Claims

1. Insert (1) for a turning device (10) for medical ampoules (2), comprising:
an input section (3) which has a plurality of input apertures (4) for receiving a respective ampoule (2), wherein the input apertures (4) are provided in a first arrangement structure,
a dispensing section (5) having a plurality of output apertures (6) for dispensing one ampoule (2) at a time, wherein the output apertures (6) are provided in a second arrangement structure, and
a transition section (7) which has a plurality of guide means (8), the transition section (7) being arranged and/or designed in such a way that ampoules (2) can pass from the input apertures (4) through the guide means (8) to the output apertures (6),
wherein the input apertures (4) and the outlet apertures (6) are arranged eccentrically relative to each other.

2. The insert (1) according to claim 1, wherein the input apertures (4) and the output apertures (6) are arranged offset relative to one another in a plan view of the insert (1).

3. The insert (1) according to claim 1, wherein the input section (3), the output section (5) and the transition section (7) are integrally formed.

4. The insert (1) according to claim 1, wherein each guiding means (8) comprises at least one braking portion configured to reduce a speed of movement of an ampoule (2) when guiding from the input portion (3) to the dispensing portion (5).

5. The insert (1) according to claim 1, wherein the insert (1) comprises polyoxymethylenes, polyamide, polytetrafluoroethylene and/or polyethylene terephthalate.

6. A turning device (10) for turning medical ampoules (2), comprising:
an insert (1) according to any one of claims 1 to 5,

a holding device (13) for holding the insert (1),
wherein the holding device (13) is designed to move the insert (1) along a first direction (R1),
wherein the holding device (13) is designed to rotate the insert (1) about a first axis (A1).

7. The turning device (10) according to claim 6, wherein the first direction (R1) and the first axis (A1) are orthogonal to each other.

8. The turning device (10) according to claim 6, wherein the turning device (10) comprises an actuator (14), wherein the actuator (14) is configured to perform the movement in the first direction (R1) and the rotation about the first axis (A1).

9. The turning device (10) according to claim 6, wherein the turning device (10) comprises a control unit configured to obtain an original position of the medical ampoules (2) and to determine a new position of the medical ampoules (2) after leaving the output apertures (6).

10. The turning device (10) according to claim 6, wherein the holding device (10) is designed to hold a first nest (11) with a plurality of ampoule holding positions in such a way that one ampoule holding position is opposite one of the input apertures (4) in each case, and/or
wherein the holding device (13) is designed to hold a second nest (12) with a plurality of ampoule holding locations in such a way that one ampoule holding location is opposite one of the output apertures (6).

11. The turning device (10) according to claim 6, wherein the turning device (10) comprises at least one positioning aid (19) configured to ensure a predetermined position of a nest (11, 12) upon contact of the nest (11, 12) with the turning device (10).

12. Method for turning medical ampoules (2) by means of an insert (1), comprising:

providing a plurality of medical ampoules (2) in a first arrangement structure,

pick up the ampoules (2) in one of the input apertures (4) provided in the first arrangement structure of the insert (1),

rotating the insert (1) which is receiving the respective ampoule (2),

guiding the ampoules (2) through a guide means (8) of the insert (1) from the input apertures (4) to the output apertures (6) provided in a second arrangement structure of the insert (1),

dispensing the ampoules from the output apertures (6) in the second arrangement structure,

such that the first arrangement structure differs from the second arrangement structure.