## Patent Claims

1. An anchor dowel provided for being cast into a castable, hardening mass, in particular concrete (42), having a receiving portion (6) for a joining member (34, 36) to be held by means of the anchor dowel (2, 2‘),wherein the anchor dowel (2, 2‘) has a surface (10) facing away from a tensile force direction (Z) and a surface (4) facing in the tensile force direction (Z), which surface (4) facing in the tensile force direction (Z) is essentially concavely curved to the effect that introduced tensile forces are distributed over the surface along the castable, hardening mass, wherein the anchor dowel (2, 2‘) consists essentially of a synthetic material, the receiving portion (6) has an internal thread (8) for screwing with the joining member (36), and the internal thread is part of a nut (8) of the anchor dowel (2, 2’) arranged at the surface (10) facing away from the tensile force direction (Z).

2. The anchor dowel according to claim 1, characterized in that the concave curvature is realized by a conic section, in particular a parabolic or a hyperbolic contour.

3. The anchor dowel according to claim 1 or 2, characterized in that the surface (4) facing in the tensile force direction (Z) is essentially rotationally symmetrical.

4. The anchor dowel according to one of the preceding claims, characterized in that the receiving portion (6) has a through-hole.

5. The anchor dowel according to one of claims 1 to 4, characterized in that a bolt, in particular a threaded bolt or a screw (36), is inserted into the receiving portion (6).

6. The anchor dowel according to one of the preceding claims, characterized in that a guide sleeve is inserted into the receiving portion (6).

7. The anchor dowel according to one of the preceding claims, characterized in that at least one recess (9) is provided in the surface (4) for abutting a reinforcement (38).

8. A concrete component having at least one anchor dowel (2, 2‘) according to one of the preceding claims.

9. The concrete component according to claim 8, characterized in that one face (14) of the anchor dowel (2, 2‘) is flush with the concrete component (22), or said anchor dowel is

recessed in the concrete component (22).

10. The concrete component according to claim 8 or 9, characterized in that a reinforcement (38) abuts the surface (4) of the anchor dowel (2, 2‘).

11. The concrete component according to claim 8, 9 or 10, characterized in that it comprises a double wall (22) wherein two concrete shells form a cavity and wherein the anchor dowel (2) is mounted in the double wall.