CLAIMS

What is claimed is:

1. A centralizing bushing device comprising:

a bushing housing having axial ends and an opening extending therethrough along an axial axis, the opening including a pocket extending outwardly from the axial axis within the bushing housing and having internal shoulders facing each other;

a bushing ring for positioning within the pocket of the bushing housing between the internal shoulders, the bushing ring having a split for allowing collapsing of the bushing ring radially inward, an inner diameter for slidably engaging an axially movable shaft extending through the bushing housing along the axial axis, and an outer shoulder; and

a resilient biasing member for positioning against the outer shoulder of the bushing ring for radially biasing the inner diameter of the bushing ring radially inwardly in a centralizing manner about the axial axis for engaging and centralizing the shaft slidably positioned therethrough.

2. The device of claim 1 in which the opening through the bushing housing includes a smaller diameter hole connected to the pocket which has a larger diameter.

3. The device of claim 2 in which the resilient biasing member comprises a resilient O-ring.

4. The device of claim 3 in which the pocket within the bushing housing has an angled surface for biasing the O-ring both radially inwardly and axially, for biasing the inner diameter of the bushing ring radially inwardly, and for biasing the bushing ring axially against one internal shoulder.

5. The device of claim 4 further comprising a lead screw shaft extending through the bushing housing and for threadably engaging a threaded nut for disposal within the smaller diameter hole, the bushing ring for resiliently engaging outer surfaces of the lead screw for centering the lead screw relative to the threaded nut for proper contact therebetween and damping noise.

6. The device of claim 5 in which the pocket is located at one axial end of the bushing housing.

7. The device of claim 1 in which the bushing ring includes a radial flange extending radially outward from the outer shoulder at one axial end of the bushing ring for engaging against said one internal shoulder of the bushing housing.

8. A centralizing lead screw bushing device comprising:

a bushing housing having axial ends and an opening extending therethrough along an axial axis, the opening including a pocket extending outwardly from the axial axis within the bushing housing and having internal shoulders facing each other, and a threaded nut for disposal axially adjacent to the pocket;

a bushing ring for positioning within the pocket of the bushing housing between the internal shoulders, the bushing ring having a split for allowing collapsing of the bushing ring radially inward, an inner diameter for slidably engaging an axially movable lead screw shaft extending through the bushing housing along the axial axis, and an outer shoulder; and

a resilient biasing member for positioning against the outer shoulder of the bushing ring for radially biasing the inner diameter of the bushing ring radially inwardly in a centralizing manner about the axial axis for engaging and centralizing the lead screw shaft slidably positioned therethrough for centering the lead screw shaft relative to the threaded nut for proper contact therebetween and damping noise.

9. The device of claim 8 in which the resilient biasing member comprises a resilient O-ring.

10. The device of claim 9 in which the pocket within the bushing housing has an angled surface for biasing the O-ring both radially inwardly and axially, for biasing the inner diameter of the bushing ring radially inwardly, and for biasing the bushing ring axially against one internal shoulder.

11. A method of centralizing an axial movable shaft extending within a centralizing bushing device, the bushing device comprising a bushing housing having axial