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J. G. TARRANT

2,269,323

CIGARETTE HOLDER

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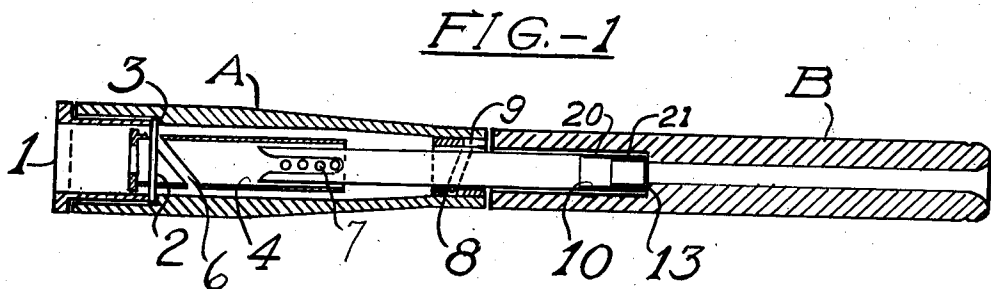
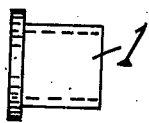
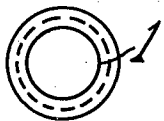
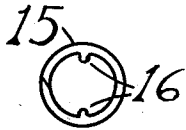


FIG.-2

FIG.-3

FIG.-4

FIG.-4a

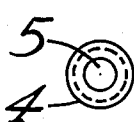
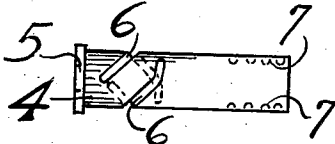


FIG.-5

FIG.-6

FIG.-7

FIG.-8

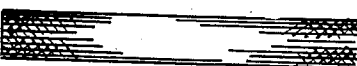
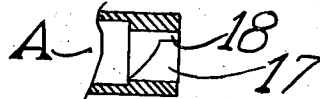


FIG.-9

FIG.-7a

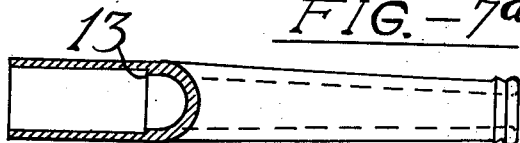


FIG.-11

FIG.-10

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CIGARETTE HOLDER

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Application March 30, 1939, Serial No. 264,911

5 Claims. (CL 131-182)

This invention relates to an improved cigarette holder and particularly to a holder having means for ejecting cigarette stubs therefrom.

An object of this invention is to provide a holder which can be simply constructed in a cylindrical form without the necessity of any openings through the wall thereof for the support or operation of the ejector.

A further object of this invention is to provide an ejector which is simple in construction, entirely concealed in its assembly in the holder, and which does not interfere either with the inner surface of the cigarette holding member or with the outer surface of the holder.

A further object of this invention is to provide a cigarette holder and ejector assembly which is simple and effective in operation, and which does not interfere with the draught through the cigarette, or permit leakage of air around the cigarette into the holder.

A further object of this invention is to provide a cigarette holder and ejector assembly in which the holder and mouthpiece are held firmly together when the holder is being used to smoke a cigarette, and are made separable from each other when the ejector is operated to eject a cigarette butt.

A further object of this invention is to provide a cigarette holder and ejector assembly having provision for readily replaceable smoke filters.

Other and further objects will be apparent from the following description and the claims.

The drawing is an illustration of a suitable construction which carries out the objects of this invention.

In the accompanying drawing, Figure 1 is a sectional elevation of the assembled holder. Figures 2 and 3 are, respectively, side and end elevations of the holder tip. Figure 4 is an elevation of the pin member. Figure 4A is a plan view of another type of means for advancing the ejector. Figures 5 and 6 are, respectively, side and end elevations of the ejector element. Figure 7 is an elevation of the lock member. Figure 7A is a sectional elevation of a modification of the rear end of the holder, illustrating an integral lock element. This modification may be used in substitution for the lock member illustrated in Figure 7. Figure 8 is an elevation of the tubular means used for turning the ejector. Figure 9 is an elevation of a suitable filter element which fits inside the elements illustrated in Figures 6 and 8. For purpose of clarity, the filter element is not shown in the assembly illustrated

in Figure 1. Figure 10 is a side elevation, partially in section, of the mouthpiece or bit member, and Figure 11 is an end elevation of this member.

Describing the drawing in greater detail, the complete cigarette holder comprises a holder member A and a bit member B. The front end of the member A is adapted to receive the end of a cigarette. A tip element 1 is preferably provided for this purpose. This tip element comprises a cylinder which is fitted tightly into the front end of the holder A. It may also be provided with a projecting band, preferably of the same outside diameter as the front end of the holder A, for purpose of ornamentation.

The holder A also contains an ejector 4 which is a hollow cylinder fitting loosely within the bore of the member A. The front end of the ejector is preferably supplied with a flat surface, having an outside diameter slightly less than the inside diameter of the tip member 1, for contacting with the butt end of the cigarette during its ejection, and with a smoke passage 5. The ejector is also provided with one or more helical slots 6 and with one or more projections 7, which are used to rotate the ejector, as will be explained hereafter.

The ejector is caused to move longitudinally in the holder by cooperation of the helical slots 6 with suitable means rigidly attached to the holder A. Such means, for example, may comprise a pin member 2. This pin member is positioned preferably on a diameter of the bore of the holder A and fits tightly against the sides thereof. It may be held in place, for example, by being pressed tightly against the shoulder 3 of the holder A by the tip member 1. When such a pin is used, the ejector is provided with two helical slots on opposite sides, and the pin passes through these slots. Then the rotation of the ejector causes it to move longitudinally in the bore of the holder A by the cooperation of the helical slots 6 with the pin 2.

Instead of using the pin, another modification is provided by using a ring 15 which is provided with one or more projections 16. This ring is fitted tightly into the bore of the holder A and the projections 16 fit into the helical slots 6 of the ejector. This ring may be held in place, for example, by being pressed tightly against the shoulder 3 of holder A by the tip 1, the outside diameter of said ring being substantially the same as the outside diameter of the tip 1. For convenience in assembly the ring 15 may be slit so that it can be readily fitted over the ejector,

and may also be made in two separate pieces, either or both having a projection 16. Also, instead of using such a ring, the projections 16 may be mounted directly on, and indeed constructed as a part of, the inner wall of the holder A. In this case, for purpose of assembly, the slots 6 should continue to one end of the ejector 4. When using such projections 16 either on the ring or the wall of the holder, the helical slots 6 may be constructed as grooves in the wall of the ejector and need not be cut entirely through this wall. This structure has the advantage that it lessens the possibility for smoke to pass outside the ejector and for tarry matter to accumulate between the ejector and the holder wall.

The ejector is rotated by means of a tubular element 10 which is attached to the bit B. The element 10 may also be formed as a part of the bit B. This tubular element 10 projects through the rear end of the holder A into the rear end of the ejector 4. Its front end is provided with slots 11 which engage the projections 7 of the ejector.

Means are preferably also supplied for holding the bit and holder members firmly together when the holder is in use. Such means, for example, comprise a projection 12 on the tubular element 10 for engagement with slots 9 and 19 in a lock member 8 which it fitted tightly into the rear end of the bore of the holder A. This lock member can be omitted and the same action obtained by providing a shoulder 17 and groove 18 formed in the inner wall of the holder A.

There is preferably also provided suitable means for treating and filtering the smoke. Such means are preferably provided in a readily removable form such as a cylinder containing suitable smoke filtering materials. A particularly desirable filter for use in this invention is the gauze roll described in my copending application Serial No. 189,159, filed February 7, 1938.

This is illustrated in Figure 9. The filter element is held in the tube 10 by a slightly reduced portion thereof 20 having an inside diameter approximately the same as the outside diameter of the filter. This provides a friction fit between tube and filter sufficiently tight to hold the filter in place and to prevent air from by-passing the filter in passing through the holder, and sufficiently loose to permit the filter to be readily removed. At the rear of the section 20 is provided means 21 for stopping the filter and for spacing it from the end of the smoke passage. Means 21 may be a projection into the reduced section 20, and is preferably a further reduction in the diameter thereof, thereby providing a sharp edged, flat shoulder, in a plane perpendicular to the axis of the tube 10. The thickness of this shoulder, or in other words, the difference in radius of the section 20 and the section 21, is preferably less than the thickness of the coating layers of the gauze roll of the filter, and is suitably about one-half this thickness. Sections 20 and 21 may each have a length about equal to the diameter of the filter.

The position of the lock member 8 relative to the ejector is preferably such that the projection 12 is in the longitudinal portion of the slot 9 when the ejector is in the advanced position for ejecting a cigarette. The parts A and B may then be disconnected simply by pulling them apart. The shoulder 17 or the slot 19

is preferably of helical form so that when the holder is assembled and the bit member is rotated relative to the holder member A, the projection 12 is advanced and the members A and B are drawn firmly together at the time that the ejector reaches its retracted position, and the holder is ready for receiving a fresh cigarette.

It will be obvious that the relative location of cooperating projections and grooves or slots in the above-described device may be reversed without change in the operation thereof. In the drawing the spaces between all parts are purposefully left larger for clarity in illustration. It is to be understood, however, that the space between all moving parts should be as narrow as possible in order to prevent flow of air, and still permit movement of the parts as indicated herein.

This invention is not to be limited to any specific examples, all of which are presented herein solely for purpose of illustration, as modifications thereof within the scope of the appended claims will occur to a person skilled in the art.

I claim:

1. A cigarette holder comprising a mouthpiece, a tubular holder, a tubular ejector located coaxially within said holder, and movable longitudinally and rotatably therein, means mounted on said ejector cooperating with means mounted rigidly within said holder whereby rotation of said ejector causes it to move longitudinally in said holder, a tubular member mounted rigidly on and coaxially with said mouthpiece and projecting coaxially into said holder and into said ejector, means on said tubular member cooperating with means on said ejector permitting relative movement longitudinally but not rotatively whereby said ejector is rotated by turning said mouthpiece relative to said holder.

2. A cigarette holder comprising a mouthpiece, a tubular holder, a tubular ejector located coaxially within said holder, and movable longitudinally and rotatably therein, means mounted on said ejector cooperating with means mounted rigidly within said holder whereby rotation of said ejector causes it to move longitudinally in said holder, a tubular member mounted rigidly on and coaxially with said mouthpiece and projecting coaxially into said holder and into said ejector, means on said tubular member cooperating with means on said ejector permitting relative movement longitudinally but not rotatively whereby said ejector is rotated by turning said mouthpiece relative to said holder, means on said tubular member cooperating with means within said holder permitting disengagement of said parts longitudinally and limited relative motion rotatively into a position where relative longitudinal movement is prevented, whereby said bit and holder are disengageable when said ejector is rotated to the advanced, ejecting position in said holder and are not disengageable when said ejector is rotated to the retracted position.

3. A cigarette holder comprising a mouthpiece, a tubular holder having a pin held rigidly on a diameter thereof, a tubular ejector located coaxially within said holder and slidable longitudinally and rotatively therein, helical slots in the wall of said ejector, said pin projecting through said slots whereby rotation of said ejector relative to said holder causes relative longitudinal movement, a tubular member

mounted rigidly on and coaxially with said mouthpiece and projecting coaxially into said holder, and cooperating means on said tubular member and said ejector permitting relative movement longitudinally but not rotatively, whereby said ejector is rotated by turning said mouthpiece relative to said holder.

4. Device according to claim 3, comprising in addition a projection on said tubular member cooperating with a slot mounted rigidly within said tubular holder, permitting disengagement of said mouthpiece and said holder longitudinally and limited relative motion rotatively thereof into a position where longitudinal disengagement is prevented, whereby said bit and holder are disengageable when said ejector is rotated to the advanced, ejecting position in said holder and are not disengageable when said ejector is rotated to the retracted position.

5. A cigarette holder comprising a mouthpiece, a tubular holder, a tubular ejector located coaxially within said holder and movable longitudinally and rotatively therein, helical means on said ejector positioned for sliding engagement with means projecting from the inner wall of said holder, whereby rotation of said ejector causes is to move longitudinally in said holder, a tubular member mounted rigidly on and coaxially with said mouthpiece and projecting coaxially into said holder and said ejector, a removable cylinder of smoke filtering means positioned in said tubular member, a projection on said tubular member cooperating with a slot mounted rigidly within said tubular holder, permitting disengagement of said mouthpiece and said holder longitudinally and limited relative motion rotatively thereof into a position where longitudinal disengagement is prevented, whereby said bit and holder are disengageable when said ejector is rotated to the advanced, ejecting position in said holder and are not disengageable when said ejector is rotated to the retracted position.

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