No. 703,221. Patented June 24, 1902.

W. E. ALLEN.

FOUNTAIN SPITTOON.

(Application filed June 20, 1901.)

(No Model.)

Fig. 1.

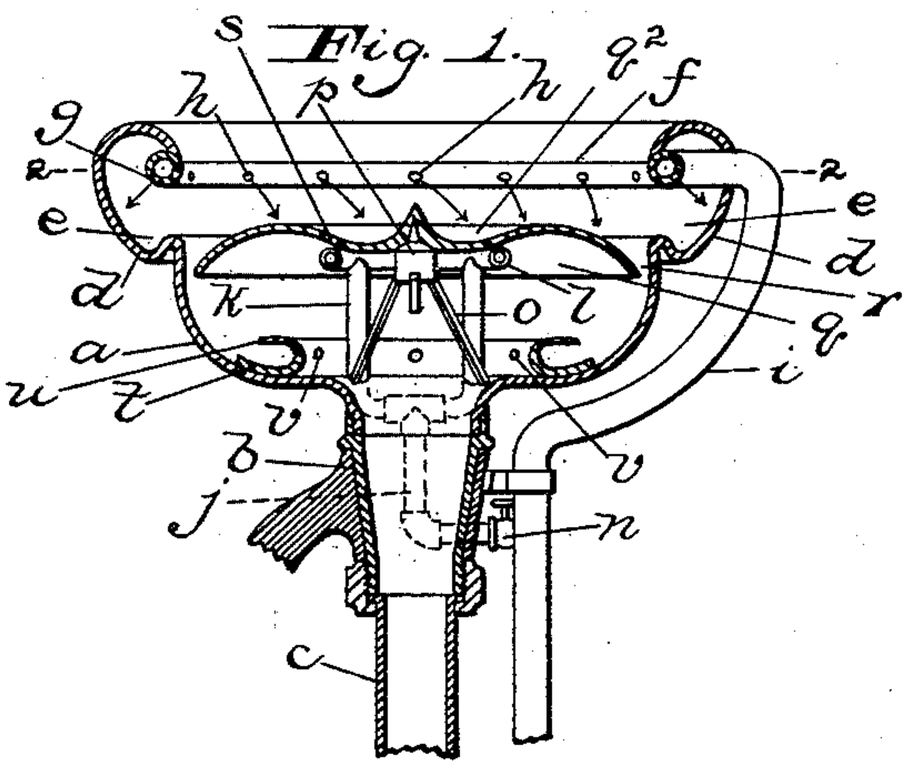


Fig. 2.

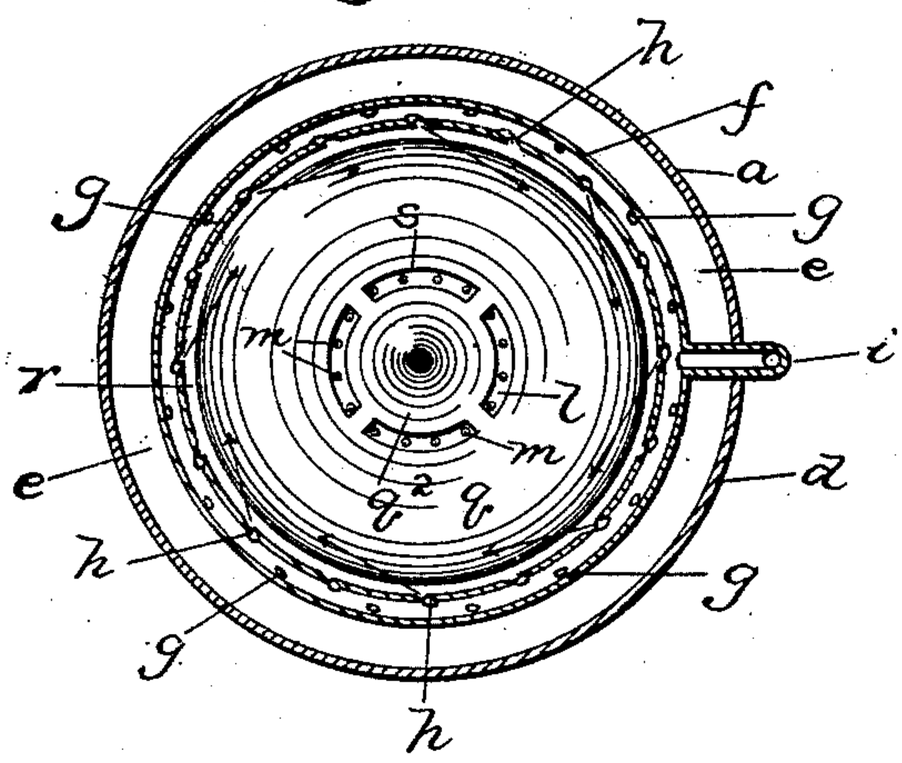


Fig. 4.

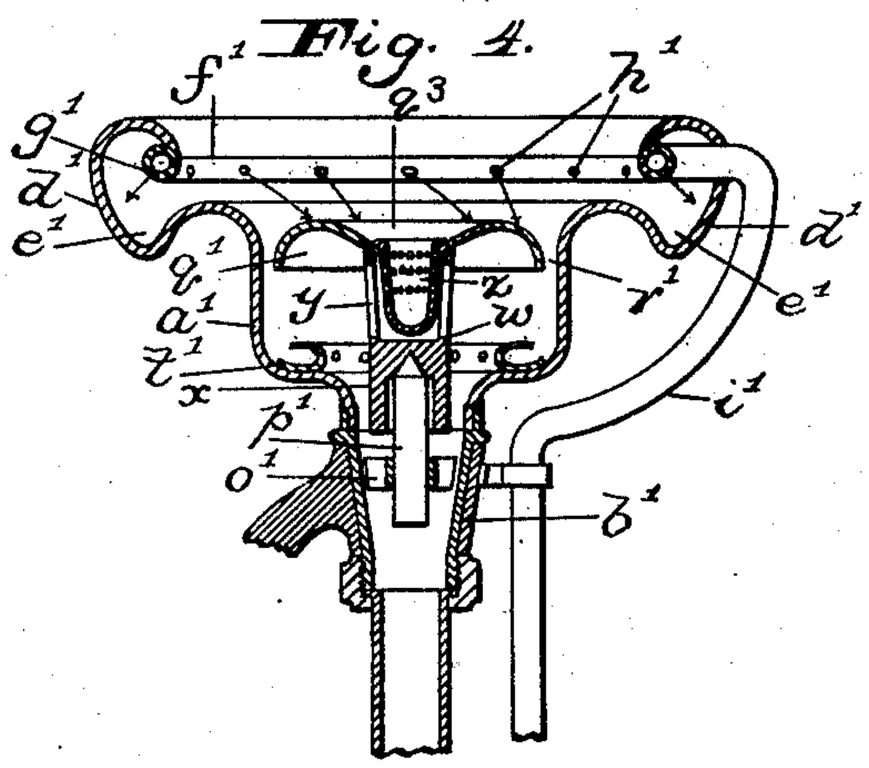


Fig. 5.

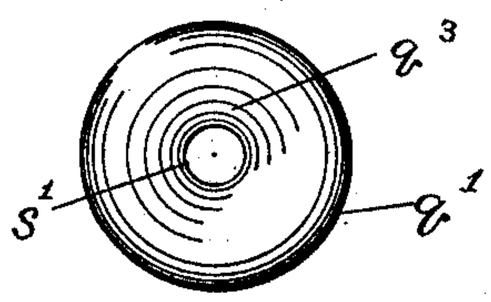


Fig. 6.

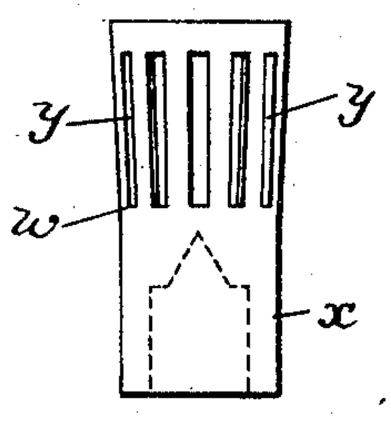


Fig. 3.

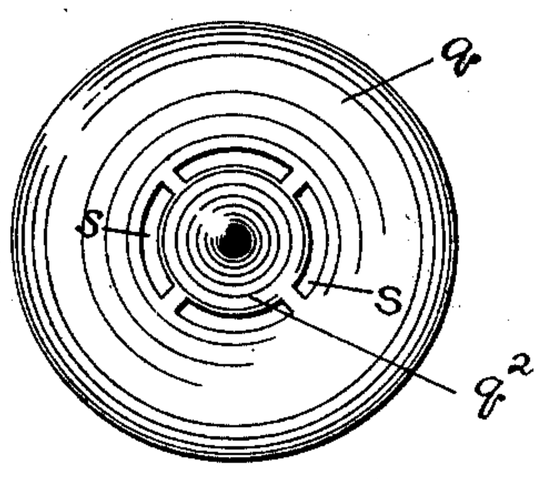
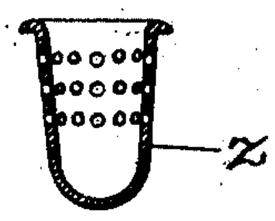


Fig. 7.



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UNITED STATES PATENT OFFICE.

WILLIS EDW. ALLEN, OF BALTIMORE, MARYLAND.

FOUNTAIN-SPITTOON.

SPECIFICATION forming part of Letters Patent No. 703,221, dated June 24, 1902.

Application filed June 20, 1901. Serial No. 65,252. (No model.)

To all whom it may concern:

Be it known that I, WILLIS EDW. ALLEN, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Fountain-Spittoons, of which the following is a specification.

This invention relates to spittoons, and particularly to that class for dentists' use called "fountain-spittoons," which are continuously flushed by a stream or streams of water flowing therethrough.

The object of the invention is to provide an improved spittoon of this character whose construction and arrangement of parts enable a thorough cleansing or flushing of the bowl to be quickly effected and in which all blood, cotton, or similar unsightly objects will be quickly washed out of the sight of the person being operated upon.

The invention consists in certain constructions, arrangements, and combinations of the parts hereinafter fully described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical transverse section of a fountain-spittoon, illustrating one form of the invention. Fig. 2 is a horizontal section thereof, taken approximately on the line 2 2 of Fig. 1. Fig. 3 is a detail top plan view of the rotating disk adapted to throw by centrifugal action the blood, cotton, or the like out toward its edge and down into the bowl. Fig. 4 is a vertical transverse section of a fountain-spittoon, illustrating another form of the invention. Fig. 5 is a detail top plan view of the rotating disk of this form of the invention. Fig. 6 is an enlarged detail side view of the rotating support for said disk. Fig. 7 is an enlarged detail vertical section of a trap for the central discharge-opening of said disk.

Referring to the drawings, Fig. 1, the letter *a* designates the bowl of the improved fountain-spittoon, which bowl may be composed of glass or metal and which is provided at its bottom with a tubular extension *b*, through which the water may discharge into a waste-pipe *c*. The said bowl *a* is also provided near its top with an outward circular flange *d*, which curls upwardly and at its upper edge inwardly, whereby to form near the top of the bowl an approximately V-shaped circular trough *e*.

Around the inside of the circular rim edge of the bowl *a* is secured a main spray device *f*, which in this instance is a ring provided with two series of jets *g h*, the jets of one series *g* opening toward the bottom of the trough *e* and the jets of the other series *h* opening inwardly and downwardly and in a tangential direction for a purpose hereinafter described.

The letter *i* designates the main water-feed pipe, which is suitably clamped to the bowl and opens at its upper end into the main spray-ring *f*. A branch feed-pipe *j* is secured to the main feed-pipe and is provided with one or more tubular arms *k*, which extend upwardly on the inside of the bowl *a* near the center of the same, and a horizontal auxiliary spray device or ring *l* is secured to the top of said arms and is provided with a series of upwardly-opening jets *m*, as best seen in Fig. 2. A cock *n* is connected with the branch feed-pipe *j*, so that the flow of water therethrough may be diminished below the flow of water through the main feed-pipe *i*.

Within the bottom of the bowl *a* is secured an upwardly-extending spider *o*, provided at its upper end with a cone-bearing *p*, and a disk *q* (shown in detail in Fig. 3) is mounted to rotate about its center on said bearing and extends over the auxiliary spray-ring *l*, as indicated in Figs. 1 and 2. The marginal edge of said disk is close to, but spaced from, the side wall of the bowl *a* just below the inner upper edge of the V-shaped trough *e*, whereby a passage *r* is formed, and said disk is provided directly over the auxiliary spray-ring *l* with segmental slots *s*, through which the water issuing out of said spray-ring may pass onto the upper surface of the disk.

In order to catch the cotton, gold, or other substances washed into the bowl, there has been provided an annular pan *t*, intended to rest without permanent attachment in the bottom of the bowl *a* and provided with an upwardly-curled inner edge *u*, having apertures *v* to let water through. All unsightly objects injected into the bowl will be washed into the said pan, and the latter may be lifted

out of the bowl and cleansed. Also if the disk q should be made of glass the curled-up edge u of the pan will hide the said objects.

In practice water issuing out of the tangential jets h of the main spray-ring f will strike the upper surface of the disk q in such a direction as to cause it to rotate, the water issuing out of the other series of jets g will fill the trough e and overflow, so that a thin sheet of water will continuously flow down the inner surface of the bowl, and the water issuing out of the auxiliary spray-ring l will flow through the slots s over the outer surface of the rotating disk q and will also, on account of striking the webs which are located between said slots, be deflected over the under surface of the disk. The said disk q, as indicated in Fig. 1, is curved in cross-section, and its upper surface is for the most part convex. Hence as the disk rotates the centrifugal action will cause all unsightly objects injected onto the disk to be quickly thrown out into the passage r, and they will then pass downwardly underneath the disk and out of sight.

In that form of the invention illustrated in Figs. 4 to 7, inclusive, the bowl a' is provided with an outward flange d', having a more pronounced curl than the flange of the first-described construction, whereby to form a larger V-shaped trough e'. Around the inside of the rim edge of the bowl is secured a spray device in the form of a ring f', which is provided with two series of jets g' h', disposed like the series of jets g and h, and to said ring is connected the water-feed pipe i'. In the tubular discharge b' of the bowl a' is secured a web-plate o', in which is rigidly held a vertical spindle p', having a cone-shaped upper end. A cup-shaped disk-support w is provided with a socket whereby it is mounted to rotate on said spindle end and is also provided with a depending skirt x, surrounding said spindle end, so that water will not be liable to reach the cone-bearing, and the upper end of said disk-support is provided with a plurality of vertical slots y, as shown best in Fig. 6. Supported on the upper rim of the cup-shaped rotary disk-support w is a disk q', having a depressed central portion q^3, with a discharge-opening s' coincident with said disk-support, and also having a downwardly-curved outer edge spaced from the bowl-wall, so as to form a passage r', and a perforated cup-trap z fits down inside of said discharge-opening, as shown in Fig. 4. A perforated pan p' rests unattached in the bottom of the bowl a'. When the tangential jets h' strike the disk q', the latter will rotate and the water will wash any object injected onto the disk either down the passage r' or through the central discharge-opening s'.

In both forms of the invention illustrated in the accompanying drawings it will be observed that the disks q and q' both have a depression q^2 q^3 around the center. In the disk illustrated in Fig. 1 the depression q^2 is annular and surrounds a peak at the center of the disk, and in the disk illustrated in Fig. 4 the said depression q^3 surrounds the central discharge-opening s'. In either case when the water is sprayed tangentially on the upper surface of the disk the said depression will contain a whirling sheet of water. In the construction of Fig. 1 the depression will overflow to the other parts of the disk. In the construction of Fig. 4 it will not likely overflow, but will pass out through the central discharge-opening s'.

It is to be understood that the invention is not confined to a spray device in the form of a ring, as two distinct nozzles, one pointing inward and tangentially and the other pointing outward toward the bowl-wall, may be employed, and changes in the detail construction of the parts may be made without departing from the scope of the invention as defined in the appended claims.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A fountain-spittoon, comprising a bowl; a rotatable disk mounted in said bowl and provided with a substantially convex upper face; and a spray device secured within the rim of said bowl above the said disk and provided with two series of jets, one series being disposed toward the wall of the bowl and the other series disposed tangentially toward said disk, as set forth.

2. A fountain-spittoon comprising a bowl provided below its top with an outwardly-extending flange curling upward and inward to the rim edge of the bowl whereby to form an annular trough; a rotatable disk in said bowl; and a spray device secured within the rim edge of said bowl and provided with two series of jets, one series being arranged to spray toward said trough and the other series arranged to spray tangentially against said disk to rotate the latter, as set forth.

3. A fountain-spittoon comprising a bowl; a substantially convex disk mounted in said bowl with its convex face uppermost and provided with a central depression; and a spray device having one or more jets opening tangentially toward said disk.

4. In a fountain-spittoon, the combination of a bowl having a bottom discharge; and an annular pan detachably resting on the bottom wall of the bowl and provided with an upwardly-turned apertured inner edge adapted to catch solid unsightly objects injected into the bowl, whereby said pan may be removed with such objects in it, and cleansed, as set forth.

5. A fountain-spittoon, comprising a bowl; a disk mounted to rotate in said bowl and provided with a series of segmental slots; a main spray device adapted to spray said disk to rotate the same; and an auxiliary spray device underneath said disk and adapted to

spray upwardly through said slots, as set forth.

6. A fountain-spittoon, comprising a bowl; a disk mounted to rotate in said bowl and provided with a series of segmental slots; a main feed-pipe; a main spray-ring secured to said feed-pipe above said disk and adapted to spray on the top of the latter; a branch feed-pipe provided with a cock, *n*, and also provided with one or more tubular arms extending upwardly on the inside of the bowl; and an auxiliary spray-ring secured to the top of said arms underneath said segmental slots and provided with a series of upwardly-opening jets adapted to spray through said slots, as set forth.

In testimony whereof I affix my signature in the presence of two witnesses.

WILLIS EDW. ALLEN.

Witnesses:

FREDERICK S. STITT,

CHARLES L. VIETSCH.