the edge zone (15), the upper outer aquatic region (25) and the deep outer aquatic region (26) being horizontally contiguous;

- fluidic communication (24, 49) linking said reception volume of the groin (48) to said upper outer aquatic region (25) and/or to said deep outer aquatic region (26).

14. A facility according to claim 13, wherein the upper surface (14) of the support (11;55) further comprises a crest (30) and a depressed zone (31) which is depressed relative to the crest (30), which crest (30) is located between the culminating zone (17) and the depressed zone (31), the culminating zone (17) and the depressed zone (31) being configured such that

when the wave generator (12) is in use, the water at the end of travel of the waves (22) gets past the crest (30) and falls into a volume (32) delimited by the depressed zone (31), hereinafter called reception volume of the support; and said reception volume (32) of the support and said reception volume (48) of the groin meet vertically.

15. An artificial wave facility for the practice of surfing, comprising:

- a support (11; 55) having an upper surface (14) comprising an edge zone (15), a wave progression zone (16) and a culminating zone (17), the wave progression zone (16) extending, in an upwards slope, from the edge zone (15) to the culminating zone (17);

- water situated over said edge zone (15) and said wave progression zone (16);

- an artificial wave generator (12) comprising at least one water driving member (20) movable over the edge zone (15) along a predetermined path (21), said wave generator (12) and said upper surface (14) of the support (11; 55) being configured such that when the wave generator (12) is at rest the culminating zone (17) is emerged and when the wave generator (12) is in use, the movable member (20) is laterally followed by a wave (22) moving in the water towards the wave progression zone (16) in contact with which the generated wave (22) breaks towards the culminating zone (17);

wherein:

- said water situated over the edge zone (15) and the wave progression zone (16) forms part of an aquatic environment (23) which, externally of the support (11; 55) along the edge zone (15), comprises a region (25), hereinafter called upper outer aquatic region, situated higher than the edge zone (15) and a region (26), hereinafter called deep outer aquatic region, situated lower than the edge zone (15), the upper outer aquatic region (25) and the deep outer aquatic region (26) being horizontally contiguous;

- the upper outer aquatic region (25) and the region (24) of the aquatic environment (23) situated over said edge zone (15) and said wave

progression zone (16), hereinafter called inner aquatic region, are vertically contiguous;

- said support is a platform (11); and
- said aquatic environment (23) comprises, under the platform (11), a region (27), hereinafter called underlying aquatic region, the deep outer aquatic region (26) and the underlying aquatic region (27) being vertically contiguous.

16. A facility according to claim 15, wherein said platform (11) is a floating platform.

17. A facility according to claim 16, wherein said path (21) of said movable member (20) is annular, said edge zone (15) is situated at the periphery of the support (11; 55) and said culminating zone (17) is situated towards the center of the support (11; 55).

18. A facility according to claim 15, wherein said path (21) of said movable member (20) is annular, said edge zone (15) is situated at the periphery of the support (11;55) and said culminating zone (17) is situated towards the center of the support (11;55).

19. An artificial wave facility for the practice of surfing, comprising:

- a support (11; 55) having an upper surface (14) comprising an edge zone (15), a wave progression zone (16) and a culminating zone (17), the wave progression zone (16) extending, in an upwards slope, from the edge zone (15) to the culminating zone (17);
- water situated over said edge zone (15) and said wave progression zone (16);
- an artificial wave generator (12) comprising at least one water driving member (20) movable over the edge zone (15) along a predetermined path (21), said wave generator (12) and said upper surface (14) of the support (11; 55) being configured such that when the wave generator (12) is at rest the

culminating zone (17) is emerged and when the wave generator (12) is in use, the movable member (20) is laterally followed by a wave (22) moving in the water towards the wave progression zone (16) in contact with which the generated wave (22) breaks towards the culminating zone (17);

- said path (21) of said movable member (20) being annular, said edge zone (15) being situated at the periphery of the support (11; 55) and said culminating zone (17) being situated towards the center of the support(11; 55);

wherein that said facility further comprises a groin (40) connected to said support (11), said groin (40) projecting upwardly from the wave progression zone (16) while extending crosswise of the region (24) situated over said edge zone (15) and said wave progression zone (16) from the culminating zone (17) towards the edge zone (15).

20. A facility according to claim 19, wherein said groin (40) has an upper surface (41) comprising a first lateral zone (42), a second lateral zone (43) situated on the opposite side to the first lateral zone (42) and an intermediate zone (44) extending from the first lateral zone (42) to the second lateral zone (43), said intermediate zone (44) comprising at least one crest (45, 46) that is emerged when the wave generator (12) is at rest.