

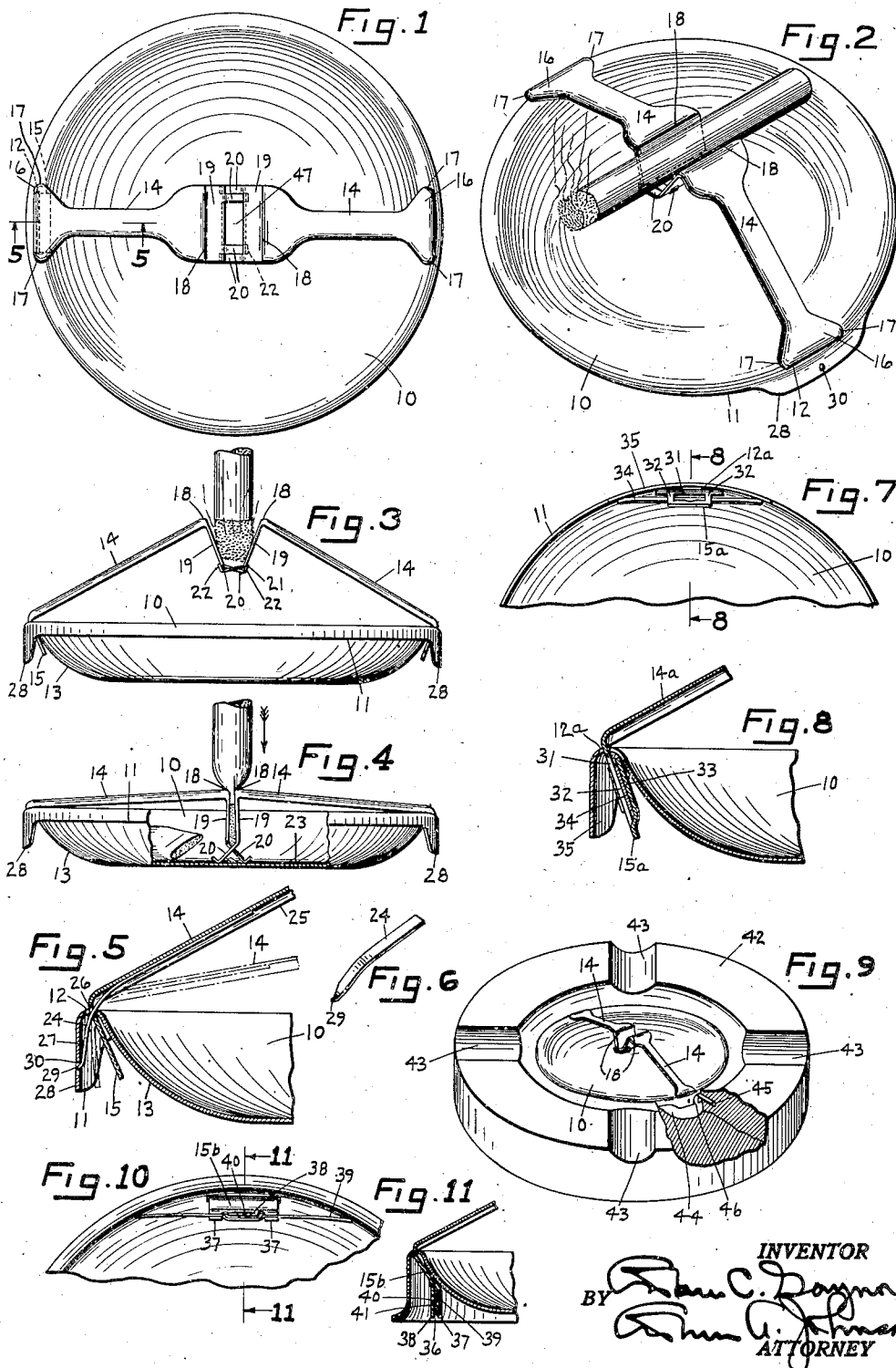
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ASH RECEIVER AND EXTINGUISHER

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ASH RECEIVER AND EXTINGUISHER

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This invention relates to ash receivers, and more particularly, to one having associated with it an extinguisher for cigarettes.

An object of this invention is to provide an improved cigarette extinguisher which is simple in construction economical to manufacture, and efficient in use.

A feature of this invention is the provision of a cigarette extinguisher having arms provided with opposed surfaces for compressing the burning end of a cigarette in which the movements of the arms toward each other are caused solely by the direct engagement of the end of the cigarette with the opposed surfaces and the subsequent downward movement of the cigarette.

A further feature is the provision of an extinguisher which is so constructed as to function as a support or rest for a cigar or cigarette.

Another feature is the provision of simple and efficient means for mounting the extinguishing arms on an ash receptacle and holding the arms in normal cigarette-receiving position.

And still another feature of this invention is the provision of an ash tray having cigarette rests and extinguishing means, preferably mounted on an ash receiver, with interlocking means between the ash receiver or extinguisher-support and the tray to permit the tray to be removed for the discharge of its contents and cleaning. The interlocking connection is preferably of the bayonet slot type and the extinguishing arms serve as handles whereby the receiver may be turned relative to the tray.

Other features and advantages will hereinafter appear.

In the accompanying drawing which shows several embodiments of my invention—

Figure 1 is a top plan view of my improved device.

Fig. 2 is a perspective view, showing a cigarette supported on the extinguishing arms.

Fig. 3 is a side elevation showing the end of the cigarette in engagement with the opposed surfaces of the extinguishing or snuffing arms.

Fig. 4 is a similar view, but showing the arms depressed through the medium of the cigarette and the end of the cigarette compressed between the opposing surfaces, a portion of the ash receiver being broken away to show the relation of the parts.

Fig. 5 is a sectional view of one side of the ash receiver, showing the manner in which the snuffing arm is mounted and showing the arm in partially depressed position in dot-and-dash lines.

Fig. 6 is a perspective view of a combined spring and locking device employed in the form of my invention shown in Fig. 5.

Fig. 7 is a bottom plan view of a modified form of this invention.

Fig. 8 is a view similar to Fig. 5 of the embodiment of the invention shown in Fig. 7.

Fig. 9 is a perspective view, showing an ash tray having cigarette and cigar supports and an ash receiver having an interlocking connection with the tray.

Fig. 10 is a bottom plan view of another modification of this invention.

Fig. 11 is a sectional view like Figs. 5 and 8, but showing the modification shown in Fig. 10.

In the embodiments thereof shown in the accompanying drawing, the devices of the present invention each comprises an ash receiver 10. This is preferably dish shape having a peripheral downwardly extending flange 11. The dish 10 may have any suitable shape, but however shaped, at opposite points in its periphery, for instance across the diameter or a chord in case the dish is circular, the dish is provided with slots 12 open at the top and communicating with the space between the flange 11 and the body portion 13 of the dish. It is at these points that there is fulcrumed, respectively, each of a pair of arms 14. For this purpose, the arms 14 are each provided with an angularly bent ear 15 which extends downwardly through the slot 12 into the space between the flange 11 and the body 13, as shown more clearly in Figs. 5, 8 and 11.

The width of the slot 12 and ear 15 is less than the width of the adjacent portion 16 of the arm 14, as indicated by the dotted lines in Fig. 1, so that the projecting portion 17 on the ears 16 may engage the rim of the dish adjacent the ends of the slot 12 and be thereon fulcrumed.

The arms 14 extend upwardly and toward each other, and toward the center of the dish when arranged as shown in Fig. 3, but a sufficient space is left between their inner ends 18 for the insertion of the end of a cigarette. Preferably integrally connected to the arms 14 and angularly disposed with relation thereto are downwardly depending ears 19 having opposed surfaces for engagement by the burning end of a cigarette. When the latter is inserted in the space between the arms 14 and is pushed downwardly, the frictional engagement between the more solid portion of the cigarette end and the opposed surfaces 19 causes the arms 14 to move downwardly, bringing the opposed surfaces toward each other to

compress and extinguish the end of a cigarette as shown in Fig. 4.

The sum of the lengths of the arms 14 from their fulcrum points 17 to their adjacent ends 18 is substantially equal to the distance across the dish from one fulcrum point to the other, so that, acting like a toggle joint, the two arms in being depressed cause the end of the cigarette to be powerfully squeezed between the opposed surfaces and thus be completely extinguished.

Preferably, the depending ears 19 are approximately at right angles to the arms 14 so that when the arms 14 are approximately horizontal, the surfaces of the ears 19 will be substantially perpendicular and parallel, thus obtaining a tremendous force against the cigarette end with comparatively little effort on the part of the user in pushing down the cigarette end, and without danger of straining the parts. The arms 14 may be stiffened against bending by suitable flanges or ribbing.

Moreover, by such an arrangement of the lengths of the arms, the downward movement of the arms 14 may be limited of their own accord and without the arms striking anything else.

According to the present invention, the space between the opposing surfaces on the ears 19 is such, and the ears have such width, that they form a trough for holding a cigarette as shown in Fig. 2, for the top of the space and ends of the space may be left open according to the present invention.

It should be here noted that the device of the present invention distinguishes from prior proposals in two major particulars just described. With the devices heretofore proposed, it was either necessary to press the extinguishing arms by direct manual engagement, or to engage an actuator with the end of the cigarette. With the first proposal referred to, the operation of the device was awkward, since it was both necessary to deposit the cigarette in proper place to be extinguished and then to manually engage some part of the device to cause the extinguishing operation to be completed. With the second proposal referred to, it was necessary to have several moving parts to transfer the motion from the actuator to the snuffing jaws. These were liable to become clogged by ashes and particles of tobacco, and, moreover, would cause large fragments of burning tobacco to be broken off and fall to the tray before the snuffing arms began to work. All this is avoided by the present invention by causing the snuffing arms to be actuated solely by the direct engagement of the end of the cigarette with the opposed surfaces and a downward movement of the cigarette end.

In the prior proposals, the space between the opposed snuffing surfaces was not open at the sides so that a trough was formed between them, and, accordingly, it was not possible to employ the snuffing surfaces as a cigarette or cigar holder when not operating to snuff a cigarette.

These are important practical advantages which I have obtained over the prior proposals and which enable me to produce a device which is more simple in construction, economical to manufacture, and efficient in use than the prior proposals.

The arms 14 may be interconnected for movement in unison by any suitable means so far as the broader aspects of this invention are concerned. Yet, the specific means disclosed herein have been found advantageous in practical use and are a substantial improvement over prior proposals. This means comprises a pair of arms

20 on the lower end of each ear 19 preferably formed integral with the ear. The arms 20 on one ear 19 extend toward and engage the bottom surface 21 on the other ear 19. Hence, if the arm 14 at the right in Fig. 3 attempts to advance faster than the arm 14 at the left, the bottom of the right-hand ear 18 will engage the arm 20 on the left-hand ear 19 and cause the left-hand arm 14 to move along with the right-hand arm 14.

This contact and engagement of the arms 20 with the lower surface of the opposite ear 19 continues throughout the downward travel of the arms 14 and, so that this may be, the arms 20 are angularly disposed with relation to the ears 19.

The arms 20, besides this, limit the upward movement of the arms 14, and for this purpose the arms 20 have their ends bent to form stops 22 which engage the outside surface of the ears 19 when the arms 14 are at their upward limits of movement.

Besides this, the arms 20 serve to limit the downward movement of the arms 14, especially when there is no cigarette end between the opposed surfaces, for, as shown in Fig. 4, these arms engage the bottom surface 23 of the dish when the arms 14 are substantially horizontal.

The arms 20 perform the function of holding the ends of the arms 14 in lateral alignment. This is accomplished by making the arms 20 on one of the arms 14, the left-hand arm as shown in Fig. 1, extend between the arms 20 on the other arm 14 and in close contact therewith. Hence, as the arms 14 are depressed, the adjacent surfaces of the respective pairs of arms 20 have sliding engagement with each other and thus limit any lateral movement which the arms may tend to have.

The arrangement illustrated is therefore more preferable than would be the more obvious arrangement wherein the arms 14 would be duplicates and interchangeable with each other and each have one arm 20 at its edge and one arm 20 inwardly removed from its edge.

In the broader aspects of this invention, the ears 15 of the arms 14 may be held in the slots 12 in any suitable manner. The means for doing this as disclosed herein is, however, very simple and efficient and constitutes an important part of the present invention. In the form of the invention shown in Fig. 5, this is accomplished by providing a spring 24, such as is shown in Fig. 6. This spring, for the most part, lies against the under-surface of the arm 14 and in the space between the flanges 25 thereof. It passes through an opening 26 in the portion of the arm 14 in line with the bearing shoulders 17 and at the same point passes through the slot 12 and has its lower end 27 in engagement with the flange 11 or ear with an extension 28 of the flange 11. The end of the spring has a nib 29 which extends into a hole 30 in the extension 28 and this interlocking engagement between the spring and the dish holds the arm 14 in proper position on the dish. The spring is normally biased so as to urge the arm 14 to its upwardly inclined position, but yields with very little resistance to the downward swinging movement of the arm.

In the embodiment of the invention shown in Figs. 7 and 8, the ear 15a is lanced and formed so as to provide a space 31 between its portions 32 and 33. This space is designed to accommodate a relatively long flat spring 34. After the ear 15a is pushed through the slot 12a, the spring 150

34 is inserted flatwise between the parts 32 and 33 so that its ends engage the inner surface of the extension 35 of the flange 11. The spring 34, being considerably longer than the slot so that it will not pass upwardly through the slot 12a, prevents the arm 14a from being removed from the dish. The spring 34 is originally so shaped and tensioned as to normally tend to push the portion 15 of the arm away from the flange 11 so as to cause the arm 14a to swing upwardly.

The modification shown in Figs. 10 and 11 is similar to that shown in Figs. 7 and 8. In this case, however, the ear 15b is so formed that the space 36 between the lanced parts 37 and 38 is open at the bottom so that the spring 39 may be inserted between these parts by vertical movement between them. To hold the spring in proper position, the spring is provided with a nib 40 and the part 38 is provided with an aperture 41 to receive the nib, these parts coacting as a detent to hold the spring from accidentally falling out of its proper place.

As illustrated in Fig. 9, the extinguisher and ash receptacle or other support of this invention may be employed with a tray 42 having depressions 43 in which cigars or cigarettes may be rested. In the specific embodiment of the invention illustrated in Fig. 9, the extinguishing arms 14 are mounted on a dish-like ash receptacle 10 and this fits in a recess 44 in the tray 42. When so employed, the ash receptacle may have an interlocking connection with the tray. This is accomplished by providing a pin 45 in the tray 42 and a bayonet slot 46 in the ash receiver 10. Of course, when used without the tray 42, the bayonet slots are omitted.

When this form of interlocking connection is employed, the ash receiver may be removed from the tray for disposal of cigarette butts and ashes or for cleaning by grasping the extinguishing arms 14 and, through the medium of these arms, rotating the ash receiver 10 until the pins 45 are over the vertical portions of the bayonet slots, at which time the ash receiver may be lifted vertically from its recesses by means of the arms 14.

After a cigarette has been extinguished by compression between the arms 14, the mere disengagement of the end of the cigarette by the operator's fingers is sufficient, for, in moving to the limit of their upward movements, the arms 14 discharge the cigarette end from between them. The separate operation of lifting the cigarette end from the snuffing space which is necessary with devices previously proposed is avoided.

Any ashes or other material loosened from the cigarette in the act of compressing it cannot remain between the opposed surfaces on the ears 19, because the space 47 between the arms 20, while not sufficient to allow the end of a cigarette to pass downwardly therethrough, is sufficiently large to permit such loose material to fall through onto the bottom of the dish.

Variations and modifications may be made within the scope of this invention and portions of the improvements may be used without others.

Having thus described the invention, what is claimed as new and for which it is desired to obtain Letters Patent, is:—

1. In combination, a receptacle; a pair of rigid cigarette extinguishing arms mounted respectively at opposite edges of the receptacle and having opposed surfaces for engagement by the burning end of a cigarette, said arms inclining upwardly toward the center of the receptacle and toward each other, said arms being fulcrumed directly on

the receptacle for movement downwardly toward each other to close a normally open space between said opposed surfaces; and spring means interposed between the receptacle and each arm for normally urging said arms upwardly.

2. In combination, a receptacle; and a pair of rigid cigarette extinguishing arms mounted respectively opposite each other on the receptacle and having opposed surfaces for engagement by the burning end of a cigarette, said arms inclining upwardly toward the center of the receptacle and toward each other, said arms being fulcrumed for movement downwardly toward each other to close a normally open space between said opposed surfaces, portions of each arm interlocking with portions of the other arm to cause said arms to move in unison.

3. In combination, a receptacle; and a pair of rigid cigarette extinguishing arms mounted respectively opposite each other on the receptacle and having opposed surfaces for engagement by the burning end of a cigarette, said arms inclining upwardly toward the center of the receptacle and toward each other, said arms being fulcrumed for movement downwardly toward each other to close a normally open space between said opposed surfaces, the sum of the lengths of the two arms from the opposed cigarette-engaging surfaces to their respective fulcrum points being slightly less than the distance across the receptacle between the two fulcrum points.

4. In combination, a receptacle; and a pair of rigid cigarette extinguishing arms mounted respectively opposite each other on the receptacle and having opposed surfaces for engagement by the burning end of a cigarette, said arms inclining upwardly toward the center of the receptacle and toward each other, said arms being fulcrumed for movement downwardly toward each other to close a normally open space between said opposed surfaces, portions of each arm interlocking with portions of the other arm to cause said arms to move in unison, said portions being at the lower ends of the opposed surfaces on the arms and limiting the downward movement of the arms by engagement with the receptacle.

5. In combination, supporting means; a pair of arms extending upwardly toward each other and having their adjacent ends spaced to receive between them the burning end of a cigarette, said arms being fulcrumed on said supporting means for downward movement toward each other; and opposed surfaces on said arms inclining downwardly and toward each other coacting to receive between them and compress and extinguish the burning end of a cigarette when said arms are swung downwardly, portions of each arm interlocking with portions of the other arm to cause said arms to move in unison, the space between the opposed surfaces on said arms and the angularity of such surfaces to each other being such that the arms may be moved downwardly by force applied directly to the opposed surfaces solely by the end of the cigarette to be extinguished.

6. In combination, supporting means; and a pair of arms fulcrumed on the supporting means and extending upwardly toward each other and having on their adjacent ends opposed surfaces to receive and compress and extinguish the end of a cigarette when said arms are swung downwardly and said opposed surfaces approach each other, the space between said opposed surfaces being open and unobstructed both at its ends and top and the opposed surfaces being relatively

wide so as to form a trough in which a cigarette may be rested horizontally.

7. In combination, a receptacle; and a pair of rigid cigarette extinguishing arms mounted respectively opposite each other on the receptacle and having opposed surfaces for engagement by the burning end of a cigarette, said arms inclining upwardly toward the center of the receptacle and toward each other, said arms being fulcrumed for movement downwardly toward each other to close a normally open space between said opposed surfaces, portions of each arm interlocking with portions of the other arm to cause said arms to move in unison, said portions limiting the upward movement of said arms.

8. In combination, a receptacle; and a pair of rigid cigarette extinguishing arms mounted respectively opposite each other on the receptacle and having opposed surfaces for engagement by the burning end of a cigarette, said arms inclining upwardly toward the center of the receptacle and toward each other, said arms being fulcrumed for movement downwardly toward each other to close a normally open space between said opposed surfaces, portions of each arm interlocking with portions of the other arm to cause said arms to move in unison, said portions limiting the downward and upward movements of said arms.

9. In combination, a dish having a peripheral downwardly extending flange, a slot opening upwardly through the edge of the dish and communicating with the space between the flange and the body of the dish, and a similar slot at a point on the dish opposite the first-named slot; a pair of arms each having a downwardly extending ear projecting through one of said slots and located in said space, said arms normally extending upwardly toward each other and having opposed surfaces for engagement by the burning end of a cigarette to extinguish the same when the arms are swung downwardly and the opposed surfaces are moved toward each other, said arms being fulcrumed on the portions of the dish adjacent said slot; and means for maintaining the ears of the arms in said slots.

10. In combination, a dish having a peripheral downwardly extending flange, a slot opening upwardly through the edge of the dish and communicating with the space between the flange and the body of the dish, and a similar slot at a point on the dish opposite the first-named slot; a pair of arms each having a downwardly extending ear projecting through one of said slots and located in said space, said arms normally extending upwardly toward each other and having opposed surfaces for engagement by the burning end of a cigarette to extinguish the same when the arms are swung downwardly and the opposed surfaces are moved toward each other, said arms being fulcrumed on the portions of the dish adjacent said slot; and means for maintaining the ears of the arms in said slots and resiliently urging the arms to the limits of their upward movements.

11. In combination, a dish having a peripheral downwardly extending flange, a slot opening upwardly through the edge of the dish and communicating with the space between the flange and the body of the dish, and a similar slot at a point on the disk opposite the first-named slot; a pair of arms each having a downwardly extending ear projecting through one of said slots and located in said space, said arms normally extending upwardly toward each other and having opposed surfaces for engagement by the burning

end of a cigarette to extinguish the same when the arms are swung downwardly and the opposed surfaces are moved toward each other, said arms being fulcrumed on the portions of the dish adjacent said slot; and means interposed between said downwardly extending flange on the dish and ear of each arm for normally urging the arm upwardly.

12. In combination, a dish having a peripheral downwardly extending flange, a slot opening upwardly through the edge of the dish and communicating with the space between the flange and the body of the dish, and a similar slot at a point on the dish opposite the first-named slot; a pair of arms each having a downwardly extending ear projecting through one of said slots and located in said space, said arms normally extending upwardly toward each other and having opposed surfaces for engagement by the burning end of a cigarette to extinguish the same when the arms are swung downwardly and the opposed surfaces are moved toward each other, said arms being fulcrumed on the portions of the dish adjacent said slot; and a spring having one end engaged with the flange on the dish and the other end engaged with the arm to hold the ear of the arm in the slot and normally cause the arm to swing upwardly.

13. In combination, a dish having a peripheral downwardly extending flange, a slot opening upwardly through the edge of the dish and communicating with the space between the flange and the body of the dish, and a similar slot at a point on the dish opposite the first-named slot; a pair of arms each having a downwardly extending ear projecting through one of said slots and located in said space, said arms normally extending upwardly toward each other and having opposed surfaces for engagement by the burning end of a cigarette to extinguish the same when the arms are swung downwardly and the opposed surfaces are moved toward each other, said arms being fulcrumed on the portions of the dish adjacent said slot; and a pair of springs, one carried by the ear of each arm and engaging the downwardly extending flange on the dish for maintaining the ear of the arm within the slot and for causing the arm to normally tend to swing upwardly.

14. In combination, supporting means; a pair of arms extending upwardly toward each other and having their adjacent ends spaced to receive between them the burning end of a cigarette, said arms being fulcrumed on said supporting means for downward movement toward each other; opposed surfaces on said arms inclining downwardly and toward each other coacting to receive between them and compress and extinguish the burning end of a cigarette when said arms are swung downwardly; and means connecting said arms for movement in unison, the space between the opposed surfaces on said arms and the angularity of such surfaces to each other being such that the arms may be moved downwardly by force applied directly to the opposed surfaces solely by the end of the cigarette to be extinguished.

15. In combination, supporting means; a pair of arms extending upwardly toward each other and having their adjacent ends spaced to receive between them the burning end of a cigarette, said arms being fulcrumed on said supporting means for downward movement toward each other; resilient means normally urging said arms upwardly; opposed surfaces on said arms inclining downwardly and toward each other coacting to

- receive between them and compress and extinguish the burning end of a cigarette when said arms are swung downwardly; and means connecting said arms for movement in unison, the space between the opposed surfaces on said arms and the angularity of such surfaces to each other being such that the arms may be moved downwardly by force applied directly to the opposed surfaces solely by the end of the cigarette to be extinguished, the space between said opposed surfaces in normal position being open at the bottom to permit ashes and tobacco pinched from the cigarette to fall therethrough to the receptacle when the arms are swung upwardly by said resilient means.
16. In combination, supporting means; a pair of arms fulcrumed on the supporting means and extending upwardly toward each other and having opposed surfaces forming a trough to receive and compress and extinguish the end of a cigarette manually placed between them when the arms are swung downwardly and said opposed surfaces approach each other; and means for resiliently urging said arms upwardly, the space between the opposed surfaces being open and unobstructed both at its ends and top to permit an extinguished cigarette butt to fall out of the trough and into the receptacle when the arms are swung upwardly by said resilient means upon manual release of the cigarette butt.

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