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Hren et al.

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[54] BIPOLAR ELECTROSURGICAL KNIFE

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Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 695,649, Jun. 14, 1976, abandoned.

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[52] **U.S. Cl.** **128/303.14;** 128/303.17

[58] **Field of Search** 128/303.13–303.18, 128/405, 800

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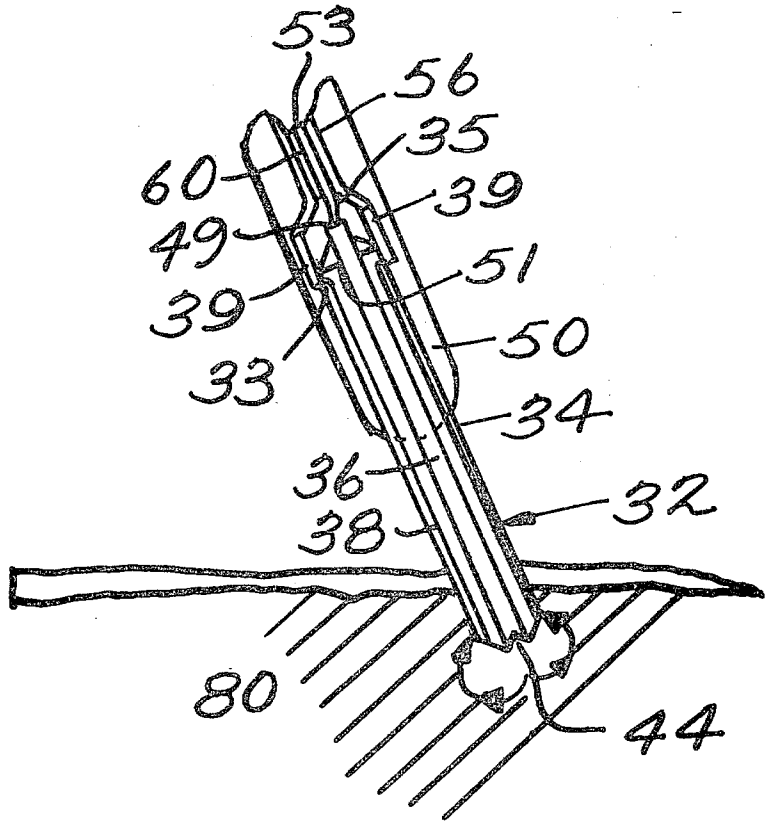
[57] **ABSTRACT**

An electrosurgical instrument for cutting, spot coagulation and point coagulation comprising a nonconductive handle which holds a blade assembly comprising a plurality of electrodes and an insulation member separating the electrodes.

The blade assembly comprises an active center electrode of specified thickness with a recessed tip and is mounted to an extruded insulation member so that it extends outwardly from the insulation member to form a cutting edge.

Split side return electrodes are symmetrically mounted to the insulation member and separated from the center electrode by the insulation member. The electrode area ratio of the return electrode area to the active electrode area falls between 0.70 and 2.0 allowing consistent bipolar operation.

The electrodes are connected inside the nonconductive handle to a circuit whose output consists of a high frequency electrical current which forms a circuit through tissue intervening between and in contact with the electrodes when the instrument is used.

19 Claims, 15 Drawing Figures