

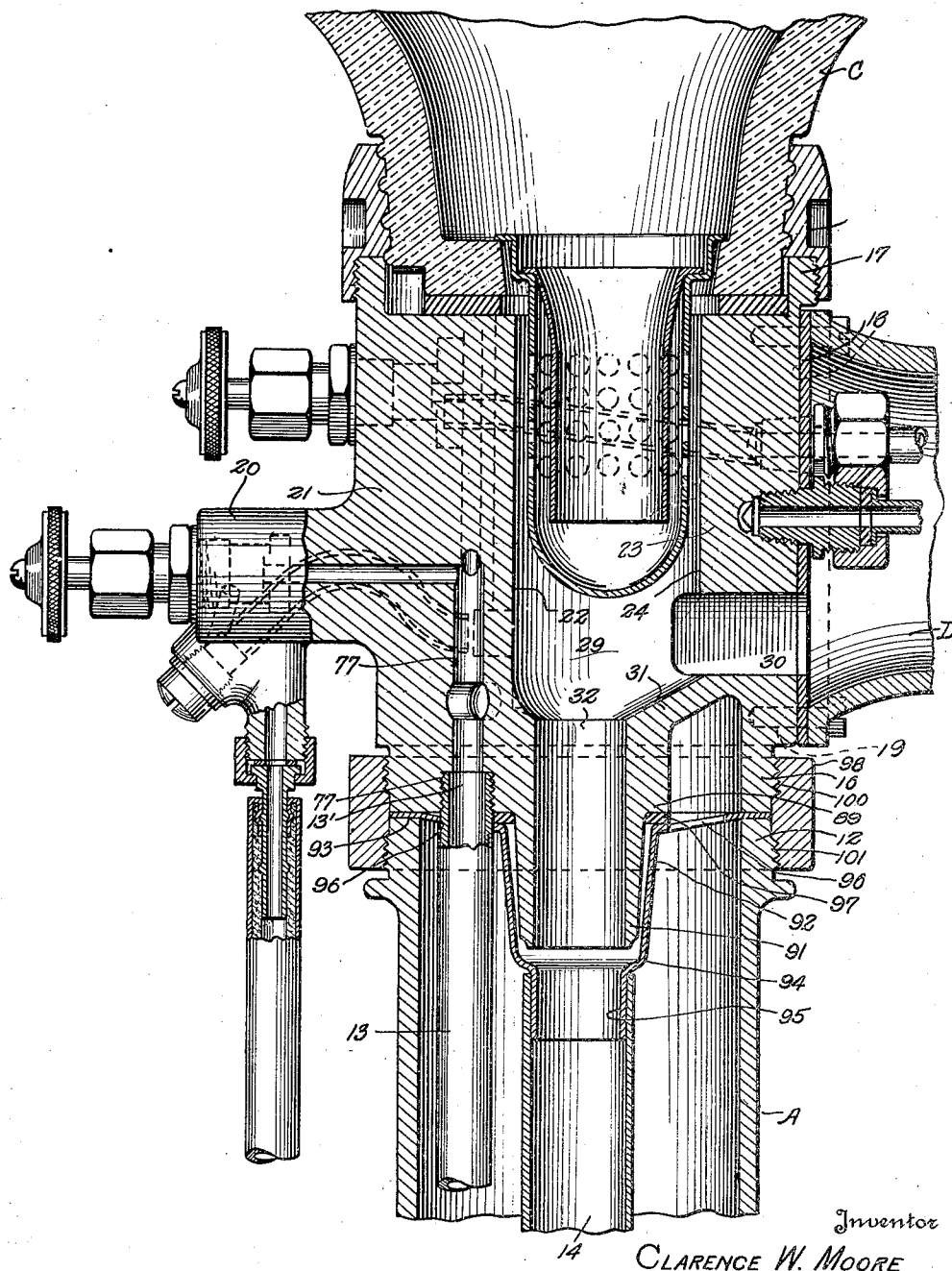
Jan. 5, 1932.

C. W. MOORE

1,839,246

FOUNTAIN CUSPIDOR

Original Filed Nov. 30, 1926



Inventor

CLARENCE W. MOORE

By

Frank H. Borden

Attorney

UNITED STATES PATENT OFFICE

CLARENCE W. MOORE, OF ROSLYN, PENNSYLVANIA, ASSIGNOR, BY MESNE ASSIGNMENTS, TO RITTER DENTAL MANUFACTURING COMPANY, INC., OF ROCHESTER, NEW YORK, A CORPORATION OF DELAWARE

FOUNTAIN CUSPIDOR

Original application filed November 30, 1926, Serial No. 151,736. Divided and this application filed September 5, 1929. Serial No. 390,489.

This invention relates to fountain cuspidors, with particular reference to cuspidors used in the professions such as dentistry and medicine.

5 The subject matter disclosed and claimed herein constitutes a division of an application for fountain cuspidors, filed Nov. 30, 1926, Ser. No. 151,736.

In the application above identified there 10 was disclosed a fountain cuspidor of novel construction and possessed of numerous advantages over the prior art. In its simplified and preferred form the cuspidor comprised a unitary drainage and distributing 15 head through which all of the water and waste of the cuspidor passed. A bowl was mounted on the upper end of the head, while the lower portion of the head engaged with a support housing drainage and water supply passages or conduits, while a branch 20 extended laterally and upwardly from the head carrying a tumbler bowl and its associated supply and drainage passages.

Among the objects of the invention are; to 25 provide a cuspidor of efficiency and compactness; to provide a cuspidor which is silent as a drainage; to provide in a cuspidor a supply or distributing head of a single unitary casting; to provide in a cuspidor a unitary 30 element through which all of the supply and drainage fluid passes; to reduce the labor formerly necessary in constructing cuspidors; to provide a cuspidor of decreased weight without adversely affecting its 35 strength and with an enhancement of its attractiveness; to provide an improved and simplified coupling joining two parts of the cuspidor without danger of leaks; and to 40 provide a coupling enabling the quick and easy joining of a distributing head and a pedestal or like support regardless of slight misalignments that may exist in the elements; and many other objects and advantages as 45 will be more apparent as the description proceeds.

In the accompanying drawing the figure represents a vertical section through the 50 unitary distributing and drainage head, with fragmentary portions of the attached bowl,

branch and support, disclosing the disposition of the coupling element.

It will be observed that the invention comprises in its preferred form an assembly of a unitary drainage and distributing head B, 55 carrying at its upper end a cuspidor bowl C, and that a branch D diverges from the head B. The assembly is arranged for mounting upon a pedestal or support A, in which are the water supply and drainage conduits to 60 be described.

The head B, preferably a casting, comprises a hollow sleeve-like body, terminating at the lower end in a threaded coupling member 16, and at the upper end in a bowl coupling member 17. Both coupling members 65 are preferably concentric with the axis of the head. The major portion of the main body of the head is generally annular or cylindrical and is concentric with its axis and with 70 the coupling members, but at one side is provided with a branch coupling face 18, having threaded openings 19 to receive coupling screws of the branch, and on another side, preferably diametrically opposite thereto, the 75 head is provided with a radial projection 20. The wall 21 from which the projection 20 extends is formed of appreciable thickness, having a substantially plane inner face 22, and the wall 23, contiguous to the branch coupling face, and opposite to wall 21, has also 80 a substantially plane inner face 24, parallel with the inner face 22. The thickened walls 21 and 23 are connected by curved relatively thin walls. The inner faces 22 and 24, with 85 the thin walls form the main drainage passage 29 through the head. The drainage passage 29 thus formed is of substantially uniform diameter from the upper end of the head to well toward the bottom, where an oblong slot 30 90 pierces the wall 23 from inner face 24 to the surface of the branch coupling face 18, to permit the passage of drainage water from the branch. Beneath the slot 30, the area of the drainage passage 29 is decreased by 95 a web 31 projecting inwardly from the several inner faces of the walls to form the common circular outlet 32, concentric with the axis of the head. It will be noted however, that although the common outlet 32 is 100

concentric with the axis, the major area of the main drainage passage 29 is located laterally of the axis of the head as located by the outlet 32 and coupling members 16 and 17, due to the differing thicknesses of the walls of the head.

The main water supply pipe 13 in the pedestal has a threaded end 13', arranged for insertion in the threaded bore 77 in the bottom face of the distributing head B.

At the lower end of the head B, the web forming the common outlet 32, may if desired, be prolonged to form a tapering discharge tube 91, although this is not essential to the proper functioning of the assembly. The common drainage outlet 32 is arranged for connection with the drainage conduit 14 in the support in a novel and useful manner. The upper end of the drainage conduit may be flanged directly, or through the attachment of a nipple as shown, in which a tapering barrel or tube 92 is spun into a flange 93 at its larger end, and at the smaller end has an internal shoulder 94, and a lower restricted hollow shank 95. The hollow shank is arranged for soldered connection in the end of the drainage conduit 14 so that the nipple forms a substantially integral prolongation of the conduit. The flange 93, is of such diameter as to seat upon the lower face of the coupling member 16, and has one or more openings 96, through which the water supply pipe 13 is arranged to extend, and which openings are spaced far enough from the inner surface of the barrel to afford a circular seating surface on the flange, arranged for abutting engagement with a shoulder 89 formed on the lower portion of the head in the plane of the lower face of the coupling member 16. This may be formed on the discharge tube 91 if that is provided. A washer 97, which may be resilient, is seated upon the shoulder 90, and is engaged by the seat portion of the flange adjacent the barrel when the head is placed upon a support, at which time the outer periphery of the flange is engaged between the coupling members of the head of the support, and which engagement effects axial distortion of the flange so that a funnel shape is assumed by the nipple, with consequent vertical pressure on the washer 97, to insure a water-tight joint between the common drainage outlet 32 and the discharge conduit 14. A firm engagement of the head B upon support A is had by the application of a nut coupling element 98, having oppositely threaded portions 100 and 101, arranged for simultaneously engaging the oppositely threaded coupling members 16 and 12, and rotated by a wrench, (not shown) engaging suitable spanner openings (not shown). The assembly will be clear, and it will be noted that considerable flexibility is had about the discharge or drainage outlet without effecting its water-tight connection,

so that slight variations in the positioning of the water drainage conduit 14 in the support can be permitted, as in the event of slight eccentricity or mis-alignment of the drainage conduit 14 relative the pedestal A.

I claim as my invention:

1. In a cuspidor, a drainage head having a lower coupling member and projecting outlet means, a washer concentric with the outlet means, a flange or nipple slidable over the washer but not with the coupling member, said flange adapted for engagement with the coupling member and for resilient distortion by such engagement to impose pressure on said washer.
2. In a cuspidor, a drainage head including a coupling member and an axial outlet extension, a nipple having a flange, the head having a shoulder in proximity to the extension, a resilient washer engaged by the shoulder and compressed by the inner portion of the flange of the nipple when the periphery thereof is forced into contact with the coupling member.
3. In a cuspidor, a unitary drainage and distributing head having a substantially vertical drainage passage terminating in a delivery outlet, a coupling member formed on the head, a support upon which the head is mounted, a drain pipe housed in the support in registry with the outlet, a shoulder being formed on the head adjacent the outlet, a flanged tubular nipple connected at one end to the drain pipe, the outer periphery of the flange engaged between the support and the coupling member, a washer interposed between the inner portion of the flange and said shoulder to space the outer periphery from the flange away from the coupling member and compressed by the engagement of the periphery of the flange with the support and coupling member, and forming a resilient connection permitting restricted movement of the pipe.
4. In a cuspidor, the combination with a support, of a drain pipe extending through the support, a flexible connection having a tapering barrel connected to the drain pipe and having a flange, a drainage element terminating in an axial projection and having a shoulder, bearing surfaces being formed on the element and the support and spaced from said shoulder in their assembled position, and gasket means interposed between the pipe flange and the shoulder and constricted therebetween by pressure on the flange from the cooperating bearing surfaces, the axial projection arranged for insertion in the tapering barrel of the connection and to discharge into the drain pipe despite slight displacement of the pipe from its position in alignment with the extension.
5. In a cuspidor, the combination with a unitary drainage and distributing head, hav-

ing a pedestal coupling member, and a drainage outlet projecting below the member, water conducting means disposed in the head, a support, drainage and water supply pipes housed in the support, of a tubular flanged gasket having an opening in the flange and engageable with the drain pipe, a head coupling member carried by the support arranged to engage the flange of the gasket, a tensioned element engaged between the flange and the head and spaced from the opening in the flange subjected to pressure when the head is mounted on the support due to distortion of the flange, said water supply pipe passing through the opening in said flange.

6. In a cuspidor, the combination with a drainage head having a drainage discharge opening and a coupling member, a support engaging the coupling member, of a drain pipe in the support in registry with the opening and having a flange, a washer engaged between the flange and said head and forming a tight joint about said opening by pressure transmitted through the flange when the element and support are assembled.

7. In a cuspidor, an element having two bearing surfaces in a plane, a support engaging one surface, a drain pipe having a flange engageable between the support and the said surface, and means compressed between and making a water tight connection with the flange and said other surface when the element is assembled with the support.

8. In combination, a head having inner and outer spaced concentric bearing surfaces, a compressible washer mounted on one surface, a flange engaging the washer and normally spaced from the other of said bearing surfaces, and means operative to force the flange toward said last mentioned bearing surface and thereby to distort the flange so as to impose sealing pressure on said compressible washer.

In testimony whereof, I affix my signature.
CLARENCE W. MOORE.