travel of the runner along the track through the at least one unidirectional barrier and into a locked position in which further movement of the runner and needle shield is prevented. The runner may be static in relation to the needle shield, in which case the track move to cause the runner to travel along the track. Alternatively, the runner may move with the needle shield to cause movement of the runner along the track. In the locked position it is preferable that the runner is located such that further movement of the runner is physically inhibited. It is preferable that the assembly is arranged such that movement of the shield can only occur with a consequent movement of the runner with respect to the track, and if the runner is prevented from moving with respect to the track then movement of the shield is prevented. Thus, by moving the runner into a locked position, the shield is locked in a position in which the needle is shielded. An injector comprising the needle shield assembly may, therefore, be a single use injector in which the needle can only be exposed for use on a single occasion before the shield assembly is locked in place.

According to one aspect, there is provided a needle safety shield assembly for an injector, comprising: a needle for shielding a needle of the injector; and a shield locking means; in which the needle shield is arranged to be movable between: a first shield position in which the needle is shielded and the shield is capable of being moved to expose the needle; a second shield position in which the needle is exposed for use and the shield is capable of being moved to re-shield the needle; and a third shield position in which the needle is re-shielded and the needle shield is prevented from further movement to expose the needle; wherein: the shield locking means comprises a first track having a first unidirectional barrier and a second track having a second unidirectional barrier, the first and second tracks adapted to engage with the runner, movement of the needle shield being associated with movement of the runner such that in the first shield position the runner is engaged with the first track, on movement between the first shield position and the second shield position the runner passes along the first track and through the first unidirectional barrier into the second track, and on movement between the second shield position and the third shield position the runner passes along the second track and through the second unidirectional barrier into a locked position in which further movement of the runner and needle shield is prevented; wherein the first unidirectional barrier is a flexible arm or flexible wall, and the second unidirectional barrier is a flexible arm or flexible wall.

The movement of the needle safety to a locked position in which further movement of the needle shield is prevented is advantageous because it prevents further exposure

of the injector needle after use. This is beneficial because it reduces the risk of cross-contamination and/or needle-stick injuries. The locking of the needle shield also assists with the identification of used injectors and the safe destruction thereof.

The needle shield may be arranged to be movable between: a first shield position in which the needle is shielded and the shield is capable of being moved to expose the needle; a second shield position in which the needle is exposed for use and the shield is capable of being moved to re-shield the needle; and a third shield position in which the needle is re-shielded and the needle shield is prevented from further movement to expose the needle. The needle shield is preferably biased by a biasing means such as a spring towards a position in which the needle is shielded. Thus, the needle shield assembly may automatically shield the needle after use of the injector.

In one embodiment, the shield locking means comprises at least one track comprising at least one unidirectional barrier, the at least one track adapted to engage with the runner, movement of the needle shield being associated with movement of the runner such that in the first shield position the runner is engaged with the at least one track, on movement between the first shield position and the second shield position the runner passes along the at least one track, and on movement between the second shield position and the third shield position the runner continues to pass along the at least one track and through the unidirectional