No. 764,125. PATENTED JULY 5, 1904.

I. A. HEALD.

TOBACCO PIPE.

APPLICATION FILED AUG. 17, 1903.

NO MODEL.

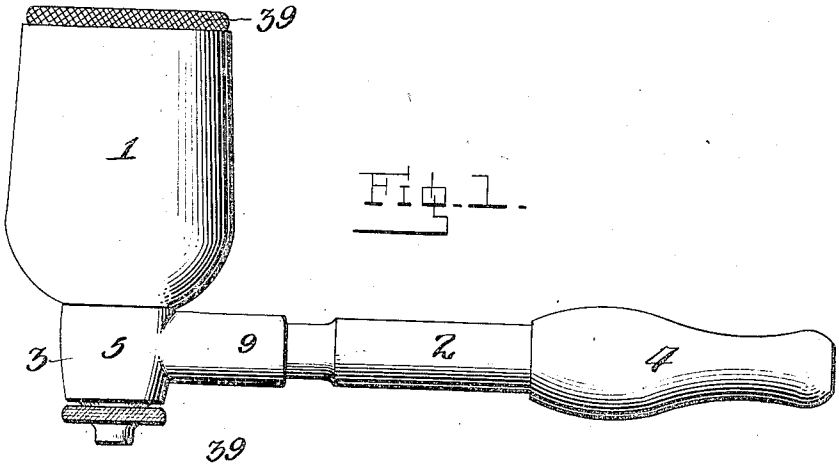

Fig. 1.

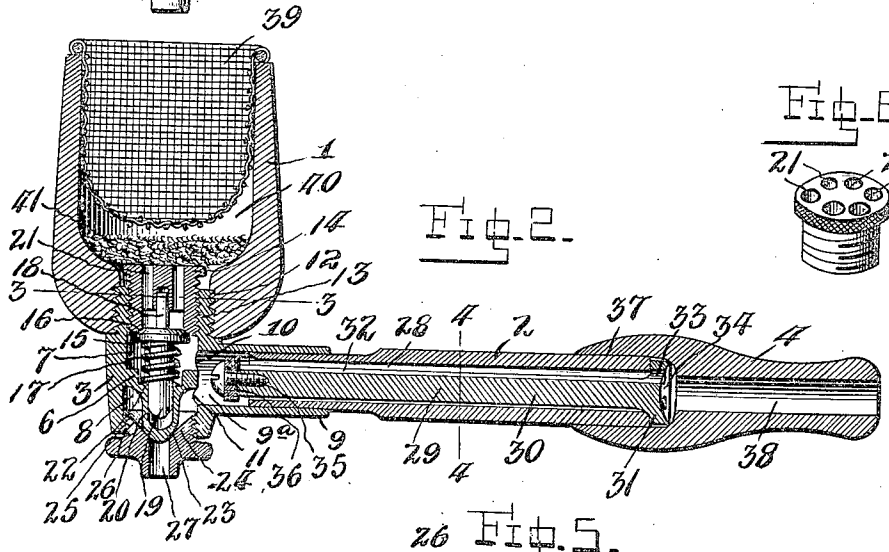

Fig. 2.

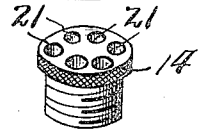

Fig. 6.

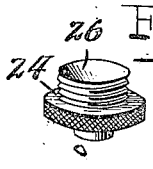

Fig. 5.

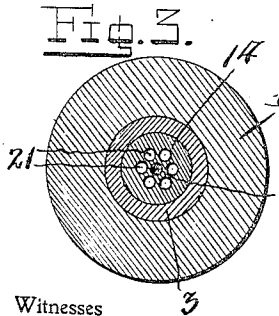

Fig. 3.

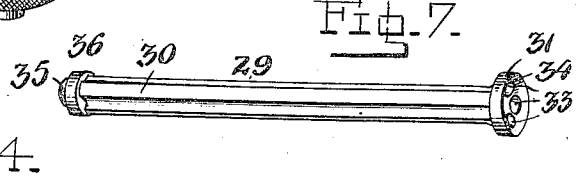

Fig. 7.

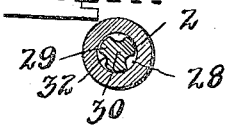

Fig. 4.

Witnesses
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No. 764,125. Patented July 5, 1904.

UNITED STATES PATENT OFFICE.

ISSACHAR A. HEALD, OF WASHINGTON, DISTRICT OF COLUMBIA.

TOBACCO-PIPE.

SPECIFICATION forming part of Letters Patent No. 764,125, dated July 5, 1904.

Application filed August 17, 1903. Serial No. 169,754. (No model.)

To all whom it may concern:

Be it known that I, ISSACHAR A. HEALD, a citizen of the United States, residing at Washington, in the District of Columbia, 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.

My invention relates to certain new and useful improvements in tobacco-smoking pipes.

One object of my invention is to provide means for preventing the saliva and smoke remaining in the stem of the pipe from entering the bowl of the pipe and saturating the unburned tobacco, said means consisting of a self-closing valve located between the bowl and stem and adapted to be opened by the vacuum or suction produced when the smoker draws upon the mouthpiece of the pipe.

Another object is to provide a cleaner for removing the nicotin, oil, tar, and other impurities from the stem of the pipe, said cleaner being adapted to remain in the stem while the pipe is being used and to clean the bore of the same upon being removed.

A further object is to provide a saliva receptacle or chamber with a peculiar outlet valve or closure whereby the accumulation of saliva and moisture may be easily blown out or removed from said receptacle.

A further object is to improve and simplify the construction of devices of this character, and thereby render them more durable and healthful in use and less expensive to manufacture.

With these and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a side elevation of a tobacco-pipe embodying my improvements. Fig. 2 is a vertical longitudinal sectional view through the same. Figs. 3 and 4 are detail sectional views taken, respectively, on the lines 3 3 and 4 4 of Fig. 2. Fig. 5 is a perspective view of the valve seat or closure for the saliva-receptacle of the pipe. Fig. 6 is a detail perspective view of the screw-plug which forms an adjustable valve-seat. Fig. 7 is a perspective view of the pipe-stem cleaner and smoke-cooler.

In the embodiment of my invention as illustrated in the drawings the numeral 1 denotes the bowl of a tobacco-pipe; 2, the stem of the same; 3, a T-shaped coupling uniting said bowl to one end of said stem, and 4 the mouthpiece, attached to the other end of said stem.

The coupling member 3 comprises a hollow body portion 5, the interior of which is divided by a horizontal partition 6 into an upper valve-chamber 7 and a lower saliva chamber or receptacle 8. Said coupling member 3 also comprises a socket portion 9, which projects laterally from the center of the body portion and is adapted to receive the reduced end of the stem 2, which is held in the bore 9^a of the socket portion by frictional engagement. The bore 9^a of said socket portion 9 is in communication with the valve-chamber 7 and saliva-chamber 8 through the openings 10 and 11, as clearly shown in Fig. 2 of the drawings. The upper end of the body portion 5 of the coupling member in which the valve-chamber 7 is located is externally screw-threaded, as at 12, to screw into the screw-threaded lower end of the bowl 1, and the said valve-chamber 7 is internally screw-threaded, as shown at 13, to receive the external screw-threads on a hollow screw-plug 14, which forms an adjustable valve-seat for a vertically-reciprocating valve 15 in said chamber 7. The lower open end of said plug forms a valve-seat 16, against which the downwardly-opening valve 15 is held by a coil-spring 17. Said valve is provided with an upwardly-projecting guide-stem 18, which slides in a socket in the plug 14, and with a downwardly-projecting guide-stem 19, which slides in a guide-socket 20, formed on the bottom or under side of the partition 6. The plug 14 is provided with an annular row of perforations or openings 21, adapted to afford communication between the interior of the pipe-bowl and the space above

the valve 15. The coil-spring 17 surrounds the stem 19, having its upper end engaging the under side of the valve 15 and its lower end seated in a recessed portion 22, formed in the partition 6.

The guide-socket 20, formed upon the bottom of the partition 6, projects downwardly into the saliva-chamber 8 and has its lower closed end tapered or conical in shape to provide a valve-seat 23 for a valve or closure 24 in the form of an externally-screw-threaded plug, adapted to screw into the lower open end of the body portion 5, which is internally screw-threaded, as at 25. The upper and inner end of said plug or closure 24 is cup-shaped or formed with a conical recess 26 to engage the similar-shaped valve-seat 23, and thus close the saliva-receptacle 8. The plug or closure 24 is formed with a central bore or opening 27, which when the plug is slightly unscrewed to lower the valve 26 from the valve-seat 23 will permit the saliva accumulated in the chamber 8 to run out of the same or to be blown out by blowing through the mouthpiece 4 and stem 2, as will be readily understood.

The stem 2 of the pipe is formed with a central bore or passage 28, in which a combined smoke-cooling and stem-cleaning device 29 is loosely mounted. Said device comprises a cylindrical body 30, of slightly less diameter than the bore 28, and a head or circular enlargement 31 at its outer end, which is adapted to engage the outer end of the stem 2. Said cylindrical body portion 30 is provided with longitudinal grooves 32, which form smoke-cooling passages and which terminate at the outer end of the body in openings or apertures 33 in the head 31, the end or outer face of which is dished or recessed, as shown at 34, to enlarge the smoke-space at this point, and thus allow for a free passage of smoke. Secured to the inner end of the cylindrical body 30 by a screw or other fastening means 35 is a washer 36, of leather or other material, which is of slightly greater diameter than the body 30, so as to snugly fit the bore 28 in the pipe-stem. It will be seen that when the device 29 is removed from the bore 28 or is reciprocated in the same the washer 36 will act as a cleaning-piston to swab the interior of the pipe-stem and remove the accumulated nicotin, tar, oil, and other impurities, thus effectively cleaning the pipe-stem. The body 30 of the device 29 is of sufficient length to allow a space for a free passage of the smoke between the washer 36 and the inner end of the pipe-stem 2, and at the same time the head of screw 35 is spaced sufficiently from the openings 10 and 11 to allow for a free passage of smoke and saliva through said openings. In order to hold the device in this position, the mouthpiece 4 is forced upon the outer end of the stem, so that the inner curved end of a socket 37 in the mouthpiece engages the head 31, as shown in Fig. 2. Said mouthpiece is held upon the stem 2 by frictional engagement and is provided with a longitudinal bore or smoke-passage 38.

The pipe-bowl 1 is provided with a removable tobacco-holder 39 in the form of a reticulated basket of woven-wire fabric, perforated or corrugated sheet metal, or material of any kind, the depth of said basket being such that a space will be left between the bottom of the same and the bottom of the interior of the bowl 40. Said space is adapted to be filled with a filtering material 41, preferably of cotton or other fibrous material, which will strain or filter the smoke and retain the greater part of the nicotin, oils, tar, and other impurities which the smoke contains. The cotton does not come in contact with the bottom of the tobacco-basket 39. Hence the former will not be ignited when the tobacco in the bowl burns out, and the cotton may be frequently replaced by simply removing the basket 39, as will be readily understood.

The operation of my invention is as follows: When it is desired to use the pipe, the basket or holder 39 is packed with tobacco, which is then ignited in the usual manner. The user when he puffs or sucks upon the mouthpiece 4 will cause a vacuum in the pipe-stem 2 and valve-chamber 7, which vacuum will draw the valve 15 down against the tension of its closing-spring 17 to open said valve, and thus permit the smoke from the bowl 1 to pass through the filtering material 41, the apertures 21 in plug 14, the valve, the valve-chamber 7, the opening 10, the bore 9^a, the grooves 32 in the cooler 29, and then through the bore 38 of the mouthpiece 4 into the smoker's mouth. The instant the suction or vacuum ceases the spring 17 will return the valve 15 to its seat 16, and thus effectively prevent any saliva and smoke passing from the stem into the tobacco-bowl. The action of the valve 15 may be quickly and easily regulated by operating the screw-plug 14 to change the position of the valve-seat 16, and thus vary the tension of the spring 17 upon the valve. It will be seen that the user may hold the pipe in his mouth or between his teeth while he is talking or working, and the liability of forcing the burning tobacco smoke or saliva out of the pipe-bowl by accidentally blowing into the pipe-stem will be entirely overcome by providing the valve 15. The saliva from the smoker's mouth which runs down the pipe-stem through the grooves 32 in the device 29 will pass through the opening 11 into the saliva-chamber 8 and may be readily removed from the same by screwing the closure 24 away from the stationary valve-seat 23 and then blowing into the pipe-stem. The closure 24 is only entirely removed from the

coupling member 3 when it is desired to clean out the interior of the same, so that the liability of losing or misplacing said closure is lessened. In order to clean out the pipe-stem, the mouthpiece is removed from the stem and the stem is removed from the socket 9 of the coupling 3. The stem 2 is then taken in one hand and the head 31 on the cleaning device 29 is taken in the other hand and pulled to remove the body 30 of the cleaner from the bore 28 of the stem. The cleaning piston or washer 36 as it is forced through said bore 28 will thoroughly clean the same, as previously described. The piston or washer 36 when worn out may be quickly and easily replaced by a new one by simply removing the screw 35. The mouthpiece 4 when it is removed from the stem 2 may be used as a cigarette or cigar holder, as will be readily understood.

From the foregoing description, taken in connection with the drawings, it will be seen that I have provided a simple, durable, and comparatively inexpensive pipe, the parts of which are all removable to permit them to be readily cleaned or replaced when worn out or broken.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus particularly described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A smoking-pipe having a self-closing valve located in its smoke-conduit and adapted to be opened by the suction produced when the pipe is being used, and means for controlling the opening and closing of said valve, substantially as described.

2. The combination with a smoking-pipe having a bowl and a smoke-conduit, of a valve located in the smoke-conduit and adapted to be opened by the suction produced when the pipe is being smoked, and means for varying the operation of said valve, substantially as described.

3. The combination with a smoking-pipe having a bowl and a smoke-conduit, of a spring-closed valve located in the smoke-conduit and adapted to be opened by the suction produced when the pipe is being smoked, and means for varying the operation of said spring-closed valve, substantially as described.

4. The combination with a smoking-pipe having a bowl and a smoke-conduit, of a valve-seat in said conduit, a valve in said smoke-conduit coacting with said valve-seat and adapted to be opened by the suction produced when the pipe is being smoked, a spring for closing said valve, and means for adjusting said valve-seat to vary the tension of said spring upon said valve, substantially as described.

5. In a smoking-pipe, the combination of a bowl, a stem, a coupling uniting said bowl and stem and removably attached to the same, a valve formed with guide-stems and mounted to reciprocate in said coupling and an adjustable valve-seat coacting with said valve and adapted to be adjusted to vary the operation of the same, substantially as described.

6. In a smoking-pipe, the combination of a bowl, a stem, a coupling uniting said bowl and stem, said coupling being formed with a valve-chamber, an adjustable valve-seat in said chamber, a reciprocating self-closing valve in said chamber coacting with said valve-seat and adapted to be opened by the suction produced when the smoker draws upon the pipe-stem, the operation of said valve being controlled by the adjustment of said valve-seat, substantially as described.

7. In a smoking-pipe, the combination of a bowl, a stem, a coupling uniting said bowl and stem, said coupling being formed with a valve-chamber, an adjustable screw-threaded valve-seat in said chamber, a vertically-guided reciprocating valve in said chamber coacting with said valve-seat, a spring for closing said valve upon its seat, the tension of said spring upon said valve being regulated by the adjustment of said valve-seat, substantially as described.

8. In a smoking-pipe, the combination of a bowl, a stem, a coupling uniting said bowl and stem, said coupling being formed with a saliva-chamber having an open end and a centrally-disposed conical valve-seat in said open end and an apertured screw-threaded valve or closure for said open end, said closure being formed with a conical recess or depression adapted to coact with said valve-seat to close said chamber and adapted to permit the accumulation of saliva to escape through the aperture in the closure when said valve is screwed away from its seat, substantially as described.

9. In a smoking-pipe, the combination of a bowl, a stem, a hollow coupling uniting said bowl and stem, a partition in said coupling dividing the same into a valve-chamber and a saliva-chamber, said chambers being in communication with said stem, a suction-opened valve in said valve-chamber for normally closing the smoke-conduit between said bowl and stem, and an adjustable valve or closure for said saliva-chamber adapted to permit the same to be readily cleaned, substantially as described.

10. The combination with the stem of a smoking-pipe, of a combined smoke-cooling and stem-cleaning device adapted to occupy the bore of said stem, said device having a body portion formed with smoke-cooling grooves, a head at one end adapted to project beyond the end of said stem, and a removable cleaning-washer at its opposite end, said washer

being of greater diameter than the diameter of the bore of said stem and said device being of greater length than said stem whereby said washer will be held out of contact with the end of said stem, and a removable mouthpiece upon the end of said stem adapted to engage the head of said device to retain the latter in said stem, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ISSACHAR A. HEALD

Witnesses:
A. J. B. LARKIN,
GEORGE R. GILL.