## CLAIMS

1. A grinding tool for an airfoil comprising:

an axial grinding wheel having a circumferential cutting slot formed therein, the cutting slot being configured to form a finished radiused edge of the airfoil, the slot having a cross-sectional profile that includes a floor having a first radius of curvature, a first side wall rising upward from the floor and having a second radius of curvature, and a second side wall rising upward from the floor opposite the first side wall and having a third radius of curvature, wherein the first radius of curvature is different from the second radius of curvature and the third radius of curvature is different from the first radius of curvature and the second radius of curvature.

2. A grinding tool as recited in Claim 1, wherein the first radius of curvature is configured to form a leading edge of the airfoil and wherein the airfoil is a gas turbine engine airfoil.

3. A grinding tool as recited in Claim 1, wherein the first radius of curvature is configured to form a trailing edge of the airfoil and wherein the airfoil is a gas turbine engine airfoil.

4. A grinding tool as recited in Claim 1, wherein the first radius of curvature of the first side wall of the cutting slot is configured to form a pressure side of the airfoil and wherein the airfoil is a gas turbine engine airfoil.

5. A grinding tool as recited in Claim 1, wherein the radius of curvature of the second side wall is configured to form a suction side of the airfoil and wherein the airfoil is a gas turbine engine airfoil.

6. A grinding tool as recited in Claim 1, wherein each side wall of the cutting slot includes an upper shoulder aligned with each other, and each upper shoulder has a fourth radius of curvature, the fourth radius of curvature being different from the first radius of curvature, the second radius of curvature and the third radius of curvature.

7. A grinding tool as recited in Claim 1, wherein the cutting slot has an abrasive surface finish.

8. A grinding tool as recited in Claim 1, wherein the axial grinding wheel is provided at the distal end of an elongated shaft.

9. A grinding tool as recited in Claim 8, wherein a proximal end portion of the elongated shaft is threaded.

10. A grinding tool as recited in Claim 9, wherein a medial portion of the elongated shaft includes a mounting section.

11. A grinding tool comprising:
    a) an elongated shaft defining a longitudinal axis; and
    b) an axial grinding wheel provided at a distal end of the shaft, the grinding wheel having a circumferential cutting slot formed therein, the cutting slot having a continuous cross-sectional profile that includes a floor having a first radius of curvature is configured to form an edge of a gas turbine engine airfoil, a first side wall rising upward from the floor and having a second radius of curvature configured to form a pressure side of the airfoil, a second side wall rising upward from the floor opposite the first side wall and having a third radius of curvature configured to form a suction side of the airfoil, wherein the first radius of curvature is different from the second radius of curvature and the third radius of curvature is different from the first radius of curvature and the second radius of curvature.

12. A grinding tool as recited in Claim 11, wherein the radius of curvature of the floor of the cutting slot is configured to form a leading edge of the airfoil.

13. A grinding tool as recited in Claim 11, wherein the radius of curvature of the floor of the cutting slot is configured to form a trailing edge of the airfoil.

14. A grinding tool as recited in Claim 11, wherein each side wall of the cutting slot includes an upper shoulder aligned with each other, and each upper shoulder has a

fourth radius of curvature, the fourth radius of curvature being different from the first radius of curvature, the second radius of curvature and the third radius of curvature.

15. A grinding tool as recited in Claim 11, wherein the cutting slot has an abrasive surface finish.

16. A grinding tool as recited in Claim 11, wherein a proximal end portion of the elongated shaft is threaded.

17. A grinding tool as recited in Claim 11, wherein a medial portion of the elongated shaft includes a mounting section.

18. A grinding tool comprising:
    a) an elongated shaft defining a longitudinal axis; and
    b) an axial grinding wheel provided at a distal end of the shaft, the grinding wheel having an abrasive surface finish and a circumferential cutting slot formed therein, the cutting slot having a continuous cross-sectional profile that includes a floor having a first radius of curvature configured to form an edge of a gas turbine engine airfoil, a first side wall rising upward from the floor and having a second radius of curvature configured to form a pressure side of the airfoil, a second side wall rising upward from the floor and having a third radius of curvature configured to form a suction side of the airfoil, wherein each side wall includes an upper shoulder aligned with each other, and each upper shoulder has a fourth radius of curvature, wherein the first radius of curvature is different from the second radius of curvature and the third radius of curvature is different from the first radius of curvature and the second radius of curvature and the fourth radius of curvature is different from the first radius of curvature, the second radius of curvature and the third radius of curvature.

19. A grinding tool as recited in Claim 18, wherein the first radius of curvature is configured to form a leading edge of the airfoil.

20. A grinding tool as recited in Claim 18, wherein the first radius of curvature is configured to form a trailing edge of the airfoil.