

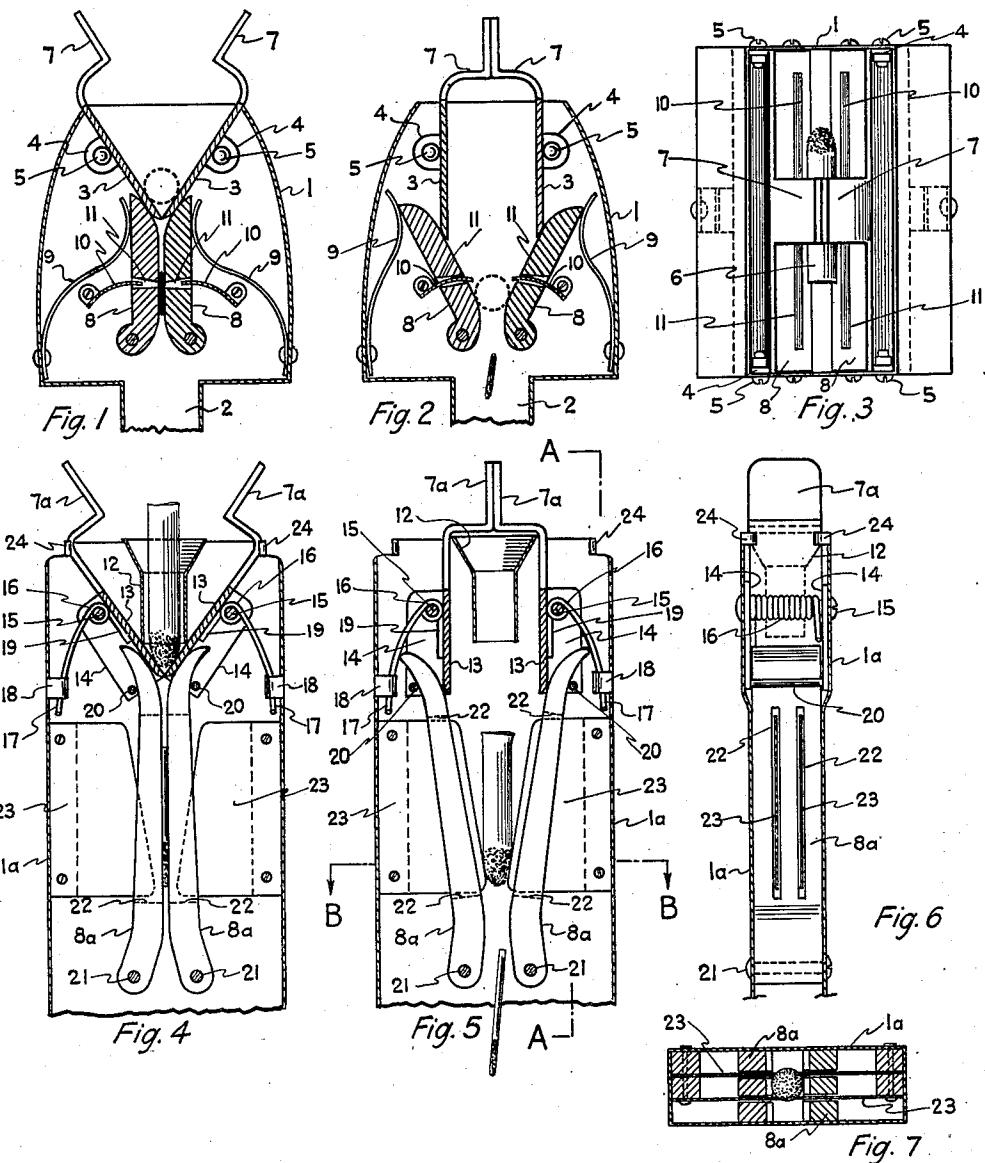
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CIGARETTE EXTINGUISHER

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CIGARETTE EXTINGUISHER

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This invention relates to an extinguisher.

An object of the invention is to provide a device of the character described specially designed for the purpose of extinguishing lighted cigarettes and the like and for conveniently disposing of the extinguished stubs and ashes.

Another object of the invention is to provide an apparatus of the character described which will readily receive the lighted stub of the cigarette and whereby the stub may be compressed and thus extinguished and also reduced in bulk so that it may be readily discharged without clogging the apparatus.

It is a further object of the invention to provide a device of this character of such construction that the cigarette stub to be disposed of can be readily dropped, by gravity, either endwise or transversely into the receiver therefor thus conducting to an easy disposition of the stub.

Means have also been provided to insure against clogging of the device by the stubs successively delivered thereto.

A further object of the invention is to provide a device of the character described that is compact and may be made with a neat appearance, which is comparatively simple in construction and may be cheaply and easily produced.

With the above and other objects in view the invention has particular relation to certain novel features of construction, operation and arrangement of parts, examples of which are given in this specification and illustrated in the accompanying drawing, wherein:—

Figure 1 shows a vertical, sectional view of the apparatus, showing the parts in their normal position.

Figure 2 shows a vertical, sectional view showing the clamps open in position to discharge an extinguished stub and to receive the next succeeding stub.

Figure 3 shows a plan view showing the parts in the position shown in Figure 2.

Figure 4 shows a vertical, sectional view illustrating another embodiment and showing the parts in normal or inactive position.

Figure 5 shows a vertical, sectional view thereof showing the parts in active position, that is, in position to discharge an extinguished stub and to receive an ignited stub.

Figure 6 shows a vertical, sectional view taken on the line A—A of Figure 5 and

Figure 7 shows a transverse, sectional view taken on the line B—B of Figure 5.

Referring now more particularly to the drawing wherein like numerals of reference designate the

same parts in each of the figures, the numeral 1 designates a casing which may be of any selected design. The casing is open at the top and enclosed on its sides and ends and has a discharge outlet 2 at the bottom. At the top of the casing there are the guide plates 3, 3, which extend approximately from end to end of the casing and have the outwardly turned ears 4, 4, at each end. Through these ears and the adjacent ends of the casing are the bolts 5, 5, whereby the guide plates 10 3 are mounted to pivot on longitudinal axes. These plates, when in normal position, converge downwardly as shown in Figure 1 thus forming a hopper into which the ashes and the lighted cigarette stub 6 may be dropped, as illustrated in Figure 3, and whereby it will be held temporarily.

The upper margins of the guide plates 3 have the upwardly extended grips 7, 7 of any selected design which may be gripped and closed together, as shown in Figure 2 and 3, whereby the stub 6 will be released and permitted to drop on down.

Beneath the guide plates 3 are the confronting clamps 8, 8. These clamps extend from end to end of the casing and their lower margins are individually pivoted in the casing to move about horizontal axes. Their upper ends are outwardly curved and the lower margins of the guide plates 3 are located between said upper ends as clearly shown in Figures 1 and 2. When the grips 7 are forced together, as shown in Figure 2, the clamps 8 will be moved apart as also shown in said figure. The cigarette stub 6 will thereupon be released by the guide plates 3 and permitted to drop down between said margins as illustrated in dotted lines in Figure 2. The pivoted ends of the clamps, however, are sufficiently close together to arrest and hold the cigarette stub in such a manner that said clamps will not permit the free passing of the stub from between them until said stub has been flattened throughout its full length. Flat springs 9, 9 are secured at their lower ends to the casing 1 and their upper ends bear inwardly against the upper ends of the clamps 8 so that when the grips 7 are released the springs 9 will force the clamps 8 together into the position shown in Figure 1

clamping the lighted cigarette stub between them and extinguishing the same. When the next succeeding stub is dropped between the guide plates 3, as shown in Figure 3, and the grips 7 forced together, the lower ends of the guide plates 3 will move outwardly acting against the clamps 8 to open them. Thereupon the extinguished stub, having been previously flattened by the clamps, will automatically drop out and the stub released by the plates 3 will fall into position between, and

will be retained by, the clamps 8, all as illustrated in Figure 2. The operation may be repeated indefinitely.

In order to prevent the extinguished stub from sticking to one of the clamps, when the clamps are opened, detaching plates 10, 10 have been provided. These plates are secured in any preferred manner to the ends of the casing so as to maintain the plates in fixed position. They work through the elongated slots 11, 11 of the clamps 8, as shown in Figures 1 and 2. They are of sufficient width to project through and beyond the inner faces of the clamps 8, when said clamps are open. Upon opening of said clamps, if the flattened stub should stick to either of them, it will eventually come into contact with the inner margin of the corresponding detaching plate and will be positively detached and will be dropped out and down through the discharge opening 2, and into a suitable receiver provided for the purpose. However, when the clamps 8 are forced together, as shown in Figure 1, their inner, or facing, sides will be spaced a sufficient distance apart to allow sufficient space between them so that the lighted cigarette stub will be flattened throughout its length only sufficient to completely extinguish the fire but will not be so tightly gripped between the clamps as to cause it to stick tightly against one of the faces of the clamps, as might otherwise happen, especially when a short wet stub is to be extinguished and is left for a considerable length of time in clamped position between the clamps.

In the form shown in Figures 4, 5 and 6 there is a casing 1a of any selected design and which is open at the top and provided with the receiving hopper 12 to receive the cigarette stub endwise. The casing 1a is considerably narrower than the casing 1 shown in Figures 1, 2 and 3 for the reason that the stub is inserted endwise through the hopper 12 rather than transversely. On opposite sides of the hopper 12 are the guide plates 13, 13 which extend across the casing 1a and which are provided with the outwardly turned end flanges 14, 14. Cross-pins 15, 15 extend through the sides of the casing and through the upper ends of the flanges 14, on which the guide plates 13 are pivotally mounted. The upper ends of said guide plates are formed with the upwardly extended grips 7a, 7a as in Figures 1, 2 and 3.

Around the cross-pins 15 are the coil springs 16. One end of each coil spring has the extended arm 17 which is retained in place by a corresponding retainer 18 on the casing. The other end of each spring 16 has the extended arm 19 which presses inwardly against the corresponding guide plate 13 and said springs normally holding the guide plate 13 inwardly as shown in Figure 4. The lower ends of the flanges 14 of each guide plate 13 are connected by the respective cross-rods 20. Pivoted at their lower ends on the cross-pins 21, 21 are the clamps 8a, 8a. These clamps are of a width substantially equal to the thickness of the casing and their upper ends are outwardly curved, as shown and are extended up between the guide plates 13 and the cross-rods 20. When the grips 7a are forced together, as shown in Figure 5, the guide plates 13 will be forced apart, as shown in said figure, thus spreading the clamps 8a. The springs 16 will be thereby placed under compression. Upon release of the grips 7a the pressure of the arms 19 will return the guide plates 13 to their normal position and the rods 20 will force the clamps 8a together, as shown in Figure 4.

The clamps 8a have the longitudinal slots 22

therethrough and detaching plates 23 are secured, at their outer margins, to the casing walls and extend through said slots 22. Their inner margins converge downwardly, as shown in Figures 4 and 5, so as to arrest and retain the cigarette stub when it is dropped between them, as illustrated in Figure 5. The range of outward movement of the grips 7a is limited by the stops 24, 24 at the upper end of the casing on each side.

In use the ignited cigarette stub may be inserted into the hopper 12, as shown in Figure 4. Upon pressing the grips 7a together the stub will drop down between, and be retained by, the release plates 23, as shown in Figure 5. Upon release of the grips 7a the clamps 8a will be forced together, as hereinabove explained, clamping the cigarette stub between them and extinguishing the same and compacting the stub to a thin flat form. When the next stub is inserted in the hopper and the grips 7a again forced together the clamps will be forced apart permitting the extinguished stub to pass on down between said clamps as illustrated in Figure 5 and the last inserted stub will fall down, and be arrested by, said detaching plates. These detaching plates 23 are also provided to detach the extinguished stub from a clamp in case the stub should adhere thereto, as explained in connection with the description of Figures 1 to 3.

The detaching plates may be arranged in any other preferred position, as stationary or movable according to the displacement and required movement, especially if the means of compression are to be preferred by swinging one or more clamps directly with the fingers thus eliminating the use of compression springs. The invention is not to be restricted by the illustrations shown and described as it is obvious mechanical changes may be made in the construction without departing from the principle of the invention as defined by the appended claims.

What I claim is:—

1. A cigarette extinguisher comprising a casing, pivotally mounted guide plates therein normally forming a receiver for a stub, yieldingly mounted clamp means beneath the receiver, means for actuating the guide plates into open position to release the stub therefrom, said guide plates being effective to open the clamp means into position to receive the released stub and yieldable means for closing the clamp means upon release of the guide plates whereby the stub will be clamped by the clamp means.

2. An extinguisher comprising a frame, yieldingly mounted clamp means therein movable to open position to admit an ignited cigarette stub, or the like, between them and movable to closed position to compress and extinguish the stub, and guide means forming a receiver for the stub and movable into open position to simultaneously open the clamp means to permit the stub in the receiver to drop into position between the clamp means, said guide means being movable to closed position to permit the clamp means to close and compress and extinguish the stub between them.

3. An extinguisher for ignited cigarette stubs and the like comprising a frame, a receiver on the frame for receiving an ignited stub, clamp means for compressing and extinguishing the stub, said receiver and clamp means being simultaneously movable to open position to release the stub from the receiver and to permit it to drop into the clamp means and means for thereafter actuating the clamp means to closed position to compress and extinguish the stub.

4. In a cigarette extinguisher having a suitable casing and a waste container, the combination of means for clamping a cigarette stub to compress and extinguish the same, and detaching elements 5 arranged to positively detach the compressed stub from the clamping means, said detaching elements being arranged to automatically and simultaneously detach the cigarette stub from the clamping means upon movement of the 10 clamping means to open position.

5. In a cigarette extinguisher having a frame and a waste container, individually pivoted clamp means, and retaining elements arranged to prevent an uncompressed cigarette stub from passing 15 between and beyond them, said clamp means being movable to compress said stub throughout its length to thereby shape the stub for passage between and beyond the retaining elements.

6. A cigarette extinguisher comprising clamp elements provided with means of compression whereby an ignited cigarette stub may be reduced in bulk, along its full length, to a point sufficient to smother said stub, and means to prevent the 5 same from adhering to the clamp elements.

7. In a cigarette extinguisher including a covering and a waste container, the combination of clamp elements with an operative guiding means to provide a temporary receiver for ashes and 10 lighted cigarette stubs, means to thereafter release said ashes and stubs into the clamp elements for extinguishing and means to eject the cigarette stubs from between the clamp elements to give place to the succeeding stubs to be extin- 15 guished.

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