devices, in order to reset the dose setting mechanism, the spindle that advances in a distal direction during dose injection must somehow be retracted back into the dose setting mechanism. Certain known methods of retracting this spindle back into the dose setting mechanism to a restart or an initial position are known in the art. As just one example, certain known reset mechanisms require a user to turn back or push back (retract) the spindle or some other portion of the dose setting mechanism. Resetting of known dose setting mechanisms have certain perceived disadvantages. One perceived disadvantage is that the pen device user has to disassemble the device to either remove an empty cartridge or somehow reset the device. As such, another perceived disadvantage is that such devices have a high number of parts and therefore such devices are typically complicated from a manufacturing and from an assembly standpoint. For example, certain typical resettable pen type devices are not intuitive as to how a user must replace an empty cartridge or how a user is to reset the device. In addition, because such resettable devices use a large number of components parts, such resettable devices tend to be large and bulky, and therefore not easy to carry around or easy to conceal.

There is, therefore, a general need to take these disadvantages associated with resetting issues into consideration in the design and development of resettable drug delivery devices. Such desired drug delivery devices would tend to reduce the number of component parts and also tend to reduce manufacturing costs while also making the device less complex to assemble and manufacture. Such desired devices would also tend to simplify the steps required for a user to reset a dose setting mechanism while also making the device less complex and more compact in size.

SUMMARY

According to an exemplary arrangement, a dose setting mechanism for a drug delivery device comprises an outer housing and an inner housing having an external groove and an internal helical groove. The inner housing guides the driver to dispense a dose set by the dose setting mechanism. A dial sleeve may be disposed between the outer and inner housing and is rotatably engaged with the external groove the inner housing. ~~When a dose is set, t~~The dial sleeve is rotated with respect to both the outer housing and the inner housing during dose setting. The dial sleeve is translated away from both the outer housing and the inner housing.

According to another exemplary arrangement, a dose setting mechanism for a drug delivery device, said mechanism comprising an outer housing; an inner housing having an external groove and a helical spline, wherein said helical spline of said inner housing is positioned on an internal surface of said inner housing; a dial sleeve coupled to said external groove of said inner housing; a driver rotationally coupled to said dial sleeve during a dose setting step: a coupling member comprising at least one rib that is rotationally coupled to said helical spline of said inner housing. During said dose setting step, said dial sleeve and said driver are both rotated, said dial sleeve follows said external groove on said inner housing, and said coupler rotates out on said helical spline and is allowed to rotate relative to said dial sleeve and driver. Further, during a dose dispense step, said driver is rotationally decoupled from said dial sleeve and rotationally coupled with said coupler, characterized in that said coupler is configured not to move axially relative to said inner housing and not to rotate said driver when said dose setting mechanism is moved between said dose setting step and said dose dispense step or between said dose dispense step and said dose setting step.