

Oct. 4, 1966

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3,276,453

CIGARETTE CONSTRUCTION

Filed Dec. 21, 1964

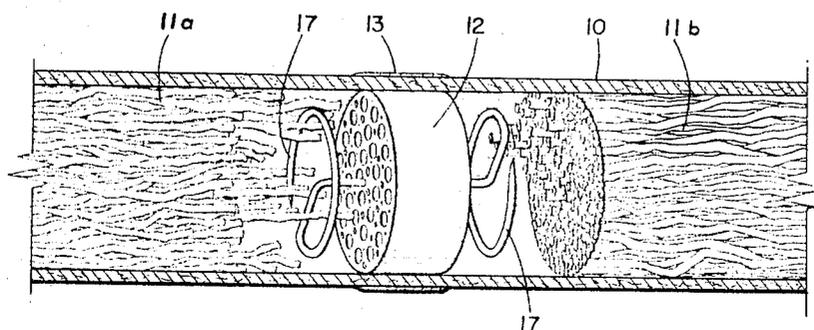


FIG. 1

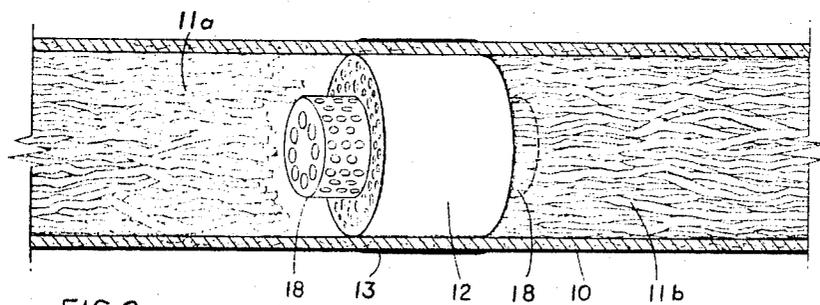


FIG. 2

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**CIGARETTE CONSTRUCTION**

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Filed Dec. 21, 1964, Ser. No. 419,663

2 Claims. (Cl. 131-4)

This application is a continuation-in-part of my co-pending application Serial No. 203,506 for Cigarette Construction, filed June 19, 1962, now abandoned.

This invention relates to a cigarette construction adapted to reduce the inhalation of noxious elements therefrom.

It is now well established that the smoking of cigarettes is harmful though in some cases the precise cause and effect may not have been finally determined. However, it is known that these harmful effects are reduced if the smoker will stub out or extinguish the cigarette while there is still a substantial amount thereof remaining. This is apparently due to the fact that noxious elements present in the tobacco will accumulate in the diminishing portion of the cigarette during smoking and will be drawn into the system in ever increasing concentration as the butt end of the cigarette is approached. However, if the cigarette is discarded or extinguished before the butt end is reached, the noxious elements which have accumulated therein, such as nicotine, and resin or tar, will remain in the discarded portion of the cigarette and the smoker's health will remain unaffected thereby. There are no precise limitations on the length of butt that should be discarded for safety although some authorities indicate that a critical point is reached when the smoke temperature abruptly rises. It appears however that if the cigarette is extinguished at a point between about one-half and one-quarter of its length, a significant reduction in the inhalation of noxious elements can be achieved.

However, the habit of smoking is such that few if any smokers are able to discipline themselves to extinguish the cigarette at this point, and undesirable harmful effects ensue. In order to overcome this human weakness it has been proposed, for example, to provide a zone of tobacco in the cigarette impregnated with a distinctive taste or smell to warn the smoker that it is time to discard the cigarette. Such prior suggestions however, have suffered from various defects requiring for example complicated techniques in manufacture, and involving a certain act of will on the part of the smoker, and also leaving the smoker with an unpleasant taste or smell after smoking the cigarette.

Accordingly, it is an objective of this invention to provide a cigarette construction adapted to reduce the inhalation of noxious elements therefrom which is relatively economical to manufacture and sell and is both effective and unobtrusive in use.

More particularly it is an objective of this invention to provide a cigarette construction having the foregoing advantages in which the cigarette is automatically extinguished at a predetermined point without affecting the smoking quality of the cigarette as a whole.

More particularly it is an objective of the invention to provide a cigarette construction having the foregoing advantages in which the tendency for the hot cinder to become separated from the discarded portion of the cigarette is reduced.

The invention seeks to provide the foregoing and other objectives which will become apparent from the following description of a preferred embodiment by the provision of a cigarette construction adapted to reduce the inhalation of noxious elements therefrom and comprising: a paper wrapper of tubular construction; tobacco filling at least a portion of said wrapper; a fire barrier located with-

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in said wrapper intermediate its ends, said barrier being firmly interengaged with that portion of said tobacco filler adjacent thereto on at least one side thereof to resist separation therefrom and having passages therein to permit flow of gases therethrough; and a zone of fire resistant material associated with said wrapper in the region of said barrier to resist combustion of said wrapper therearound.

A preferred embodiment of the invention will now be described by way of example only with reference to the following drawings in which like reference devices refer to like parts thereof throughout the various views and diagrams and in which:

FIGURE 1 is a sectional side elevation of a preferred embodiment of the cigarette construction according to the invention, and,

FIGURE 2 is a sectional side elevation of a further embodiment of the cigarette construction according to the invention.

Referring now to FIGURE 1 the cigarette construction according to the invention will be seen to comprise the tubular wrapper 10 of paper or like material which is of conventional construction and requires no further description. Within wrapper 10 shredded tobacco 11 is inserted filling wrapper 10 along substantially its entire length. Interposed within wrapper 10 intermediate the ends thereof is the fire barrier member 12. Fire barrier 12 is shaped to effectively fill tubular wrapper 10 at that point thus separating the tobacco 11 into two portions 11a and 11b. It will be noted that fire barrier 12 in this preferred embodiment is formed of asbestos, rice hull ash or the like thus providing a generally porous member having a large number of fine passages therein to permit the flow of smoke therethrough in either direction. It should also be observed that both upper and lower sides of fire barrier 12 are firmly interengaged and intimately interwoven with the tobacco 11 contained in wrapper 10 thus reducing the tendency for the hot cinder to become separated from the remainder of the cigarette.

Around the wrapper 10 in the region of fire barrier 12 there is provided a zone of fire resistant material 13, more or less co-extensive with the length of fire barrier 12, the purpose of which is to resist combustion of wrapper 10 in the region of fire barrier 12. In this way when the hot cinder of tobacco is close to fire barrier 12 any tendency for the wrapper 10 to continue to burn around and beyond the fire barrier 12 is virtually eliminated, thus ensuring complete snuffing of the cigarette at that point. One form of fire resistant material which has proved suitable is a mixture of boric acid and borax which may be used to impregnate a narrow band of wrapper 10 to provide the zone of fire resistant material 13. However, many alternative such materials will be apparent to persons skilled in the art in particular circumstances such as metal foil.

Fire barrier 12 is preferably provided with forwardly extending retaining means such as retaining member 17 of rust resistant wire or the like to provide the degree of engagement and interweaving with the tobacco necessary for the purpose on either side thereof extending forwardly and rearwardly of barrier 12.

In the embodiment of FIGURE 2 the barrier member 12 is provided with integral forwardly and rearwardly extending bosses 18 formed of ceramic or other material identical with the material of fire barrier 12 functioning in precisely the same manner as wire members 17.

The operation of the instant invention requires no elaboration beyond the fact that the smoker will smoke the cigarette in the normal way without noticing the presence of the fire barrier 12 until it is reached at which point the cigarette will go out and the smoker will discard it.

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In this way, the smoker is saved from the harmful effects of the greater part of the noxious elements present in tobacco **11**, which by that time will have accumulated in high concentration in the unsmoked portion of the cigarette.

It should be noted that since the cigarette will go out while it is in the smoker's hand, in many cases, there will be a strong tendency for the hot cinder to become detached from the forward side of fire barrier **12** at this moment particularly where the smoker is handling the cigarette. However, this normal tendency is overcome by the provision of a high degree of bonding between the tobacco and fire barrier **12** which resists such separation.

The foregoing is a description of a preferred embodiment of the invention and is here made by way of example only. It is not intended that the invention should be limited to any of the specific features described but comprehends all such variations thereof that come within the spirit and scope of the appended claims.

What I claim is:

1. A cigarette construction adapted to reduce the inhalation of noxious elements therefrom and comprising: a paper wrapper of tubular construction; tobacco filling at least a portion of said wrapper; a cylindrical porous non-combustible fire barrier member located within said wrapper intermediate its ends extending across the full

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diameter of said wrapper, two porous non-combustible cylindrical boss members formed integrally with said barrier member of reduced diameter in relation to said barrier member and of identical material therewith and extending outwardly therefrom along the central axis of said barrier member to the tobacco on either side thereof within said wrapper.

2. A cigarette construction as claimed in claim 1 wherein said barrier members and said boss members are formed of rice hull ash.

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