

[54] DENTAL SILVER RETRIEVAL APPARATUS	2,253,143	8/1941	Siegel.....	32/33
[76] Inventor: John K. Ritchie, 1118 Grand St., Alameda, Calif. 94501	3,138,873	6/1964	Bishop	32/33
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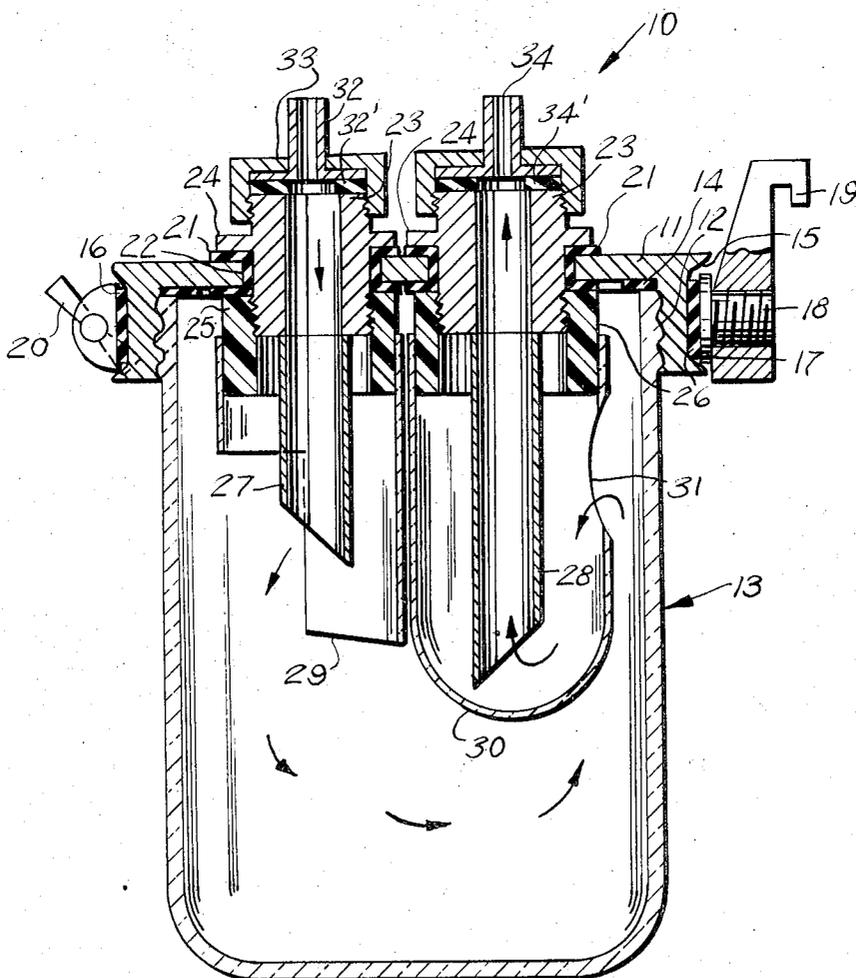
[57] ABSTRACT

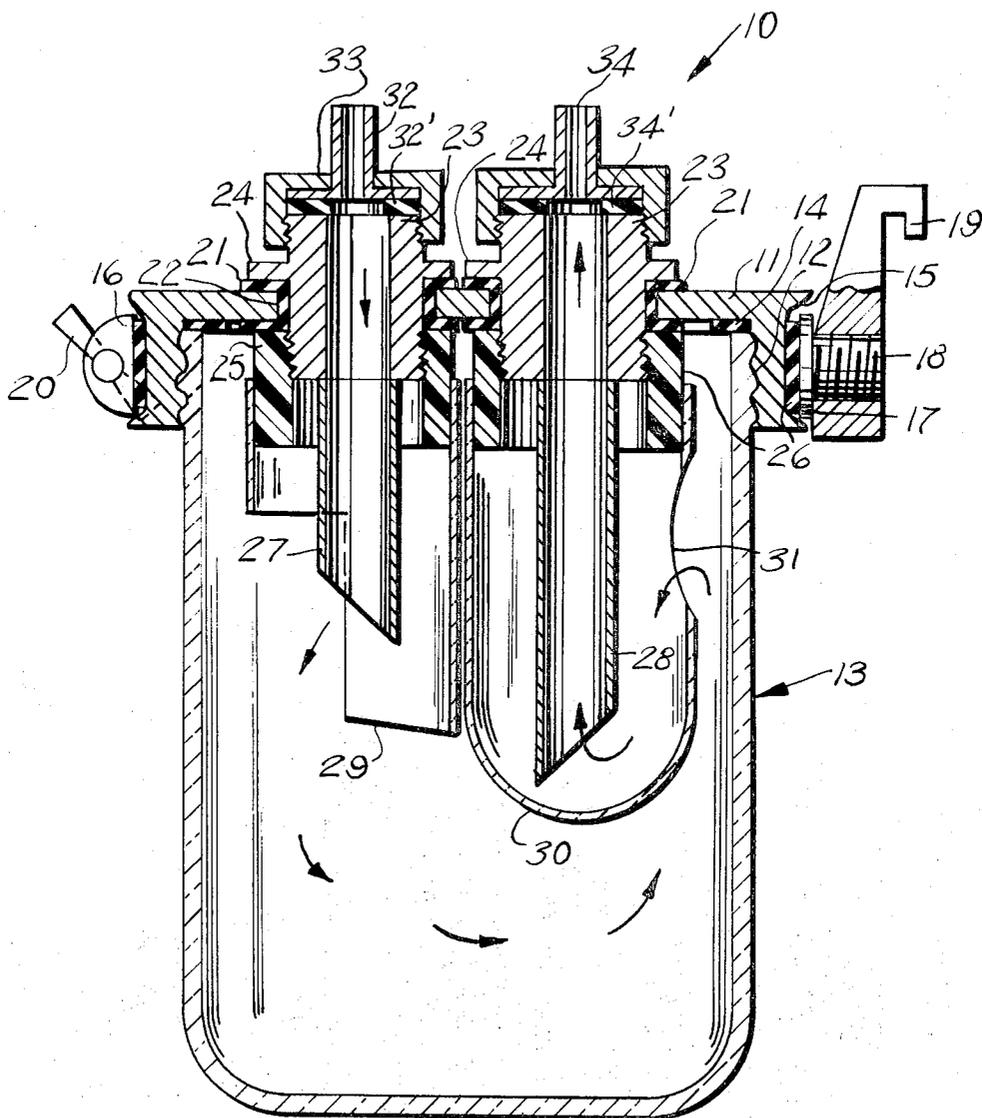
A device for collecting dental silver. This device consists primarily of a mounting member carrying a sump, a sediment director member, a sediment barrier member and sleeve and tube members which incorporate fittings for hoses.

[56] **References Cited**

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4 Claims, 1 Drawing Figure





DENTAL SILVER RETRIEVAL APPARATUS

This invention relates to dental silver retrieval apparatus for separating elements of different specific gravities, and more particularly to a dental silver retrieval apparatus.

It is therefore the primary purpose of this invention to provide a dental silver retrieval apparatus which will prevent the loss of the silver that is normally lost when ground up by dentist drills.

In the prior art, the silver that is ground up by a dentist drill is carried down the drain into the sewer.

Another object of this invention is to provide an apparatus of the type described, which will operate on the effect of differential in specific gravities of the elements, compounds and fluids that are directed through the apparatus by air pressure differential which is produced by applying a vacuum to a decanting unit element using the dentist equipment.

Another object of this invention is to provide an apparatus of the type described, which will be of such structure, so as to be easily installed on the operative, office side of dental aspirating equipment and the structure will be of such nature, so as to operate under the stress of one half atmosphere internal pressure. Standard dental aspirating equipment operates about 22 inches of mercury internal pressure and the present apparatus will provide for about 7 inches of mercury as a safety factor.

Another object of this invention is to provide an apparatus of the type described, which may be supported by hanger hook means from the top of the equipment access door in the pedestal of the dentist operating equipment, or the hanger hook may be removed and a stud member of the mounting ring may be threaded into a tapped hole in the pedestal at any desired point.

A further object of the present invention is to provide an apparatus of the type described, which will include a transparent sump envelope for the collection of the silver, the mounting portion having a pair of threaded sleeve members and plastic collar means carrying a sediment director member and a sediment barrier member, the extending sleeve of the mount, carrying the hose fitting.

Other objects of the present invention are to provide a dental silver retrieval apparatus which is simple in design, inexpensive to manufacture, rugged in construction, easy to use and efficient in operation.

These and other objects will be readily evident upon the study of the following specification and the accompanying drawing wherein:

The drawing is the sole FIGURE of the present invention which is shown in elevation and in section.

According to this invention, a dental silver retrieval 10 is shown to include a circular mount 11 made of metal or other suitable material. Mount 11 is internally threaded and serves to receive the threaded end 12 of a transparent sump envelope 13. The sump envelope 13 serves as collection means for the ground silver when apparatus 10 is in operation. The upper threaded end 12 of envelope 13 abuts with a rubber gasket seal 14 which provides seal means between the mount 11 and the sump envelope 13. Mount 11 is provided with an annular groove 15 in which is carried a rubber shock ring 16, the rubber shock ring 16 being encompassed by a mounting ring 17. Mounting ring 17 is provided with an extending and externally threaded stud 18 which is threaded into a hanger hook 19, the hook 19

10 serving to suspend apparatus 10 from a desired point.

It shall be noted that hanger hook 19 may be unthreaded from stud 18 and the stud 18 threaded into a tapped hole of the dentist equipment pedestal at any desired location.

The mounting ring 17 is secured against the rubber shock ring 16 by an adjustable thumb screw 20. A rubber grommet 21 is frictionally carried within each of the spaced apart openings 22 of mount 11 and an externally threaded adapter sleeve 23 is frictionally secured within each of the rubber grommets 21. The adapter sleeves 23 are also provided with an annular flange 24 which abuts with the extending face of the grommets 21. A plastic collar 25 is threaded onto the end of one of the adapters 23 and a second collar 26 is threaded onto the other adapter sleeve 23. Collars 25 and 26 are of plastic material and each abuts with a face of rubber grommets 21, the rubber grommets 21 serving as seal means therefore.

A tube 27 is secured to one of the adapter sleeves 23 on the interior of sump envelope 13 and a decanting tube 28 is secured fixedly in a suitable manner to the other adapter sleeve 23. A sediment director member 29 is fixedly secured in a suitable manner to the outer periphery of plastic collar 25. A sediment barrier member 30 is spaced apart from sediment member 29 and is secured fixedly in a suitable manner to the outer periphery of collar 26, the sediment barrier member 30 having an opening 31 through its wall for a purpose which hereinafter will be described.

A serrated hose fitting 32 bears against a rubber washer seal 32' within screw fitting 33 which is threaded on to one of the adapter sleeves 23. A hose fitting 24 bears against a rubber washer seal 34' within screw fitting 35 which is threaded on to the second adapter sleeve 23.

In use, the aspirator hose is removed from the vacuum riser of the dentist equipment and is attached to the serrated fitting 32 which is the intake of apparatus 10. The vacuum riser fitting is then connected to the serrated fitting 34 leading into the decanting member tube 28, by means of a piece of surgical tubing of appropriate length. Apparatus 10 is then ready for operation. Sewage and silver particles are carried down the aspirator tube through the tube 27 where the sediment director member 29 glides the sediment away from the decanting tube 28 portion. The heretofore mentioned, provides the longest route and this enables the maximum amount of time for the elements with the greatest specific gravity, to move to the bottom of the sump envelope 13, the fluids are carried out through opening 31 of the sediment barrier member 30 which is closed at the bottom. The fluids then travel outwards through decanting tube 28 and out of the fitting 24, and through the vacuum riser fitting to the normal drainage system which results in leaving the aspirated silver in the sump envelopes 13 for collection.

What I now claim is:

1. A dental silver retrieval apparatus, comprising a circular and internally threaded mounting member, a transparent sump envelope carried by said mount for the collection of silver, gasket means carried within said mount providing seal means between said mount and said sump envelope, a mounting ring carried by said circular mount with rubber shock ring means for absorbing the shock there between, stud and hanger hook means carried by said mount assembly for sup-

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porting said apparatus from equipment, a pair of flanged adapter sleeves carried within said mount with grommet means providing sealing thereof, a pair of serrated hose fittings with screw fittings for rendering them secure to said apparatus, a sediment director member with collar means carried within said apparatus for forming the intake side of said apparatus and a sediment barrier member including collar means for enabling the silver to be retained in said sump envelope for said apparatus when in operation.

2. The combination according to claim 1, wherein said sediment director member encompasses a central tube extending from one of said adapter sleeves on the intake side of said apparatus said tube of the intake of said apparatus extending partially downwards within said sediment director member and the outlet portion of said apparatus includes an elongated decanting tube secured to the other adapter sleeve, said adapter sleeve being spaced apart and frictionally carried within grommets carried within a pair of openings of said mount of said apparatus.

3. The combination according to claim 2, wherein said adapter sleeves are provided with an outwardly extending and annular flange, said flange bearing against one of the faces of said grommets and said plastic collars bear against the opposite face of said grommets thus rendering the intake and output assemblies secure within said mount of said apparatus and said sediment barrier member is dome shaped at its bottom portion

of the output assembly and said decanter tube extends from the adapter receiving the collar as secured within the inner periphery of the open end of said sediment barrier member, said dome portion serving as baffle means for the fluid flow so as to enable the silver to remain within said sump envelope for collection.

4. The combination according to claim 3, wherein said sump envelope is provided with an opening through its wall portion that is adjacent and spaced apart from the inner periphery of said sump envelope, thus enabling said fluid to pass upwards and down into said sediment barrier and enable said fluid to be drained into said decanting tubes and out of said fitting and hose of the output of said apparatus, said apparatus being operated by the aspirator hose being moved from the vacuum riser of the dentist equipment, said aspirator hose being attached to the serrated fitting of the intake side of said apparatus which carries said sediment director member, the vacuum riser fitting being connected to the serrated fitting leading to said decanting tube portion, the sewage and silver particles being carried down said aspirator tube through the intake portion of said apparatus where the horizontally curved sediment director guides said sediment away from said decanting element thus providing the longest route and enabling the maximum amount of time for the elements with the greatest specific gravity to move through the bottom of said sump envelope.

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