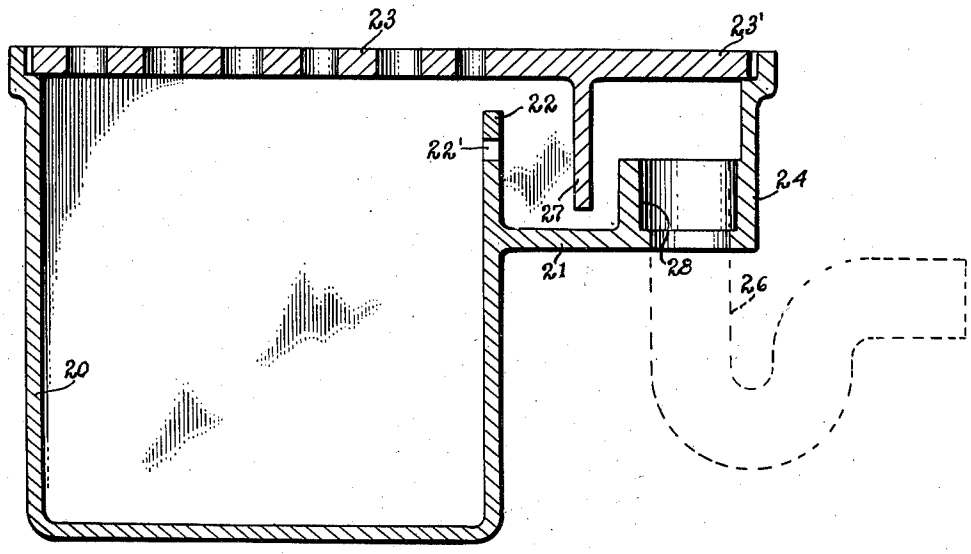
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GARAGE FLOOR DRAIN

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GARAGE FLOOR DRAIN

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1 Claim. (Cl. 182—31)

This invention relates to floor drains, the principal object being to provide a floor drain of such character of construction that, upon liquids of varying specific gravities being discharged thereinto, the liquids of lighter specific gravity are discharged to the outlet and the liquid or liquids of greater specific gravity remain in the drain body at the minimum water level.

A further feature and object of the invention is to provide a drain having a body and a grating at its inlet end, the body being so formed that the sewer connection is open to cleaning or inspection on removal of the grating and thus providing for a cleanout that is accessible at the floor line.

With such structure, the accumulated oil, gasoline etc., is discharged at each flushing of the drain and thus does not lie on the surface of the water whose fumes may pass upward through the grating into the interior of a building as, for instance, a garage.

With the usual drains heretofore used in garages, automobile wash floors etc., there is a material amount of oil gathering on the surface of the liquid in the drain body and while this is usually discharged to the sewer when additional water and oil are discharged into the drain body yet in such cases, after the flushing, oil accumulates on the top of the liquid. Such prior character of drain is objectionable due to the fact that undesirable odors constantly pass upward through the grating into the building.

My improved drain construction seeks to avoid such objectionable feature and this is accomplished by utilization of a wall at the outlet having an aperture or apertures below its upper edge and determining the normal water level in the drain body as oil, gasoline etc., are of less specific gravity than water they will float at a higher level than the water and pass off through the aperture. As oil and water are discharged into the sewer and the level of the liquid raised, it flows over the top of the wall and any oil, grease etc., on the surface will first pass to the sewer outlet together with water and as the liquid level in the body drops, the apertures permit the remaining material floating on the water to pass into the sewer.

An additional feature of the invention is involved in the provision of a trap associated with the dam and the outlet to prevent discharge of non-liquid material into the outlet.

These and other objects and features of the invention are hereinafter more fully described and claimed, and the preferred form of construction of a floor drain embodying my invention is shown in the accompanying drawing.

The drawing is a vertical section showing the principal structural features of a garage floor drain embodying my invention.

As before stated, the floor drain is peculiarly adapted for use where water and liquids of less specific gravity, such as oil, gasoline and grease are flushed into the drain and wherein it is desirable that the oils and greases shall practically all discharge from the drain and materially reduce, if not practically eliminate, the offensive odors rising from accumulated oil and grease that pass through the grating at the top as is commonly the case with prior floor drains.

In the form of the invention shown the body 20 has an offset portion at the top on one side as indicated at 21 and a dam or wall 22 is provided between the main portion and the offset portion which extends to near the top of the body. The wall 22 has seepage apertures 22′ below the upper edge. The grating 23 has an imperforate portion 23′ which lies over the offset portion. Preferably at the outer end of this offset portion 21 is provided a vertical hub 24 having its upper end at approximately the same level as the apertures 22′ in the wall 22. To this hub may be attached a sewer outlet pipe 26. Integral with or secured to the grating is a depending strip or flange 27 which extends into the recess formed between the dam 22 and the inner wall 28 of the vertical hub 24. Any liquid flowing over the dam strikes the flange 27 and passes therebeneath to the outlet. In this particular case, the dam has the function at each flushing of first passing the oil and lighter constituents at the top of the liquid body to the sewer.

Apertures 22′ are provided in the dam 22 and oil rising to the surface of the liquid body is passed to the sewer and any sand or foreign matter is trapped in the channel formed by the wall 22 and the wall 28 connected at the bottom by the horizontal wall 21. By mere removal of the grating with which the strip or flange 27 is integrally formed, the trapped liquid matter may be removed.

Removal of the grating provides access to the outlet for the purpose of cleaning and with any of these constructions therefore, the necessity of providing a separate cleanout and cover member is avoided.

The structure herein disclosed will function as described in all the usual installations in view of the fact that normally, a volume of water greater than the volume of oils, greases, gasolines and

liquids of less specific gravity than water are discharged at each flushing into the drain body and thus the water level at each flushing will rise to above the top of the separating wall and will fall to the minimum water level due to the slots or openings in the wall whereby the liquid remaining in the drain body is practically free from liquid on the surface of less specific gravity than water. This difference in the specific gravities between the water and the liquids of less specific gravity is relied upon to position the liquids of less specific gravity above the bottom of the seepage openings. By the construction described, floats or other mechanical devices to either determine the minimum water level or to insure separation of the lighter from the heavier liquids is avoided.

It is believed evident from the foregoing description, that the invention disclosed resides in the construction of a floor drain so constructed that, by removal of the grating, the outlet is made accessible for cleaning purposes and that the invention further resides in a construction whereby my improved drain functions to discharge the oil and lighter constituents from the drain body at each flushing, and that the various features and objects of the invention are attained by the structures described.

Having thus fully described my invention, its utility and mode of operation, what I claim and desire to secure by Letters Patent of the United States is:

A floor drain to which water, oil and greases may be discharged, comprising a hollow body having an open top, a grating providing an apertured cover through which material may flow into the body the grating having an imperforate portion on one side, the body having an offset portion at the top of materially less depth than the body beneath the imperforate portion of the grating, a wall extending upwardly from the bottom of the offset portion and terminating below the grating, and an outlet conduit connected with the bottom of the offset portion, a flanged element depending from the imperforate portion of the grating into the offset portion between said upwardly extending wall and the outlet and terminating above the bottom of the offset portion, the entrance to the outlet being above the bottom of the said flange the said wall being constructed to provide for seepage of liquid from the body to the chamber and outlet and determining the minimum water level while the upper edge of the said wall determines the flow water level, the chamber being accessible through the open top of the body by removal of the grating.

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