L. BROMBERG

ARTICLE FOR SMOKING

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FIG. 1

FIG. 2

FIG. 3

INVENTOR

LOUIS BROMBERG

BY

Epstein, Wolf, Wolf & Greenfield

ATTORNEYS
This invention relates to cigarettes and more particularly comprises a new and improved filter type cigarette which provides the smoker with the full flavor of an unfiltered cigarette.

Recent medical discoveries have produced a marked change in the smoking habits of the public. In a relatively few years millions of cigarette smokers have changed from unfiltered to filtered cigarettes. Cigarette manufacturers have developed a wide variety of filters all of which to one degree or another remove the undesirable constituents from tobacco smoke. Most filters perform this function by absorbing the tar, nicotine and other undesirable substances while other filters have chemicals which react with the tobacco products to neutralize their effect.

While the filters now used by the cigarette manufacturers are effective, the technology is available to make them even more effective, but their use would result in an unsaleable product. If the manufacturers incorporated into their product a more effective filter the cigarette smoke would be reduced to little more than flavorless warmed air. Because such cigarettes would provide no enjoyment to the smoker they would not be saleable, and as a result, the cigarette manufacturers have had to compromise the filters' effectiveness to retain some of the flavor.

One important object of this invention is to provide means for restoring the flavor of effectively filtered cigarettes without affecting the cigarette smoke the undesirable constituents normally found therein and associated with the flavor.

Another important object of this invention is to provide means for introducing into the receiving end of cigarettes a flavor charge which is satisfying to the smoker and not deleterious to the smoker's health.

Yet another important object of this invention is to provide a flavor source at the mouth end of cigarettes that will not burn or give a bitter taste to the mouth of the smoker.

Still another important object of this invention is to prevent the tobacco or other material at the rearward end of a cigarette, which constitutes the flavor charge, from entering the mouth of the smoker.

To accomplish these and other objects of this invention there is included among its features a cigarette having at its forward end a combustible charge which when ignited produces an extremely mild smoke. The very mild smoke produced by the burning charge is directed through a second charge contained in a nonporous and non-absorbent capsule at the mouth end of the cigarette, which furnishes the taste for the smoker, but which does not ignite. The capsule in accordance with this invention serves as a volatilization chamber in which the second charge releases its volatiles in response to the very mild warm smoke drawn into it. The smoke in turn entrains the volatiles with it when the smoker draws on the cigarette.

These and other objects and features of this invention along with its incident advantages will be better understood and appreciated from the following detailed description of several embodiments thereof, selected for purposes of illustration and shown in the accompanying drawings, in which:

FIGS. 1 and 2 are side views, partly in section, of two embodiments of cigarettes constructed in accordance with this invention; and

FIG. 3 is a perspective view of one part of the cigarette of FIG. 1.

The cigarette shown in FIG. 1 includes a wrapper 10 made of any conventional substance such as cigarette paper, and the wrapper has a mouthpiece extension 12 made of a stiff paper or other material such as is commonly used as the tip for filtered cigarettes. The mouthpiece 12 is cemented or otherwise secured to the rearward end of the wrapper proper in a slightly overlapped relationship.

The cigarette wrapper contains a long fill of tobacco 14, a filter element 16 and a capsule insert 18. The tobacco fill 14 may be of any variety suitable for smoking. The filter 16 may also be of any desired variety which either absorbs the undesirable constituents of cigarette smoke or contains a substance which reacts with them, such as activated charcoal, capric acid, aluminum oxide or granulated vermiculite. Neither the type of tobacco fill 14 used nor the specific type of filter forms a part of this invention except that the milder the smoke produced by the combination of tobacco fill 14 and filter 16, the more desirable the product. Thus, if the filter 16 is capable of removing from the smoke all of the undesirable substances such as tar, nicotine, moisture and dust, a better product results.

Preferably the smoke produced by the fill 14 and the filter 16 is so mild as to be almost tasteless and quite unsatisfying to the smoker without some additive. The capsule 18 is provided for this purpose. The capsule 18 should be made of a harmless nonporous and non-absorbent substance such as gelatin, aluminum or other thin and lightweight metal, or other material which will not melt from the heat of the warm smoke. The capsule is shown in FIG. 1 to be open at its frontal end 20 so as to receive smoke drawn through the mouthpiece 12 from the ignited tobacco fill 14. The rearward end 22 of the capsule is shown to be closed except that small perforations 24 are provided to allow the smoke to draw normally through the cigarette. The capsule 18 contains a short fill of tobacco 26 which preferably is relatively strong as compared to tobacco usually used in cigarettes. This small tobacco fill 26 is intended to supply flavor and aroma to the smoke which leaves the filter 16. While the tobacco 26 may be substantially stronger than regular tobacco found in cigarettes it is never ignited as it is protected from the flame by the filter 16, and therefore, the products of combustion created by burning tobacco are not produced at the short fill 26. Rather, the short fill of tobacco 26 has the warm smoke drawn therethrough as the smoke puffs on the cigarette, and the flavor giving substances are volatilized in the capsule and are entrained with the warm smoke from the fill 26 to the mouth of the smoker.

It will be noted in the drawing that the rearward end 22 of the capsule 18 is disposed forwardly of the rear edge 28 of the mouthpiece so that the tongue or lips of the smoker will not touch the capsule 18 and more important the short fill 26 in the capsule, which may be strong and bitter to the taste. It will also be noted in FIG. 1 that the perforations 24 are disposed toward the center on the spherical surface forming the rearward end 22 of the capsule. By confining the perforations 24 to the central portion of the rearward end 22 no tar or other products which may be freed from the tobacco 26 and collect in the capsule will flow through the per-
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3 perforations and reach the lips of the smoker, and thus nervous membrane irritation is avoided.

The capsule 18 has many advantages. As indicated above, it is particularly desirable to keep the stronger tobacco fill 26 from the lips of the smoker and retain the tobacco inwardly of the rearward edge 28 of the cigarette. However, even if the tobacco fill 26 is of normal strength and therefore not bitter to the taste, the capsule 18 nevertheless serves to retain the short fill of tobacco 26 in the rearward end of the cigarette, which would not otherwise be possible. The heavier material from which the mouthpiece 12 is made cannot be so tightly wrapped about the tobacco and nonabsorbent weight wrapper 10 to hold the short fill. Moreover, the short length of the fill 26 will not contact the inside of the mouthpiece 12 over a large enough surface area to achieve a firm frictional bond. To recess the short fill 26 would be impossible without some means of containing that short length of tobacco forward in the mouthpiece. The stiff material for the mouthpiece is required when the tobacco is recessed as the wrapper 10 does not possess enough stiffness in and of itself to hold its shape without some fill when placed between the lips. It is also desirable that the stiffer material be used for the mouthpiece to avoid bending of the rearward end of the cigarette along the rearward edge of the filter. The relatively stiff filter if contained in a lightweight paper wrapper may cause the wrapper to bend at the rearward edge of the filter because of the different relative stiffness of the tobacco fill 26 and the filter material.

The embodiment of this invention shown in FIG. 2 differs only slightly from that shown in FIG. 1. In the embodiment of FIG. 2 the capsule is of somewhat different shape but performs the same function. The capsule 30 shown in FIG. 2 has a cylindrical nonporous and nonabsorbent side wall 32 and a flat preferably nonporous and nonabsorbent rear wall 34 perforated as shown at 36 to enable the smoker to draw smoke from the cigarette. Typically, the side and rear walls may be made of a harmless thin metal or plastic material. Within the capsule 30 is a short fill of tobacco 38 which may be concentrated or otherwise treated in the same manner as the fill shown in FIG. 1 to produce the desired flavor and aroma for the smoker. In the embodiment of FIG. 2 the perforations 36 are shown spaced inwardly from the periphery of the flat wall 34 to prevent any moisture from dripping out of the capsule should such moisture be freed from the tobacco. As in the previous embodiment the forward end of the capsule 30 is open so that the filter smoke may freely enter it as it is drawn through the length of the cigarette.

In each of the embodiments of FIGS. 1 and 2, the capsule may be approximately three-eighths of an inch long and be recessed forwardly from the rearward edge 28 of the cigarette about one-eighth of an inch. The specific size of the parts is of course not critical and may be varied to suit the types of fill actually used. It should also be understood that the fill 26 of tobacco may be artificially flavored and contain such substances as menthol, spearmint, and perfume oils. The use of synthetic tobacco flavor or any of the other substances will depend upon public demand. To achieve its function the fill 26 may be concentrated or of greater density than normal tobacco fill, a special blend, etc., which will introduce the aroma and flavor to the otherwise bland smoke.

It will be appreciated that the capsule in accordance with this invention serves as a volatilization chamber in which the short fill of tobacco releases its volatiles in response to the hot air which enters it from the filter. The volatiles reconstitute the flavor of the cigarette. In order for the capsule to perform its function as a volatilization chamber, its surrounding volatiles released in the chamber. If the side walls are absorbent they will absorb the volatiles and the chamber will not effectively reintroduce into the warm air drawn through the capsule flavorful materials which will make for a more enjoyable product. Preferably the end wall as well is nonporous to increase the efficiency of the capsule. The end wall of the capsule serves as a baffle to retard the escape of the smoke which enters the capsule from the forward end so that the smoke lingers in the capsule and thus is afforded a greater opportunity to pick up the volatiles released in the capsule. Further, the walls of the capsule should not be porous, for such walls would not retain the smoke in the capsule and afford it time to pick up the volatiles.

If the capsule is capable of performing with great efficiency, the filter may and preferably is of maximum effectiveness, because the capsule will be able to provide all of the flavor necessary and none is needed from the long fill of tobacco. Further, when the filter is of maximum efficiency the air passed through it into the capsule will be relatively dry, and the dry air will be capable of picking up more of the volatiles released in the capsule. Again, if the capsule walls absorb the volatiles there will be relatively little, if any, flavor reintroduced into the smoke and the cigarette will be substantially tasteless. By way of summary, it may then be stated that if the capsule walls are incapable of absorbing the volatiles, the capsule will perform with great efficiency to reintroduce flavor into the air before it is drawn into the mouth of the smoker, and this efficiency on the part of the capsule makes possible the use of a more efficient filter which in turn contributes to the efficiency of the capsule.

While two embodiments of the present invention have been described and illustrated it will be understood and appreciated that other modifications of the invention are possible without departing from the scope of the invention. For example, the mouthpiece end of the cigarette including the stiff wrapper 12 along with the filter 16 and capsule 18 or 30 could be fully contained within the wrapper 10 so that the outer surface of the cigarette is continuous rather than interrupted by a circumferential seam. Because such modifications are possible it is not intended to limit the breadth of this invention to the two embodiments illustrated and described. Rather, it is intended that the breadth of this invention be determined by the appended claims and their equivalents.

What is claimed is:

1. A cigarette comprising a wrapper, a long fill of tobacco extending inwardly from one end of the wrapper, a nonabsorbent filter disposed behind the long fill of tobacco and constructed to absorb a maximal percentage of the products of combustion from the tobacco and to admit a highly filtered smoke to emerge therefrom, a cup-shaped volatilization capsule disposed behind the filter and in the direction of the filter and having a rear wall extending across the cross section of the capsule that closes the capsule at its rearward end and having a nonabsorbent and nonporous fully encircling and containing side wall, a limited number of perforations extending through the rear wall of the capsule enabling the smoke to draw through it when the cigarette is lighted, and a short fill of aromatic tobacco disposed in the capsule to release volatiles in said capsule from the tobacco when the highly filtered smoke is introduced for introducing flavor into the smoke entering the capsule from the filter, said capsule slowing down the flow of smoke therethrough to enable the smoke to pick up the volatiles from the tobacco.

2. An article for smoking comprising a wrapper, a tobacco charge filling the forward portion of the wrapper producing a smoke to be drawn through the drapper when the charge is ignited,
a nontobacco filter disposed behind the combustible charge constructed to absorb a maximal percentage of the products of combustion from the tobacco smoke and to permit a highly filtered smoke to emerge therefrom,
a charge of aromatic tobacco disposed behind the filter,
a nonabsorbent and nonporous wall fully encircling and containing the charge of aromatic tobacco and a nonabsorbent end wall behind said charge together defining a volatilization chamber for said charge and through which filtered smoke leaving the filter may be drawn,
said charge of aromatic tobacco containing volatiles released in the volatilization chamber when the highly filtered warm smoke is introduced from the filter into said chamber, said volatilization chamber slowing down the flow of smoke therethrough to enable the smoke to pick up the volatiles from the aromatic tobacco,
and at least one perforation in the end wall of the chamber disposed inwardly of the encircling wall through which smoke in the volatilization chamber may be drawn into the mouth by the smoker.

3. A cigarette as defined in claim 1 further characterized by

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a stiff cylindrical mouthpiece surrounding the capsule and the rear wall of the capsule being spaced inwardly from the rear end of the mouthpiece.

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SAMUEL KOREN, Primary Examiner.

MELVIN D. REIN, ABRAHAM G. STONE, Examiners.