

No. 652,719.

Patented June 26, 1900.

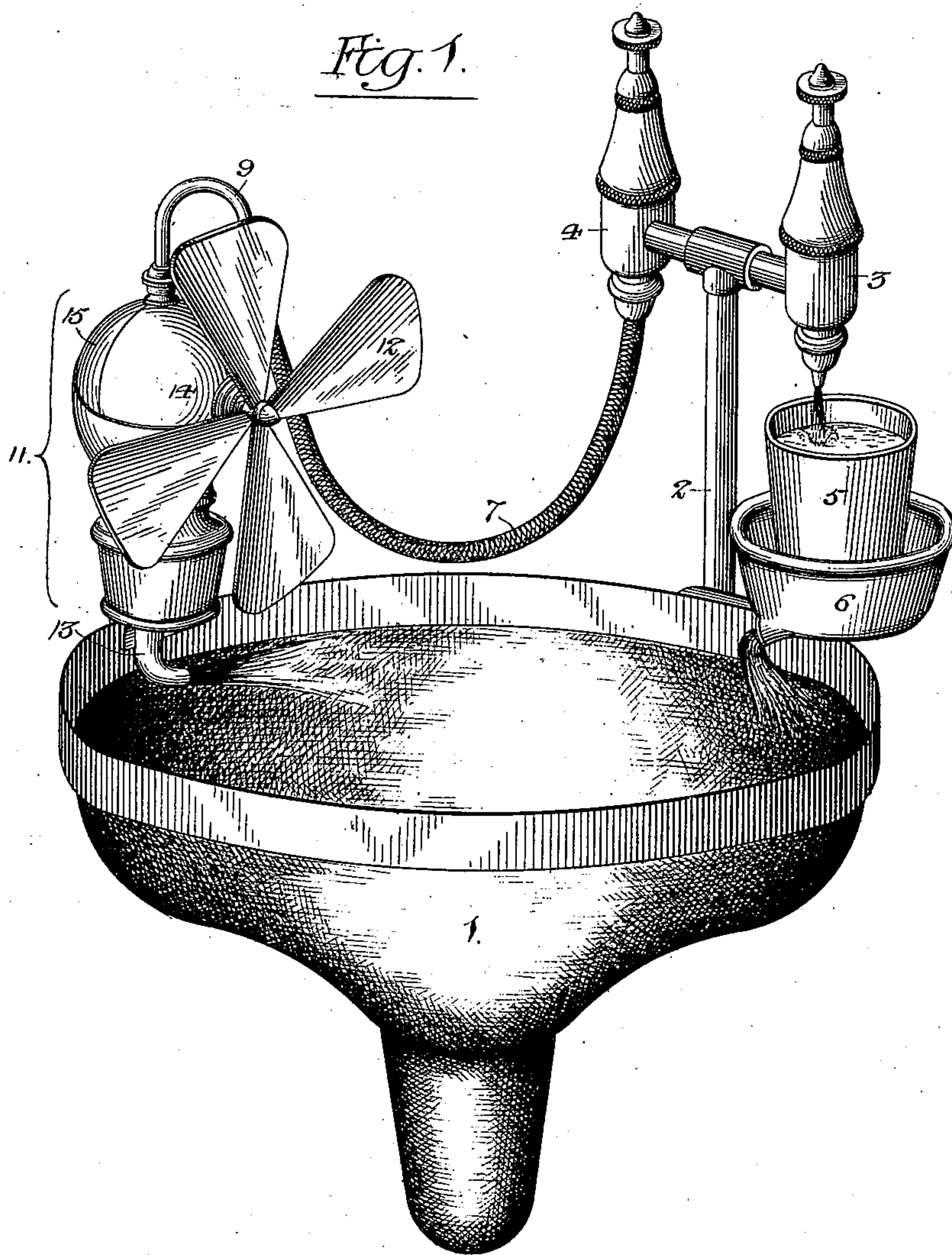
J. F. MAYER.

FAN ATTACHMENT FOR DENTISTS' FOUNTAIN SPITTOONS.

(Application filed Mar. 28, 1899.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:-

Frank L. A. Graham
Louis W. T. Whitehead.

Inventor:-

Jacob F. Mayer.

by his Attorneys:-

Housman & Housman

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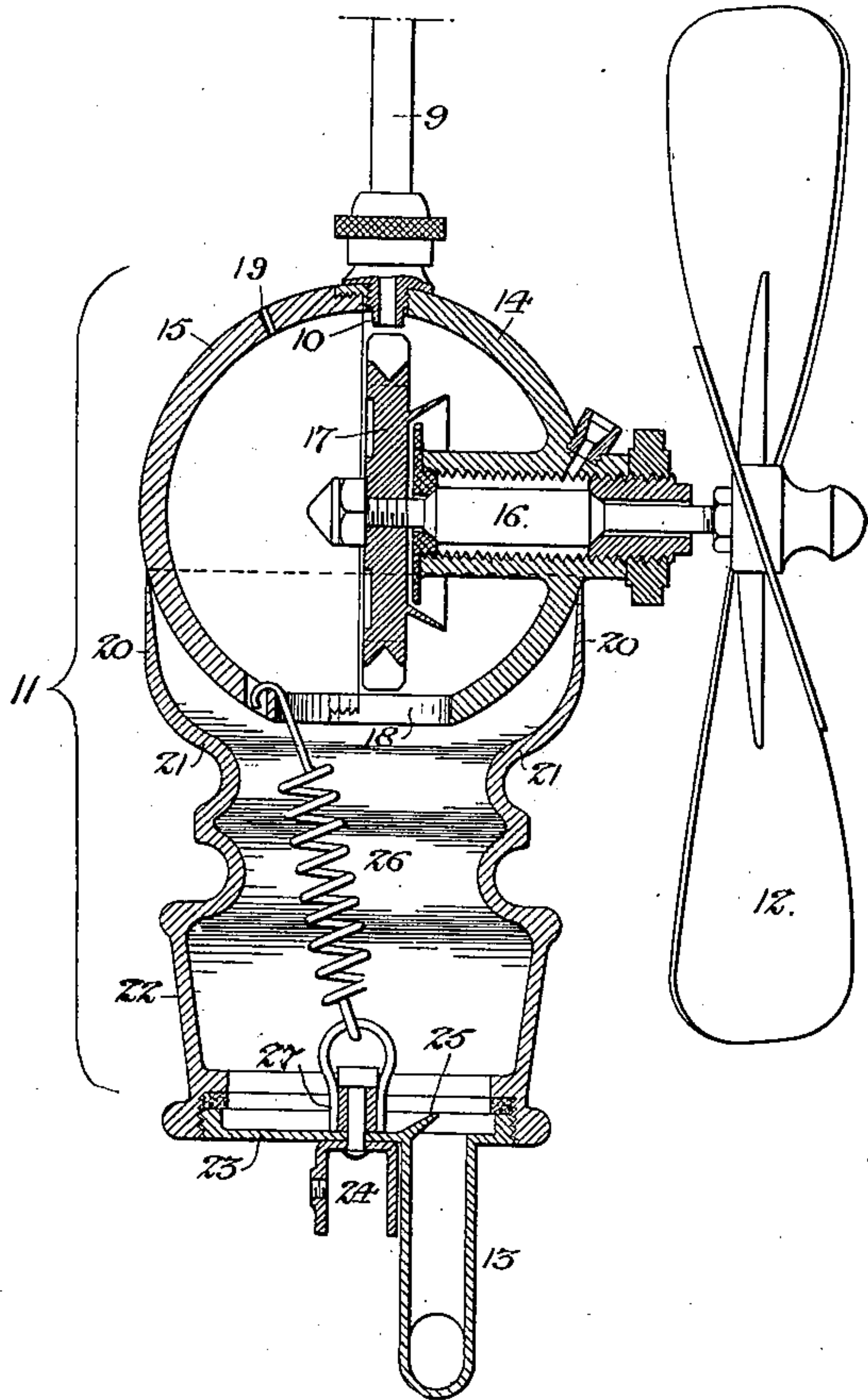


Fig. 2.

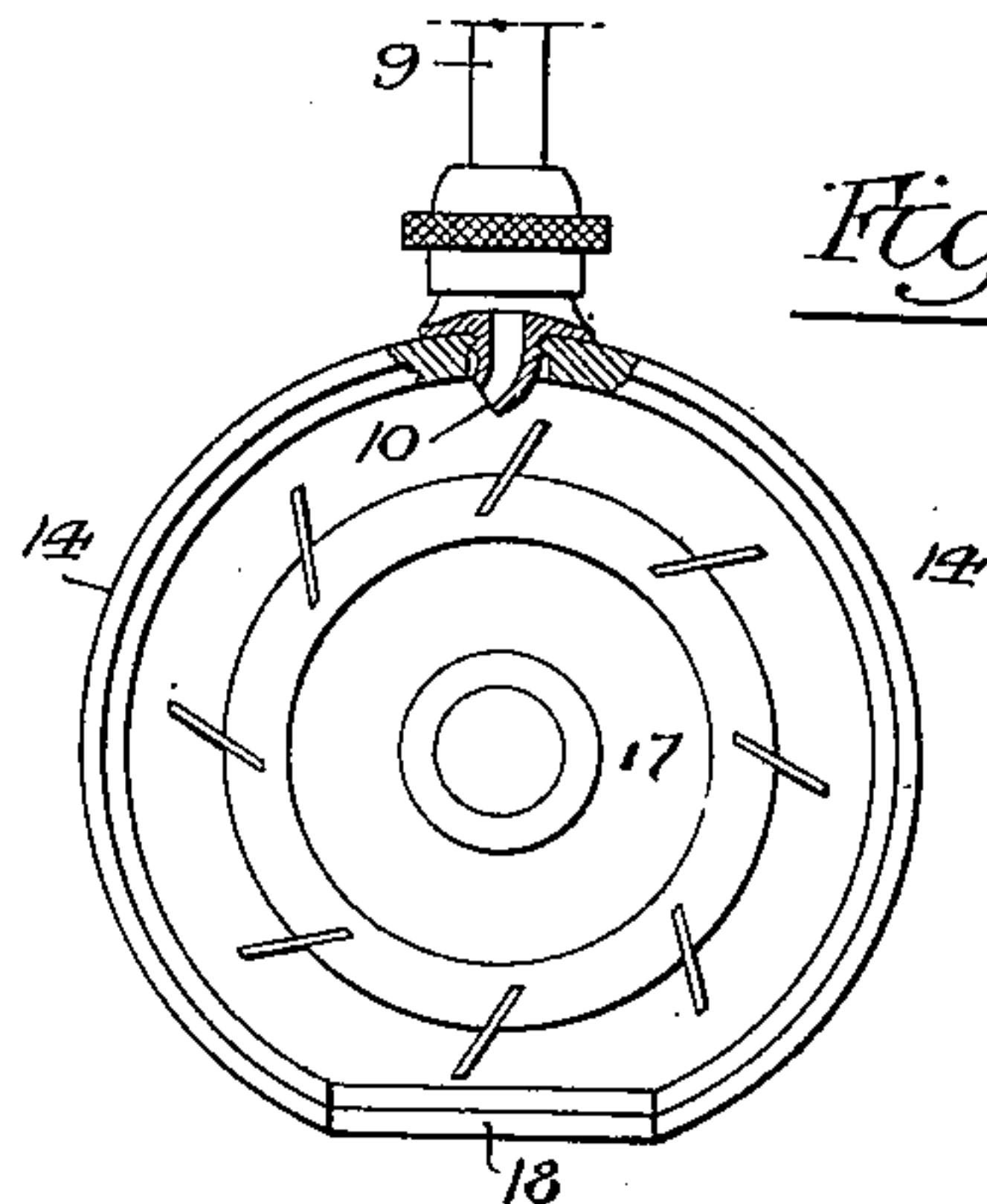
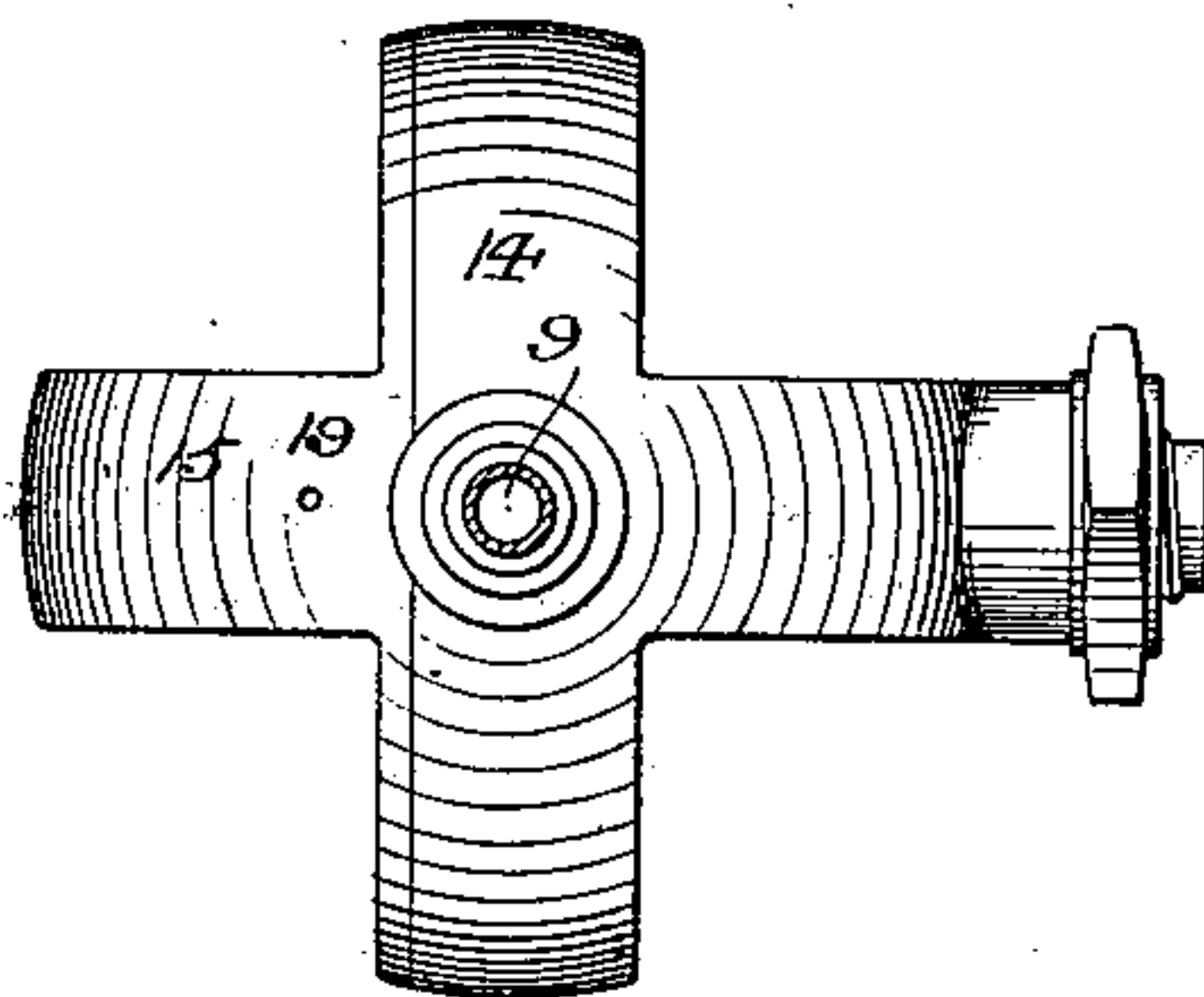


Fig. 3.

Fig. 4.



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Frank L. A. Graham.

Louis M. F. Whitehead.

Inventor:-

Jacob F. Mayer.

by his Attorneys:-

Howson & Howson

UNITED STATES PATENT OFFICE.

JACOB F. MAYER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO JAMES M. CORNYN, OF SAME PLACE.

FAN ATTACHMENT FOR DENTISTS' FOUNTAIN-SPITTOONS.

SPECIFICATION forming part of Letters Patent No. 652,719, dated June 26, 1900.

Application filed March 28, 1899. Serial No. 710,802. (No model.)

To all whom it may concern:

Be it known that I, JACOB F. MAYER, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain
5 Improvements in Fan Attachments for Dentists' Fountain-Spittoons, of which the following is a specification.

One object of my invention is to so combine a rotary fan with a dentist's fountain-spittoon or like structure that said fan can
10 be conveniently driven by the water-supply with which such structure is usually provided, the location of the fan, moreover, having the advantage of being close to the dentist and patient without being in the way.
15

A further object of the invention is to so construct the motor casing and support as to render the same extremely compact and yet permit of adjustment of the fan to different
20 angles.

In the accompanying drawings, Figure 1 represents sufficient of a dentist's fountain-spittoon and its appurtenances to illustrate my present invention. Fig. 2 is a longitudinal section, partly in elevation and on a
25 larger scale, of the rotary fan and the driving device therefor. Fig. 3 is a rear elevation, partly in section, and with the cap or cover plate of the motor-chamber removed to illustrate the interior construction; and
30 Fig. 4 is a plan or top view of a modified form of motor-casing.

In Fig. 1 part of an ordinary fountain-spittoon, such as is used by dentists, is represented at 1, this spittoon being either of the
35 rotary type or of the simple washout type, as desired, that shown being one of the rotary class. At one side of the bowl of the fountain is a water-supply pipe 2, which has branches communicating with two valve-chests 3 and 4,
40 the chest 3 governing the water-supply for the tumbler 5, which is contained in the tumbler-holder 6, suitably mounted at one side of the bowl. The chest 4 may be that
45 which ordinarily controls the flow of water for supplying the fountain of the bowl; but in the present instance this chest is connected by a flexible tube 7 to a gooseneck 9, which is secured to or forms part of the nozzle
50 10 of a rotary water-motor 11, the latter being mounted upon the rim of the bowl and

driving any available form of rotary fan 12, the discharge from the motor-casing supplying the fountain of the bowl. Thus in the construction shown in Fig. 1 it is directed
55 through a curved or inclined outlet-nozzle 13, so as to be projected against the inner portion of the bowl in such manner as to cause the same to rotate, although the discharge from the motor-casing may be caused to supply
60 any of the ordinary forms of spittoon-fountains in common use. By thus mounting the fan and its motor upon the rim of the bowl said fan is located so closely to the dentist and his patient that the full effect of
65 the blast from the fan is obtained, while at the same time the fan is out of the way of both dentist and patient and is not likely to cause inconvenience to either. The driving of the fan is, moreover, effected without expense,
70 since the ordinary water-supply of the bowl is used to operate the motor, and the discharge from the motor-casing is as effective for its intended purpose in connection with the spittoon as though it had been discharged directly thereinto without first operating
75 the motor. In a device of this sort compactness is a desideratum, as is also facility for adjusting the fan to different positions. Hence in carrying out my invention I construct the casing of the motor in the
80 form of a hollow sphere composed of opposite halves 14 and 15, screwed or otherwise suitably secured together, the half 14 of the casing carrying the bearing for the spindle
85 16 of the motor-wheel 17, said spindle projecting beyond the bearing and receiving the fan 12, which is suitably secured thereto, so as to rotate therewith.

The spherical motor-casing has at the bottom an opening 18, and the lower portion of
90 said spherical casing is seated in a concave ring 20 at the upper portion of a cup 21, which forms part of the discharge-neck 22 of the motor, said neck being secured to a plate 23,
95 which has a bracket 24 or equivalent means whereby it may be fastened upon the rim of the bowl, said plate 23 also having the outlet-nozzle 13, through which the waste water from the motor-casing is discharged into the
100 bowl.

The noise caused by the impact of the wa-

ter-jet upon the buckets of the wheel may in some cases prove objectionable; but I find that if the waste water is dammed up in the discharge-neck so as to maintain a film over the mouth of the discharge-nozzle this noise is deadened to such an extent as to be hardly audible. This damming of the water I prefer to effect by means of an inclined vane or fin 25, projecting diagonally across the entrance to the discharge-nozzle 13, as shown in Fig. 2, the water being thus compelled to back up in the chamber within the neck 22 and to escape over and around this vane or fin in order to gain access to the nozzle.

The formation of a partial vacuum in the motor-casing is prevented by providing said casing with a vent-opening 19.

In order to retain the spherical motor-casing properly seated upon the ring 20, I connect to the lower portion of the motor-casing the upper end of a spring 26, the lower end of which is connected by means of a swivel 27 to the plate 23, so that the motor-casing is always held to its seat with a yielding pressure. Hence, while the escape of water between the casing and its seat is prevented, the motor can be readily adjusted to different positions on its seat without loosening any of the parts and will be self-retaining in the position to which it is adjusted by reason of the frictional hold of the concave seat upon the spherical casing.

My invention is primarily designed as an attachment for fountain-spittoons; but it may, as will be evident, be used in connection with washbasins or other structures having a supply of water under pressure, and, although I prefer in all cases to use a motor-casing of spherical form, a casing of cruciform cross-section composed of two cylindrical portions at right angles to each other, as shown, for instance, in Fig. 4, may, if desired, be used with good results and is considered the equivalent of this feature of my invention.

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

1. The combination of a fan, a rotary motor therefor having a spherical casing, a concave ring serving as a seat for said spherical casing, and a discharge-neck carrying said ring, substantially as specified.

2. The combination of a fan, a rotary motor for operating the same, a spherical motor-casing, and a concave ring in which the said motor-casing is supported, substantially as specified.

3. The combination of a rotary fan, a rotary motor for driving the same, a spherical casing for said motor, a concave ring constituting a seat for said motor-casing, and a spring for retaining the motor-casing in contact with said seat, substantially as specified.

4. The combination of a rotary fan, a rotary motor for driving the same, a spherical casing for said motor, a concave ring constituting a seat for said motor-casing, and a spring for retaining the motor-casing in contact with said seat, said spring having a swivel connection with the seat structure, substantially as specified.

5. The combination of a rotary motor, a shaft therefor, a spherical casing for said motor, a concave ring-support for the casing, the casing being composed of separate halves, one of which is provided with a bearing for the motor-shaft, said casing having an inlet at the top and an outlet at the bottom, and the lower portion of the casing being free from projections, whereby it can be mounted in said concave ring, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JACOB F. MAYER.

Witnesses:

F. E. BECHTOLD,
JOS. H. KLEIN.