

DEVICE FOR A SMOKING ARTICLE

The present invention relates to a device for holding a smoking article that has a liquid delivery member disposed therein.

5 Smoking articles, particularly cigarettes, generally comprise a filter aligned in end-to-end relationship with a shredded tobacco rod or another aerosol forming substrate. Typically, the filter includes a plug of cellulose acetate tow attached to the tobacco rod by tipping paper. A cigarette is employed by a consumer by lighting one end thereof and burning the shredded tobacco rod. The consumer receives mainstream smoke by drawing on the
10 opposite end (mouth end or filter end) of the cigarette. Ventilation of the mainstream smoke can be achieved with a row or rows of perforations in the tipping paper about a location along the filter. Other known smoking articles include smoking articles in which tobacco material is heated, rather than combusted, to form an aerosol, and smoking articles in which a nicotine-containing aerosol is generated from tobacco material, tobacco extract, or other
15 nicotine source, without combustion or heating.

Smoking articles including flavourants that are released into the mainstream smoke of the smoking article during combustion, in order to modify the smoking characteristics thereof, are known in the art. Flavourants may be used to enhance the tobacco flavours produced upon heating or combusting the tobacco material, or to provide additional non-
20 tobacco flavours such as mint or menthol. The flavourants may be provided in a liquid delivery member, for example a capsule, comprising structural material enclosing the flavourant. The encapsulated flavourant may be released prior to or during smoking of the smoking article by deforming or destroying the encapsulating structure, for example by crushing.

25 It would be desirable to provide an improved device for holding smoking articles which include a liquid delivery member.

According to a first aspect of the invention, there is provided a device for holding a smoking article that has a liquid delivery member disposed therein, the device comprising: a support portion for supporting the smoking article during smoking of the smoking article; and
30 a crusher configured to apply external force to a liquid delivery member in the smoking article, wherein the crusher comprises at least one lever for amplifying a force applied by a consumer, to provide the external force on the liquid delivery member in the smoking article.

The device provides for straightforward, consistent and reliable crushing of the liquid delivery member in the smoking article. In this specification, the term "crush" is used to mean
35 to press or squeeze with an external force. The crushing results in deformation or destruction of the liquid delivery member. The liquid delivery member may be reduced in

size after crushing. The deformation of the liquid delivery member may occur steadily over a range of external force. Alternatively, the liquid delivery member may be suddenly deformed

or destroyed, for example the liquid delivery member may burst, when the external force reaches a threshold.

Providing a crusher means that there is no need for a consumer to touch the smoking article in order to apply the external force to the liquid delivery member in the smoking article. This may reduce any staining or smell on the consumer's fingers. In addition, the crusher may allow the liquid delivery member to be crushed more easily than would be possible using only the consumer's fingers. The crusher facilitates manipulation of the liquid delivery member and allows the consumer to apply the external force more easily. Providing a support portion means that there is also no need for a consumer to touch the smoking article during smoking. Again, this may reduce any staining or smell on the consumer's fingers.

The liquid delivery member preferably comprises structural material enclosing a liquid or liquids. The liquid may comprise any suitable substance, but preferably comprises flavourant for flavouring smoke during smoking of the smoking article, or any other smoke altering substance for altering the smoke during smoking of the smoking article. The liquid delivery member is preferably arranged to release at least a portion of the liquid when the smoking article is subject to the external force. The external force may be applied, and hence the liquid released, prior to or during smoking.

A device according to the present invention may advantageously be used with filter cigarettes and other smoking articles in which tobacco material is combusted to form smoke. A device according to the present invention may alternatively be used with smoking articles in which tobacco material is heated, rather than combusted, to form an aerosol. A device according to the present invention may also be used in smoking articles in which a nicotine-containing aerosol is generated from a tobacco material, tobacco extract, or other nicotine source, without combustion or heating. The term "smoking" used in this specification should be interpreted in a similarly broad manner.

In this specification, the terms "upstream" and "downstream" are used to describe relative positions between elements of the smoking article or filter in relation to the direction of mainstream smoke as it is drawn from a lit end of the smoking article towards a mouth end of the smoking article. Mainstream smoke flows generally parallel to the length of the smoking article, in the longitudinal direction. The transverse direction of the smoking article is perpendicular to the longitudinal direction.

The support portion and crusher may or may not be separable from one another. For example, the support portion and crusher may be made from a single piece of material, for example, injection moulded plastic. Alternatively, the support portion and crusher may be separable from one another by a consumer. This may allow replacement or spare support portions or crushers to be provided. For example, the support portion and crusher may be

fitted to one another by a screw fit, friction fit, snap fit, or any other suitable type of connection.

The support portion supports the smoking article during smoking, so that a consumer does not need to touch the smoking article. The support portion may support any part of the smoking article. Preferably, however, the support portion supports the downstream end of the smoking article.

Preferably, the support portion comprises a mouthpiece. The mouthpiece is a part which is held in the mouth of a consumer during smoking of the smoking article. The mouthpiece forms part of the device and is not part of the smoking article itself. Preferably, the mouthpiece receives the furthest downstream end of the smoking article (for example the smoking article filter) and the consumer's lips touch the mouthpiece, rather than the smoking article, during smoking. The mouthpiece preferably comprises an upstream aperture for receiving the smoking article, a downstream aperture or outlet which is received in the consumer's mouth during smoking, and a passage or tube joining the two apertures for conveying smoke from the downstream end of the smoking article into the consumer's mouth.

The device may comprise a removable cover for the mouthpiece. The cover protects the mouthpiece when the device is not in use. The cover may be removed when a consumer wishes to use the device. Preferably, the cover is arranged to cover the mouth end (downstream end) of the mouthpiece when the device is not in use. Additionally, or alternatively, the cover may be arranged to cover the upstream end of the mouthpiece when the device is not in use. This may reduce the chance of dirt and debris entering the mouthpiece. If the mouthpiece comprises an upstream aperture for receiving the smoking article and a downstream aperture which is received in the consumer's mouth during smoking, the cover is preferably arranged to cover at least the downstream aperture when the device is not in use.

The device preferably includes means for attaching the device to another object. For example, the attachment means may be arranged to attach the device to a pack of smoking articles when the device is not in use. Preferably, the smoking articles are smoking articles which may be used with the device. This is convenient for a consumer. Alternatively or additionally, the attachment means may be arranged to attach the device to the consumer, for example around the consumer's wrist, to a consumer's clothing, or to other consumer goods or packs of consumer goods, for example, matches, lighters, extinguishing means, breath-fresheners or electronics.

The attachment means may have any structure suitable for attaching the device to another object. The attachment means may be integrally formed with a part of the device, or may be a separate component which is fixed to a part of the device. For example, the

attachment means may comprise two or more opposed spring clips, which pivot with respect to one another and are arranged to grip another object, for example a pack of smoking articles or a portion of a consumer's clothing. Alternatively, the attachment means may comprise a band, for example an elastic band, arranged to encircle a pack of smoking
5 articles, a consumer's wrist, or another object. Alternatively, the attachment means may comprise an arm or plate arranged to slide under one surface of a pack of smoking articles. Alternatively, the attachment means may comprise a chain or other decorative connector which allows the device to be worn as jewellery or attached to clothing in a decorative manner.

10 The mouthpiece cover may be an additional part of the device. Alternatively, another part of the device may also act as a mouthpiece cover. For example, the crusher may act as a mouthpiece cover when the device is not in use.

In a preferred embodiment, however, the means for attaching the device to another object comprises the removable cover for the mouthpiece.

15 Alternatively, the support portion may further comprise the removable cover for the mouthpiece. In one such embodiment, the support portion comprises an upstream portion for receiving the smoking article and a downstream portion which comprises the mouthpiece. When the device is not in use, the mouthpiece may be detached from the upstream portion of the support portion, rotated by 180°, and reattached such that the downstream end of the
20 mouthpiece is covered by the upstream portion of the support portion.

In one embodiment, the device further comprises means for ejecting the smoking article from the support portion after smoking of the smoking article. Providing ejection means avoids the need for a consumer to touch the used smoking article after the smoking article has been smoked. This may reduce any staining or smell on the consumer's fingers.

25 In one preferred embodiment, the support portion comprises a tubular portion for receiving the smoking article during smoking of the smoking article, and an insert for extending into the tubular portion, wherein the insert is configured to be inserted into the tubular portion after smoking of the smoking article, so as to displace the smoking article from the tubular portion to eject the smoking article from the support portion. This avoids the
30 need for a consumer to touch the used smoking article after the smoking article has been smoked. The consumer may simply push the insert into the tubular portion so as to eject the smoking article. In that embodiment, preferably the support portion is telescopic (that is, extensible and compressible) by virtue of the relative movement between the tubular portion and the insert. Preferably, the support portion adopts an extended configuration when the
35 smoking article is received in the tubular portion, with the insert withdrawn from the tubular portion. Preferably, the support portion adopts a compressed configuration when the device is not in use, with the insert inserted into the tubular portion.

Preferably, the support portion is arranged to support smoking articles of at least two different sizes. For example, the support portion may comprise a first portion arranged to support a smoking article of a first size and a second portion arranged to support a smoking article of a second size. A consumer may choose which portion to use, depending on the size of the smoking article. Alternatively, the support portion may be adjustable between at least a first size and a second size. A consumer may then manually adjust the support portion, depending on the size of the smoking article.

For example, the support portion may be arranged to support a smoking article having a diameter between about 7.0 mm and about 8.0 mm, and a smoking article having a diameter between about 5.0 mm and about 7.0 mm.

In a preferred embodiment, the support portion is arranged to receive the furthest downstream end of the smoking article, and the support portion comprises a first upstream tubular portion having a first internal dimension and a second downstream tubular portion having a second internal dimension, the first internal dimension being larger than the second internal dimension.

Thus, the support portion is tapered so as to support smoking articles of two different sizes. Preferably, the first internal dimension is substantially the same as the diameter of a smoking article of a first size and the second internal dimension is substantially the same as the diameter of a smoking article of a second size. Thus, if the support portion is used with a smoking article of the first, larger size, the downstream end of the smoking article extends only into the first upstream tubular portion. The smoking article may be secured in the first upstream tubular portion by a friction fit. The second downstream tubular portion is too small to accommodate the smoking article. On the other hand, if the support portion is used with a smoking article of the second, smaller size, the downstream end of the smoking article extends through the first upstream tubular portion and into the second downstream tubular portion. The smoking article may be secured in the second downstream tubular portion by a friction fit.

The crusher is arranged to apply external force to the smoking article, and consequently to the liquid delivery member within the smoking article. Preferably, the crusher is manually operable by a consumer. Preferably, the crusher is biased to a non-crushing position until a force is applied by the consumer. The crusher may have any structure which is suitable for applying the necessary external force to the liquid delivery member. The structure of the crusher, and consequently the external force which may be applied, may depend on the shape, size, position and material or combination of materials of the liquid delivery member.

Preferably, the crusher is arranged to apply an external force to the liquid delivery member of between about 5 N and about 24 N. More preferably, the crusher is arranged to

apply an external force to the liquid delivery member of between about 8 N and about 20 N. Even more preferably, the crusher is arranged to apply an external force to the liquid delivery member of between about 12 N and about 16 N. Such a force may correspond to a peak in the force versus compression curve of the liquid delivery member.

5 The external force may be applied when desired by a consumer, either prior to or during smoking of the smoking article. The external force may be exerted in any direction, but is preferably exerted in a direction perpendicular to the longitudinal direction of the smoking article.

10 As mentioned in the above first aspect, the crusher comprises at least one lever for amplifying a force applied by a consumer, to provide the external force on the liquid delivery member in the smoking article. Such an arrangement, which uses leverage to apply the external force, reduces the force which needs to be applied by a consumer. This allows the liquid delivery member to be crushed more easily than would otherwise be possible.

15 The lever may have any suitable structure in which a lever arm pivots around a hinge or fulcrum so as to amplify the force applied by a consumer. For example, in order to provide maximum mechanical advantage, the liquid delivery member may be aligned generally with the middle of the lever, the consumer's force may be applied on one side of the liquid delivery member and the hinge of the lever may be located on the other side of the liquid delivery member. The structure of the lever should be appropriate to apply the necessary
20 external force to the liquid delivery member using a reasonable force from a consumer.

 In a preferred embodiment, the crusher comprises two opposed portions for applying force on respective opposite sides of the liquid delivery member. Providing force on two opposite sides of the liquid delivery member may result in more straightforward, consistent and reliable crushing of the liquid delivery member. This may also provide for release of the
25 liquid in a homogeneous manner throughout the smoking article's cross section.

 Preferably, the two opposed portions are biased to a non-crushing position until a force is applied by the consumer. The two opposed portions may comprise two opposite members for transferring a linear compressive force applied by a consumer to the liquid delivery member. Thus, the consumer does not need to touch the smoking article in order to crush
30 the liquid delivery member. More preferably, however, the crusher comprises two opposed levers for applying force on respective opposite sides of the liquid delivery member. The levers amplify torque applied by a consumer. Preferably, the levers are arranged to pivot around a common hinge. Preferably the two levers are arranged to amplify two inwardly directed forces applied by a consumer on the respective levers.

35 Alternatively, however, the crusher may comprise only a single portion for applying the external force to the liquid delivery member. For example, the crusher may comprise a single lever arm, which may allow straightforward crushing by the consumer using only one hand or

one finger. Alternatively, the crusher may comprise a plurality of portions for applying the external force.

Preferably, the crusher comprises at least one protrusion for applying the external force to the liquid delivery member. The at least one protrusion engages with the liquid delivery member and is located on the inside (liquid delivery member side) of the crusher. Preferably, the at least one protrusion is pointed. If the external force is applied via a small area of the at least one protrusion, the pressure exerted on the liquid delivery member may be increased. This reduces the force which needs to be applied by a consumer. This allows the liquid delivery member to be crushed more easily than would otherwise be possible. This also allows the external force to be applied at a specific desired location or locations.

Preferably, the crusher comprises at least one lever, the lever including at least one protrusion configured to engage with the liquid delivery member. Preferably, the at least one protrusion is pointed. The combination of the leverage together with the protrusion reduces the force which needs to be applied by a consumer. In order to provide maximum mechanical advantage, the at least one protrusion (for aligning with the liquid delivery member) may be aligned generally with the middle of the lever, the consumer's force may be applied on one side of the protrusion and the hinge may be located on the other side of the protrusion.

Even more preferably, the crusher comprises two opposed levers for applying force on respective opposite sides of the liquid delivery member, each lever including one protrusion configured to engage with the liquid delivery member. Preferably, each protrusion is pointed. Preferably, the levers are arranged to pivot around a common hinge, each protrusion is aligned generally with the middle of the respective lever, the consumer's force may be applied on one side of the protrusion and the hinge is located on the other side of the protrusion.

Irrespective of the particular structure of the crusher, the crusher may include one or more contact pads for contact with the consumer's fingers. This may allow the consumer to make firm contact with the crusher which may facilitate application of the force. Preferably, the contact pads are sized and shaped for good contact with the consumer's fingers.

The position of the smoking article, with respect to the device, during smoking is preferably the same as the position of the smoking article, with respect to the device, during crushing. That is, preferably the device is arranged such that, when a smoking article is supported by the support portion for smoking of the smoking article, the crusher is positioned to apply the external force to the liquid delivery member. Then, the consumer may crush the liquid delivery member when desired, either prior to or during smoking.

However, this need not be the case. For example, the device may be arranged to hold the smoking article in a first position for smoking and a second position for applying the

external force to the liquid delivery member. If a consumer wishes to crush the liquid delivery member prior to smoking, the consumer may position the smoking article in the second position in which the crusher is properly aligned with the liquid delivery member. Then, the external force may be applied to the liquid delivery member by the crusher. Then, the consumer may position the smoking article in the first position in which the smoking article is supported by the support portion. The consumer may then smoke the smoking article. Alternatively, if the consumer wishes to crush the liquid delivery member during smoking, the consumer may position the smoking article in the first position in which the smoking article is supported by the support portion. The consumer may then partially smoke the smoking article. Then, the consumer may position the smoking article in the second position in which the crusher is properly aligned with the liquid delivery member. Then, the external force may be applied to the liquid delivery member by the crusher. Then, the consumer may return the smoking article to the first position in order to continue smoking the smoking article.

The device according to the present invention may be used with smoking articles of any desired size, for example, but not limited to smoking articles having a diameter of between about 5.0 mm and about 8.0 mm, or between about 7.0 mm and about 8.0 mm (for example, standard cigarettes), or between about 5.0 mm and about 7.0 mm (for example, slim or super slim cigarettes). The smoking articles may have any desired length, for example between about 70 mm and about 100 mm.

The liquid delivery member may be positioned in the smoking article at any suitable position. The position of the liquid delivery member and the arrangement of the device are such that the crusher may be properly positioned with respect to the liquid delivery member so that the external force may be applied. Preferably, the liquid delivery member is disposed towards the downstream end of the smoking article. More preferably, the liquid delivery member is disposed in a filter of the smoking article. The liquid delivery member may be embedded in filter material of the filter, for example in a plug of filter material, such as cellulose acetate tow. Alternatively, the liquid delivery member may be provided in a cavity within the filter, for example in a plug-space-plug filter. Alternatively, the liquid delivery member may be disposed in the tobacco rod of the smoking article.

The term "liquid delivery member" refers to any delivery system for delivering a liquid or liquids. The liquid may comprise any suitable substance, but preferably comprises flavourant for flavouring smoke during smoking of the smoking article, or any other smoke altering substance for altering the smoke during smoking of the smoking article. Preferably, the liquid delivery member comprises structural material enclosing a liquid or liquids. Provision of a liquid delivery member which releases at least a portion of the liquid when the smoking article is subjected to the external force from the crusher allows the liquid to be controllably released by the consumer. The external force may be applied, and hence the

liquid released, prior to or during use of the smoking article. The external force on the liquid delivery member allows the liquid to escape from the liquid delivery member and interact with and modify the characteristics of the smoking article and thus the smoke derived therefrom. Because the liquid is only released when the external force is applied, this
5 reduces the chance of the liquid migrating or disintegrating, for example, during storage.

Where the liquid comprises flavourant, the flavourant may comprise any flavour compound suitable for being releasably disposed in liquid form within the structural material of the liquid delivery member. Suitable flavours include, but are not limited to, menthol, mint, such as peppermint and spearmint, eucalyptus, sage, chocolate, liquorice, citrus and other
10 fruit flavours, gamma octalactone, vanillin, ethyl vanillin, breath freshener flavours, spice flavours such as cinnamon, methyl salicylate, linalool, bergamot oil, geranium oil, lemon oil, ginger oil, and tobacco flavour. Other suitable flavours may include liquid compounds selected from the group consisting of an acid, an alcohol, an ester, an aldehyde, a ketone, a pyrazine, combinations or blends thereof and the like.

The liquid delivery member may have any suitable structure, preferably in which a
15 structural material encloses liquid. The liquid delivery member may comprise a matrix structure defining a plurality of domains, the liquid being trapped within the domains until released when the smoking article is subjected to the external force via the crusher. More preferably, however, the liquid delivery member comprises a capsule. Preferably, the
20 capsule comprises an outer shell and an inner core containing liquid. Preferably, the outer shell is substantially continuous. Preferably, the outer shell is sealed before the application of the external force, but is frangible or breakable to allow liquid to be released when the external force is applied. The capsule may be formed in a variety of physical formations including, but not limited to, a single-part capsule, a multi-part capsule, a single-walled
25 capsule, a multi-walled capsule, a large capsule, and a small capsule.

If the liquid delivery member comprises a matrix structure defining a plurality of domains enclosing liquid, the liquid delivery member may release the liquid when the smoking article is subjected to the external force, via the crusher, over a range of force of at least 5 N. Alternatively, if the liquid delivery member is a capsule arranged to rupture or burst
30 to release liquid when the smoking article is subjected to the external force (for example, but not limited to, if the capsule comprises an outer shell and an inner core), the capsule may have any desired burst strength. The burst strength is the force (exerted on the capsule via the crusher from the outside of the smoking article) at which the capsule will burst. The burst strength may be a peak in the capsule's force versus compression curve. Preferably, the
35 capsule has a burst strength of between about 5 N (0.5 kgf) and about 24 N (2.4 kgf). More preferably, the capsule has a burst strength of between about 8 N (0.8 kgf) and about 20 N (2.0 kgf). Even more preferably, the capsule has a burst strength of between about 12 N (1.2

kgf) and about 16 N (1.6 kgf). The liquid delivery member's force versus compression curve may have a peak between about 5 N and about 24 N.

The application of the external force provides a squeezing or compressive force which preferably breaks the capsule, which in turn, causes at least a portion of the liquid to be released into the smoking article. Alternatively, the squeezing or compressive force may provide a sustained release of liquid over a range of forces. The liquid may then flavour or otherwise alter the smoke passing through the smoking article.

The liquid delivery member may have any suitable shape, for example, spherical, spheroid, or ellipsoid. Preferably, however, the liquid delivery member is generally spherical.

The liquid delivery member may have any desired size. For example, the liquid delivery member may be spherical with a diameter between about 2.5 mm and about 4.5 mm, preferably between about 3.0 mm and about 3.5 mm, more preferably about 3.5 mm. The size of the liquid delivery member relative to the diameter of the smoking article should be appropriate so that, when the external force is applied by the crusher, the liquid may be released from the liquid delivery member. For example, the device may be adapted for use with a smoking article having a diameter of between about 5.0 mm and about 8.0 mm, or between about 7.0 mm and about 8.0 mm (for example, a standard cigarette), or between about 5.0 mm and about 7.0 mm (for example, a slim or super slim cigarette).

The liquid delivery member may comprise any suitable material or combination of materials, for example those used in capsules for drug delivery, liquid encapsulated capsules, or other encapsulated materials. The liquid delivery member may be manufactured according to any suitable method (for example, by co-extrusion), as will be appreciated by those skilled in the art.

The device may comprise any suitable material or combination of materials, for example, but not limited to polypropylene, Acrylonitrile butadiene styrene (ABS), metal, paper, rubber and combinations thereof. In a preferred embodiment, the mouthpiece of the device comprises paper. When the consumer's lips contact the paper mouthpiece, this provides the same sensation as directly contacting a smoking article filter. All or part of the device may be printed, embossed, debossed or otherwise embellished with manufacturer or brand logos, trade marks, slogans and other consumer information and indicia.

The device may be any suitable size which allows the device to be portable and suitable for supporting a smoking article having a liquid delivery member disposed therein.

A second aspect of the invention is directed to the use of a device for holding a smoking article that has a liquid delivery member disposed therein, the device comprising a support portion for supporting the smoking article during smoking of the smoking article, and a crusher configured to apply external force to a liquid delivery member in the smoking

article, wherein the crusher comprises at least one lever for amplifying a force applied by a consumer, to provide the external force on the liquid delivery member in the smoking article.

Features described in relation to one aspect of the invention may also be applicable to another aspect of the invention.

The invention will be further described, by way of example only, with reference to the accompanying drawings in which:

5 Figure 1 is a side view of a device according an embodiment of the invention;

Figure 2 is an end view of the device of Figure 1;

Figure 3 is a side view of a cover for the device of Figures 1 and 2;

Figure 4 is a cross sectional view of the device of Figures 1 and 2, with a smoking article received in the device;

10 Figure 5 is an end view of the device of Figures 1 and 2, with a smoking article received in the device;

Figure 6 is a cross sectional view of device of Figures 1 and 2, with a used smoking article to be ejected; and

15 Figure 7 is a cross sectional view of device of Figures 1 and 2 as the used smoking article is ejected.

Figure 1 is a side view of a device for a smoking article according to an embodiment of the invention. Figure 2 is an end view of the device of Figure 1. Referring to Figures 1 and 2, the device 100 comprises a support portion 101 at the device's downstream end and a crusher 103 at the device's upstream end.

20 The support portion 101 comprises an upstream tubular portion 105 and a downstream mouthpiece 107 (shown shaded in Figures 1 and 2). The mouthpiece 107 comprises a mouth end 109, which is designed to be held in a consumer's mouth during smoking, and an insert 111, which extends into the tubular portion 105. A passage 113 extends through the insert 111 and mouth end 109.

25 The crusher 103 comprises two opposite lever arms 115a, 115b arranged to pivot around hinge 117. In Figure 1, only lever arm 115b is visible. Each lever arm 115a, 115b comprises a contact pad 119a, 119b respectively at the end furthest from hinge 117. In Figure 1, the lever arms 115a, 115b are shown in a closed position and, in Figure 2, the lever arms 115a, 115b are shown in an open position. Each lever arm 115a, 115b further
30 comprises a protrusion 121a, 121b respectively on its inner surface. The protrusions 121a, 121b are not visible in Figure 1. In the embodiment shown in Figures 1 and 2, the hinge 117 connects the crusher 103 to the support portion 101.

Figure 3 shows a cover 300 for the mouthpiece 107 of the device 100 of Figures 1 and 2. The cover 300 also acts as a means for attaching the device to another object. Cover 300
35 comprises a closed tube 301 which is arranged to receive the mouth end 109 of the mouthpiece 107. This is shown by the arrow between Figures 1 and 3. The internal diameter of the tube 301 substantially matches the diameter of the mouth end 109 so that the

mouthpiece 107 may be secured in the cover 300 by a friction fit. This protects the mouthpiece 107 when it is not in use. The cover 300 further comprises two spring clips 303 on the outer surface of closed tube 301. The spring clips 303 pivot with respect to one another and are arranged to grip another object. Thus, the spring clips 303 may secure the device 100 to another object when the device 100 is not in use. For example, the spring clips 303 may secure the device 100 onto a pack of smoking articles or onto a consumer's clothing.

Figure 4 shows the device 100 of Figures 1 and 2, with a smoking article received in the device 100. In this embodiment, the smoking article 400 comprises a tobacco rod 401 and a filter 403 axially aligned with and downstream of the tobacco rod 401. A liquid delivery member in the form of a flavour capsule 405 is disposed in the filter 403. The flavour capsule 405 encloses liquid flavourant (not shown) for modifying the taste of mainstream smoke during smoking of the smoking article 400.

In order to position the smoking article 400 as shown in Figure 4 (when a consumer wishes to smoke the smoking article), lever arms 115a, 115b of crusher 103 are positioned in the open position as shown in Figure 2. The downstream, filter end of the smoking article 400 is inserted between lever arms 115a, 115b and into the tubular portion 105 of the support portion 101. As the smoking article 400 is inserted into the tubular portion 105, the insert 111 is pushed out of the tubular portion 105 in a downstream direction. When the smoking article 400 is correctly positioned (as shown in Figure 4), a stopper (not shown) prevents the smoking article 400 from extending further into the tubular portion 105 and the insert 111 from being ejected further. At this point, the smoking article 400 may be lit and smoked by a consumer. The consumer holds the mouth end 109 in the mouth and the passage 113 conveys smoke from the downstream end of the lit smoking article 400 into the consumer's mouth. There is no need for the consumer to touch the smoking article during smoking.

Figure 5 is an end view of Figure 4. As can be seen in Figure 4, when the smoking article 400 is correctly positioned in the device 100, the flavour capsule 405 disposed in the smoking article filter 403 is aligned with the crusher 103 of the device 100. When desired by a consumer (either before or during smoking), the consumer may use the crusher 103 to crush the capsule 405. This is shown schematically in Figure 5. The fingers of the consumer are placed on contact pads 119a, 119b of lever arms 115a, 115b. When the consumer applies squeezing force (as shown by the arrows in Figure 5), the lever arms 115a, 115b pivot inwards around hinge 117. As the lever arms 115a, 115b pivot, the protrusions 121a, 121b on the inner surface of the lever arms 115a, 115b apply directed pressure onto the outer surface of the filter 403 aligned with the capsule 405. The external force on the capsule 405 causes the capsule to release at least a portion of the liquid flavourant enclosed within

the capsule. The consumer can then begin or continue to smoke, and the mainstream smoke will now be modified by the liquid flavourant released from the capsule 405.

There is no need for the consumer to touch the smoking article 400 in order to crush the capsule 405. In addition, because of the lever mechanism of lever arms 115a, 115b, only
5 a small force is needed by the consumer in order to crush the capsule 405. The crushing results in deformation or destruction of the capsule which causes the liquid flavourant to be released. In the embodiment illustrated in Figures 1 to 5, the capsule comprises an outer shell and an inner core containing the liquid flavourant. The liquid flavourant is released suddenly when the outer shell breaks, on application of the external force. Alternatively,
10 however, the liquid flavourant may be released gradually over a range of force, for example if the capsule is replaced with a liquid delivery member comprising a matrix structure defining a plurality of domains enclosing liquid flavourant.

Figures 6 and 7 show how a used smoking article may be ejected from the device 100 after smoking. Once the consumer has finished smoking the smoking article 400, the used
15 smoking article 400 may be ejected from the device 100 without the consumer needing to touch the used smoking article 400. As shown in Figure 6, the consumer grasps the device 100, and pushes the mouth end 109 of the mouthpiece 107 towards the tubular portion 105. This is shown by the arrow in Figure 6. The insert 111 is pushed into the tubular portion 105 and the used smoking article 400 is pushed out of the tubular portion 105 in an upstream
20 direction. As shown in Figure 7, once insert 111 extends completely into tubular portion 105, the used smoking article 400 is no longer supported by the device 100 and is ejected from the device 100. Ejection of the used smoking article 400 can be performed without the consumer needing to touch the smoking article. Note that Figures 6 and 7 show a filter cigarette, in which the tobacco rod has reduced in length after smoking. However, the device
25 may be used with any smoking article, including those in which tobacco material is not combusted, such that a used smoking article is the same length as an unused smoking article.

CLAIMS

1. A device for holding a smoking article that has a liquid delivery member disposed therein, the device comprising:
 - a support portion for supporting the smoking article during smoking of the smoking article; and
 - a crusher configured to apply external force to the liquid delivery member in the smoking article, wherein the crusher comprises at least one lever for amplifying a force applied by a consumer, to provide the external force on the liquid delivery member in the smoking article.
2. A device according to claim 1, wherein the support portion comprises a mouthpiece.
3. A device according to claim 2, wherein the device comprises a removable cover for the mouthpiece.
4. A device according to any preceding claim, further comprising means for attaching the device to another object.
5. A device according to claim 4, when dependent on claim 3, wherein the means for attaching the device to another object comprises the removable cover for the mouthpiece.
6. A device according to any preceding claim, further comprising means for ejecting the smoking article from the support portion after smoking of the smoking article.
7. A device according to claim 6, wherein the support portion comprises a tubular portion for receiving the smoking article during smoking of the smoking article, and an insert for extending into the tubular portion, wherein the insert is configured to be inserted into the tubular portion after smoking of the smoking article, so as to displace the smoking article from the tubular portion to eject the smoking article from the support portion.
8. A device according to any preceding claim, wherein the support portion is arranged to support smoking articles of at least two different sizes.
9. A device according to claim 8, wherein the support portion is arranged to receive the furthest downstream end of the smoking article, and the support portion comprises a first

upstream tubular portion having a first internal dimension and a second downstream tubular portion having a second internal dimension, the first internal dimension being larger than the second internal dimension.

10. A device according to any preceding claim, wherein the crusher is arranged to apply an external force to the liquid delivery member of between about 5 N and about 24 N.

11. A device according to any preceding claim, wherein the crusher comprises two opposed portions for applying force on respective opposite sides of the liquid delivery member.

12. A device according to any preceding claim, wherein the crusher comprises at least one protrusion for applying the external force to the liquid delivery member.

13. A device according to any preceding claim, wherein the device is arranged such that, when a smoking article is supported by the support portion for smoking of the smoking article, the crusher is positioned to apply the external force to the liquid delivery member.

14. Use of a device for holding a smoking article that has a liquid delivery member disposed therein, the device comprising a support portion for supporting the smoking article during smoking of the smoking article, and a crusher configured to apply external force to a liquid delivery member in the smoking article, wherein the crusher comprises at least one lever for amplifying a force applied by a consumer, to provide the external force on the liquid delivery member in the smoking article.