The device 10 includes an engaging formation 12 for overlying and engaging an opening of a in a snug manner and a tubular member 14 arranged in flow communication with and extending from the engaging formation 12 for receiving a substance 16 for unblocking the drain therein and channelling same towards and into the drain opening via the engaging formation 12. The engaging formation 12 is ensnared by a stabilising flange 18 to assist in keeping the device 10 stable in use. A reservoir 22 is arranged at a free end of the tubular member 14 for in use receiving the substance 16 for unblocking the drain therein.
DEVICE FOR AIDING UNBLOCKING OF A DRAIN

FIELD OF THE INVENTION

[0001] This invention relates to a device for aiding unblocking of a drain during which an acidic or alkaline substance is fed to the drain.

BACKGROUND OF THE INVENTION

[0002] Household drains such as sink and bathroom drains routinely require unblocking or cleaning due to soap and other residue build-up in the drain which may eventually cause the drain to become blocked.

[0003] Various mechanical and chemical methods are currently used to un-block drains. Of the chemical methods, use of acidic or alkaline liquids capable of dissolving residues that block drains are popular.

[0004] A drawback of using chemicals is the damage that corrosive substances cause to the area surrounding the drain and also to the visible (and at times decorative) elements of the drain, especially of pop-up drains.

[0005] In addition, splattering of corrosive substances may injure a person unblocking a drain.

[0006] The inventor therefore believes, that a need exists for providing a device in aiding unblocking of a drain which will permit unblocking of drains using corrosive substances without causing damage to the drain and surrounding areas and which minimises risk of injury to a user of the device.

SUMMARY OF THE INVENTION

[0007] According to the invention, there is provided a device for aiding unblocking of a drain, the device including:

[0008] an engaging formation for overlaying and engaging an opening of a drain in a snug manner; and

[0009] a tubular member arranged in flow communication with and extending from the engaging formation for receiving a substance for unblocking the drain therein and channelling same towards and into the drain opening via the engaging formation.

[0010] The engaging formation may be removeably attached to the tubular member to permit replacement thereof with an engaging formation having different dimensions so as to permit the device to be used on drains of various types and sizes.

[0011] The engaging formation may be attached to the tubular member via a screw-thread or snap-fit arrangement.

[0012] The engaging formation may be manufactured from a synthetic plastics material or from a natural rubber that displays strong resistance against corrosion by alkaline and acidic substances.

[0013] Alternatively, the engaging formation may be provided with an interior lining manufactured from a synthetic plastics material or from a natural rubber so as to permit a snug overlay and fit with the drain opening.

[0014] The tubular member may be between 300 mm and 500 mm in length and may be manufactured from a synthetic plastics material, metal or metal alloy that displays strong resistance against corrosion by alkaline and acidic substances.

[0015] An internal diameter of the tubular member may be between 20 mm and 50 mm and is typically about 25 mm.

[0016] The engaging formation may be encased by a stabilising flange to assist in keeping the device stable in use. In use, the stabilising flange may engage a surface surrounding the drain to be unblocked. The flange may additionally be stabilised by filling the area surrounding the drain with water. The stabilising flange may be manufactured from a synthetic plastics material or from a natural rubber.

[0017] A reservoir may be arranged at a free end of the tubular member for in use receiving the substances for unblocking the drain therein. The reservoir may be provided with a lid.

[0018] A flow control valve may be arranged in the tubular member between the reservoir and the engaging formation to permit flow control of the substances from the reservoir towards the engaging formation.

[0019] The flow control valve may be a ball, gate, or butterfly valve and may be manufactured from a synthetic plastic material, metal, or metal alloy that displays strong resistance against corrosion by alkaline and acidic substances.

[0020] The substance for unblocking the drain may be an acidic or alkaline liquid. Alternatively, it may be in the form of a powder or granules for reconstitution into a liquid by the addition of water.

[0021] In use, an engaging formation sized and dimensioned to snugly overlay and engage an opening of the drain to be unblocked is selected and attached to the tubular member. The area around the drain is then preferably filled with at least 200 mm of water.

[0022] Thereafter, a user should check that the flow control valve is in a closed position after which the substance for unblocking the drain may be poured into the reservoir. The lid of the reservoir is closed prior to displacing the control valve into an open position to allow the substance from the reservoir to flow towards and into the drain opening via the engaging formation. The flow control valve should typically be closed after 2-5 seconds of flow has taken place.

[0023] The device should be maintained in place for a sufficient length of time to permit the substance for unblocking the drain to act on the residues blocking the drain. Thereafter, it may carefully be removed from the drain opening and flushed several times with fresh water.

[0024] As the engaging formation overlays the opening of the drain, the visible parts of the drain are protected against the substance for unblocking the drain, as is the area surrounding the drain.

[0025] Splattering of the substance for unblocking the drain is inhibited to a great extent due to the provision of the reservoir having a lid in combination with the flow control valve.

[0026] It is to be appreciated, that the entire device may be manufactured using a single mould.

[0027] The invention extends to a kit for a device for aiding unblocking of a drain as described above, wherein the kit includes a tubular member and two or more engaging formations configured and dimensioned to overlay and engage drain openings of various types and sizes.

BRIEF DESCRIPTION OF THE DRAWING

[0028] FIG. 1 is a sectioned side view of an embodiment of a device for aiding unblocking of a drain in accordance with the present invention.
DETAILED DESCRIPTION OF THE INVENTION

[0029] The invention will now be described by way of the following, non-limiting example with reference to the accompanying drawing.

[0030] In the drawing:

[0031] FIG. 1 shows a sectioned side view of an embodiment of a device for aiding unblocking of a drain in accordance with the present invention.

[0032] In the drawing, reference numeral 10 generally indicates an embodiment of a device for aiding unblocking of a drain in accordance with the present invention.

[0033] The device 10 includes an engaging formation 12 for overlaying and engaging an opening of a drain (not shown) in a snug manner and a tubular member 14 arranged in flow communication with and extending from the engaging formation 12 for receiving a substance 16 for unblocking the drain therein and channeling same towards and into the drain opening via the engaging formation 12.

[0034] The engaging formation 12 is removeably attached to the tubular member 14 to permit replacement thereof with an engaging formation 12 having different dimensions so as to permit the device 10 to be used on drains of various types and sizes.

[0035] The engaging formation 12 is typically attached to the tubular member 14 via a screw-thread or snap-fit arrangement (not shown).

[0036] The engaging formation 12 is manufactured from a synthetic plastics material or from a natural rubber that displays strong resistance against corrosion by alkaline and acidic substances.

[0037] In an alternative embodiment, the engaging formation 12 is provided with an interior lining manufactured from a synthetic plastics material or from a natural rubber so as to permit a snug overlay and fit with the drain opening.

[0038] The length “l” of the tubular member 14 is typically about 420 mm and it is manufactured from a synthetic plastics material, metal or metal alloy that displays strong resistance against corrosion by alkaline and acidic substances.

[0039] An internal diameter “d” of the tubular member 14 is typically about 25 mm.

[0040] The engaging formation 12 is encased by a stabilising flange 18 to assist in keeping the device 10 stable in use. In use, the stabilising flange 18 engages a surface 20 surrounding the drain to be unblocked. The stabilising flange 18 is manufactured from a synthetic plastics material or from a natural rubber.

[0041] A reservoir 22 is arranged at a free end of the tubular member 14 for in use receiving the substance 16 for unblocking the drain wherein. The reservoir 22 is provided with a lid 24. The lid 24 can fit onto the reservoir 22 in a friction-fit manner, it can be connected to the reservoir 22 via a hinge (not shown) or it can be connected to the reservoir via a screw-thread arrangement. The lid can optionally be provided with a locking member (not shown) to secure it in place when the device 10 is in use.

[0042] A flow control valve 26 is arranged in the tubular member 14 between the reservoir 22 and the engaging formation 12 to permit flow control of the substance 16 from the reservoir 22 towards the engaging formation 12.

[0043] The flow control valve 26 is typically a ball valve manufactured from a synthetic plastics material, metal, or metal alloy that displays strong resistance against corrosion by alkaline and acidic substances.

[0044] The substance 16 for unblocking the drain is an acidic or alkaline liquid.

[0045] In use, an engaging formation 12 sized and dimensioned to snugly overlay and engage an opening of the drain to be unblocked is selected and attached to the tubular member 14. The area around the drain is then preferably filled with at least 200 mm of water.

[0046] Thereafter, a user should check that the flow control valve 26 is in a closed position after which the substance 16 for unblocking the drain is poured into the reservoir 22, taking care not to overfill it. The lid 24 of the reservoir 22 is closed prior to displacing the control valve 26 into an open position to allow the substance 16 from the reservoir 22 to flow towards and into the drain opening via the engaging formation 12. The flow control valve 26 should typically be closed after 2-5 seconds of flow has taken place.

[0047] The device 10 should be maintained in place for a sufficient length of time to permit the substance 16 for unblocking the drain to act on the residues blocking the drain. Thereafter, it may carefully be removed from the drain opening and flushed several times with fresh water.

[0048] As the engaging formation 12 overlays the opening of the drain, the visible parts of the drain are protected against the substance 16 for unblocking the drain, as is the area surrounding the drain.

[0049] Splattering of the substance 16 for unblocking the drain is inhibited to a great extent due to the provision of the reservoir 22 having a lid 24 in combination with the flow control valve 26.

[0050] It is to be appreciated, that the invention is not limited to any particular embodiment or configuration as hereinbefore generally described or illustrated.

1. A device for aiding unblocking of a drain, the device including:
   an engaging formation for overlaying and engaging an opening of a drain in a snug manner, and
   a tubular member arranged in flow communication with and extending from the engaging formation for receiving a substance for unblocking the drain therein and channeling same towards and into the drain opening via the engaging formation.

2. A device as claimed in claim 1, wherein the engaging formation is removeably attached to the tubular member to permit replacement thereof with an engaging formation having different dimensions so as to permit the device to be used on drains of various types and sizes.

3. A device as claimed in claim 1, wherein the engaging formation is manufactured from a synthetic plastics material or from a natural rubber that displays strong resistance against corrosion by alkaline and acidic substances.

4. A device as claimed in claim 1, wherein the tubular member is between 300 mm and 500 mm in length and is manufactured from a synthetic plastics material, metal or metal alloy that displays strong resistance against corrosion by alkaline and acidic substances.

5. A device as claimed in claim 1, wherein the engaging formation is encased by a stabilising flange to assist in keeping the device stable in use.

6. A device as claimed in claim 1, wherein the engaging formation is encased by a stabilising flange to assist in keeping the device stable in use and wherein the stabilising flange is manufactured from a synthetic plastics material or from a natural rubber.
7. A device as claimed in claim 1, wherein a reservoir is arranged at a free end of the tubular member for in use receiving the substance for unblocking the drain therein.

8. A device as claimed in claim 1, wherein a reservoir is arranged at a free end of the tubular member for in use receiving the substance for unblocking the drain therein and wherein the reservoir is provided with a lid.

9. A device as claimed in claim 1, wherein a flow control valve is arranged in the tubular member between the reservoir and the engaging formation to permit flow control of the substance from the reservoir towards the engaging formation.

10. A device as claimed in claim 1, wherein a flow control valve is arranged in the tubular member between the reservoir and the engaging formation to permit flow control of the substance from the reservoir towards the engaging formation and wherein the flow control valve is selected from the group including: a ball valve, a gate valve, and a butterfly valve and is manufactured from a synthetic plastics material, metal, or metal alloy that displays strong resistance against corrosion by alkaline and acidic substances.

11. A kit for a device for aiding unblocking of a drain, the kit including:
   
   two or more engaging formations for overlaying and engaging an opening of a drain in a snug manner, each of the engaging formations being configured and dimensioned to overlay and engage drain openings of various types and sizes; and

   a tubular member arranged in flow communication with and extending from the each of the two or more engaging formations for receiving a substance for unblocking the drain therein and channeling same towards and into the drain opening via any of the two or more engaging formations.

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