June 12, 1928. 1,673,083

S. D. LOCKE

ASH TRAY AND RECEIVER AND SUPPORT THEREFOR

Filed March 29, 1924

Fig. 1

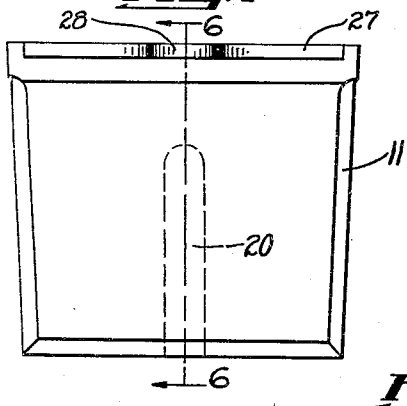


Fig. 2

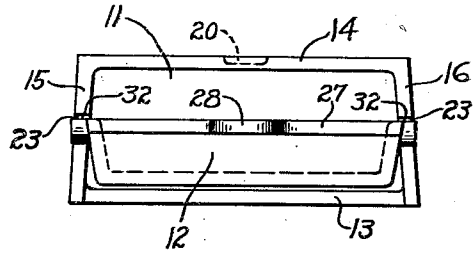


Fig. 5

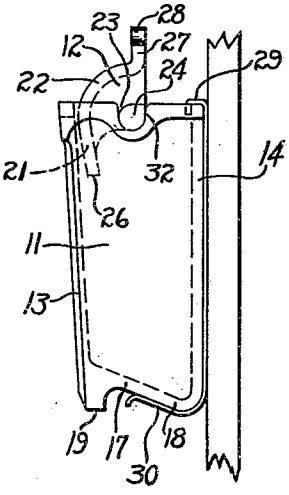


Fig. 4

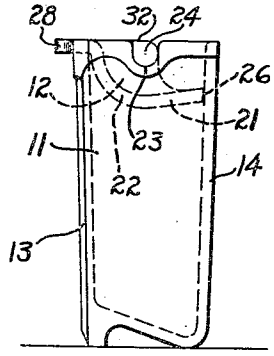


Fig. 6

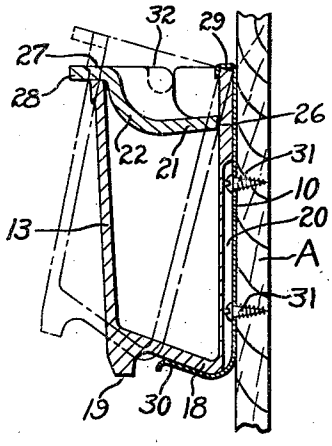


Fig. 7

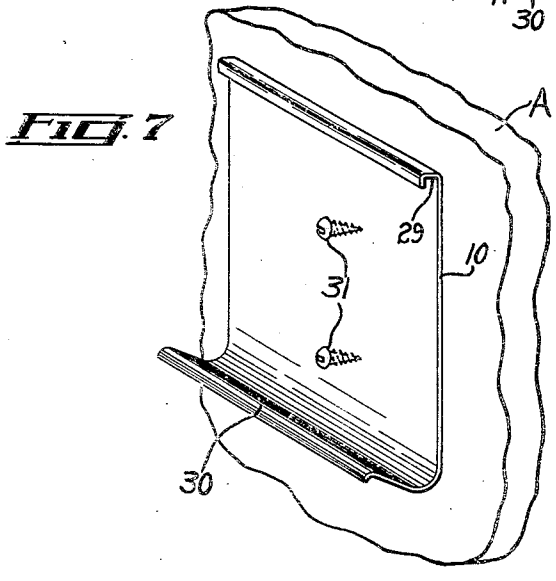
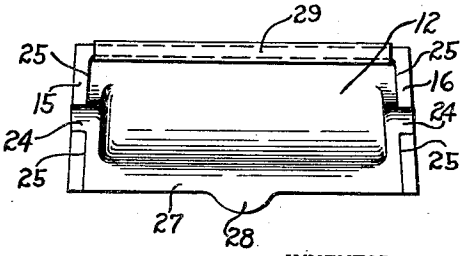


Fig. 3



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UNITED STATES PATENT OFFICE.

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ASH TRAY AND RECEIVER AND SUPPORT THEREFOR.

Application filed March 29, 1924. Serial No. 702,743.

This invention relates to a novel ash tray and receiver capable of use in various locations, but more especially adapted for use in automotive vehicles (particularly in closed automobiles), and the invention further relates to an improved arrangement and device whereby the tray and receiver can be removably supported, as upon the dash of an automotive vehicle, in unique manner.

A purpose of the invention is to produce an ash tray and receiver, more peculiarly suitable for use in closed automobiles, uniquely associated with each other so that the tray is rotatable on the receiver to be swung between a closed, smoke-tight position and a wide open position providing an opening between the upper face of the tray body and the receiver greater than one-half of the area of the space at the mouth of the receiver.

A further purpose is to provide a novel ash receiver having sockets in its upper, open end, and to provide a novel ash tray adapted to cover said receiver in smoke-tight fashion, the tray having trunnions rotatably and removably fitting said sockets, the body of the tray being adapted to lie within said receiver, and a portion of said body being provided with a flange or margin adapted to rest upon a part of the upper, open end of the receiver, the side walls of said receiver extending rearwardly from points adjacent to or contiguous with the opposite ends of said flange or margin in converging relation to each other, and the opposite side edges or ends of said tray similarly converging to exactly fit said receiver in such manner that the portion of the tray which moves in the receiver will rotate, between its closed, smoke-tight position and its wide open position, clear of the receiver wall to offer no interference between the receiver and tray during manipulation of the tray to open or closed position, as by means of a finger piece, which may be the flange or margin of said tray, or a part of said flange or margin.

A still further purpose is to provide an ash tray and receiver as stated, wherein the portion of the tray having the flange or margin resting upon the upper, open end of the receiver is heavier than the portion of the tray beyond the trunnions (opposite the flange or margin) and adapted to lie within the receiver, whereby the normal position of the tray will be its closed, smoke-tight position.

A still further purpose is to provide the improved ash tray and receiver as stated, with an arrangement limiting the movement of the tray toward open position, this arrangement precluding the possibility of swinging the tray to a position beyond that from which said tray will return, as soon as released, to its normal, closed position.

Another purpose is to provide a novel ash tray as briefly outlined which will be constituted by a single piece of metal or other suitable material.

Another purpose is to provide a receiver of general rectilinear conformation, the side walls of said receiver being disposed obliquely with respect to each other, and to provide a tray adapted to snugly fit within and be removably rotatable in said receiver.

Another purpose is to provide an oblong receiver and an oblong tray having its shorter sides rotatably mounted upon the receiver, the tray being adapted to fit the receiver and being smaller in width than a measurement representing the length of a burnt match or cigarette ordinarily dropped into a tray, whereby to insure that burnt matches and cigarettes will position themselves lengthwise in the tray to pass sidewise into the receiver when the tray is dumped, thus minimizing the liability of matches and cigarettes going into the receiver end first to be apt to stand on end at the bottom of the receiver and prevent the tray from rotating to closed position.

Another purpose is to provide an oblong receiver and an oblong tray as stated, the receiver including a receiving face which is parallel with the length of the tray and the tray being adapted to dump matches and cigarettes sidewise against said receiving face, whence said matches and cigarettes can fall to the bottom of the receiver to lie flat upon said bottom and thus require a minimum of space.

Another purpose is to provide an improved and simple device whereby the tray and receiver invented by me can be positively and dependably, as well as removably, supported, as from the dash of an automotive vehicle.

And yet another object is to so construct the tray and receiver that they will occupy but a minimum of space in an automobile, the base of the receiver at the same time

being of suitable structure to insure stability of said receiver when positioned unsupported, as upon a table or the like.

With the above objects and purposes in view, as well as others which will appear as the specification proceeds, the invention comprises the construction, arrangement and combination of parts as now to be fully described and as hereinafter to be specifically claimed, it being understood that the disclosure herein is merely illustrative of the principles of the invention and meant in no way in a limiting sense, changes in details of construction and arrangement of parts being permissible so long as within the scope of the appended claims.

In the accompanying drawing forming a part of this specification,

Fig. 1 is a front elevational view of an ash tray and receiver in which features of the invention are incorporated;

Fig. 2 is a top plan view of the tray and receiver of Fig. 1, showing the tray in wide open position;

Fig. 3 is a similar view, showing the tray in closed, smoke-tight position, and also showing the receiver-support with which the receiver is associated;

Fig. 4 is a side or end elevation, showing the tray in closed position, the receiver-support being not shown;

Fig. 5 is a similar view showing the tray in wide open position, and also showing the receiver-support with the receiver situated therein;

Fig. 6 is a sectional view, taken as on line 6—6 in Fig. 1, showing the improved device supporting the receiver, as from the dash of an automobile, and disclosing in dotted lines a receiver as when being inserted in or removed from its supporting device; and

Fig. 7 is a perspective view disclosing the improved receiver-holding or supporting device as when secured to a dash or the like, the receiver being not shown.

With respect to the drawing and the numerals and characters of reference indicated thereon, A denotes a support, as for example, the dash of an automobile, 10 the improved receiver-supporting device, 11 the novel receiver, and 12 denotes the novel tray.

Of the receiver, 13 is the front wall, 14 the rear wall which is desirably flat and approximately parallel with the front wall, 15 and 16 are side walls converging from the front wall 13 to the rear wall 14, and 17 is the base of the receiver including a rear portion 18 having its outer face smoothly curved upwardly and forwardly as best shown in Figs. 4 to 6, and a front portion 19 which comprises an extension the lower edge of which terminates at a location in the horizontal plane of the lowest (desirably furthest to the rear) part of said rear portion 18, whereby the receiver when resting upon a table or the like will be upright and stable, as will be fully understood. The receiver may be of any suitable material. Preferably, it is a metallic casting, a groove 20 extending downwardly at the middle of the width of the rear face of the rear wall 14, from about two-thirds of the height of the wall to the lower extremity thereof as disclosed (see Figs. 1, 2 and 6), being for a purpose to be made clear.

The ash tray and its manner of association with the receiver is best shown in Figs. 2 to 6. In said figures, the tray is disclosed as of general rectilinear shape to fit within the upper, open end of the receiver. It includes a body the rear portion 21 of which is desirably approximately flat and the front portion 22 of which is smoothly curved upwardly from said flat portion, the whole of the upper extremity of said curved portion being adapted to lie closely adjacent to or contiguous with the upper, open end of the receiver within said open end, there being a part of said smoothly curved portion adjacent to or contiguous with the front wall 13 and parts thereof adjacent to or contiguous with said side walls 15 and 16.

Each side wall 15, 16 has a socket 23 in its upper end, the sockets being arranged opposite each other preferably centrally of said side walls, and the parts of said smoothly curved portion 22 of said tray adjacent the side walls 15 and 16 merge into outwardly extending trunnions 24 adapted to lie in said sockets 23. Naturally, the side or end edges 25 of the tray converge to fit the side walls 15 and 16 of the receiver when in closed position, while the rear edge 26 of the portion 21 is designed to then lie against the rear wall 14. It is evident that when the tray is swung on its trunnions, the portion 21 moving downwardly in the receiver, the edges 25 and 26 immediately recede from the side and rear walls, respectively. See Figs. 2 and 3.

The part of the smoothly curved portion 22 of the tray body which is adjacent to or contiguous with the front wall 13 of the receiver is provided with a flange or marginal portion 27 adapted to rest upon the upper edge of the wall 13 when the tray is in closed position, said wall 13 terminating short of the plane of the ends of the walls 15 and 16 a distance preferably equal to the thickness of said flange or marginal portion, whereby the upper face of the flange or marginal portion can be flush with the upper ends of said walls 15 and 16 (see Fig. 4), and desirably, the flange or marginal portion includes a finger piece 28 extending forwardly a trifle beyond the wall 13, whereby the tray can be manipulated about its axis.

The part of the tray at the side of the trunnions having the flange or marginal portion (at the left in Figs. 4, 5 and 6) is

preferably heavier than the part of the tray opposite said flange or marginal portion; this for the obvious purpose of insuring that the normal position of the tray will be its closed, smoke-tight position. As will be more apparent from Figs. 4, 5 and 6, each trunnion 24 includes a flat face 32 normally disposed upwardly and adapted to engage a socket to limit the movement of the tray toward open position (see Fig. 5), this arrangement being designed to preclude the swinging of the tray to a position beyond that from which it will return to closed position when released after being opened.

Clearly, when the tray is in wide open position, see Figs. 2 and 5, the opening provided between the upper face of the tray body and the receiver is equal to more than one-half of the area of the space at the mouth of the receiver. Attention is called to the fact that the portion 21 of the tray does not become removed from the receiver during its normal use, and, therefore, needs no side walls.

Referring to Figs. 2 to 6, inclusive, it will be seen that the instant the tray is manipulated about its axis as explained, the rear edge 26 thereof will immediately commence to recede from the rear wall 14 of the receiver, while the side or end edges 25 swing downwardly in the receiver away from the side walls 15 and 16—said side walls diverging from the rear wall to the front wall 13. After swinging downwardly said side edges or ends swing upwardly, but where they swing upwardly they are situated in the receiver at a location the side walls are yet a further distance apart. This is apparent. The portion of the tray between the trunnions and the flange or marginal portion of course offers no interference to ready manipulation of the tray, the smoothly curved part of said portion nicely fitting within the upper, open end of the receiver. The initial movement of the tray about its axis simply lifts the portion 22 away from the front wall 13 and the side walls 15 and 16.

The tray is composed of a single piece of material; it is usually a metallic casting. It can be quickly removed from the receiver and just as quickly returned to its normal position.

The receiver-holding or supporting device 10 as disclosed is, desirably, a resilient metallic plate of general rectangular shape bent at its upper end portion to provide a downwardly opening hook member 29, and at its lower end to provide a spring platform or member 30 directly beneath the hook member, numeral 31 denoting desirably round-headed screws arranged in holes in the plate 10 and imbedded in the material of the dash A, removably securing the receiver-supporting device to said dash.

It is to be noted that the spring platform or member 30 has approximately the shape of the outer face of the rearward, curved portion 18 of the receiver. In Fig. 6 I have disclosed the manner in which the receiver can be inserted in or removed from its supporting device. In the dotted lines in said figure, the upper edge of the rear wall 14 of the receiver is shown fitted into the hook member, said hook member preferably being of just sufficient width to fit along the full width of said wall 14 and between the walls 15 and 16 (see Fig. 3). When then the dotted receiver is moved to the position of the receiver in full lines (against the plate 10), the spring platform or member has snugly engaged beneath the smoothly curved portion 18 to firmly hold the receiver clamped between the hook member and the spring platform or member, whence it cannot become accidentally displaced. By pulling the lower portion of the receiver away from the plate 10, the receiver can, obviously, be easily withdrawn from its holder. It is now apparent that the groove 20 is adapted to provide a way for the screws 31 when the receiver is inserted in or removed from its holder.

The present tray, receiver and support are specially well fitted for use in closed automobiles. The arrangement of tray and receiver positively insures that no smoke will come from burning cigars or cigarettes deposited in the receiver beneath the tray. To empty refuse, all that is necessary is to withdraw the receiver from the support, and remove the tray from the receiver. After emptying, the tray and receiver can be quickly replaced.

It is to be noted that the receiver is relatively flat to lie as close as possible to a dash or the like; this for an obvious purpose. It is also to be noted that the rectilinear, relatively flat receiver makes provision whereby the tray must swing downwardly in the receiver but a very short distance; this allowing by far the greater portion of the receiver to be filled with ashes or other refuse before requiring to be emptied. The tray is preferably smaller in width than a measurement representing the length of a partially used match or cigarette ordinarily dropped into a tray, so that matches and cigarettes position themselves lengthwise in the tray. The receiver includes a receiving face which is parallel with the length of the tray, and when the tray is dumped, the matches and cigarettes leave the tray and strike against said receiving face sidewise, and fall to the bottom of the receiver to lie flat upon said bottom. And while the receiver meets all the requirements for advantageous use in closed vehicles, it can have other uses. Its bottom has been constructed to be stable on

a table or the like so that it can serve for use as an ordinary tray and receiver of commerce.

By having the hook member 29 just fit over the upper end of the wall 14 between the walls 15 and 16, two results are obtained:—first, there can be no other way to attempt to insert the receiver in its holder than to fit the full width of the wall 14 into the hook member 29; and second, the plate 10 is thus capable of holding the receiver against sidewise play in its support.

By actual experience, a tray and receiver having the structure as outlined, and associated with an automobile dash in the manner illustrated and described, produces no rattling noises even when the automobile is carelessly driven over the roughest of surfaces.

Having thus fully described the invention, what I claim as new and desire to secure by Letters Patent is:

1. In combination, an ash receiver having sockets, and an ash tray adapted to entirely cover said receiver in smoke tight fashion and having trunnions fitting the sockets, the trunnions being arranged at opposite sides of the tray above the base thereof whereby the tray can rotate on an axis above its base, said receiver having converging side walls, and said tray including a body having converging side edges fitting said side walls when the tray is in closed position.

2. In combination, an ash receiver having sockets, and an ash tray adapted to entirely cover said receiver and having trunnions removably and rotatably fitting the sockets, the trunnions being arranged at opposite sides of the tray above its base, said receiver having converging side walls, said tray including a body having a margin adapted to rest upon the upper edge of a part of said receiver, and said body also having converging side edges fitting said side walls when the tray is in closed position.

3. In combination, an ash receiver including a base, a front wall, a rear wall, and side walls connecting said front and rear walls, said side walls including diverging portions and each side wall having a socket in its upper edge, and an ash tray adapted to entirely cover said receiver in smoke-tight fashion when in closed position, the ash tray having trunnions arranged at its opposite sides and above its base for removably and rotatably fitting said sockets, and including a body adapted to lie wholly within the receiver when the tray is in closed position.

4. In combination, an oblong receiver and an oblong tray having its shorter sides rotatably mounted upon the receiver, the tray being adapted to fit the receiver and being smaller in width than a measurement representing the length of a burnt match or cigarette ordinarily dropped into a tray.

5. In combination, an oblong receiver and an oblong tray having its shorter sides rotatably mounted upon the receiver, the tray being adapted to fit the receiver and being smaller in width than a measurement representing the length of a burnt match or cigarette ordinarily dropped into a tray, the receiver including a receiving face parallel with the length of the tray, and the tray being adapted to dump matches and cigarettes sidewise against said receiving face whence said matches and cigarettes can fall to the bottom of the receiver to position themselves flat upon said bottom.

6. In combination, an oblong receiver and an oblong tray having its shorter sides rotatably mounted upon the receiver, the tray being adapted to fit the receiver, the receiver including a receiving face parallel with the length of the tray, and the tray being adapted to throw matches and cigarettes sidewise against said receiving face when said tray is dumped.

7. In combination, a receiver having an upper, open end and a bottom curved upwardly from rear toward front, and a support for the receiver, the support including a member having a downwardly opening hook adapted to receive the upper edge of the receiver and an integral spring rest for the bottom thereof, said spring rest having the general shape of the part of said receiver bottom which it is adapted to engage.

8. In combination, a receiver having an upper, open end and a bottom curved upwardly from rear toward front, and a support for the receiver, the support including a member having an integral downwardly extending hook adapted to receive the upper edge of the receiver and an integral spring rest for the bottom thereof, said spring rest having an outline to snugly fit beneath the receiver.

9. The combination as specified in claim 8, wherein the front portion of the base of the receiver has an extension terminating in the horizontal plane of the lowest part of the rear portion thereof, whereby the receiver when removed from its support can rest in stable manner upon any horizontal plane surface.

10. In combination, a receiver having a relatively flat rear wall, an upper, open end, and a bottom curved upwardly from rear toward front, and a support for the receiver including a member against which the rear wall of the receiver is adapted to lie, an integral downwardly extending hook adapted to receive the upper edge of the receiver, and an integral spring rest opposite the hook for the bottom of the receiver, said spring rest having an outline to snugly fit beneath the receiver, and the receiver being adapted to be first fitted into the hook and then moved to position against the support

member while the spring rest is finding its seat beneath the curved part of the receiver bottom.

11. In combination with a receiver having a flat rear wall and side walls, a receiver support adapted to be attached to an automobile dash or the like, the receiver support consisting of a flat plate adapted to be secured against said dash, a downwardly opening hook member integral with said plate adapted to fit over the upper edge of said rear wall of said receiver, and an integral spring rest directly beneath said hook member and adapted to fit beneath the base of said receiver to securely hold the upper edge of said rear wall in said hook member.

12. In combination, a receiver having a flat rear wall and side walls, and a receiver support for said receiver, said receiver support including a downwardly opening hook member adapted to fit over said rear wall and lie close to both of said side walls, and a spring seat directly beneath said hook member and adapted to removably fit beneath the base of said receiver to exert an upward pressure against the receiver designed to securely hold the upper edge of said rear wall in said hook member.

Signed at Bridgeport, in the county of Fairfield and State of Connecticut, this 24th day of March, A. D., 1924.

SYLVANUS D. LOCKE.