Dec. 24, 1940. G. H. KENNEDY 2,226,473

CIGARETTE

Filed Feb. 14, 1939

FIG. 1.

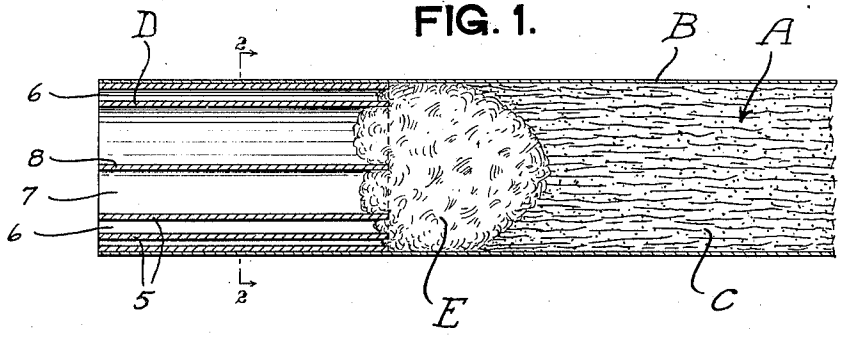


FIG. 2.

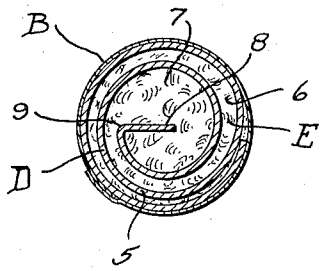


FIG. 3.

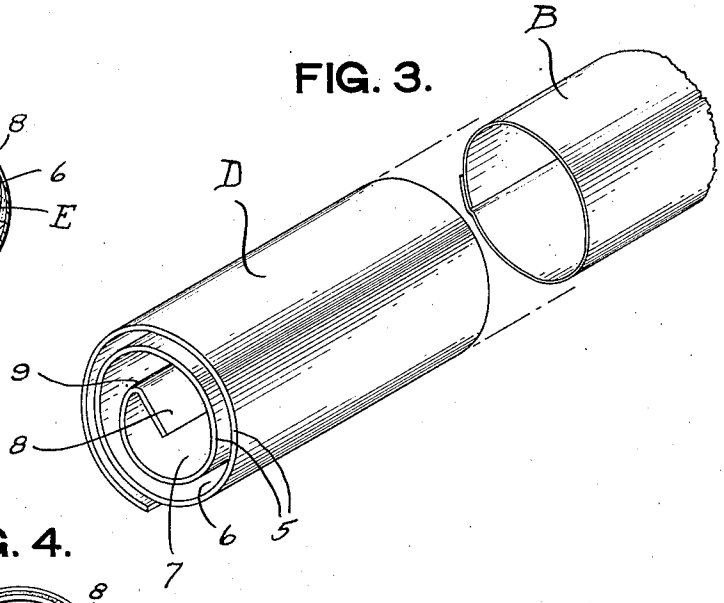
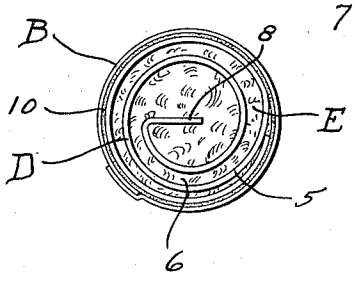


FIG. 4.



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CIGARETTE

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3 Claims. (Cl. 131—11)

The present invention relates to improvements in cigarettes and the primary object of the invention is to provide a cigarette construction embodying a novel tip reinforcement for the cigarette wrapper and a filter means so associated with the reinforcement as to strengthen the wrapper at the zone of the filter means and prevent collapsing of the cigarette at the location where held between one's fingers while smoking the cigarette.

A further object of the invention is to provide an improved cigarette comprising a wrapper reinforcement and filter, the reinforcement having open convolutions providing passages between convolutions into the ends of which the filter extends in a manner to prevent collapsing of the reinforcement.

A further object of the invention resides in the novel formation of the reinforcement providing a barrier for preventing the filter material from being drawn into the smoker's mouth when smoking the cigarette.

A still further object is to provide a tip reinforcement for cigarettes which is adapted to be expanded into surface contact with the internal periphery of the cigarette wrapper and held in place thru the normal tendency of the reinforcement to expand.

A still further object of the invention is to provide a cigarette embodying an open coiled tip reinforcing member and a fibrous filter held in place at the inner end of the reinforcing member thru contracting the convolutions so that a portion of the filter is gripped between adjacent convolutions.

Other objects and advantages of the invention will be apparent from the following detailed description, taken in connection with the accompanying drawing forming a part of this specification and in which drawing:

Figure 1 is an enlarged fragmentary longitudinal section thru the improved cigarette.

Figure 2 is a transverse section on the line 2—2 of Figure 1.

Figure 3 is a detail perspective view showing the open coiled reinforcement in its normal expanded condition prior to insertion into a cylindrical cigarette wrapper.

Figure 4 is an end view of the cigarette showing a slightly modified arrangement of retaining the reinforcement in place in the cigarette wrapper.

Referring to the drawing in detail and wherein like reference characters designate corresponding parts thruout the several views, the letter A designates the improved cigarette as a whole, embodying a wrapper B enclosing the tobacco filler C. Provided in one end of the wrapper B is a tip reinforcement D having a fibrous filter material E retained in place at the inner end of the reinforcement in surface contact with the inner peripheral surface of the wrapper B.

The wrapper B may be of conventional type, being formed of thin paper or the like made into a cylinder or tube of the desired length.

Referring now to the tip reinforcement D, the same is formed from a rectangular-shaped blank of sheet material such as paper, cork or analogous material of sufficient stiffness to prevent ready collapsing of the thin wrapper B when the reinforcement is in cooperative relation in the wrapper. The tip reinforcement in strip or blank form is rolled or formed into an open coiled tip reinforcing member providing spaced apart convolutions 5 forming longitudinal passages 6 between adjacent convolutions and a central or axial passageway or bore 7. This coiled reinforcement is preferably of such length as to extend into the wrapper B to a point or zone where the cigarette is normally held between one's fingers while smoking the cigarette whereby the reinforcement prevents collapsing of the wrapper where the cigarette is held. The number of convolutions and the nature or stiffness of the material from which the reinforcing member is made will be such as to provide a mouth piece which will stand the pressure of one's lips or teeth while smoking the cigarette.

Provided along the inner edge of the innermost convolution of the coiled strip member is a flat fin portion 8 which is set to extend diametrically of the tip member into the central bore 7 with its straight free edge terminating out of contact with the inner convolution. This flat fin as shown in Figure 1, extends thruout the entire length of the tip member with the ends of the fin in alignment with the ends of the convolutions of the tip member. The relatively sharp bend 9 is such as to give the material a set whereby the fin 8 will normally retain a diametric relation to the convolutions.

In coiling the tip member, the material is coiled so that in its normal condition after being coiled, the convolutions are all spaced apart with the diameter of the coiled strip member slightly greater than the diameter of the wrapper B as is clearly illustrated in Figure 3 of the drawing. When the so formed tip member is contracted to a diameter

to fit within the wrapper B, the outermost convolution forms a substantially continuous cylinder which contacts and serves to reinforce the thin paper wrapper B of the cigarette, while within this cylinder are at least one or more spaced convolutions terminating in the fin 8. With the inherent tendency of the coiled tip member to expand when positioned in the wrapper, the tip member will be securely held in place in the end of the tubular wrapper thru frictional contact.

The fibrous filter material E may be a wad of cotton or other absorbent filtering material, such as will serve to filter and reduce the amount of nicotine drawn into the smoker's mouth, as well as preventing any of the tobacco filler C from being drawn past the filter. As shown particularly in Figure 1, the filter material E completely fills the wrapper B and separates the filler C from the tip reinforcement D. It will also be seen that a portion of the filter material extends into the passages 6 between the convolutions 5 and into the central passage or bore 7 so that some of the filter material is in a zone surrounded by the wrapper B and some is in a zone surrounded by the reinforcement D. The wad of filter material E is of substantially semi-ovoidal shape forming a somewhat conical end which projects axially into the rear portion of the filler C. With this particular arrangement, the cigarette wrapper is not weakened at the inner end of the reinforcement by any abrupt edge of the reinforcement material, such as may cause the wrapper to tear, the strain being eased off longitudinally of the wrapper by the filter material. Likewise, by having a portion of the filter material extend into the space between the convolutions of the reinforcement, such serves to reinforce and prevent the reinforcement from being collapsed at the point where held between one's fingers. The spacing of the convolutions 5 provide for a substantially unobstructed draft passage thru the tip reinforcement, and this spacing, together with the diametrical disposition of the fin 8 across the center bore 7, provide a barrier for passage of the cotton filter when one draws upon the cigarette.

The cigarette may be assembled in various manners and as one example, the filter and reinforcement may be inserted into the wrapper B after the wrapper is formed into a tube or cylinder as shown. Under this manner of assembling the cigarette, with the coiled tip member in its normal condition as in Figure 3, the wad of filter material is placed against one end of the member with some of the material extending between the convolutions. The tip member is then slightly contracted to a diameter slightly less than the diameter of the wrapper B and this contracting of the tip member causes the filter material to be gripped between the convolutions 5. The reinforcement and filter may then be inserted into one end of the tubular wrapper and when released, the inherent tendency of the reinforcement to uncoil or expand will cause the outer convolution of the reinforcement to grip the inner surface of the wrapper and frictionally hold the reinforcement in place. The tobacco filler B may then be inserted into the opposite end of the wrapper into engagement with the filter. The semi-ovoidal shaped end of the filter may either be provided by preshaping the wad of filter material, or by forming a shallow pocket in the end of the tobacco filler before it is inserted into the wrapper.

In the slightly modified form of the invention as shown in Figure 4, like reference characters have been applied to corresponding parts as shown in Figures 1 to 3. In this form of the invention, an adhesive 10 is interposed between the last or outer convolution of the reinforcement D and the inner surface of the cigarette wrapper B for securing the reinforcement in place.

Changes in detail may be made to the forms of the invention herein shown and described, without departing from the spirit of the invention or the scope of the following claims.

I claim:

1. A cigarette comprising a tubular paper wrapper, a filler in the outer portion of the wrapper, an open coiled reinforcement in the inner end of the wrapper, and a wad of fibrous material filling the wrapper between the filler and reinforcement and having a portion of the material extending into the spaces between and held by the convolutions of the reinforcement.

2. A cigarette comprising a tubular paper wrapper, a tobacco filler in the outer portion of the wrapper and having a semi-ovoidal shaped pocket at its inner end, an open coiled reinforcement in the inner end of the wrapper in spaced relation to the filler, and a wad of fibrous material filling the wrapper between the filler and reinforcement and gripped between the convolutions at the inner end of the coiled reinforcement with a portion of the material extending into said pocket.

3. In a cigarette having a tubular wrapper and a tobacco filler in the outer end of the wrapper, an open coiled reinforcement having a normal diameter greater than the internal diameter of the wrapper fitting in the inner end of the wrapper and having a normal tendency to expand into contact with the inner periphery of the wrapper, and a fibrous wad filling the wrapper between the filler and reinforcement and gripped between the spaced convolutions of the reinforcement.

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