Oct. 24, 1950 J. X. SNADDEN 2,527,461

CIGARETTE RECEPTACLE AND EXTINGUISHING MEANS

Filed May 11, 1949

FIG. 1.

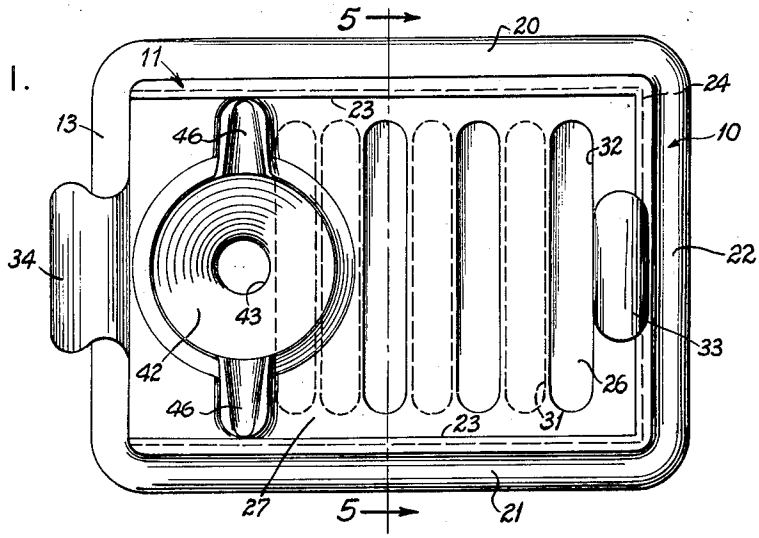


FIG. 2.

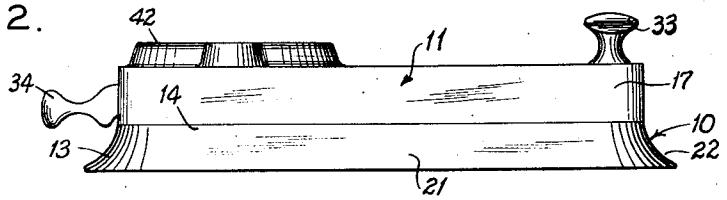


FIG. 3.

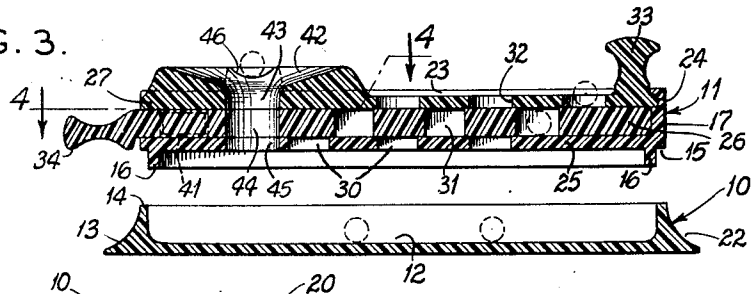


FIG. 4.

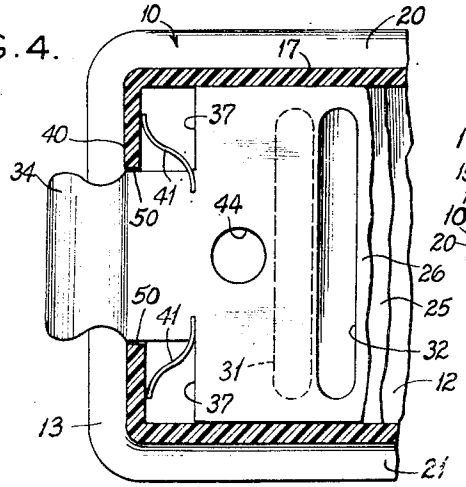
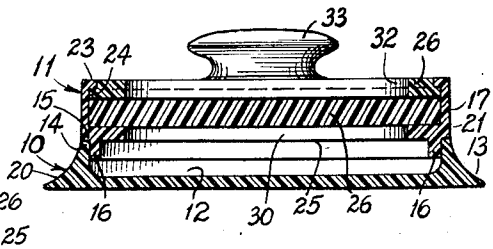


FIG. 5.



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CIGARETTE RECEPTACLE AND EXTINGUISHING MEANS

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6 Claims. (Cl. 131—235)

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This invention relates to improvements in cigarette receptacles and extinguishing means, and more particularly to a smoker's accessory fulfilling the purposes stated in the title, and of such nature that the improvements may be embodied in a low cost, light weight, easily manipulable device for extinguishing, and thereafter confining a quantity of discarded cigarettes or the like.

This designer is aware of certain attempts heretofore made toward the design of cigarette extinguishers, including some such articles which function by exclusion of air from the discarded cigarette to terminate burning thereof. One example of such device is shown and claimed in Patent 1,912,598 issued to this applicant June 6, 1933. The device therein disclosed, functions admirably for its intended purposes, but presents certain dimensional objections and production limitations now overcome.

The present improvements serve to correct the noted shortcomings and those presented by other designs. Such current developments may be summarized as objectively leading to a low-cost, relatively flat extinguishing receptacle, which is more easily cleaned, more easily manipulated, and presents other functional and structural advantages over most of the older forms of cigarette extinguishers.

Certain further objectives of the present improvements are realized in novel assembly features, greater ease of cleaning and easier access to all parts; a more rugged and sturdy character of the parts; visibility to the user of the various movable parts, as well as a perfected design making for simplicity and low cost when formed of a molded composition, such as certain of the synthetic resins and plastic compositions now available for production of articles of this type.

The foregoing and numerous other objects and advantages will more clearly appear from the following detailed description of a presently preferred embodiment of the invention, particularly when considered in connection with the accompanying drawing, in which:

Fig. 1 is a top or plan view of a combined cigarette ash tray and extinguisher embodying the present improvements;

Fig. 2 is a side elevational view of the assembly of Fig. 1;

Fig. 3 is a longitudinal sectional view of the device of Fig. 1, taken in a vertical median plane therethrough;

Fig. 4 is a fragmentary sectional elevation of one end of the structure as taken in staggered

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horizontal planes particularly located by line 4—4 of Fig. 3, and

Fig. 5 is a transverse sectional view taken in a vertical cross plane and particularly located by line 5—5 of Fig. 1.

Referring now by characters of reference to the drawing, the present extinguisher improvements are shown as incorporated in a cigarette tray consisting of two major components viz., a lower section generally indicated at 10, and an upper section generally indicated at 11, the sections 10 and 11 together serving as a rest for cigarettes in the course of burning, also as a receptacle for ashes and discarded cigarettes, and containing as well the noted extinguisher provisions.

The reservoir or receptacle is characterized by a relatively flat chamber 12, which as will appear, serves as a retainer for the accumulated ashes and burned cigarettes or butts. This section is characterized by an outwardly flared flange 13 increasing its base of support and hence its stability, an upwardly extended planar-top flange 14, the horizontal perimeter of flange 14 constituting a seat normally abutted by an undercut shoulder portion 15 of the upper section, with a depending flange 16 of the latter sleeved just inside of the flange 14 to provide an interfitted partly nested relation of the sections.

The upper section 11 of the assembly includes a perimetral body flange or band 17 which is projected inwardly along two of the sides 20 and 21 of the section 11, and similarly along that end of the assembly designated at 22. These inwardly projecting portions are designated at 23 and are in the form of a shallow flange each provided with an undercut groove 24 for the slidable and guiding reception of a top plate member to be described.

Preferably formed integrally with the body of the upper section 11, is the lowermost of a stack or superposed group of three plate or deck elements, such lowermost plate being indicated at 25. Resting slidably upon the plate 25 is an intermediate plate 26, which for reasons to be stated is preferably of a somewhat greater thickness than plate 25. Slidably mounted upon the plate 26, and by preference immediately adjacent thereto, is a top plate 27.

As will best appear from Figs. 1 and 4, each of the plates 25, 26 and 27 is provided with at least one and preferably with a series of uniformly spaced elongate openings, slots or apertures, these apertures in the lower plate 25 being desig-

nated at 30, and a correspondingly spaced series of apertures in the intermediate plate 26, designated at 31. A similar pattern and arrangement of elongate ports is provided in the uppermost plate element 27, these latter passages being indicated at 32.

It is a preference so to proportion, as to length and width, the several apertures 30, 31 and 32 that each is only of slightly greater length than the largest commercial size of cigarette, and the width of each said slot not greatly exceeding the diameter of a standard or commercial cigarette. The depth of the plates 25, 26 and 27 may be arrived at in accordance with requisite strength of material, consistent with their relatively large apertured areas, with the exception of the intermediate plate 26 which should be of such thickness or gauge that each of the slotted openings 31 therein will be of a depth at least equal to, and preferably slightly greater than the diameter of the cigarette. A suitable proportion of these parts and of the slots, as well as the dimensions of the plate and slots are suggested, but without intended limitation, by the dotted circles of Fig. 3. Such proportions conduce to the quickest and most facile extinguishing function of the apertures 31 of plate 26, consistent with certainty of operation, as will appear.

It is a preference so to space the several elongate ports or slots laterally of each adjacent such opening in the same plate, a distance slightly greater than the slot width, this relation best appearing from Fig. 3, and resulting in the fact that, with the three plates 25, 26 and 27 normally related as shown by Fig. 3, each of the bridges between adjacent slots will serve fully to cover and to extend slightly beyond and thus overlap one of the slots of the next adjacent plate. Thus, as will appear, the slots of the several plates arranged one above another as shown, will be staggered or offset in directions lengthwise of the rectangular assembly and, as will appear, in a direction of sliding movement of at least one of the slidable plates. Although a series of three such slotted openings is provided in each of the decks or plates, no limitation as to any practical number thereof is thereby intended.

It is a preference to form each of the several parts thus far described, as by molding of a synthetic resin of molding type, for example a suitable thermoplastic or thermosetting resin exhibiting upon cure, the requisite strength, smoothness of surface for ease of cleaning, and other desired characteristics. Obviously other materials such as metal may be employed.

It is a preference to provide for a guided linear movement of the upper plate or slide 27, which as noted, is provided with lateral margins slidably engaging the grooves 24. Suitable stops (not shown) may if desired be provided to limit the movement of the upper plate or slide to the left in Fig. 1, such movement being facilitated by grasping an integral upstanding knob 33.

Provision for selective register of slots 31 and 30 may consist of a provision for slidable actuation of either of the intermediate plate 26 or the lower plate 25, it being preferred in the present embodiment to allow a shift of the plate 26 through a distance sufficient to bring each of the extinguishing chambers or slots 31 of plate 26 into overlying register with a corresponding such slot 30 of the plate 25. Provision for a guided reciprocal movement of plate 26 is best seen from Fig. 4 showing the side margins of plate 26 to be in slidable guided engagement with the vertical side wall portions inside of the body band 17. A pull knob 34 is provided as an integral molded extension of the plate 26, and vertical faces or shoulders 37 will, when the slide 26 is fully actuated to the left Fig. 4, almost abut the inside surface of the portion of the body at the end 40 thereof, at which times the springs 41 will lie straight and flat between elements 40 and 37. Return actuation of slide or plate 26 is facilitated, for example by utilizing one or a pair of leaf springs 41. One end of each spring is shown as set into the neck of material connecting the slide 26 with the knob 34, with the free ends of these springs engaging and working upon the inside vertical surface of the end 40 of the body.

A further practical provision is found in the present assembly in an annular ash ring or socket 42, the sloping surface of which is directed toward a passage shown as having a circular section and indicated at 43 in the top plate 27. The passage 43 is normally in line with a similar neck or passage 44 in the plate 26, aligned with which is a continuation 45 of this depthwise ash passage, in the lowermost plate 25. Extended exteriorly and radially of the formation 42 are a pair of cigarette rests 46, the number and location of which are matters of choice.

The manner of assembly of the parts described is felt to have become apparent from the foregoing description of elements, but it may be noted for completeness that for dumping and cleaning the ash receptacle proper, it is merely necessary to lift section 11 from section 10 and to dump the latter, followed by restoration of the upper section to its position shown, in which the flange 16 is sleeved within the upstanding flange 14 of the base section. Assembly of the removable plate elements in the upper section 11 will, now obviously, be made by insertion, first, of the intermediate plate 26 depthwise through the top opening of the upper section, then retracting the springs 41 to seat them in place as shown by Fig. 4. The plate 26 is now in operative position in which its sides are guided between the inside surfaces of the portions 17 of the body, the neck carrying the knob 34 being guidedly disposed in a rectangular recess of the end wall, and indicated at 50. With the intermediate slide thus assembled and slidably resting upon the top surface of the lower plate 25, the top or uppermost plate 27 is inserted from the left hand end (Fig. 1) so that its undercut side margins will enter the grooves 24, the top slide or plate being moved to a normal position as shown by Figs. 1 and 3. It will now appear that the groove-retention of the upper plate 27, will serve to retain in assembly the intermediate plate 26.

The extinguishing function and disposal action of the staggered ports or slots of the three superposed plates, is thought to have become apparent from the foregoing detail of description, but it may be noted for completeness that upon completion of smoking, the cigarette is discarded by presenting same parallel to the top plate and in one of the openings 32 thereof so that it lies lengthwise in the top-open recess. It should be noted that no usual snubbing action is necessary for extinguishing. When it is desired to extinguish the yet burning but discarded cigarette or the like, the top slide is actuated to the left of Figs. 1 and 3, a distance corresponding approximately to the width of one slot. This movement brings the cigarette over a correspond-

ing extinguishing recess or chamber **31** of the intermediate plate. A restoring movement, by shifting the upper plate to its normal position, serves to cover the discarded cigarette, which is now fully enclosed in the restricted atmosphere of a chamber in the intermediate plate, which chamber is covered top and bottom and the sides of which are defined by the side walls of the slot, as suggested by the dotted circle in the intermediate slide (Fig. 3). A few seconds time in this position is sufficient to starve the restricted atmosphere therein, of oxygen adequate to support combustion. When the several chambers of the intermediate slides are filled, or otherwise as desired, the knob **34** is drawn to the left (Figs. 3 and 4) sufficiently to bring the occupied chambers or slots thereof, each over a corresponding discharge slot or port in the plate **25**, whereupon the one or more discards will fall by gravity through the passage or passages **30**.

The description has thus far principally for brevity, dealt with a tray and extinguisher combination for cigarettes. It will be understood of course that the stated field of usage is without limitation, and the description and claims are to be so interpreted, inasmuch as other forms of tobacco, for example so-called little cigars may with equal facility be extinguished and disposed of in a combination such as that described.

Although for completeness there is described in detail a single selected embodiment of the improvements, such detail should be understood solely in an instructive, rather than in any limiting sense, inasmuch as many variants are possible within the fair scope of the claims hereunto appended.

I claim as my invention:

1. In a cigarette extinguisher, a receptacle formed to provide an ash chamber, three superposed, apertured decks above said chamber, two of which are guidedly linearly shiftable, each of said decks being provided with an elongated opening of a length and width to receive and permit passage therethrough of a cigarette, said openings in the decks being normally relatively offset in a direction of movement of the shiftable decks.

2. In a cigarette tray and extinguisher, a receptacle for the accumulation of discarded cigarettes, three apertured plates arranged on above another and atop the receptacle, two of said plates being guidedly shiftable, and each of said plates being provided with an elongated aperture of a length and width to receive and permit passage therethrough of a discarded cigarette presented parallel to the plate, the apertures of the plates being relatively offset in a direction of shifting movement of one of the plates, and the intermediate such plate being characterized by a thickness in its apertured region, such that the aperture may at times contain a discarded cigarette.

3. In a cigarette extinguisher and ash receiver, a two-part container, an upper part of which rests on the lower to provide a normally closed ash receptacle defined by and between the parts, an arrangement of three planar members in said upper part, arranged one above the other in the order of upper, intermediate and lower members, the upper such member being shiftable through at least a distance exceeding the diameter of a conventional cigarette, and one of the intermediate and lower plates being shiftable, each of said planar members being provided with a cigarette slot each such slot being of a proportion to receive and pass therethrough, a cigarette presented to the slot in a direction parallel to each member, the slots of the three members being normally so staggered that the slots of adjacent such members are normally out of register, and will preclude the passage of a cigarette through the slot, the slot in the intermediate plate being of a depth, and the slot otherwise so proportioned as to contain fully the cigarette between imperforate areas of the upper and lower planar members, whereby to form therewith an extinguishing chamber.

4. In a cigarette tray and extinguisher, a container providing in its lower portion a receiver for ashes and discarded cigarettes, and in its upper portion an arrangement of three flat slotted plates arranged one above another, the upper such plate being shiftable to bring its slot into register with the slot of the intermediate plate, and one of either the intermediate or lower plates being shiftable to effect register between the slot of the intermediate plate and the slot of the lower plate, the three said plates being provided with registering depthwise ash passages normally in alignment and arranged to enable deposit of ashes therethrough from the top of the assembly directly to said ash receiver.

5. In an ash tray of extinguishing type for cigarettes and the like, an ash container forming the lower part of the tray, a closure portion for said container comprising three apertured plates, each of said plates having a series of spaced slots, each slot being of elongate linear shape and proportioned to pass therethrough a discarded cigarette, said plates being arranged in superposed relation, the uppermost and intermediate said plates being shiftable, and the lower such plate being fixed, and the plates normally occupying relative positions such that the slots of the intermediate plate are out of register with corresponding slots of both the upper and the lower said plate.

6. In a combination cigarette tray and extinguisher, a container body formed of a molded material and including a lower chambered section for the reception of ashes and discarded cigarettes, an upper section in interfitting relation with, and mounted detachably upon the lower section, the upper section including a fixed slotted plate, an intermediate plate slidably mounted upon the first or lowermost plate, and a third or upper such plate slidably mounted for movement over the second or intermediate plate; each of said plates characterized by a series of laterally spaced elongated ports arranged in parallel relation with their major axes arranged transversely of the plate in which they are formed, each of said slots being of a length and width not substantially larger than a commercial cigarette, and said intermediate plate being of a thickness such that each of the slots therein will substantially fully contain such a cigarette, the three said plates being arranged in assembly so that the slots of said upper plate are normally out of register with those of the intermediate plate, and the slots of the latter out of register with those of said lowermost plate, the uppermost plate and the upper section of the receptacle provided respectively with marginal slide portions and grooves to accommodate such portions whereby the uppermost plate is shiftably retained in assembly and serves to hold the intermediate plate in assembly, the intermediate plate being shiftable lengthwise of the container a distance sufficient to bring the slots of the intermediate plate

into register with corresponding slots of the lowermost plate, a spring coacting with the intermediate plate and arranged to urge the intermediate plate into its normal position such that its slots constitute, in coaction with the imperforate areas of the upper and lower plates, extinguishing chambers, the upper plate being normally so located that the slots therein are out of communication with corresponding slots of the intermediate plate.

JOSEPH X. SNADDEN.

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