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(54) DEVICE FOR HYGIENICALLY AND CONVENIENTLY EXTRACTING STICKS FOR A TOBACCO HEATING SYSTEM AND/OR CIGARETTES FROM A PACKET

(57) A device for removing sticks for a tobacco heating system and/or cigarettes from a packet, which is made in the form of a cylinder with a circular base and consists of: a housing (1) inside of which there is a fixed partition (2) having an opening inside; the said partition (2) dividing the housing (1) into an upper portion and a lower portion, the lower portion of the housing having an open end (3) via which a tobacco product enters the device; the said open end (3) of the device being toothed, and the inside surface of the lower portion of the housing having longitudinal ribs (4) or a rough surface, in addition, the upper portion of the housing is hollow and is configured to allow the installation therein of a self-contained flashlight (5) and is closed by a cap (8); the said cap (8) is made with an opening in the middle for the push button switch (7) of the flashlight (5); the inside diameter of the lower portion of the device corresponds to the diameter of the tobacco product, taking into account a design gap formed by the ribs or roughness on the inside surface of the device.

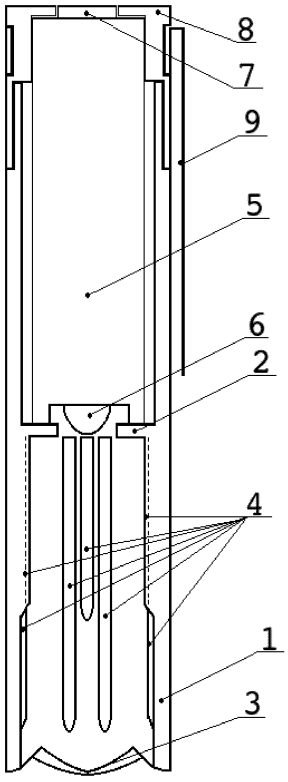

Fig.1

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Description

[0001] The utility model relates to auxiliary means for using tobacco products, and more specifically, to devices for sticks of a tobacco heating system (for example, IQOS, Glo), namely, for a hygienic and convenient separation of one tobacco stick from the others in a packet, careful removal of the stick from the packet, and reliable holding of this stick inside the housing of the device for further moving and installing the free end of the tobacco stick into the holder of a tobacco heating system, while maintaining at all stages the integrity of shape and sanitary condition of this tobacco stick and of the other sticks in the packet. This device can also be used for hygienic and convenient removal of conventional filtered or unfiltered cigarettes from a packet.

[0002] Analogues of the claimed device have not been found by the author of the utility model.

[0003] As is known, the development trends in modern society are focused on a healthy lifestyle. Thus, to help consumers reduce negative impact of tobacco products on their health, scientists and researchers have created an innovative tobacco heating system that emits aerosol, which is 90-95% less harmful than cigarette smoke. Instead of conventional cigarettes, this system uses miniature sticks filled with natural tobacco (tobacco sticks).

[0004] Owing to the innovation revolution in tobacco smoking, more than 5 million users of tobacco products in the world have already abandoned cigarettes in favor of tobacco sticks. This technology has recently appeared on the Ukrainian market; therefore, in the near future there will be a tendency among our fellowcountrymen to switch from conventional cigarettes to tobacco sticks.

[0005] It is clear that smoking as such is very harmful to health. Unfortunately, users of tobacco products face another danger associated with a high risk of contact with various pathogens through the use of cigarettes: viruses, bacteria.

[0006] In most cases before pulling a tobacco stick or a cigarette out of a packet, users of these products neglect sanitary rules: they forget to wash their hands or to use hand sanitizer.

[0007] As is well-known, hands are the main factor in the spread of contagious diseases. Most viruses enter the human body through hands coming into contact with the mouth. The claimed utility model is intended for the category of people who bring their hands into contact with their mouths most often during the day, namely for users of tobacco products.

[0008] Sticks for a tobacco heating system, like cigarettes, are placed in a packet in such a way, that when the packet is opened normally, filter tips show up. In order to get a tobacco stick or a cigarette from a packet, first, users need to get hold of the filter tip with their fingers. It is clear that while removing one tobacco stick from the packet, the user will involuntarily touch the other tobacco sticks, thereby degrading sanitary condition of all tobacco products in this packet.

[0009] In addition, when inserting a tobacco stick into the holder of a tobacco heating system, users have to hold the stick directly by the filter tip with their fingers, which is undoubtedly extremely antisanitary. And so, observing innovations in the global tobacco market and having carefully examined the products of a new tobacco heating system, one can see that, on the one hand, improved products have been created to help users reduce the negative impact of smoking on their health, but, on the other hand, they do not protect against yet another significant danger - the risk of infection by pathogens.

[0010] In addition to the aforementioned sanitary and hygienic problems, tobacco users face yet another inconvenience. Since tobacco sticks and cigarettes are packed very tightly in a packet, this greatly complicates the process of removing them and leads to their deformation. So, drawing a tobacco stick from a packet with fingers, the user not only disturbs the integrity of shape of this product but also deforms the adjacent tobacco sticks. First of all, such deformation of sticks makes it difficult to insert them further into the holder of a tobacco heating system, and secondly, it changes full protective properties of filter elements of these tobacco products, and therefore, it worsens the indicators of tobacco products safe use.

[0011] The aim of the utility model is to create a device designed for sticks for a tobacco heating system (for example, IQOS, Glo) and/or conventional cigarettes, which will:

- make the process of using a tobacco product as intended as safe as possible from a hygienic point of view, namely, it will exclude the possibility of touching the part of a tobacco stick that comes in direct contact with the user's mouth;
- greatly facilitate the process of separation and removal of tobacco products from the packet;
- prevent deformation of a tobacco stick during all manipulations with it, provide a convenient insertion of a tobacco stick into the holder of a tobacco heating system;
- be simple and convenient to use;
- be portable, light in weight and compact in size, while being designed to always keep it at hand and easily accessible;
- be simple and cheap to manufacture;
- be made of a material allowing repeated use of this device and possibility to maintain it in a proper sanitary condition, it will also be environmentally friendly, hypoallergenic, and will not change the taste and smell of tobacco products with which it comes into contact.

[0012] This aim is achieved by creating a device for hygienically and conveniently removing sticks for a tobacco heating system and/or cigarettes from a packet, while maintaining their shape and sanitary condition; the device being configured in the form of a right cylinder

with a circular base and consisting of: a housing (1) inside of which there is a fixed partition (2) having an opening inside; the said partition (2) dividing the housing (1) into an upper portion and a lower portion, the lower portion of the housing having an open end (3) via which a tobacco product enters the device, the said open end (3) of the device being toothed to facilitate separation of one tobacco product from the others in a tightly packed packet, and the inside surface of the lower portion of the housing having longitudinal ribs (4) or a rough surface for more firmly gripping a tobacco product as it is drawn out of the packet. In addition, the upper portion of the housing is hollow and is configured to allow the installation therein of a self-contained flashlight (5) and is closed by a cap (8) which has an internal thread and is screwed from outside onto the end of the device housing opposite to the open, toothed end (3), the former end having an external thread for the cap (8), and the cap (8) having an opening in the middle for the push button switch (7) of the flashlight (5). The inside diameter of the device corresponds to the diameter of the tobacco product for which the device is intended, taking into account a design gap formed by the ribs or roughness on the inside surface of the device. Additionally, a clip (9) is disposed on the outside of the device for convenient and hygienic storage of the device.

[0013] The device that is claimed is shown in the drawing.

FIG. 1 shows a view of the claimed device in longitudinal section with a flashlight inside.

FIG. 2 shows a view of the claimed device in longitudinal section with a hollow upper portion of the housing.

Description:

[0014]

1 - cylindrical housing;
2 - fixed partition;
3 - open, toothed end of the housing;
4 - internal longitudinal ribs;
5 - flashlight;
6 - flashlight lens;
7 - flashlight push button switch;
8 - cap;
9 - clip.

[0015] The operation principle of the claimed device is as follows. Since the device of this utility model is very compact in size and light in weight, users can easily place it in their hands and can handle it with the fingers of one hand.

[0016] By sending the toothed end (3) of the housing into the gaps between tobacco sticks, which are formed in a tightly packed packet due to the cylindrical shape of these sticks, the user easily separates one stick from the others, while maintaining the hygienic condition and the integrity of shape of a detached tobacco stick and of the other sticks in the packet.

[0017] After that, applying minimal effort on the opposite toothed end of the device and pressing on the cap (8), the user puts the toothed end (3) of the device on a tobacco stick, while the fixed partition (2) of the device limits the depth of the tobacco stick passage inside the housing of the device. Thus, only the tobacco stick filter tip enters the device (more specifically, its lower portion), and the other end of this tobacco product remains free for its further installation in the holder of a tobacco heating system. The tobacco stick filter tip captured by the device is held inside the device by means of internal longitudinal ribs (4) or roughness on the inside surface of the device, while maintaining the integrity of shape and the sanitary condition of the entire tobacco stick.

[0018] Then, the user, holding the device with a tobacco stick captured inside, easily removes this stick from the packet and inserts the free end of this tobacco stick into the holder of a tobacco heating system, where this stick is fitted tight enough. And since the filter tip of this tobacco stick is held inside the claimed device less firmly than the opposite end of this stick in the holder, this allows the user to easily remove the claimed device from the tobacco stick filter tip by pulling the housing, leaving this stick in the holder of a tobacco heating system for further intended use, while the integrity of shape and sanitary condition of this tobacco stick is fully preserved.

[0019] Using the claimed device for conventional cigarettes, with the help of the toothed end (3) of the device, the user easily separates one cigarette from the others in a packet and captures it with the device, while the part of the tobacco product that must remain in a sanitary condition enters the device (more specifically, its lower portion) and is held there by means of internal longitudinal ribs (4) or roughness on the inside surface of the device. Further, holding the device with a cigarette in one hand, part of this cigarette being inside the device housing, while the sanitary condition of this cigarette being preserved, with the other hand the users can get hold of that part of the cigarette that will not come into contact with their mouths. After that, the user removes the device from the cigarette and uses the tobacco product as intended, while the area of the cigarette, which comes into contact with the user's mouth, remains in a sanitary condition.

[0020] After that, by means of a clip (9), the user can attach the device to a packet of tobacco products or have it as an accessory, fastening it to a jacket lapel, pocket and the like.

[0021] The flashlight (5), which can be installed inside the housing of the claimed device, is an absolutely self-contained device, ready for use both inside the device and separately from it. The flashlight (5) has a battery inside its body; the flashlight is turned on/off by pressing the push button switch (7) and emits light through the lens (6), with the light passing through the opening in the partition (2) and the lower portion of the housing (1) of

the claimed device and coming out of the open toothed end (3) of the housing (1), illuminating the area where this open toothed end (3) of the housing (1) is directed to. The push button switch (7) does not protrude beyond the cap (8) and when the push button switch (7) is pressed, it enters the housing (1), which is very convenient, as the claimed device remains stable in shape and can be put onto any flat surface the cap (8) side down. Also, owing to the fact that the push button switch (7) does not protrude beyond the cap (8) of the claimed device, this design concept makes it impossible to turn the flashlight on/off inadvertently. To separate the flashlight from the housing of the claimed device, the user just needs to remove the cap (8) of the device housing.

[0022] Therefore, using this device in low light conditions or in the dark, the user, having turned on the flashlight (5) inside the housing of the claimed device, directs a beam of light coming out of the toothed end (3) of the device to a packet of tobacco products, easily separates one tobacco product from the others, using the specified toothed end of the device, grabs the tobacco product and easily removes it from the packet. At the same time, part of the tobacco product goes inside the housing of the claimed device and is held firmly there by means of internal longitudinal ribs (4) or rough inside surface of the lower portion of the device.

[0023] Owing to incomplete tobacco distribution inside the stick, and the materials of which a tobacco stick is made, the beam of light from the flashlight passes through almost the entire tobacco stick, illuminating it inside and outside, thereby facilitating the installation of the free end of a tobacco stick in the holder of a tobacco heating system.

[0024] The technical result of the utility model consists in obtaining a novel device for sticks of a tobacco heating system (for example, IQOS, Glo) and/or cigarettes, namely, for hygienic and convenient separation of one tobacco product from the others in a packet, careful removal of a tobacco product from the packet, and reliable holding of this product inside the housing of the device, while maintaining the integrity of shape and sanitary condition of each tobacco product, for further handling of tobacco products as intended.

[0025] By virtue of the claimed device, all manipulations with tobacco products occur in the safest way from a hygienic point of view, since the use of this device eliminates touching the part of a tobacco stick or a cigarette that comes into direct contact with the user's mouth.

[0026] Using this device also greatly facilitates the process of separating one tobacco product from the others in a tightly packed packet, its capture and removal from the packet, while maintaining the shape of this tobacco product and of the other ones in the packet, compared to performing the same operations directly with fingers.

[0027] In turn, maintaining the integrity of shape of a tobacco stick makes it easier to insert this stick into the holder of a tobacco heating system.

[0028] By virtue of the flashlight, which is installed inside the housing of the claimed device, the user can handle tobacco products under no ambient light or under minimum light, for example, in a nightclub, while maintaining the hygienic condition and the integrity of shape of a tobacco product and of the other ones in a packet.

[0029] Another advantage of using this device is that with its help users can use a tobacco stick without even having to take off their gloves. This method is very convenient, for example, in winter, in terms of maintaining hands thermal comfort or when working in protective gloves.

[0030] The claimed device can also be used even with wet hands, which usually happens, for example, after using wet wipes, or for example in summer, on vacation at the seaside, river or after leaving the pool.

[0031] For convenience, the device is equipped with a clip, which allows having it always on hand, for example, attaching it to a packet of tobacco sticks or cigarettes, or carrying it as an accessory, having fastened it to a jacket lapel, pocket, etc., while maintaining the sanitary condition of the device.

[0032] The claimed device can be made of any material that will allow its design implementation, for example, of bioplastics for food packaging by vacuum molding, pressing or thermomolding. Such material is hypoallergenic and environmentally safe; it does not change the taste and smell of tobacco products with which it comes into contact. In addition, this material is convenient for forming and allows manufacturing of the device as light as possible. This material makes the device reusable and provides for its constant sanitary condition. It is also possible to manufacture the claimed device using plastics, polypropylene, metals and various alloys.

[0033] The flashlight inserted inside the housing of the claimed device can be made of any material that will allow its design implementation, while the preferred materials for the manufacture of a flashlight for the claimed device will be lightweight materials. In the manufacture of a flashlight for the claimed device, the size and shape of the flashlight will correspond to the size and shape of the device for which it is made.

[0034] Therefore, the claimed device is compact in size, light in weight, portable, easy to manufacture and convenient to use, allowing the user to enjoy the process of using tobacco products and makes this process as convenient and hygienic as possible.

[0035] Also, to ensure the sanitary condition of this device, its inside and outside surface can be treated with sanitizers or washed under running water using soap or dishwashing liquid, after the inserted flashlight being removed from the housing of the device. All necessary information on how to ensure sanitary condition of the device taking into account the material of which it is made will be indicated in the user manual.

Claims

1. A device for hygienically and conveniently removing sticks for a tobacco heating system and/or cigarettes from a packet, while maintaining their shape and sanitary condition, which is configured in the form of a right cylinder with a circular base and consists of: a housing (1) inside of which there is a fixed partition (2) having an opening inside; the said partition (2) dividing the housing (1) into an upper portion and a lower portion, the lower portion of the housing having an open end (3) via which a tobacco product enters the device; the said open end (3) of the device being toothed to facilitate separation of one tobacco product from the others in a tightly packed packet, and the inside surface of the lower portion of the housing having longitudinal ribs (4) or a rough surface for more firmly gripping a tobacco product as it is drawn out of the packet, in addition, the upper portion of the housing is hollow and is configured to allow the installation therein of a self-contained flashlight (5) and is closed by a cap (8) which has an internal thread and is screwed from outside onto the end of the device housing opposite to the open, toothed end (3), the former end having an external thread for the cap (8); the said cap (8) has an opening in the middle for_a push button switch (7) of the flashlight (5); the inside diameter of the device corresponds to the diameter of the tobacco product for which the device is intended, taking into account a design gap formed by the ribs or roughness on the inside surface of the device, additionally, a clip (9) is disposed on the outside of the device for convenient and hygienic storage of the device.

2. The device according to Claim 1, **wherein** a self-contained flashlight (5) is installed inside the upper portion of the housing (1); the said flashlight (5) has a battery inside its body, is turned on/off by pressing the push button switch (7) and emits light through the lens (6), with the light passing through the lower portion of the housing (1) of the claimed device and coming out of the open toothed end (3) of the housing (1), illuminating the area where this open toothed end (3) of the housing (1) is directed to, the push button switch (7) does not protrude beyond the cap (8) and when the push button switch (7) is pressed, it enters the housing (1) of the claimed device.

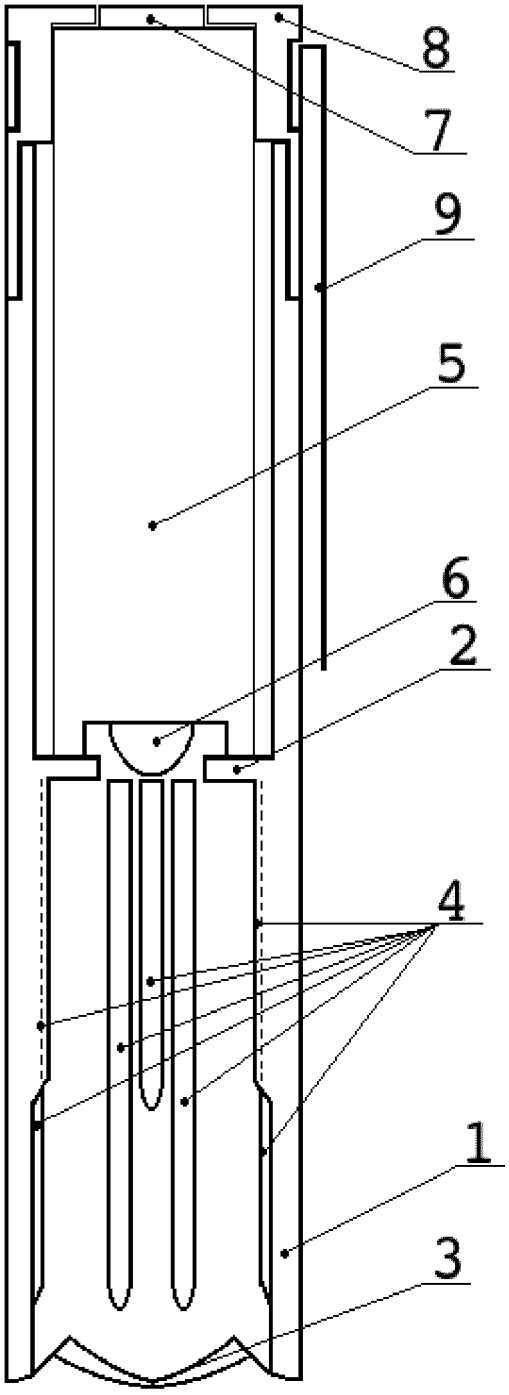

Fig.1

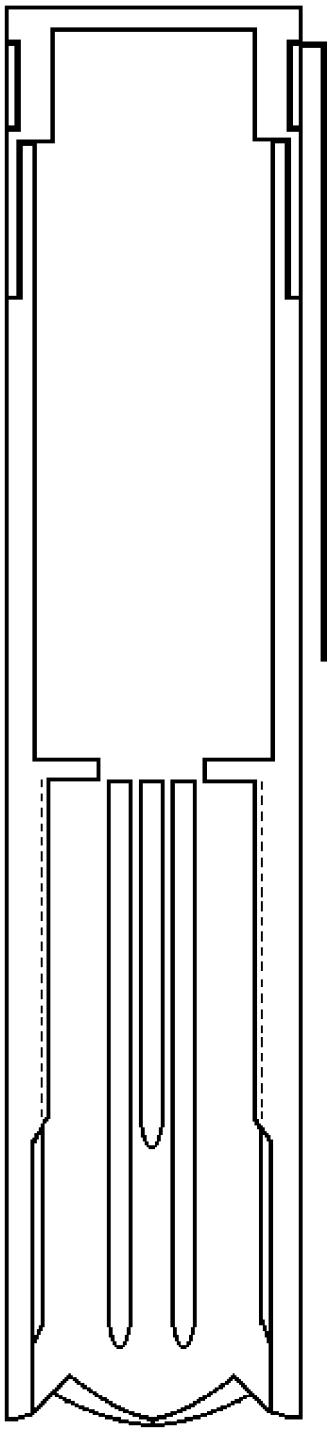

Fig.2

INTERNATIONAL SEARCH REPORT

International application No.
PCT/UA 2019/000133

A. CLASSIFICATION OF SUBJECT MATTER
A24F47/00; A24D1/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
A24F 47/00; A24D 1/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Espacenet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	RU 2061396 C1 (KHACHATUROV JURY RUBENOVICH [RU]) 10 June 1996 (10.06.1996) (the entire document)	1, 2
A	CN 2426281 Y (HUANG HAI [CN]) 11 April 2001 (11.04.2001) (the abstract; fig. 1)	1, 2
A	CN 201089589 Y (WANG JIANJUN [CN]) 23 July 2008 (23.07.2008) (the abstract; fig. 1)	1, 2
A	US 5529079 A (TU CHING S [TW]) 25 June 1996 (25.06.1996) (fig. 4)	1

☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
07 February 2020 (07.02.2020)	21 February 2020 (21.02.2020)
Name and mailing address of the ISA/ UA Facsimile No.	Authorized officer Telephone No.

Form PCT/ISA/210 (second sheet) (April 2005)

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/UA 2019/000133

RU 2061396 C1	1996-06-10	NONE
CN 2426281 Y	2001-04-11	NONE
CN 201089589 Y	2008-07-23	NONE
US 5529079 A	1996-06-25	NONE

Form PCT/ISA/210 (patent family annex) (January 2015)