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W. L. HARROUN
CIGARETTE EXTINGUISHER

2,147,029

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FIG. 1.

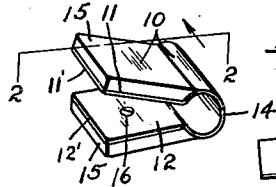


FIG. 2.

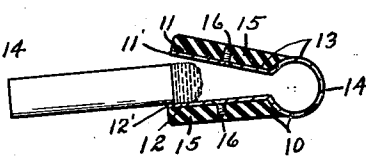


FIG. 3.

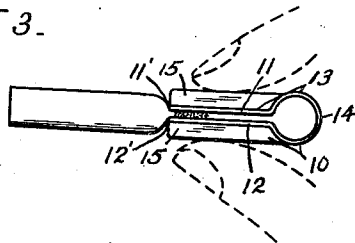


FIG. 9.

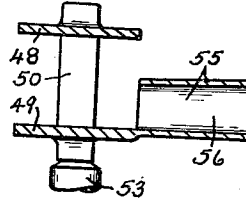


FIG. 4.

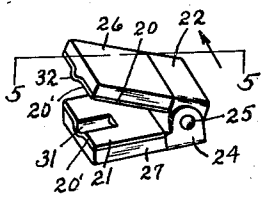


FIG. 5.

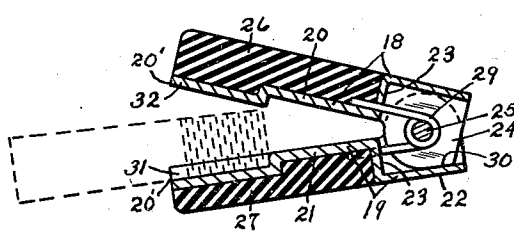


FIG. 6.

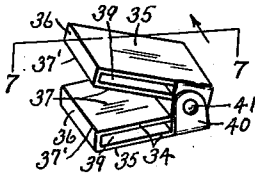


FIG. 7.

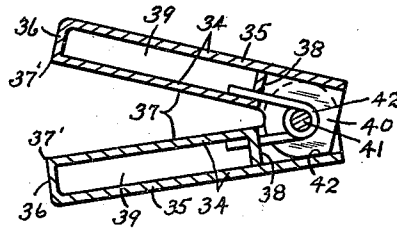
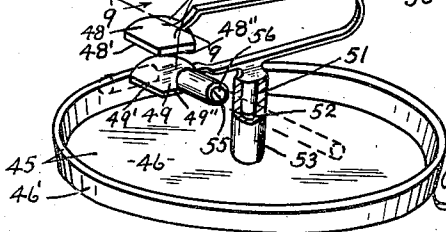


FIG. 8.



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CIGARETTE EXTINGUISHER

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3 Claims. (Cl. 131-51)

This invention relates to a device for extinguishing the ignited end of a cigarette.

As is well known, smokers of cigarettes, when out of doors, usually discard the cigarettes, by throwing them on the ground and when indoors by depositing them into an ash tray or other suitable receptacle.

Lighted cigarettes when thus thrown on the ground often come into contact with combustible or easily kindled material and cause forest and other serious and costly fires. On the other hand when lighted cigarettes are deposited in an ash tray or other receptacle they usually smolder for an extended period of time before burning out and produce an excessive amount of smoke and often a very disagreeable odor. In order to eliminate such smoke and odor when indoors, other smokers extinguish the same by dashing or crushing the lighted end of the cigarette against the bottom or side of the ash tray and in so doing the fingers are not only soiled but there is danger of burning them as well.

The main object of my invention is to produce a simply constructed and operated instrument by which lighted cigarettes may be quickly and easily extinguished and thereby eliminate offensive smoke and odors and without danger of setting fire to inflammable objects or burning and soiling the fingers.

Another object of the invention is to provide a cigarette extinguisher which is small and compact so as to be easily carried in a pocket, handbag or purse and thus be readily available at all times.

Other objects and uses pertaining to the detail construction of the invention will more fully appear from the following description taken in connection with the accompanying drawing in which:

Figure 1 is a perspective view of a cigarette extinguisher of this invention.

Figure 2 is a longitudinal sectional view taken on line 2-2, Figure 1, and illustrating an ignited cigarette in cooperative relation therewith to be extinguished.

Figure 3 is a side elevation of the cigarette extinguisher, shown in Figures 1 and 2, with the jaws thereof in engagement with a cigarette end for extinguishing or snuffing out the same and for cropping off the burnt portion of the cigarette.

Figure 4 is a perspective view of a modified form of the cigarette extinguisher illustrated in Figures 1, 2 and 3.

Figure 5 is a longitudinal sectional view similar to Figure 2, taken on line 5-5, Figure 4.

Figure 6 is a perspective view of another form of my cigarette extinguisher.

Figure 7 is a longitudinal sectional view taken on line 7-7, Figure 6.

Figure 8 is a perspective view illustrating a still further modification of the invention, partly in section.

Figure 9 is a transverse sectional view taken on line 9-9, Figure 8.

The cigarette extinguisher, shown in Figures 1, 2 and 3 is in the form of a resilient clamp having jaws 11 and 12 formed from a single piece 13 of thin, flat spring metal, such as brass, steel or the like, bent substantially midway between the ends thereof to form a cylindrical rear or connecting resilient portion 14 and the substantially flat jaw portions 11 and 12 which extend forwardly from said rear portion. The rear or connecting portion 14 is so constructed that the jaws 11 and 12 are normally maintained thereby spaced apart for easily receiving an end of a cigarette between the outer end portions thereof. The jaws extend substantially radially from the connecting portion 14 so that as they approach each other during the engagement thereof with the lighted end of a cigarette they will finally assume a position substantially parallel with each other and thus engage all portions of the cigarette positioned between them for uniformly crushing and thus quickly and completely extinguish the same.

In use, the jaws are held between the thumb and first finger of the hand and the jaws are moved into engagement with the cigarette by pressure applied by said members directly to the jaws. In order, therefore to protect the user from the heat transmitted from the cigarette to the jaws 11 and 12 I secure to the outer side of each jaw a finger piece 15 composed of any suitable heat insulating material such as wood or other non-metallic substance. The finger pieces 15 may be secured to the jaws by any suitable means such as screws 16.

In use the clamp is held as above stated between the thumb and first finger by the engagement of said members with the finger pieces 15. The lighted end of the cigarette is now inserted between the jaws with the burnt portion of the cigarette positioned only slightly inwardly beyond the outer front edges 11' and 12' respectively of the jaws 11 and 12, as shown in Figure 2. These edges 11' and 12' of the jaws are preferably formed substantially flat and normal to the inner flat surfaces of the jaws to provide each jaw with relatively sharp cutting or knife edge which when

imbedded into the unburnt portion of the cigarette immediately adjacent the burnt portion will sever adjacent portions of the paper wrapper of the cigarette together with any partially burnt or charred grains of the tobacco and thus remove from the butt end of the cigarette all portions having a burnt odor simultaneously with the extinguishing of the cigarette.

In the structure shown in Figures 4 and 5 the extinguisher is composed of two clamp members 18 and 19 each of which has the jaw as 20 or 21 formed from a thin metal plate bent laterally outwardly and then rearwardly intermediate its ends to form and offset rear portion 22 arranged in substantially parallel relation with the corresponding jaw portion and connected to the rear end of the jaw by a wall 23 extending transversely of said jaw and rear portions substantially normal thereto. Each rear portion 22 has the ends thereof extended beyond the jaw and wall portions and bent laterally toward the wall 23 to form a pair of ears 24. The ears 24 of one clamp member are preferably spaced apart a relatively greater distance than the ears of the other clamp member for receiving the ears of the latter member between them, said ears being provided with aligned holes adapted to receive a pintle or hinge pin 25 therethrough for pivotally securing the clamp members together. The hinge pin 25 may be secured against axial displacement with respect to the ears in any suitable manner as by peening or upsetting the ends thereof.

Mounted upon the outer side of each jaw member 20 and 21 is a respective finger piece 26 or 27 composed of non-metallic heat insulating material similar to the finger pieces 15 shown in Figures 1, 2 and 3. A spring 29 coiled upon the hinge pin 25 has the ends thereof extended forwardly from said hinge pin and projected through corresponding apertures formed in the respective wall 23 and finger piece 26 or 27, as illustrated in Figure 5, for yieldingly urging the jaws 20 and 21 to an open position. At least one of the inner positioned hinge ears 24 is preferably provided with a substantially flat stop surface 30 arranged at an angle of inclination to the rear portion 22 and jaw as 20 for contacting the inner adjacent surface of the other rear portion to limit the outward swinging or pivotal movement of the jaws produced by the action of spring 29.

As shown in Figures 4 and 5 one of the jaw members as 21 is provided with a recess 31 adapted to receive the burning end of a cigarette therein. The recess 31 is formed by pressing a portion of the jaw outwardly and extends substantially midway between the sides of the jaw inwardly from the outer end of said jaw a distance equal to the amount the burnt end of the cigarette is to be inserted between the jaws. The other jaw 20 is provided with a rib 32 formed in a manner similar to the recess 31 and which is complementary to said recess for engaging and crushing the portion of the cigarette contained in the recess as the jaws are moved toward each other.

In Figures 6 and 7 I have illustrated each clamp as 34 of my extinguisher constructed from a piece of sheet metal bent to form a back member 35, an outer end wall 36, a substantially flat jaw 37 and an inner end wall 38. The end walls 36 and 38, like wall 23 of the structure shown in Figures 4 and 5, extend transversely of the back and jaw members 35 and 37 substantially normal thereto. The walls 36 and 38 are of substantially the same width so that the back member 35,

which provides a finger piece by which the jaws may be manually moved toward each other for extinguishing a cigarette, is maintained in spaced substantially parallel relation with the corresponding jaw member 37 and provide an air space 39 between said jaw and back member for maintaining the latter member cool during use.

Each back member 35 has the longitudinal edges adjacent the rear end thereof provided with a pair of integral, inwardly extending ears 40 which are mounted on the pintle or hinge pin 41 for rotatably connecting the two clamps together as illustrated, and as described above for the structure shown in Figures 4 and 5. Spring 42 mounted on hinge pin 41 has the ends thereof extended forwardly from the hinge pin through suitable openings provided in corresponding rear end walls 38 whereby said spring will yieldingly urge the jaws 37 to an open position. The inwardly positioned ears 40 like ears 24 are provided with a stop surface 42 arranged at an angle of inclination to the back member 35 and jaw 37 connected therewith for engagement with the adjacent portions of the other back member for limiting the outward swinging movement of the clamping members produced by the action of spring 42. It will be noted that the jaw members 20 and 21, shown in Figures 4 and 5 and each jaw member 37, shown in Figures 6 and 7, has the outer end thereof formed substantially flat and normal to the adjacent inner face of the jaw to provide a relatively sharp edge at its inner side as 20'-20" and 37'-37", respectively. These edges, like edges 11' and 12', are adapted to bite the adjacent portion of the cigarette wrapper as the jaws firmly grip the lighted portion of the cigarette between them and assist in severing the burnt portion of the cigarette from the unburnt portion thereof.

In Figures 8 and 9, I have illustrated a still further modified form of my invention which distinguishes primarily from the remaining figures by being supportably connected to an ash tray as 45. The ash tray 45 may be of any suitable construction and as shown is of simple structure comprising a bottom 46 and an upwardly extending flange 46' surrounding the bottom.

The extinguisher proper as 47, comprises two flat jaw members 48 and 49 which are connected to each other by a U-shaped resilient arm or spring member 50 which is adapted to yieldingly maintain the jaws in spaced relation for readily receiving the end of a cigarette between them. The extinguisher 47 is rotatably connected, in this instance, to the ash tray 45 by means of a stud 51 secured to one side of the arm 50 and which is rotatably received in a recess 52 provided in a pedestal 53 connected with the bottom 46 of the ash tray in any suitable manner. The pedestal 53 is preferably arranged to extend upwardly from substantially the center of the bottom 46 while the stud 51 is so positioned with respect to the jaws 48 and 49 that said jaws will be maintained within the vertical plane of the marginal edge 46' whereby ashes collected between the jaws during the extinguishing of a cigarette may fall on to the bottom 46. Each jaw 48 and 49 has the forward and one side edge thereof formed substantially flat and normal to the inner face thereof to provide two relatively sharp edges 48'-48" and 49'-49" respectively arranged at substantially right angles to each other whereby the end of a cigarette may be inserted between the jaws from either the front

or side of the jaws, and the corresponding pair of these edges will bite adjacent portions of the cigarette paper wrapper as said edges become embedded in the cigarette so as to assist in severing the burnt portion of the cigarette from the unburnt portion thereof.

One of the jaws as 49 has connected therewith in any suitable manner a cigarette guide 55 which, in this instance is a tubular member arranged to extend outwardly from the flattened side 49' of the jaw. The opening as 56 through the guide is preferably tapered from the outer end thereof inwardly to permit a cigarette to be quickly and easily inserted therein, while the bottom wall of said opening at the inner end thereof is arranged substantially flush with the inner surface of the jaw 49 as illustrated in Figure 9 for guiding the lighted end of the cigarette between the jaws 48 and 49.

It will now be observed that the cigarette extinguisher shown in Figures 1 to 7 inclusive, are relatively small and compact in structure which adapts them to be carried in the pocket, while the structure shown in Figures 8 and 9 may be of larger size and the parts thereof may be of various ornamental configuration if desired.

The structure shown in Figures 8 and 9, is operated in a manner similar to the remaining structures for extinguishing a cigarette. If the cigarette is to be discarded the lighted end thereof may be inserted from the outer end of the jaws inwardly that is, between flattened portions 48' and 49', after which the cigarette is extinguished by the smoker pressing downwardly on the upper portion or arm of spring 50 and as the spring and cigarette are released the extinguished portions thereof will fall into the ash tray 45. On the other hand if, as often happens, the cigarette is only partially smoked and is to be temporarily laid aside the same may be inserted through the guide or holder 55 to bring the lighted end thereof into position between the jaws 48 and 49 to be extinguished. After the jaws have been operated to extinguish the cigarette the user may allow the cigarette to remain in the holder until he again wishes to smoke the same.

Although the devices shown are particularly simple and efficient, it is evident that various changes may be made in the detail construction thereof without departing from the spirit of the invention as set forth in the appended claims.

I claim:

1. A cigarette extinguisher composed of a pair

of sheet metal clamping members, each of said members being formed by bending the sheet metal to provide a substantially flat jaw portion and a rear portion arranged in a plane at one side of the jaw portion and separated therefrom by a laterally disposed wall extending substantially normal to the jaw portion at the rear end thereof, means including a hinge pin connected with the rear portions for pivotally connecting the clamping members to each other, and a spring surrounding said hinge pin and having the ends thereof engaging said walls for yieldingly maintaining the jaw portions spaced from each other for receiving the end of a cigarette between said latter portions, said jaw portions being provided with a complementary rib and groove extending inwardly from the outer edges thereof coacting with the adjacent portions of said jaw portions for guiding and crushing the lighted end of the cigarette.

2. A cigarette extinguisher comprising a pair of jaw members composed of relatively thin material, means including a spring element arranged adjacent one side of the jaws in close proximity thereto hingedly connecting the jaw members in cooperative spaced relation to each other to receive the lighted end of a cigarette between them, and members connected with the jaws and arranged to extend over the outer side thereof providing both heat insulating means and fingerpieces by which said jaws may be pressed toward each other against the action of the spring element into clamping relation with the cigarette, said jaw members being provided the one with a groove for receiving and positioning the lighted end of the cigarette and the other with a rib adapted to extend into said groove into pressure contact with the cigarette.

3. A cigarette extinguisher comprising a pair of jaw members composed of relatively thin material, means including a spring element arranged adjacent the rear ends of the jaws in close proximity thereto hingedly connecting the jaw members in cooperative spaced relation to each other to receive the lighted end of the cigarette between them, said jaw members being provided the one with a groove for receiving and positioning the lighted end of the cigarette and the other with a rib adapted to extend into said groove into pressure contact with the cigarette as the jaw members are moved toward each other.

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