United States Patent [19]

Hagman

[11] **3,921,645**

[45] **Nov. 25, 1975**

[54] **SAFETY CIGARETTE HOLDER**

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[22] Filed: **Sept. 11, 1974**

[21] Appl. No.: **505,158**

[52] **U.S. Cl.** **131/182;** 131/187; 131/190; 131/207

[51] **Int. Cl.²** **A24F 13/10**

[58] **Field of Search** 131/187, 190, 182, 207

[56] **References Cited**

UNITED STATES PATENTS

1,447,664	3/1923	Hollingsworth	131/190 X
2,101,127	12/1937	Bruins	131/187
2,103,662	12/1937	Brower	131/190
2,701,571	2/1955	Dittrich	131/182 X
2,742,908	4/1956	Lay	131/182 X

FOREIGN PATENTS OR APPLICATIONS

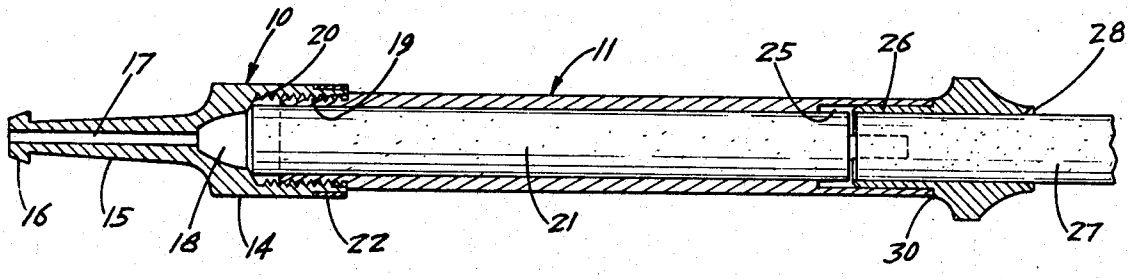
492,628	9/1938	United Kingdom	131/207
41,641	2/1908	Switzerland	131/190
9,471	1915	United Kingdom	131/190

Primary Examiner—Joseph S. Reich

[57] **ABSTRACT**

A safety filtering cigarette holder utilizing another cigarette as a filter for reducing the inhalation of tars and nicotine by the smoker and lowering the smoke temperature. The present cigarette holder is an assembly of separable components, a mouthpiece, a filter housing and cigarette grip characterized by ease of assembly and disassembly, ease of cleaning, butt ejection means, strength and durability, and the like. The outer periphery of the cigarette grip is of flat-sided polygonal configuration to prevent rolling of the holder. The lateral dimensions of the outer periphery of the cigarette grip are greater than the maximum diameter of the mouthpiece so that, if the holder is accidentally rested on paper or other inflammable surface, the lighted tip of the cigarette is held sufficiently far from the surface to prevent ignition.

3 Claims, 6 Drawing Figures



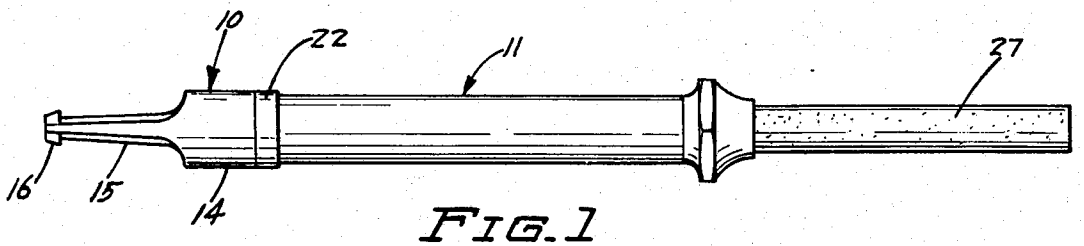


FIG. 1

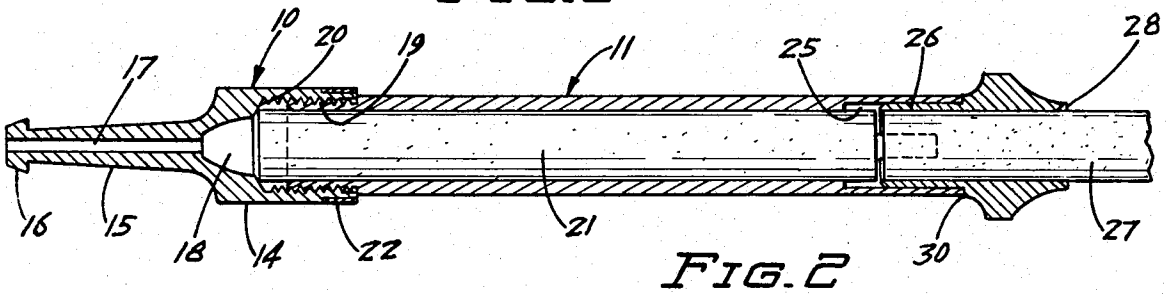


FIG. 2

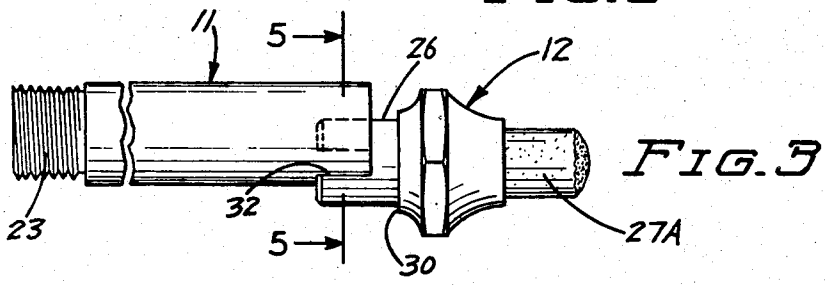


FIG. 3

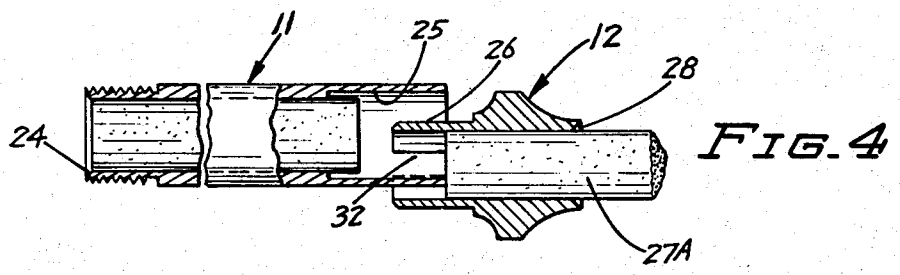


FIG. 4

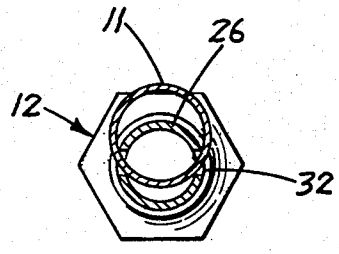


FIG. 5

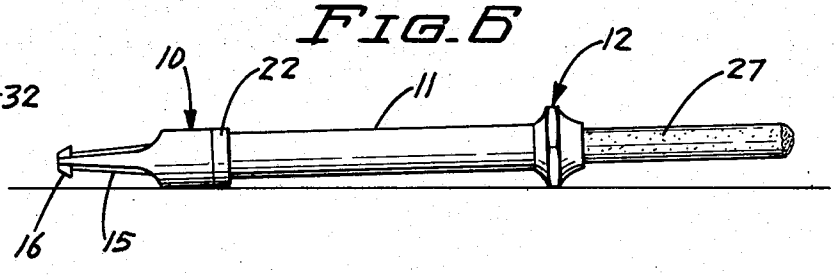


FIG. 6

SAFETY CIGARETTE HOLDER

FIELD OF THE INVENTION

This invention relates to a safety filtering cigarette holder in which one cigarette is utilized as a filter while another cigarette is being smoked. The passage of the smoke through the cigarette being utilized as a filter reduces the amount of tar and nicotine and other harmful residue, which might cause throat irritation and lung and vascular ailments, and otherwise might enter the mouth, throat, lungs, etc. of the smoker. The filter cigarette is housed in a tube of heat conducting metal so that some cooling of the smoke occurs promoting greater condensation of harmful residues in the filter. At the same time, little or no extra effort is required to draw the smoke through the holder. Use of the filter reduces throat irritation, coughing, stained fingers and lips, and the like.

Accidentally mislaid lighted cigarettes represent a potentially serious fire hazard. Lighted cigarettes resting in ash trays often become accidentally dislodged and before discovery the lighted end may seriously damage the surface on which it has fallen. A cigarette alone, or a cigarette in a conventional cylindrical holder, presents an additional hazard in that it tends to roll easily and may fall into a waste paper basket or on a carpet, or the like, and cause serious fire damage before discovery. The safety holder, according to the present invention, is provided with a cigarette grip end designed to prevent rolling of the holder in case of accidental misplacement or falling, and to minimize damage to the surface if the accidentally misplaced or fallen cigarette is not immediately discovered. Rolling is prevented by providing the outer periphery of the grip with a flat sided polygonal configuration. The lateral dimensions of the cigarette grip are sufficiently greater than the maximum diameter of the cigarette holder mouthpiece such that when the holder lies on a flat surface the cigarette is held at a slight upwardly inclined angle with the lighted tip held spaced from the surface.

THE PRIOR ART

Derr British Pat. No. 492,628 relates to a cigarette holder which includes a mouthpiece, a tapered socket member, a tubular stem member and a further socket. The tapered socket is intended to receive a filtering cigarette so as to provide a seal which insures that all of the smoke will be drawn through the filtering cigarette before reaching the mouthpiece. The filter cigarette is adapted to be held free from contact with the housing wall, which permits the provision of a substantial clearance between the filtering cigarette and the inner wall of the tubular member.

Colassi British Pat. No. 607,728 likewise shows a cigarette holder utilizing another cigarette as a filter. The Colassi holder includes a mouthpiece, a filter housing and a cigarette holding portion. The cigarette holding portion of the Colassi holder is reciprocable, spring loaded and mates with a cylindrical portion of the filter housing, which is of reduced diameter, so that the butt of the cigarette being smoked is ejected when the cigarette holding portion is moved backward against the pressure of the spring.

Dittrich U.S. Pat. No. 2,701,571 is directed to a cigarette holder of somewhat different type which comprises a mouthpiece having a holder element to receive the cigarette to be smoked and an outer tubular member surrounding and enclosing the cigarette to be smoked. The outer member is provided with air inlet holes **28** in its closed end and is provided with a heat insulating liner. It is of substantially greater diameter than a cigarette so that substantial air space exists around the sides and end of the cigarette being smoked. It performs no filtering function, but air inlets are provided by which the smoke may be diluted before inhalation.

Bruins U.S. Pat. No. 2,101,127 discloses a filter cigarette holder intended to use a fresh cigarette as a filter for each cigarette smoked. The cigarette which serves as a filter once is then used as the next smoke. The Bruins holder utilizes a one piece tubular magazine and mouthpiece. A tubular "reversing member" fits telescopically into the open end of the magazine opposite from the mouthpiece. The reversing member is adapted to hold in line two oppositely projecting cigarettes, the one being utilized as a filter and the one being smoked. After the first cigarette is smoked, the reversing member is removed from the magazine and the butt is replaced with a fresh cigarette. The reversing member is then reinserted into the magazine in the opposite direction with the fresh cigarette forming the filter while the cigarette previously used as the filter is smoked.

Lackow et al U.S. Pat. No. 2,185,598 discloses another form of cigarette holder utilizing a cigarette as a filter. The Lackow et al patent discloses a one piece tubular filter magazine and mouthpiece and is directed to specific gripping means insertable into the open end of the magazine opposite from the mouthpiece for holding both the cigarette to be smoked and the cigarette to be utilized as a filter.

Campbell U.S. Pat. No. 2,830,593 discloses a cigarette filter holder utilizing one cigarette as a filter for another and including a condensation chamber and trap. The Campbell holder comprises a short tubular member adapted to receive the cigarette to be smoked in one end and the cigarette to be used as a filter in the other. The cigarette used as the filter is placed directly in the smoker's mouth, being utilized as the mouthpiece. After the first cigarette is smoked and replaced with a fresh cigarette, the unit may be reversed and the cigarette previously used as a filter may be smoked.

Howard U.S. Pat. No. 2,721,559 discloses a filtering cigarette holder having as a primary objective preventing soiling of the hands or clothes of the user due to metal dust produced through abrasion between sliding surfaces of concentric metal tubes. Although not specifically designed for use of a cigarette as the filter unit, the Howard holder is adapted to such use. Howard achieves his objective through use of a two part multiwalled telescoping tubular body of complex construction.

Cippico U.S. Pat. No. 2,158,897 discloses a filtering cigarette holder utilizing two cigarettes disposed side-by-side as the filter unit.

SUMMARY OF THE INVENTION

The safety filtering cigarette holder, according to the present invention, consists essentially of three major components, a mouthpiece, a separable elongated tubular filter housing, and a separable cigarette grip member, all in sequential alignment about a common longitudinal axis. The mouthpiece is composed of heat insulating material and has a longitudinal passage therethrough with an enlarged diameter internally threaded portion at one end, into which the filter hous-

ing is threadably engaged. The filter housing is adapted to receive a cigarette for use as a filter element with a loose slide fit and is composed of a metal having good heat conducting properties. The cigarette grip member fits telescopically into the end of the filter housing. The outer periphery of the grip is of flat sided polygonal configuration and the lateral dimensions of the grip are greater than the maximum diameter of the mouthpiece. The shank of the grip member is provided with a pair of diametrically opposed slots which permit the end of the filter housing to be used to eject a cigarette butt from the grip member. The cigarette holder of the present invention offers advantages of simplicity of structure and in utility and function over any or all of these prior art devices.

BRIEF DESCRIPTION OF THE DRAWINGS

This invention is illustrated in the accompanying drawings in which:

FIG. **1** is a side elevation of the holder with a cigarette;

FIG. **2** is a longitudinal section on an enlarged scale showing details of construction of the holder;

FIG. **3** is a fragmentary side elevation showing the tubular grip element for retaining the cigarette to be smoked out of normal telescopic engagement with the end of the filter magazine but in engagement with the end of the filter magazine to eject a short butt;

FIG. **4** is a fragmentary longitudinal section of the elements of FIG. **3**;

FIG. **5** is a transverse section on the line **5—5** of FIG. **3** and in the direction of the arrows; and

FIG. **6** is a side elevation of the holder with lighted cigarette shown at rest on a table top or other flat surface.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the drawings, the cigarette holder according to the present invention consists essentially of a mouthpiece **10**, a separable tubular filter housing or magazine **11** and a separable generally tubular cigarette grip or retainer **12**, all normally disposed in line about a common longitudinal axis. The mouthpiece **10** is generally cylindrical at one end **14** and having a shank of generally flattened or ovoid shape at the other end **15** terminating in a flanged tip **16** adapted to be gripped between the teeth of the smoker. A longitudinal passage **17** for the transmission of smoke extends longitudinally through the mouthpiece. The passage **17** is enlarged into a chamber **18** at one end, the walls of which are internally threaded at **19** to receive the externally threaded end of filter housing **11**. A shoulder **20** in chamber **18** may provide a seat for the end of filter housing **11** and the end of the cigarette **21** therein used as the filter element.

The mouthpiece is constructed of a thermally stable heat-insulating material such as bone or ivory or amber or a thermosettable synthetic resinous material such as phenol formaldehyde resin, i.e. Bakelite, or the like. The mouthpiece is thus comfortable both to the mouth and fingers of the smoker. A metal band or ferrule **22** is disposed about the end **14** of the mouthpiece opposite from the tip **16** to prevent breakage of the mouthpiece when threading it onto the filter housing **11**.

The filter housing **11** is an elongated cylindrical tube of length about ¼ to ¾ inch greater than the length of the cigarette to be used as the filter unit, whether regular, king-sized, filter or non-filter. The filter housing is externally threaded at **23** at one end to engage the internal threads **19** of the mouthpiece. The filter housing is smooth walled and of substantially uniform inside diameter just slightly larger than the diameter of a standard cigarette in order to receive a cigarette therein with a loose slide fit for easy insertion and removal. However, the filter cigarette should engage the housing wall sufficiently closely that the smoke from the cigarette smoked is drawn through the filter cigarette and not merely around it.

The housing is relatively thin-walled consistent with the required rigidity of the housing and is formed from a metal having good heat-conducting properties such as aluminum, copper, silver, and the like, and alloys thereof. The threaded end **23** of housing **11** is provided with an internal bevel **24** (FIG. **4**) to facilitate insertion of a cigarette filter unit from that end. The opposite end of housing **11** is provided with an internal recess **25** of length sufficient to receive telescopically and frictionally engage the shank **26** of the cigarette grip member **12.**

The cigarette grip or retaining member **12** is adapted to receive and hold the cigarette **27** to be smoked. It is relatively short and generally tubular, the inside diameter being uniform and adapted to receive and frictionally engage cigarette **27** with a slide fit. The forward end of the central passage through the grip member is provided with an internal bevel **28** to facilitate insertion of the cigarette **27** to be smoked. The outside diameter of shank **26** is of a size adapted to fit with a tight slide fit within recess **25** of housing **11.** As best seen in FIG. **5,** the outer periphery of head **29** of grip member **12** is of polygonal flat-sided configuration and the lateral dimensions of the head are greater than the maximum diameter of housing **11.** From its periphery head **29** then tapers inwardly to the beveled cigarette receiving mouth **28.** A shoulder **30** at the base of head **29** butts against the end of housing **11** to seat the cigarette grip member therein.

Viewed in transverse cross section, the outer periphery of head **29** of the cigarette grip member **12** is flat sided to prevent rolling of the holder when placed on a flat surface. While the cross sectional configuration of the grip heat may be triangular or square, it is preferably pentagonal, hexagonal, as shown, or heptagonal. Although polygons having larger members of flat edges may be used, as the number of flat sides increases, less stability is provided. Because the holder may often be carried in a pocket, any sharp edges are desirably rounded so as to prevent the possibility of tearing the pocket fabric or points penetrating through the pocket fabric. Preferably the polygon is regular with the sides being of substantially uniform length.

The minimum lateral dimension of the head **29** is sufficiently greater than the maximum diameter of the mouthpiece so that, when the holder is resting on a flat surface, the longitudinal axis is inclined upwardly relative to the surface of the table so that the lighted tip end of a cigarette held in the holder is spaced from the surface. For example, the minimum distance measured along a radius from the longitudinal axis to the center of the flat sided surface of the head **29** should be at least about 1/16 inch greater than the corresponding maximum radius of the mouthpiece.

As seen in FIG. **6,** in the event that a holder with a lighted cigarette accidentally falls or is placed on a flat surface, the cigarette being smoked is held at an up-

wardly inclined angle with the lighted tip spaced from the surface. If the surface on which the holder is resting is paper, it has been determined experimentally that, while the paper may be scorched slightly from the heat of the lighted cigarette tip, it does not become ignited. Possible fire damage to other less readily ignitable surfaces is lessened or totally prevented.

The polygonal configuration of the head **29** of the grip member is easily gripped between the fingers to facilitate insertion of the grip member into the filter housing and removal therefrom, and permits easy gripping of the head for removal of a cigarette butt, as shown in FIG. **4.** Grip member **12** is likewise composed of a heat conducting metal. It performs a self-extinguishing function if cigarette **27** burns too short.

Shank **26** of the grip member is provided with a pair of diametrically opposed longitudinal cigarette disengaging slots **32.** Slots **32** are so positioned that, when grip member **12** is separated from the filter housing **11,** the grip member may be re-engaged with the end of the housing with the housing wall extending into the slots to eject the short butt **27A** from the grip member when cigarette **27** has been smoked so short that it cannot otherwise be easily removed. Slots **32** also provide slight resilience in the shank **26** of the grip member to facilitate frictional engagement with the inside end wall of filter housing **11.** The narrow longitudinal passages extending in a radial direction through the slots **32** are closed by the filter housing wall when the grip member is in telescopic engagement with the filter housing.

In normal use, a regular cigarette **21** is inserted in filter housing **11** and the cigarette **27** to be smoked is inserted in the grip member **12.** The filter element **21** serves to trap tars and similar residues. Because of the good conductivity of the housing wall, the smoke is cooled to some extent in its passage through the filter. At the same time, some condensation of residues occurs. These beneficial results are effected without any substantial increase in the draw by the smoker. The filter unit may be changed after each **30** or **40** cigarettes or so but it may be changed more often if desired.

The unit is lightweight and durable. The elements are easily separable for insertion and removal of the filter units and cigarettes to be smoked. Short butts are easily ejected. The parts may be easily cleaned with detergents and pipe stem cleaners. The holder may be used with an assurance of safety. The possibility of fire damage from the holder accidentally rolling off of a surface is virtually eliminated. Even though the holder may accidentally fall or be placed on a flat inflammable surface, possible fire damage is minimized or prevented.

It is apparent that many modifications and variations of this invention as hereinbefore set forth may be made without departing from the spirit and scope thereof. The specific embodiments described are given by way of example only and the invention is limited only by the terms of the appended claims.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A safety filtering cigarette holder consisting essentially of:

A. a mouthpiece composed of heat-insulating material and having a longitudinal passage therethrough, one end of said passage being of enlarged diameter and internally threaded,

B. a separable elongated tubular filter cylindrical housing threadably engaged at one end in said mouthpiece in alignment therewith about a common longitudinal axis, said filter housing being adapted to contain a cigarette with a loose slide fit as a filter element, said housing being relatively thin walled, internally beveled at the end adjacent to the mouthpiece to facilitate insertion of cigarette filters therein, of a length substantially equal to the combined length of a cigarette and the shank of the grip member, composed of metal having good heat conducting properties selected from the group consisting of aluminum, copper and silver and alloys thereof, and having a recess at the end opposite from the mouthpiece,

C. a hollow separable cylindrical cigarette grip member telescopically and frictionally engaged in said recess in said filter housing in longitudinal alignment therewith, said grip member having a shank and a head, the walls of the shank of said grip member received in said recess having a pair of diametrically opposed longitudinally extending cigarette disengaging open-ended slots of constant width, the narrow longitudinal passage extending in a radial direction through said slots being closed by the filter housing wall when said grip member is in telescopic engagement with said filter housing, said slots being adapted when disengaged from said recess to receive a portion of the wall of the end of the filter housing therein to disengage a cigarette held therein, the head of the grip member having an internally beveled cigarette receiving mouth, the outer periphery of said head in transverse cross-section being of a flat-sided regular polygonal configuration having from five to seven flat sides of substantially uniform length, and the minimum distance between the center of one of the flat sides of the periphery of the head of the cigarette grip member and the longitudinal axis of the holder is at least about 1/16 inch greater than the maximum radius of the mouthpiece, said grip member being composed of metal having good heat conducting properties selected from the group consisting of aluminum, copper and silver and alloys thereof.

2. A safety cigarette holder according to claim **1** further characterized in that the peripheral portions of the head of said cigarette grip member is hexagonal.

3. A safety cigarette holder according to claim **1** further characterized in that a metal ferrule extends around the outside surface of said mouthpiece adjacent the internally threaded end of the mouthpiece.

* * * * *

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. : 3,921,645
DATED : November 25, 1975
INVENTOR(S) : Harry C. Hagman

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Column 4, line 45, "heat" should be --head--.

Signed and Sealed this

sixth Day of *April 1976*

[SEAL]

Attest:

RUTH C. MASON
Attesting Officer

C. MARSHALL DANN
Commissioner of Patents and Trademarks