Claims

1. A method of providing a male mold half (1) for molding a toric ophthalmic lens at a predetermined target rotational orientation (TROM), the male mold half comprising a front face (10) having a toric convex lens-forming surface (100) and a rear face (11) opposite to the front face (10), the method comprising the steps of:

- providing the male mold half (1) at a predetermined rotational orientation (PROM),

- picking the male mold half (1) up with a gripper (5) having a central axis (55),

- rotating the gripper (5) with the male mold half (1) about the central axis (55) of the gripper (5) by a predetermined rotational angle (α) towards the predetermined target rotational orientation (TROM), the predetermined rotational angle (α) being the angular difference between the predetermined rotational orientation (PROM) and the predetermined target rotational orientation (TROM), and

- releasing the rotated male mold half (1) from the gripper (5),

wherein

- prior to picking the male mold half (1) up, centering the gripper (5) and the male mold half (1) relative to each other such that the central axis (55) of the gripper and a central axis (113) of the male mold (1) half coincide,

- picking the male mold half (1) having the target rotational orientation (TROM) up with a capping stamp (7) having a central axis (75), and placing the male mold half (1) on the female mold half (2) to mate the male and female mold halves (1, 2) while keeping the target rotational orientation (TROM) of the male mold half (1) relative to the predetermined rotational orientation (PROF) of the female mold half (2) to form the closed lens mold (3), and

- prior to picking the male mold half (1) up, centering the capping stamp (7) and the male mold half (1) relative to each other such that the central axis (75) of the capping stamp (7) and a central axis (113) of the male mold half (1) coincide.

2. A method according to claim 1, wherein the centering surface portion (53) of the gripper (5) is a conical portion, in the form of a chamfer, tapering towards a distal end face (54) of the gripper (5).

3. A method according to claim 2, wherein the rear face (11) of the male mold half (1) includes a cylindrical portion extending in a direction coaxial with the central axis (113) of the male mold half (1) and forming the centering surface portion (112) thereof, and

wherein the method further comprises introducing the gripper (5) into the cylindrical portion (112) on the rear face (11) of the male mold half (1) until the conical portion of the gripper (5) engages the cylindrical portion on the rear face (11) of the male mold half (1) thereby causing centration of the gripper (5) and the male mold half (1) relative to each other.

4. A method according to claim 3, wherein the rear face (11) of the male mold half (1) further comprises an annular surface (114) adjoining the cylindrical portion at a distal end of the cylindrical portion, the annular surface (114) extending radially inwardly in a plane perpendicular to the central axis (113) of the male mold half (1) and having at least one pair of projections (115) arranged thereon, the projections (115) of each pair of the at least one pair of projections (115) being arranged angularly spaced from one another by 180 degrees in the plane perpendicular to the central axis (113) of the male mold half (1),wherein the distal end face (54) of the gripper (5) extends in a plane perpendicular to the central axis (55) of the gripper (5), the distal end face (54) of the gripper (5) comprising at least one pair of recesses (56) arranged therein, the recesses (56) of each pair of the at least one pair of recesses (56) being arranged angularly spaced from one another by 180 degrees in the plane perpendicular to the central axis (55) of the gripper (5),
and wherein the method further comprises introducing the gripper (5) into the cylindrical portion of the rear face (11) of the male mold half (1) until the recesses (56) of the at least one pair of recesses (56) arranged in the distal end face (54) of the gripper (5) engage with the projections (115) of the at least one pair of projections (115) arranged on the annular surface (114) of the rear face (11) of the male mold (1) half to rotationally lock the male mold half (1) and the gripper (5).

5. A method of mating a male mold (1) half having a toric convex lens-forming surface (100) with a female mold (2) half having a non-rotationally symmetric concave lens-forming surface (200), to form a closed lens mold (3) for molding a toric ophthalmic lens, the method comprising:

- providing the female mold half (2) at a predetermined rotational orientation (PROF), and providing the male mold half (1) at a target rotational orientation (TROM) relative to the predetermined rotational orientation (PROF) of the female mold half (2) using the method of claim 1,

- picking the male mold half (1) having the target rotational orientation (TROM) up with a capping stamp (7) having a central axis (75), and placing the male mold half (1) on the female mold half (2) to mate the male and female mold halves (1, 2) while keeping the

target rotational orientation (TROM) of the male mold half (1) relative to the predetermined rotational orientation (PROF) of the female mold half (2) to form the closed lens mold (3),
wherein the method further comprises

- prior to picking the male mold half (1) up, centering the capping stamp (7) and the male mold half (1) relative to each other such that the central axis (75) of the capping stamp (7) and a central axis (113) of the male mold half (1) coincide.

6. A method according to claim 5, wherein centering the capping stamp (7) and the male mold half (1) relative to each other is performed by engaging a centering surface portion (73) of the capping stamp (7) with a centering surface portion (112) provided on the male mold half (1).

7. A method according to claim 6, wherein the centering surface portion (73) of the capping stamp (7) is a conical portion, for example a chamfer, tapering towards a distal end face (74) of the capping stamp (7).

8. A method according to claim 7, wherein the rear face (11) of the male mold half (1) includes a cylindrical portion extending in a direction coaxial with the central axis (113) of the male mold half (1) and forming the centering surface portion (112) thereof, and wherein the method further comprises introducing the capping stamp (7) into the cylindrical portion on the rear face (11) of the male mold half (1) until the conical portion at the distal end of the capping stamp (7) engages the cylindrical portion on the rear face (11) of the male mold half thereby causing centration of the capping stamp (7) and the male mold half (1) relative to each other.

9. A method according to claim 8, wherein the rear face (11) of the male mold half (1) further comprises an annular surface (114) adjoining the cylindrical portion at a distal end of the cylindrical portion, the annular surface (114) extending radially inwardly in a plane perpendicular to the central axis (113) of the male mold half (1) and having at least one pair of projections (115) arranged thereon, the projections (115) of each pair of the at least one pair of projections (115) being angularly spaced from one another by 180 degrees in the plane perpendicular to the central axis (113) of the male mold half (1),
wherein the distal end face (74) of the capping stamp (7) comprises at least one pair of recesses (76) arranged therein, the recesses (76) of each pair of the at least one pair of recesses (76) being spaced from one another by 180 degrees in the plane perpendicular to the central axis (75) of the capping stamp (7),

and wherein the method further comprises introducing the capping stamp (7) into the cylindrical portion of the rear face (11) of the male mold half (1) until the recesses (76) of the at least one pair of recesses (76) arranged in the distal end face (74) of the capping stamp (7) engage with the projections (115) of the at least one pair of projections (115) arranged on the annular surface (114) of the rear face (11) of the male mold half (1) to rotationally lock the male mold half (1) and the capping stamp (7).