Jan. 20, 1931. H. S. MAYMON 1,789,316

CIGARETTE EXTINGUISHER

Filed Sept. 29, 1928

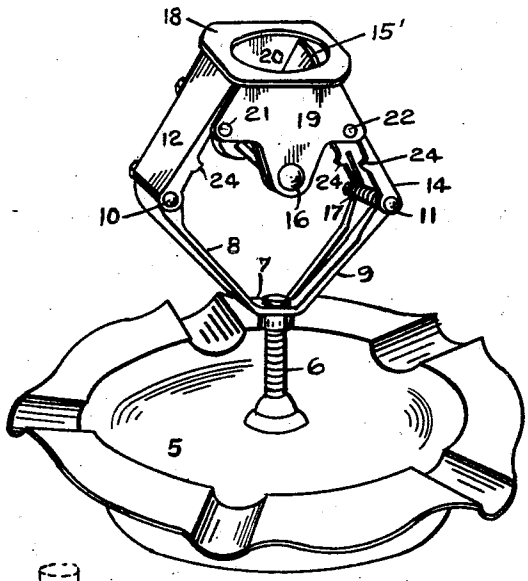


Fig-1

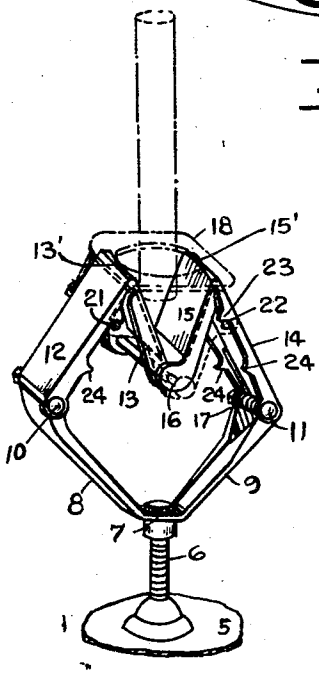


Fig-2

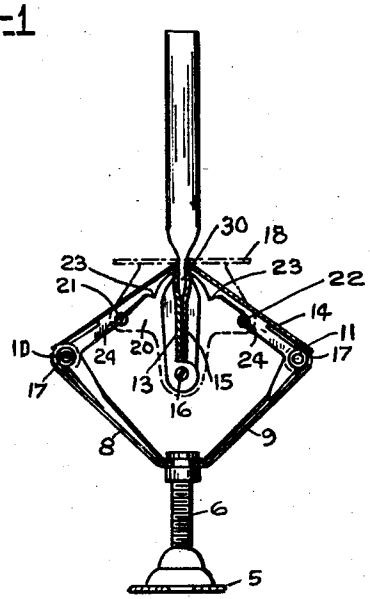


Fig-3

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UNITED STATES PATENT OFFICE

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CIGARETTE EXTINGUISHER

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The present improvements relate to ash receivers and more particularly to novel means whereby the lighted end of a cigar, cigarette or the like may be smothered and extinguished, thereby eliminating offensive odors arising from a smoldering cigar or cigarette which has been discarded by the user.

A primary object among others, of the present improvements is to provide a cigarette snuffer of the pinchers type which embodies novel cooperative elements. A further object is to generally improve the construction of extinguishers of this character by providing a sturdy, rugged and durable construction, whose life and efficacy is greatly increased.

Other objects and advantages of the present improvements will be apparent to those skilled in the art upon reference to the accompanying drawings in which—

Fig. 1 is a perspective view of a device embodying one form of the present improvements;

Fig. 2 is a perspective view of the extinguisher and support, with some elements in outline;

Fig. 3 is a vertical medial section of the extinguisher illustrating the jaws and arms as moved in the act of clamping the lighted end of a cigarette.

In the drawings the illustrated ash receiver 5 may be of any suitable construction. Rigidly secured in any desired manner in the base of said receiver, is an upstanding support or post 6. The upper free end of said post 6 is provided with securing means for holding in fixed relation, a frame 7 having divergent arms 8 and 9. Obviously said frame may be secured to the post 6 or receiver 5 in any desired manner.

The outer limits of arms 8 and 9 are provided with pivot pins or rods 10 and 11 extending transversely of said arms. As illustrated, a rigid arm 12 is loosely pivoted at its base to pin 10, said arm extending upwardly a short distance where it terminates in an extremity 13 downwardly disposed at an angle to the arm portion 12. Said extremity is integral with or definitely fixed to said arm 12 and defines a rigid jaw member. The arm 14 and jaw member 15 are of similar construction, said arm 14 being loosely pivoted at its base to pin 11.

The lower extremities of jaws 13 and 15 are extended to provide lugs which are perforated to receive a common pivot member 16. By thus uniting the jaws 13 and 15 of arms 12 and 14, the former are brought into juxtaposition, with an intervening space therebetween. Suitable energized means in the form of coil springs 17 are mounted on the rods 10 and 11, said springs having fingers extending along the inner faces of the arms 8, 9, 12 and 14, as illustrated, whereby the arms 12 and 14 are constantly urged away from each other about the pivotal rods 10 and 11 respectively.

Actuating means for the extinguisher comprises an annular plate 18 which is rigidly supported by depending side members 19 and 20. Said latter members depend on each side of the jaws and arms as clearly seen in the drawings, and are apertured adjacent their lower extremities to receive the pivot member 16 on which they are loosely supported. It is thus seen that the inner faces of the members 19 and 20 together with the faces of jaws 13 and 15 afford an open topped chamber in which the lighted end of a cigarette may be inserted.

A rod 21 extends transversely beneath arm 12, and is secured at its ends to side members 19 and 20. A similar rod 22 extends transversely beneath arm 14 and is secured to side members 19 and 20, as illustrated. Stop means are provided on the inwardly turned edges of arms 12 and 14 and comprise projections 23 and 24, formed on both sides of said arms. The rods or pins 21 and 22, are positioned so as to be disposed in the area defined by projections 23 and 24 and are free to move between same and have sliding contacting movement with the contiguous edges of the arms 12 and 14.

The normal position of the elements of the extinguisher is seen in Figs. 1 and 2, wherein the springs 17 are constantly urging arms 12 and 14 apart, as well as jaws 13 and 15. This separation of the elements is opposed and limited by pins 21 and 22 contacting up-

per projections 23 thereby maintaining the elements in the position illustrated in Figs. 1 and 2.

When it is desired to extinguish a lighted cigar or cigarette, the lighted end is inserted through the aperture of annular plate 18 so that the burning end of the cigarette will be disposed between jaws 13 and 15 (as seen in dotted lines in Fig. 2), whereupon the fingers of the user are pressed downwardly on plate 18. This downward force exerted on said plate causes arms 12 and 14 and jaws 13 and 15 to come together, pinching or mashing the lighted end of the cigarette and extinguishing the fire. Upon release of the pressure, the springs 17 restore the parts to their normal position (Fig. 1), whereupon the charred ashes drop into the tray through the space existing between the lower ends of jaw members 13 and 15 (see Fig. 2). The extinguished cigarette may then be withdrawn and placed in the receiver 5.

It is notable in the above described operation that the pressure exerted on plate 18 is transmitted by means of side members 19 and 20 to the common operating member 16, which latter member moves downwardly thereby causing jaws 13 and 15 to move together about pivotal points 10 and 11. By this arrangement, the pressure exerted on plate 18 is applied with uniformity to each of the juxtaposed levers. Accordingly the effort is not dissipated at various points along the arms or jaws but is applied at a common point, each lever sharing the effort equally. An increased mechanical advantage is therefore attained by the present improvements. Furthermore the rigidity of the arms and jaws is of marked importance, due to the fact that the entire effort brought to bear on member 16 is experienced by the resistance (the lighted end of the cigarette) which is close to the point of application of the effort. The clamping function of the jaws resulting in the attempt to straighten the toggle arrangement is experienced by the resistance, without any loss of pressure or effort due to the dissipation of same through the material of which the jaws or arms are made, which obviously would be the case should these elements be nonrigid or resilient.

Attention is directed to the particular shape of the jaw members 13 and 15. Although they may be true plane surfaces if desired, a distinct function is contributed to the device by forming these jaw members in the manner illustrated. It is notable, as seen in Figs. 1 and 2, that the transverse ridges 13′ and 15′, formed at the union of arms 12, 14 and jaws 13 and 15 respectively, are concavely curved so that when the jaws are forced together without a cigarette therebetween, these curved ridges are juxtaposed and substantially define an elongated oval. This curvature of the upper surfaces of the jaws is present therein downward along the faces thereof to a point approximately half way down the jaws. When the jaws are brought together, without a cigarette therebetween, the lower portions of the faces thereof are adapted to meet while the upper portions of the faces, due to the curvature thereof, when brought together, define an ovoid pouch shaped chamber 30 as clearly seen in Fig. 3.

The provision of the feature just described practically insures complete extinguishment of the cigarette. When the burning cigarette is placed in the device as seen in Fig. 2, the burning tip becomes positioned between the lower portions of the jaws while the contiguous unburned part of the cigarette is approximately in the horizontal plane of the bottoms of the curved portions of the jaws, the remaining unburned portion being also either opposite to or above said curved portions. Upon pressing the jaws together (see Fig. 3) the lower parts thereof pinch the burning part of the cigarette which latter obviously offers little resistance due to its composition, whereby the lower jaw portions may be brought close together. At the same time, the contiguous unburned part of the cigarette occupies the chamber 30 and the upper curved jaw portions surround and press the walls of the cigarette together. Since the paper and tobacco in this part is unburned, said ingredients are merely more closely packed and squeezed, and obviously offer greater resistance in that state than the lower burning portion. The curvature of the jaws is therefore provided to compensate for this condition so that the resistance of this closely packed part of the cigarette will not act as a wedge to prevent the close contact of the lower parts of the jaws about the burning tip. Where straight jaws are employed the packed part of the cigarette referred to, may act as a wedge thereby keeping the lower jaw portions from completely crushing and extinguishing the burning tip.

A further feature of merit resides in the cooperation between pins 21, 22 and the projections 23, 24, and the edges of the arms therebetween. This provision causes the plate 18 and side members 19 and 20 to be braced and guided in all their movements and prevents any wabbling thereof. Furthermore, as seen in Fig. 3, the pins 21, and 22 contact the lower projections 24 and thereby limit the movements of the parts and at the same time give stability thereto and insure against oscillation or wabbling of the parts at the lowest point of their depression. Accordingly the plate 18 and side members 19, 20 are braced and guided in all movements thereof, causing same always to be maintained erect, whereby the operator's

fingers will not slip off the plate, which would be the result should the plate 18 be so constructed without the improved bracing means and thereby be permitted to cant to the right or left when pressure is brought to bear thereon.

Furthermore, the device herein set forth may be used to extinguish a cigarette, regardless of how much thereof is smoked. This is due to the flat plate 18, whereby a very short stub may be held by the user's fingers, with the lighted tip between the jaws, and downward pressure by the user's fingers, while holding the cigarette, will extinguish same. Such a result cannot be attained in devices wherein a plate similar to plate 18 has an upstanding tubular member superposed thereon.

Obviously the features of the present improvements may be variously applied by other modified forms. For example, the support 6 and frame 7 may be dispensed with and the pivotal points 10 and 11 disposed directly on the receiver 5, or the support 6 may have the form of a small tripod or four legged support independent of the tray 5 whereby the extinguisher is rendered portable and may be placed in any favorite ash tray, dish or receptacle or removed therefrom at will. Other modifications within the scope of the improvements will occur to those skilled in the art and may be embodied without departing from the purview of the invention.

I claim:—

1. A cigarette extinguisher comprising two crushing jaws mounted on a frame with a clearance between said jaws into which a cigarette may be advanced and means whereby said jaws may be advanced toward each other comprising a member common to both jaws, said member being pivotally supported by said jaws and against horizontal sliding movement with respect to said jaws.

2. A cigarette extinguisher comprising two crushing jaws mounted on a support in juxtaposition so as to provide a clearence between said jaws into which a cigarette may be advanced, a member pivotally connecting said jaws, and an actuating element for said member.

3. A cigarette extinguisher comprising two crushing jaws mounted on a support in juxtaposition so as to provide a clearance between said jaws into which a cigarette may be advanced, a member pivotally connecting said jaws, and common to both, and an actuating element for said member.

4. A cigarette extinguisher comprising two crushing jaws mounted on a support in juxtaposition so as to provide a clearance between said jaws into which a cigarette may be advanced, means normally urging said jaws apart, means for limiting such movement, actuating mechanism for bringing said jaws together in opposition to said first-named means, said actuating mechanism including closure means flanking said jaws and means for positively limiting said last-named movement of said jaws.

5. In a cigarette extinguisher, in combination a pair of rigid arms having their bases pivotally mounted in spaced relation, said arms arranged in converging relation and terminating in juxtaposed jaws, a pivot member connecting said jaws, actuating means for said jaws and energized means normally urging said arms apart.

6. In a device of the character described, in combination, a rigid frame adapted to be fixed to a support, said frame having diverging arms, a pair of rigid arms each having its base pivotally mounted to one of said diverging arms, said rigid arms arranged in converging relation and terminating in juxtaposed jaws, a pivot member connecting said jaws, actuating means for said jaws and energized means normally urging said pivoted arms apart.

7. A device for extinguishing the fire of a lighted cigarette or the like comprising an ash tray, a rigid arm pivotally secured to said tray, a second rigid arm pivotally secured to said tray and spaced from said first mentioned arm, each of said arms terminating in a downwardly inclined jaw, a pivot member uniting said jaws whereby said arms extend upwardly and inwardly, energized means for urging said jaws apart, actuating means for bringing said jaws together in opposition to said energized means, stop means on said arms, said actuating means cooperating with said stop means to limit movement of said jaws.

8. In a cigarette extinguisher of the character described, in combination, a pair of jaw members pivotally mounted on a support and arranged to be advanced toward each other into intimate juxtaposition, one of said jaw members having a plane surface portion and a curved surface portion.

9. In a cigarette extinguisher, in combination, a pair of rigid arms having their bases pivotally mounted in spaced relation, said arms arranged in converging relation and terminating in juxtaposed jaws, a pivot member connecting said jaws, wall members flanking said jaws and mounted on said pivot member, said wall members adapted to be moved for depressing said pivot member, and energized means normally urging said arms apart.

Witness my hand this 28th day of September, 1928, county of New York, State of New York.

HARRY S. MAYMON.