E. Larsen,

Pipe Stem.

No. 94,831. Patented Sep. 14. 1869.

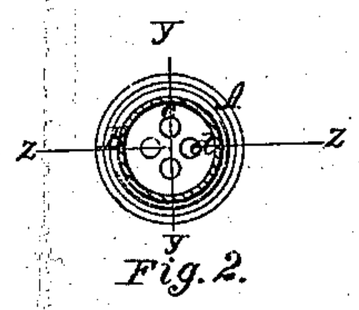


Fig. 2.

Fig. 3

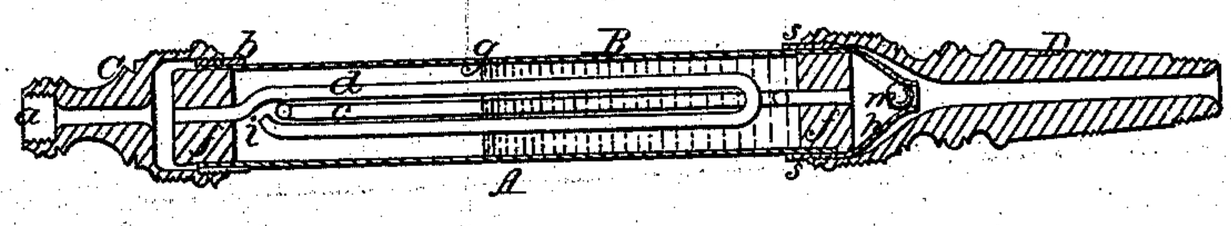


Fig. 4.

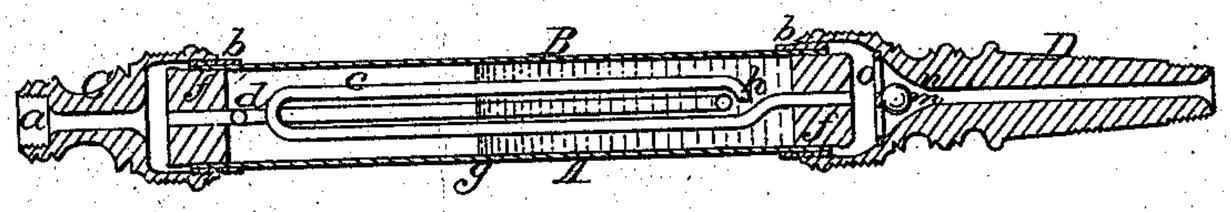
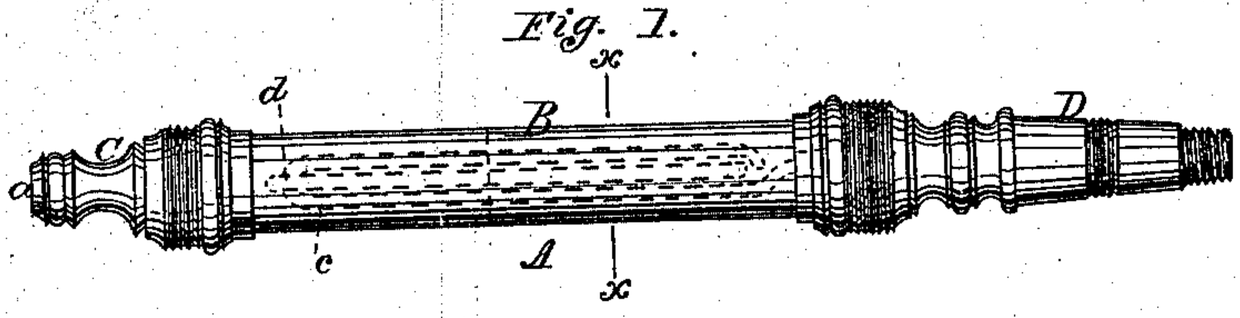


Fig. 1.



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EDUARD LARSSEN, OF STAVANGER, NORWAY.

Letters Patent No. 94,831, *dated September* 14, 1869.

IMPROVEMENT IN TOBACCO-PIPE STEM.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, EDUARD LARSSEN, of Stavanger, in the Kingdom of Norway, have invented a new and useful Improvement in Stems for Tobacco-Pipes; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to which my invention appertains, to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an elevation of my improved pipe-stem;

Figure 2, a transverse section of the same, through the line *x x*, fig. 1; and

Figures 3 and 4, longitudinal sections, through the lines *y y* and *z z*, respectively, of fig. 2.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to that class of tobacco-pipes in which the smoke passing from the bowl through the stem, is directed through water, and thereby cleansed of many of its impurities, and rendered cool and agreeable to the taste of the smoker.

Water tobacco-pipes as usually constructed are composed of a large vessel containing water interposed between the bowl and stem, and connected to each by short tubes, through which the smoke passes.

These pipes, however, from their peculiar construction, are incapable of being moved from place to place, and are cumbrous and unwieldy.

The object of my invention is to adapt the stem of an ordinary tobacco-pipe for containing water, so that it may be conveniently carried in the pocket, and used whenever desired, thus combining portableness with the luxury of the water-pipe.

The invention consists in the combination, with the stem of the pipe, which is enlarged in diameter to contain the requisite quantity of water, of two interior bent tubes, the plugs by which such tubes are held in place within the stem or cylinder, and two caps or short tubes attached to opposite ends of the cylinder, one furnishing the mouth-piece of the stem, and the other the means for attaching the stem to an ordinary pipe-bowl.

It also consists in the combination, with the stem and interior tubes, of a ball-valve, by which the water contained in the stem is prevented from flowing into the bowl of the pipe, as will be hereinafter more fully described.

In the accompanying drawings—

A is the stem, adapted to be applied to an ordinary pipe-bowl.

B is the cylinder or main portion of the stem, composed of glass, wood, or other suitable material.

I prefer to employ glass, either white or colored, as being the cheapest and most ornamental.

C and D are caps or short tubes, formed of vulcanized rubber, or other proper material.

The former is adapted to receive, at its upper end *a*, the mouth-piece of the stem, and the latter is somewhat elongated and made tapering, in order to fit the bowl of a pipe.

These tubes are attached to the cylinder B at opposite ends by any suitable means in such a manner as to be readily removed when desired.

In this example of my invention, I have employed rubber packing-rings *b*, interposed between the cylinder and tubes, as a means of forming the connection.

c d are bent tubes, of glass, metal, or other material, arranged longitudinally within the cylinder B, and fitting within one another in a manner similar to the links of a chain, although this precise arrangement is not absolutely essential to their successful operation.

Each tube is secured, at its outer end, to a plug, *f*, of rubber, cork, or other proper substance, fitting the ends of the cylinder B, as clearly shown in figs. 3 and 4. The inner ends of these tubes are arranged at opposite ends of the cylinder, near the plugs *f*, and open directly into said cylinder.

The operation is as follows:

The cylinder is partially filled with water, either in its natural state or perfumed, to about the height indicated at *g*, figs. 3 and 4, and the tube D inserted in the bowl of a pipe containing burning tobacco. The smoke, as it is drawn through the stem in smoking, passes through the tube D, and enters the outer end of the interior tube *c*, through which it passes, and is discharged into the water contained in the cylinder, at its inner end *h*, seen in fig. 4. From thence it passes directly through the water, and enters the end *i* of the tube *d*, as seen in fig. 3, following the course of said tube until it is discharged through the cap C into the mouth of the smoker.

It will be observed that the smoke in its passage through the tubes *c d* is exposed to an increased cooling surface, because both branches of each pipe pass through the water.

By this arrangement the smoke is rendered exceedingly cool and agreeable to the taste.

In filling the cylinder B with water, the cap C is removed and the plug *f* raised sufficiently to permit the water to be poured in around it. When, however, the water becomes impure, it is discharged through the tube D, (the latter having been previously removed from the bowl,) by blowing with the breath through the mouth-piece. The tube *c* then operates as a siphon, as will be readily understood.

It frequently happens in lighting a pipe, that the smoker will blow through it slightly to ascertain if the tobacco is ignited. If this were attempted with my improved stem, the result would be as above indicated,

that is to say, the tube *c* would operate as a siphon to discharge the water from the cylinder. To guard against this contingency, I have arranged a ball-valve, *m*, seen in fig. 4, within a recess formed in the cap D. The valve is limited in its movements by the seat *n* and guard *o*, as will be readily observed.

Instead of placing the valve directly within the cap D, it may be enclosed in a thin elastic case or diaphragm, *p*, whose upper end, *s*, serves as a packing-ring between the cylinder B and tube D, as clearly shown in fig. 3.

When the valves are employed, it will be apparent that the water contained in the cylinder cannot be expelled through the tube D, but must be discharged by removing the cap C and plug *f* in the manner previously described for its introduction.

My improved pipe-stem is economical in construction, easily operated, and can be applied with the utmost ease to any ordinary pipe-bowl. By its use the smoker can enjoy the luxury of the water-tobacco pipe at a comparatively trifling expense.

Having thus described my invention,

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

1. In combination with the cylinder B, adapted to contain water, the interior bent tubes *c d*, plugs *f*, and caps or short tubes C D, substantially as herein shown and described, for the purpose specified.

2. In combination with the cylinder B, and caps or short tubes C D, the elastic packing-rings *b* or *s*, substantially as herein shown and described, for the purpose specified.

3. In combination with the cylinder B, interior bent tubes *c d*, and short tube D, the valve *m*, substantially as herein shown and described, for the purpose specified.

The above specification of my invention signed by me, this 21st day of July, 1869.

EDUARD LARSSEN.

Witnesses:

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