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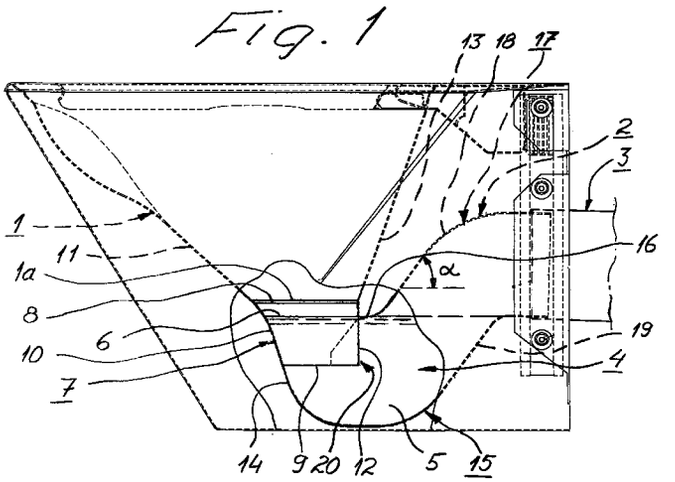
(54) Toilet of metal material

(57) The present invention relates to a toilet of metal material, whereby a tubular intermediate member (7) is provided between a cup-shaped member (1) and an outlet pipe (2). A rear wall (12) of the tubular intermediate member (7) defines a water-seal tongue which is directed down into front members of the outlet pipe (2).

Fig. 1



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Description

The present invention relates to a toilet of metal material, said toilet comprising a cup-shaped member and an outlet pipe for flushing out content in said cup-shaped member into a discharge system, whereby the toilet further comprises a water seal and whereby water in said water seal prevents odours from rising from the discharge system into the cup-shaped member.

At toilets of the abovementioned type, the outlet members often have large spaces behind the cup-shaped member. A problem is that waste water during flushing can whirl about in said spaces so that portions of the waste water remain in the water seal instead of flowing away directly to the discharge system.

The object of the present invention has been to eliminate this problem. This is arrived at by providing the abovementioned toilet with the characterizing features of subsequent claim 1.

By providing the toilet with a tubular metal member to which fore or front members of the upper wall portion of the discharge pipe are connected, a stable structure which can be manufactured in large amounts is obtained, at which the outlet members lack spaces wherein disadvantageous turbulence or whirling might occur when waste water is flushed away.

The invention will be further described below with reference to the accompanying drawings, in which

fig. 1 with a partly broken side view illustrates a toilet having a tubular metal member according to the invention;

fig. 2 is a plan view of the toilet of fig. 1; and

fig. 3 is a front view of the toilet of fig. 1.

The toilet illustrated in the drawings consists of metal material, preferably sheet material. The toilet comprises a cup-shaped member 1 and an outlet pipe 2 for flushing away the content in the cup-shaped member 1 to a discharge system 3.

The outlet pipe 2 defines a water seal 4 in which water 5 is collected so that the water surface 6 lies sufficiently high for preventing odours from rising from the discharge system 3 into the cup-shaped member 1.

Between the cup-shaped member 1 and the outlet pipe 2 there is provided a tubular intermediate member 7, which preferably consists of the same sheet material and which has the same wall thickness as the cup-shaped member 1. The cup-shaped member 1 and the tubular intermediate member 7 fit together and an upper edge 8 of said tubular intermediate member 7 is connected to a lower edge 1a of said cup-shaped member 1, preferably by welding said members 1 and 7 together. A fore or front wall portion 10 of the tubular intermediate member 7 is at the top connected to a fore or front wall portion 11 of the cup-shaped member 1 and a rear wall portion 12 of said tubular intermediate member 7 is at the top connected to a rear wall portion 13 of said cup-shaped member 1.

The tubular intermediate member 7 and the outlet pipe 2 consist preferably of sheet material with the same wall thickness and they are preferably connected to each other by welding.

Front members 14 of a lower wall portion 15 of the outlet pipe 2 are connected to the front wall portion 10 of the tubular intermediate member 7. Furthermore, front members 16 of an upper wall portion 17 of the outlet pipe 2 are located in level with the tubular intermediate member 7 and they are connected to the rear wall portion 12 of the tubular intermediate member 7. Said front members 16 of the upper wall portion 17 of the outlet pipe 2 transform in backwards direction into upwards/backwards inclining members 18 of said upper wall portion 17.

The rear wall 12 defines a water-seal tongue to said water seal 4, which tongue is directed down into the front members 14 of the outlet pipe 2.

By stating that the rear wall 12 defines said water-seal tongue, it is meant that as long as the water surface or level 6 in the water seal is located above the lower edge 9 of said rear wall 12, the water functions as a stench trap.

The upwards/backwards inclining members 19 of the lower wall portion 15 and the upwards/backwards inclining members 18 of the upper wall portion 17 are preferably parallel or substantially parallel with each other. Furthermore, the angle α between each upwards/backwards inclining portion 19 and 18 respectively, and the horizontal plane is less than 60°, preferably about 56°.

The front members 16 of the upper wall portion 17 of the outlet pipe 2 are preferably connected to the rear wall portion 12 of the tubular intermediate member 7 adjacent the upper edge 8 thereof.

The tubular intermediate member 7 is preferably designed so that the angle between the rear wall portion 12 and the upper edge 8 is 90° or substantially 90°, and the angle between the front wall portion 10 and said upper edge 8 less than 90°. Additionally, the tubular intermediate member 7 is preferably designed so that the upper edge 8 and the lower edge 9 thereof are parallel or substantially parallel with each other.

The rear wall portion 12 of the tubular intermediate member 7 is preferably directed vertically or substantially vertically down into the water seal 4 and defines said water-seal tongue therein. Also, the rear wall portion 12 preferably extends down to an elevation 20 between or approximately between the lower and upper wall portions 15 and 17 of the outlet pipe 2 at said rear wall portion 12.

The front members 16 of the upper wall portion 17 of the outlet pipe 2 are preferably provided on the same or substantially the same level as the water surface 6 in the water seal 4.

The toilet described above and illustrated in the drawings as well as the members forming part thereof,

may vary within the scope of the following claims.

Claims

1. Toilet of metal material, said toilet comprising a cup-shaped member (1) and an outlet pipe (2) for flushing out content in said cup-shaped member (1) into a discharge system (3), whereby the toilet further comprises a water seal (4) and whereby water (6) in said water seal (4) prevents odours from rising from the discharge system (3) into the cup-shaped member (1),
characterized in

that between the cup-shaped member (1) and the outlet pipe (2) there is provided a tubular intermediate member (7) having a rear wall (12) which defines a water-seal tongue to said water seal (4), which tongue is directed down into front members (14) of the outlet pipe (2),

that front members (16) of an upper wall portion (17) of the outlet pipe (2) are located in level with the tubular intermediate member (7), and

that said front members (16) of the upper wall portion (17) of the outlet pipe (2) are connected to such members of the rear wall portion (12) of the tubular intermediate member (7) which are located above a lower edge (9) of said tubular intermediate member (7).

2. Toilet according to claim 1, **characterized in** that said front members (16) of the upper wall portion (17) of the outlet pipe (2) are connected to the rear wall portion (12) of the tubular intermediate member (7) adjacent an upper edge (8) of said tubular intermediate member (7).

3. Toilet according to claim 1 or 2,
characterized in

that an upper edge (8) of the tubular intermediate member (7) is connected to a lower edge (1a) of the cup-shaped member (1),

that a front wall portion (10) of the tubular intermediate member (7) at the top is connected to a front wall portion (11) of the cup-shaped member (1), and a rear wall portion (12) of said tubular intermediate member (1) is at the top connected to a rear wall portion (13) of said cup-shaped member (1), and

that the tubular intermediate member (7) is connected to the outlet pipe (2) so that front members (14) of a lower wall portion (15) of said outlet pipe (2) at the top is connected to the front wall portion (10) of said tubular intermediate member (7).

4. Toilet according to any preceding claim, **characterized in** that said front members (16) of the upper wall portion (17) of the outlet pipe (2) transform in backwards direction into upwards/backwards inclining members (18).

5. Toilet according to claim 4, **characterized in** that the front members (14) of the lower wall portions (15) of the outlet pipe (2) transform in backwards direction into upwards/backwards inclining members (19), and that the upwards/backwards inclining members (18, 19) of the lower and upper wall portions (15, 17) of the outlet pipe (2) are parallel or substantially parallel with each other.

6. Toilet according to claim 5, **characterized in** that the angle (α) between the upwards/backwards inclining portions (18 and 19 respectively) of the lower and upper wall portions (15 and 17 respectively) of the outlet pipe (2) and the horizontal plane is less than 60°, preferably about 56°.

7. Toilet according to any preceding claim, **characterized in** that the angle between the rear wall portion (12) of the tubular intermediate member (7) and the upper edge (8) of said tubular intermediate member (7) is 90° or substantially 90°, that the angle between the front portion (10) of the tubular intermediate member (7) and the upper edge (8) of said tubular intermediate member (7) is less than 90° and that the upper edge (8) and lower edge (9) of the tubular intermediate member (7) are parallel or substantially parallel with each other.

8. Toilet according to any preceding claim, **characterized in** that the tubular intermediate member (7), the cup-shaped member (1) and the outlet pipe (2) consist of sheet material and that the tubular intermediate member (7) is welded to the cup-shaped member (1) and the outlet pipe (2).

9. Toilet according to any preceding claim, **characterized in** that the rear wall portion (12) of the tubular intermediate member (7) is directed vertically or substantially vertically down into the water seal (4) of the outlet pipe (2).

10. Toilet according to any preceding claim, **characterized in** that the rear wall portion (12) of the tubular intermediate member (7) extends down to an elevation (20) between or approximately between the lower and upper wall portions (15, 17) of the outlet pipe (2) at said rear wall portion (12).

11. Toilet according to any preceding claim, **characterized in** that the front members (16) of the upper

wall portion (17) of the outlet pipe (2) are provided on the same or substantially the same level as the water surface (6) in the water seal (4).

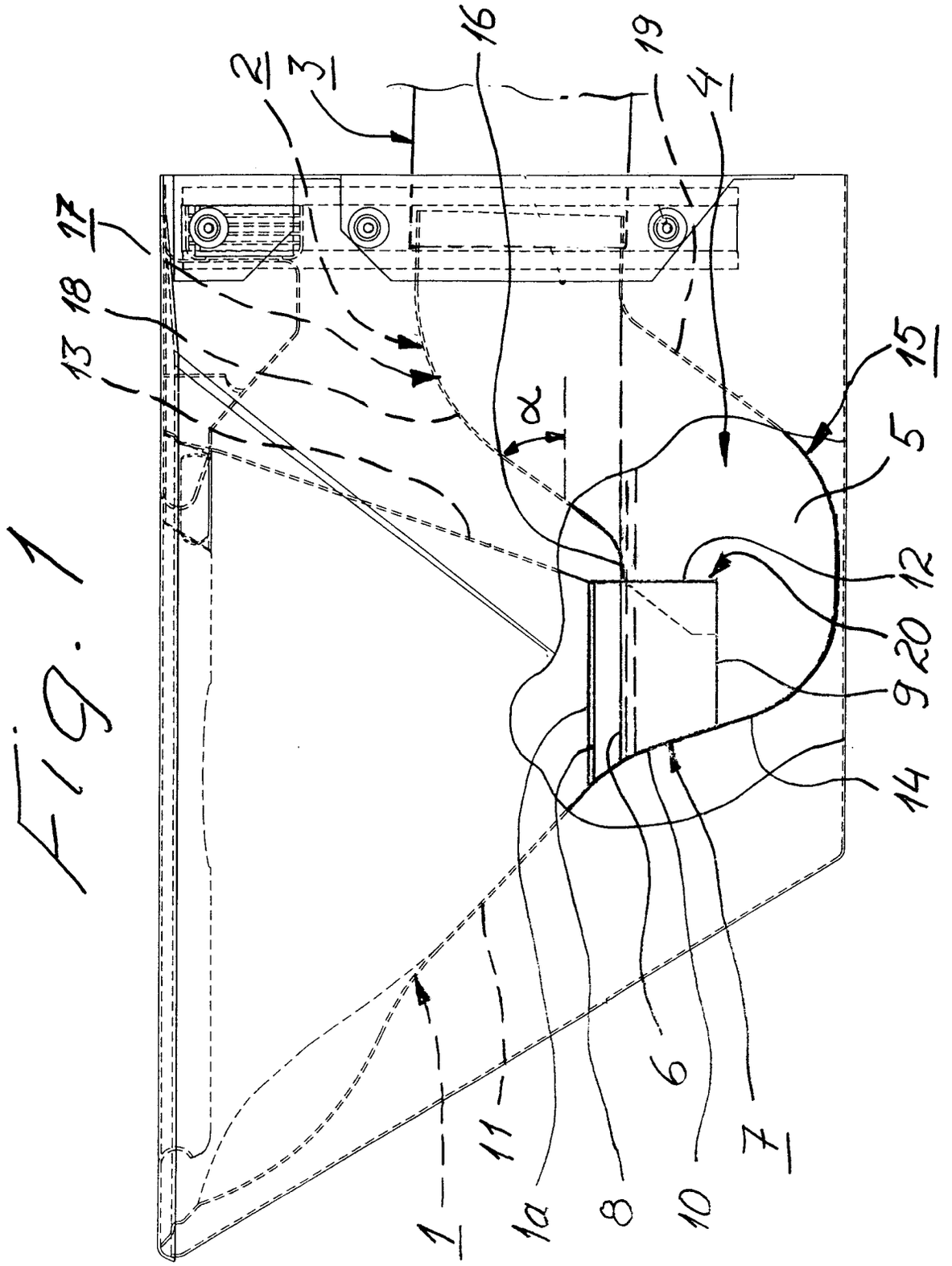

Fig. 1

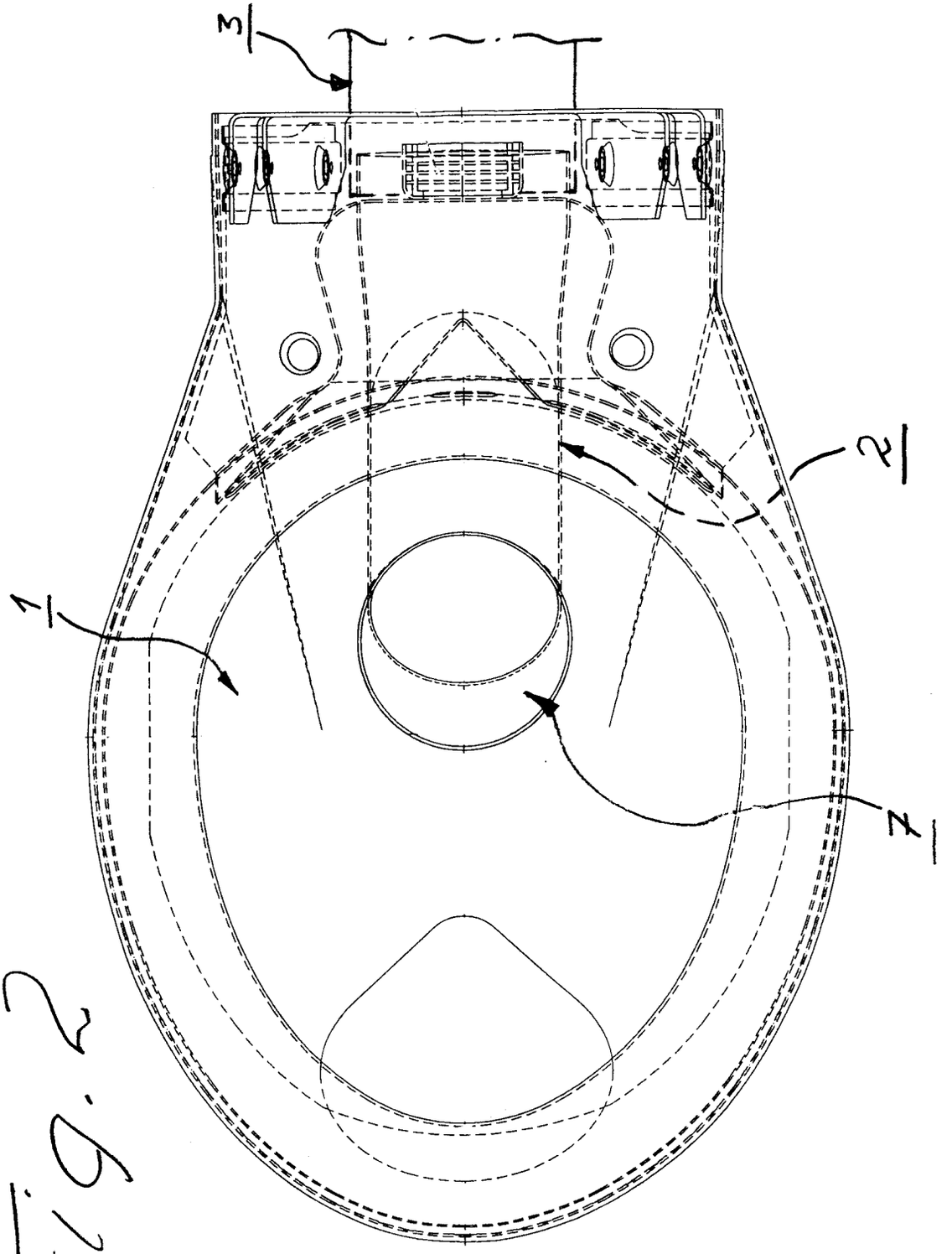

Fig. 2

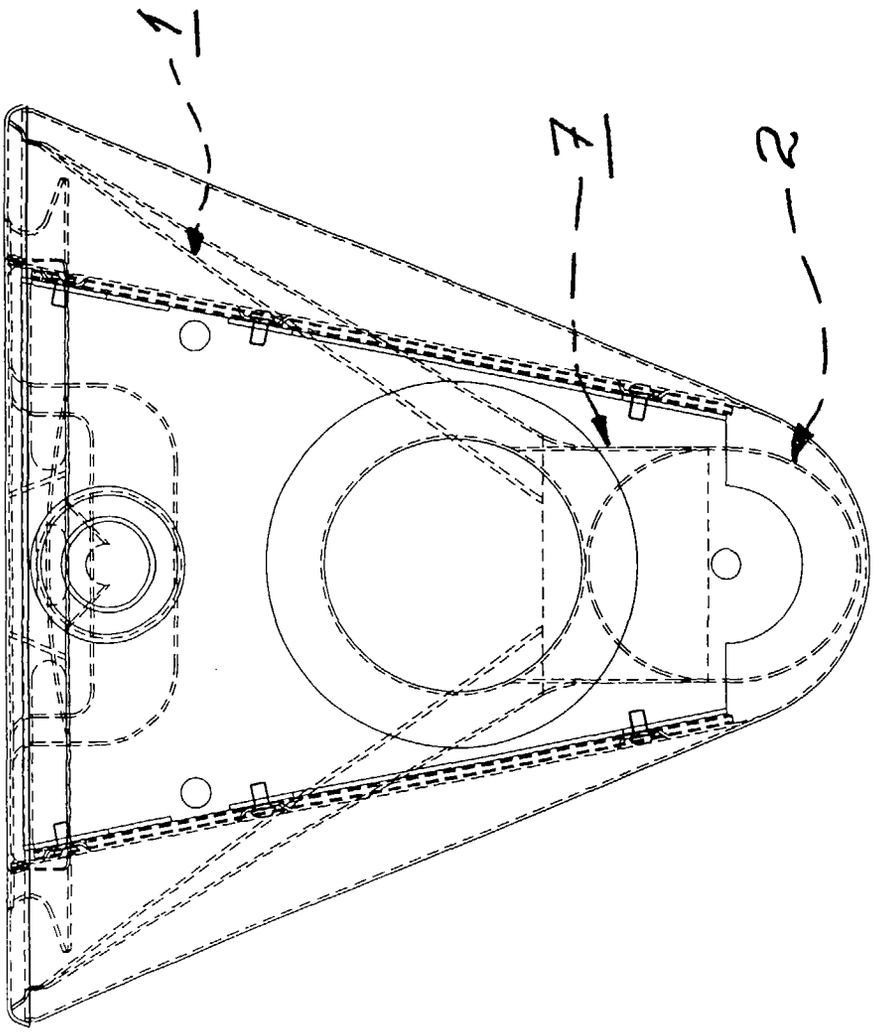

Fig. 3