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(54) **Public sanitary facility with lowerable urinal wall**

Öffentliche Toilette mit senkbarer Urinalwand

Installation publique sanitaire avec mur d'urinoir abaissable

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Description

[0001] The present invention relates to a public sanitary facility, comprising a housing intended for placing underground, and means for collecting urine which are mounted on the housing and movable between an underground rest position and an above-ground position of use.

[0002] Such a sanitary facility is described in the European patent 1232313 of applicant.

[0003] The known public sanitary facility comprises a housing with one or more walk-in positions, each having a receptacle for human excrement and/or urine. The housing comprises telescopically slidable housing parts, a first housing part of which is intended for placing underground. In the first housing part is received a second housing part which is slidable between an underground and an above-ground position. The second housing part is provided with receptacles which are connected to a waste pipe for connection to a sewage system.

[0004] The known public sanitary facility can be placed ready for use as required in rapid, simple and safe manner. A temporary toilet facility can hereby be provided without any permanent change to the street scene. It has already been found in practice that the problem of public urination can be solved satisfactorily by placing the known public sanitary facilities.

[0005] Although in the retracted situation the known sanitary facility takes up only minimal space under the ground, the situation can nevertheless occur that it cannot be placed at a specific location because of objects being present in the ground, such as conduits for water or electricity.

[0006] The invention has for its object to provide a public sanitary facility of the type stated in the preamble which obviates this drawback.

[0007] The public sanitary facility according to the invention has for this purpose the feature that the collecting means are formed by a urinal wall which is pivotable between the rest position and the position of use wherein the upper side of the urinal wall is situated substantially parallel to street level during operation in the underground rest position without forming an obstacle for traffic.

The urinal wall according to the invention can take diverse forms, but per se always takes up less space underground than the above-mentioned telescopically slidable housing. A pivoting movement can be realized in reliable manner at low cost.

[0008] It is noted that DE 20 2005 006 515 discloses a public sanitary facility comprising means for collecting urine that are formed by a urinal wall which is pivotable between a rest position and a position of use.

[0009] In a further development of the first preferred embodiment the urinal wall serves in the rest position as closing element of the housing. The sanitary facility according to this embodiment can hereby be carried in one movement of the urinal wall into the rest position, in which the sanitary facility is immediately covered and secured by means of the cover.

[0010] In an elegant preferred embodiment of the public sanitary facility the urinal wall is generally plate-like. In this embodiment the urinal wall takes up minimal space and is highly practicable as closing element for the housing.

[0011] The upper side of the urinal wall is situated substantially parallel to street level during operation in the underground rest position. In the rest position the public sanitary facility can be integrated inconspicuously into the street scene without forming an obstacle for traffic.

[0012] According to yet another preferred embodiment, the urinal wall stands substantially perpendicular to street level in the above-ground position of use. In this embodiment the public sanitary facility can very well be placed close to the wall of a building such that in the position of use the urinal wall.

[0013] The invention will now be discussed in more detail with reference to the drawings, in which

Figure 1A shows a schematic view of a first preferred embodiment of a sanitary facility according to the invention in the position of use;

Figure 1B shows the sanitary facility of figure 1A without finishing; and

Figure 2 shows a schematic view of the sanitary facility of figure 1A in the rest position.

[0014] Figure 1A shows a schematic view of a sanitary facility according to the invention in the form of a urinal 1 in a first preferred embodiment.

[0015] Urinal 1 has a housing 2 intended for placing underground. The height of housing 2 is less than the generally usual depth for placing of underground conduits. In the Netherlands this depth amounts to about 40 cm. Housing 2 can further take any suitable form. The shown rectangular form of receptacle is for instance very suitable, but serves only by way of illustration.

[0016] A urinal wall 3 for collecting urine is mounted on housing 2. Urinal wall 3 is generally plate-like and can take a single-walled or double-walled form.

[0017] The urinal wall is movable between the shown above-ground position of use and an underground rest position as shown in figure 2. In the above-ground position of use the urinal wall stands substantially perpendicularly of street level S. In the underground rest position the upper side 3b of the urinal wall lies substantially parallel to street level S.

[0018] In the shown preferred embodiment the urinal wall 3 is pivotable between the rest position and the position of use. Urinal wall 3 hereby serves in advantageous manner as cover for closing the housing. On the side 3b visible in the rest position the urinal wall 3 is provided with a finish. This finish preferably corresponds with the appearance of the pavement at that position, so that cover 3 can be integrated inconspicuously into the pavement. For the purpose of elucidation figure 1B shows

urinal 1 without this finish.

[0019] The pivoting movement can be realized using different techniques known in the relevant technical field. Shown as an example of a suitable operation is a gas spring 4. Alternatively, a hydraulic cylinder can for instance be used.

[0020] As a not claimed alternative (not shown), the urinal wall can be embodied for submerging into the ground. Urinal wall 3 can for instance submerge upright into the ground from the position shown in figure 1A to the position shown in figure 2. In the underground rest position the front side 3v of the urinal wall is then situated substantially parallel to street level S. Housing 2 is preferably provided for this purpose with a part for placing underground in which the urinal wall is slidably received. The operation of the sliding movement can be realized using different techniques known in the relevant technical field, for instance by means of hydraulic techniques.

[0021] Operation of the movement of the urinal wall can take place both manually and automatically. In both embodiments it is important that the operative has a clear overall view of the situation at the particular location before placing the urinal in the position of use or the rest position so as to avoid hazardous situations for bystanders.

[0022] Both housing 2 and urinal wall 3 are provided with a closing mechanism 5 consisting of two co-acting parts. Diverse closing mechanisms suitable for this purpose are commercially available.

[0023] Urinal wall 3 can in a not claimed embodiment, optionally be mounted releasably on housing 2. Housing 2 then has to be provided with a separate closing element for closing the housing in the rest position after removal of urinal wall 3.

[0024] Further arranged adjacently of urinal wall 3 in housing 2 is a draining gutter 6 which, if desired, is provided with a grating. Draining gutter 6 can preferably be connected by means of a connection 7 to the sewage system at the location. Alternatively, draining gutter 6 can be connected to a urine reservoir that has to be emptied regularly.

[0025] An electrical connection 8 connectable to the local mains electricity provides the necessary electric power. Lighting can optionally be arranged in the urinal, for instance by means of LEDs.

[0026] Further provided is a water connection 9 which connects the urinal to the local water supply system for the purpose of cleaning the urinal. Flushing could for instance be performed automatically by means of a time-controlled mechanism after a determined period of time to be set.

[0027] Diverse materials are suitable for the sanitary facility according to the invention, including metal (in particular stainless steel) and plastic.

[0028] It is expressly noted that the invention is not limited to the described and shown preferred embodiment. The invention extends generally to any embodiment which falls within the scope of the appended claims as seen in the light of the description and the accompanying drawings.

Claims

1. Public sanitary facility, comprising a housing intended for placing underground, and means for collecting urine which are mounted on the housing and movable between an underground rest position and an above-ground position of use, **characterized in that**, the collecting means are formed by a urinal wall which is mounted on the housing for pivoting between the rest position and the position of use, wherein the upper side of the urinal wall is situated substantially parallel to street level during operation in the underground rest position without forming an obstacle for traffic.

2. Public sanitary facility as claimed in claim 1, wherein the urinal wall serves in the rest position as closing element of the housing.

3. Public sanitary facility as claimed in any of the foregoing claims, wherein the urinal wall is generally plate-like.

4. Public sanitary facility as claimed in any of the foregoing claims, wherein the urinal wall stands substantially perpendicular to street level in the above-ground position of use.

Patentansprüche

1. Öffentliche Sanitäranlage, umfassend ein Gehäuse, das für eine unterirdische Platzierung bestimmt ist, und Mittel zum Sammeln von Urin, die an dem Gehäuse angebracht sind und bewegbar zwischen einer unterirdischen Ruhestellung und einer oberirdischen Benutzungsstellung sind,
dadurch gekennzeichnet, dass die Mittel zum Sammeln durch eine Urinalwand ausgebildet sind, die an dem Gehäuse angebracht und zwischen der Ruhestellung und Benutzungsstellung schwenkbar ist, wobei die obere Seite der Urinalwand, während sie in unterirdischer Ruhestellung ist, im Wesentlichen auf Straßenniveau liegt, ohne ein Hindernis für den Verkehr darzustellen.

2. Öffentliche Sanitäranlage gemäß Anspruch 1, wobei die Urinalwand in der Ruhestellung als Schließelement für das Gehäuse dient.

3. Öffentliche Sanitäranlage gemäß einem der vorhergehenden Ansprüche, wobei die Urinalwand grundsätzlich plattenförmig ist.

4. Öffentliche Sanitäranlage gemäß einem der vorhergehenden Ansprüche, wobei die Urinalwand in der oberirdischen Benutzungsstellung im Wesentlichen senkrecht zum Straßenniveau steht.

Revendications

1. Installation publique sanitaire comprenant un boîtier destiné à être placée sous terre et des moyens pour collecter l'urine, lesquels moyens de collecte sont montés sur le boîtier et sont mobiles entre une position de repos souterraine et une position d'utilisation hors-sol, **caractérisée en ce que** les moyens de collecte sont formés par une paroi d'urination qui est montée sur le boîtier pour pouvoir pivoter entre la position de repos et la position d'utilisation, la partie supérieure de la paroi d'urination étant située essentiellement parallèlement au niveau de la route durant l'opération en position de repos souterraine sans former d'obstacle pour le trafic.

2. Installation publique sanitaire selon la revendication 1, dans laquelle la paroi d'urination, en position de repos, sert d'élément de fermeture du boîtier.

3. Installation publique sanitaire selon l'une des revendications précédentes, dans laquelle la paroi d'urination a une forme générale de plaque.

4. Installation publique sanitaire selon l'une des revendications précédentes, dans laquelle la paroi d'urination, en position d'utilisation hors-sol, se dresse sensiblement perpendiculairement au niveau de la route.

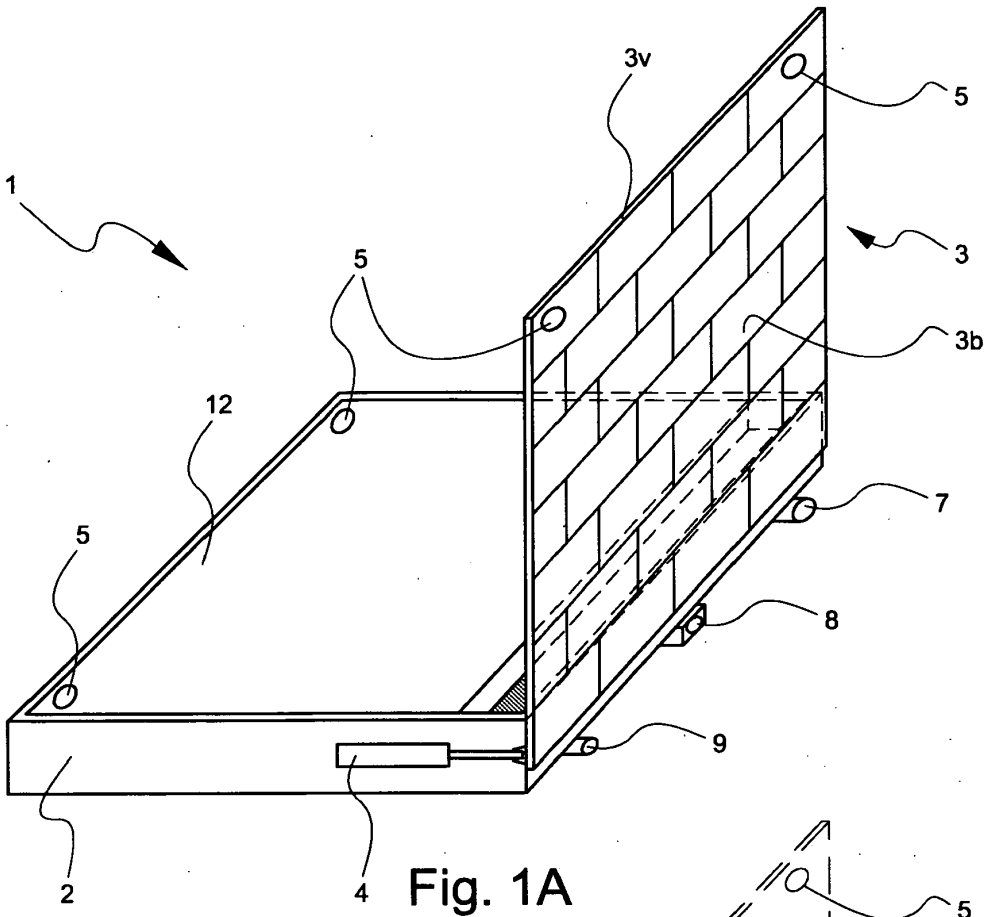


Fig. 1A

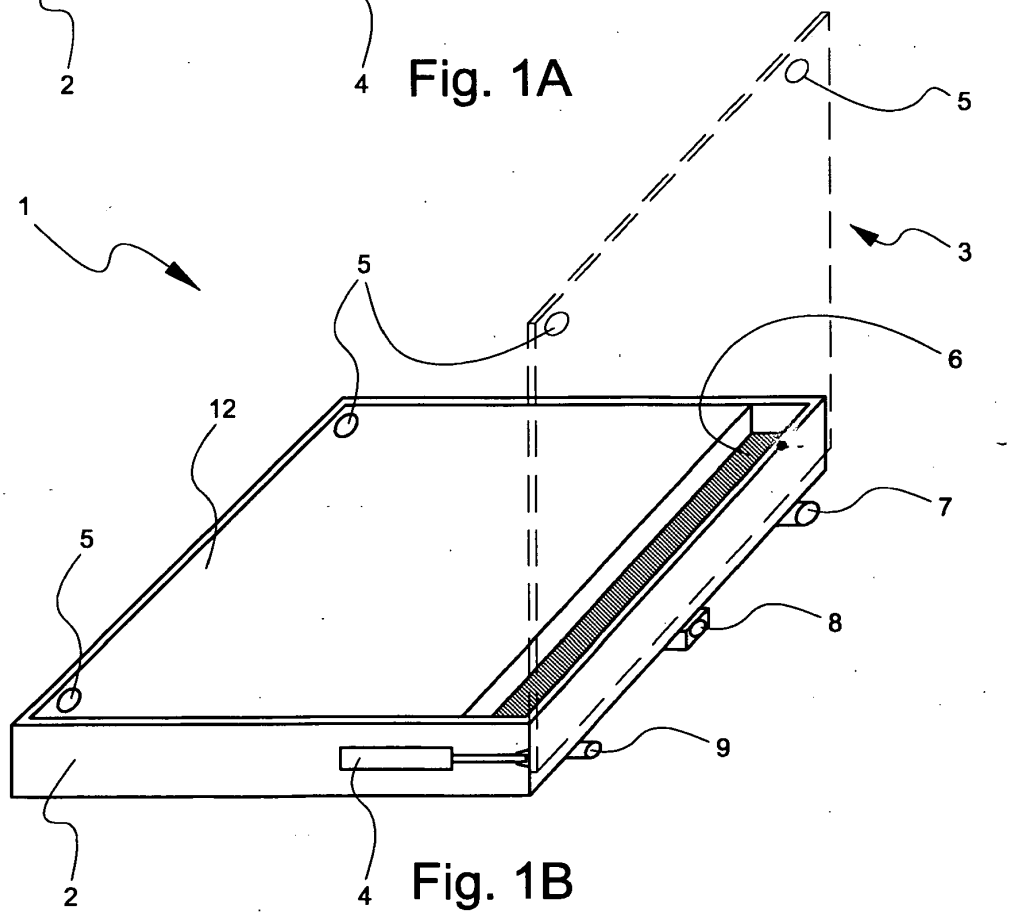


Fig. 1B

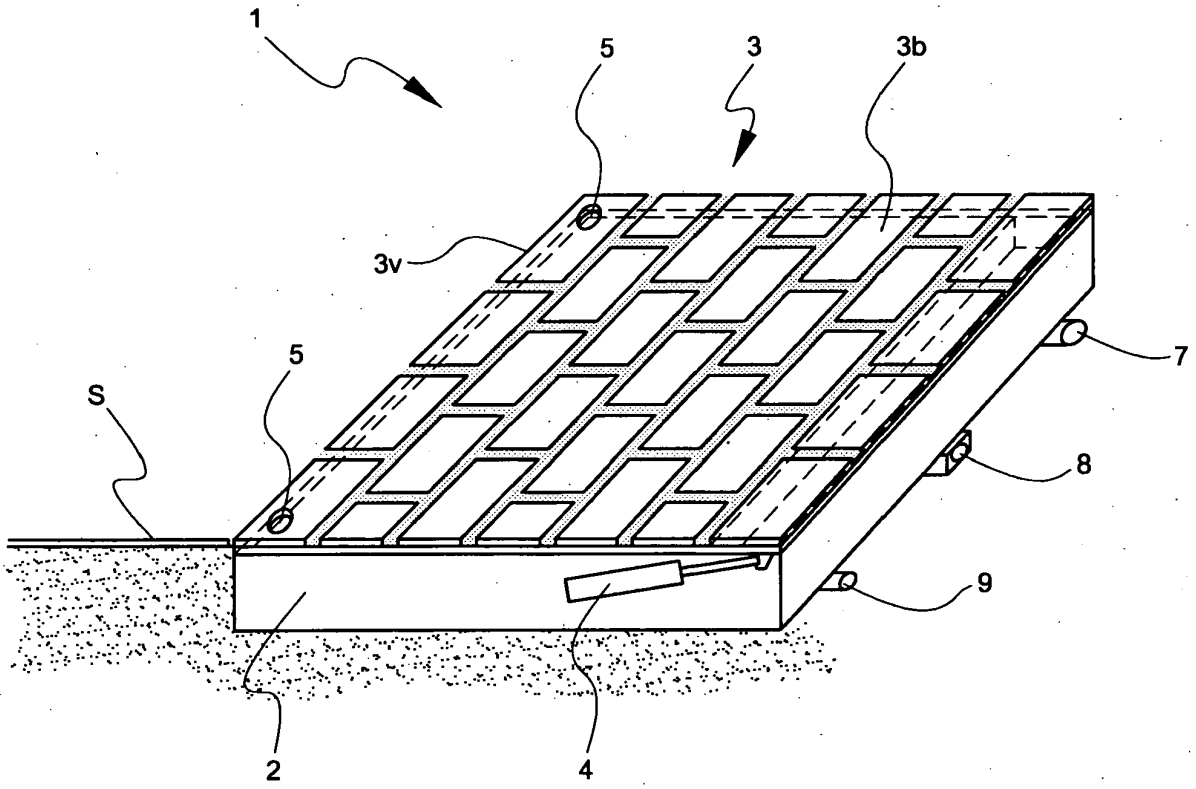


Fig. 2

REFERENCES CITED IN THE DESCRIPTION

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- EP 1232313 A **[0002]**
- DE 202005006515 **[0008]**