CLAIMS

1. A method comprising:

reciprocating a first plate carrying a plurality of first tool halves, a second plate carrying a plurality of second tool halves, or both, relative to each other, between (i) an open configuration in which the first plate and the second plate are spaced apart, and (ii) a closed configuration in which the first plate and the second plate are in such close proximity to one another that the first and second tool halves contact one another and together define a plurality of injection molding cavities, each of the plurality of injection molding cavities forming a separate mold half;

bringing the first plate and the second plate into the closed configuration and injecting a mold-forming material into the plurality of injection molding cavities, thereby forming a plurality of injection molded mold halves;

during the reciprocating, propelling a gripper plate between a receive position and a deliver position, the receive position being a location where the gripper plate is positioned between the first plate and the second plate when the first plate and the second plate are in the open position, and the deliver position being a location where the gripper plate is not positioned between the first plate and the second plate; and

receiving, with mold-removing elements of the gripper plate, the plurality of mold halves from the first or second tool halves when the gripper plate is in the receive position;
CHARACTERISED IN THAT:

the method is a method of manufacturing a contact lens and the mold halves are contact lens mold halves; and

the gripper plate is propelled by a linear motor and comprises carbon fiber material and is configured to stop only instantaneously at the receive position and the first plate and second plate begin to close from the open configuration to the closed configuration before the gripper plate has been fully removed from between the first plate and the second plate.

2. The method as claimed in claim 1, further comprising applying a vacuum to each of the mold-removing elements to thereby transfer the plurality of contact lens mold halves from the first or second tool halves into the mold-removing elements of the gripper plate.

3. The method as claimed in any of claims 1 to 2, wherein, during the reciprocating, the first plate and the second plate are moved from the open configuration to the closed configuration before the gripper plate has reached the deliver position.

4. The method as claimed in any of claims 1 to 3, further comprising synchronizing the steps of opening the first plate and the second plate during the reciprocating, followed by inserting the gripper plate between the first plate and the second plate during the propelling, followed by removing the gripper plate from between the first plate and the second plate following the receiving, and followed by closing the first plate and the second plate during the reciprocating, the synchronizing thereby minimizing dwell time of the gripper plate between the first plate and the second plate during the reciprocating.

5. The method as claimed in any of claims 1 to 4, further comprising accelerating the gripper plate away from the receive position at a rate of more than 45 m/s^2 following the receiving.

6. The method as claimed in any of claims 1 to 5, further comprising stopping the gripper plate at the deliver position; approaching the gripper plate with a pick head at the deliver position, and transferring the plurality of contact lens mold halves from the gripper plate to the pick head during the receiving.

7. The method as claimed in claim 6, further comprising applying a vacuum to the mold-removing elements, then, during the receiving, stopping the application of vacuum to the mold-removing elements, and, substantially simultaneously, starting applying vacuum through vacuum inlets in the pick head, thereby causing the transferring of the contact lens mold halves from the mold-removing elements of the gripper plate to the pick head.

8. The method as claimed in claim 6 or claim 7, further comprising, following the transferring, moving the pick head from the deliver position to a transport position in which the plurality of contact lens mold halves are provided to a transporter.

9. The method as claimed in claim 8, wherein moving from the deliver position to the transport position comprises moving the pick head from a vertical position to a horizontal position.

10. The method as claimed in claim 8 or claim 9, wherein, when the pick head is in the transport position, the application of vacuum to the pick head is stopped, thereby releasing the plurality of contact lens mold halves onto the transporter.

11. The method as claimed in any of claims 1 to 10, further comprising the steps of, following the receiving, placing a polymerizable composition onto a lens forming surface of individual first contact lens mold halves; contacting the first contact lens mold halves with the second contact lens mold halves to form contact lens mold assemblies having the polymerizable composition in contact lens-shaped cavities; exposing the mold assemblies to conditions to polymerize the polymerizable composition present in the contact lens-shaped

cavities to form polymerized contact lens bodies; demolding and delensing the mold assemblies to release the polymerized contact lens bodies; optionally washing, or extracting, or hydrating, or any combination thereof, the released contact lens bodies; sealing the contact lens bodies in contact lens packages with packaging solution; and sterilizing the sealed packages to form packaged contact lenses.