J. DAVIS.

TOBACCO-PIPE.

No. 189,023. Patented April 3, 1877.

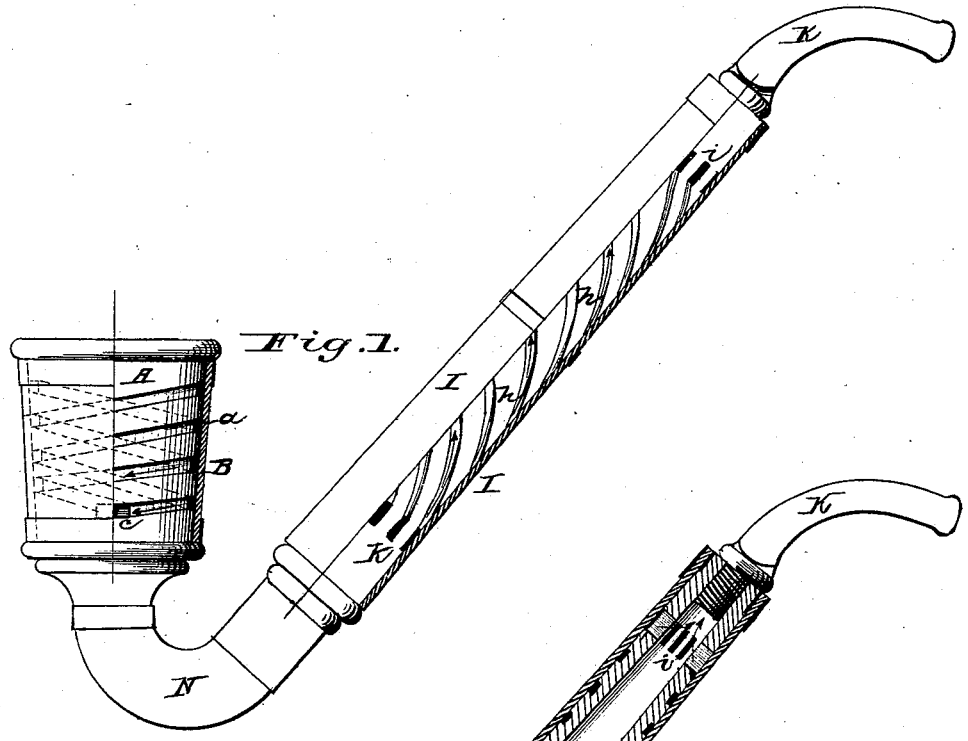

Fig. 1.

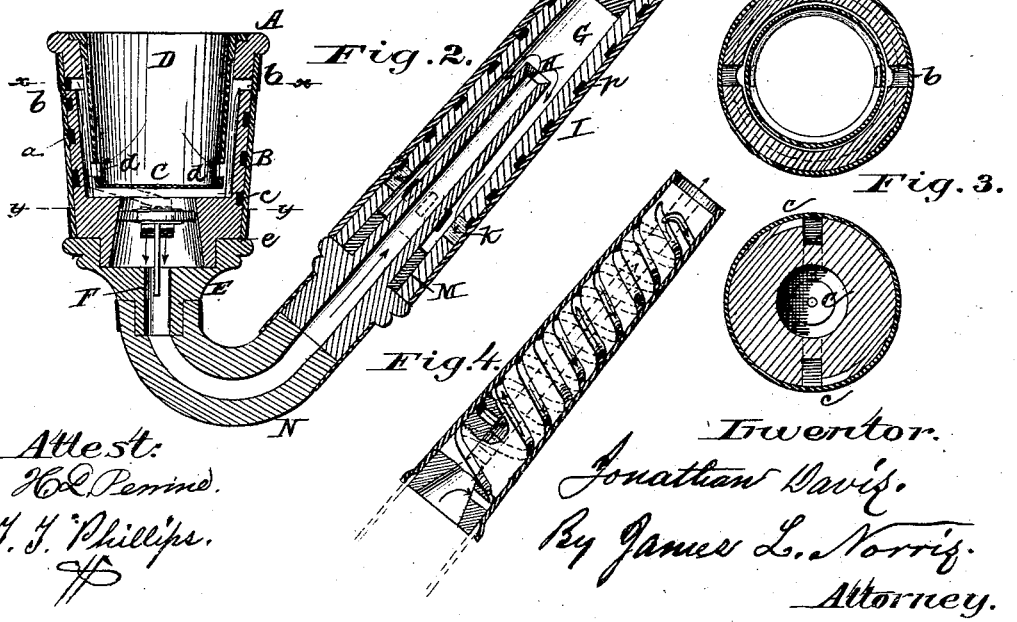

Fig. 2.

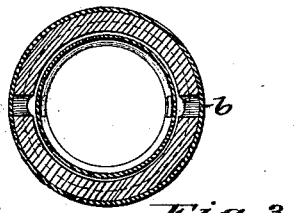

Fig. 3.

Fig. 4.

Attest:
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UNITED STATES PATENT OFFICE.

JONATHAN DAVIS, OF ST. PAUL, MINNESOTA.

IMPROVEMENT IN TOBACCO-PIPES.

Specification forming part of Letters Patent No. **189,023**, dated April 3, 1877; application filed August 2, 1876.

To all whom it may concern:

Be it known that I, JONATHAN DAVIS, of St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Pipes and Stems, of which the following is a specification:

This invention relates to certain improvements in tobacco-pipes and stems therefor, its object being to cool the smoke and condense the volatile products of combustion of the tobacco, which contain the nicotine and other deleterious substances, and prevent the same and any ashes or light particles of tobacco from being drawn into the mouth of the smoker.

My invention consists, first, in a pipe, the body of which is provided with a series of channels, through which the smoke has to pass on its way to the pipe-stem; and, second, in a pipe-stem provided with similar channels for the smoke, by means of which the smoke is compelled to pass over an extended surface on its way to the mouth of the smoker, whereby the smoke is cooled and all deleterious substances condensed and collected.

In the drawing, Figure 1 represents a view of my improved pipe and stem with a portion of the outer shell removed. Fig. 2 represents a sectional view of the pipe and stem. Fig. 3 represents horizontal sectional views of the body, taken on lines *x x* and *y y* of Fig. 2; and Fig. 4 shows a modification of the pipe-stem, in which the channels are formed on the interior of the outer shell, instead of on the exterior of the inner shell of the same.

The drawing represents the pipe-body, consisting of an inner shell, A, made in the shape of a frustum of a cone, and, preferably, of cherry wood, and an outer shell, B, adapted to fit closely over the inner shell, and, preferably, constructed of bird's-eye maple. The inner shell is divided into two chambers or compartments by means of a removable plug, *c*, and on its exterior are formed two parallel spiral grooves, *a a*, starting from the ducts or perforations *b b*, on opposite sides of the pipe-body, near its top, and communicating with the upper compartment or chamber, and terminating at similar ducts, *c c*, on opposite sides, near the bottom of the pipe-body, which communicate with the lower compartment or chamber of the pipe-body. The letter D represents a removable fire-pot, constructed of any refractory material, the exterior of which is somewhat smaller than the interior of the inner shell of the pipe-body, in which it is adapted to sit, so as to leave an annular space between the two, for the purpose to be hereinafter explained. The said fire-pot is provided on opposite sides, near the bottom, with ducts or openings *d d*, leading into the annular space between the fire-pot and the inner shell. The letter E represents a removable bottom, adapted to fit upon a flange, *e*, on the lower part of the inner shell of the pipe-body, inclosing the lower chamber thereof. Said bottom is provided with a central aperture, F, to which the stem is attached. The stem of the pipe is composed of the body G, short supplementary stem H, an outer shell, I, and is provided with a mouth-piece, K, of the ordinary construction. The body G consists of a tapering tube, of suitable length, divided near the top into two compartments by means of a partition, *g*. On the outer surface of said body are formed a series of parallel spiral grooves, *h*, extending from a series of ducts, *i*, leading from the upper compartment to a series of similar ducts, *k k*, below, leading into the lower compartment near its bottom. The supplementary stem H consists of a tapering tube, about half the length of the body G, and somewhat smaller in diameter than the interior of the lower chamber of said body. The said tube is enlarged at its lower end, and provided with a cork packing, M, setting against the shoulder formed by such enlarged portion, which packing fits neatly into the lower end of the body G, and serves to connect the two parts of the stem. The lower end of the enlarged portion of the tube is made tapering, in order to fit into the curved neck N of the bowl of the pipe for the purpose of connecting the pipe and stem together.

The operation of my improved pipe is as follows: The parts being properly secured together, during the act of smoking the smoke and condensable products of combustion make their escape from the fire-pot through the ducts at the bottom into the annular channel between said pot and the inner shell of the pipe-body; thence out through the ducts at the top of the same into the spiral channels around

said body, and then into the lower chamber of the body through the ducts leading thereto. From this chamber the smoke passes into the stem through the supplementary stem leading into the main body of the same; and from thence into the spiral channels around the same; and, finally, into the upper chamber of said body, after which the smoke passes to the mouth of the smoker.

It will be seen that the smoke is thus made to travel over a very extended surface on its way to the mouth of the smoker, whereby it is cooled, and all deleterious substances—such as condensable vapors, ashes, and light particles of tobacco—are deposited and collected, leaving the smoke absolutely cool and pure when it finally escapes.

What I claim, and desire to secure by Letters Patent, is—

1. In a pipe-bowl, the combination of the inner shell A, divided into two compartments by the partition C, and provided with spiral grooves *a* on the outside communicating with ducts leading to said compartments, with the outer shell B fitting over said inner shell, and the fire-pot D sitting within said inner shell, the whole arranged to operate substantially as set forth.

2. In a pipe-stem, the combination of the body G, divided into two compartments by the partition *g*, said compartments communicating with each other by means of spiral channels on the outside of said body, and the outer casing, and supplemental stem H, secured in the lower part of the body, substantially as herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of the subscribing witnesses.

JONATHAN DAVIS.

Witnesses:
J. M. GILMAN,
C. T. WARD.