No. 793,565. PATENTED JUNE 27, 1905.

G. G. CAMPBELL.

PIPE FOR SMOKING.

APPLICATION FILED OCT. 1, 1904.

Fig. 1.

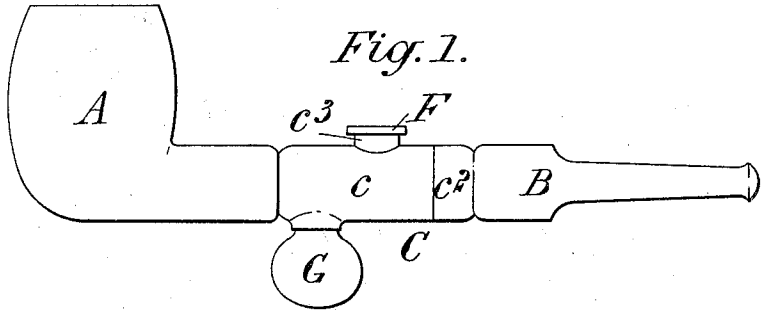


Fig. 2.

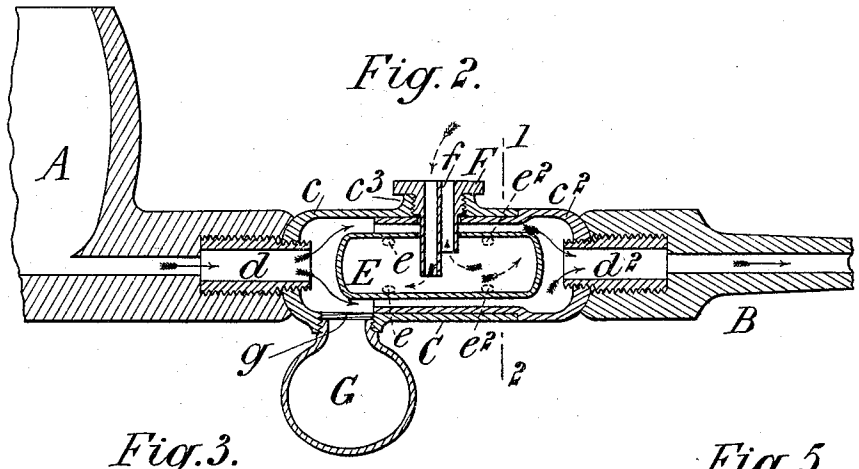


Fig. 3.

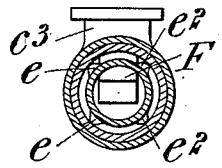


Fig. 4.

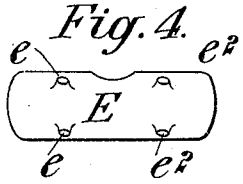


Fig. 5.

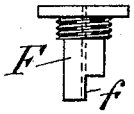
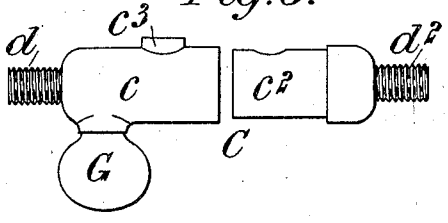


Fig. 6.



WITNESSES

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HIS ATTORNEYS.

No. 793,565. Patented June 27, 1905.

UNITED STATES PATENT OFFICE.

GEORGE GRANVILLE CAMPBELL, OF LONDON, ENGLAND.

PIPE FOR SMOKING.

SPECIFICATION forming part of Letters Patent No. 793,565, dated June 27, 1905.

Application filed October 1, 1904. Serial No. 226,853.

To all whom it may concern:

Be it known that I, GEORGE GRANVILLE CAMPBELL, a subject of the King of Great Britain and Ireland, residing at 2 Bryanston Square, London, England, have invented certain new and useful Improvements in Pipes for Smoking, of which the following is a specification.

The object of my invention is to provide a pipe by which the smoke in its passage from the bowl of the pipe to the mouth of the smoker is very efficiently cooled and caused to deposit injurious matter without clogging the pipe, the said pipe being readily cleaned of such deposited matter. The construction is such that the smoke passes through a practically straight bore and is compelled to come in contact with the whole of the cooling-surfaces provided for it, and so that any ordinary bowl as well as mouthpiece can be used with the pipe.

According to my invention I interpose between the bowl and the mouthpiece a thin metal outer chamber having within it a removable inner chamber, preferably provided with means by which external air is caused to pass therethrough for the purpose of keeping the said inner chamber cool in addition to the outer chamber being kept cool, the space between the interior of the said outer chamber and the exterior of the said inner chamber being in communication with the passage from the bowl to the mouthpiece and being provided with means whereby at one end an ordinary bowl can be attached and whereby at the other end an ordinary mouthpiece can be attached.

In the accompanying drawings, Figure 1 shows the exterior of the pipe provided with a cooling device according to my invention. Fig. 2 is a central longitudinal section. Fig. 3 is a cross-section on the line 1 2, Fig. 2. Fig. 4 shows the inner chamber separately. Fig. 5 shows the air-admission tube separately; and Fig. 6 shows the parts of the outer chamber separated, the inner chamber and air-admission tube being removed. Figs. 2 to 5 are drawn to a larger scale than that to which Figs. 1 and 6 are drawn.

A is the bowl, and B the mouthpiece, and C is the aforesaid thin metal outer chamber, which is made of two cylindrical parts c and c^2, the part c having attached to it the part d, connected with the bowl A, and the other part c^2 having attached to it the part d^2, connected with the mouthpiece B. The said parts c c^2 can be joined in any suitable manner, as by passing one partly over the other, as shown in the drawings. The inner chamber E, which is closed to the smoke-passages, is also made of cylindrical form and of thin metal and is held in position substantially parallel to and within the enlargement by distance-pieces e e^2 or pressed-up bosses in any suitable positions. There is thus formed between the exterior of the inner chamber and the interior of the outer chamber an elongated narrow annular space in line with the bore from the bowl and through the mouthpiece, so that the smoke proceeding from the bowl to the mouthpiece comes in contact with the whole of the surfaces bounding the said annular space, while the bowl and mouthpiece do not require to be made in any special manner. The exterior of the outer chamber C presents a large cooling-surface to the outer air, and being of thin metal the heat transmitted to it from the smoke is readily and rapidly conducted away by the said outer air; but, if desired, the inner chamber can be utilized in addition as a cooling-surface by causing the outer air to pass in contact with its interior surfaces as well as with the external surface of the outer chamber. This is shown as being effected by making openings through the outer chamber and the inner chamber, these openings being coincident when the parts are fitted together and a tube F or tubes is or are passed through these openings to constitute a passage or passages for air from outside the outer chamber to the inside of the inner chamber, the said tube or tubes F also serving to lock together the two parts c c^2 of the outer chamber C. For example, to provide for a current of air through the inner chamber E one tube F may be used, divided by a partition f into two passages, one for the inlet and the other for the outlet of air, one of the said passages being preferably longer than the other, as shown, so as to get a good current of air. The said tube F (or

tubes) can be secured by being screwed into a collar c^3, (or collars) surrounding the opening (or openings) through the part c of the outer chamber C, or by being connected therewith by a bayonet-joint fastening or otherwise, such, for example, as by making the tube F somewhat conical and wedging it in. The outer chamber C and the inner chamber E present two thin metal surfaces cooled by air on their outer and inner sides, respectively, and the smoke coming into contact with the opposite sides on its way from the bowl A to the mouthpiece B, as shown in Fig. 2 by full-line arrows, the course of the air being indicated by dotted-line arrows. As the pieces d and d^2 project into the outer chamber C, they tend to keep liquid from passing into the bowl A and mouthpiece B, respectively; but in order to insure this I prefer to combine with the outer chamber C a receptacle G, into which liquid flows, the said receptacle G being secured in any suitable way in an opening g—for example, by screwing into a boss around the said opening—so that the said receptacle G can be readily removed and replaced. By removing the tube F and separating the parts c and c^2 the various portions can be readily separated for cleaning purposes, and they can be as readily replaced.

I do not limit myself to the ways shown of fitting and attaching the various parts, as this may be done in any convenient manner.

I claim as my invention—

1. In pipes for smoking, a thin metal outer chamber, and an inner chamber closed to the smoke-passages and parallel with said outer chamber, the said outer chamber being provided with means for attaching a bowl and mouthpiece, leaving an elongated passage between the inner and outer chambers communicating at one end with the bore from the bowl and at the other with the bore from the mouthpiece.

2. In pipes for smoking, a thin metal outer chamber, presenting an elongated passage or passages for the smoke between itself and a thin metal inner chamber, substantially parallel with said outer chamber, the said outer chamber being provided with means for attaching a bowl and a mouthpiece so that the said elongated passage between the inner and outer chambers is practically in line with the bore from the bowl and through the mouthpiece, and the inner chamber being provided with means for admitting external air thereto.

3. In pipes for smoking, a thin metal outer chamber and an inner chamber arranged so as to provide between them an extended passage for smoke and a large cooling and heat-radiating surface, the said outer chamber being provided with means for attaching a bowl and a mouthpiece, so that the said passage between the inner and outer chambers is practically in line with the bore from the bowl and through the mouthpiece, and a receptacle in communication with the lower part of the interior of the outer chamber for the reception of moisture.

4. In pipes for smoking, a thin metal outer chamber made in two parts and provided with means for securing them together and a thin metal chamber arranged in the outer chamber so as to provide an extended passage for smoke and large cooling and heat-radiating surfaces, the said outer chamber being provided with means for attaching a bowl and a mouthpiece so that the said passage between the inner and outer chambers is practically in line with the bore from the bowl and through the mouthpiece, and openings in the inner and outer chambers in which an air admission and exit tube is secured.

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

GEORGE GRANVILLE CAMPBELL.

Witnesses:
JNO. M. FADZEAN,
JOHN WM. COLB.