Feb. 11, 1930. C. H. CUMMINGS 1,746,992

GREASE TRAP AND COVER FOR SAME

Filed Jan. 2, 1929

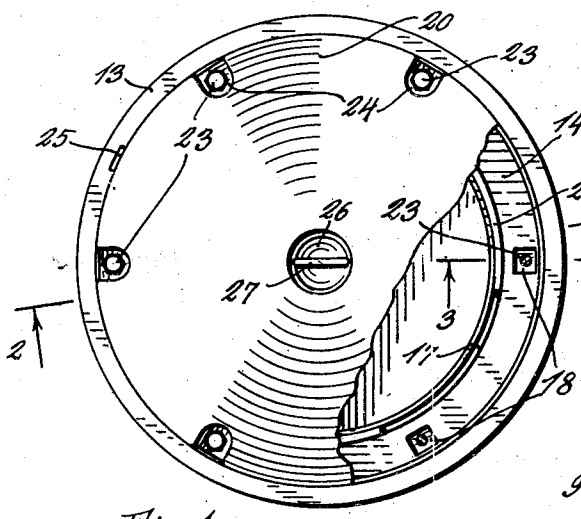


Fig. 1.

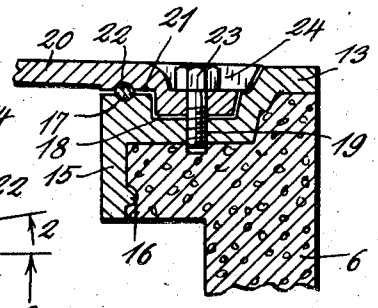


Fig. 3.

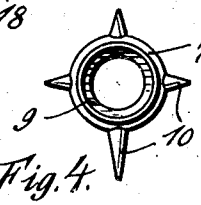


Fig. 4.

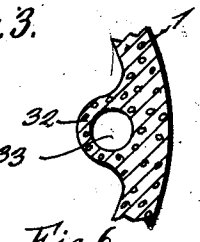


Fig. 6.

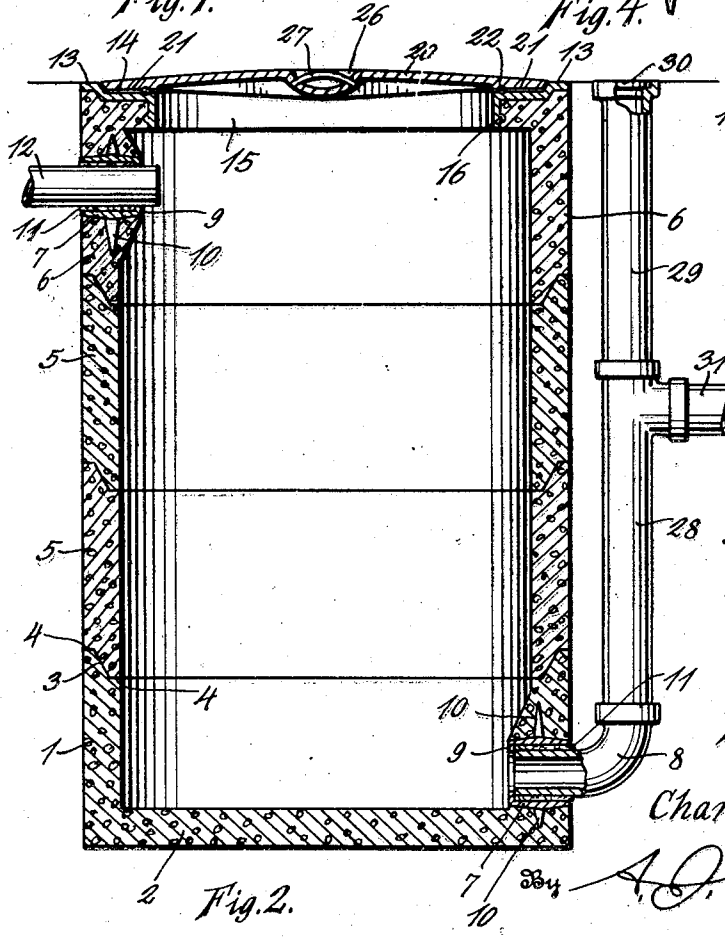


Fig. 2.

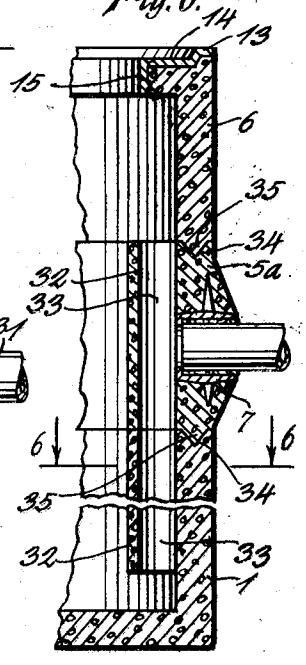


Fig. 5.

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UNITED STATES PATENT OFFICE

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GREASE TRAP AND COVER FOR SAME

Application filed January 2, 1929. Serial No. 329,908.

This invention relates to improvements in the construction of grease traps and covers for the same.

In present sanitary engineering practice it is common to construct grease traps of concrete. These grease traps are made from a plurality of rings that are constructed with interengaging surfaces so that one ring can be supported by another and in this manner a grease trap of any depth can be formed quickly. Such grease traps have been provided with removable covers which have been formed, either from a concrete slab or from a piece of cast iron laid on top of the trap so as to close the upper end thereof. This method of closing grease traps has several objectionable features which, however, will not be pointed out in this specification.

It is the object of this invention to produce a cover that can be readily applied and removed, and which will positively seal the upper end of the trap so as to prevent the escape of sewer gases. Another object of this invention is to so construct the grease trap itself that the inlet and outlet pipes can be readily attached to it with calked joints so as to provide a tight and workmanlike construction.

The above and other objects which will become apparent as the description proceeds, are obtained by means of a construction and an arrangement of parts which will now be described in detail, reference for this purpose being had to the accompanying drawing in which the preferred embodiment of the invention has been illustrated, and in which:

Fig. 1 is a top plan view of the cover and attaching ring employed in connection with my improved trap, a portion of the cover having been broken away to better illustrate the construction;

Fig. 2 is a vertical section taken on line 2—2, Fig. 1, and shows the manner in which the inlet and outlet pipes are attached to the body of the trap;

Fig. 3 is a section taken on line 3—3, Fig. 1, and shows the manner in which the cover is secured to the cover frame at the top of the trap;

Fig. 4 is an end view of one of the thimbles employed in the construction;

Fig. 5 is a vertical section through a modified construction; and

Fig. 6 is a section taken on line 6—6, Fig. 5.

The grease trap illustrated in Figs. 1 and 2 comprises a bottom ring 1 which is formed integral with the bottom 2. The upper edge of the ring portion has an inclined annular surface 3 terminating at the top and bottom in transverse surfaces 4. The ring 5 that is supported on the ring 1 has cooperating surfaces so that it can be placed directly onto the lower ring and will be securely held by the same in centered position. Before the rings are assembled, surfaces 3 and 4 are covered with a thin cement wash so as to form a seal and for the purpose of binding the parts together. In the construction illustrated, there are two rings 5 and a top ring 6 all of which are supported on the bottom ring 1. The two central rings 5 are identical in shape and size, whereas both the bottom ring 1 and the top ring 6 are of a specifically different construction. When the lower ring 1 is molded, a thimble 7 is molded into the side of the ring in the manner shown in Fig. 2. This thimble has a cylindrical opening somewhat larger in diameter than the outer opening of the soil pipe 8 that is to be attached to it. It is also provided with an inwardly extending flange 9 that forms a stop for the inner end of the soil pipe. In order to properly locate this thimble it is provided with a plurality of projections 10 that extend radially from the outer surface thereof, and which serve to hold the thimble securely in place. After the pipe 8 has been introduced into the thimble, the space between the pipe and the inner surface of the thimble is calked with some suitable material 11, such as oakum and lead. A similar thimble is secured to the wall of the upper ring 6 in the same manner as described but this thimble is of such size that the inlet pipe 12 can pass into the interior of the trap and is held centrally of the thimble by the action of the flange 9. After this pipe has been introduced, the space between it and the inner surface of the thimble is calked in the same manner as previously described. When ring

6 is molded, it is molded onto a ring 13. This ring has a cross section which, for the greater part of its length, is like that indicated in Fig. 2 and is provided with a circular recess 14 that forms an annular horizontal surface, which terminates in a downwardly and inwardly extending flange 15. The outer surface of flange 15 is provided with a bead 16 that forms an interlock with the material of the ring. The annular surface 14 is provided with a semi-circular groove 17 that is adapted to receive a round oakum rope which serves as a sealing medium. Of course any other suitable material can be used for this purpose but it is preferred to employ a material that will last under the conditions to which it is subjected. At angularly spaced positions, the flange 14 is provided with rectangular depressions 18, whose bottoms are provided with threaded openings 19. The cover 20 is slightly upwardly convex and is provided with a flat annular flange 21 which rests upon the flange 14. This flange is also provided with an arcuate recess 22 that is adapted to receive the sealing medium 17 in the manner indicated in Fig. 3. Bolts 23 pass through openings located in depressed areas 24 and these bolts are adapted to engage the threaded openings 19 in the manner indicated in Fig. 3. When the cover is put into place and clamped against the sealing material 17 by the action of the bolts 23, the cover will form a gas tight seal and can be readily removed by removing the bolts and then prying the cover up from its seat. In order to facilitate the removal of the cover, the ring 13 is provided with a notch 25 that facilitates the introduction of a pinch bar or a chisel by means of which the cover can be raised. For the purpose of handling the cover it has been provided with a central spherical depression 26 across which a bar 27 extends. This bar is cast into the material and serves as a handle that can be engaged when the cover is removed and put into place.

The outlet pipe of which the L 8 forms a part, comprises, in addition, a T 28 to whose upper end a cleanout section 29 is attached. The upper end of this cleanout section can be closed by a plug 30, or in any other suitable way. The pipe 31 which is connected to the side opening of the T extends to the sewer and its position in a vertical direction determines the level of the liquid within the trap.

In Figs. 5 and 6 I have shown a modified construction in which the bottom ring 1 has been modified by the omission of the thimble 7 and the substitution of an inwardly extending thickened portion 32 which has a cylindrical opening 33. The ring 5ª located directly above ring 1 has a corresponding thickened portion and a corresponding cylindrical opening, both of which can be made to register with the corresponding part in the lower ring. This ring also contains the thimble 7 to which the overflow pipe 31 is connected. The upper ring 6 is constructed in the same manner as the one shown in Fig. 2. In this modified construction, the interengaging surfaces corresponding to surfaces 3 and 4 are of slightly different form. In this modified construction, the upper edge of each ring is provided with a V-shaped groove 34 and the lower edges a V-shaped projection 35. In assembling the parts a thin cement mixture is placed in the groove 34, and when the next ring is put into place, this cement mixture will be squeezed out between the adjacent surfaces so as to form a tight seal. When the openings are to be cleaned the cover is removed and a properly constructed swab is introduced into the cylindrical opening 33.

From the above description it will be apparent that I have produced a grease trap construction to which the supply and overflow pipes can be readily attached and which is provided with a removable cast iron cover that is attached to the grease trap by means which permits the cover to be readily attached and removed and in which the cover also forms a tight seal.

Having described the invention what is claimed as new is:

A cover for cement grease traps comprising a ring having a cylindrical flange and an annular flange extending outwardly from one end of the cylindrical flange, said annular flange having its surface formed by two concentric annular areas which lie in parallel spaced planes, the smaller annular area being provided with spaced depressions whose bottoms have threaded holes, the smaller annular area having also a circular depression adapted to receive a ring of packing material, a circular cover whose diameter is substantially equal to the diameter of the smaller annular area, said cover having a plurality of projections adapted to fit into the recesses in the ring, said projections having holes which register with the holes in the recesses and clamping bolts in said holes.

In testimony whereof I affix my signature.

CHARLES H. CUMMINGS.