Feb. 19, 1957 E. B. ROYLE 2,781,761

POCKET ASH TRAY

Filed Sept. 14, 1953

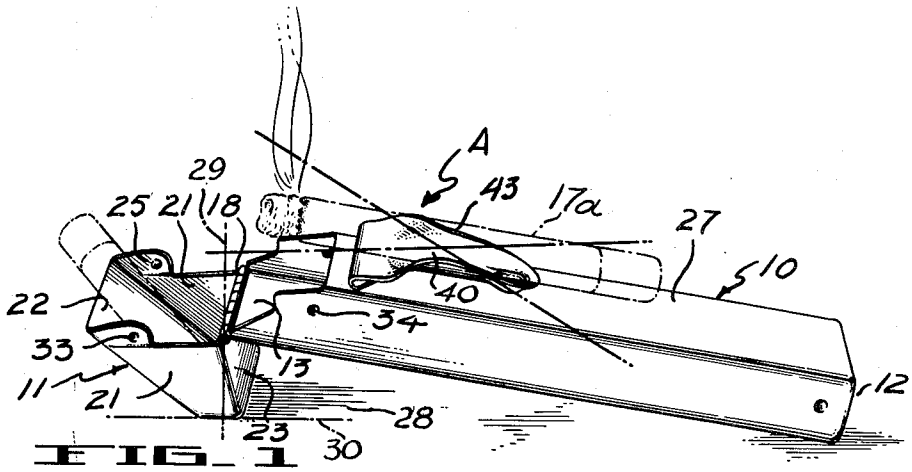

FIG_1

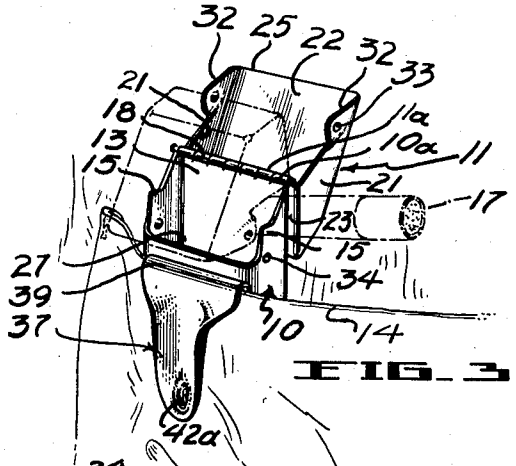

FIG_3

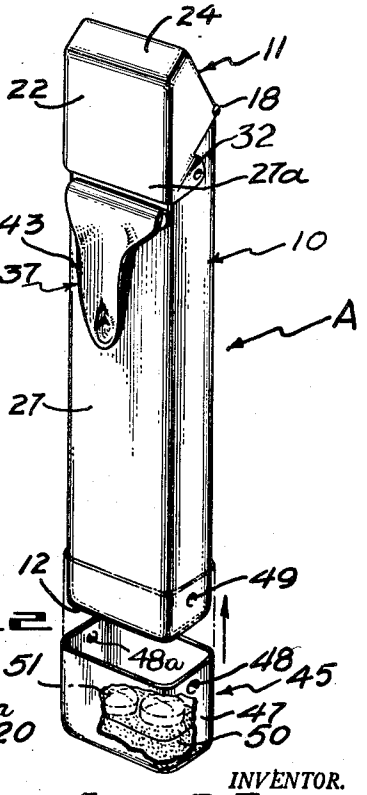

FIG_2

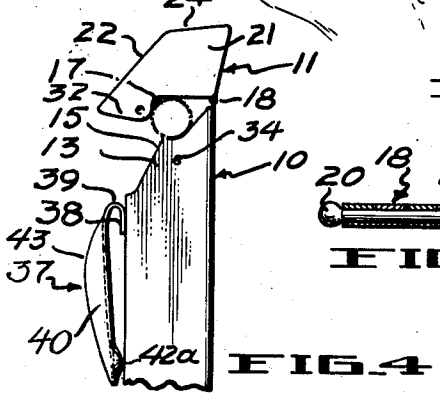

FIG_4

FIG_5

INVENTOR.
EDWIN B. ROYLE
BY
Hansen and Lane
ATTORNEYS

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POCKET ASH TRAY

Edwin B. Royle, Saratoga, Calif.

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2 Claims. (Cl. 131—241)

The present invention relates to an ash tray, and pertains more particularly to an ash tray which may be carried conveniently in the pocket, and may be used either in the pocket or resting on any suitable supporting surface.

The present invention is of the same general character as that disclosed in my co-pending application, Serial No. 337,077, filed February 16, 1953. A further object of the invention is to provide a pocket ash tray with an improved pocket engaging clip which also serves as a safe repository for a burning cigarette. A further object of the invention is to provide a pocket ash tray with a combined clip and cigarette holder formed to cause a cigarette placed thereon to gravitate into properly aligned position therein.

These and other objects and advantages of the invention will be brought out in the following description and the accompanying drawings, wherein:

Fig. 1 is a perspective view of an ash tray embodying the invention as it appears when resting on a flat surface, one cigarette being shown in broken lines resting on a combined pocket clip and cigarette holder, the central axes of cigarettes in misaligned positions being indicated in broken lines and a second cigarette being shown in snuffing position in the cover.

Fig. 2 is a perspective view of the device shown in Fig. 1 as it appears with the cap closed, a pill receptable being shown removed from the device, the broken lines indicating the assembled position of the pill holder.

Fig. 3 is a perspective view of the device as it appears when clipped into a pocket, the cap being shown in open position in solid lines, and in partially closed position to grip a cigarette in broken lines.

Fig. 4 is side elevational view of the device with the cap partially closed, the broken lines showing a cigarette gripped between the cap and body portion.

Fig. 5 is a fragmentary longitudinal sectional view through the hinge structure employed in the device shown in Figs. 1 to 4 inclusive.

In the illustrated embodiment of the invention, a pocket ash tray A comprises a tubular body portion or receptacle **10** of generally oblong, rectangular cross-sectional shape, and a cup-shaped cap **11** hingedly mounted thereon. Both the receptacle **10** and cap **11** preferably are fabricated from suitable metal, or molded from strong, heat resistant plastic material, many of which are well known to those familiar with the plastic molding art.

The receptacle **10** has one end thereof closed at **12**. Its other end **13** is open and slopes at an acute angle toward the front or outer side of the receptacle **10** when the device is clipped in position in a garment pocket **14** as shown in Fig. 3. A pair of cigarette engaging ears **15, 15** project upwardly, one from each of the sloping side edges of the open upper end of the receptacle **10**. These ears are concavely curved on their upper edges to conform substantially to the circumference of a cigarette **17** (Figs. 3 and 4) when gripped between the cap **11** and the receptacle **10**.

The hinge **18** which connects the cap **11** to the receptacle **10** is of the piano type, and consists of alternately interposed hinge segments **10***a* and **11***a* formed, respectively, from the material of the receptacle **10** and cap **11**.

The pintle **19** of the hinge consists of a length of strand of strong, fusible material, such as the plastic known as nylon, and having a diameter to fit closely within the relatively interposed hinge segments **10***a* and **11***a*. The strand **19** when inserted in the hinge segments, is of a length to project beyond both ends of the hinge a slight distance. These projecting portions are heated, as by passing a flame over them, to fuse them into ball-like enlargements **20, 20** which secure the pintle against withdrawal. The formation of the ball ends **20, 20**, in accordance with a well known phenomenon, is caused by the surface tension of the strand material as the latter reaches a melted condition. This closely fitted plastic pintle produces a feeling of lubricated firmness when opening or closing the cap **11**, and prevents any loose swinging action of the cap, which would be undesirable.

The cup-shaped cap **11** is in the form of a truncated wedge, the side walls **21, 21** thereof being parallel to each other, and the front and rear walls **22** and **23** converging toward the closed, flat, upper end **24** thereof. The open end **25** of the cap slopes at an angle to conform to, and to close the open end **13** of the receptacle **10**. The front and rear cap walls **22** and **23** are so disposed that when the cap **11** is closed, as shown in Fig. 2, the front wall **22** of the cap will be substantially parallel with the front wall **27** of the receptacle **10** and will overlap it slightly as at **27***a*, while the rear cap wall **23** will slope forwardly from the hinge **18**. The closed end **24** of the cap is disposed at an angle of slightly less than 90° to the rear cap wall **23** so that when the cap is opened to the position shown in Fig. 1, and the device is placed on a generally horizontal supporting surface **28**, a plane represented by the broken line **29** through the axis of the hinge **18** and substantially perpendicular to the plane of the supporting surface **28**, represented by the broken line **30**, will fall substantially centrally of the closed end **24** of the cap. Thus, any downward stress imposed on the cap hinge **18** by the weight of the receptacle **10**, or even by the additional weight of one's hand not shown resting thereon, will not tend to collapse the cap or to swing it out of its supporting position shown in Fig. 1.

A pair of ears **32, 32** are formed on the side walls **21, 21** of the cap **11** at its open end **25**, and these ears are offset laterally outwardly from the planes of their respective side walls so as to overlie the sides of the receptacle **10** when the cap is in its closed position shown in Fig. 2.

A pair of inwardly deformed embossments **33, 33** are formed in the cap ears **32, 32** to fit into corresponding indentations **34, 34** provided in the side walls of the receptacle **10** to retain the cap in closed position.

The position of the cap ears **32, 32**, as best shown in Fig. 4, correspond substantially with the position of the ears **15, 15**, when provided, on the upper edges of the receptacle **10**. Therefore, when the cap **11** is partially closed to grip a cigarette **17** (Fig. 3) positioned inwardly of the ears **15** and **32**, and with the lighted end of the cigarette within the confines of the receptacle **10**, the ears **15** and **32** partially surround the cigarette and prevent it from becoming displaced downwardly out of gripped position.

For securing the device A in upright position in a garment pocket **14** (Fig. 3) a pocket engaging clip **37** is mounted on what may be referred to as the outward

side of the receptacle **10** just below the open end **13** thereof.

The clip **37** comprises an attaching portion **38** which may be secured as by silver soldering to the receptacle **10**. The metal of the clip **37** is bent reversely at **39** to bring the clip arm **40** alongside, and in slightly spaced relation to the receptacle **10**. The metal of the clip arm **40** is curved concavely outwardly to provide a trough-shaped cigarette support approximating in size and shape the exterior curvature of a cigarette for use when the device A is placed on a supporting surface **28** (Fig. 1). A depression **42***a* is provided near the free or lower end of the clip arm **40** which forms an embossment on the inner side of the arm for gripping the cloth of the pocket **14**.

The side edges of the troughed clip arm **40** are curved convexly at **43** (Fig. 4) and diverge toward the reverse bend **39** therein (Figs. 1, 2 and 3). This formation of the clip arm **40** causes a cigarette **17***a* (Fig. 1) which may be inadvertently laid thereon at a slight acute angle to the longitudinal center line of the clip arm **40** to gravitate into a position of cradled alignment therein as shown in Fig. 1.

Many people at the present time require frequent medication in the form of pills, such as, for example, cortisone. Others, in still larger number, as a substitute for sugar, carry their own saccharine. When carried in the pocket in ordinary bottles or boxes such pills rub against each other and against the interior of the container and as a result become chipped, broken and reduced in size.

A container **45** for safely holding such small fragile or friable articles is shown in Fig. 2. This container consists of a cup-shaped member **47** which is of a size to fit telescopically over the lower end of the receptacle **10** and is provided with indentations **48, 48** in opposite sides thereof to provide inwardly extended embossments **48***a* which are positioned to fit into correspondingly shaped indentations **49** provided therefor in the side walls of the receptacle **10** near the lower end thereof. A cushion **50** of foam rubber or other softly resilient material is fitted into the lower end of the container **47**, and is of a size to substantially fill the container below the level of the bottom of the receptacle **10** when the container **47** is fitted thereon as indicated in broken lines in Fig. 2. Pills **51** or other articles may be dropped onto the cushion **50**, and when the container **47** is fitted onto the lower end of the receptacle **10**, the pills **51** are pressed into the body of the cushion **50** which gently presses them against the bottom of the receptacle **10** and thus preserves them from breakage and wear.

For use of the device as a pocket ash tray, it may be clipped into a garment pocket **14** and the cap **11** swung open to the position shown in the Fig. 3. The friction of the hinge pintle **19** on the hinge segments **10***a* and **11***a* supports the cap in adjusted position. In this position of the device, either the cap **11** or the receptacle **10** may be used as a depository for ashes or discarded cigarette butts. In this connection, it will be noted that the sloping open ends **13** of the receptacle **10** and **25** of the cap **11** cause the inner walls of both of these members (Fig. 3) to extend up above their respective outer walls. This arrangement protects the clothing against accidental contact with the tip of a lighted cigarette in flicking the ashes therefrom into the device, or in dropping a lighted cigarette butt into the receptacle **10** or cap **11** to discard it.

In the event that a discarded cigarette butt is dropped into the cap **11**, when the cap is closed with the receptacle **10** in upright position such butt, as well as any ashes which may be in the cap, will gravitate into the receptacle **10**.

It is not necessary to extinguish a cigarette when discarding it, since when it is dropped into the receptacle **10** it goes out almost instantly due to lack of sufficient oxygen to maintain combustion. Therefore, there is never any unpleasant acrid odor of smouldering tobacco as in many larger more open types of ash trays.

When one is smoking and it becomes desirable to free one's hands momentarily with no convenient place to lay the cigarette, the lighted end of the cigarette **17** may be placed within the confines of the open end of the receptacle **10** and the cap **11** closed sufficiently to grip the cigarette gently as shown in Figs. 3 and 4. The ear **32** on the cap **11**, as well as the ear **15** on the receptacle **10**, when provided, support the cigarette **17** against downward or outward displacement. Should the cigarette be left in this position long enough to burn to a point closely adjacent to the gripped area thereof, the conductivity of the parts gripping the cigarette will lower the temperature of its burning tip and will extinguish it, so that there is no danger of the cigarette burning itself free from its gripped position with possible resultant damage.

In addition to its use in a garment pocket, the device is not only usable as an emergency table type ash tray, but also has some actual advantages over many conventional types of table top ash trays. As shown in Fig. 1, the device may be placed on any generally horizontal supporting surface **28** with the cap **11** opened so that the device will rest on the flat closed end **24** of the cap, and also on the closed lower end **12** of the receptacle **10**. In this position, ashes may be deposited either in the cap **11** or in the open end **13** of the receptacle. In this position of the device, the troughed clip arm **40** serves as a convenient support for a lighted cigarette **17***a* (Fig. 1). The curvature of the edges **43, 43** of the sides of the clip arm **40**, together with their outward spreading as they approach the reverse bend **39** in the clip, cause a cigarette placed thereon in slightly misaligned condition to gravitate into aligned cradled position in the clip. This is important, since if the cigarette is properly cradled in aligned position in the clip, when it burns down to a point closely adjacent to the clip, the conductivity of the clip material will cool the burning tobacco below its temperature of combustion and thus will extinguish it. If the cigarette remained in misaligned position on the clip, it might burn down to an unbalanced condition on the clip, topple or roll off the clip and cause burn damage to the table or other object where it came to rest.

The receptacle **10** provides a convenient depository for a number of cigarette butts and may be easily emptied when the user goes out of doors or has access to a conventional larger ash tray or other suitable depository for its contents.

While I have illustrated and described a preferred embodiment of the present invention, it will be understood however, that various changes and modifications may be made in the details thereof without departing from the spirit and scope of the invention as set forth in the appended claims.

Having thus described the invention, what I claim as new and desire to protect by Letters Patent is defined in the following claims.

I claim:

1. In a pocket ash tray comprising an elongated ash and cigarette butt receiving receptacle open at one end and closed at the other, a cup-shaped cap formed to close the open end of said receptacle, and a hinge pivotally connecting an edge of the cap to a side of the receptacle at its open end; a pocket clip comprising an attaching portion attached to the opposite side of said receptacle from said hinge adjacent the open end of said receptacle, a transversely troughed clip arm secured at one end thereof to said attaching portion and extending from the attaching portion longitudinally alongside said receptacle toward its closed end, the trough curvature of the clip arm approximating in size and shape the exterior curvature of a cigarette, the bottom of the trough being straight to receive and support a lighted cigarette placed in the trough of the clip with the receptacle in reclining position with its clip side uppermost, and the cigarette is positioned with its lighted end extending over the open end of the receptacle when the cap is opened approxi-

mately 90°, and an embossment formed on the free end of said clip arm and extending toward the receptacle to space the clip from the receptacle and to grip a piece of pocket fabric inserted between the clip and the receptacle.

2. In a pocket ash tray comprising an elongated ash and cigarette butt receiving receptacle open at one end and closed at the other, a cup-shaped cap formed to close the open end of said receptacle, and a hinge pivotally connecting an edge of the cap to a side of the receptacle at its open end; a pocket clip comprising an attaching portion attached to the opposite side of said receptacle from said hinge adjacent the open end of said receptacle, a transversely troughed clip arm secured at one end thereof to said attaching portion and extending from the attaching portion longitudinally alongside said receptacle toward its closed end, the trough curvature of the clip arm approximating in size and shape the exterior curvature of a cigarette, the bottom of the trough being straight, and the upper edges of both side walls of the clip arm forming the trough therein being arched from a higher medial portion toward both ends thereof, whereby a lighted cigarette, laid at an acute angle to the length of the trough at the higher central portion thereof with the receptacle in reclining position with its clip side uppermost and the cigarette is positioned with its lighted end

extending over the open end of the receptacle when the cap is opened approximately 90° will gravitate into the trough of the clip arm, and an embossment formed on the free end of said clip arm and projecting toward the receptacle to space the clip arm from the receptacle and to grip a piece of pocket fabric inserted between the clip arm and the receptacle.

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