What is claimed is:

1. A clinch fastener for installation relative to a workpiece, said clinch fastener comprising:

a shaft defining a central axis of the clinch fastener;

a head cooperating with the shaft, the head having an outer periphery;

a plurality of ribs disposed under the head to engage the workpiece upon installation of the clinch fastener to the workpiece, the plurality of ribs extending radially outward in a direction from the central axis of the clinch fastener to the outer periphery of the head, wherein each of the plurality of ribs includes multiple sections forming at least a sidewall and a parametric profile for each rib, including at least a first section disposed proximate the shaft extending perpendicular to the central axis and an outer end adjacent the outer periphery of the head,

wherein the plurality of ribs are configured to radially displace workpiece material when secured to the workpiece to diffuse stress within the workpiece material.

2. A clinch fastener as recited in claim 1, wherein at least two of the sections are defined by different radii or a plurality of line segments.

3. A clinch fastener as recited in claim 1, wherein at least two of the sections are flat, and at least one is parallel to the head.

4. A clinch fastener as recited in claim 1, wherein each of the ribs diminish in height as each of the ribs extends in a direction going from the central axis of the clinch fastener to the outer periphery of the head of the clinch fastener.

5. A clinch fastener as recited in claim 1, wherein the ribs are equally spaced apart under the head.

6. A clinch fastener as recited in claim 1, further comprising an annular recess proximate the plurality of ribs under the head.

7. The clinch fastener as recited in claim 6, further comprising an annular recess proximate the ribs, disposed between the head and the shaft.

8. A clinch fastener as recited in claim 1, wherein the clinch fastener comprises a nut having a threaded bore.

9. A clinch fastener as recited in claim 1, wherein each of the plurality of ribs commences with a section that is perpendicular to the central axis of the clinch fastener, and a remainder of each rib comprises a plurality of sections, wherein at least two of the sections are curved and defined by different radii or a plurality of line segments.

10. A clinch fastener as recited in claim 1, wherein each of the plurality of ribs commences with a section that is perpendicular to the central axis of the clinch fastener, wherein each rib has at least one section that is curved and one section that is flat.

11. A clinch fastener as recited in claim 1, wherein each of the plurality of ribs comprises a plurality of flat sections that collectively provide that the rib diminishes in height as the rib extends to the outer periphery of the head.

12. A clinch fastener as recited in claim 1, wherein each of the plurality of ribs comprises tapered sidewalls.

13. A clinch fastener as recited in claim 1, wherein each of the plurality of ribs comprises outwardly tapered sidewalls.

14. A clinch fastener as recited in claim 1, wherein the plurality of ribs are configured to provide for reduced warping of the workpiece material during installation as a result of the plurality of ribs being configured to provide for radially focused material displacement ~~the radial inward direction of flow~~ of workpiece material resulting from a taper on a sidewall of each of the ribs.

15. A clinch fastener as recited in claim 1, wherein each of the plurality of ribs commences with a section that is perpendicular to the central axis of the clinch fastener, and a

remainder of each rib comprises a plurality of sections, and wherein the plurality of sections form the parametric profile of the plurality of ribs.

16. A clinch fastener as recited in claim 15, wherein the parametric profile of each of the plurality of ribs is defined by a plurality of parameters including a rib height, a distance from a central axis of the clinch fastener to an end of the rib, and a predefined angle Theta.

17. A clinch fastener for installation relative to a workpiece, said clinch fastener comprising:

a shaft defining a central axis of the clinch fastener;

a head cooperating with the shaft, the head having an outer periphery; and

a plurality of ribs disposed under the head to engage the workpiece upon installation of the clinch fastener to the workpiece, wherein each of the plurality of ribs, in a direction going from the central axis of the clinch fastener to the outer periphery of the head of the clinch fastener, comprises a non-flat surface having a curved surface and a parametric profile;

wherein each of the plurality of ribs commences with a section that is perpendicular to the central axis of the clinch fastener, and a remainder of each of the plurality of ribs comprises a plurality of sections, wherein at least two of the sections are curved and defined by different radii or a plurality of line segments,

wherein the plurality of ribs are configured to radially displace workpiece material when secured to the workpiece to diffuse stress within the workpiece material.

18. A clinch fastener as recited in claim 17, wherein each of the ribs diminish in height as each of the ribs extends in a direction going from the central axis of the clinch fastener to the outer periphery of the head of the clinch fastener.

19. A clinch fastener as recited in claim 17, wherein the plurality of ribs are configured to provide for reduced warping of the workpiece material during installation as a result of the plurality of ribs being configured to provide for radially focused material displacement of workpiece material resulting from a taper on a sidewall of each of the ribs.

20. A clinch fastener as recited in claim 17, wherein the clinch fastener comprises a nut having a threaded bore.