July 21, 1925. 1,546,638

W. B. EVANS

TONIC DISPENSING COMB

Filed Nov. 11, 1924

Fig. 1.

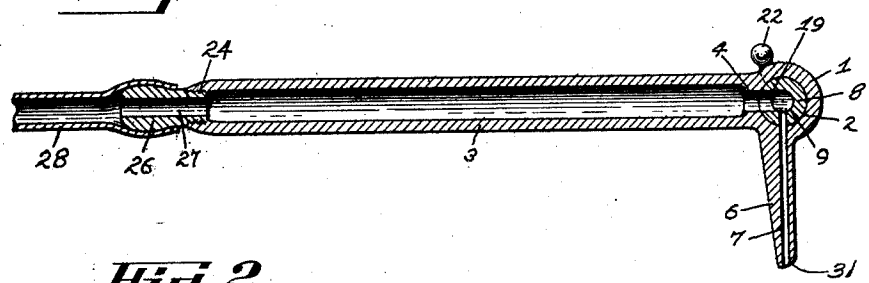


Fig. 2.

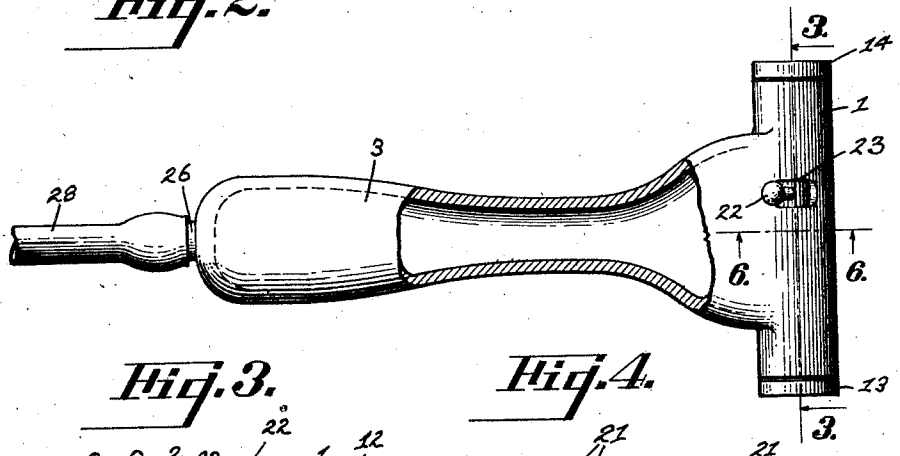


Fig. 3.

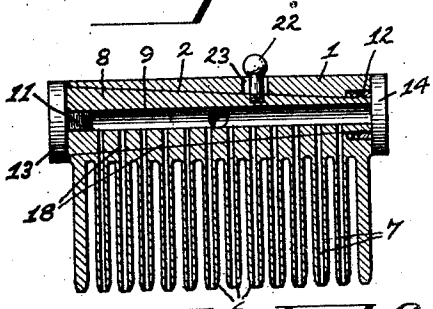


Fig. 4.

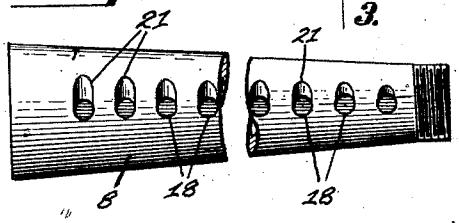


Fig. 5.

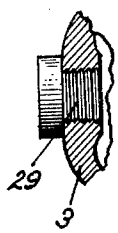


Fig. 6.

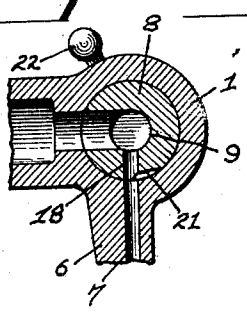
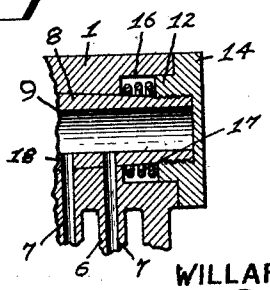


Fig. 7.



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UNITED STATES PATENT OFFICE.

WILLARD B. EVANS, OF SAN QUENTIN, CALIFORNIA.

TONIC-DISPENSING COMB.

Application filed November 11, 1924. Serial No. 749,234.

To all whom it may concern:

Be it known that I, WILLARD B. EVANS, a citizen of the United States, residing in San Quentin, in the county of Marin and State of California, have invented a new and useful Improvement in a Tonic-Dispensing Comb, of which the following is a specification.

My invention relates to improvements in combs for dispensing hair tonic and the like wherein a supply of tonic contained in the handle of the comb is dispensed past registering apertures and grooves and through passages formed in the teeth of the comb to deliver a regulated flow of tonic.

The primary object of my invention is to provide an improved comb for dispensing hair tonic and the like.

Another object is to provide an improved device of the character described provided with improved means for regulating the flow of tonic.

A further object is to provide an improved construction which will insure against leakage.

Another object is to provide an improved device of the character described which may be readily attached to a main supply container for use in barber or beauty shops and the like, or in homes, and which may be disconnected from said main supply container for use when traveling or at points remote from the main supply.

A further object is to provide a device of simple and durable construction which will afford an efficient means for applying hair tonic and other similar preparations.

I accomplish these and other objects by means of the device disclosed in the drawings forming a part of the present specification wherein like characters of reference are used to designate similar parts throughout said specification and in which,

Fig. 1 is a longitudinal transverse section of my improved tonic dispensing comb.

Fig. 2 is a broken plan view of the comb.

Fig. 3 is a transverse section taken upon the line 3—3 of Fig. 2 in the direction indicated.

Fig. 4 is an enlarged broken side elevation of the dispensing valve core.

Fig. 5 is an enlarged sectional detail of the end of the handle showing the manner in which said handle may be closed when the comb is to be used at a point remote from a main supply.

Fig. 6 is a broken enlarged sectional detail taken upon the line 6—6 of Fig. 2 in the direction indicated.

Fig. 7 is a broken enlarged sectional detail of one end of the valve core.

Referring to the drawings the numeral 1 is used to designate in general a cylindrical body portion of a comb having a conical bore 2 extending therethrough and provided with a hollow handle portion 3 communicating with the bore 2 through an opening 4. A plurality of teeth 6 are formed upon the body portion at substantially right angles to the plane of the handle portion 3, said teeth 6 having dispensing passages 7 formed therethrough in communication with the bore 2.

A dispensing valve core 8 is rotatably mounted within the bore 2, said core being conical in shape and adapted to fit into the bore 2 to afford a neat turning fit. An axial bore 9 is formed through the core 8, the end of said bore 9 at the large end of the core, being internally threaded to receive a plug 11 closing said end of the bore. The opposite or small end of the core is externally threaded to receive a cap 12 closing the adjacent end of the bore. Flanges 13 and 14 are formed upon the outer ends of the plug and cap respectively, said flanges substantially conforming to the ends of the body portion 1 to give a neat and finished appearance to the device.

The end of the body portion 1 adjacent the small end of the bore 2 and core 8 is provided with an annular recess 16 adapted to receive a spring 17 normally slightly compressed between the back of the recess and the inner end of the cap 12 to exert an outward pressure against said cap whereby the core 8 is held firmly seated within the conical bore 2, for a purpose hereinafter more fully explained.

A plurality of apertures 18 are formed in the core 8 said apertures being adapted to communicate between the bore 9 and the tooth passages 7 when the apertures are caused to register with the adjacent ends of said passages. An opening 19 is formed in the core to register with the opening 4 when the apertures 18 register with the passages 7 whereby a passage is formed between the

handle and the bore 9 of the core. Grooves 21 are cut upon the surface of the core 8 adjacent the apertures 18, said grooves tapering from a maximum width and depth at the edge of the apertures to a point slightly spaced from said apertures as best illustrated in Fig. 4 of the drawings. The grooves are of progressively increasing length from the small end of the core to the large end of the core and are adapted to form passages communicating between the apertures and the adjacent ends of the tooth passages before the apertures 18 are moved into registering relation with the passages 7.

A core actuating member 22 is secured upon the core 8 and arranged to extend outwardly through a slot 23 in the body portion 1 whereby the core may be turned to cause the apertures 18 to register with the cause said apertures to be moved out of such registering position to fully close the tooth tooth passages 7 for dispensing tonic or to passages and the opening 4 to entirely shut off the flow of tonic from the handle.

A threaded opening 24 is formed in the end of the handle 3, to receive a reduced extension 26 having a passage 27 therethrough, said extension being adapted to receive the end of a flexible hose connection 28 connected to a main source of supply, not shown, in any convenient manner. The extension 26 is threaded into the handle to permit said extension to be readily removed and a plug 29 substituted therefor whereby the comb may be used at a point remote from the main source of tonic supply if desired.

In operation the core is moved by means of the actuating member 22 to cause the apertures 18 to register with the tooth passages 7, the aperture 19 being caused to register at the same time with the opening 4 into the handle. Tonic contained within the hollow handle can now flow through the openings 4 and 19 into the bore 9 of the core 8 and thence through the apertures 18 into the tooth passages 7 through which it is dispensed onto the hair or onto any surface over which the ends of the teeth 6 may be moved. The ends of the teeth 6 are slightly rounded as at 31 whereby the ends of the passages 7 are prevented from resting flatly upon the surface to which the tonic is being applied, thereby facilitating the flow of tonic outwardly from the teeth.

The grooves 21 are provided in order that the flow of tonic may be easily and effectively regulated through a relatively wide range. As the core is moved to bring the apertures into registering relation as above explained, the pointed ends of the grooves are first moved over the ends of the tooth passages, said grooves thus forming a restricted passage through which limited quantities of the tonic may flow to the tooth passages before the apertures themselves are moved to registering position. The grooves are tapered to a fine point so that when the points first reach the tooth passages a very small amount of tonic may pass through the grooves to the tooth passages. As the core is turned to advance the grooves further over the tooth passages, progressively increasing amounts of tonic may pass through the grooves to the teeth until the apertures 18 are moved to fully register with the tooth passages 7 at which point a maximum flow is obtained. In this manner the quantity of tonic which is dispensed may be readily regulated by varying the degree to which the core is turned.

By connecting the comb handle to a main source of supply through the flexible hose connection 29 the handle may be kept filled at all times. This arrangement is particularly useful in connection with the barber shops, beauty shops and in homes where daily treatments are to be administered. However, when it is desired to use the comb at a point remote from the main supply, the extension 26 may be removed and the opening closed by a plug 29 as above explained. The handle is adapted to contain a sufficient quantity of tonic to administer several treatments and of course may be refilled through the opening 24 whenever necessary. The comb may thus be used independently of any connection to a source of supply and may be conveniently packed in a grip for use when traveling.

The conical form of the core 8 permits the same to be held firmly seated within the bore 2 by means of the spring 17 thereby insuring against leakage around the sides of the core. The pressure from the spring also serves to hold the core in any desired position, the frictional resistance due to the pressure exerted by said spring being sufficient to hold the core in closing position or in any desired position regulating the flow of tonic from the tooth.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is.

1. A tonic dispensing comb comprising a cylindrical body portion having a conical bore extending therethrough and provided with an annular recess and a hollow handle adapted to receive a supply of hair tonic and the like and also provided with a plurality of teeth having dispensing passages therethrough; a hollow conical core rotatably mounted within the body portion and having apertures connecting with an opening communicating with the hollow handle and with the passages formed in the teeth whereby tonic may be dispensed through said teeth; and means for partially rotating the core to move the apertures out of registering relation with the tooth passages whereby the supply of tonic may be cut

off; and a spring mounted between the annular recess in one end of the cylindrical body portion and a cap engaging the core for holding said core seated within the bore to prevent leakage.

2. A tonic dispensing comb comprising a cylindrical body portion having a conical bore extending therethrough and provided with a hollow handle adapted to receive a supply of hair tonic and the like and also provided with a plurality of teeth having dispensing passages therethrough; a hollow conical core rotatably mounted within the body portion and having apertures adapted to connect with a chamber communicating with the hollow handle and with the passages formed in the teeth whereby tonic may be dispensed through said teeth; and means for partially rotating the core to move the apertures out of registering relation with the tooth passages whereby the supply of tonic may be cut off; caps threaded onto the ends of the core to close the ends thereof and to retain the core within the bore; and a spring mounted within a recess formed in the body portion adjacent one end of the core for holding said core seated within the bore to prevent leakage.

3. A tonic dispensing comb comprising a cylindrical body portion having a conical bore extending therethrough and provided with a hollow handle adapted to receive a supply of hair tonic and the like and also provided with a plurality of teeth having dispensing passages therethrough; a hollow conical core rotatably mounted within the body portion and having a supply aperture adapted to register with an opening communicating with the hollow handle and a plurality of dispensing apertures adapted to register with the tooth passages, the surface of said core having tapered grooves communicating with the dispensing apertures and arranged to communicate between the dispensing apertures and the tooth passages to restrict the flow of tonic through said apertures and the teeth; and means for partially rotating the core within the body to cause a desired portion of the grooves or apertures to register with the tooth passages to regulate the flow of tonic therethrough and to move the apertures and grooves entirely out of registering relation with the tooth passages to close said passages.

4. A tonic dispensing comb comprising a cylindrical body portion having a conical bore extending therethrough and provided with a hollow handle adapted to receive a supply of hair tonic and the like and also provided with a plurality of teeth having dispensing passages therethrough; a hollow conical core rotatably mounted within the body portion and having a supply aperture adapted to register with an opening communicating with the hollow handle and a plurality of dispensing apertures adapted to communicate with the tooth passages, the surface of the core having tapered grooves communicating with the dispensing apertures, said grooves being of progressively increasing length from the small to the large end of the core and arranged to communicate between the dispensing apertures and the tooth passages to restrict the flow of tonic therethrough; and means for partially rotating the core within the body to cause a desired portion of the grooves or apertures to register with the tooth passages to regulate the flow of tonic and to move the apertures and grooves entirely out of registering relation to entirely shut off the flow of tonic through the tooth passages.

5. A tonic dispensing comb comprising a cylindrical body portion having a conical bore extending therethrough and provided with a hollow handle adapted to receive a supply of hair tonic and the like and also provided with a plurality of teeth having dispensing passages therethrough; a hollow conical core rotatably mounted within the body portion and having a supply aperture adapted to register with an opening communicating with the hollow handle and a plurality of dispensing apertures adapted to communicate with the tooth passages, the surface of the core having tapered grooves communicating with the dispensing apertures, said grooves being of progressively increasing length from the small to the large end of the core and arranged to communicate between the dispensing apertures and the tooth passages to restrict the flow of tonic therethrough; and means for partially rotating the core within the body to cause a desired portion of the grooves or apertures to register with the tooth passages to regulate the flow of tonic and to move the apertures and grooves entirely out of registering relation to entirely shut off the flow of tonic through the tooth passages; and a reduced extension threaded into an opening formed in the end of the handle and having a passage therethrough, said extension being adapted to receive a flexible hose connection to a source of tonic supply whereby the handle may be kept filled when the comb is in use.

In witness whereof I hereunto set my signature.

WILLARD B. EVANS.