Claims:

1. Separator for separating solid matter from a fluid, comprising:

   - a separator housing section (1) forming an at least partially cylindrical inner wall (2) with respect to a vertical axis (V),

   - a funnel-shaped upper member (3) with a large diameter portion (30) being attached to said inner wall (2),

   - a funnel-shaped lower member (4) with a large diameter portion (40) being attached to said inner wall (2) at a position lower than said large diameter portion (30) of said funnel-shaped upper member (3),

   - an inlet opening (5) arranged for leading fluid into said separator housing section (1) at a position between said large diameter portions (30, 40) of the upper and lower funnel-shaped members (3, 4) with a flow direction of said fluid having at least a tangential component at said inlet opening (5),

   wherein said upper and lower funnel-shaped members (3, 4) each have axial openings (31, 41) at respective lower end portions (34, 44) opposite to said large diameter portions (30, 40), characterized in that an annular passage (6) is defined by a radial outer surface (32) of said upper funnel-shaped member (3) and a radial inner surface (43) of said lower funnel-shaped member (4), and wherein a passage is formed for allowing a flow of said fluid from said inlet opening (5) through said annular passage (6), into said axial opening (31) of said upper funnel-shaped member (3) and said large diameter portion (30) of said upper funnel-shaped member (3) in this sequence.

2. Separator according to one of the preceding claims, wherein said axial opening (41) of said lower funnel-shaped member (4) opens to an accommodation space (7) for accommodating solid matter separated from said fluid.

3. Separator according to one of the preceding claims, wherein said upper funnel-shaped member (3) opens with its large diameter portion (30) to an outlet section (8).

4. Separator according to claim 3, wherein said outlet section (8) is formed with an inner wall (80) which is continuous with an inner surface (33) of said upper funnel-shaped member (3).

5. Separator according to claim 3 or 4, wherein said outlet section (8) is formed with a circular cross section with a maximum diameter being lager than a diameter of said large diameter portion (30) of said upper funnel-shaped member (3).

6. Separator according to one of the preceding claims, further comprising a separating shield (11) in a space between said upper and lower funnel-shaped members (3, 4), said separating shield (11) being formed as annular member which is attached to said inner wall (2) of said separator housing section (1) and preferably radially spaced to said outer surface (32) of said upper funnel-shaped member (3).

7. Separator according to one of the preceding claims, wherein a treatment section (50) is fluidly connected downstream of said upper funnel-shaped member (3) which is preferably provided with means for treating fluid flowing through said treatment section (50).

8. Separator according to claim 7, wherein an overflow section (53) is provided downstream of said treatment section (50) for leading fluid towards an outlet (12) of said separator.

9. Separator according to claim 8, wherein said overflow section (53) is adjustable for levelling edges of said overflow section with respect to a horizontal orientation by a levelling arrangement (54).

10. Separator according to one of the preceding claims, wherein each of said upper and lower funnel-shaped members (3, 4) is made by concrete based material.

11. Separator according to one of claims 7 to 10, wherein said treatment section (50) is provided in an outlet housing section (60) having a larger inner diameter than the separator housing section (1).

12. Separator according to claim 11, wherein in a transition between said separator housing section (1) and said outlet housing section (60), an adapter element (61) is provided which has in inner surface which is continuous with said inner surface (33) of said upper funnel-shaped member (3) and an inner surface portion of said outlet housing section (60).

13. Separator according to one of the preceding claims, wherein a filter element (90) is provided in an area of said separator having the largest inner diameter and/or in an area providing the lowest average flow velocity in the separator.