

WHAT IS CLAIMED IS:

1. A cable fitting, comprising:

a gland nut including first threads, an axial gland bore, and a first sloped surface along a portion of the axial gland bore;

a body including second threads configured to receive the first threads, an axial body bore, and a second sloped surface along a portion of the axial body bore;
and

a chuck including multiple segments and multiple joints interposed between the multiple segments, the multiple segments being positioned around a central axis and the multiple segments and multiple joints joined to create a ring, wherein each of the multiple segments includes a distal end tapered surface and a proximal end tapered surface,

wherein each joint of the multiple joints includes a strip that folds inwardly along a line parallel to the central axis to reduce an inside diameter of the ring,

wherein the gland nut, the body, and the chuck are configured to form an axial pathway for receiving a cable,

wherein, when the first threads of the gland nut are advanced onto the second threads of the body, the first sloped surface is configured to apply a first compressive force to the distal end tapered surfaces, and the second sloped surface is configured to apply a second compressive force to the proximal end tapered surfaces, and

wherein the compressive forces cause inward deformation of the chuck to secure the cable within the axial pathway.

2. The cable fitting of claim 1, further comprising:

a bushing with a central bore,

wherein each of the multiple segments of the chuck include a seating area to support the bushing within a circumference of the chuck and a shoulder ~~and to~~ position the central bore in the axial pathway, and

wherein, when the first threads of the gland nut are advanced onto the second threads of the body, the shoulders compress the bushing around the cable.

3. The cable fitting of claim 2, wherein the gland nut and the bushing are configured to fit within the axial gland bore.

4. The cable fitting of claim 2 or claim 3, wherein the bushing further comprises a tapered bushing surface and wherein the second sloped surface is configured to contact the tapered bushing surface.

5. The cable fitting of ~~claim~~ any one of claims 2 to 4, wherein the bushing comprises a thermoplastic rubber material.

6. The cable fitting of ~~claim~~ any one of claims 1 to 5, wherein a taper angle of one of the distal end tapered ~~surface~~ surfaces is larger than ± 25 degrees from a the central axis ~~of the cable fitting~~.

7. The cable fitting of ~~claim~~ any one of claims 1 to 6, wherein a taper angle of one of the proximal end tapered surfaces is larger than ± 25 degrees from a the central axis ~~of the cable fitting~~.

8. The cable fitting of ~~claim~~ any one of claims 1 to 7, wherein the taper angle of the proximal end tapered surfaces and the taper angle of the distal end tapered surfaces are of the same angular degree.

9. The cable fitting of ~~claim~~ any one of claims 1 to 8, wherein each of the multiple segments comprises a nylon material with teeth along an inwardly-facing surface.

10. The cable fitting of ~~claim~~ any one of claims 1 to 9, wherein the second threads are located at a distal end of the body and wherein the body is further configured with installation threads at a proximal end of the body to secure the body to a mounting structure.

11. A chuck for a cable fitting, comprising:

multiple segments positioned around a central axis, each segment including:

a first tapered surface on a distal end, wherein the first tapered surface slopes outwardly from the distal end away from the central axis, and

a second tapered surface on a proximal end, wherein the second tapered surface slopes outwardly from the proximal end away from the central axis; and

multiple joints interposed between the multiple segments, wherein the multiple segments and multiple joints form a ring configured to receive a cable,

wherein each segment of the multiple segments is configured to receive compressive forces on the first tapered surface and the second tapered surface to force each segment of the multiple segments inwardly toward the central axis, and

wherein each joint of the multiple joints ~~is configured to collapse inwardly~~ includes a strip that folds inwardly along a line parallel to the central axis to reduce an inside diameter of the ring.

12. The chuck of claim 11, wherein each segment of the multiple segments further includes teeth along an inwardly-facing surface to engage the cable.

13. The chuck of claim 11 or claim 12, wherein the slope of the first tapered surface and the slope of the second tapered surface are each greater than ± 25 degrees from the central axis.

14. The chuck of claim ~~13~~ 11 or claim 12, wherein the slope of the first tapered surface is 45 degrees from the central axis.

15. The chuck of ~~claim~~ any one of claims 11 to 14, wherein the slope of the first tapered surface and the slope of the second tapered surface have different length-to-thickness ratios.

16. The chuck of ~~claim~~ any one of claims 11 to 15, wherein each segment of the multiple segments further comprises:

a seating area to support a bushing, and

a shoulder to compress the bushing when the segment is forced inwardly toward the central axis.

17. The chuck of ~~claim~~ any one of claims 11 to 16, wherein the chuck is configured to fit within an axial bore of a gland nut that includes a sloped internal surface that matches the angle of the first tapered surface.

18. A cable fitting, comprising:

a gland nut including a first axial bore, wherein the gland nut includes internal threads along a portion of the first axial bore and a first sloped surface along another portion of the first axial bore;

a body including external threads configured to receive the internal threads and a second axial bore at a distal end, wherein the body includes a second sloped surface along the second axial bore;

a chuck, interposed between the gland nut and the body, wherein the chuck includes multiple segments and multiple joint sections interposed between each segment of the multiple segments, the multiple segments being positioned around a central axis, wherein each segment of the multiple segments includes:

a distal end tapered surface that matches the first sloped surface,

a proximal end tapered surface that matches the second sloped surface,

a seating surface with a shoulder, and

an inward-facing surface; and

wherein each of the joint sections includes a strip that folds inwardly along a line parallel to the central axis to reduce an inside diameter of the chuck; and

a bushing, configured to seat on the seating surface, the bushing including a third axial bore and a bushing tapered surface that matches the second sloped surface;

wherein the first axial bore, the second axial bore, the third axial bore, and the chuck are configured to form an axial pathway for a cable.

19. The cable fitting of claim 18, wherein, when the internal threads are advanced onto the external threads, the first sloped surface is configured to apply a first force to the distal end tapered surfaces, and the second sloped surface is configured to apply a

second force to both the proximal end tapered surfaces and the bushing tapered surface,

wherein the first and second forces cause inward deformation of the chuck to force the inward-facing surfaces against the cable, and

wherein, the shoulders force the third axial bore of the bushing against the cable.

~~20. The cable fitting of claim 18, wherein the chuck further comprises:~~

~~joint sections interposed between each segment of the multiple segments, wherein each of the joint sections is configured to collapse inwardly to reduce an inside diameter of the chuck.~~