PREFILLED RETRACTABLE SYRINGE, PLUNGER AND NEEDLE ASSEMBLY THEREFOR

ABSTRACT

A retractable syringe, plunger and releasable needle retaining assembly are provided. The retractable syringe typically has a glass barrel and is prefilled with fluid contents before use. The releasable needle retaining system comprises a retractable needle, a needle seal, a retaining member and an ejector member that is operable to release the retractable needle from the retaining member. The retaining member has a mating surface for mounting to a complementary mating surface of an interior wall of a syringe barrel. The plunger comprises a plunger outer, a plunger rod frangibly connected to a controlling member, a spring and a unitary plunger seal capable of engaging the retractable needle, wherein the plunger rod, plunger outer and the controlling member co-operate to releasably maintain the spring in an initially compressed state. After delivery of fluid contents of the syringe, the plunger forces the ejector member to release the retractable needle from the retaining member. Decompression of the spring at the end of depression of the plunger facilitates retraction of the retractable needle when engaged with the unitary plunger seal. Dual locking systems prevent re-use of the syringe after needle retraction.

Figure 1