

S. G. BROWN.
DRAIN TRAP.
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Patented Apr. 2, 1912.

Fig. 1.

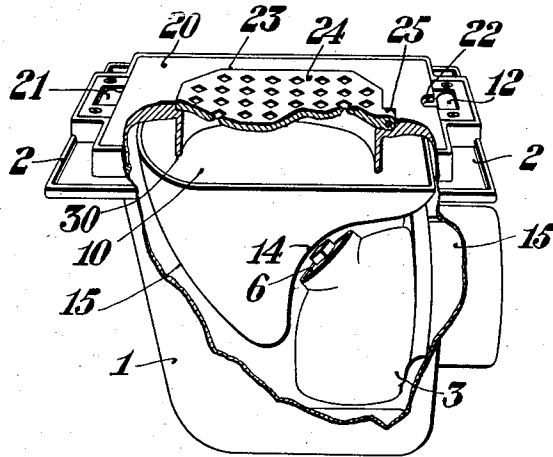


Fig. 2.

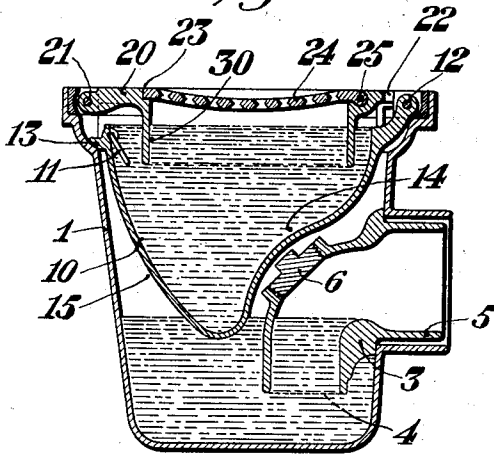
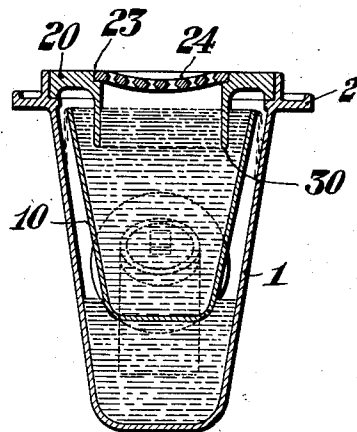


Fig. 3.



Witnesses

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DRAIN-TRAP.

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To all whom it may concern:

Be it known that I, SAMUEL G. BROWN, a citizen of the United States, residing at Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Drain-Traps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to drain traps, and more particularly to floor draining traps for automobile or wagon wash stands, or for other floors which require draining such as the floors of stables, breweries, factories and hospitals, the drain water from which may contain sediment or oils.

The wash water from cleaning automobiles and the like contains not only dirt, but also more or less gasoline and lubricating oil. In order to prevent the drain or soil pipe from being filled, it is necessary to separate the dirt or sediment from the water, and it is also imperative that the oils, particularly the gasoline, be kept from entering into the drain pipe or sewer, since the volatile gases therefrom will permeate the entire sewer or drain system, and are likely to explode if by chance they reach any flame.

One object of the present invention is to produce an improved drain trap which will remove the sediment from the drain water and hold it so that it may be easily removed from the trap.

Another object of the present invention is to produce an improved drain trap which will remove oils or grease from the drain water and hold them so that they may be easily removed from the trap.

Still another object is to combine the sediment and the oil removing features into a unitary construction and so produce a drain trap which will remove from the drain water both the sediment or dirt, and also the oils, such as the gasoline or lubricating oil, and from which the collected sediment and oils may be easily removed.

With the above object in view the present invention consists in the drain trap

hereinafter described and particularly pointed out in the claims.

In the drawings Figure 1 is a perspective view of the drain pipe with parts of the main pot and covers broken away to show the inner deposit pot; Fig. 2 is a vertical longitudinal cross-section through the trap; and Fig. 3 is a vertical transverse cross-section through the trap. Figs. 2 and 3 both illustrate the trap as filled with water.

The main part of the trap is formed of a main pot or containing shell 1. This pot or shell is provided with a horizontal flange 2 near its top, by means of which it may be set into or hung from the floor to be drained. A downwardly turned pipe elbow 3 enters the side of the main pot, the lower end of this elbow opening at 4 beneath the normal level of the water in the pot, so that it acts as a trap for sewer gas. The outer end of the elbow has a collar 5 which is adapted to receive a soil or sewer pipe connection. A taper screw clean-out plug 6 is provided for cleaning the soil or sewer pipe.

A secondary or deposit pot 10 is provided to catch and retain the sediment in the wash water. The deposit pot 10 is removably set into the main pot 1 so that it may be lifted or turned out to dump the sediment therefrom. The most convenient way to provide for the removal of the deposit pot is to hinge it to the main pot, as shown in the drawings. By grasping the ring or handle 11 the deposit pot may be turned about the hinge 12 by which it is connected to the main pot, and the sediment dumped out. The deposit pot is supported at its ends opposite the hinge 12 by a stop lug 13 which rests against a cooperating inner flange on the main pot. The deposit pot is hollowed in at 14 to fit over the elbow 3, and has its opposite wall 15 formed on the arc of a circle about the hinge 12, so that when it is turned up it will clear the inside of the main pot. The deposit pot is narrower than the main pot, so that a free space is allowed on either side for the water to overflow into the main pot as illustrated in Fig. 3.

To form a continuation of the floor over the trap, a main cover 20 is hinged at 21 to the top of the main pot. This cover has a recess 22 by which it may be grasped and

lifted to expose the trap. The main cover 20 is provided with a central opening 23 over the open top of the deposit pot. A perforated secondary cover or lid 24 normally protects this opening. The lid 24 is hinged at 25 to the side of the opening 23 opposite the main cover hinge 21, so that when the main cover 20 is raised or lowered the lid 24 will be held closed by gravity.

The cover 20 is hinged to the main pot opposite the hinge 12 of the deposit pot 10, so that the cover is entirely out of the way of the deposit pot when it is lifted to dump the sediment. The under side of the main cover 20 is provided with a downwardly extending flange 30. This flange encircles the open area or opening 20 through the main cover, and projects downwardly into the open top of the deposit pot 10. This flange acts, with the surface of the water in the deposit pot, to form a reservoir in which the oils are trapped or separated from the water. As the water flows through the perforations in the lid 24 into the deposit pot the oils separate and remain on top. The flange 30 acts as a barrier and prevents the oils from spreading beyond it and running over the edge of the deposit pot. The water and sediment from which the oil has been separated passes down into the deposit pot, the sediment falling into the bottom of the pot, and the water rising outside of the flange 30 and dripping or spilling over the edge of the deposit pot into the main pot. The water in the main pot which has thus been freed from the oils and the sediment runs into the sewer through the elbow 3. When it is desired to clean out the trap the lid 24 is first raised, and the oils, such as lubricating oil and gasoline, which are retained within the flange 30, can be skimmed off the surface of the water or taken up by an oil absorbing material. After the oils have been taken out, the main cover 20 is lifted and this gives free access to the deposit pot, which may be lifted and the sediment dumped therefrom. The construction illustrated, which provides the oil retaining flange 30 on the bottom of the main cover, is particularly convenient in use, since when the main cover is lifted, the flange 30, which forms the side walls of the oil retaining reservoir, is removed from the surface of the water, which forms the bottom of the oil retaining reservoir, so that the open top of the deposit pot is left entirely unobstructed and free for the removal of the sediment.

As illustrated in the drawings, the deposit pot 10, the main cover 20, and the lid 24 are made removable from their normal positions by means of hinged joints, but it is obvious that they might be loosely set in and be removed by being lifted out bodily.

While a preferred embodiment of the in-

vention has been illustrated and described, it is to be understood that the present invention is not confined to such specific embodiment but may be otherwise embodied within the spirit of the invention and the scope of the following claims.

I claim:

1. An oil-and-sediment retaining floor draining trap, having, in combination, a main pot, a drain connection opening under the normal water level in said pot and forming a sewer gas trap, an open topped deposit pot set into the main pot and hinged at one side thereof whereby it may be lifted to discharge the sediment accumulated therein, a main cover hinged to the top of the main pot and having an opening over the open top of the deposit pot, a flange formed on the under side of said cover encircling the opening and extending downwardly into the deposit pot so as to form with the surface of the water in the deposit pot an oil retaining reservoir, and a perforated lid hinged to the main cover to protect said opening and allow easy access for the removal of the oil without raising the main cover, substantially as described.

2. An oil-and-sediment-retaining floor draining trap, having, in combination, a main pot, a drain connection for the main pot, an open topped deposit pot set into the top of the main pot and hinged at one side thereof whereby it may be lifted to discharge the sediment accumulated therein, a main cover hinged to the side of the main pot opposite the deposit pot hinge and having an opening over the open top of the deposit pot, a flange formed on the under side of said cover encircling the opening and extending downwardly into the deposit pot so as to form with the surface of the water in the deposit pot an oil retaining reservoir, and a perforated lid hinged to the main cover to protect said opening and allow easy access for the removal of the oil without raising the main cover, substantially as described.

3. A floor draining trap, having, in combination, a main pot, a drain connection for the main pot and a deposit pot set into the main pot and hinged at one side thereof whereby the deposit pot may be lifted to discharge the sediment accumulated therein, a cover for the trap having an opening over the top of the deposit pot and hinged to the main pot at the side thereof opposite the deposit pot hinge whereby the cover and deposit pot are swung up in different directions and do not interfere when they both are raised, substantially as described.

4. A floor draining trap, having, in combination, a main pot, a downwardly opening pipe elbow entering one side of the main pot and opening beneath the normal water

level therein to form a sewer gas trap, a deposit pot set into the main pot and hinged at the side of the main pot through which the drain pipe elbow enters, whereby it may
5 be lifted to discharge the sediment accumulated therein, said deposit pot being hollowed-in to fit over the drain pipe elbow and having its opposite side formed on the arc of a circle about its hinged connection so as to
10 clear the inside of the main pot when it is raised, a cover for the trap having an opening over the top of the deposit pot and hinged to the main pot at the side opposite the deposit pot hinge whereby the cover may
15 be swung up out of the path in which the

deposit pot is lifted to discharge the sediment, substantially as described.

5. A floor draining trap, having, in combination, a pot body, a main cover hinged thereto and having an opening therethrough, 20 a lid for said opening hinged to the main cover at the side of the opening opposite the main cover hinge whereby the lid will be held closed by gravity when the main cover is raised or lowered, substantially as de- 25 scribed.

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Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."