

[54] **BOLT MECHANISM FOR FIRE ARM**

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[21] **Appl. No.:** 96,934

[22] **Filed:** Sep. 14, 1987

Related U.S. Application Data

[60] Division of Ser. No. 784,157, Oct. 4, 1985, Pat. No. 4,693,170, which is a division of Ser. No. 639,526, Aug. 8, 1984, Pat. No. 4,553,469, which is a continuation of Ser. No. 336,328, Dec. 31, 1981, abandoned.

[51] **Int. Cl.⁴** **F41D 5/04**

[52] **U.S. Cl.** **89/187.01**

[58] **Field of Search** 89/165, 173, 187.01

[56] **References Cited**

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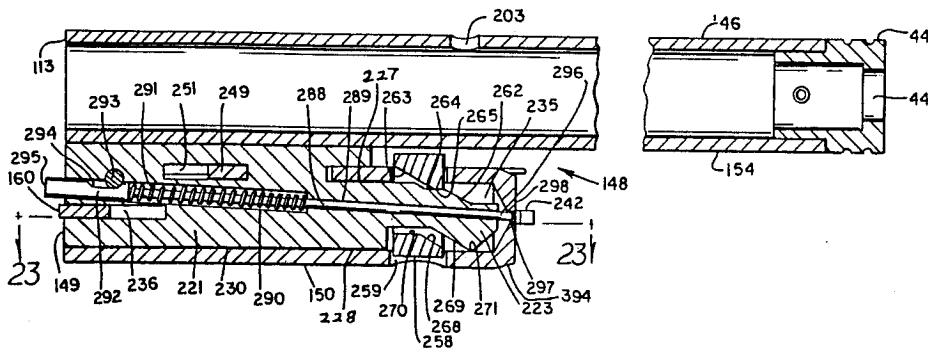
3,540,147 11/1970 Cream et al. 89/187.01

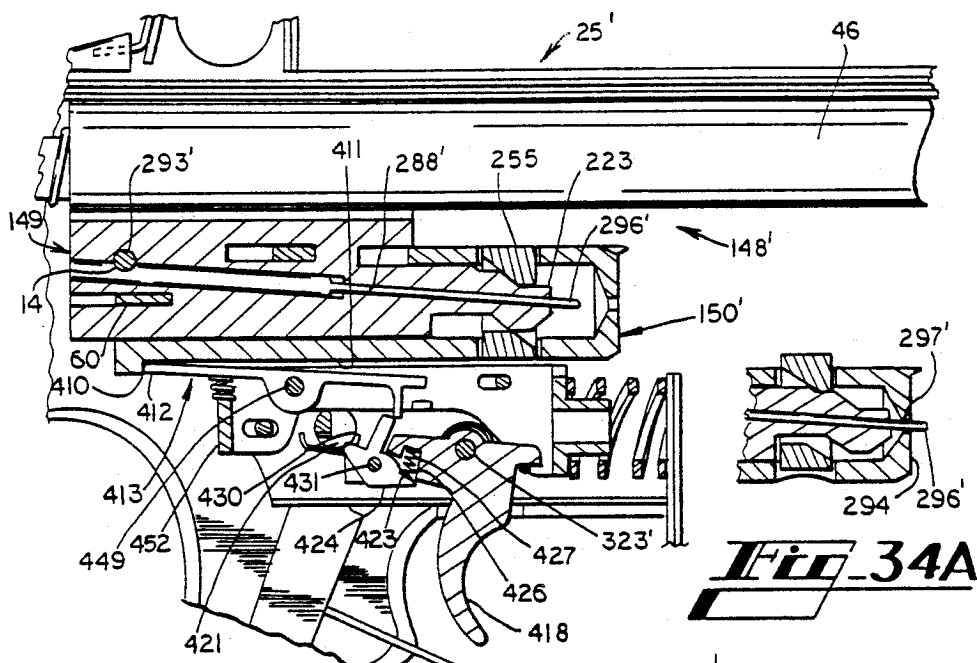
Primary Examiner—Stephen C. Bentley
Attorney, Agent, or Firm—Jones, Askew & Lunsford

[57] **ABSTRACT**

A locked breach, gas operated long action firearm capable of firing heavy caliber shotgun or rifle shells with substantially reduced recoil. The gas piston and bolt carrier assembly are supported for recoil movement along a single guide rod which extends the entire length of the gun, permitting a longer recoil path resulting in reduced impulse due to recoil. The guide rod has a noncircular or radially-assymentrical cross-section mating with a corresponding opening in the gas piston, so that the bolt carrier assembly remains in alignment over the entire recoil path. Separate close-bolt and open-bolt embodiments are disclosed, and the open-bolt embodiment is selectively capable of firing either semi-automatic or full-automatic while permitting reliable cartridge feeding from a box or drum magazine.

7 Claims, 18 Drawing Sheets





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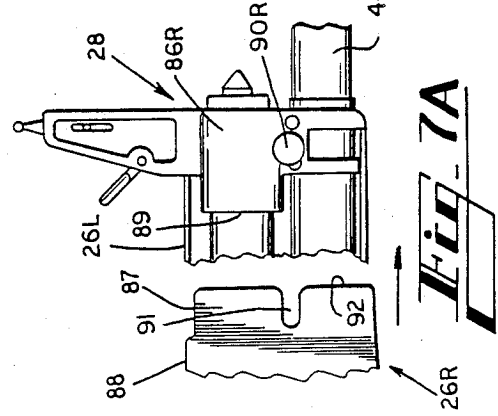
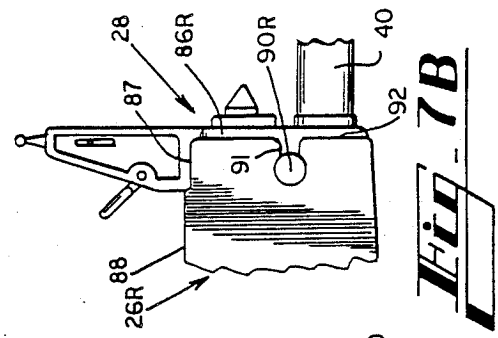
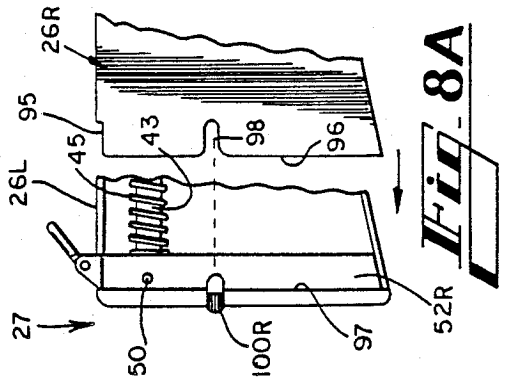
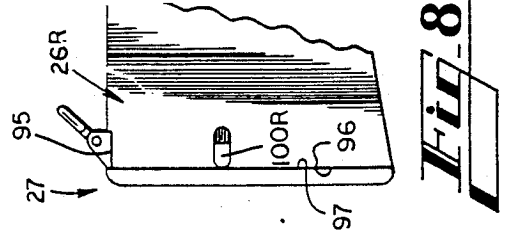
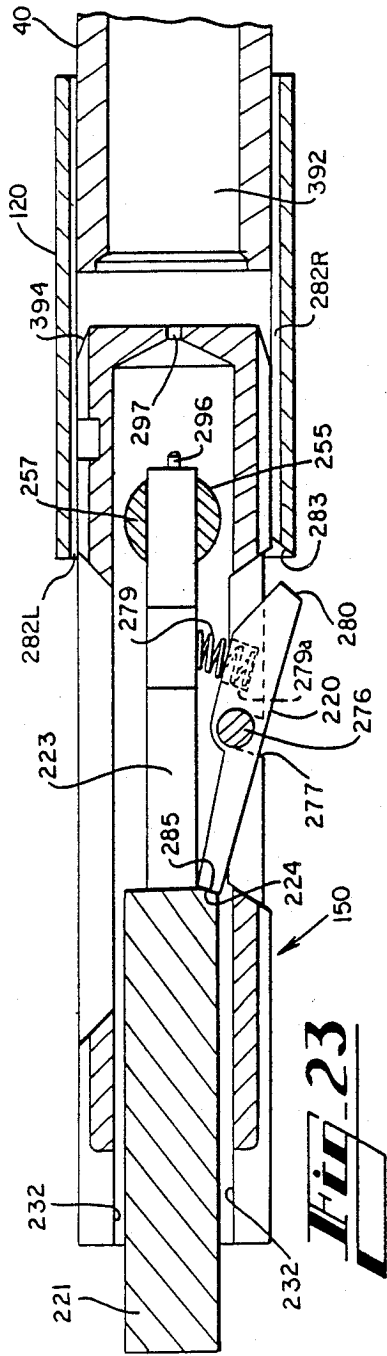
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[22] Filed: Sep. 14, 1987

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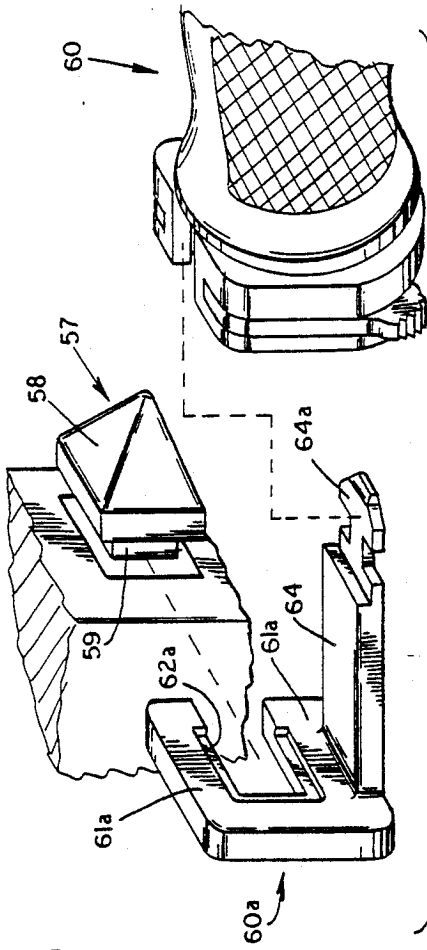


Fig. 6

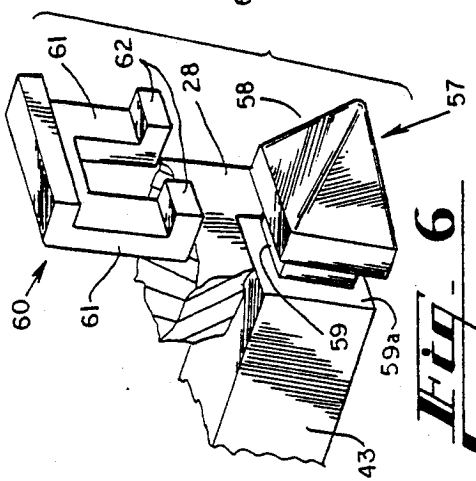


Fig. 12

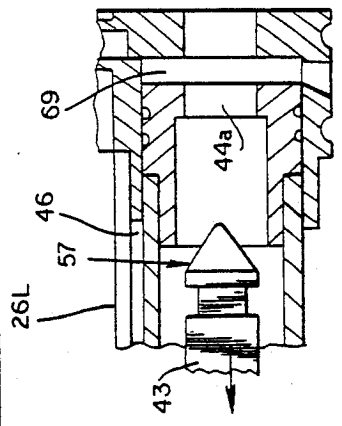


Fig. 11C

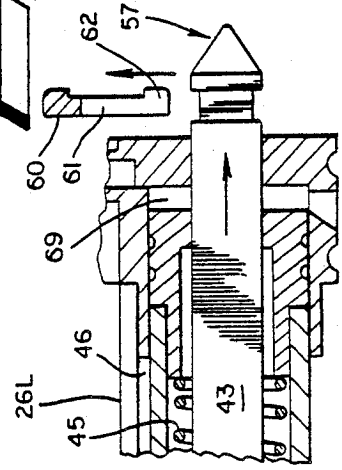


Fig. 11B

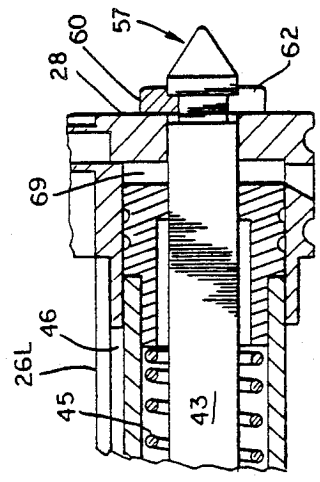


Fig. 11A

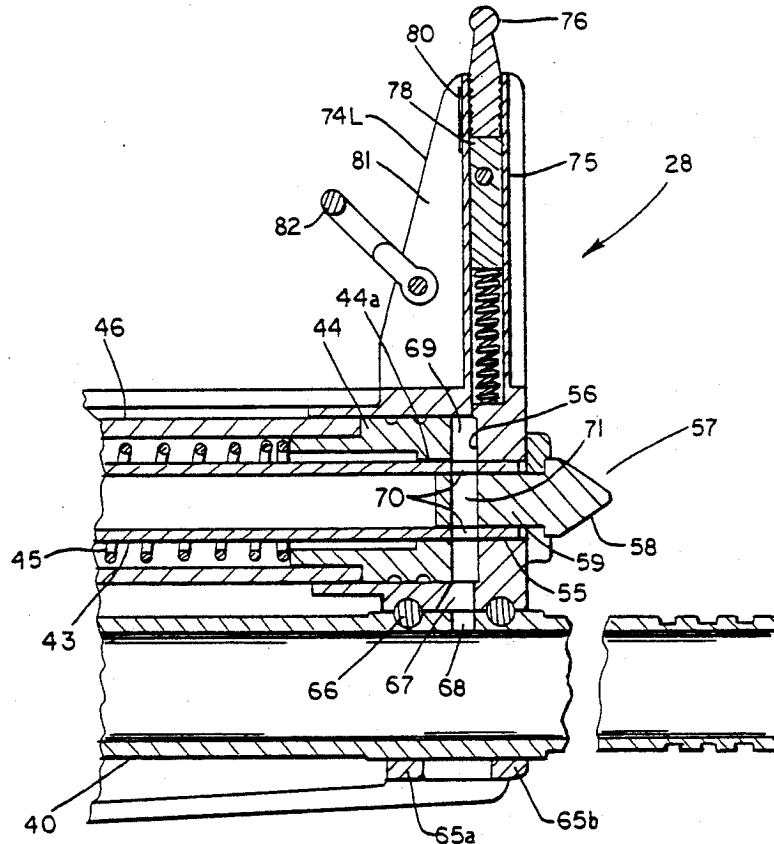


Fig. 5

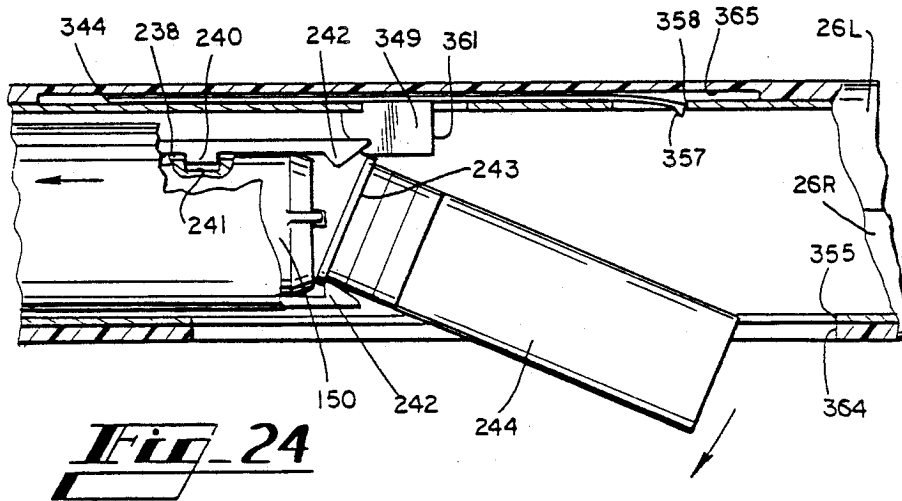
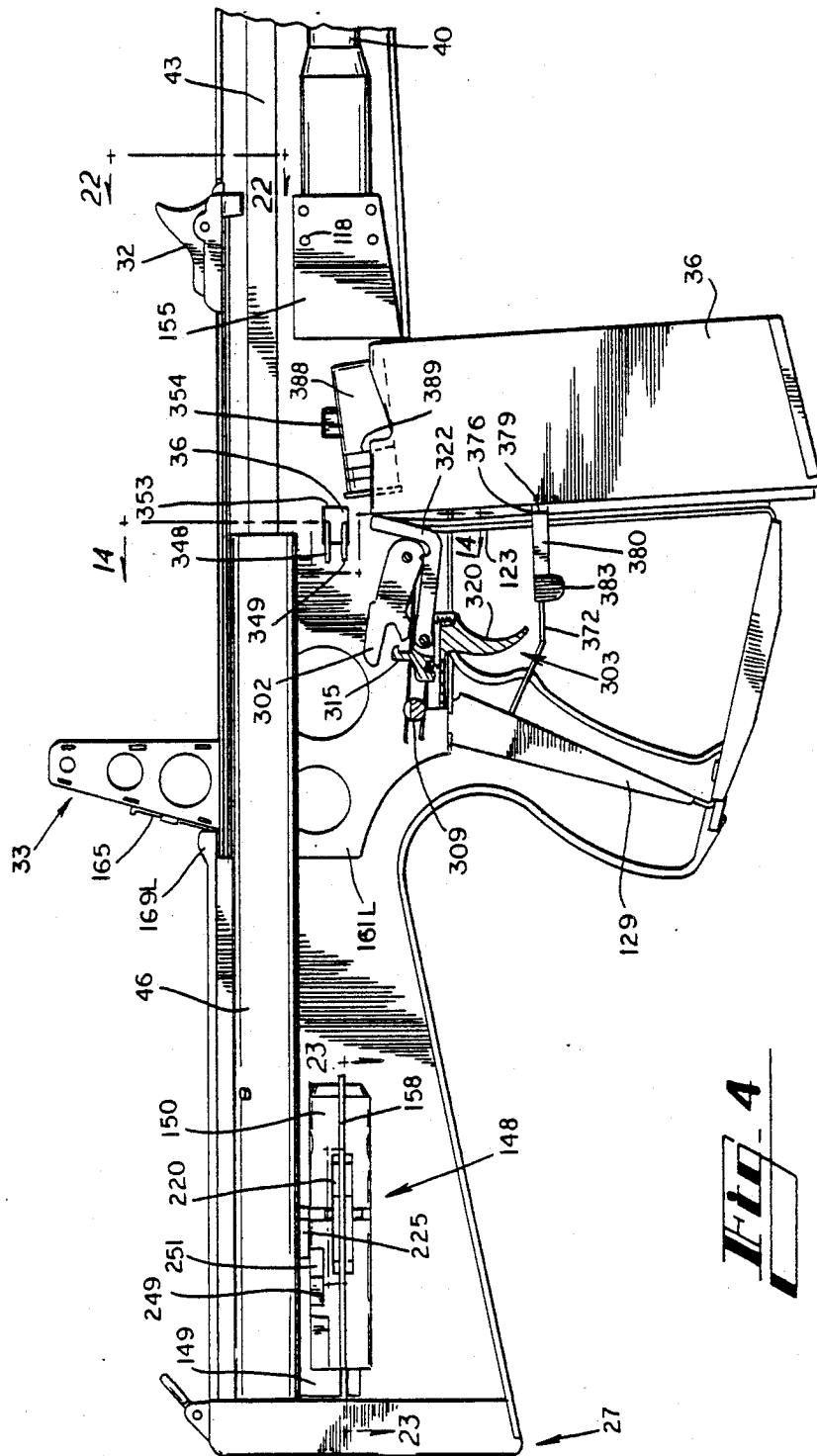


Fig. 24



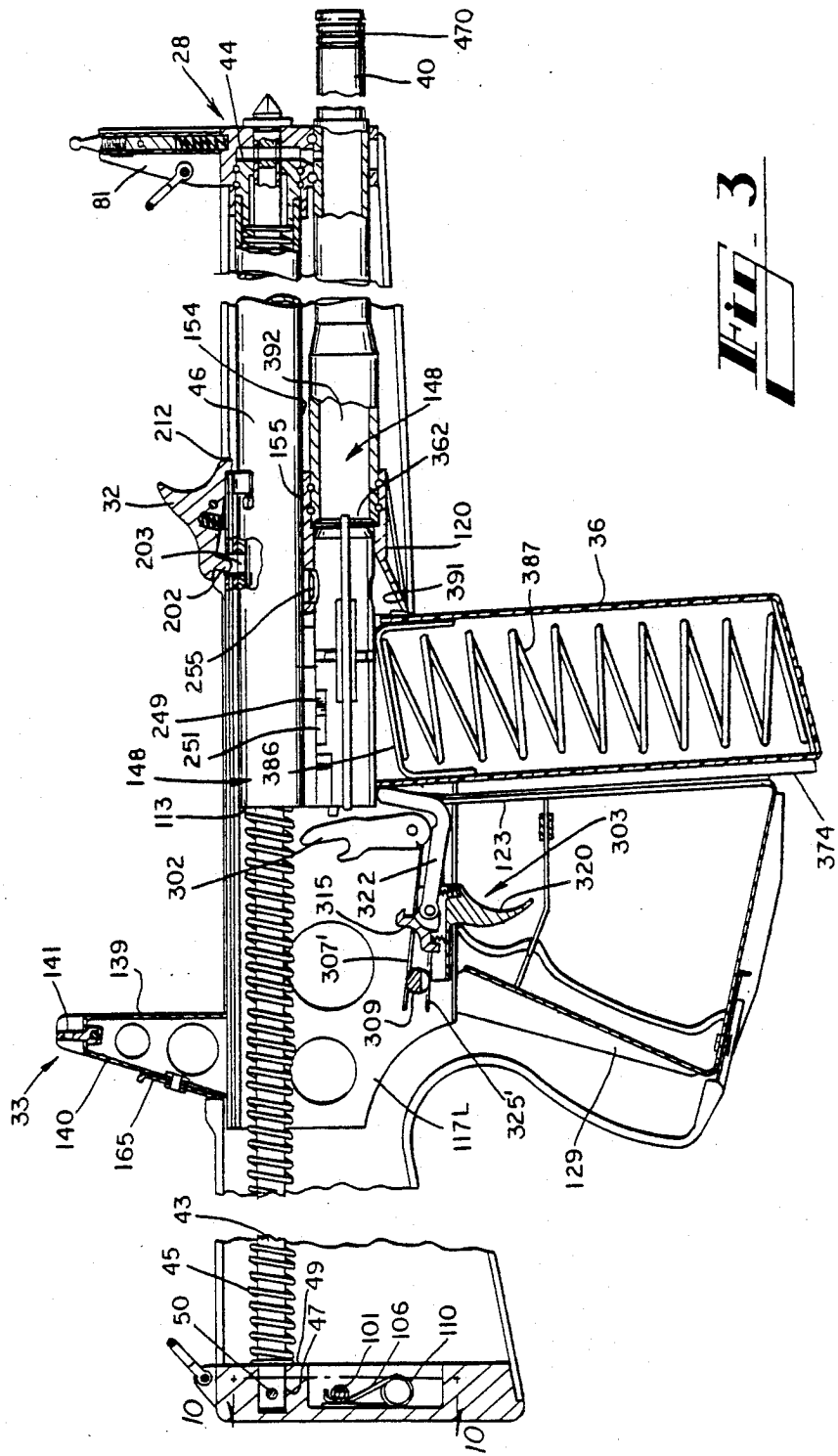
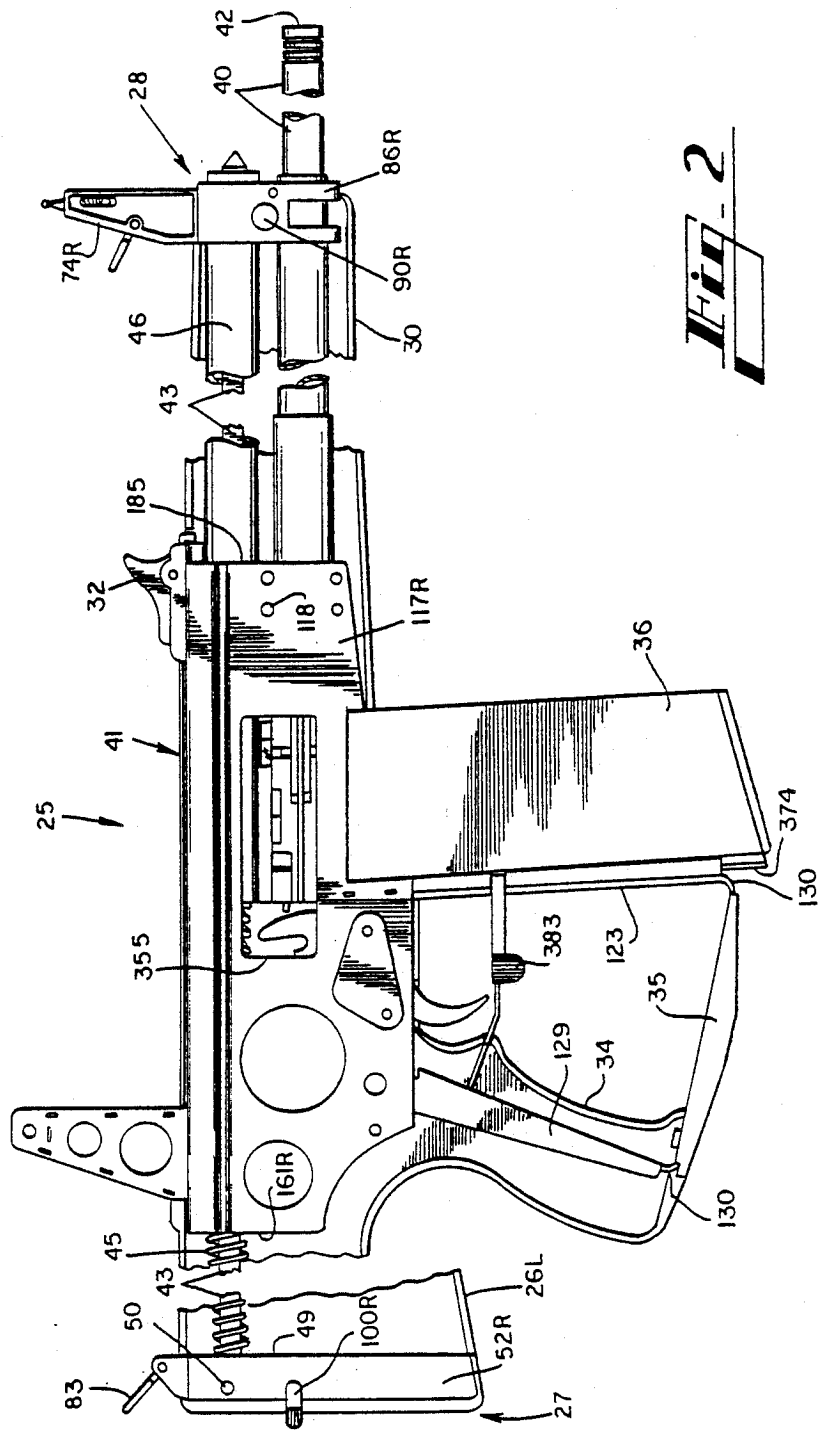
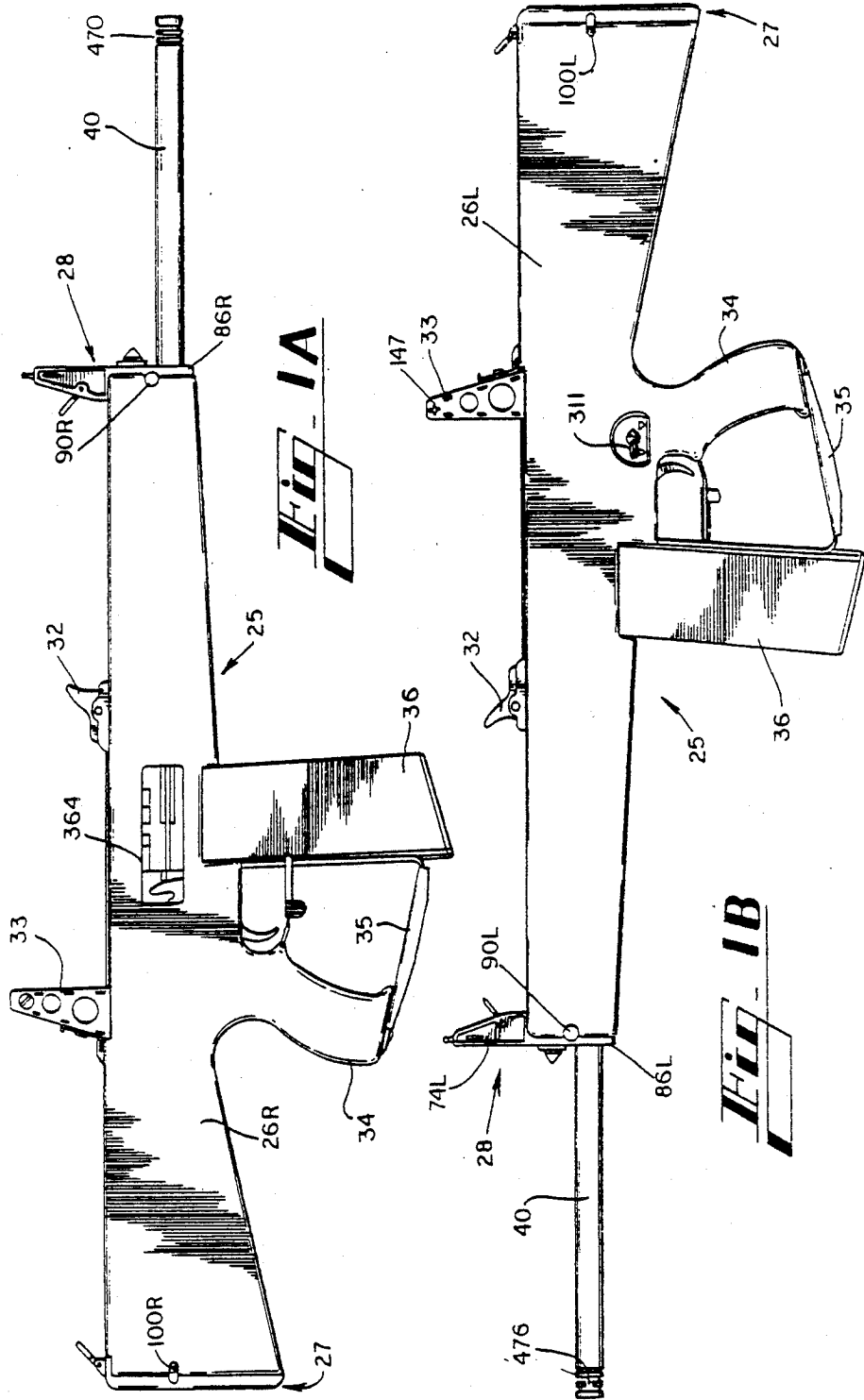
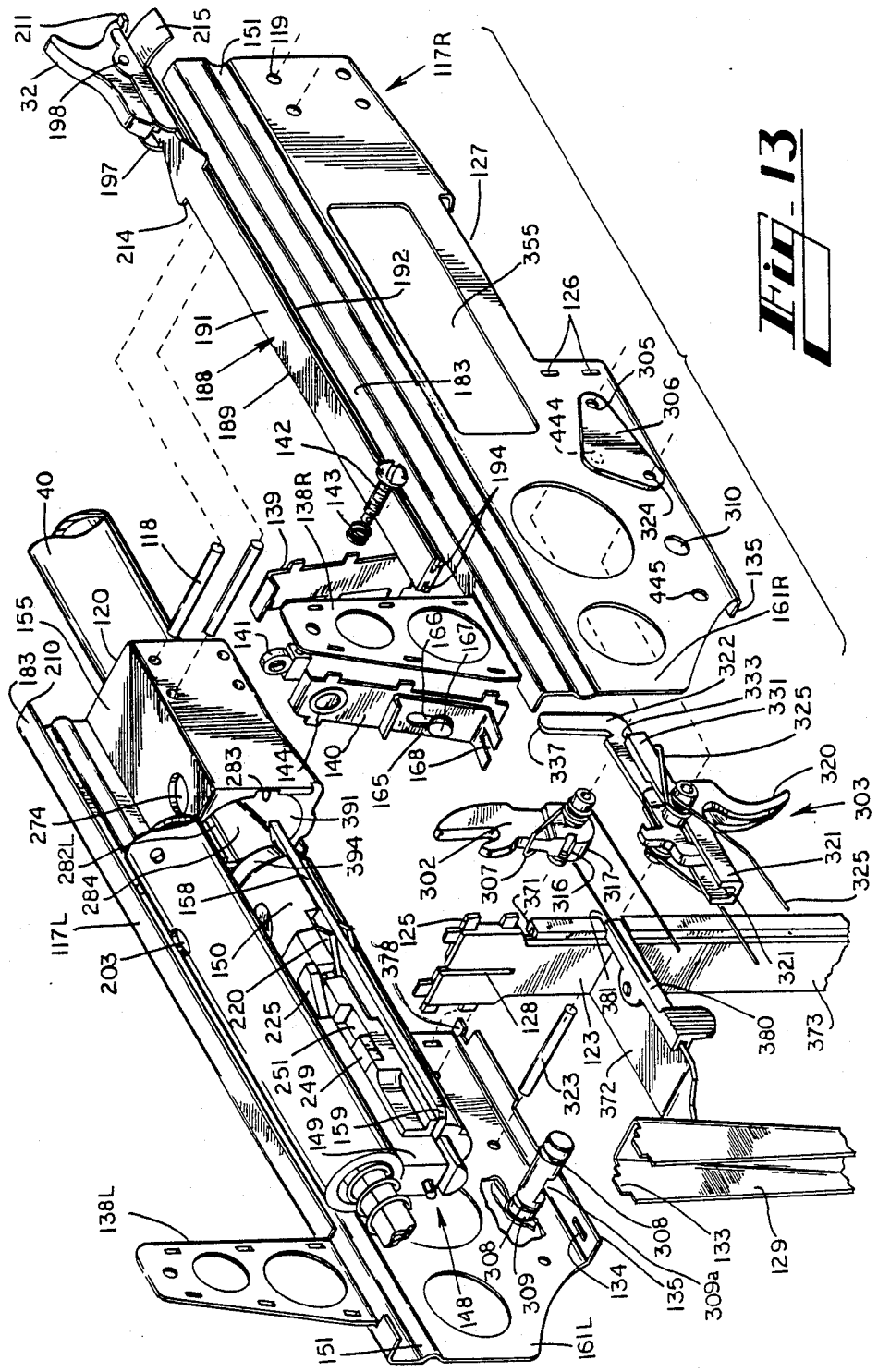


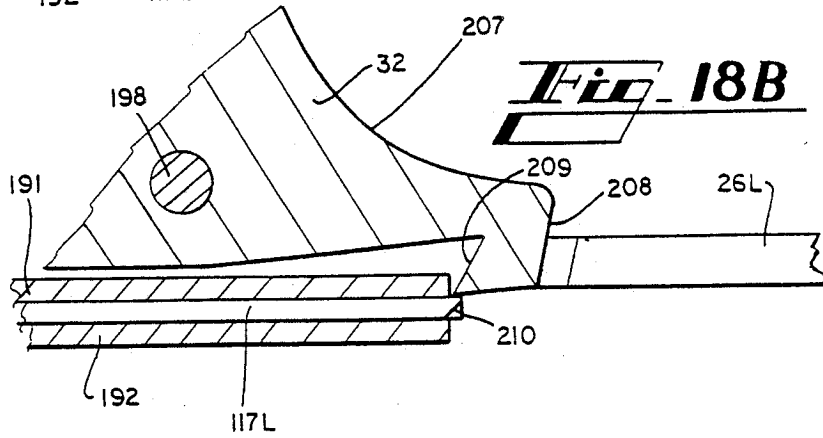
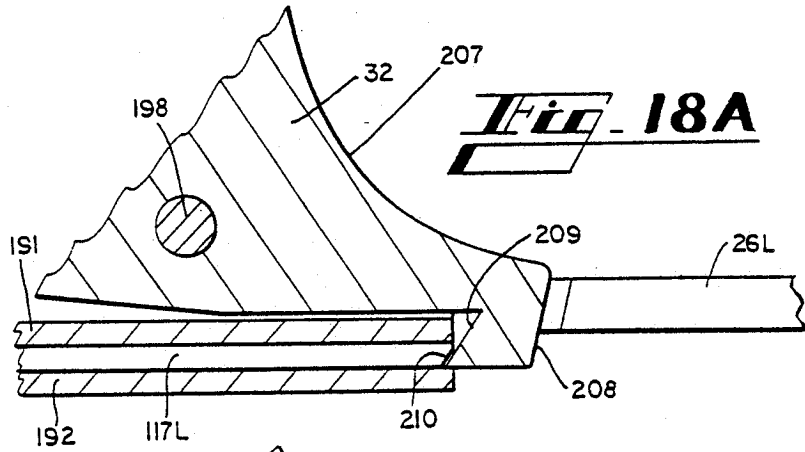
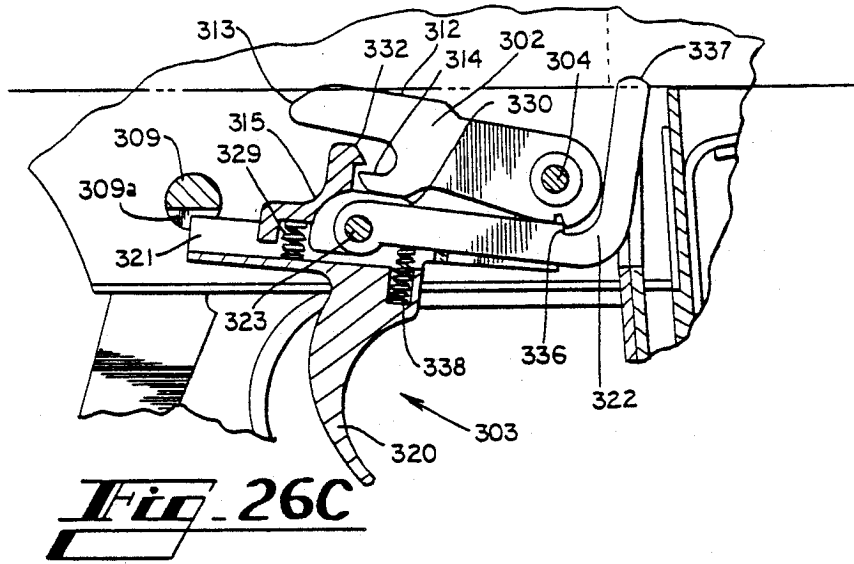
FIG. 3

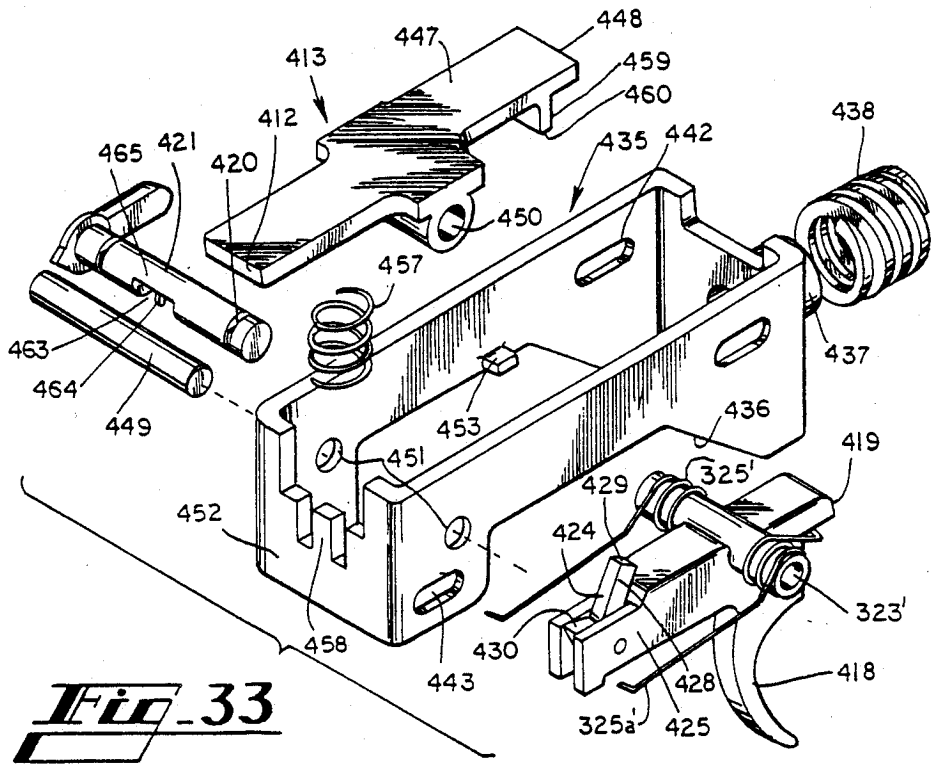
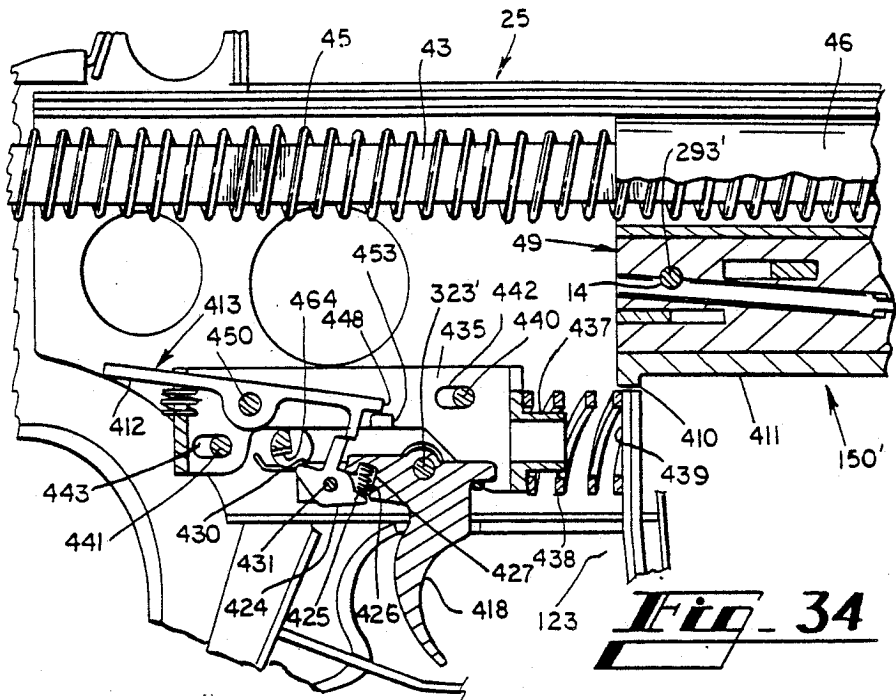






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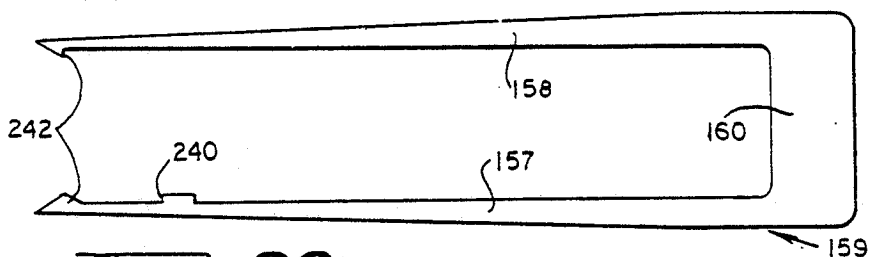


Fig. 20

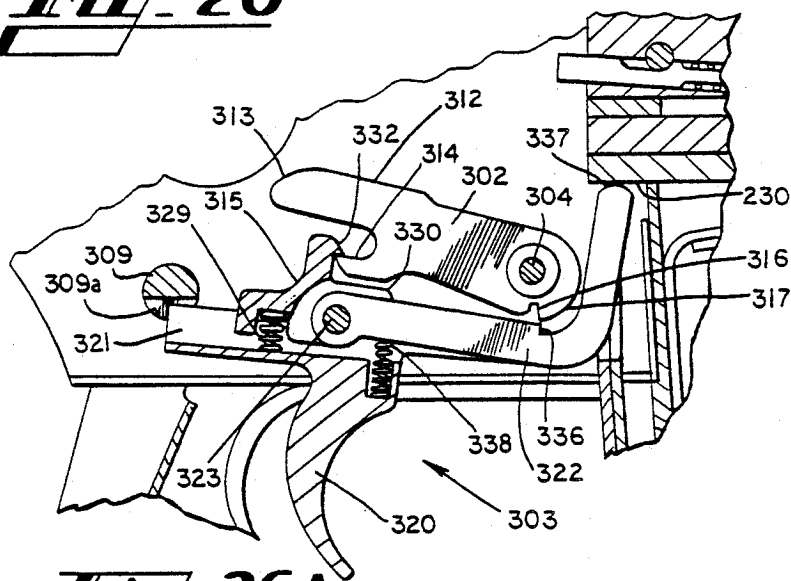


Fig. 26A

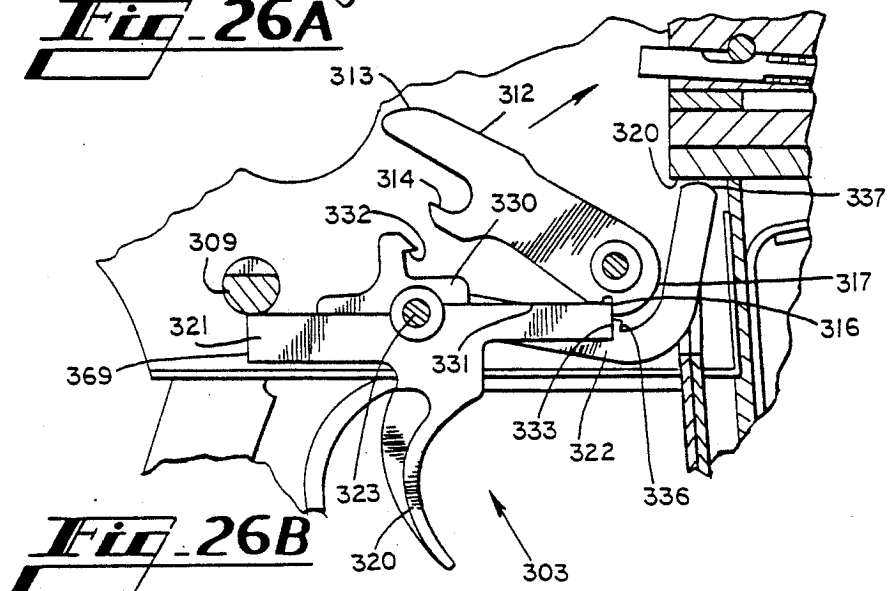


Fig. 26B

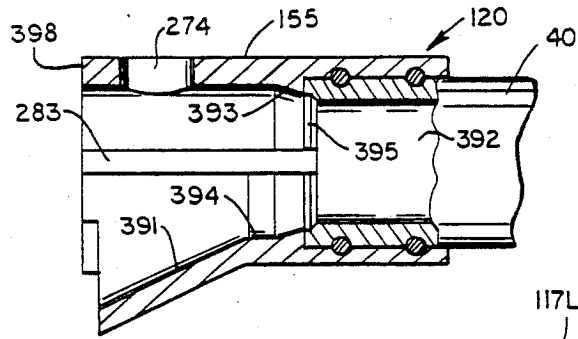


Fig. 31

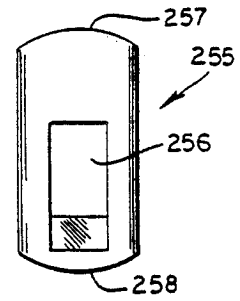


Fig. 25

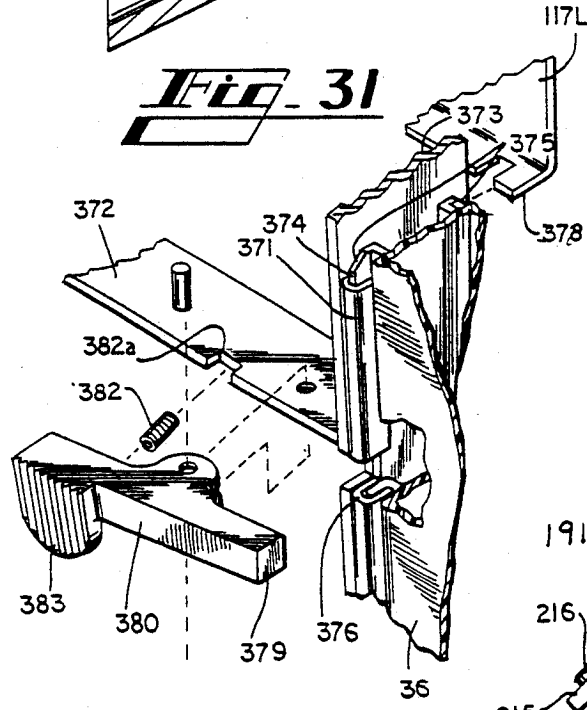


Fig. 30

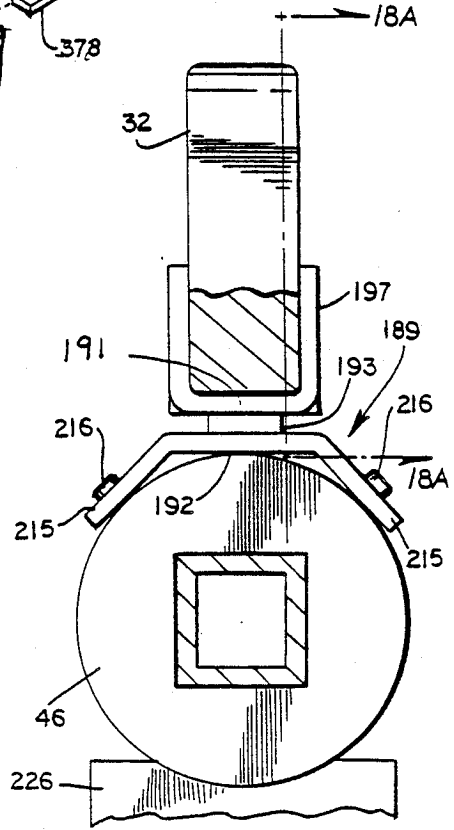


Fig. 22

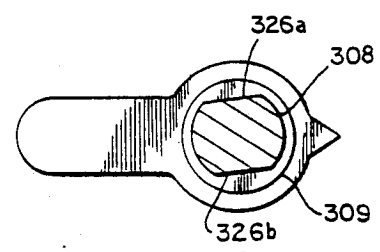
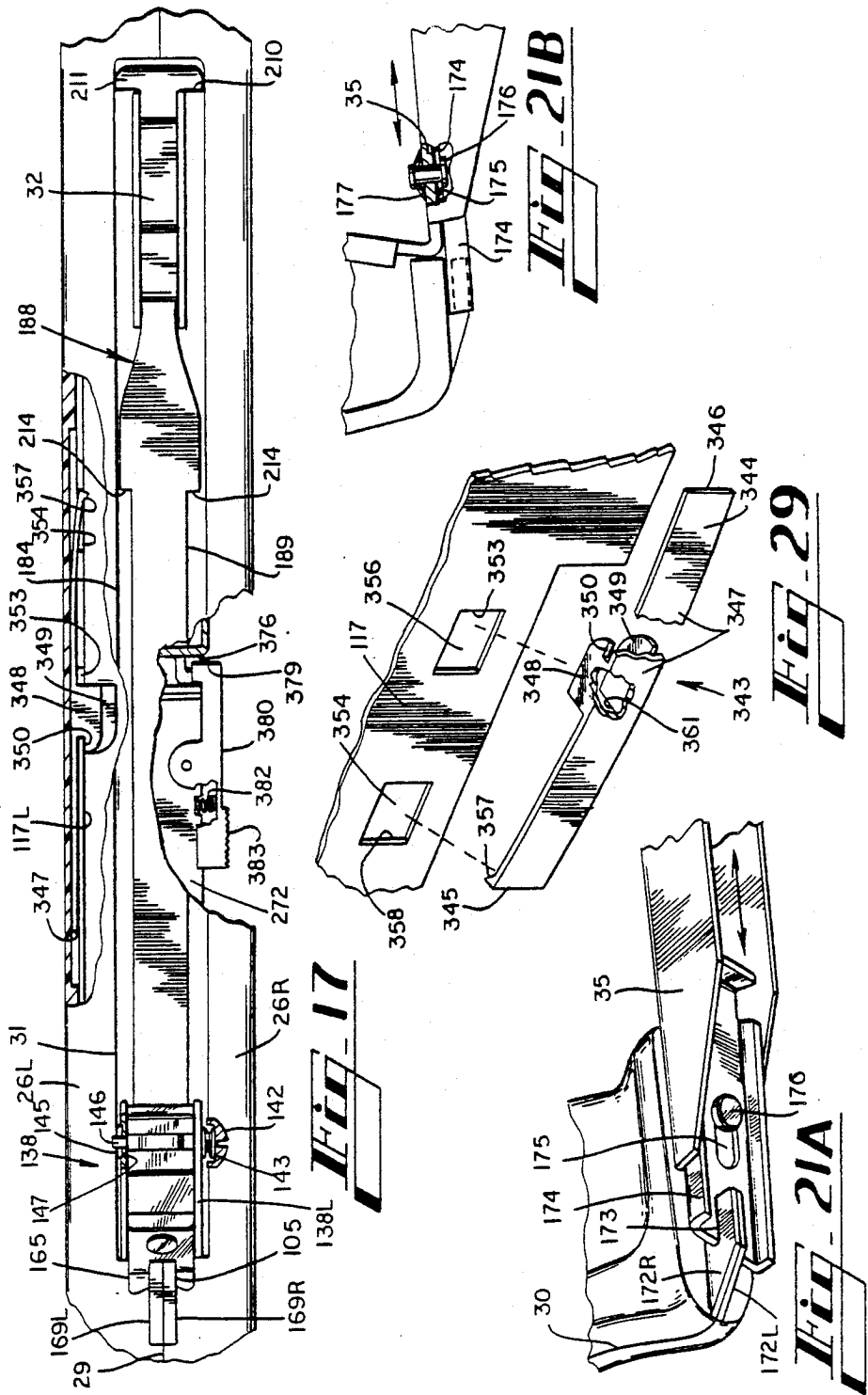
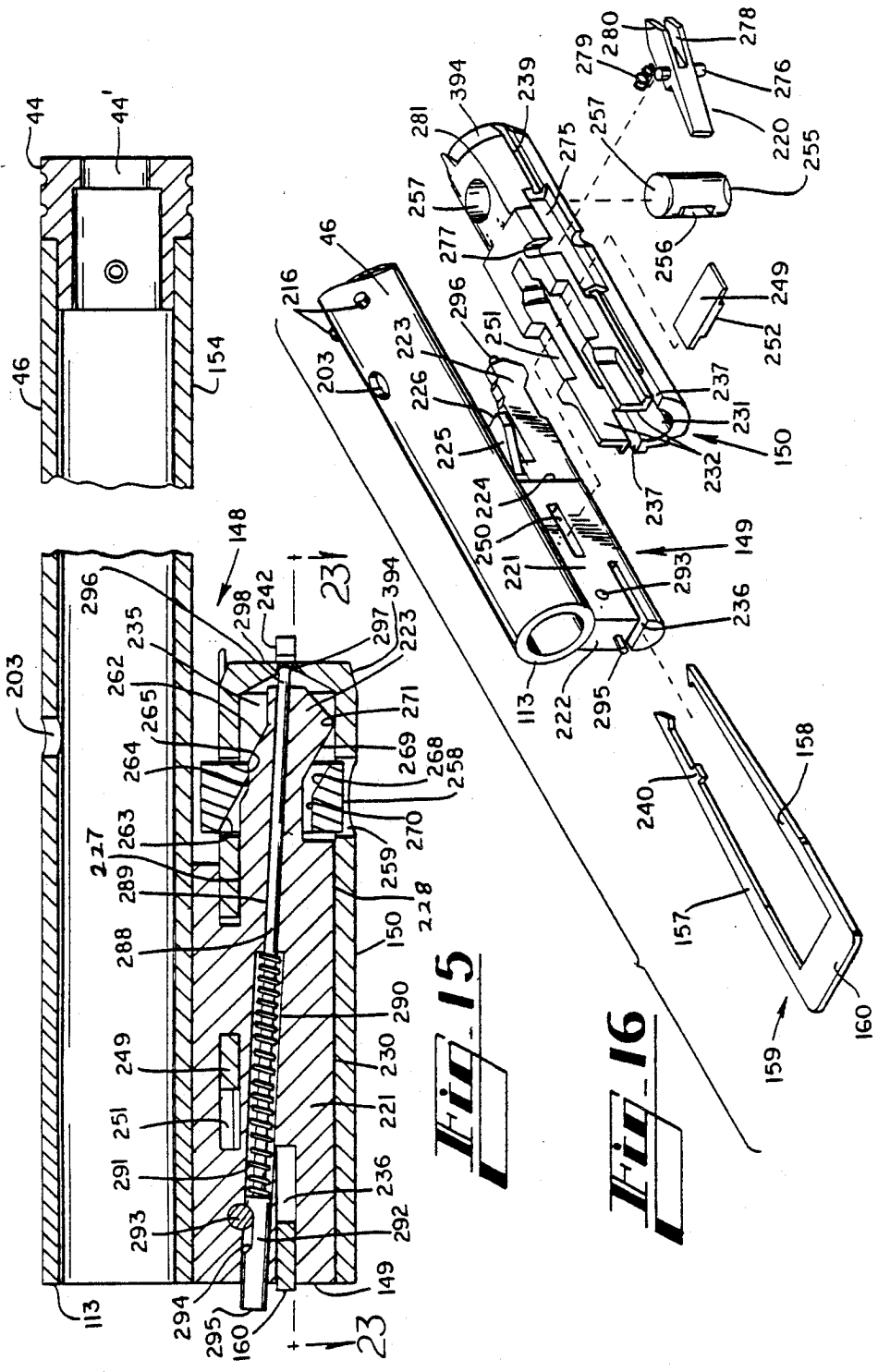


Fig. 27





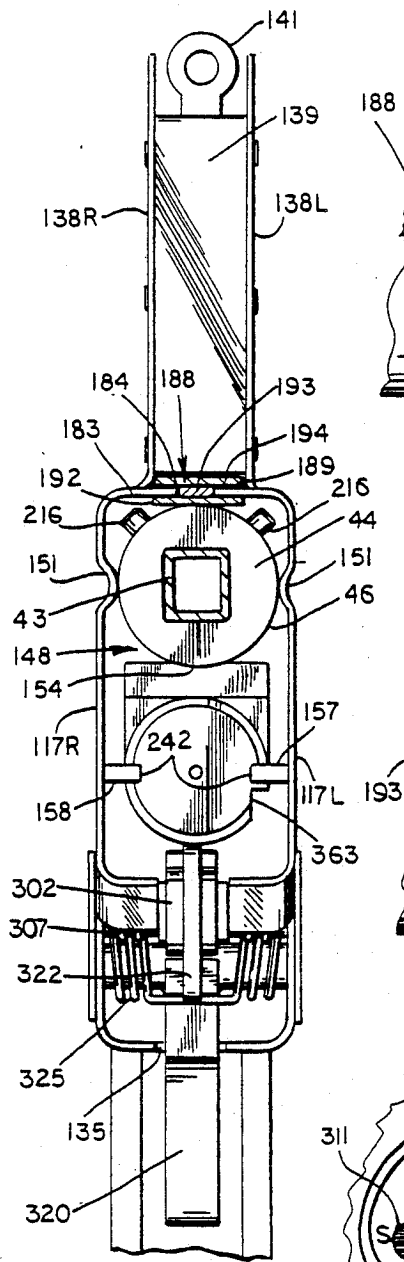


Fig. 14

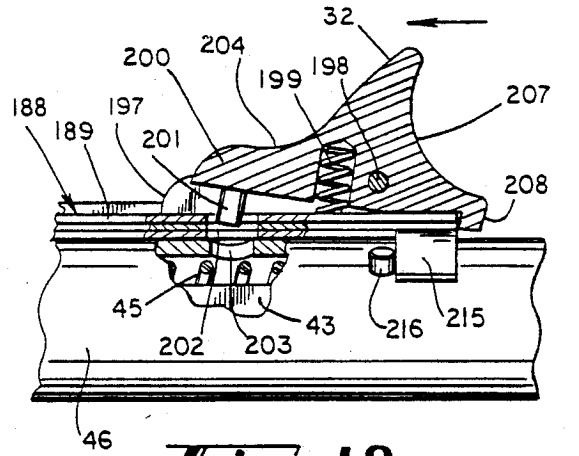


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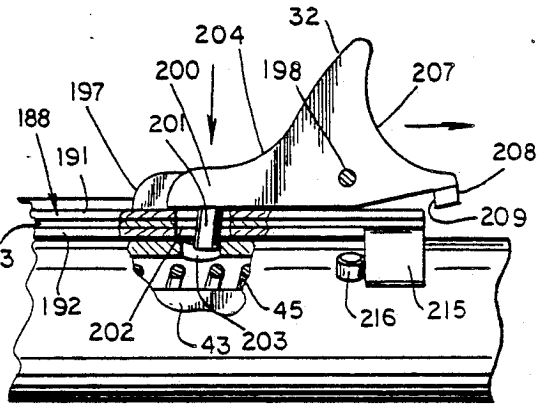


Fig. 19

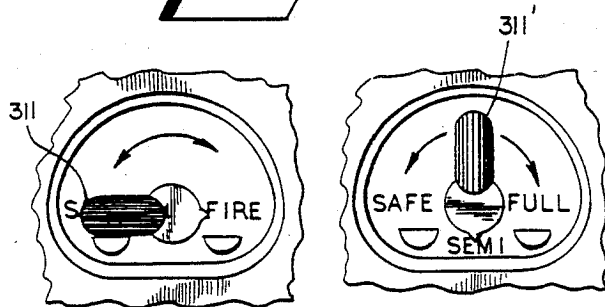


Fig. 28

Fig. 35

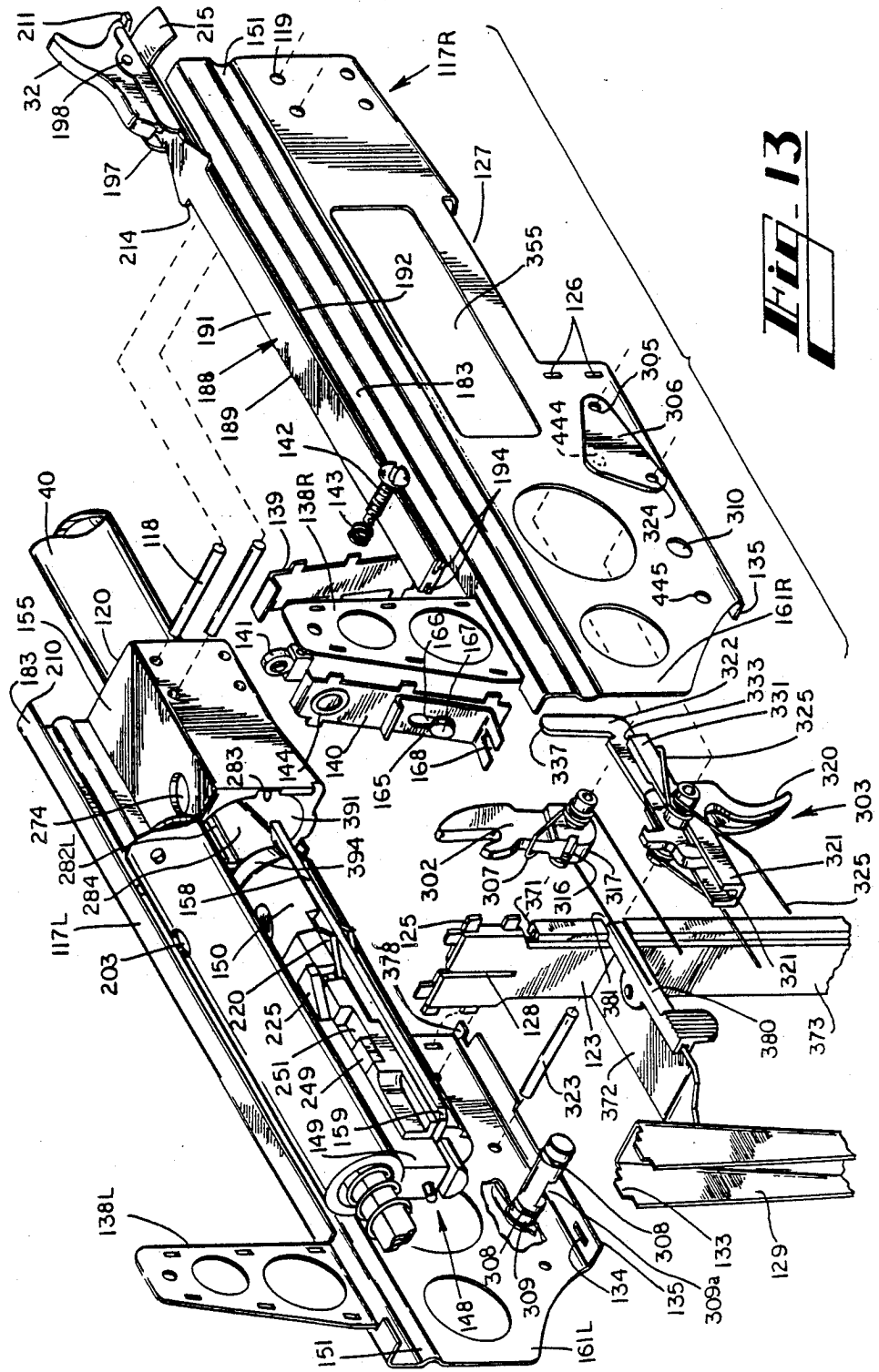


FIG. 13

Fig. 36

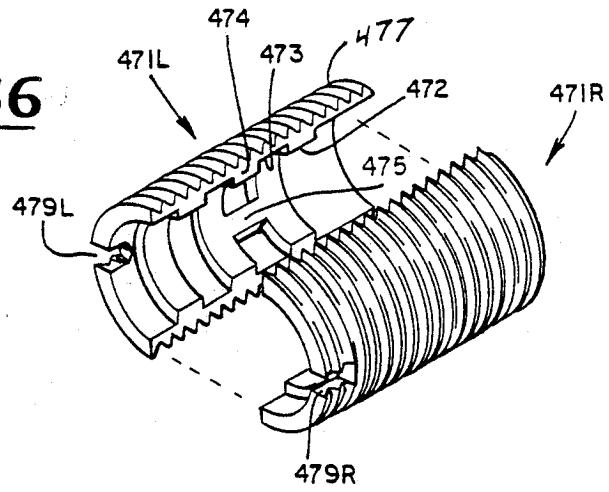


Fig. 37

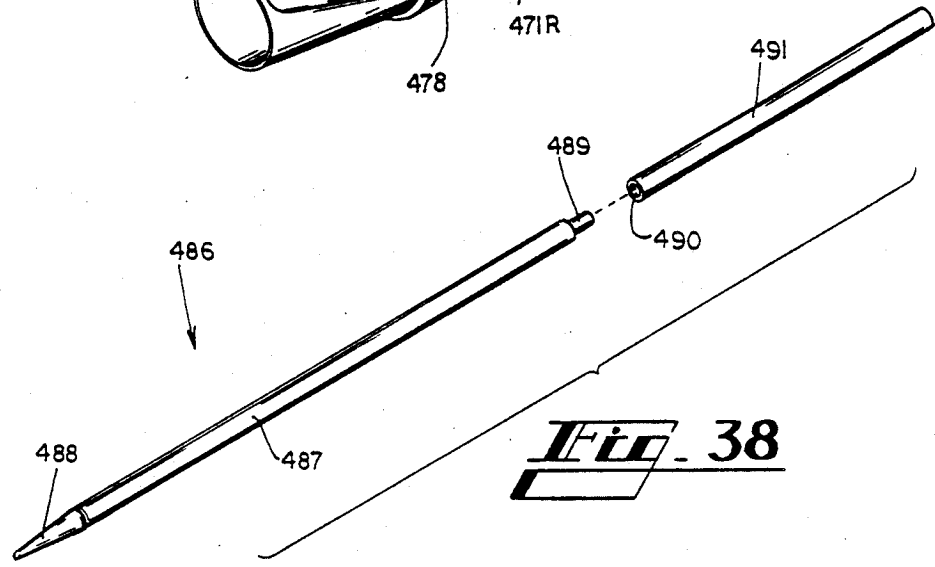
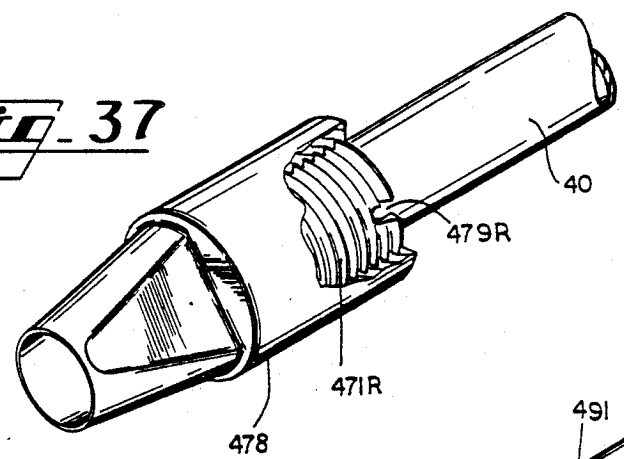


Fig. 38