United States Patent

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[72] Inventor **Cornelish Pruysers**
517 Fruitvale Ave., Yuba City, California 95991

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[54] **CIGARETTE FILTER**
1 Claim, 3 Drawing Figs.

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[51] **Int. Cl.** **A24f 25/00,** A24d 1/06
[50] **Field of Search** ..... 131/10.1, 10.7, 10.9, 173, 261, 261(B), 265

[56] **References Cited**

UNITED STATES PATENTS

941,019	11/1909	Irving	131/261
1,826,331	10/1931	Traube	131/10.9X
2,795,227	6/1957	Seldeen	131/10.9
3,125,100	3/1964	Jany	131/261
3,250,280	5/1966	Hu	131/10.1X

FOREIGN PATENTS

1,093,418	11/1954	France	131/265
833,801	4/1960	Great Britain	131/10.7
383,144	11/1932	Great Britain	131/261

Primary Examiner—Joseph S. Reich

ABSTRACT: A filter device for a cigarette comprising a pair of interfitting sections between which there is located a cartridge containing material that will absorb nicotine and other harmful substances from the smoke of the cigarette fitted upon one end of the filter device. The cartridge is separate from the sections, has a sealed case and is adapted to be positioned within the sections. The end portions of each section has a transversely positioned disc having hollow tapered projections extending toward the adjacent end of the cartridge, the tapered portion has sharp ends adapted to penetrate the ends of the cartridge when one section is tapped toward the other. The discs have smoke passing apertures such that smoke passing through the hollow projections can pass through the discs.

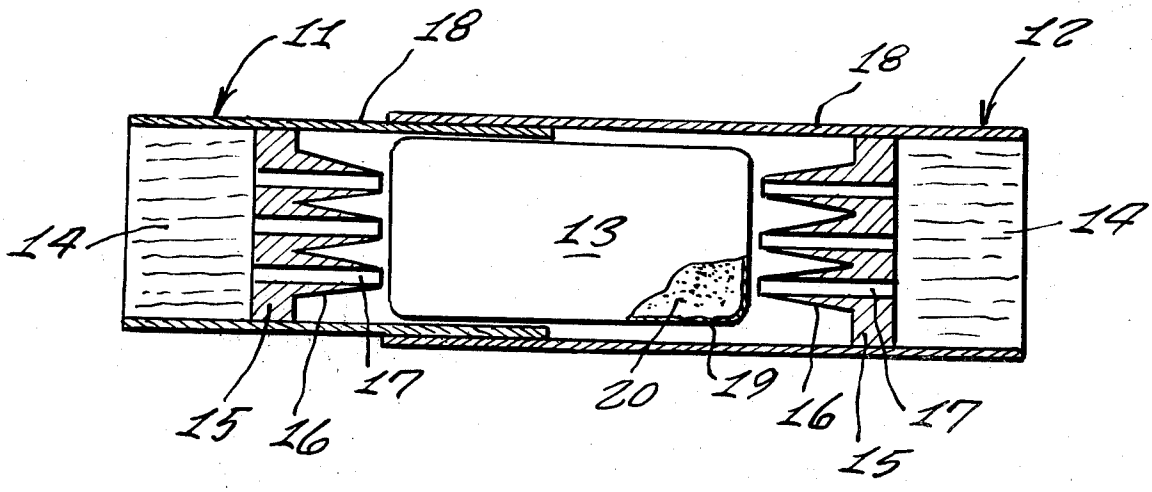


Fig. 1

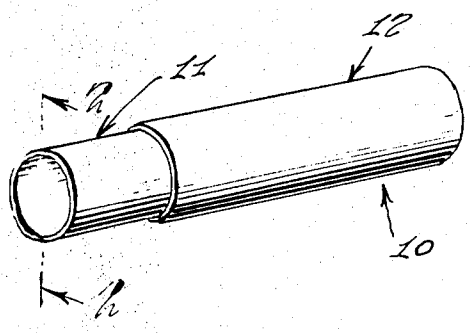


Fig. 2

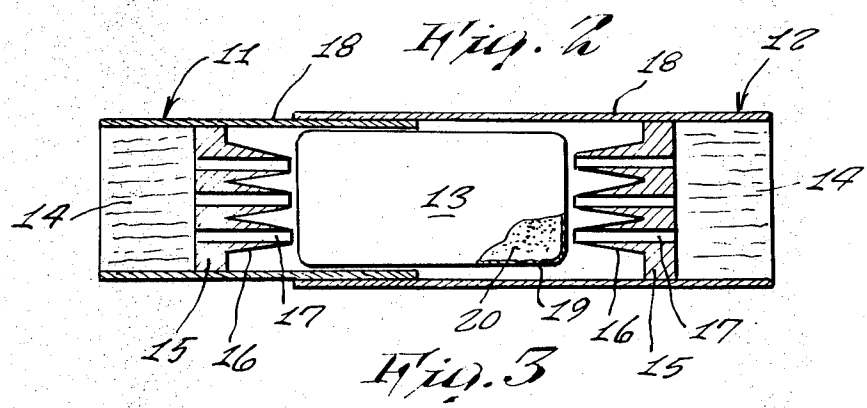
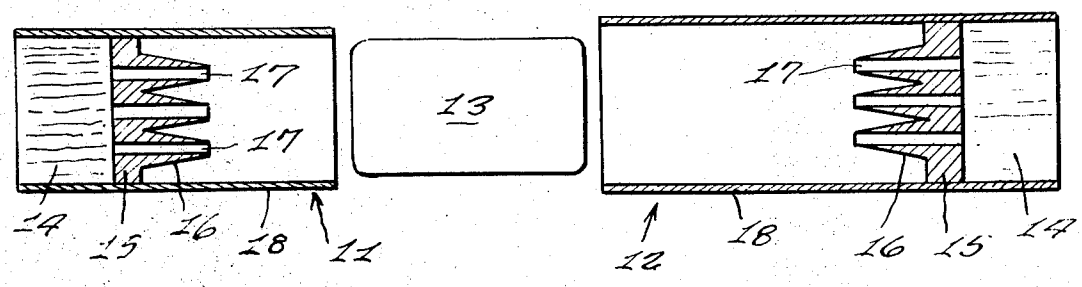


Fig. 3



INVENTOR.

CORNELIS H. PRUYSERS

CIGARETTE FILTER

This invention relates generally to cigarette filters. More specifically it relates to cigarette filters having self-contained cartridges.

A principal object of the present invention is to provide a cigarette filter which includes a filter cartridge which may be discarded together with the used cigarette.

Other objects of the present invention are to provide a cigarette filter wherein the cartridge may be kept in an air and moisture proof condition prior to use, even though positioned within the holder.

Yet a further object of the present invention is to provide a cigarette filter wherein the cartridge may be activated for operative use by simply tapping the interfitting sections together, the sections having self-contained means for piercing the opposite ends of the cartridge and thus expose the substance therewithin to smoke being drawn through the filter.

These and other objects will be readily evident upon a study of the following specification and the accompanying drawing wherein:

FIG. 1 is a perspective view of the present invention;

FIG. 2 is a cross-sectional view taken on the line 2–2 of FIG. 1; and

FIG. 3 is a cross-sectional view similar to FIG. 2 and showing the parts separated.

Referring now to the drawing in detail, the reference numeral 10 represents a cigarette filter according to the present invention wherein there are a pair of interfitting sections 11 and 12. A cartridge 13 is positioned therebetween, the cartridge containing silica gel or other equivalent material for absorbing nicotine, tars or other harmful substances from cigarette smoke.

The first section 11 comprises a cylindrical member made from plastic or stiff paper, the first section containing a short white fiber filter 14 such as is commonly used in filter cigarettes. Adjacent the filter 14 there is a disc 15 positioned within the cylinder of section 11, the disc being provided with a plurality of projections 16 upon one side which are pointed at their ends, each of the projections having a central opening 17 therethrough that extends through the disc 15.

The second section 12 is of a like construction including a cylinder 18 having short white fiber filter 14 and disc 15 therewithin, the disc having the pointed projections 16 on one side thereof, each of which has the openings 17 extending therethrough and through the disc. It is to be noted however that the cylinder of the second section is of relatively larger diameter than the cylinder of the first section. Accordingly, the cylinder of the second section telescopes over the cylinder of the first section. It is to be further noted that each of the discs are located within their respective cylinders in a manner whereby the projections point toward each other as is shown in FIG. 2 of the drawing.

The cartridge 13 is made out of an aluminum foil cover 19 which encloses the silica gel 20. Prior to actual use, the cartridge is hermetically sealed from the air so that moisture cannot gain entrance thereinto.

In operative use, the cartridge may be activated by simply tapping one end of the filter, thus causing the projections 16 to pierce the aluminum foil 19 of the cartridge and thus expose the silica gel. A conventional cigarette is fitted over one of the ends of the device and lighted. Smoke is then drawn through the filter, the smoke passing through the openings 17 of the discs and through the punctured openings caused by the projections in the aluminum foil and through the silica gel.

Thus there has been provided a construction wherein a cartridge may be maintained in a sealed condition until ready for actual use and which can be made activated in a relatively simple manner.

The cigarette together with its permanently fixed filter cartridge is discarded after being smoked.

While various changes may be made in the detailed construction, it is understood that such changes will be within the spirit and scope of the present invention as is defined by the appended claim.

I claim:

1. In a cigarette filter, the combination of a pair of sections, said sections being slidably interfitting relative to each other, and a sealed cartridge containing silica gel being positioned between said sections, each of said sections comprising a cylindrical case, a short white fiber filter forming a closure at each end thereof, a circular disc adjacent to each filter, each circular disc having self-contained means for puncturing said cartridge, said disc comprising a plurality of projections extending from one side thereof, each of said projections being tapered toward a terminal end, and each of said projections having a central opening extending therethrough and through the body of said disc to allow cigarette smoke to pass therethrough, the terminal end of each said projection defining a sharp circular edge around said opening, said cartridge comprising a member formed of an aluminum foil covering which encloses said silica gel therewithin, and each of said projections of said discs being pointed toward an end of said cartridge positioned between said first and said second section.