

W. M. KEENAN.
TOBACCO PIPE.
APPLICATION FILED AUG. 23, 1909.

975,251.

Patented Nov. 8, 1910.

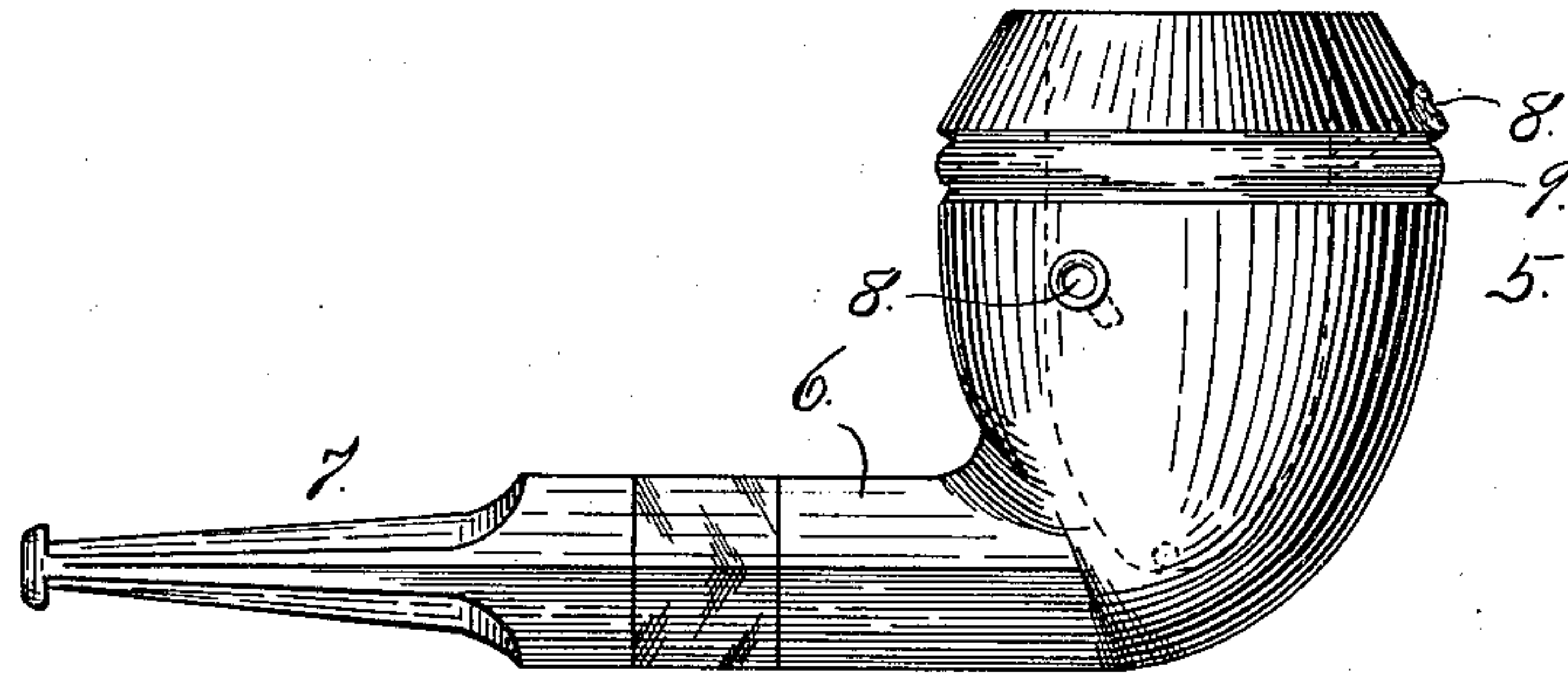


Fig. 1.

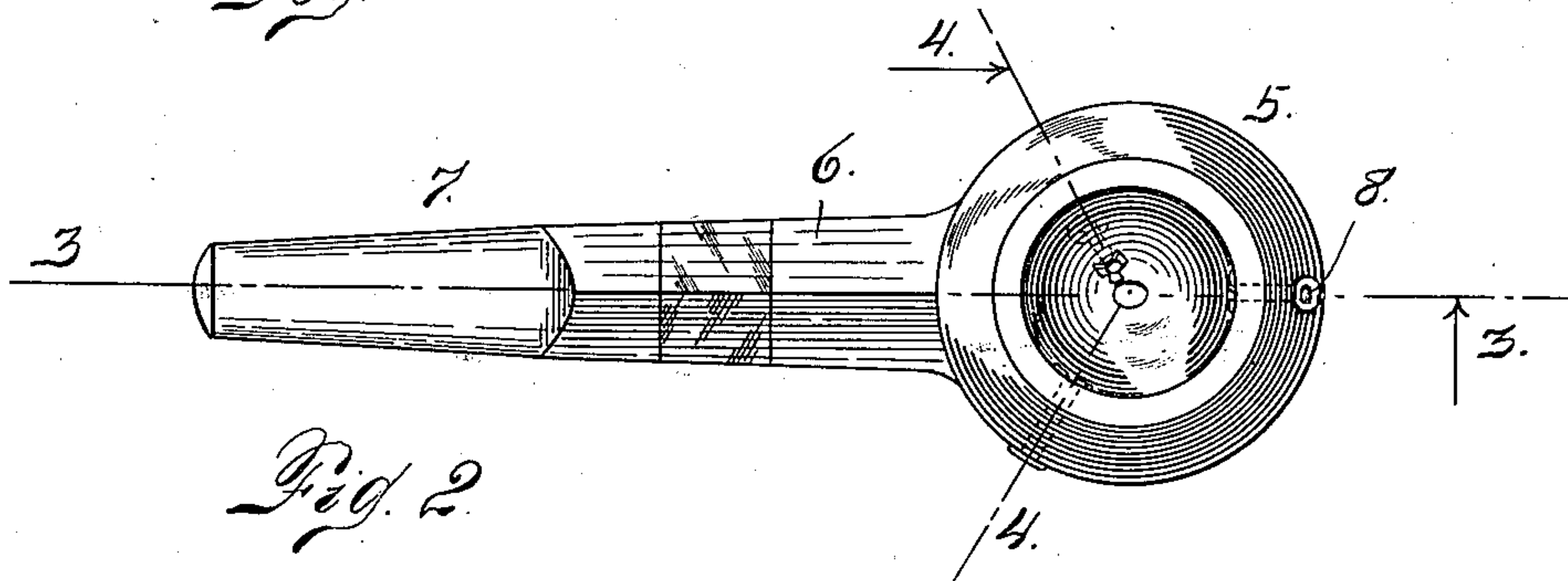


Fig. 2.

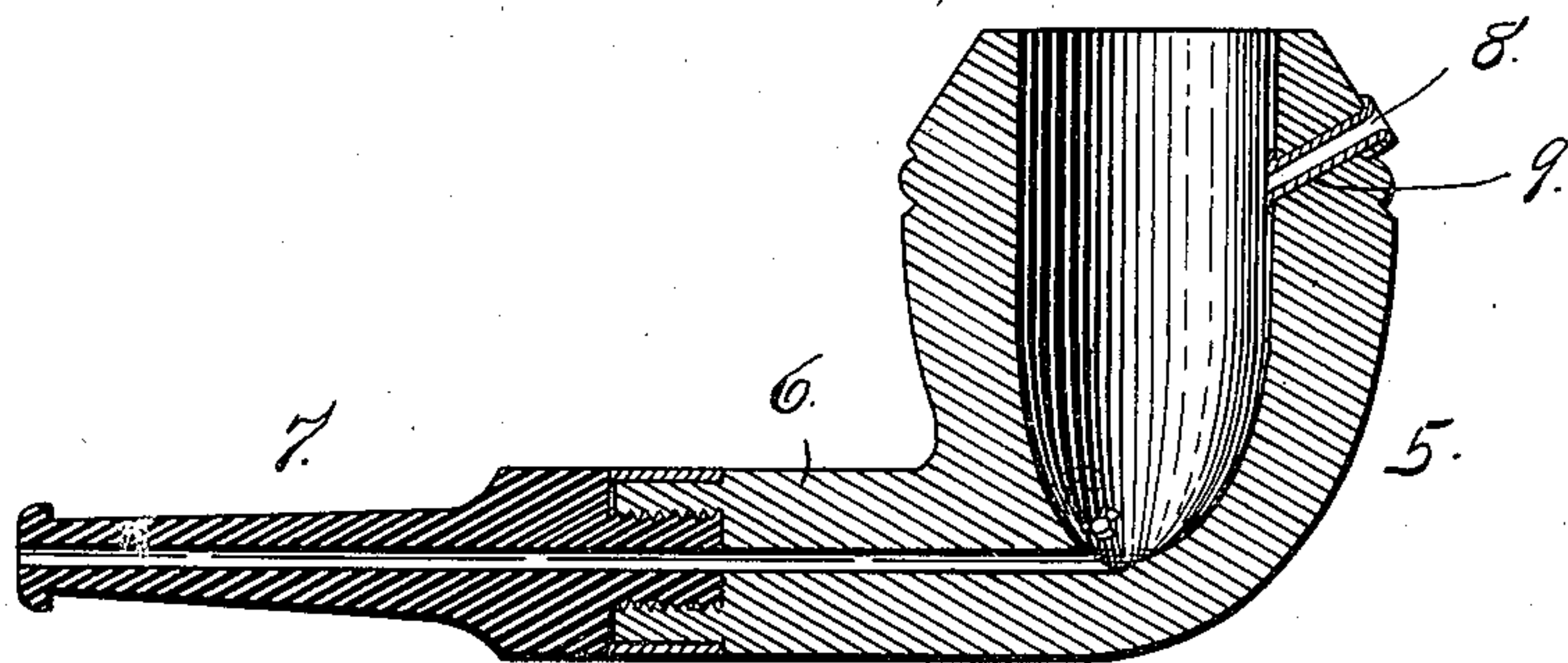


Fig. 3.

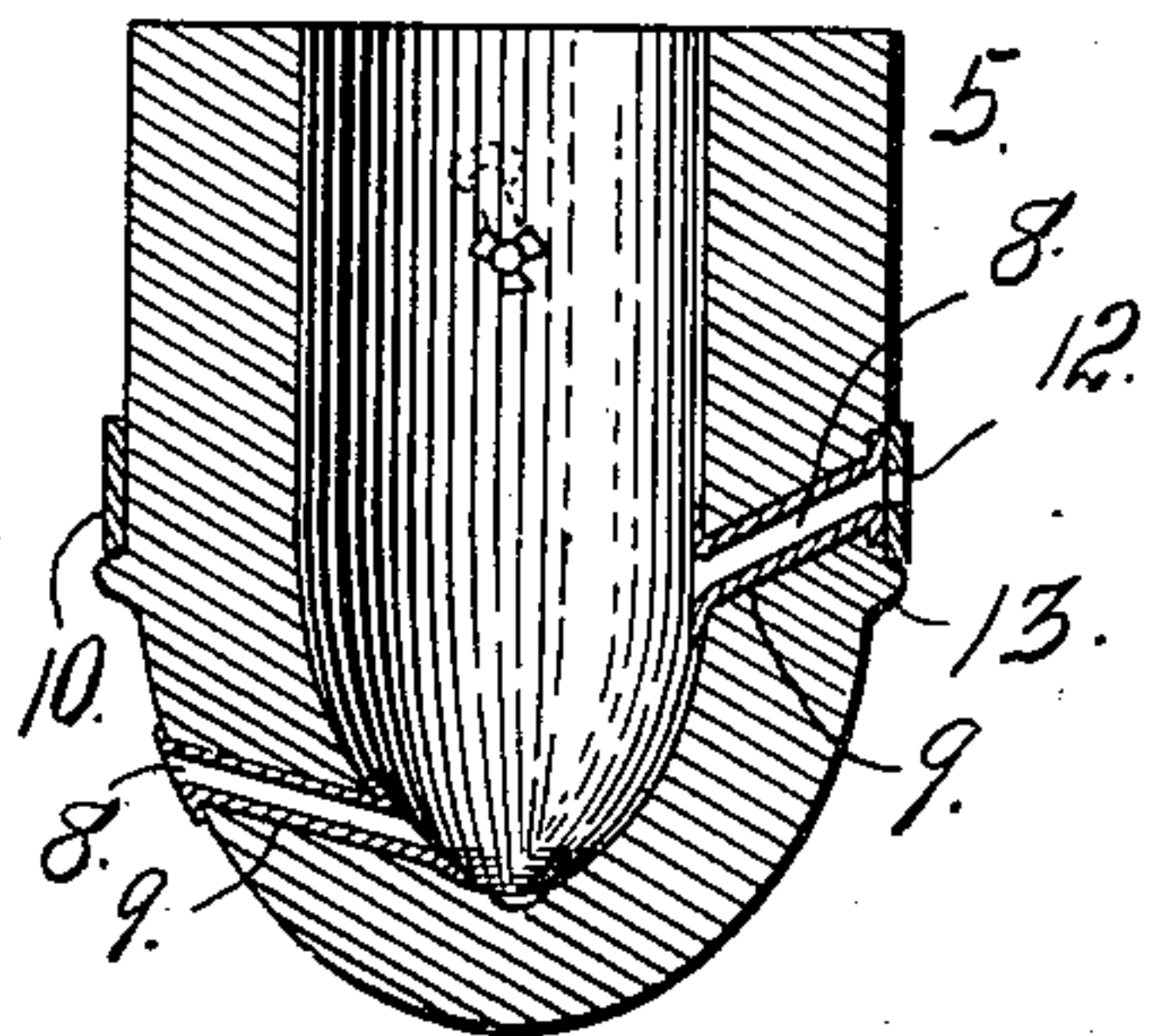


Fig. 5.

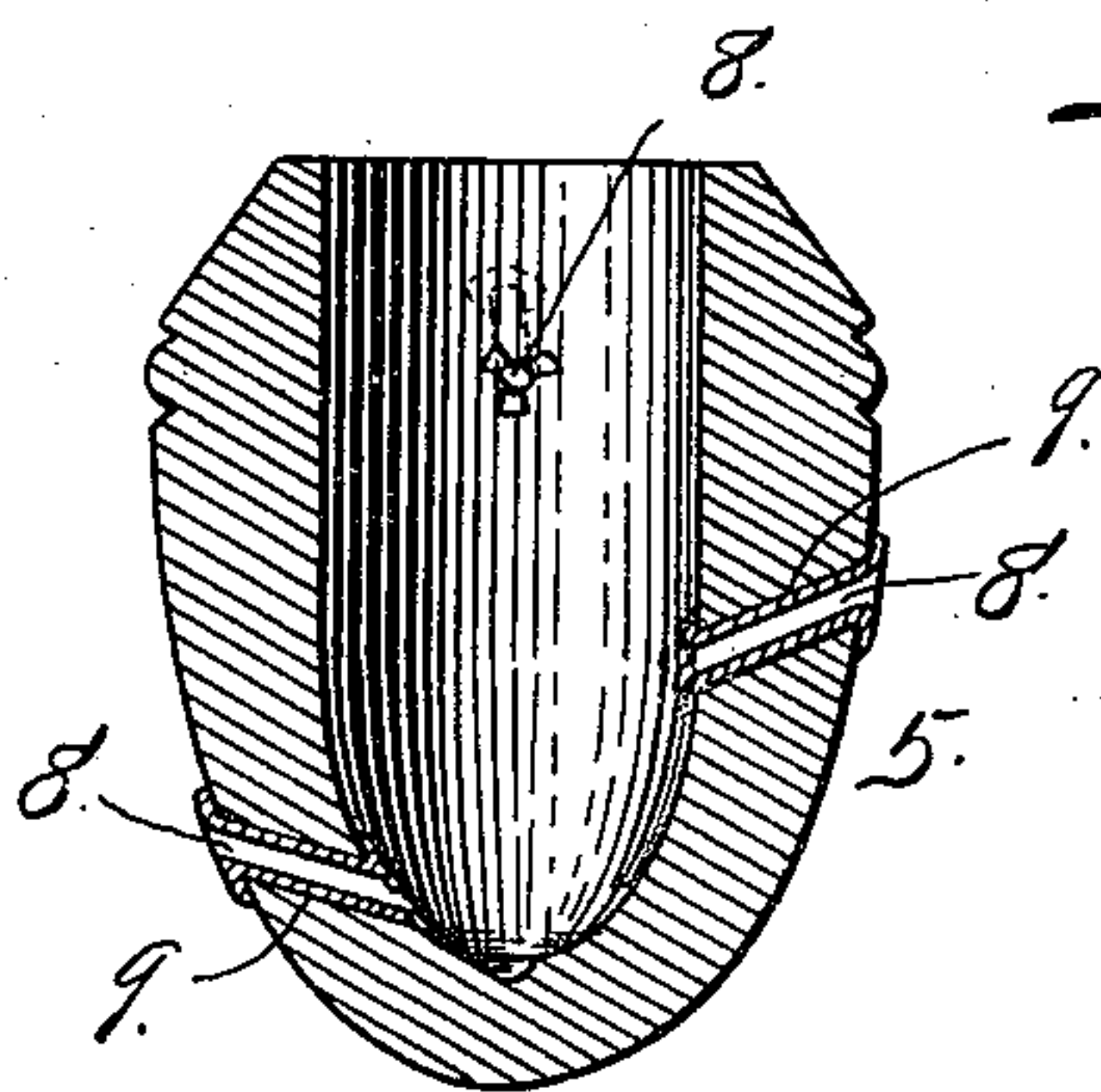


Fig. 4.

Witnesses

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WALTER M. KEENAN, OF DENVER, COLORADO.

TOBACCO-PIPE.

975,251.

Specification of Letters Patent.

Patented Nov. 8, 1910.

Application filed August 23, 1909. Serial No. 514,280.

To all whom it may concern:

Be it known that I, WALTER M. KEENAN, a citizen of the United States, residing in the city and county of Denver and State of Colorado, have invented certain new and useful Improvements in Tobacco-Pipes; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in tobacco pipes, my object being to supply the tobacco within the bowl of the pipe with air and promote combustion to a greater extent than can be supplied at the opening at the top of the pipe bowl.

I have found by experiment that the formation of nicotin in pipes, is largely, if not entirely, due to imperfect combustion of the tobacco within the pipe bowl and results from the smothering, so to speak, of the fire, whereby combustion is retarded.

In my improved pipe, I make provision for introducing air below the top of the pipe bowl, whereby oxygen may be supplied to the tobacco for the purpose of combustion at various points between the top and the bottom of the bowl. In this manner, air is allowed to enter, not only at the top of the bowl, but also at points below simultaneously, thus making it practicable to promote combustion to any degree desired. I find by this construction of pipe, that the deposit of nicotin within the stem and bowl of the pipe may be practically prevented; in fact it seems that the generation, or production of nicotin is obviated by the complete combustion, to which the tobacco is subjected.

In the specific construction disclosed in the drawing, forming a part of this application, the pipe bowl is provided with a number of perforations which are inclined downwardly from their outer extremities, thus preventing the possibility of the escape of the tobacco through the said ports or perforations, when the pipe is held in the proper position for smoking. I have also shown these perforations, ducts or ports provided with a metal lining consisting of small sleeves or tubes which are introduced into the said perforations and upset at their opposite extremities; that is to say on the inner

and outside surfaces of the pipe bowl, whereby they are retained in place. This metal lining for the perforations, or ducts, prevents the burning of the bowl where the perforations are located, where the bowl is composed of wood, and also facilitates the work of cleaning out the perforations.

Having briefly outlined my improved construction, I will proceed to describe the same in detail, reference being made to the accompanying drawing, in which is illustrated an embodiment thereof.

In this drawing: Figure 1 is a side elevation of a pipe equipped with my improvement. Fig. 2 is a top plan view of the same. Fig. 3 is a vertical, longitudinal section taken through the pipe on the line 3—3, Fig. 2. Fig. 4 is a section of the pipe bowl, taken on the line 4—4, Fig. 2. Fig. 5 is a section similar to Fig. 4, showing a modified form of construction.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate the bowl; 6 the stem and 7 the mouthpiece of the pipe. The bowl is provided below the top with a number of ducts 8, which are inclined downwardly from their outer extremities, which prevents the tobacco and ashes from sifting through the ducts. Three of these ducts are illustrated, but it must be understood that any desired number may be employed. Each duct is provided with a metal lining 9, which may consist of a tube inserted in the duct and upset at its opposite extremities on the inner and outer surfaces of the bowl, by the use of a suitable tool not shown.

In the form of construction shown in Fig. 5, the bowl is surrounded by a band 10, preferably composed of metal and having a perforation 12, adapted to register with one of the ducts 8, preferably the centrally-located duct, or that intermediate the upper and lower ducts of the bowl. This band is adjustable rotatively upon the bowl, and makes it practicable to close one of the perforations, if desired, thus reducing the draft or the introduction of air to the tobacco contained in the pipe bowl. This feature simply illustrates the idea of controlling the delivery of oxygen to the tobacco, since different qualities or kinds of tobacco, or other material, which it may be desired to smoke, may require different quantities of air or oxygen, in order to produce the desired result. It is therefore evident that provision may be

made for closing one or more of the other ducts of the bowl.

In order to support the band or ring 10, upon the pipe bowl, the latter is shown provided with a circumferential shoulder or rib 13, which is engaged by the lower edge of the said band.

In further explanation of the use of my improved pipe, and the results obtained thereby, it may be stated that the nicotin appears to be instantly consumed on contact with the fire and not precipitated as a viscous and semifluid substance in the bowl or other parts of the pipe; in other words, the nicotin element or part of the tobacco appears to be consumed before its deposition or formation. The introduction of air through the ducts or perforations of the pipe bowl produces a more even and perfect combustion and prevents the customary increase of accumulation of nicotin below the zone of the fire, avoiding the simmering and stewing, so to speak, of the released nicotin with the remaining contents of the pipe, and the resulting rank odors.

By reason of the admission of cold air through the lateral openings or ducts in the bowl of the pipe, the heat of the bowl is reduced to a minimum, thus rendering the smoke cool and preventing burning of the tongue, as well as under secretion of saliva.

The circulation of fresh, cool air in the tobacco contents of the pipe through the lateral openings or ducts below the zone of the fire, keeps the tobacco cool and prevents the partial combustion and commingling of the beneficent tobacco odors, and the acrid and rank qualities before they are reached by the fire.

Having thus described my invention, what I claim is:

1. A pipe whose bowl is provided with a perforation for the introduction of air below the top thereof, and a circumferential metal band adjustably mounted on the bowl and having a perforation adapted to register with the outer extremity of the pipe-bowl perforation the latter having a metal lining whose inner extremity is upset to prevent burning the bowl adjacent the perforation, for the purpose set forth.

2. A pipe whose bowl is provided with

perforations for the introduction of air below the top thereof, the said perforations being inclined downwardly as they extend inwardly, and provided with metal linings upset at the opposite extremities of the perforations, for the purpose set forth.

3. A pipe whose bowl is provided with perforations for the introduction of air below the top thereof, the said perforations being inclined downwardly as they extend inwardly, a circumferential metal band adjustably mounted on the bowl, the said band having a perforation adapted to register with the outer extremities of the pipe bowl perforations, and a circumferential flange integral with the pipe bowl for supporting the said band, substantially as described.

4. A pipe whose bowl is provided with relatively steep downwardly inclined perforations from the exterior surface of the bowl for the purpose of introducing air below the top thereof, the said perforations being metal lined, the inner extremities of the lining being upset to prevent the burning of the bowl adjacent the perforations, substantially as described.

5. A pipe whose bowl is provided with a relatively steep downwardly inclined perforation from the exterior surface of the bowl to the inner surface thereof, whereby air may be introduced into the bowl of the pipe and the contents of the latter prevented from sifting through the perforation, substantially as described.

6. A pipe whose bowl is provided with perforations having metal linings upset at their inner extremities, to prevent the burning of the bowl adjacent the perforations, substantially as described.

7. A pipe whose bowl is provided with downwardly inclined upper, lower and intermediate perforations for introducing air into the bowl of the pipe the said perforations being relatively steep, for the purpose set forth.

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

WALTER M. KEENAN.

Witnesses:

A. J. O'BRIEN,
JESSIE F. HOBART.

It is hereby certified that in Letters Patent No. 975,251, granted November 8, 1910, upon the application of Walter M. Keenan, of Denver, Colorado, for an improvement in "Tobacco-Pipes," an error appears in the printed specification requiring correction as follows: Page 2, line 31, the word "under" should read *undue*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 17th day of January, A. D., 1911.

[SEAL.]

C. C. BILLINGS,

Acting Commissioner of Patents.