

Aug. 29, 1950

L. UMAN
ASH TRAY

2,520,746

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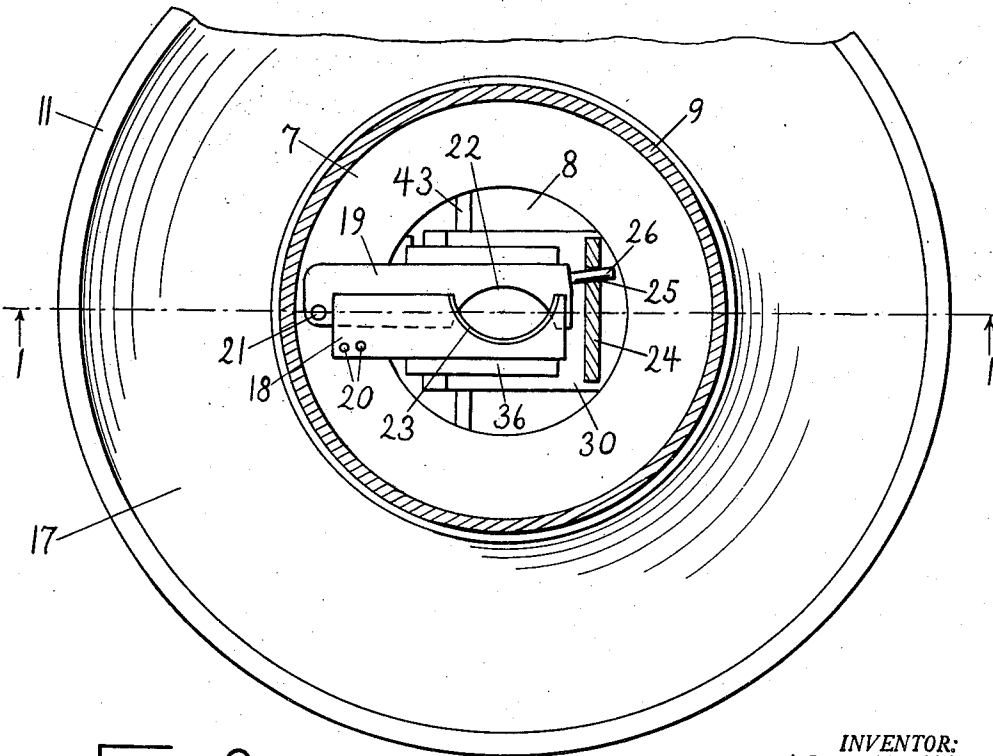
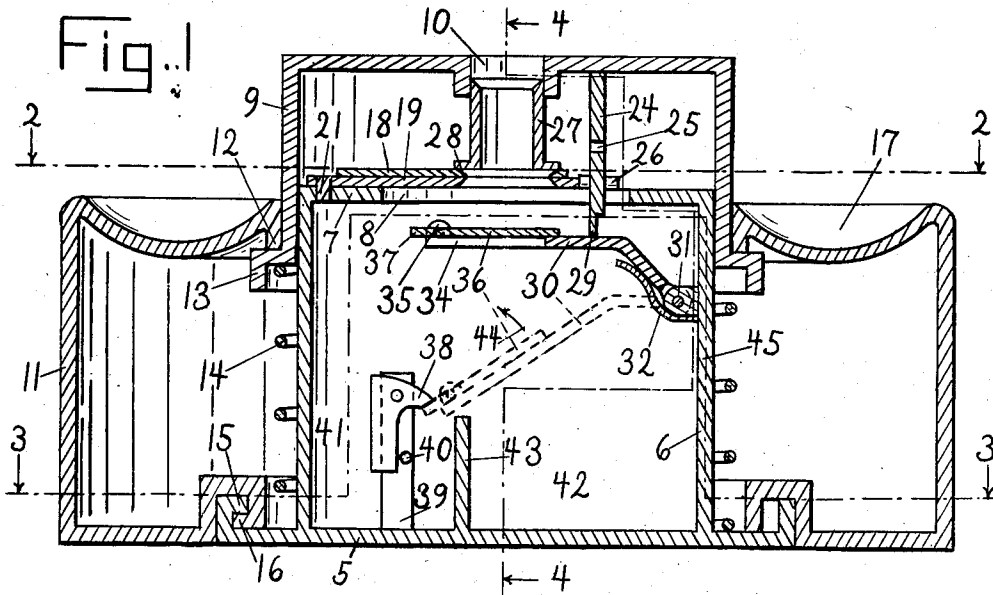


Fig. 2

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Fig. 3

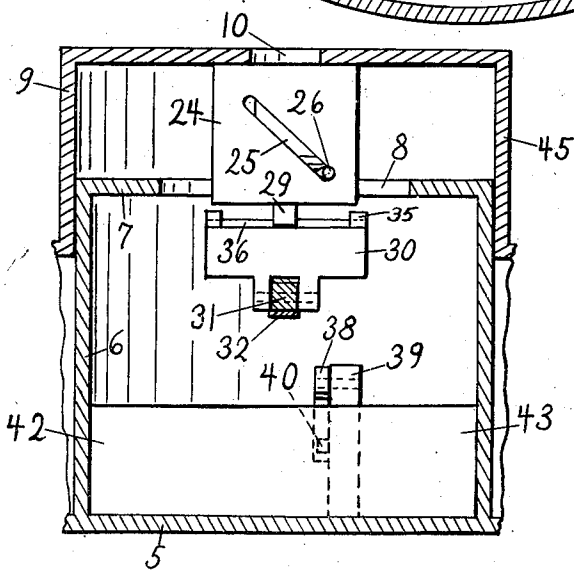
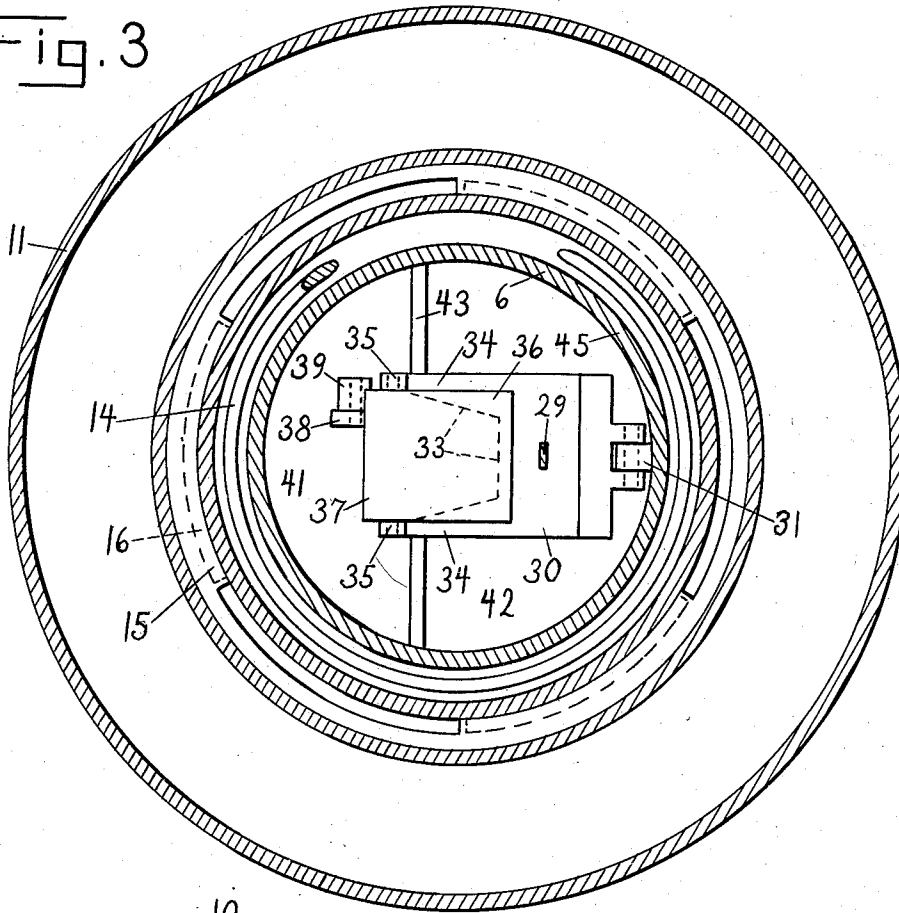


Fig. 4

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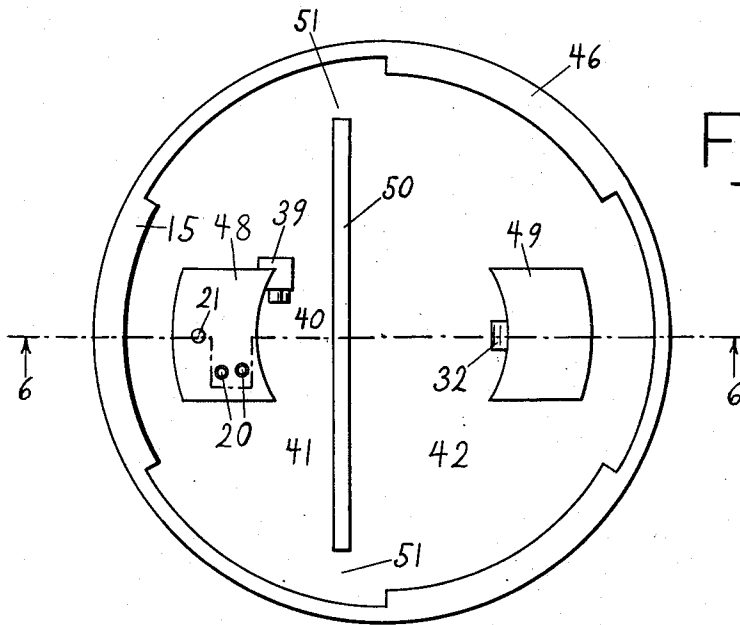


Fig. 5

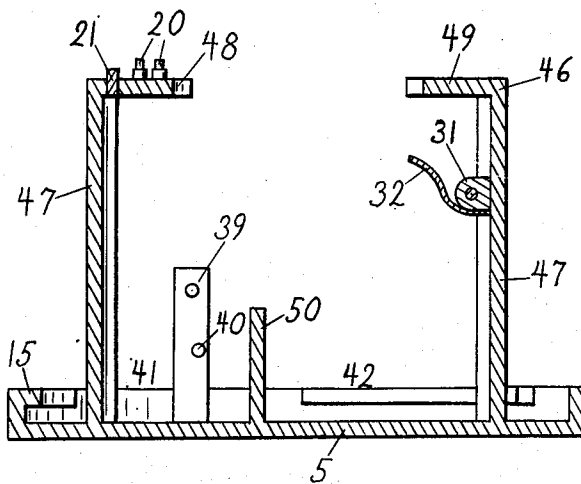


Fig. 6

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UNITED STATES PATENT OFFICE

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5 Claims. (Cl. 131-237)

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My invention relates to ashtrays or to receptacles for discarded ends of cigarettes or the like.

When cigarette ends are deposited in an ordinary ashtray, they continue burning until the entire end has been converted into ashes whereby considerable smoke is developed. This smoke originating from that part of the cigarette which previously has acted as a filter has an unpleasant odor, spoils the air of the room unnecessarily and is resented by most persons. An object of my invention is to avoid the development of this smoke and the mentioned disadvantages.

Other objects are to provide the ashtray with means separating the burning part of the cigarette end from the remaining part thereof, to provide the ashtray with two divisions or compartments, and to provide for deposition of the burning part in one compartment and of the remaining part in the other compartment.

Further objects are to provide an ashtray with a covered spaced divided into compartments for burning tips and for other parts of cigarette ends and, in addition, with an open cavity where ashes, or temporarily not used cigarettes can be deposited conveniently, and to provide for easy clearance of the covered compartments.

Still other objects are to provide cutting means in the ashtray, to arrange these cutting means in a position where they are protected from injuries, and to provide a stop under these cutting means at a distance equal to the common length of a burning cigarette tip whereby a burning cigarette end inserted between said cutting means will be cut close to the burning tip, to provide for mobility of the stopping member whereby this member will throw or guide the cut tip into the proper compartment, and to provide for passage of the remaining part of the cigarette end into the other compartment after the cooperating edges of the cutting means have been spaced again.

Still further objects are to operate the cutting means by a simple movement of a hand, to operate the cutting means by depressing the top of the ashtray, and to operate the stopping member by the same movement.

Still other objects are to obtain these objects by simple, reliable and inexpensive means and by a structure that can be easily manufactured and kept in good working condition.

While I preferably refer to cigarettes in this specification, I desire it to be understood that my invention applies also to other smoking materials and may be used, for example, for cigarillos

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or, with obvious modification of some measures, for cigars.

Still other objects and advantages will appear from the following description of an exemplifying embodiment of my invention, from the appended claims and from the accompanying drawings in which:

Fig. 1 shows a vertical cross-section of an illustrative embodiment of my invention, this cross-section being taken along the line 1-1 in Fig. 2. Fig. 2 shows a cross-section taken along the line 2-2 in Fig. 1, a marginal part of the ashtray being broken off. Fig. 3 shows a cross-section taken along the broken line 3-3 in Fig. 1. Fig. 4 shows a cross-section of the housing and cover taken along the line 4-4 in Fig. 1, the outer parts of the housing and the cover being broken off, and shows a view of parts positioned in the housing and cover, this view being seen from the right side in Fig. 1. Fig. 5 shows a top view of a body which may be used instead of the housing shown in Figs. 1 to 4, parts affixed to this body being included in this figure and other parts being omitted. Fig. 6 shows a cross-section taken along the broken line 6-6 in Fig. 5.

Referring to the drawings, numeral 5 indicates the bottom of a housing which further comprises a cylindrical side wall 6 and a ceiling 7 with an opening 8. A cover 9 has a side wall slidably contacting the upper part of the wall 6 and a top provided with a central opening 10. A casing 11 surrounds the housing and forms an extension thereof. The upper inner edge 12 of the casing 11 slidably contacts the lateral wall of the cover 9. The latter has an outwardly projecting rim 13 whereby the edge 12 forms a stop for the upward movement of the cover 9. The cover is urged to its upmost position by a spiral spring 14 positioned between the rim 13 and the bottom 5.

Preferably, the casing 11 is detachably affixed to the housing or to its bottom 5. For example, the outer rim of the bottom 5 has a hook-shaped cross-section with an inwardly projecting end 15, and the casing has a hook-shaped cross-section with an outwardly projecting end 16 reaching under the rim end 15. The rim ends 15 and 16 are cut away or omitted along arcs equally distributed over the circumference of the respective rims whereby the casing and the housing can be turned into a position where these projecting ends do not engage each other, and can be turned into an engaging position. Thereby the housing and the casing may be separated or

interlocked in a manner similar to a bayonet.

The upper surface of the casing 11 forms an annular cavity 17 where ashes or other materials may be deposited.

Cutting means are arranged under the opening 10 and are operated by pressing the cover 9 down. These cutting means may comprise two knives 18 and 19 of which one may be stationary and the other movable. The stationary knife 18 may be affixed to the ceiling 7 by rivets 20. The movable knife is connected to the ceiling 7 by a hinge 21. In the position of rest, the sharp edges 22 and 23 of these knives surround an opening which is substantially co-axial with the opening 10. When the knife 19 is turned about the hinge 21, its sharp edge 22 slides closely under the sharp edge 23 of the knife 18.

This movement is enforced by a guide member 24 affixed to the cover 9. The member 24 has a slot 25 running up-down in an oblique direction. A pin or projection 26 forming an extension of the movable knife 19 passes through the slot 25 and moves horizontally when the member 24 moves vertically whereby movement of this member swings the knife 19 around its hinge 21 and causes cutting operation of the edges 22 and 23.

A sleeve 27 is slidable in the opening 10 and has a lower rim 28 resting on the upper knife 18. The rim 28 forms a stop for the downwardly directed movement of the cover 9. When the cover is released, the spring 14 drives the cover and the member 24 back to the upper position, the slot 25 guiding the projection 26 and the knife 19 back to the original position shown in the drawings.

A projection or finger 29 extends down from the member 24 and contacts the upper surface of a member 30. The member 30 is hinged to an eye 31 which has a horizontal bore and may be affixed to the wall 6 by suitable means, for example, by solder. A spring 32 urges the member 30 against the finger 29. The free end of the member 30 is cut out along lines 33 bordering a free space positioned under the opening 10. Thereby the free end of the member 30 forms two lateral arms 34. The free ends of the arms 34 carry co-axial eyes or bearings 35.

A rectangular plate member 36 is provided with little pins turnable in the eyes 35. In the shown position, the plate 36 covers the space between the arms 34 and forms a stop for a cigarette end which may be dropped through the opening 10. The vertical distance between the plate 36 and the cutting edges 22, 23 is equal to or slightly larger than the average length of a burning cigarette tip. The member 36 forms a lever having a short arm 37 projecting beyond the free ends of the member 30.

When the cover 9 is pressed down, the finger 29 pushes the member 30 whereby the latter, together with the overlying plate 36, is turned down against the pressure of the spring 32 to the position shown in Fig. 1 in dotted lines.

A hook 38 projects into the path of the short arm 37 of the plate 36 at a short distance from the lowermost position of this arm. The hook 38 is hinged to a stationary post 39 which may be affixed to the bottom 5. The post 39 is provided with a stop 40 preventing the hook 38 from turning in counter-clockwise direction from the position of rest shown in Fig. 1. The downward moving arm 37 passes the hook 38, the latter giving way by turning in clockwise direction and immediately thereafter returning into the posi-

tion shown in the drawing whereby the arm 37 is caught under the hook 38.

When the member 30 turns up again, the arm 37 and the plate 36 are rotated about the axis of the eyes 35 by the resistance of the hook 38 as far as necessary in order to let the arm pass the tip of this hook. This turning movement of the plate 36 uncovers temporarily the free space between the arms 34. After having passed the hook 38 in upward direction the plate 36 falls back on the member 30.

The lower part of the inner space of the housing is divided into compartments 41 and 42 by a wall 43 crossing this space parallel to the axis of the eyes 35 and positioned substantially vertically below the lowermost position of this axis.

The described device operates as follows:

When a smoker has finished smoking a cigarette, he drops the remaining end, with its burning tip first, into the opening 10. The discarded end is stopped by the plate 36 on which it is supported in erect position. In this position the plane dividing the burning tip from the remaining part of the cigarette end is at the same level as the cutting edges 22 and 23.

Then the smoker presses the cover 9 down. Thereby the knife 19 is moved in the manner described before. Immediately after this knife has started moving, the cigarette end is gripped by the cutting edges 22 and 23. During the continuation of this movement, the burning tip is cut from the upper part of the cigarette end.

During this cutting operation, the member 30 and the plate 36 have turned down to the position shown in Fig. 1 in dotted lines. The burning tip drops on the plate 36 and may slide or roll along the upper surface of the plate to the left side in Fig. 1. The upper part of the cigarette end is supported in erect position by the knives 18 and 19 as long as the latter stay closed.

Then the cover 9 is released whereupon it returns to its upper position. At the beginning of this returning movement, the plate 36 is turned in the direction of the arrow 44 in the manner described before whereby the burning tip is thrown into the compartment 41 if this tip should not have dropped into this compartment before that time. This turning movement of the plate 36 uncovers an area or passage between the arms 34. Simultaneously, the knives re-open the passage between the cutting edges 22 and 23. The cut upper part of the cigarette drops through these passages between the cutting edges and between the arms 34 into the compartment 42.

Thereafter all movable parts of the device return to their original positions in which they rest until the device is operated again. The severed parts of the cigarette end are separated by the wall 43. The burning part will soon finish burning. The other part will not burn whereby the discarded cigarette end will not develop appreciable smoke.

In order to empty the compartments 41 and 42, the bottom 5 of the housing is detached from the casing 11 in the manner described before. Then the cover 9 is taken off and the housing is turned upside down whereby the contents of the housing drop through the opening 2.

The wall 6 of the housing 45 may have openings or interruptions, or a body 46 (see Figs. 5 and 6) may be used instead of the housing 45. The body 46 differs from the housing 45 in that two vertical posts or wall parts 47 replace the cylindrical wall 6, in that two smaller platforms 48 and 49 forming the tops of the posts 47 replace

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the annular ceiling 7 and in that a somewhat longer wall 50 having free end sides replaces the wall 43. In every other respect, the body 46 is identical to the previously described housing 45, and this body carries the same parts as the housing 45 in the same manner.

The casing 11 is connected to the bottom of the body 46 in the manner described before with respect to the identical bottom 5 whereby this casing closes the sides of the body 46 and, together with this body, forms a housing. The lower space of this housing is divided by the wall 50 into two compartments which are connected only by narrow gaps 51. These gaps are far from the central zone where burning tips fall as has been described before. The inner space of the casing 11 forms an enlargement of the space of the body 46 whereby the deposition of a large quantity of cigarette ends and ashes is possible. Another advantage is that the body 46 can be emptied without being turned upside down after the casing 11 has been detached.

I desire it understood that my invention is not confined to the particular embodiments shown and described, the same being merely illustrative, and that my invention may be carried out in other ways without departing from the spirit of my invention as it is obvious that the particular embodiments shown and described are only two of the many that may be employed to attain the objects of my invention.

Having described the nature of my invention, what I claim and desire to protect by Letters Patent is:

1. An ashtray comprising a housing, a movable cover for said housing with a top opening for the introduction of a burning end of an elongated substantially cylindrical smoking article, cutting means positioned under said opening, and a plate positioned under said cutting means at a distance about equal to the average length of a burning cigarette tip said cutting means being operative in a direction crossing the moving direction of said cover and deriving motion from the movement of said cover.

2. An ashtray comprising a housing, a movable cover for said housing with a top opening for the introduction of a burning end of an elongated substantially cylindrical smoking article, cutting means positioned under said opening, a movable plate positioned under said cutting means, and means for operating said cutting means and turning said plate into an inclined position.

3. An ashtray comprising a housing, a cover for said housing with an opening for the introduction of a burning end of an elongated substantially cylindrical smoking article, cutting means positioned under said opening, a member hinged to said housing and having an arm positioned lower than said cutting means and passing aside of a free space located vertically under said opening, a plate hinged to said arm and having a main part positioned at one side of its

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hinge and, in the position of rest, overlying a part of said member and said free space, said plate having another part positioned at the other side of its hinge, means for causing to and fro movement of said cutting means and of said member, and means for turning said plate during said fro movement of said member.

4. An ashtray comprising a housing, a cover for said housing with an opening for the introduction of a burning end of an elongated substantially cylindrical smoking article, a member hinged to said housing and having an arm positioned lower than said cutting means and passing aside of a free area located vertically under said opening, a plate hinged to said arm and having a main part positioned at one side of its hinge and, in the position of rest, overlying a part of said member and said free area, said plate having another part positioned at the other side of its hinge, means for causing to and fro movement of said cutting means and of said member, and means for turning said plate during said fro movement of said member, said latter means comprising a hook movably connected to said housing and having a tip positioned in the path of said other plate part.

5. An ashtray comprising a housing, a wall dividing the lower part of said housing into two compartments, a cover for said housing with an opening for the introduction of a burning end of an elongated substantially cylindrical smoking article, cutting means positioned under said opening and adapted to cut an introduced cigarette end into two parts, and means movably connected to said housing, positioned under said cutting means, forming a stop for the introduction of a cigarette end in one position, and, in another position, directing one part of a cut cigarette end in one of said compartments and letting the other part drop into the other compartment.

LEO UMAN.

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