

What is claimed is:

1. An improved wind turbine comprising:
a wind turbine wheel having a hub, a rim and a cable extending between the hub and the rim;
a set of airfoils rotatably carried by the cable and disposed between the hub and the rim;
a cinch attached to the cable and disposed between adjacent airfoils; and,
an upturned section included in at least one airfoil in the set of airfoils and disposed at a trailing edge of the airfoil wherein each airfoil has a different angle of attack relative to an adjacent airfoil.
2. The improved wind turbine of claim 1 including:
an inner cable extending between a distal end of the hub and the rim; and,
a set of inner airfoils carried by the inner cable.
3. The improved wind turbine of claim 2 including:
an outer cable extending between a distal end of the hub and the rim; and,
a set of outer airfoils carried by the outer cable.
4. The improved wind turbine of claim 1 including:
a first airfoil adjacent to the hub having a first length;
a second airfoil adjacent to the rim having a second length; and,
wherein the first length is less than the second length.
5. The improved wind turbine of claim 4 including an intermediate airfoil having a length between the first length and the second length.

6. The improved wind turbine of claim 1 including a spacer assembly disposed between adjacent airfoils.

7. The improved wind turbine of claim 6 including a resilient member included in the spacer assembly.

8. The improved wind turbine of claim 6 including a washer included in the spacer assembly.

9. The improved wind turbine of claim 1 wherein an airfoil in the set of airfoils has a length in a range of 2 feet to 12 feet.

10. The improved wind turbine of claim 1 including saillets attached to the rim extending from an exterior of the rim.

11. The improved wind turbine of claim 10 wherein the saillets can include a variable pitch.

12. The improved wind turbine of claim 1 including a vane attached to at least one airfoil in the set of airfoils.

13. The improved wind turbine of claim 1 wherein the airfoil can include material selected from the group consisting of high performance vinyl ester resin, 40% unidirectional fiberglass reinforcement, 17% continuous fiberglass mat, resin mixture, UV inhibitors, pigments, surfacing coatings or any combination.

14. The improved wind turbine of claim 1 including a cable opening defined in each airfoil in the set of airfoils for receiving the cable.

15. The improved wind turbine of claim 1 including a generator having a generator wheel configured to engage the rim and disposed below the rim.

16. An improved wind turbine comprising:

a wind turbine wheel having a rim;
a hub included in the wind turbine wheel having a proximal end and a distal end;
an inner set of cables extending between the proximal end of the hub and the rim;
a set of inner airfoils rotatably attached to the inner set of cables;
an outer set of cables extending between the distal end of the hub and the rim;
and,
a set of outer airfoils rotatably attached to the outer set of cables.

17. The improved wind turbine of claim 16 including a spacer assembly disposed between adjacent airfoils.

18. The improved wind turbine of claim 17 including a cinch included in the spacer assembly.

19. The improved wind turbine of claim 16 including an upturned section included in at least one airfoil in the set of outer airfoils and disposed at a trailing edge of the airfoil wherein each airfoil has a different angle of attack relative to an adjacent airfoil.

20. An improved wind turbine comprising:
a wind turbine wheel having a rim and a hub;
a set of cables extending between the hub and the rim; and,
a set of airfoils independently rotatably attached to the set of cables and extending between the rim and the hub.