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United States Patent [19]

Knodel et al.

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[54] **SURGICAL STAPLER INSTRUMENT**

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[51] **Int. Cl.^{6}** **A61B 17/068**

[52] **U.S. Cl.** **227/176**; 227/180; 227/19

[58] **Field of Search** 227/19, 902, 175, 227/176, 178, 180

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Primary Examiner—Scott A. Smith

[57] **ABSTRACT**

A surgical stapler instrument is provided for applying lateral lines of staples to tissue while cutting the tissue between those staple lines. The instrument includes a handle portion, an implement portion, a reciprocating section, a drive member and a movable actuator. The implement portion includes a staple cartridge and an anvil. The reciprocating section is adapted to move back and forth along an axis of the implement portion. The movable actuator is associated with the handle portion and is engaged with the drive member such that motion of the actuator causes the drive member to move back and forth between first and second drive positions separated by a first distance. A multiplier is further provided and is associated with the reciprocating section and the drive member for causing the reciprocating section to move back and forth between first and second reciprocating positions in response to movement of the drive member. The reciprocating section includes a work portion which, when moved distally, effects the firing of staples in the staple cartridge toward the anvil. The work portion is also provided with a reciprocating knife. The first and second reciprocating positions are separated by a second distance which differs from the first distance.
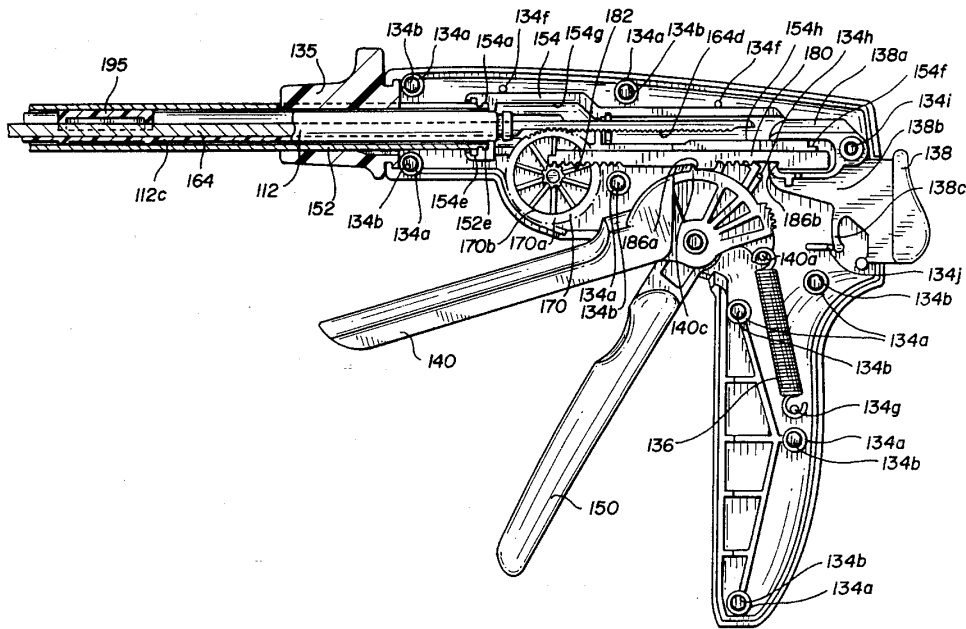
15 Claims, 16 Drawing Sheets
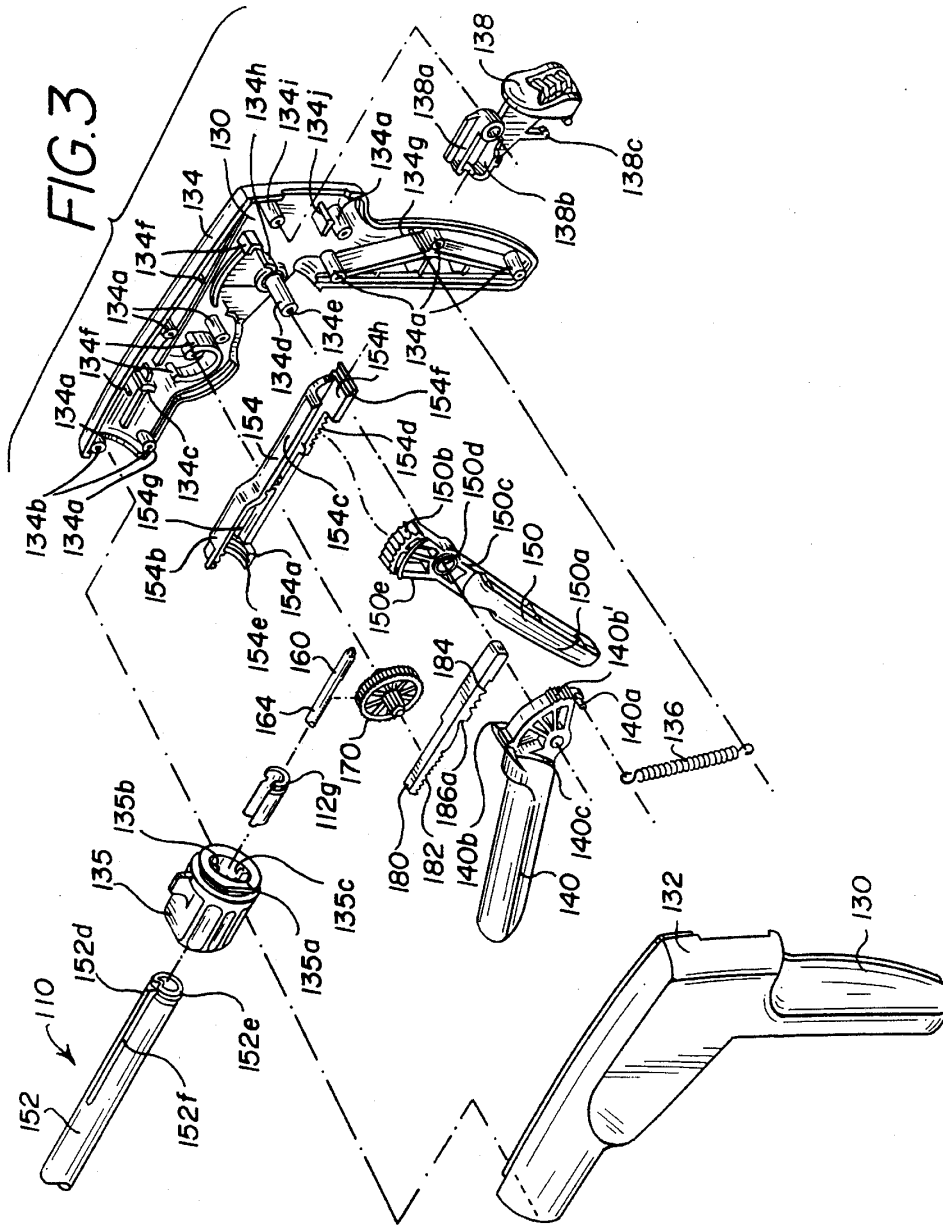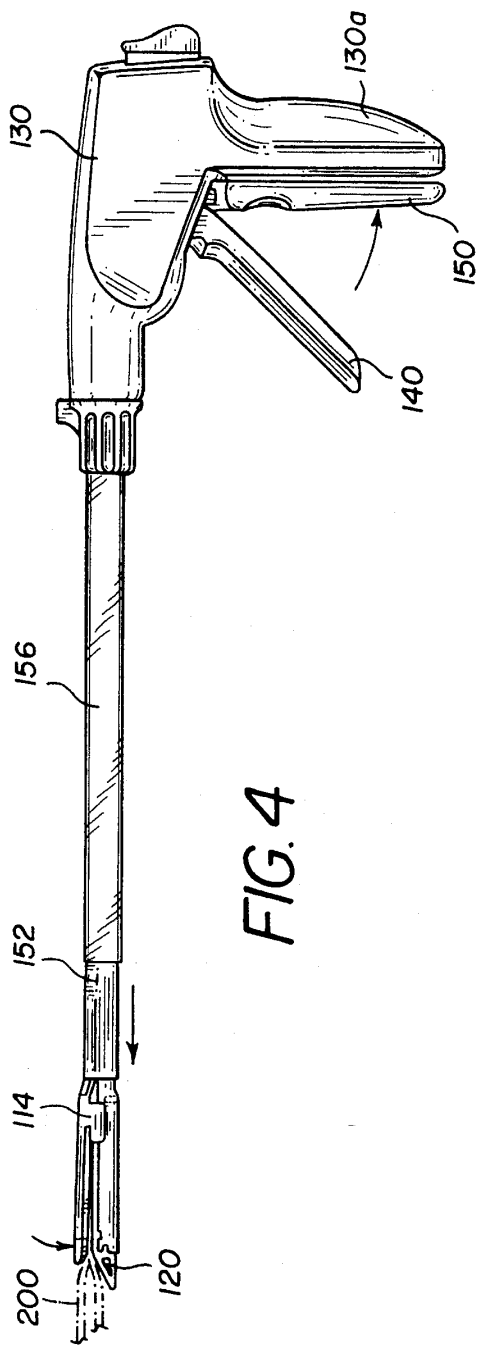
FIG. 1

FIG.2

FIG.3
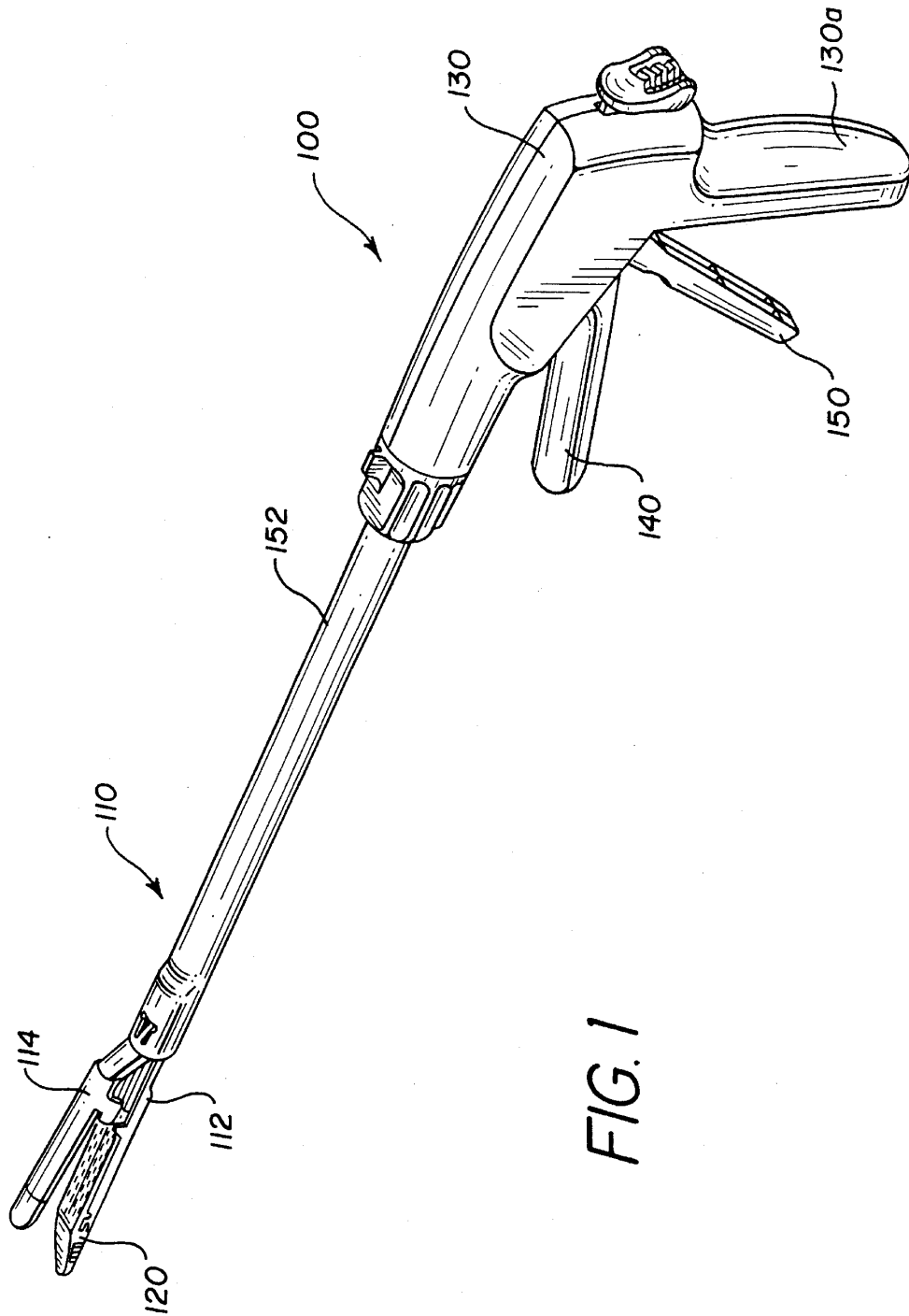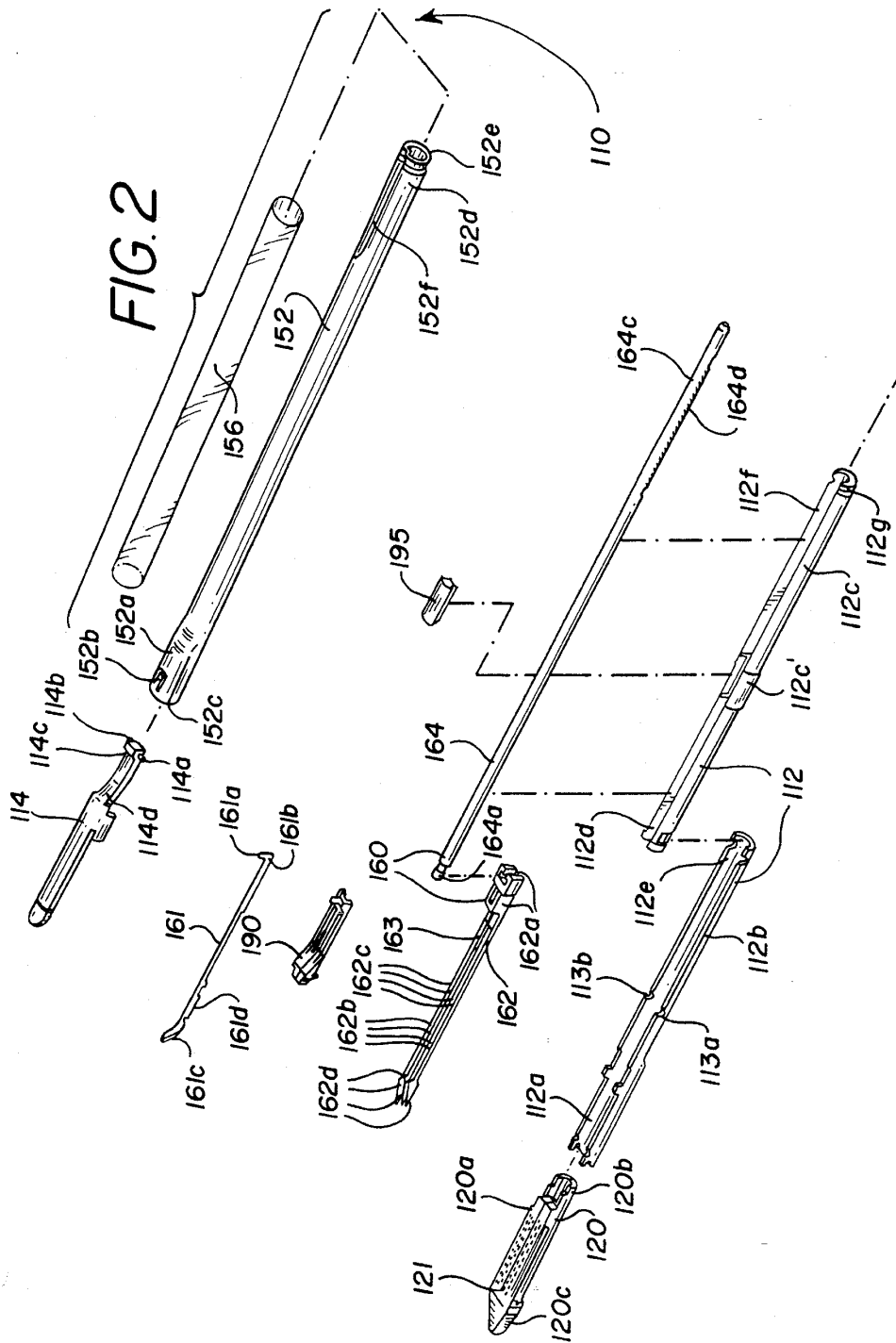
FIG. 4

FIG. 5

DOCKET ALARM
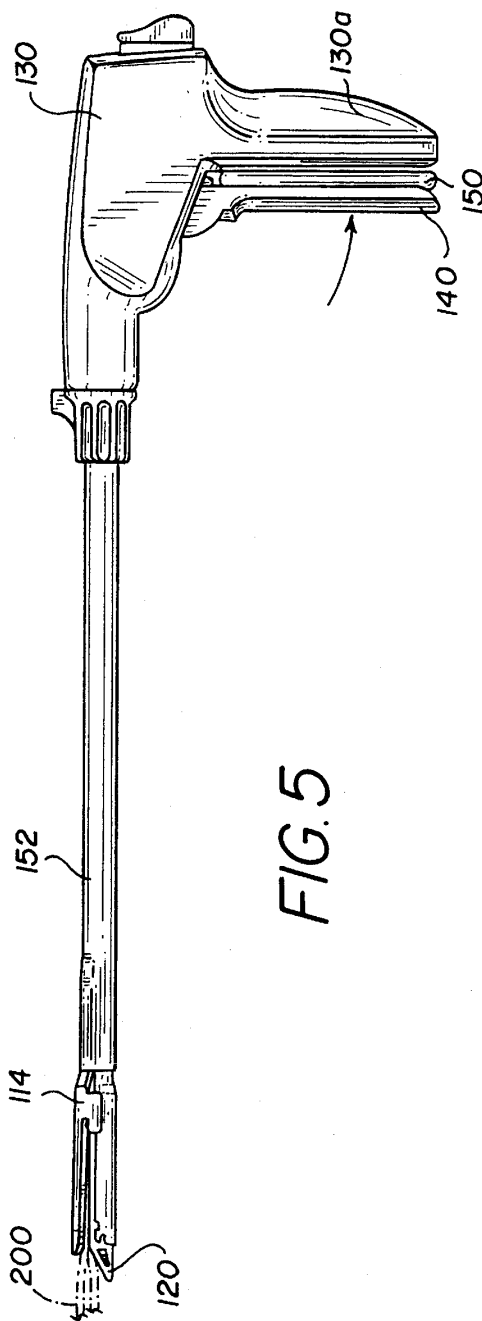
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