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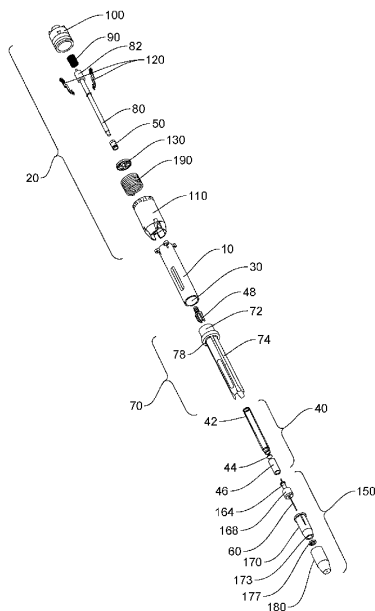


FIG. 1

(57) Abstract: The present invention relates to an injection device comprising an elongated housing having a proximal end and a distal end, the proximal end comprising an actuation mechanism, wherein: said elongated housing defines an inner lumen between said proximal and distal ends which is adapted to receive and hold a formulation chamber relative to said actuation mechanism, said formulation chamber also having corresponding proximal and distal ends, and having a stopper between its proximal and distal ends for retaining formulation in said formulation chamber; said actuation mechanism having corresponding proximal and distal ends, and comprises an actuation housing with a proximal end, and a distal end adapted for engaging said elongated housing, wherein said actuation mechanism includes a plunger, the distal end of said plunger engaging said stopper or being adapted to engage said stopper, said plunger being in communication with at least one driving spring which biases the plunger distally when the actuation mechanism is primed for injection, wherein said plunger is held in position against said bias by at least one retention arm or toggle having at least one first surface adapted to engage an opposed complementary second surface to hold said plunger in a first unactuated position when the actuation mechanism is primed for injection, the first and second surfaces being held in an engaged position by a restrainer which translates from an unactuated position or configuration to an actuated position or configuration when triggered, thereby allowing uncoupling of the engagement between the first and second surfaces and release of the plunger to move distally. The present invention also relates to needle hubs, actuation mechanisms, dosing mechanisms and assembled elongated housings for use with such injection devices, as well as methods of using such devices.

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