

(Model.)

D. H. FERGUSON.
TOBACCO PIPE.

No. 541,156.

Patented June 18, 1895.

Fig. 1



Fig. 2

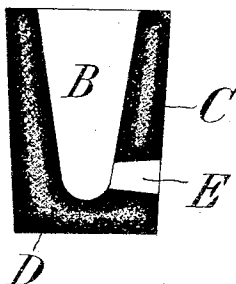


Fig. 3

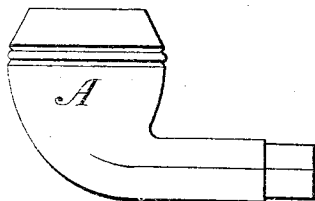
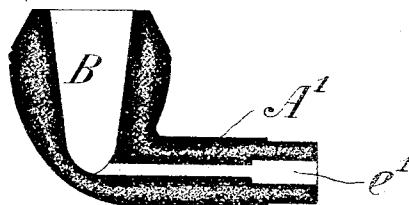


Fig. 4



WITNESSES:

J. C. Bureau
Ernest J. Carpenter.

INVENTOR,
David H. Ferguson.
BY
Wm. A. Kellough.
ATTORNEY.

UNITED STATES PATENT OFFICE.

DAVID H. FERGUSON, OF MONTREAL, CANADA.

TOBACCO-PIPE

SPECIFICATION forming part of Letters Patent No. 541,156, dated June 18, 1895.

Application filed March 15, 1894. Serial No. 503,672. (Model.)

To all whom it may concern:

Be it known that I, DAVID HISLOP FERGUSON, a subject of the Queen of Great Britain, and a resident of the city of Montreal, in the District of Montreal and Province of Quebec, in the Dominion of Canada, have invented a certain new and useful Improvement in Tobacco-Pipes, of which the following is a specification.

This invention relates to tobacco pipes, and has for its object a new and improved hygienic and sanitary tobacco pipe.

It is a well-known fact that all non-absorbent pipes, including wood, chip, meerschaum, shellac pipes, (otherwise known as asbestos pipes,) and composition pipes generally become foul after being a short time in use, which foulness necessitates frequent cleaning. This foulness is caused by the black juice or distillate of tobacco, commonly called nicotine, gathering in the bottom and stem of the pipe, and much of it ultimately reaches the mouth of the smoker in nauseating black clots. This black juice being a concentrate of tobacco, greatly increases the evil effects, which the use of tobacco would have upon the system, and in some cases so aggravates these effects as to cause tobacco poisoning known to the medical faculty under various forms, such as tobacco heart, smoker's sore throat, tobacco blindness, smoker's dyspepsia, and many minor nervous troubles, and smoking from being a soothing enjoyment, becomes a probable source of disease.

To minimize as much as possible any ill effects from pipe smoking, the pipe should be so absorbent as to take up and retain the juice as fast as formed, and as such a pipe must accumulate the juice in its walls and stem, it should be easily and simply cleaned. A pipe to be a perfect pipe should have the following qualities:—first, for hygienic and sanitary reasons, it should be actively absorbent and easily cleaned; second, for economic reasons, it should be reasonably cheap, strong enough for ordinary use, incombustible, light in weight, and last, but as many think, not least, it should color by use. Up to date this combination of essential qualities has not been found in any one pipe. All pipes are unsanitary according as they are more or less impervious to moisture. The less the ab-

sorptive qualities, the less hygienic is the pipe. By the invention of this pipe in which all these desirable qualities are found to a greater or lesser extent, I obviate all possibility of the black juice reaching the mouth.

This invention briefly speaking, consists in a tobacco pipe having hard porous exterior and interior surfaces inclosing a soft pith like interior very porous and highly absorptive, which when in use, owing to its constituents and construction, is perfectly incombustible, practically unbreakable, light in weight, colored by use, absorbs the black juice as fast as formed, allowing none to reach the mouth, is easily and perfectly cleaned by soaking in water, and is reasonably cheap.

In the accompanying drawings, forming part of this specification, similar letters of reference indicate like parts.

Figures 1 and 2 are respectively an elevation and a transverse section of one form of pipe-bowl; and Figs. 3 and 4 similar views of another form of pipe having bowl and shank formed together, all being according to my improvements.

A, represents the bowl having the usual chamber or hollow, B, for the tobacco, C, representing the chemically hardened surfaces, and D the soft absorptive interior.

In Figs. 1 and 2 E is an aperture formed directly in the wall of the bowl A, for the insertion of any ordinary stem, and in Figs. 3 and 4 A' represents the shank or stem formed in one piece with the bowl having the usual draft hole e' communicating with the tobacco chamber B.

In the construction of this pipe I take a fire proof incombustible material, such as asbestos or a similar mineral fiber, preferably asbestos, reduce the same in any suitable machine to a fiber fine as eider-down, then after thoroughly sifting the fiber to eliminate all dust and gangue I add to the cleaned fiber freshly calcined magnesite (natural carbonate of magnesia), in the proportion of one of the magnesite to three of fiber, and mix them thoroughly together. This mixture I place loosely in any suitable mold, cores for the bowl and stem being in place, taking care that the mold is completely filled throughout. Then when the packing is finished and the mold closed, I withdraw the cores, and fill the bowl

and stem of the pipe with a weak solution of chloride of magnesium, and keep the mold closed until the charge is all absorbed, when it will be found to have percolated to the outside surface. I then open the mold and extract the blank or pipe form, and place it where it will dry slowly. As the drying takes place at the surfaces only, the water of the solution finds its way there, and carries the matter in solution with it. The initial strength of the solution being weak, it acts on the magnesite but feebly; but as the evaporation proceeds the solution becomes concentrated at the surface, and becomes strong enough to act vigorously upon the adjacent magnesite, and forms a hard stone-like surface, inclosing a soft interior; both surface and interior being highly porous. The pipe is now polished, glazed or varnished, as the case may be, but though this method is specified, I wish it to be understood that I do not confine myself to this but I may use any other suitable method or materials, so long as I pro-

duce a pipe having the specified characteristics and qualities.

What I claim, and desire to cover by Letters Patent, is as follows:

1. A tobacco pipe having a soft porous interior, and an integrally formed hard porous shell or outer and inner surfaces substantially as set forth. 25
2. A tobacco pipe formed of a fibrous absorptive material, having its exterior and interior surfaces hard and porous, inclosing a soft porous pith-like interior, the whole being of one piece, substantially as described. 35
3. A tobacco pipe formed of an incombustible material constructed with hard porous shell or exterior and interior surfaces and soft porous interior or pith, so as to be of a highly absorptive nature, substantially as set forth. 40

DAVID H. FERGUSON.

Witnesses:

ROBT. A. KELLOND,
ERNEST J. ECKERSLEY.