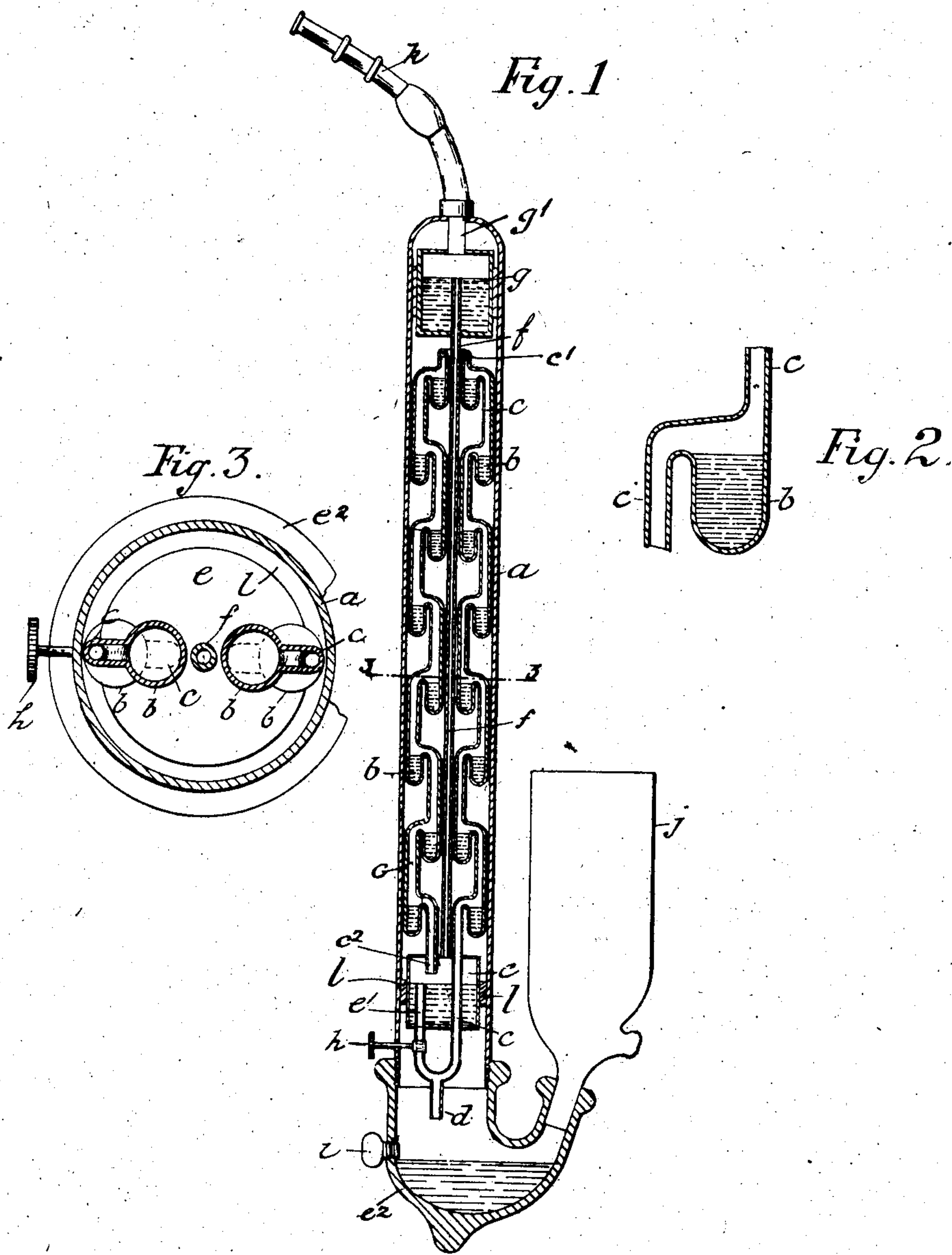


No. 834,036.

PATENTED OCT. 23, 1906.

C. WOLFF.  
TOBACCO PIPE.  
APPLICATION FILED DEC. 15, 1905.



Witnesses.

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# UNITED STATES PATENT OFFICE.

CARL WOLFF, OF HANOVER, GERMANY.

## TOBACCO-PIPE.

No. 834,036.

Specification of Letters Patent.

Patented Oct. 23, 1906.

Application filed December 15, 1905. Serial No. 291,914.

*To all whom it may concern:*

Be it known that I, CARL WOLFF, a subject of the German Emperor, residing at Hanover, Germany, have invented certain new and useful Improvements in Tobacco-Pipes, of which the following is a specification.

This invention relates to improvements in tobacco-pipes and the like for the purpose of removing nicotin and tobacco-dust from tobacco-smoke and for cooling the latter in order to render the practice of smoking more pleasant and hygienic.

The quality of tobacco is not dependent on the quantity of nicotin contained therein, and very small quantities of this latter substance are capable of being highly injurious to health. To secure the removal of nicotin from tobacco-smoke is therefore an advantage of great importance. It is also very desirable to cool the smoke to the greatest possible extent, since cool smoke is less irritating than hot smoke to the mucous membrane and is therefore more pleasant to the smoker.

The improved tobacco-pipe is distinguished from the so-called "hygienic" tobacco-pipes hitherto known by the simplicity of its construction and by the fact that the smoke is caused to pass repeatedly over the surface of water, which forms, so to speak, part of the wall of the passage through which the smoke has to pass.

The invention is illustrated in the annexed drawings, in which—

Figure 1 is a longitudinal section of a pipe; Fig. 2, a longitudinal section of part of the smoke-tube with one of its water-pockets shown on a larger scale. Fig. 3 is a cross-section on line 3 3 of Fig. 1, also on a larger scale.

The outer stem or tube *a* is preferably made of papier-mâché, aluminium, or other suitable material in order to allow of constructing it with thin walls. In the cavity within this outer stem *a* is a sinuous smoke-tube comprising a series of cups or water-pockets *b*, interconnected by lengths of tubing *c*. The length of tubing connecting successive pockets *b* extends from the upper part of the lower pocket, near one side thereof, to the side of the upper pocket. The connection of the tubes is thus on opposite sides of the pockets, and smoke passing from one length of tube to the other has to cross the mouth of the pocket.

In the example illustrated in the drawings the tube *c*, after following an upward direc-

tion up to the bend marked *c'*, is returned downwardly, and ends at *c<sup>2</sup>*, where it enters the vessel *e*. From the vessel *e* a tube *f* ascends to the vessel *g* and extends up to some distance from the bottom of this vessel. From the vessel *g* a tube *g'* leads to the mouthpiece *k*. An overflow-tube *e'* extends from some distance above the bottom of vessel *e* down into the elbow *e<sup>2</sup>* of the pipe and may be opened or closed by a cock *h*.

*i* is a plug for closing the overflow from the elbow *e<sup>2</sup>*.

*j* is the tobacco-bowl.

*l* is a ring for preventing passage of smoke around the vessel *e*.

Before the pipe is used water is drawn or forced through the stem—that is to say, through the tube *c* and pockets *b* and vessels *e* and *g*. The cock *h* is then opened, allowing the surplus water to drain out, which leaves the pockets and vessels *e* and *g* filled to a certain level, as shown in the drawings.

The smoke drawn from the bowl *j* into the elbow *e<sup>2</sup>* enters the tube *c* at *d* and passes over the series of pockets and into vessel *e*. From the said vessel the smoke passes upward by the tube *f* to vessel *g* and thence to the mouthpiece *k* of the pipe. It is obvious that during its passage through this sinuous path and past the surfaces of the water in the pockets and vessels the smoke is freed from all constituents containing nicotin, since these constituents, being heavier than the others, tend to descend and be deposited. Moreover, the smoke is cooled by the presence of the water. When the tube is to be cleansed after being in use some time, water is forced through the mouthpiece and flows in the direction opposed to the direction of flow of the smoke. All the smoke-passages are thus cleansed, and the water soiled with nicotin deposits is removed from the pockets *b* and vessels *e* and *g* and replaced by fresh water. Thereupon the pipe is again ready for use.

At the lower end of the pipe a hole is provided, which is normally closed by the screw-stopper *i*, but allows of discharging superfluous water from the pipe without taking the latter to pieces. The tubes and pockets and the vessels *e g* in the pipe-stem are preferably made of glass or similar material in order to prevent the absorption or adhesion of solid deposits and to render the construction of the pipe inexpensive.

What I claim as my invention, and desire



to secure by Letters Patent of the United States, is—

1. In a tobacco-pipe the combination with a bowl, mouthpiece and hollow stem connecting them, of a sinuous tube comprising a series of interconnected pockets within said stem adapted to contain liquid, said pockets being so placed with regard to their connecting-passages that the smoke traverses the surface of the liquid in the pockets substantially as described.

2. In a tobacco-pipe the combination with a bowl, mouthpiece and hollow stem connecting them, of a sinuous tube comprising vertical lengths and horizontal lengths and pockets in said horizontal lengths for the purpose set forth.

3. In a tobacco-pipe the combination with

a bowl, mouthpiece and hollow stem connecting them, of a sinuous tube comprising a series of interconnected pockets in the well thereof and forming a rising and a descending series, a water vessel below said tube communicating with the end thereof, a closable overflow thereto, a rising pipe therefrom, another water vessel communicating with said rising pipe and a tube from the last-mentioned vessel to the mouthpiece, substantially as described.

In witness whereof I have signed this specification in the presence of two witnesses.

CARL WOLFF.

Witnesses:

WILHELM WOLFF,  
LEONORE KASCH.