(No Model.)

G. BOOTH.

DENTAL CUSPIDOR.

No. 597,384. Patented Jan. 18, 1898.

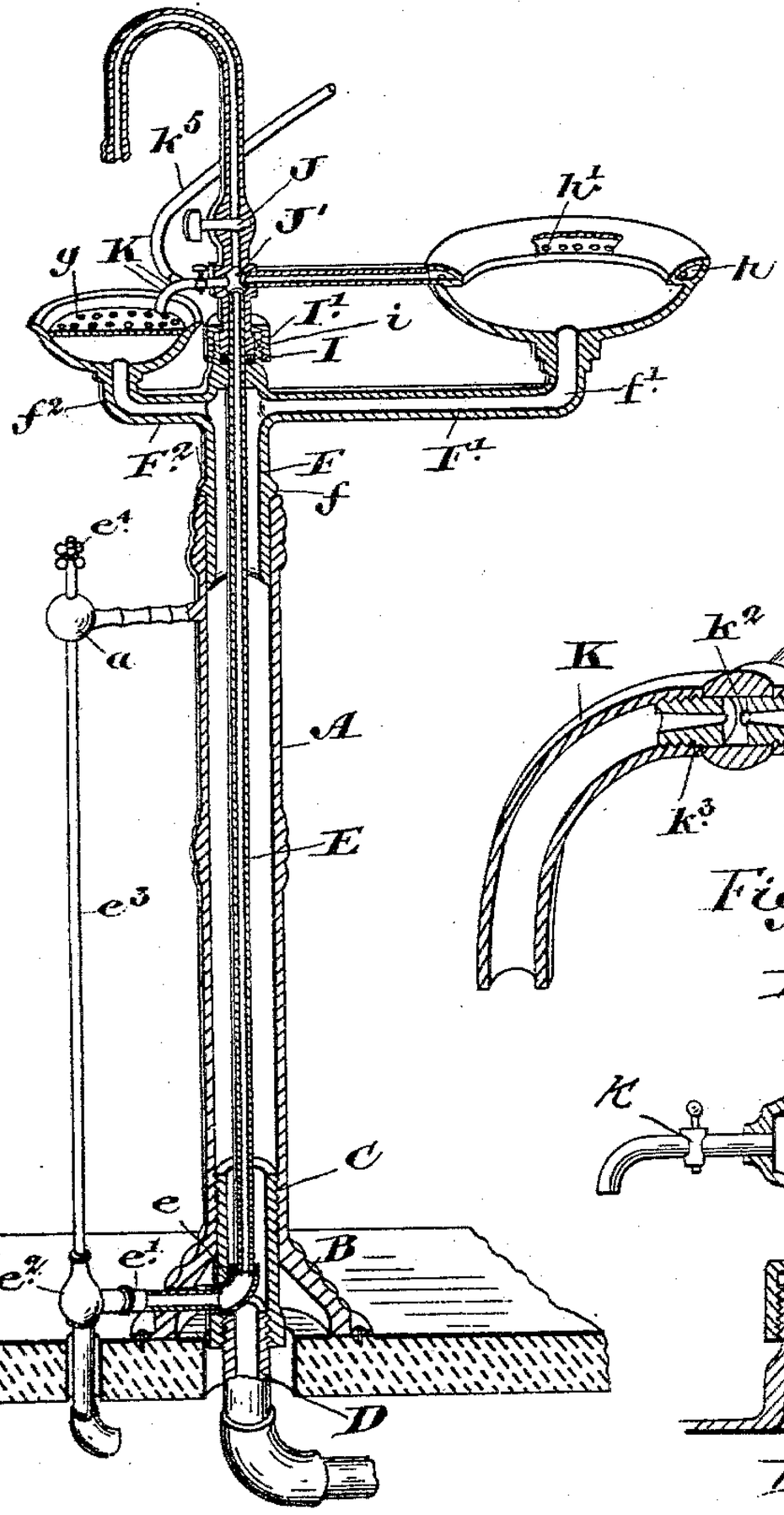
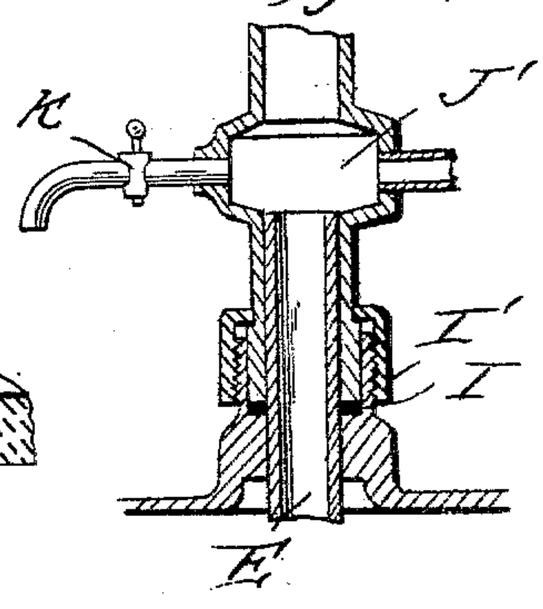


Fig. 1.

Fig. 2.

Fig. 3.



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UNITED STATES PATENT OFFICE.

GEORGE BOOTH, OF TORONTO, CANADA.

DENTAL CUSPIDOR.

SPECIFICATION forming part of Letters Patent No. 597,384, dated January 18, 1898.

Application filed November 2, 1896. Serial No. 610,871. (No model.)

To all whom it may concern:

Be it known that I, GEORGE BOOTH, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Dental Cuspidors, of which the following is the specification.

My invention relates to improvements in dental cuspidors; and the object of the invention is to design a simple, cheap, compact, and convenient form of combined cuspidor and tumbler-rest in which the stand of the cuspidor may be placed close to the dental chair and the cuspidor readily swung into position before the patient; and it consists, essentially, of a hollow tubular standard having connected to the bottom end thereof a waste-pipe and at the top having pivotally swung thereon a suitable valve with radial hollow branch arms, on the end of one of which is secured the tumbler-rest and on the other the cuspidor in suitable form, and, further, of a water-supply pipe extending through the base of the tubular standard and provided with a valve near the floor and a faucet the stem of which extends up and is supported in a bracket attached to the standard, the said supply-pipe extending up through the center of the hollow standard which forms part of the waste-pipe to a chamber-casing supported on the upper end of the sleeve, from which casing leads a branch supply-pipe to the cuspidor and also a vertical supply-pipe having a curved upper end for the supply of water to the tumbler, the parts being constructed as hereinafter more particularly explained.

Figure 1 represents a sectional perspective view of my improved form of dental cuspidor. Fig. 2 is a sectional detail of the ejector, to which the tube is attached for drawing the saliva from the mouth. Fig. 3 is a detail view.

In the drawings like letters of reference indicate corresponding parts in each figure.

A is a central supporting-standard which is formed hollow, as indicated, and B is the base.

C is a sleeve which is screwed into the bottom of the standard, and D is the bottom of the waste-pipe, which is screwed into the bottom of the sleeve.

E is the supply-pipe, which extends centrally through the standard A and is provided at the bottom with an elbow *e*, through which extends a branch pipe *e'*, which is connected to the main supply-pipe E'. A valve e^2 is provided which is provided with a long stem e^3, which extends upwardly from the valve through a bracket *a*, attached to or forming part of the standard, and is provided with a turning-knob e^4. By having such a stem supported near the top of the standard it will be readily seen that a dentist can without stooping turn the water on or off.

F is a sleeve which is provided with an annular shoulder *f*. The sleeve F extends downwardly into the standard A as far as the shoulder *f*, upon which it rests.

F' and F^2 are radial hollow arms situated diametrically opposite each other and provided with upwardly-extending elbows *f'* and f^2. On the upwardly-extending elbow f^2 is secured the minor basin G, provided with a perforated plate *g*. Upon this plate it is designed to place a tumbler or other suitable vessel for the reception of water, and the plate is made perforated, so that the water may drain through it into the hollow arm F^2.

H is a cuspidor which is secured at the top of the elbow *f'*. The cuspidor H is provided at the top with an annular chamber *h*, the bottom of which has perforations *h'*, as shown. The top of the sleeve is closed in and has a cup *i*, the exterior of which is threaded.

J is a faucet the bottom of which is enlarged and extends down into the recess *i*. The pipe E extends upwardly into the faucet J, as indicated.

I is a washer which is placed beneath the lower end of the faucet and the bottom of the recess and surrounds the pipe E.

I' is a screw-cap which fits onto the enlarged lower end of the faucet J and is screwed down upon the threaded outer end of the cup, so as to hold the washer I tight.

J' is a hollow chamber in the faucet, into which the top of the pipe E fits. The faucet J extends upwardly from the walls of the chamber J and has a downward bend, as shown, the bottom of such bend being directly above the center of the basin G.

j is a branch pipe leading from the cham-

ber J′ to the annular chamber *h*, formed at the top of the cuspidor.

K is an ejecting bent tube which is connected to the water-supply pipe at the lower end of the faucet J and is preferably provided with a suitable tap *k* and a nozzle *k′*, extending laterally out therefrom.

k^2 is a hole leading through the nozzle.

k^3 and k^4 are plugs formed with tapered holes, the narrow portion of the taper being next to the hole k^2. (See Fig. 2.)

k^5 is a tube which leads to the mouth and is designed to draw the saliva therefrom. When the water is turned on and passes through the bent tube K and conical plugs therein, I find in practice that the effect is to produce a vacuum between the plugs, and the suction thus produced by the flowing water draws the air out from the tube k^5, which passes out with the water, thus producing a suction through the tube and consequently in the mouth of the patient, thereby removing the saliva.

Although I show the bent tube K as connected to the faucet J and leading down into the waste-pipe connected with the tumbler-rest, it will of course be understood that such ejection-tube might be placed at any point connected with the supply-pipe and emptying into a waste-pipe, so long as it is situated above the top of the standard upon which the sleeve F turns.

Having now described the principal parts involved in my invention, I shall briefly describe its utility.

By turning on the valve e^2 the water is admitted through the supply-pipe E and *j* into the cuspidor, which it will keep cleansed, the waste escaping through the hollow arm F′ and standard A. If a tumbler or other vessel is put on the perforated plate G, any waste water will escape out through the arm F^2 and standard A. As the sleeve F rests loosely upon the top of the standard A it will be readily understood that the arm F′, with the cuspidor H, may be swung very readily by the dentist to the desired position in front of the patient. As the arms F′ and F^2 extend directly out from the sleeve at right angles thereto it will of course be understood that the standard A may be placed in very close proximity to the dentist's chair, and the utility of my device is thereby greatly facilitated.

What I claim as my invention is—

1. In combination, the hollow standard, the sleeve rotatably supported thereby, the faucet fixed to said sleeve, the supply leading centrally through said standard and sleeve and into said faucet, the cuspidor and tumbler-support arranged on opposite sides of said standard, the hollow horizontal arms extending in the same plane and supporting said support and cuspidor and having communication with the bottom of the same and the branch pipes leading to the support and cuspidor from a common chamber in said faucet into which said supply-pipe discharges.

2. In a dental cuspidor in combination the hollow standard supported upon a suitable base and having the waste-pipe connected to the bottom of the standard, a sleeve supported on the top of the standard, hollow branch arms attached to or forming part of the sleeve, the tumbler-rest and cuspidor supported on the upwardly-extending elbows of the arms, the supply-pipe extending up through the center of the standard and having a branch pipe extending from the bottom to the main supply-pipe provided with a suitable valve, the cup-shaped recess at the top of the sleeve, the faucet fitting over the top end of the supply-pipe, the branch supply-pipe leading from the faucet to the basin, the lower end of the faucet being enlarged and fitting within the recess around the pipe, a washer beneath the lower end of the faucet and a screw-cap holding the sleeve and faucet together as and for the purpose specified.

GEORGE BOOTH.

Witnesses:
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