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United States Patent [19]

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Kozak et al.

[45] Date of Patent: **Mar. 14, 1995**

[54] ANTERIOR INTERBODY FUSION DEVICE

[75] Inventors: **Jeffrey Kozak, Houston, Tex.; Larry Boyd, Memphis, Tenn.**

[73] Assignee: **Danek Medical, Inc., Memphis, Tenn.**

[21] Appl. No.: **134,049**

[22] Filed: **Oct. 12, 1993**

[51] Int. Cl.⁶ **A61F 2/44**

[52] U.S. Cl. **623/17; 606/61**

[58] Field of Search **623/17, 11, 16**

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Primary Examiner—David Isabella
Attorney, Agent, or Firm—Woodard, Emhardt, Naughton, Moriarty & McNett

[57] ABSTRACT

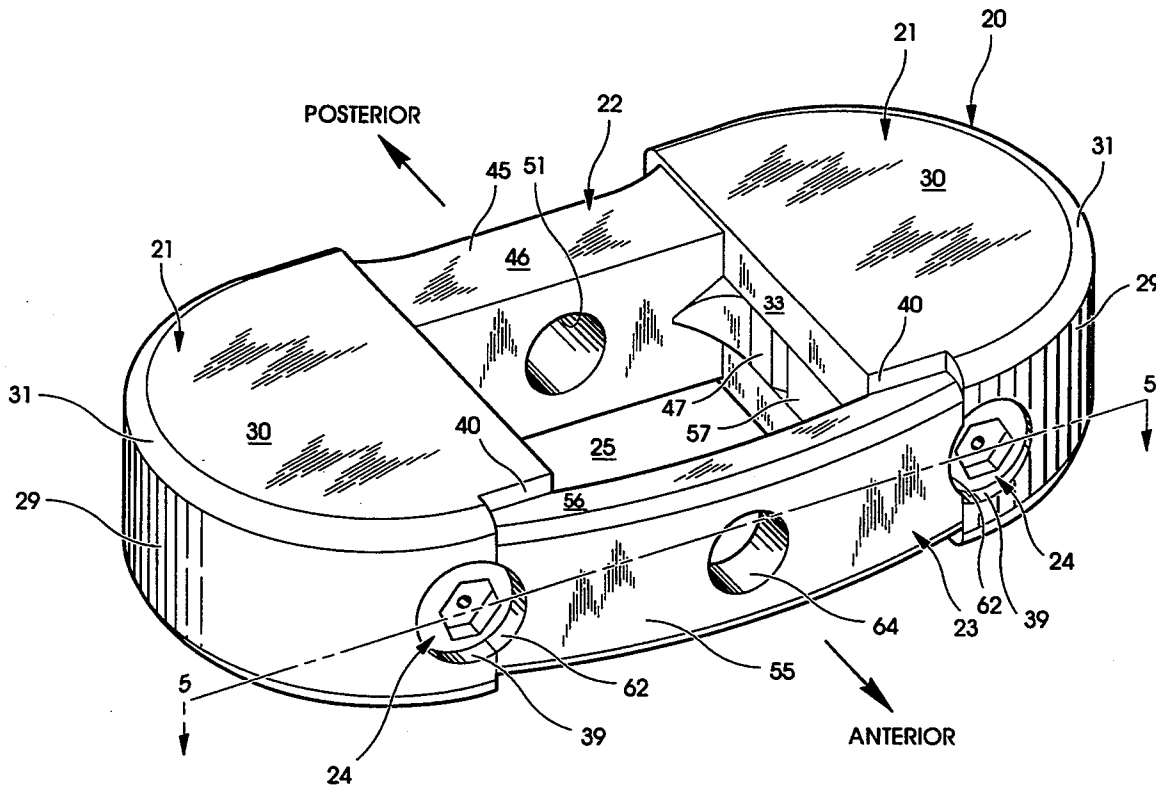
An interbody fusion device includes a pair of lateral spacers and a pair of central spacers, each sized for percutaneous introduction through a disc resection portal in the disc annulus. Each of the lateral spacers includes opposing side faces defining a channel therein, while each of the central spacers includes arms at their opposite ends configured to be received within a channel of a corresponding lateral spacer. The arms and channels are interlocking to prevent separation of the components once assembled within the intradiscal space. The assembly of the central and lateral spacers defines a cavity therebetween for insertion of bone graft material. The central and lateral spacers are configured so that the bone graft cavity is oriented over the weakest, but most vascular and biologically active, bone of the vertebral body, while the lateral spacers are situated adjacent the disc annulus and over the strongest vertebral bone.

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18 Claims, 9 Drawing Sheets



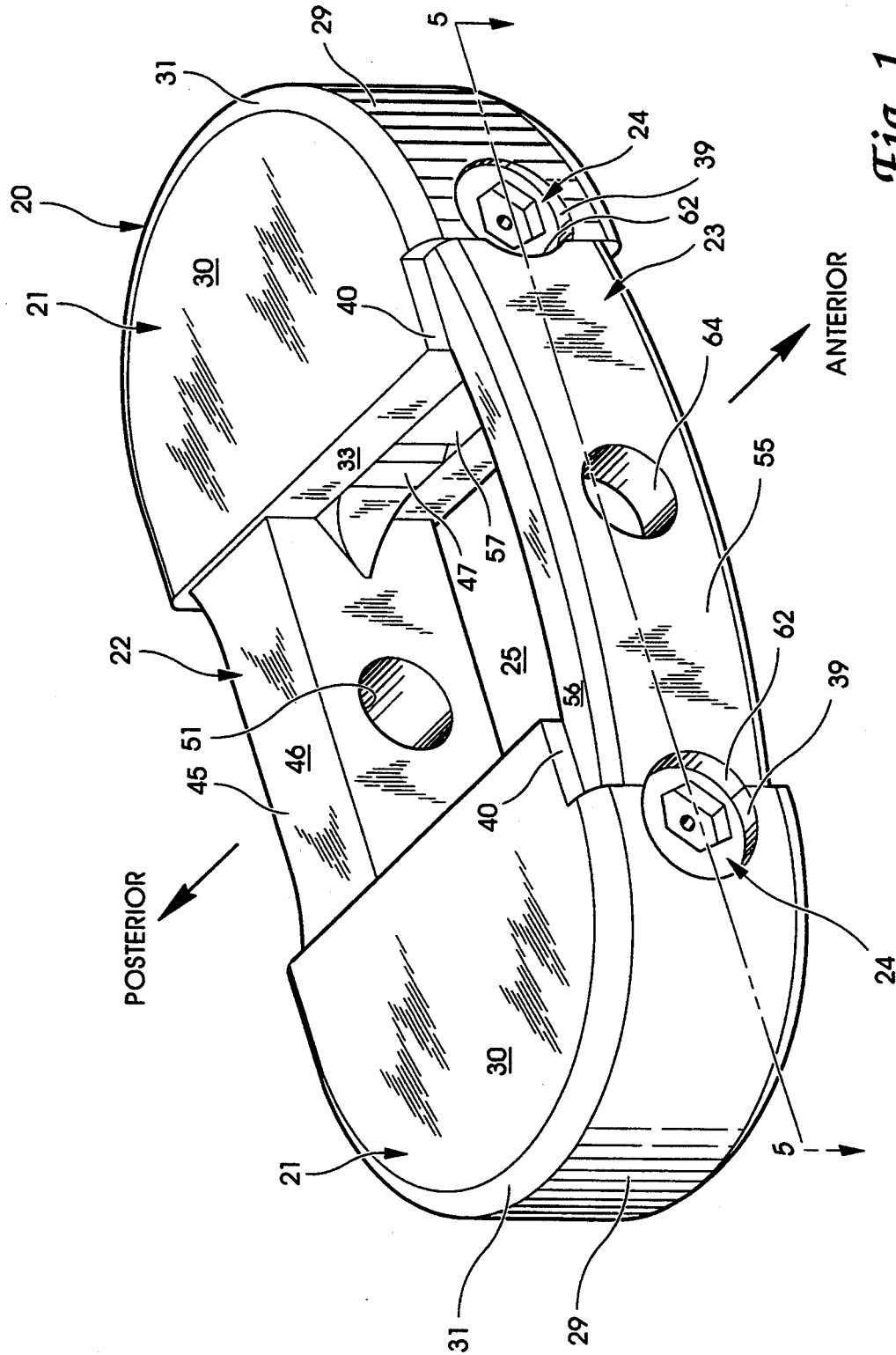


Fig. 1

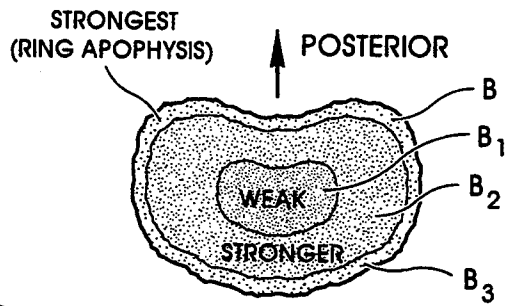
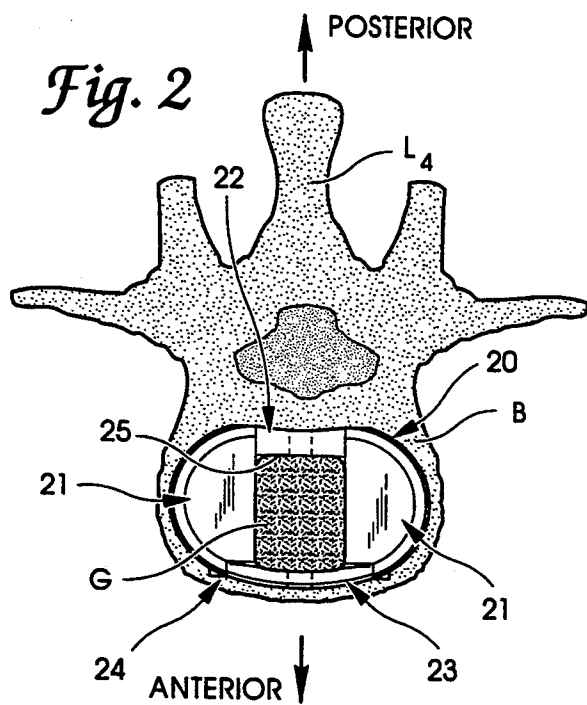


Fig. 2A

Fig. 3

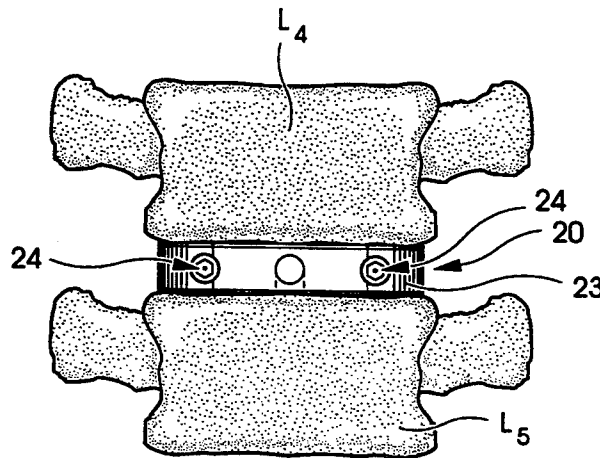
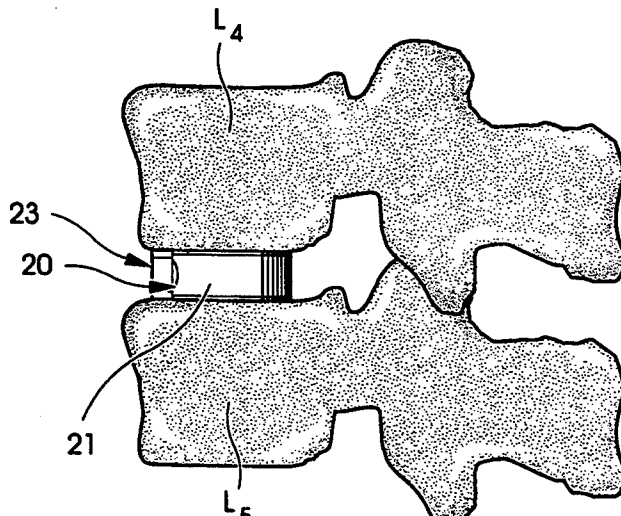


Fig. 4



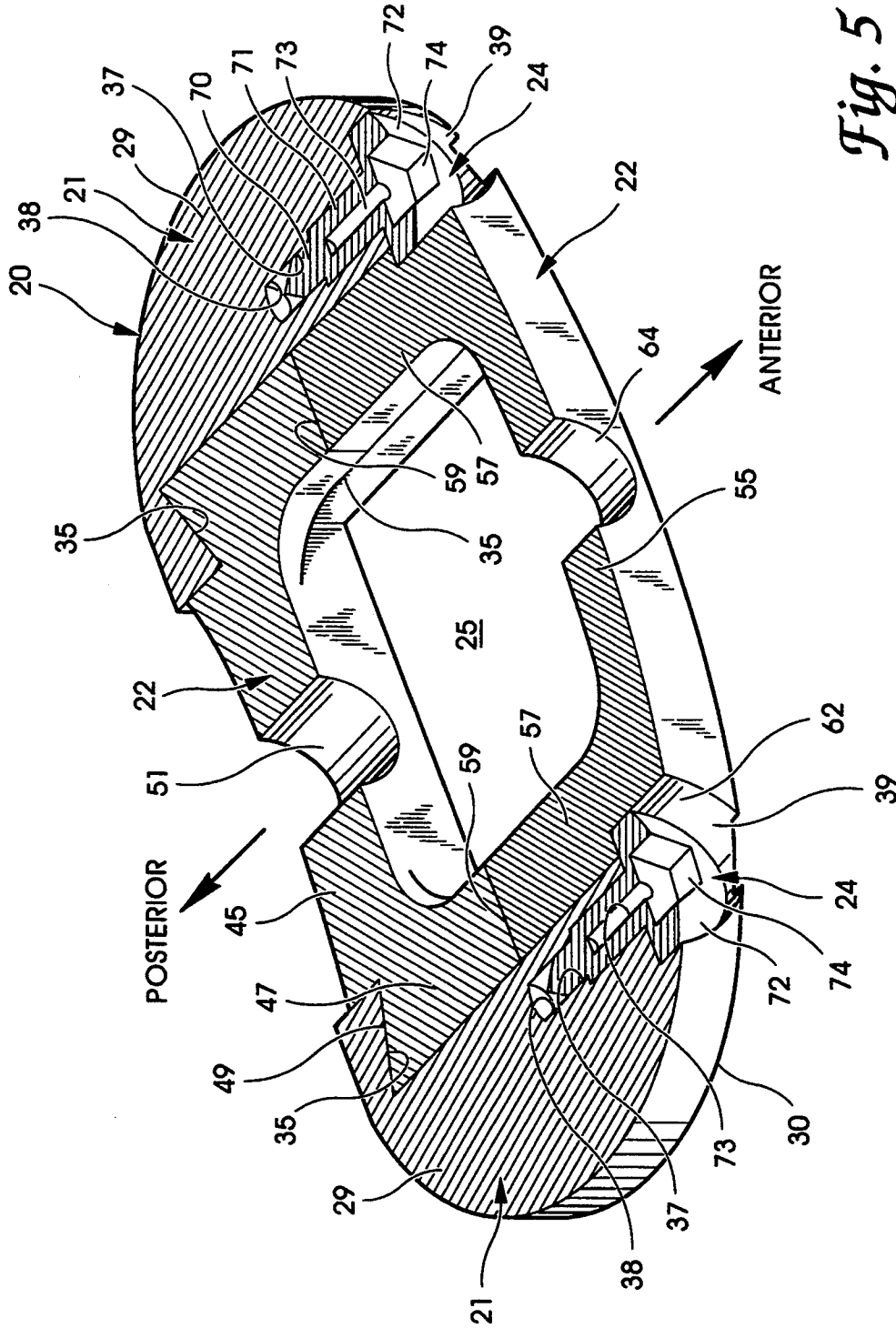


Fig. 5

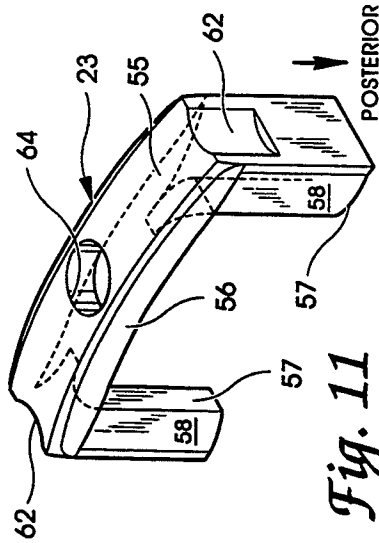


Fig. 11

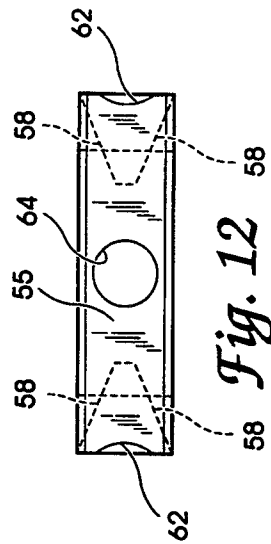


Fig. 12

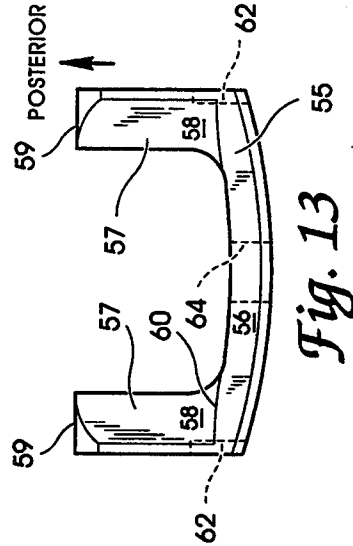


Fig. 13

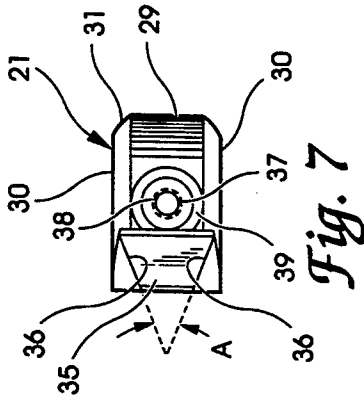


Fig. 7

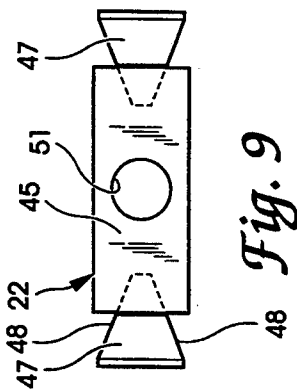


Fig. 9

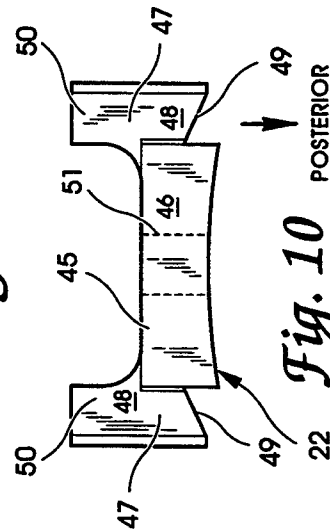


Fig. 10

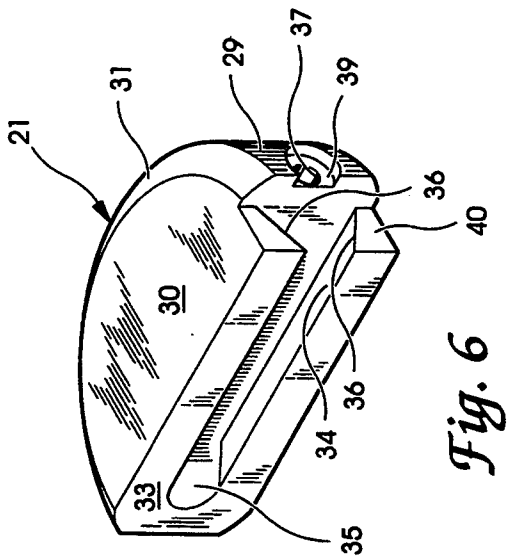


Fig. 6

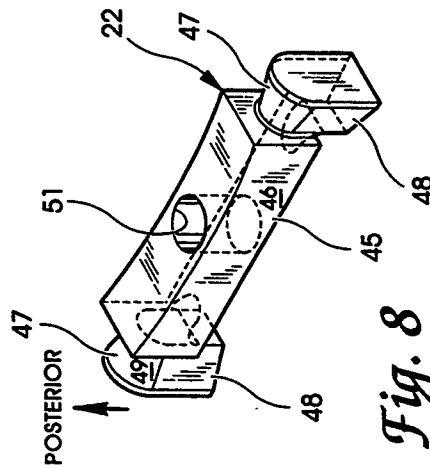


Fig. 8

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