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(54) Ash tray

(57) An ash tray comprises at least one cigarette-receivable recess in an upper surface, the said one or each recess comprising a generally U-shaped channel whose width and/or depth are sufficient to reduce the combustion rate of and/or extinguish a burning cigarette when the burning end reaches or is located within the recess.

Cigarettes may be retained or extinguished more safely when not being smoked by placing them in one of the recesses. Extinguished cigarettes need not be damaged, can be re-lit and can be made to burn more slowly so promoting economy.

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The drawing(s) originally filed was/were informal and the print here reproduced is taken from a later filed formal copy.

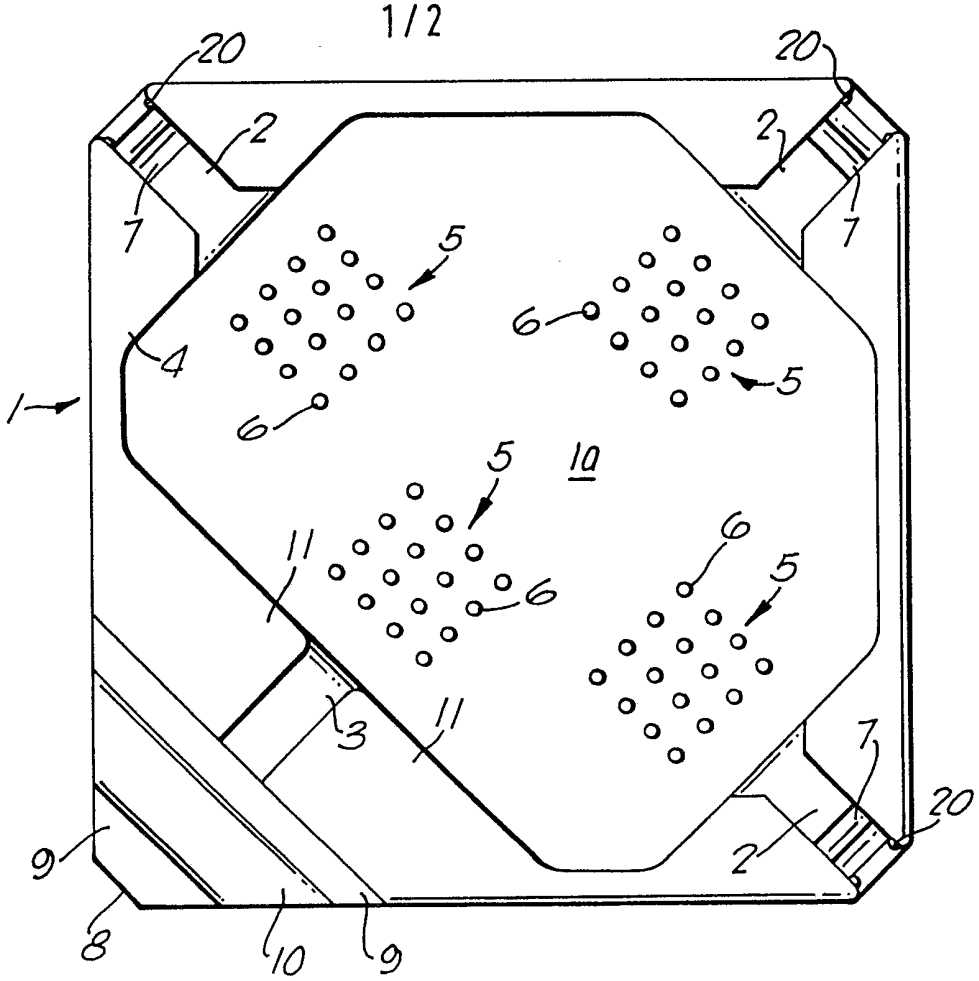

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FIG. 1.

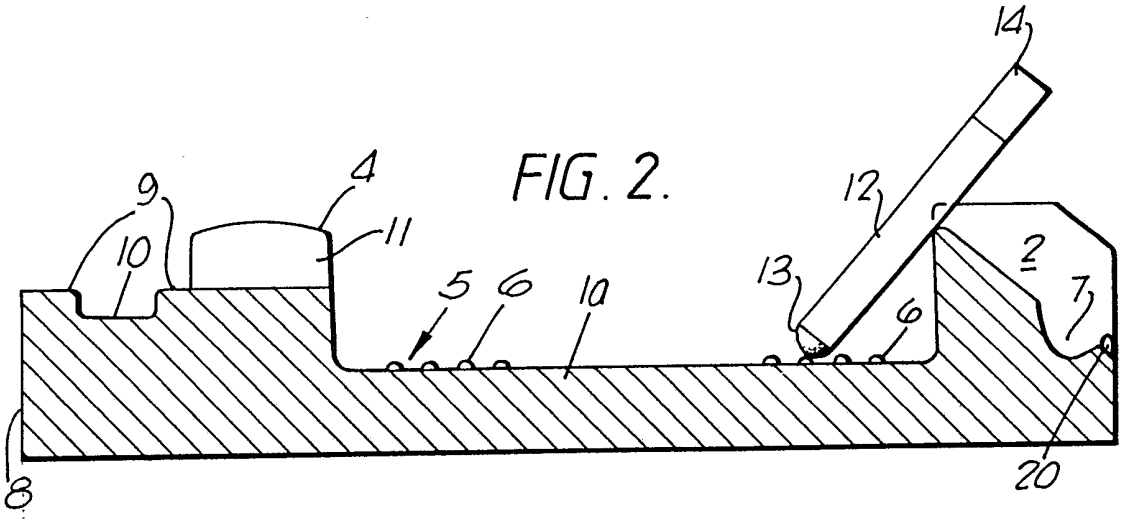

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FIG. 2.

FIG. 3.

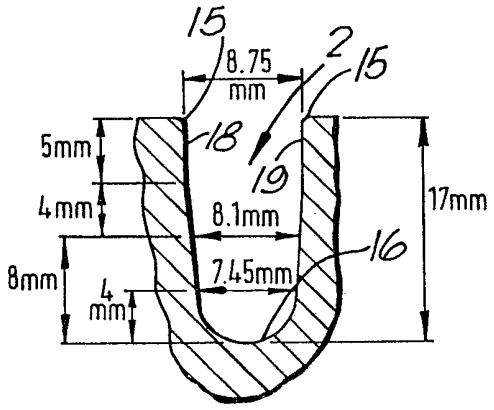


FIG. 4.

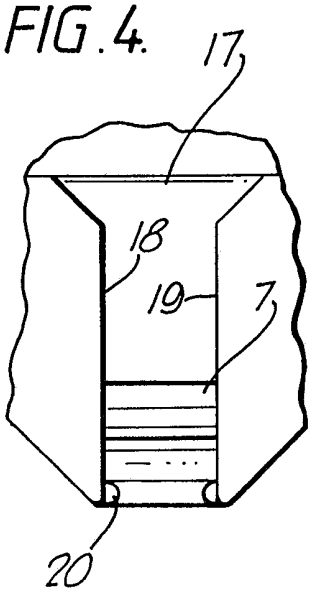
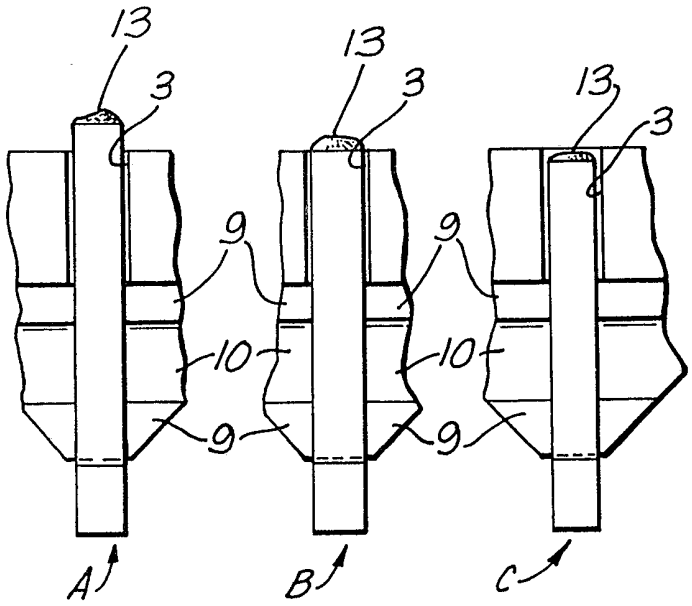


FIG. 5.



SPECIFICATION

Ashtray

This invention is concerned with an improved ashtray.

Ashtrays are known which comprise a base, a receptacle for receiving ash and for manually extinguishing cigarettes, a continuous rim and a series of depressions upon which a burning cigarette may be rested. Ashtrays such as the conventional type just described have disadvantages in their construction and in their use. It is known that smokers will leave their cigarettes on an ashtray for a short moment and possibly even the smoker may forget that he/she has left the cigarette still burning resting upon an ashtray. There are many reasons why smokers remove their burning cigarettes from their mouth and/or hand and place them temporarily upon an ashtray. It is not always convenient to smoke continuously without placing the cigarette upon an ashtray and many smokers will smoke whilst performing tasks or operations in which it is not convenient to be smoking or holding a cigarette. For example cooks or shop keepers may require to refrain from smoking for various periods of time and for this reason will place a burning cigarette upon an ashtray.

Sometimes smokers will extinguish a part-used cigarette by pressure and twisting motion thereby rendering that cigarette ineffective for further smoking. This is uneconomical and use of the invention may avoid this. In addition there is a considerable risk from fire if, for example, a burning cigarette is left resting upon an ashtray recess and simply left there. As the combustion of the cigarette proceeds its length will diminish and this will alter its centre of gravity and hence its balance upon the ashtray. When a burning cigarette is left in several different positions, but generally horizontally upon a recess of an ashtray, after a time elapse it is possible for that burning cigarette to fall off the ashtray and on to potentially flammable materials e.g. chairs, sofas, carpets and the like. This phenomenon may also happen where a burning cigarette is placed in an ashtray with one edge resting on a rim and the burning end resting on the base. The centre of gravity of the cigarette may alter and so cause the cigarette to "fall backwards" over the rim and out of the ashtray.

It is additionally to be noted that conventional ashtrays provide no effective means of reducing the combustion rate of a burning cigarette. The expression "reducing the combustion rate" is used herein to mean slowing down of the cigarette burning process but not extinguishing thereof which term is used separately. Therefore cigarettes which are allowed to remain upon ashtrays continue to burn at their conventional rate unless they are manually extinguished which can ruin the cigarette rendering it unsuitable for further use. Cigarettes which are left burning in an ashtray may completely burn themselves out whereby the smoker has not received the full value of that cigarette in terms of smoking capacity.

There is also a risk that unauthorised personnel, e.g. children, may pick up a burning cigarette from an ashtray.

In short conventional ashtrays do not securely hold cigarettes, do not reduce the combustion rate of cigarettes and the use thereof may lead to unexpected dangerous incidents and they may even be a major factor in the cause of many domestic or other residential fires.

It is from a consideration of existing ashtrays and their method of use which has led to the development of the present invention. Use of ashtrays according to the present invention might result in percentage savings of cigarettes in terms of increasing the available quantity of tobacco for smoking by 8-20 per cent.

According to this invention there is provided an ashtray having at least one cigarette-receivable recess in an upper surface, the said one or each recess comprising a generally U-shaped channel whose width and/or depth are sufficient to reduce the combustion rate of and/or extinguish a burning cigarette when the burning end reaches or is located within the recess.

In embodiments of the invention the ashtray may comprise four recesses, and furthermore each recess may be located at the corner of a generally rectangular ashtray. However the present invention is not restricted to any particular form, shape or dimension of ashtray providing such ashtray includes at least one generally U-shaped recess as defined above. One or more of the recesses in an ashtray may extend at an acute angle with respect to a base part of the ashtray. One or more of the recesses may alternatively or additionally extend generally parallel with respect to a base part of the ashtray. In such a generally parallel recess one end of that recess may terminate adjacent a supporting platform upon which the inhalation end of a cigarette can rest. In such an embodiment the burning end of a cigarette may project beyond the other end of that recess or it may gradually become located within that recess in use or it may be initially located within that recess.

For ashtrays which incorporate such a platform there may be provided a depression coplanar with but spaced from the recess adjacent that platform.

It has been found that in order to reduce the combustion rate of a burning cigarette end within a U-shaped recess the maximum width of the recess may be from 5-12 mm, preferably 7-10 mm and most preferably 7.75-9.75 mm. These dimensions are based upon the

width of a standard manufactured cigarette and the dimensions could be modified to accommodate e.g. cigars, oversized cigarettes and cigarettes which a smoker has "rolled" himself/herself.

It is preferred for the recess to have a maximum depth of e.g. 7-20 mm, preferably 8-18 mm. It is also preferred that the recess has chamfered or rounded shoulders at its upper part and a rounded lowermost part in the sense of being partially arcuate. It is convenient for the recesses to be formed into the rim of an ashtray and extend in a direction directed generally towards the centre of the ashtray in similar fashion to e.g. conventional square-type ashtrays having a cigarette-receivable recess at each corner thereof.

It has been found that the particular length the recess extends is not especially critical although for example the length of the recess may be 10-40 mm, preferably 15-35 mm and most preferably 20-30 mm.

For embodiments of the invention which have a recess extending parallel with a base part of the ashtray and on which a supporting platform extends the combined length of recess and support platform may be, for example 30-60 mm, preferably 35-55 mm and most preferably 40-50 mm. It is also preferred that for the or each recess the width thereof decreases either stepwise or continuously with increasing depth.

As will become apparent from the following description of a preferred embodiment ashtrays according to the invention may be provided with one or more recesses which additionally incorporate an ash-receiving depression at one end thereof and/or width-reducing formations at the same or different end thereof. Ashtrays according to the invention may include a base part which itself is provided with one or more regions of upstanding projections, which regions are coplanar with or colinear with the axis of a recess.

In order that the invention may be illustrated and readily carried into effect, an embodiment thereof will now be described by way of example only with reference to the accompanying drawing and in which:

Figure 1 is a plan view of an ashtray,

Figure 2 is a side elevation of Figure 1 including burning cigarette,

Figure 3 is a cross-sectional detail of one form of recess,

Figure 4 is a plan view of one preferred form of recess, and

Figure 5 illustrates alternative positioning of burning cigarettes within e.g.

a "horizontal" recess.

Referring firstly to Figures 1 and 2 of the accompanying drawings, the ashtray 1 is generally square-shaped being provided with three recesses 2 at three corners thereof and a fourth recess 3 spaced from the fourth corner of the ashtray. Each recess 2,3 is cigarette-receivable in the sense that a burning cigarette can be placed in the recesses and left there. Each recess 2,3 comprises a generally U-shaped channel whose maximum width is 0.75 mm greater than the diameter of a standard cigarette at 8 mm. The maximum depth of this embodiment of recess is 17 mm and as can be seen from Figure 3 the width of the U-shaped channel decreases with increasing depth towards the bottom including a part whose width is less than the diameter of a standard cigarette e.g. a part whose width is 7.45 mm.

Each of the recesses is formed in a protruding, upstanding rim portion 4 which is conveniently formed around the periphery of the ashtray so that an interior ash-receptacle is formed. The base 1a of the ashtray includes regions 5 of upstanding circular projections 6 adjacent one end of each recess. This textured surface helps to prevent a burning cigarette from slipping into the ash as shown in Figure 2.

The recesses 2 are arranged to slope at an acute angle with respect to the base 1a as shown in Figure 2. These recesses 2 also have at one end thereof a supplementary depression 7 which is able to accommodate a small amount of ash and may assist in preventing the cigarette from becoming dislodged from the recess when it has burned sufficiently for the inhalation end to have "tipped" into these recesses 2.

The other recess 3 is spaced from the respective corner 8 of the ashtray but otherwise has similar depth and width dimensions to the recesses 2. This recess 3 extends in parallel with the base 1a and one end thereof lies adjacent a platform 9 which includes a depression 10. A burning cigarette may be placed in this recess with the inhalation end resting on the raised platform 9. The depression 10 is to assist grip of the cigarette for picking it up and continuing smoking. The recess 3 is located between side portions 11 of the rim, which side portions have for convenience rounded-off edges as shown in Figure 2. Use of the ashtray is illustrated in Figure 2 in which a cigarette 12 has burning end 13 resting on the projections 6 in the base 1a and its inhalation (filter) end 14 uppermost. If this cigarette should tip backwards the additional depression 7 will serve to retain the end and the dimensions of the recess 2 will cause the rate of combustion to decrease to the point of extinguishing the cigarette by heat transfer and/or lack of oxygen.

Referring to Figure 3 of the drawings a preferred form of recess 2,3 is shown having rounded shoulders 15 and a curved base 16. The width at its widest part is 8.75 mm which decreases in two stages to 8.1 mm and then 7.45 mm. The maximum depth of this U-shaped recess is of the order 17 mm.

Referring to Figure 4 of the drawings an

enlarged detail plan view of a recess 2 is shown. The forward end 17 of the recess is enlarged but this part of the recess is not counted as part of its maximum width, being regarded as a mouth or opening which extends from the recess. The width of the recess at its widest part is to be taken as being measured between parallel sides 18,19. The end of the recess remote from the mouth 17 is provided with depression 7 for the purposes described above. This end is also provided with projecting formations 20, e.g. of diameter 1.5 mm to provide a further means of retaining the inhalation end of a cigarette and prevent it from falling onto e.g. a combustible surface.

Figure 5 shows use of the recess 3 for reducing combustion rate of a cigarette and for extinguishing a cigarette. When a cigarette is placed into the recess with its burning end in the position shown by A the cigarette will be extinguished after a pre-determined time interval. This position will be useful for smokers who know they will need to smoke the cigarette after an interval of e.g. more than four minutes. When the cigarette is placed in the recess with its burning end as shown by B the combustion rate will be reduced to the point of extinguishing after 4 minutes or so. The combustion rate will be significantly reduced until extinguishing thereby reducing the quantity of smoke emanated by the cigarette and making it last longer. When a cigarette is placed in the recess with its burning end as shown by C it will be extinguished in approximately 60 seconds or less. Cigarettes can be placed with confidence in any of the positions A,B or C depending upon requirements whilst the smoker knows that the risk of the cigarette falling from the ashtray onto a combustible surface is significantly reduced. That risk may even be eliminated. When the cigarette has been placed in the recess and become extinguished either intentionally or accidentally the smoker may simply relight his cigarette without further wastage thereof. This is a significant improvement over attempting to relight conventionally extinguished cigarettes which have an unattractive appearance. Placing the cigarettes in any of the positions A, B or C also ensures that the cigarette itself does not become physically damaged, distorted or contaminated with ash in the ash-receiving receptable part. It is most undesirable for smokers to attempt to relight cigarettes which have been significantly contaminated by ash deposits.

Embodiments of the ashtray may of course also be used to extinguish cigarettes completely in a conventional manner. They also serve as conventional ash-receptacles but offer a significant improvement in reduction of fire hazards caused by unattended cigarettes. Smokers may economise on cigarettes and may relight part-smoked cigarettes whose appearance has not been altered. Cigarettes may be left in the ashtray to become extinguished automatically or they may be placed in the ashtray to regulate the combustion rate and consequently regulate the time delay before a burning cigarette becomes extinguished. Each of the U-shaped channels may be dimensioned to hold a cigarette in position firmly by frictional fit. This not only assists the combustion rate reduction but also holds the cigarettes more securely in the ashtray.

CLAIMS

1. An ash tray having at least one cigarette-receivable recess in an upper surface the said one or each recess comprising a generally U-shaped channel whose width and/or depth are sufficient to reduce the combustion rate of and/or extinguish a burning cigarette when the burning end reaches or is located within the recess.

2. An ash tray as claimed in claim 1 comprising four recesses.

3. An ash tray as claimed in either preceding claim wherein the recess or one of the recesses extends at an acute angle with respect to a base.

4. An ash tray as claimed in claim 1 or claim 2 wherein the recess or one of the recesses extends generally parallel with respect to a base and terminates at one end adjacent a supporting platform upon which the filter or mouth end of a cigarette can rest with the burning end of a cigarette projecting beyond the other end of that recess or located within that recess.

5. An ash tray as claimed in claim 4 in which the platform includes a depression coplanar with but spaced from the recess adjacent it.

6. An ash tray as claimed in any preceding claim wherein the maximum width of one or more recesses is 5 to 12 mm, preferably 7 to 10 mm.

7. An ash tray as claimed in claim 6 wherein the maximum width is 7.75 to 9.75 mm.

8. An ash tray as claimed in any preceding claim wherein the maximum depth of one or more recesses is 7 to 20 mm, preferably 8 to 18 mm.

9. An ash tray as claimed in any preceding claim wherein the maximum depth of one or more recesses is 10 to 17.5 mm.

10. An ash tray as claimed in any preceding claim wherein the width of the or each recess decreases with increasing depth.

11. An ash tray as claimed in any preceding claim wherein one or more recesses have an ash-receiving depression at one end.

12. An ash tray as claimed in any preceding claim wherein a base defines an ash-receiving area which is provided with one or more regions of upstanding projections directly opposite a recess.

13. An ash tray as claimed in any preceding claim wherein one or more recesses have width-reducing formations at one end thereof.

14. An ash tray substantially as herein described.

15. An ash tray substantially as herein illustrated in any of the accompanying drawings.

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