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United States Patent [19]

Alesi et al.

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[54] **SELF-CONTAINED POWERED SURGICAL APPARATUS**

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[75] Inventors: **Daniel E. Alesi**, Sherman; **Robert J. Geiste**, Milford; **Dominick L. Mastri**, Bridgeport, all of Conn.; **Wayne P. Young**, Brewster, N.Y.; **Kenneth E. Toso**, Wilton, Conn.

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[73] Assignee: **United States Surgical Corporation**, Norwalk, Conn.

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[21] Appl. No.: **319,907**

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[22] Filed: **Oct. 7, 1994**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 287,455, Aug. 5, 1994, abandoned.

[51] Int. Cl.⁶ **A61B 17/068**

[52] U.S. Cl. **227/176.1; 227/178.1; 227/180.1; 227/19**

[58] Field of Search **227/175.1, 176.1, 227/178.1, 179.1, 180.1, 19**

Primary Examiner—Scott A. Smith

[57] ABSTRACT

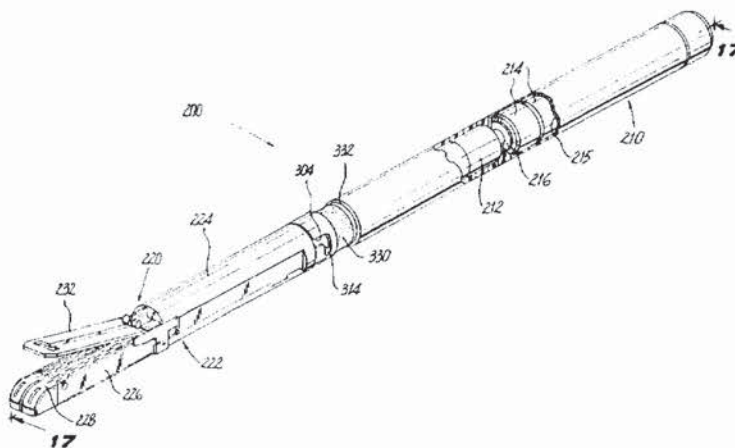
A self-contained powered surgical stapling device is provided which includes an elongate body and a disposable cartridge assembly detachably supported in a distal end portion of the body. The cartridge assembly includes a frame configured to engage the distal end portion of the body, a housing supported within the frame and containing a plurality of surgical fasteners, an anvil mounted for movement with respect to the housing, an actuation assembly configured to translate relative to the housing and the anvil to progressively move the anvil from an open position to a closed position and to sequentially eject the surgical fasteners from the housing to be formed against the anvil, and an axial drive screw mounted in the frame and threadably associated with the actuation assembly for effectuating the longitudinal translation thereof. A motor assembly having an axial drive shaft is disposed within the elongate body, and a coupling is provided for detachably connecting the axial drive shaft and the axial drive screw. A power source is disposed within the elongate body for energizing the motor assembly.

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20 Claims, 16 Drawing Sheets



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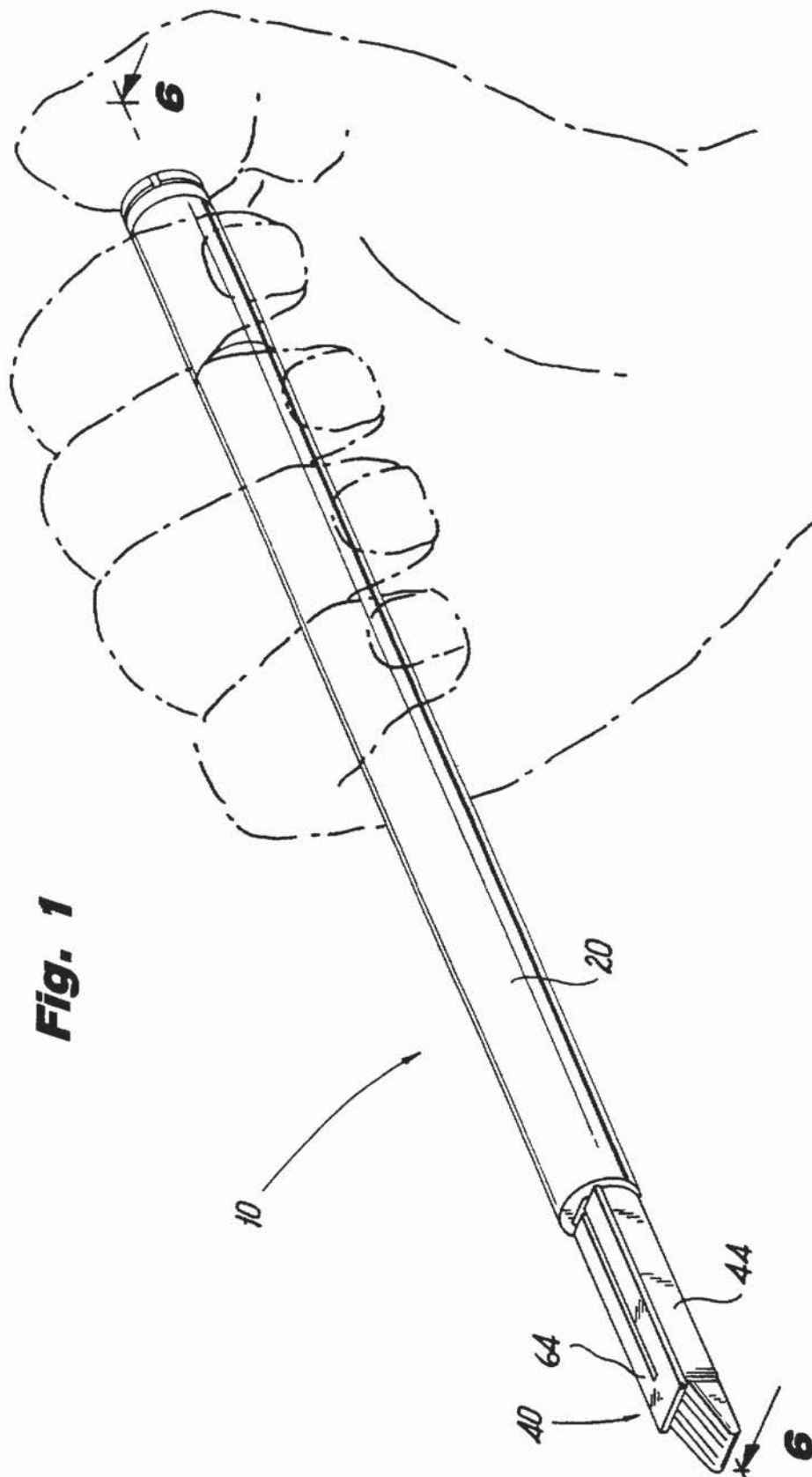


Fig. 2A

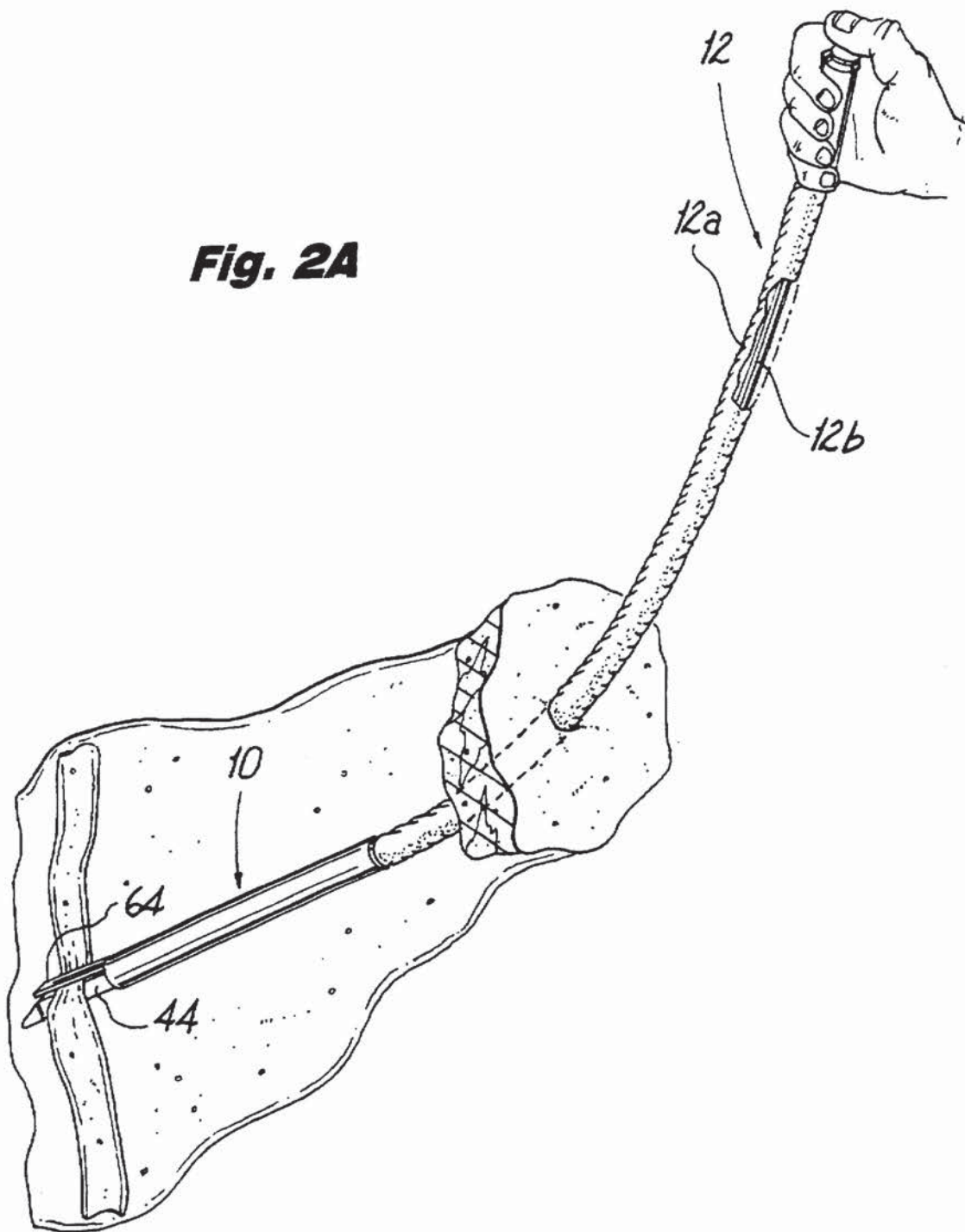


Fig. 2B

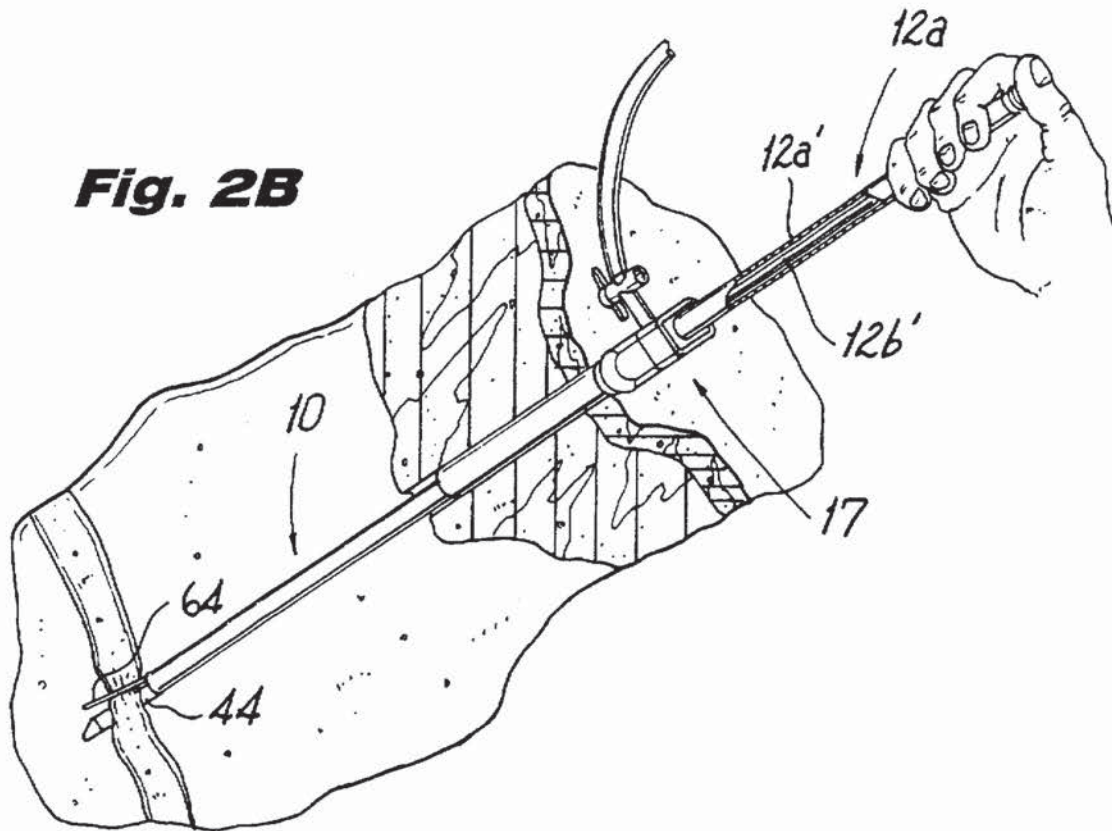
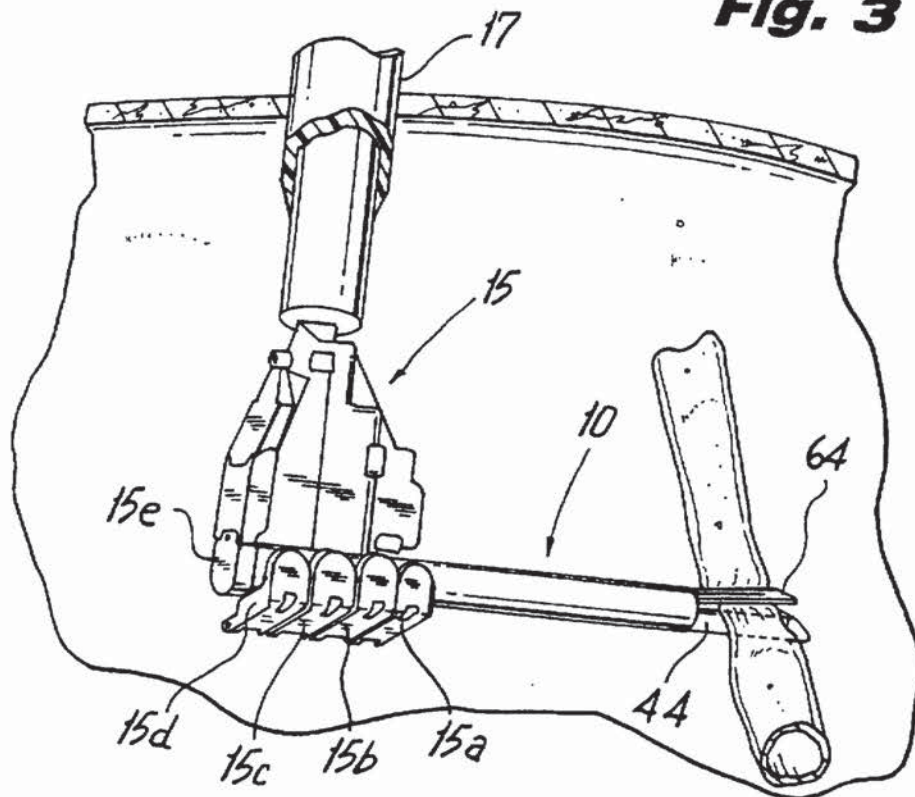


Fig. 3



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