CLAIMS

1. Storage and retrieval unit (7) movable along at least one travel lane (6) of a high-bay warehouse (1) with a plurality of multi-level rack bays (3), the storage and retrieval unit (7) comprising:

(a) a raisable and lowering lifting bridge (22) with a plurality of linear guides (42); and

(b) at least two telescopic pick-ups (100) mounted on the lifting bridge (22) for picking up and shifting containers (4, 34) of different longitudinal lengths in a high-bay warehouse (1),

(a) wherein each container includes a longitudinal side, two end-faces, and at least four corresponding openings on top of the container (4, 34);

(b) wherein each telescopic pick-up (100) comprises at least one displaceable telescopic arm (120) mounted on the lifting bridge (22),

(i) wherein the displaceable telescopic arm (120) of each telescopic pick-up (100) includes a pick-up (130) for holding the container (4, 34) handled by way of at least two supports (140);

(ii) wherein the at least two supports (140) of each pick-up (131) support the pick-up (130) to be movable along a first displacement direction, the first displacement direction aligned perpendicular to the longitudinal side of the container (4, 34) handled;

(iii) wherein each pick-up (130) includes at least two twist-lock bolts (131), each twist-lock bolt (131) arranged to engage in and lock one of the at least four corresponding openings of the container (4, 34) handled; and

(iv) wherein at least one of the at least two telescopic pickups (100) is movable along a second displacement direction within the linear guides (42), the second displacement direction perpendicular to both the first displacement direction and each of the two end-faces of the container (4, 34) handled.

2. The storage and retrieval unit (7) according to claim 1, characterised in that the support (140) comprises at least one cylinder/piston device (141) with a cylinder (142) and a piston (143) received therein to be displaceable, wherein the cylinder/piston device (141) is mounted at one end, preferably the side of the cylinder (142), on the telescopic arm (120) and at the other end, preferably the side of the piston (142), on the pick-up (130) and is so arranged that the pick-up (130) is vertically movable relative to the

telescopic arm (120).

3. The storage and retrieval unit (7) according to claim 2, characterised in that the cylinder/piston device (141) further comprises a spring (144), preferably a helical spring, so arranged that the cylinder/piston device (141) can be extended and shortened in resilient manner by displacement of the piston (143) in the cylinder (142).

4. The storage and retrieval unit (7) according to claim 2 or 3, characterised in that two cylinder/piston devices (141) are provided, the devices being spaced apart in the direction of displacement of the telescopic arm (120), preferably arranged at the two end sections of the pick-up (130).

5. The storage and retrieval unit (7) according to any one of the preceding claims, characterised in that the support (140) comprises at least one pendulating rod which is mounted by way of at least one joint (145, 146), preferably constructed as a ball joint, on the telescopic arm (120) and/or the pick-up (130) so that the pick-up (130) is movable relative to the telescopic arm (120) substantially in the horizontal plane.

6. The storage and retrieval unit (7) according to any one of the preceding claims, characterised in that this comprises a displaceable outer telescopic arm (110), the [other] telescopic arm (120) being an inner telescopic arm which is mounted and guided by the outer telescopic arm (110) to be displaceable along the displacement direction of the outer telescopic arm (110) and relative thereto.

7. The storage and retrieval unit (7) according to claim 6, characterised in that the outer telescopic arm (110) has along the displacement direction thereof one or more, preferably two, outer guide profiles (111) co-operating with guide rollers (112), which are rotatably mounted at a main housing (101) of the telescopic pick-up (100), for displacement of the outer telescopic arm (110), and the outer telescopic arm (110) further has along the displacement direction thereof one or more, preferably two, inner guide profiles (113) co-operating with guide rollers (122), which are rotatably mounted on the inner telescopic arm (120), for displacement of the inner telescopic arm (120).

8. The storage and retrieval unit (7) according to any one of the preceding claims, characterised in that this comprises a rack drive (125) with at least one rack (126) and at

least one pinion meshing with the rack (126), wherein the rack drive (125) is so arranged that the rotational movement of the pinion is converted into a linear movement of the rack (126), whereby the telescopic arm (120) is displaceable, particularly retractable and extensible.

9. The storage and retrieval unit (7) according to claim 1, characterised in that the support (140) comprises at least two strap elements (147, 148) which are arranged to interengage and to be movable relative to one another and which allow at least a movement in a first direction and in a second direction perpendicular to the first direction.

10. The storage and retrieval unit (7) according to claim 9, characterised in that the strap elements (147, 148) are detachably interconnectible by way of at least one bolt (149).