Claims

1. Carrier for carrying an ophthalmic lens, in particular a contact lens such as a soft contact lens, during its treatment in a bath, the carrier comprising:
   a basket (10) comprising a basket wall defining a concave cavity (50) for accommodating an ophthalmic lens, the basket (10) further comprising a plurality of recesses (17) arranged in the basket wall at different angular locations along the circumference of the basket (10), each recess (17) of the plurality of recesses (17) being arranged to extend downwardly from an upper rim (15) of the basket wall;
   and a retainer (20) comprising a plurality of retainer arms (21) corresponding to the plurality of recesses (17) arranged in the basket wall, the retainer arms (21) being arranged in a star-shaped configuration at angular locations corresponding to the angular locations of the recesses (17) along the circumference of the basket (10), to in an assembled state of two such carriers (1) extend into a corresponding one of the plurality of recesses (17) in the basket wall to retain the ophthalmic lens in the carrier,
   wherein the basket wall defining the concave cavity (50) comprises first and second concavely curved sections (18, 19), the first and second concavely curved sections (18, 19) each having a curvature, with the curvature of the first concavely curved section (18) being different from the curvature of the second concavely curved section (19).

2. Carrier according to claim 1, wherein the first concavely curved section (18) is a lower section and the second concavely curved section (19) is an upper section of the basket wall, the upper section and the lower section being coaxially arranged about a central axis of the basket (10).

3. Carrier according to claim 2, wherein the lower section has a stronger curvature than the upper section.

4. Carrier according to claim 1, wherein the retainer arms (21) are arranged to have a protruding shape to in the assembled state of two such carriers

protrude into the concave cavity (50) defined by the basket wall to further limit a space (60) for the ophthalmic lens in the carrier (1).

5. Carrier according to claim 4, wherein the protruding shape comprises first and second portions (22, 23) of the retainer arms (21), the first portion (22) having a convex shape and the second portion (23) having a concave shape.

6. Carrier according to claim 4, wherein the retainer arms radially merge in a common central hub (12).

7. Carrier according to claim 1, wherein the basket wall comprises a transition section (70) arranged between and connecting the first and second concavely curved sections (18, 19) of the basket wall, wherein the transition section connecting the first and second concavely curved sections (18, 19) is rounded to connect the first and second concavely curved sections (18, 19) without forming any sharp edges.

8. Carrier according to claim 1, wherein the basket wall comprises a plurality of basket wall segments (11), in particular at least eight basket wall segments (11), which are adjacently arranged to one another in the direction of the circumference of the basket (10), each individual basket wall segment (11) of the plurality of basket wall segments (11) being formed by a centrally arranged common basket wall bottom and by two adjacently arranged webs (13) extending radially outwardly from the common basket wall bottom to a radial outer end (14) of the respective web (13), the radial outer end (14) of the respective web (13) being arranged in one of the recesses (17) of the plurality of recesses (17), and the individual basket wall segment (11) further being formed by a rim portion (150) connecting the radial outer ends (14) of the two adjacently arranged webs (13) to define an opening (16) bounded by the common basket wall bottom, the two adjacently arranged webs (13) and the rim portion (150).

9. Carrier according to claim 1, wherein the basket wall and each of the retainer arms (21) comprise a lens-contacting surface (24), and wherein the lens-contacting surface of the basket wall is larger than the sum of the lens-

contacting surfaces (24) of all retainer arms (21).

10. Carrier according to claim 9, wherein the lens-contacting surface (24) of all retainer arms (21) is convexly rounded (24).

11. Carrier according to claim 5, wherein the first concavely curved section (18) of the basket wall has a radius of curvature in the range of 7 mm and 10 mm, in particular in the range of 8 mm and 9 mm, and wherein the second concavely curved section (19) of the basket wall has a radius of curvature in the range of 11 mm and 15 mm, in particular in the range of 12 mm and 14 mm, and wherein further the first portion (22) of the retainer arms (21) having the convex shape has a radius of curvature in the range of 5 mm to 9 mm, in particular in the range of 6 mm to 8 mm, and wherein the second portion (23) of the retainer arms (21) having the concave shape has a radius of curvature in the range of 4 mm to 6 mm, in particular in the range of 5 mm to 6 mm.

12. ~~Carrier array (40) for forming a plurality of carriers according to claim 1, the carrier array (40) comprising a plurality of baskets (10) and a plurality of retainers (20),~~

~~each basket (10) of the plurality of baskets (10) comprising a basket wall defining a concave cavity (50) for accommodating an ophthalmic lens, the basket (10) further comprising a plurality of recesses (17) arranged in the basket walls at different angular locations along the circumference of the baskets (10), each recess (17) of the plurality of recesses (17) being arranged to extend downwardly from an upper rim (15) of the basket wall; and~~

~~each retainer (20) of the plurality of retainers (20) comprising a plurality of retainer arms (21) corresponding to the plurality of recesses (17) arranged in the basket wall, the retainer arms (21) being arranged in a star-shaped configuration at angular locations corresponding to the angular locations of the recesses (17) along the circumference of the basket (10),~~

~~wherein a said retainer (20) is integrally formed with each basket (10) on a side of the basket (10) opposite to the basket wall defining the concave cavity (50), and~~

~~wherein the baskets (10) and retainers (20) of the carrier array (40) are arranged in a matrix configuration comprising one or more rows and one or more columns.~~

13. ~~Carrier tray (46) comprising a frame (45) and one or more carrier arrays (40) according to claim 12 attached to the frame (45).~~

14. ~~Carrier stack system (47) comprising a plurality of carrier trays (46) according to claim 13 arranged one above the other to form a stack, wherein with respect to two carrier trays (46) adjacently arranged in the stack the retainer arms (21) of the retainer of an upper carrier tray (46) of the two adjacently arranged carrier trays (46) extend into the recesses (17) in the basket wall of the basket (10) of the lower carrier tray (46) of the two adjacently arranged carrier trays (46).~~