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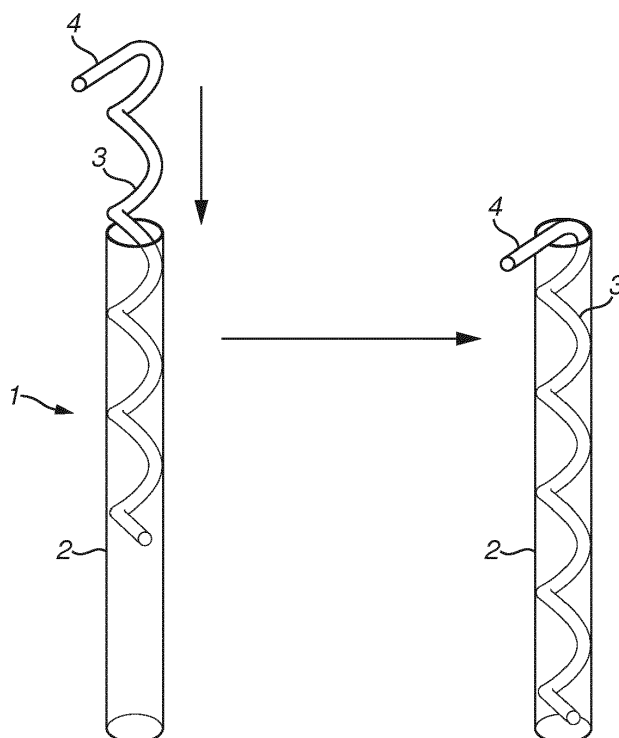
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(54) **Smoking article filling device**

(57) There is provided a device for filling a tube for a smoking article with tobacco, the device comprising a hollow sheath and a screw-threaded tobacco driving mechanism, wherein the driving mechanism is arranged to draw, upon rotation in a first direction, tobacco in to

the sheath, and wherein the sheath is arranged to fit within the mouth of a tube for a smoking article and the driving mechanism is further arranged to drive tobacco from the sheath in to the mouth of the tube in use when rotated in a second direction.



**FIG. 1**

## Description

**[0001]** The present invention relates to a device for filling a tube for a smoking article with tobacco.

**[0002]** Many consumers of tobacco enjoy making their own smoking articles, such as "Make-Your-Own" cigarettes, by purchasing separate smoking papers and tobacco and inserting the tobacco into the paper themselves. The papers can be formed into a hollow tube by the consumer or are pre-formed as a hollow tube and may have a filter at one end if desired.

**[0003]** Whilst many consumers enjoy making their own smoking articles, the filling of the paper with the tobacco can be messy and can result in tobacco being dropped and wasted. This is particularly the case if a consumer is trying to make the product on the move. Devices have been proposed which assist a user in making their own smoking articles in such a way, but such devices are usually bulky and difficult to use, are often at times still very messy, and are often also difficult to carry.

**[0004]** Accordingly, there is a need for a device which assists a user in making their own smoking articles while reducing the likelihood of tobacco being dropped and/or wasted and which is simple to use and easy to carry.

**[0005]** According to the present invention there is provided a device for filling a tube for a smoking article with tobacco, the device comprising a hollow sheath and a screw-threaded tobacco driving mechanism, wherein the driving mechanism is arranged to draw, upon rotation in a first direction, tobacco in to the sheath, and wherein the sheath is arranged to fit within the mouth of a tube for a smoking article and the driving mechanism is further arranged to drive tobacco from the sheath in to the mouth of the tube in use when rotated in a second direction.

**[0006]** With the present invention, a simple insertion of the device into tobacco, followed by a turning of the screw fills the sheath. Insertion of the sheath into a paper tube to be filled then follows, with the screw then being rotated in an opposite direction to dispense the tobacco into the paper tube. The sheath, with the screw still in it, can then be removed and the smoking article is prepared.

**[0007]** One example of the present invention will now be described with reference to the accompanying drawings, in which:

Figure 1 shows side schematic views of a device according to the present invention with a screw partially inserted into a sheath and a screw fully inserted into a sheath;

Figure 2 is a schematic diagram showing how a user can fill the sheath with tobacco;

Figure 3 is a schematic diagram showing how a user can dispense tobacco from the device of the invention into a paper tube; and

Figure 4 is an example of a configuration of the

screw-threaded according to the present invention.

**[0008]** Referring to Figure 1 a device 1 according to the present invention has a hollow sheath 2 and a screw-threaded tobacco driving component 3 positioned within the sheath 2. In this example the screw-threaded tobacco driving mechanism 3 is connected to a handle component 4 which a user can turn in use, as will be described below. The tobacco driving mechanism 3 may be removable from the hollow sheath 2 or may be rotatably fixed within it. It may also be slidable in an axial direction within the hollow sheath 2 if required.

**[0009]** Referring to Figure 2, in use the device 1 according to the present invention is inserted into a pool of tobacco 5 and the handle 4 rotated by user. Rotation of the handle 4 in turn rotates the tobacco driving mechanism 3, with the screw thread thereon engaging with the tobacco 5 and drawing it up into the sheath 2. When the sheath 2 has been filled to an appropriate level with tobacco 5 the device 1 is removed from the pool of tobacco 5.

**[0010]** As shown in Figure 3, the device 1 can then be placed in the mouth of a hollow tube 6, which is generally formed from paper or other smoking material, and which may be attached, at the end opposite to its mouth, to a filter 7 if required. The tube 6 may be supplied in a pre-formed state, or may be formed by a consumer just prior to use of the device 1 according to the invention. Once the device 1 is placed over the mouth of the tube 6 it can be inserted therein so that the sheath 2 sits within the tube 6. A user can then rotate the handle 4 in a direction opposite to that which is rotated during the insertion in to the sheath 2 of tobacco 5. This drives the tobacco 5 out from within the sheath 2 in to the tube 6. The device 1 can then be drawn upward to leave the tobacco 5 within the tube 6. The device 1 may or may not be emptied in this process. A completed smoking article has then been formed in a simple and effective manner without any tobacco being spilled or wasted.

**[0011]** The configuration of the screw-threaded tobacco driving mechanism 3 may be adopted in shown Figure 4 (The handle component is not shown).

**[0012]** The pitch angle on the screw-threaded tobacco driving mechanism 3 may be uniform along its length. However, it is also possible to selectively vary the pitch and/or angle of the screw-thread to change the packing density of the tobacco as it is drawn into and then driven out of the sheath 2 into the tube 6. By controlling the packing density it is possible to control both the smoking characteristics of the finished smoking article, and/or also to control the packing density of the tobacco within the finished smoking article such that, for example, the open end of the tube has more dense tobacco packing than the remainder to effectively develop a "plug" of tobacco that ensure good retention of the tobacco within the tube 6.

**[0013]** It should also be noted that whilst the sheath 2 illustrated in the Figures is of fixed length provide a device

in which the length of the sheath 2 can be varied dependent upon the length of the tube 6 into which tobacco 5 is to be inserted. With such a device it is possible to provide a single device that can be used with a variety of different tube lengths.

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**[0014]** The present invention provides a simple and effective device which is of low cost and easy to manufacture as well as being readily understood in terms of its operation.

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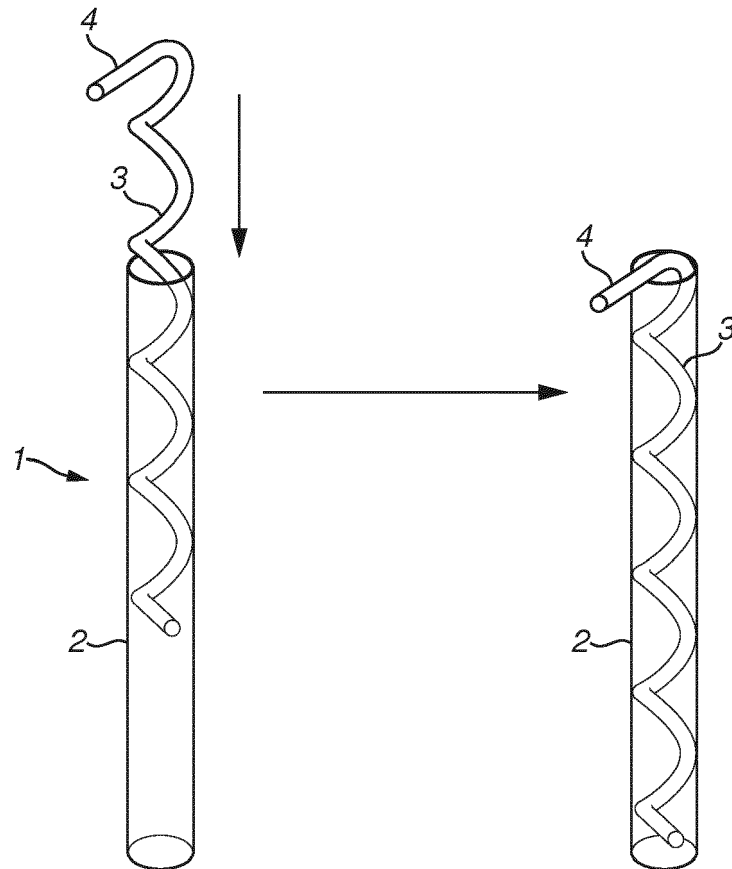
## Claims

1. A device for filling a tube for a smoking article with tobacco, the device comprising a hollow sheath and a screw-threaded tobacco driving mechanism, wherein the driving mechanism is arranged to draw, upon rotation in a first direction, tobacco in to the sheath, and wherein the sheath is arranged to fit within the mouth of a tube for a smoking article and the driving mechanism is further arranged to drive tobacco from the sheath in to the mouth of the tube in use when rotated in a second direction. 15
2. A device according to claim 1 wherein the sheath is cylindrical. 20
3. A device according to claim 1 or claim 2 wherein the driving mechanism is removable from the sheath. 25
4. A device according to any of preceding claim wherein the driving mechanism has a handle which can be rotated to drive the driving mechanism in either of the first or second directions. 30
5. A device according to any preceding claim wherein the pitch and/or angle of inclination of the screw in the screw-threaded tobacco driving mechanism varies along the length of the screw-threaded tobacco driving mechanism in an axial direction. 35
6. A device according to any preceding claim, wherein the length of the sheath can be varied. 40

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**FIG. 1**

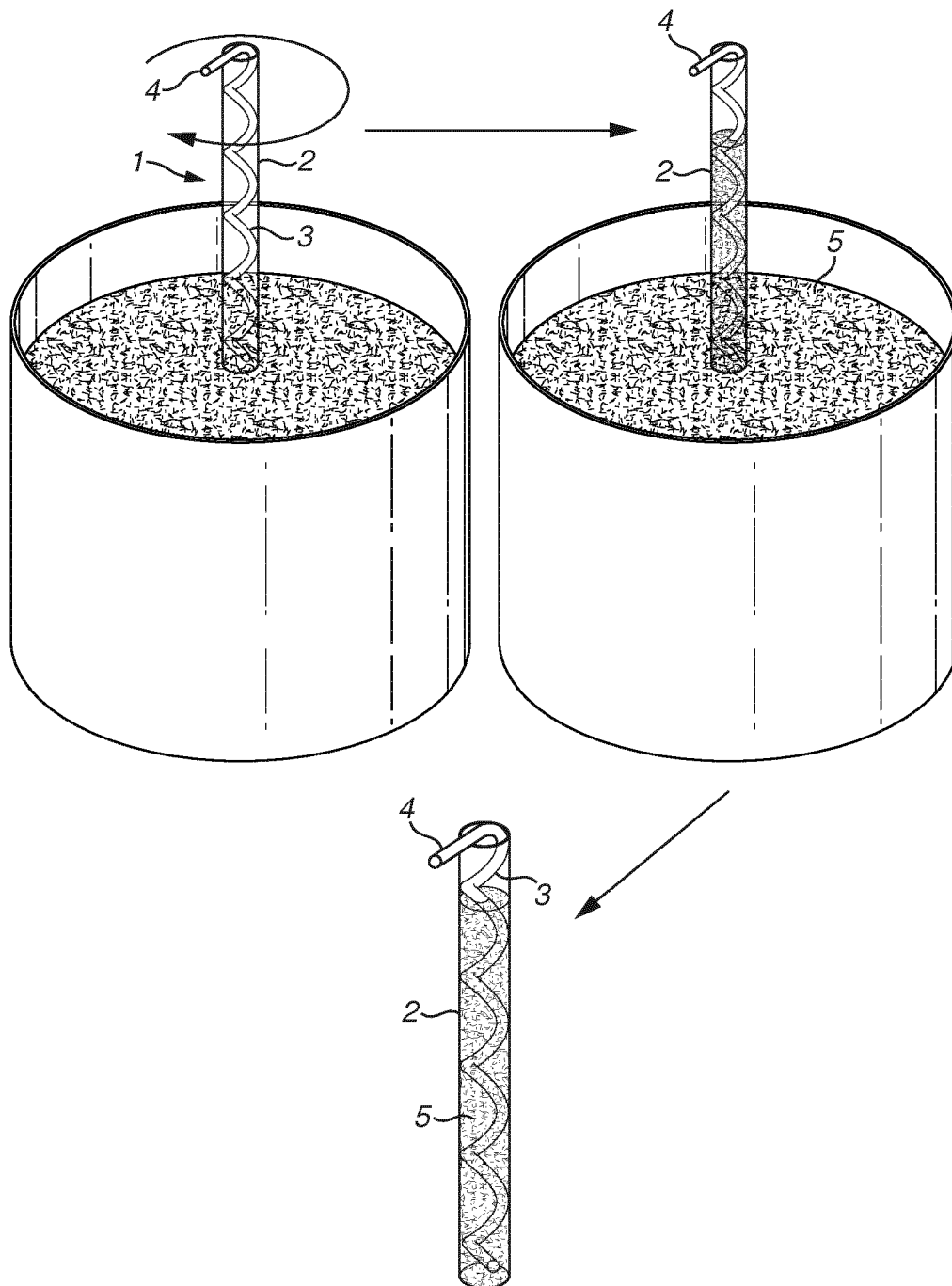


FIG. 2

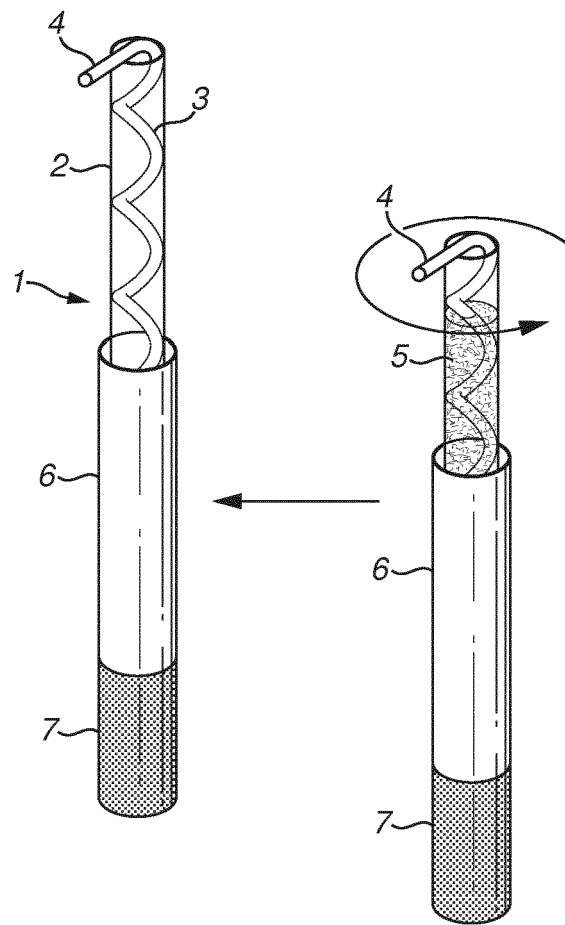


FIG. 3

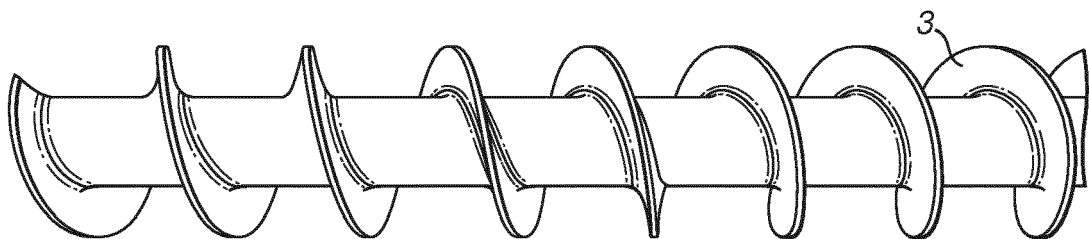


FIG. 4



## EUROPEAN SEARCH REPORT

Application Number  
EP 14 18 2004

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The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 24 February 2015	Examiner Kock, Søren
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT  
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on  
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