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(54) Title: RETRACTABLE NEEDLE ADAPTERS AND SAFETY SYRINGES

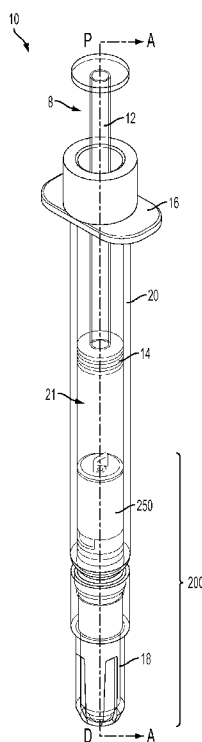


FIG. 20

(57) Abstract: Barrel adapters 100, 200 for safety syringes 10 include a barrel 20 and a plunger assembly 8 adapted to move within the barrel 20, a barrel tip 130, 230 adapted to be sealingly engaged with a distal end of the barrel 20 and a needle retraction mechanism 111, 211 having a needle sub-assembly 120, 220 and an actuator subassembly 110, 210. The needle subassembly 120, 220 includes a needle 101, 201, and a needle-over-mold 122, 222 (NOM) through which the needle 101, 201 extends. The needle subassembly 120, 220 is disposed at least partially within the barrel tip 130, 230, and adapted to move from an injection position in which the needle 101, 201 extends from a distal end of the barrel tip 130, 230 to a retracted position in which the needle 101, 201 is disposed within at least one of the barrel tip 130, 230 or the barrel 20. The actuator subassembly 110, 210 includes a needle seal 116, 216, a push-bar, and an actuator 114 surface. The needle retraction mechanism 111, 211 includes a biasing member 140, 240 and an actuatable locking arrangement. A syringe 10 includes such barrel adapters 100, 200.



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