Claims

What is claimed is:

1. A fastener, comprising:

a shank having a base at a bottom most end thereof, said base being ~~the~~ a largest diameter of the fastener;

a deformable collar on the shank of a greater diameter than the shank;

an undercut in the shank having a inner wall of lesser diameter than the shank and located immediately below the collar; and

wherein the collar is constructed and adapted to receive an external axial force whereby portions of the collar deform and flow into the undercut to captivate a panel between the collar and the base.

2. The fastener of claim 1 wherein the shank has a threaded axial bore.

3. An assembly of a fastener to a panel, comprising:

the fastener of claim 1 affixed to a panel, said panel having a top side and a back side:

the panel having a raised conical portion extending upwardly from the panel top side and defining a recess in the panel back side;

a mounting hole centered at the apex of the conical portion, said hole defining a top edge of the conical portion; and

wherein the fastener shank extends upwardly through the mounting hole and the conical portion of the panel is captivated between the collar and the base.

4. The assembly of claim 3 wherein the base lies wholly within the back side recess.

5. The assembly of claim 3 wherein elements of the conical portion lie within the undercut.

6. The assembly of claim 5 wherein the top edge of the conical portion abuts the inner wall of the undercut.

7. The assembly of claim 5 wherein the fastener shank has a threaded axial bore.

8. The assembly of claim 5 wherein the panel is of uniform thickness.

9. The assembly of claim 3 wherein the panel has a plurality of radial slots in the conical portion.

10. The assembly of claim 9 wherein there are four radial slots in a cross-cut pattern, each extending from the mounting hole to a circumference of the conical portion.

11. The assembly of claim 10 wherein the conical portion consists of four tabs, each extending from the mounting hole to the circumference of the conical portion.

12. The assembly of claim 9 wherein portions of the deformable collar lie within the slots.

13. The assembly of claim 3 wherein the panel is composed of resilient material whereby the fastener is affixed to the panel by snap-fit.

14. A method of rigidly affixing the fastener to the panel in the assembly of claim 3 with a step of pressing the deformable collar against the conical portion in the direction of the base thereby rigidly clamping the conical portion between the collar and the base.

15. The method of claim 14 whereinafter the step of pressing, portions of the deformable collar lie within the radial slots.