



[54] STENT CRIMPING TOOL AND METHOD OF USE

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[21] Appl. No.: 09/069,010

[22] Filed: Apr. 28, 1998

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[51] Int. Cl.⁷ B23P 11/00; B21D 39/00

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[52] U.S. Cl. 29/516; 606/1; 606/108; 606/198; 623/1; 29/282

[58] Field of Search 29/282, 283.5, 29/515, 516, 517, 715; 606/1, 108, 198; 623/1

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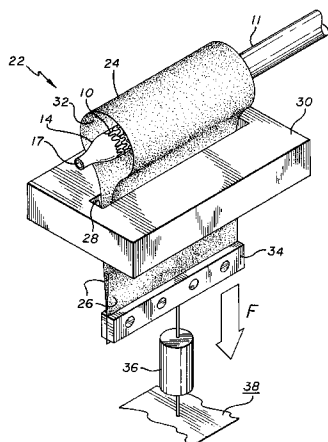
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[57] ABSTRACT

A stent crimping tool for firmly and uniformly crimping a stent onto a balloon catheter. The stent crimping tool is constructed by curving and overlapping the ends of a flexible Mylar sheet and inserting the end portions through a thin slot of a rigid panel. The uncrimped stent and catheter assembly are placed within a cylindrical space formed by the curved and overlapping flexible sheet. A force is applied to the overlapping end portions to pull the flexible sheet through the slot thereby collapsing the cylindrical space and crimping the stent, held therein, onto the balloon. In another embodiment, the crimping tool is constructed from a mount having a grooved top with steeply sloped sides. The uncrimped catheter-stent assembly is placed on the mount and rests within the groove. A flexible sheet of Mylar is draped over the catheter-stent assembly and a downward force is applied to the end portions of the flexible sheet. This downward force places the flexible sheet in tension thereby compressing the catheter-stent assembly between it and the mount. Accordingly, the stent is crimped onto the balloon catheter.

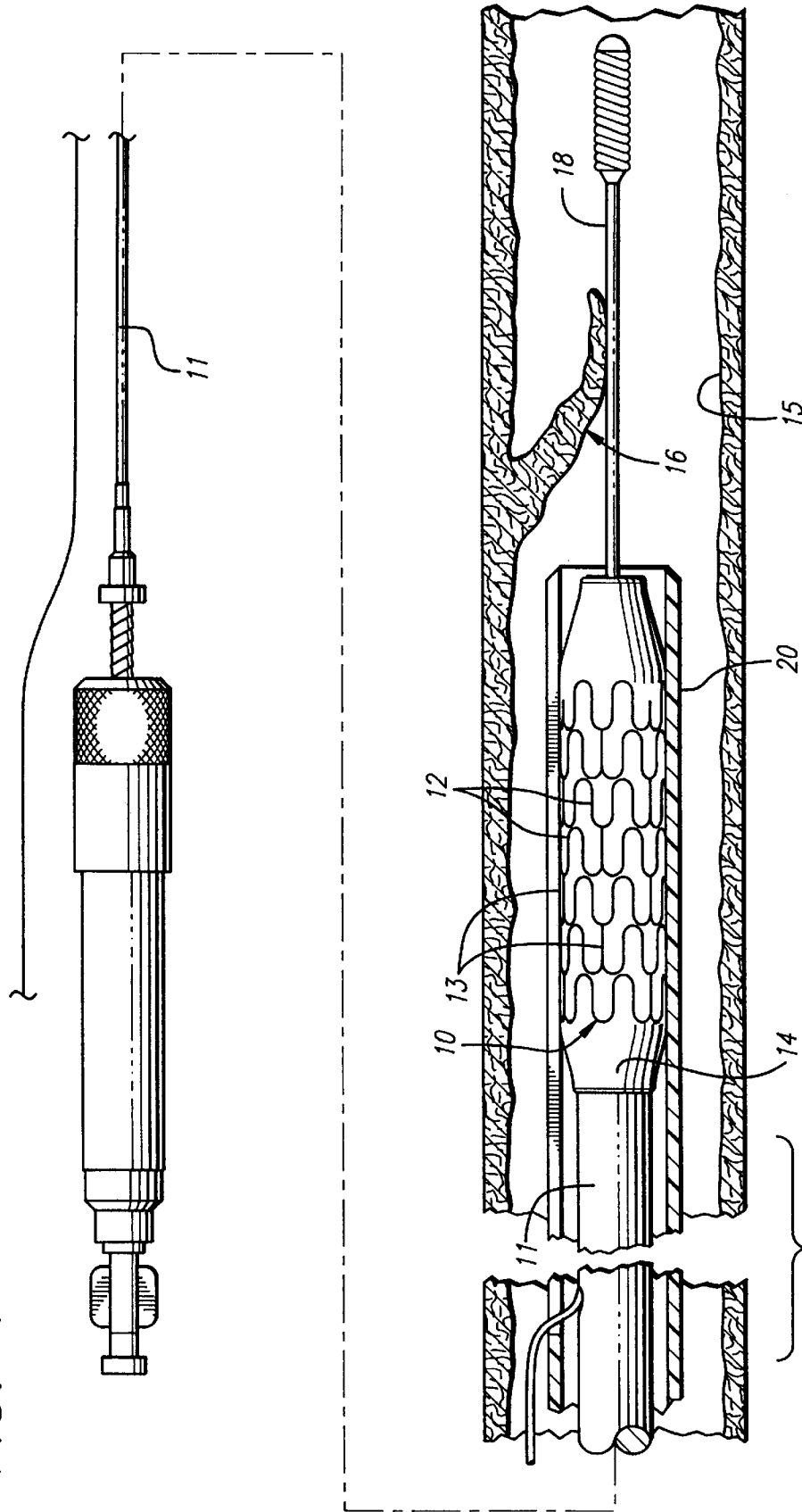
13 Claims, 5 Drawing Sheets



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FIG. 1



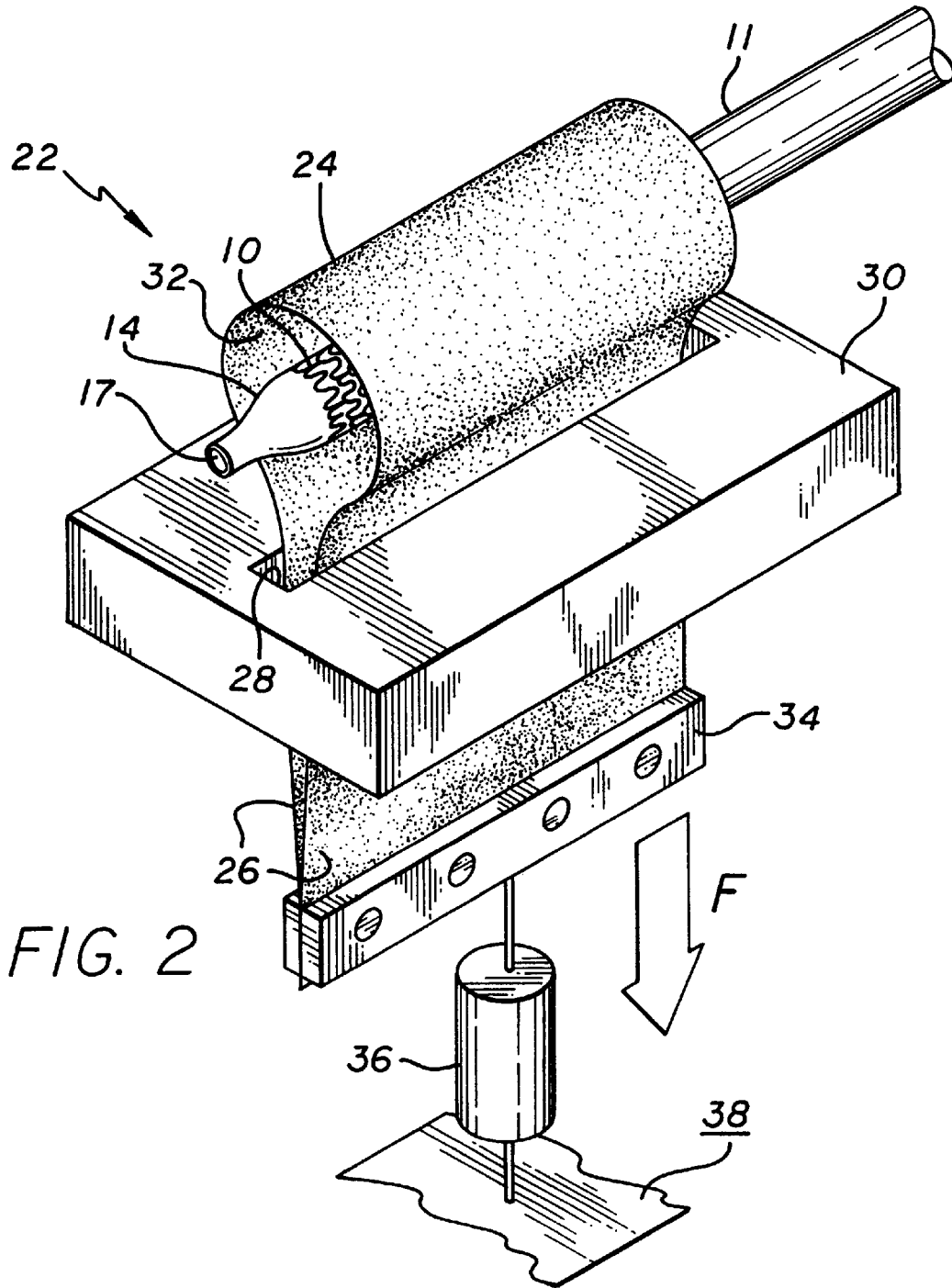


FIG. 2

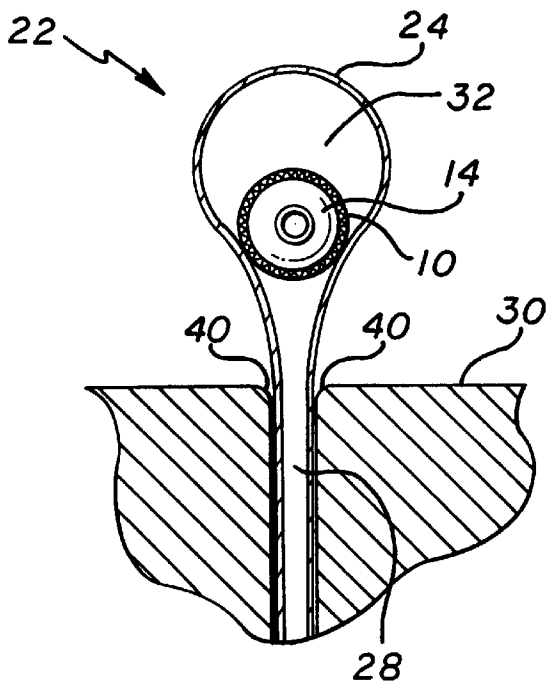


FIG. 3

FIG. 4A

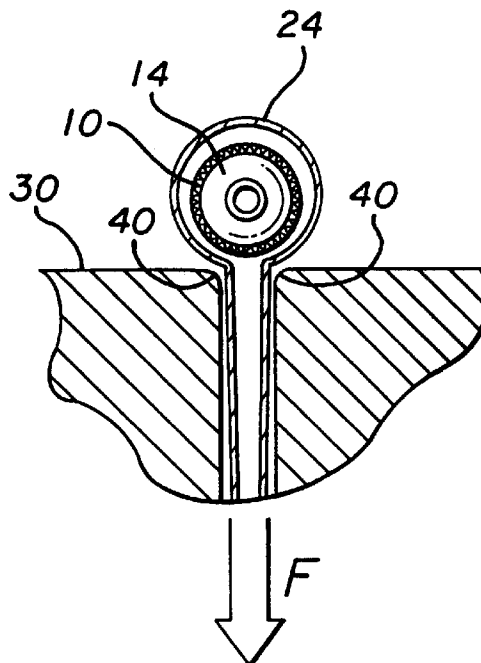
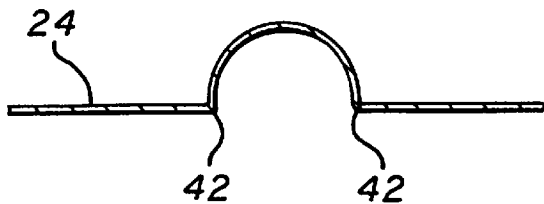


FIG. 4B



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