

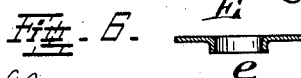
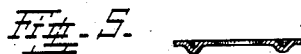
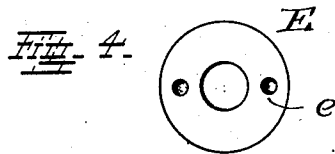
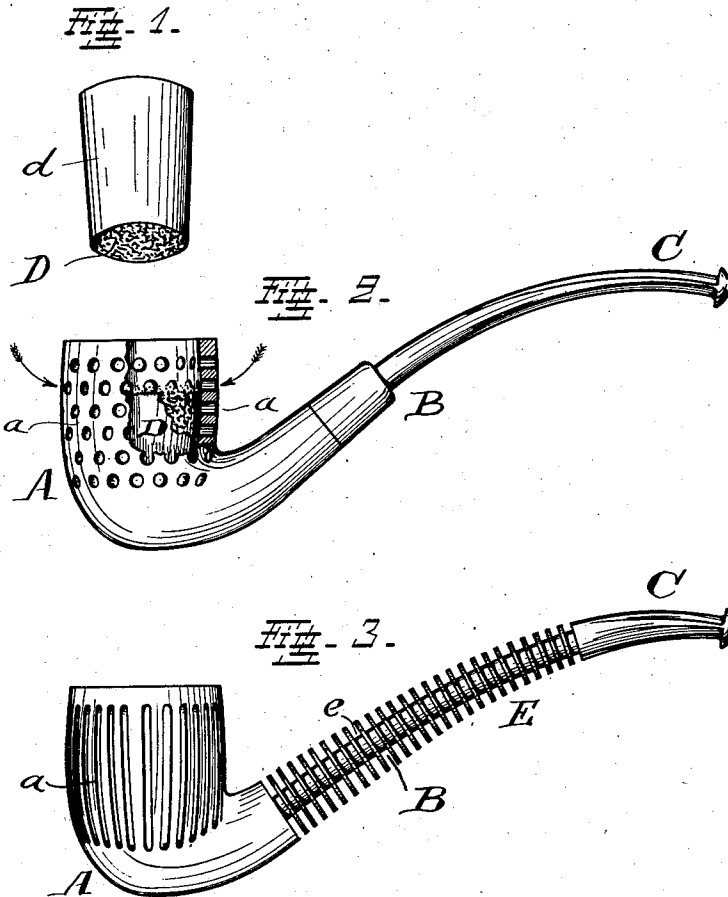
C. H. ODENBAUGH & C. A. CRARY.

PIPE.

APPLICATION FILED APR. 23, 1910.

986,024.

Patented Mar. 7, 1911.



WITNESSES.
Kathleen Riffe.
T. LeBeau.

INVENTORS.
Charles H. Odenbaugh
Charles A. Crary
by C. Spengel atty.

UNITED STATES PATENT OFFICE.

CHARLES H. OPENBAUGH AND CHARLES A. CRARY, OF MIDDLEPORT, OHIO.

PIPE.

986,024.

Specification of Letters Patent.

Patented Mar. 7, 1911.

Application filed April 23, 1910. Serial No. 557,163.

To all whom it may concern:

Be it known that we, CHARLES H. ODENBAUGH and CHARLES A. CRARY, both citizens of the United States, and residents of Middleport, Meigs county, State of Ohio, have invented certain new and useful Improvements in Pipes; and we do declare the following to be a clear, full, and exact description of the invention, attention being called to the drawing which accompanies this application and forms a part thereof.

This invention relates to improvements in smoking-pipes and the object of the invention is to construct pipes in a certain manner which counteracts their tendency to become excessively hot, so that the smoke is cooled before it enters the user's mouth.

In the following specification and particularly pointed out in the claims at the end thereof, will be found a full description of our invention, together with its manner of use, parts and construction, which latter is also illustrated in the accompanying drawing, in which:—

Figure 1, shows in perspective view a charge of smoking material prepared ready for use in connection with the pipe. Fig. 2, shows in side-elevation with parts broken away, a pipe provided with features used in connection with our invention. Fig. 3, shows in a similar view a pipe improved as contemplated by our invention. Figs. 4, 5 and 6, the latter two cross-sections of the first, illustrate at enlarged scale a member entering in the construction of the pipe as shown in Fig. 3.

In the drawing, A indicates the bowl of the pipe of usual form and construction. B is the stem thereof and C is the mouth-piece of it.

In pipes as now used, the air is drawn in through the open top of the bowl where it is subject to the effects of heat as soon as it enters between the hot side of the bowl. It becomes further heated while passing through the hot ashes of consumed tobacco and through the zone of combustion where the tobacco is burning. In this highly heated condition it passes through the stem of the pipe with little chance of being cooled before it reaches the smoker's mouth.

We prevent the preliminary heating of the air by admitting it at the zone of combustion, so that the air need not pass through the hot bowl, nor through the hot

ashes of consumed tobacco. Conduits through which the air moves after it has passed the point of combustion are kept cool by free admission of air and by provision of means whereby the heat is dissipated by favoring its radiation. For such purpose the wall of the bowl is foraminated, the openings *a* whereby this effect is obtained being closely spaced and of a suitable shape. In Fig. 2, these openings are shown circular and in Fig. 3, they are in form of narrow slots.

The tobacco is in form of a plug or cartridge D of a size adapted to snugly fill the bowl. It is surrounded by a wrapper *d* of suitable combustible material without a bottom and adapted to be consumed with the tobacco. This may be cigarette paper or a tobacco-wrapper analogous to the wrapper of a cigar.

The cartridges may form an article of commerce and be manufactured ready for use, or the wrappers, particularly if of paper, may be manufactured ready for filling with tobacco by the user whenever required. The object of using this wrapper is not so much for the purpose of confining the tobacco to form the plug or cartridge, as for the purpose of producing a closure for the air-inlet-openings *a* in the bowl and below the point of combustion, since admission of air below the burning tobacco would interfere with the draft. Air may always enter at the point of combustion, since the wrapper burns away with the tobacco and following the burning zone, renders the perforations open. Therefore when the complete cartridge is not manufactured ready for use, the most convenient way of procedure is to use the wrapper as a lining for the side of the bowl by inserting it into the same, after which the tobacco is filled in. In this case the lining may be in form of a short tube, or in sheet-form merely, and it may be manipulated in any suitable way, with or without an appliance to place it to a seat. Outside of this direct admission of air to the tobacco which prevents its pre-heating, the bowl of the pipe is also prevented from accumulating heat by reason of its perforated wall. Furthermore any heat absorbed by this wall is again quickly dissipated by the free access of air to it above, as well as below the point of combustion. Accumulation of heat in the stem is also

counteracted by means which favor dissipation by radiation. These means consist of disks E of a material which is a good heat conductor. Any metal, preferably aluminum, may do. These disks are perforated to permit mounting upon the stem, and they are of graduated diameters as best shown in Fig. 3, so as to conform to the usual shape of a pipe-stem. They are spaced apart by suitable spacing means *e* which may consist of short collars, or washers and interposed between adjoining disks, or form integral parts thereof as shown in Fig. 6. These spacing means may also be obtained by the provision of projections as shown in Figs. 4 and 5. These disks may also form integral annular ribs which project from the stem.

Having described our invention, we claim as new:

20 1. A pipe having a foraminated bowl in

combination with a combustible lining closely fitting the interior of said bowl.

2. A pipe consisting of a bowl and of a stem and of heat-dissipating disks mounted upon the stem with spaces between them, the diameters of these disks being graduated to produce the outline of the stem in proper shape.

In testimony whereof, we hereunto affix our signatures in the presence of two witnesses.

CHARLES H. ODENBAUGH.
CHARLES A. CRARY.

Witnesses as to Charles H. Odenbaugh:
C. SPENGEL,
T. LE BEAU.

Witnesses as to Charles A. Crary:
S. E. STONE,
N. LEVENSON.