WHAT IS CLAIMED IS:

1. A current sensing inductive device, comprising:

a plurality of inductive elements, each element comprised of a conductive winding; and

a return conductor that electrically couples a leading one of said plurality of inductive elements with a trailing one of said plurality of inductive elements;

wherein a first element of said plurality of inductive elements includes a first conductive element, said first conductive element electrically coupling said return conductor to a first end of said conductive winding.

2. The current sensing inductive device of Claim 1, wherein said plurality of inductive elements each comprise a discrete bobbin element.

3. The current sensing inductive device of Claim 2, further comprising a second conductive element disposed on a second one of said plurality of bobbin elements, said second conductive element attached to an end of said conductive winding opposite the first end of said conductive winding.

4. The current sensing inductive device of Claim 3, wherein said second conductive element is bent at a defined angle with respect to a surface of said second one of said plurality of bobbin elements.

5. The current sensing inductive device of Claim 2, wherein said first conductive element is disposed on or within a flange of said first bobbin element.

6. The current sensing inductive device of Claim 2, wherein at least two of said plurality of bobbin elements are physically coupled to one another via a hinged coupling.

7. The current sensing inductive device of Claim 6, wherein said hinged coupling comprises:

a pair of outer hinge features disposed on a first of said plurality of bobbin elements;

a pair of inner hinge features disposed on a second of said plurality of bobbin elements; and

a hinge pin disposed within said pairs of inner and outer hinge features.

8. The current sensing inductive device of Claim 7, further comprising a housing that encases said plurality of bobbin elements, said housing including a hinge pin receiving aperture sized to accommodate said hinge pin.

9. The current sensing inductive device of Claim 8, wherein said housing further comprises a plurality of hinge pin receiving apertures, said hinge pin receiving apertures adapted to position and align said plurality of bobbin elements with respect to one another.

10. The current sensing inductive device of Claim 6, wherein each of said bobbin elements comprises a pair of flanges with a winding spool disposed substantially therebetween, said conductive winding wound onto said winding spool.

11. The current sensing inductive device of Claim 10, wherein said hinged coupling comprises an aperture and a cavity on a first one of said plurality of bobbin elements; and

a coupling element comprised of a winding spool portion and an insertable portion on a second one of said plurality of bobbin elements;

wherein said winding spool portion of said second one of said plurality of bobbin elements fits within said cavity of said first one of said plurality of bobbin elements, while said insertable portion of said second one of said plurality of bobbin elements simultaneously fits within said aperture of said first one of said plurality of bobbin elements.

12. The current sensing inductive device of Claim 1, wherein each of said plurality of inductive elements comprises a linearly wound inductive element, each element having said conductive winding disposed thereon, said conductive winding disposed in two or more layers of windings.

13. The current sensing inductive device of Claim 12, wherein at least one of said two or more layers of windings comprises a shielding layer.

14. The current sensing inductive device of Claim 13, wherein said shielding layer is only electrically coupled to one of said leading or trailing ones of said plurality of linearly wound inductive elements.

15. The current sensing inductive device of Claim 12, wherein at least a portion of said plurality of linearly wound inductive elements comprises a winding barrel with a pair of flanges disposed on either side of said winding barrel.

16. The current sensing inductive device of Claim 15, wherein a first of said pair of flanges comprises a boss and a second of said pair of flanges comprises a boss mating aperture; and

wherein said boss is adapted to be received within an adjacent boss mating aperture to facilitate the winding of the plurality of linearly wound inductive elements.

17. A method of manufacturing a current sensing inductive device, comprising:

securing an insulated conductor to a first end of a plurality of segmented winding elements;

continuously winding said insulated conductor onto said plurality of segmented winding elements;

securing said insulated conductor to a second end of said plurality of segmented winding elements;

routing a return conductor between each of said plurality of segmented winding elements; and

electrically coupling said return conductor with said insulated conductor so as to form said current sensing inductive device.

18. The method of Claim 17, wherein said act of securing said insulated conductor to said second end facilitates the electrical coupling of said return conductor with said insulated conductor.

19. The method of Claim 18, wherein said act of securing said insulated conductor to said second end comprises wire wrapping said insulated conductor to a conductive clip, said conductive clip disposed on said second end of said plurality of segmented winding elements.

20. The method of Claim 19, further comprising securing said return conductor to said conductive clip.

21. The method of Claims 17, further comprising continuously winding said insulated conductor onto said plurality of segmented winding elements in a reverse direction subsequent to said act of securing said insulated conductor to said second end of said plurality of segmented winding elements.

22. The method of Claim 21, wherein the insulated conductor wound onto said plurality of segmented winding elements in said reverse direction is wound in a single layer winding.

23. A support structure for use in a current sensing inductive device, said support structure, comprising:

a plurality of bobbin elements;

wherein at least a portion of said plurality of bobbin elements include one or more connection features, said connection features utilized for joining at least said portion to other of said plurality of bobbin elements adjacent thereto so as to form said support structure.

24. The support structure of Claim 23, wherein said connection features comprise:

a hinge feature that allows for a movable relationship between joined bobbin elements.

25. The support structure of Claim 24, wherein the hinge feature comprises a first set of spaced hinge elements, each of said hinge elements including an aperture disposed at least partly there through.

26. The support structure of Claim 23, wherein said connection features comprise:

a flexible hinge feature; and

an aperture that is sized to accommodate the flexible hinge feature of an adjacent one of the bobbin elements.

27. The support structure of Claim 26, wherein the flexible hinge feature is integrally molded with the bobbin element to which the flexible hinge feature is associated.

28. A bobbin element for use in a current sensing inductive device, said bobbin element, comprising:

a spool element comprised of an outer winding diameter and defining an interior volume; and

a pair of flange features disposed on opposing ends of said spool element.

29. The bobbin element of Claim 28, wherein at least one of the pair of flange features includes an electrically conductive clip disposed therein.

30. The bobbin element of Claim 29, wherein a portion of the electrically conductive clip is received within the interior volume of the spool element.

31. The bobbin element of Claim 30, wherein an end of the electrically conductive clip includes a notched end for wire wrapping of a conductor.

32. The bobbin element of Claim 28, wherein the interior volume includes a return conductor support feature disposed therein, the return conductor support feature

adapted to position a return conductor at a predetermined position with respect to said spool element.

33. The bobbin element of Claim 32, wherein the predetermined position comprises the geometric center of the spool element.

What is claimed is:

1. An invention not claimed in any divisional application.