May 9, 1944. W. H. BANCK 2,348,442

CIGARETTE AND MATCH DISPENSER

Filed Dec. 8, 1941

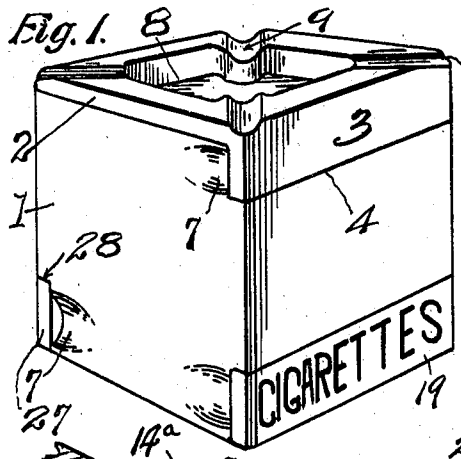


Fig. 1.

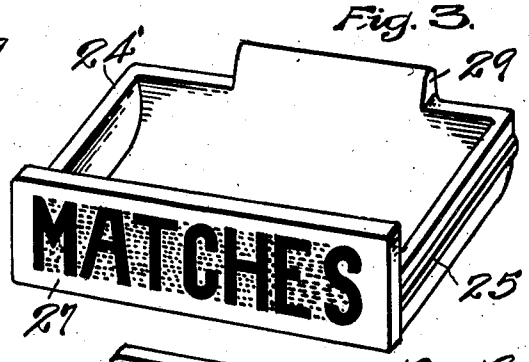


Fig. 3.

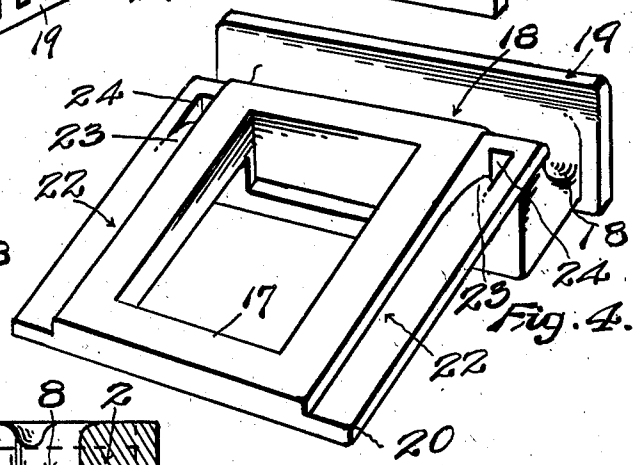


Fig. 4.

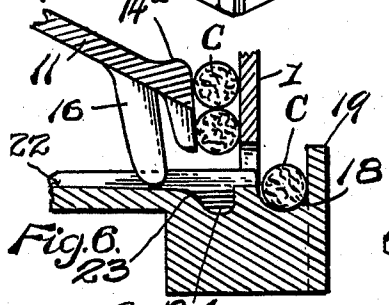


Fig. 6.

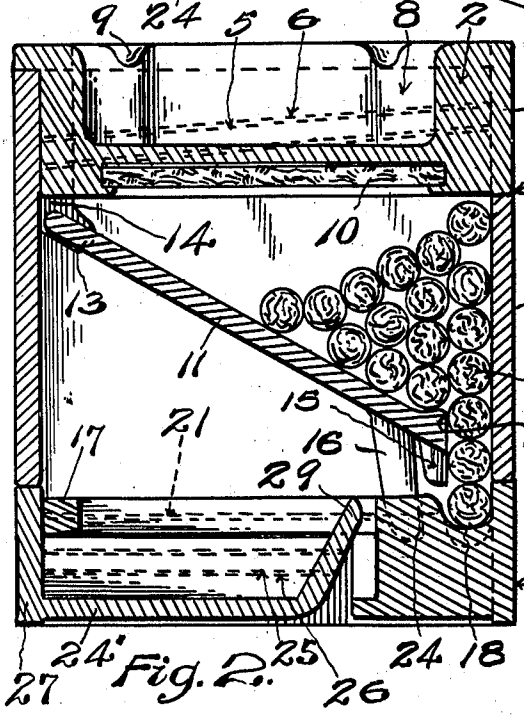


Fig. 2.

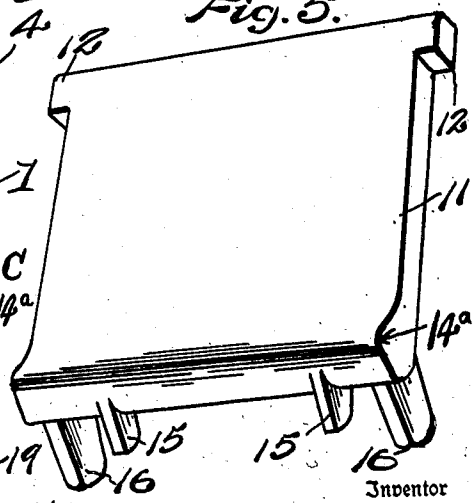


Fig. 5.

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CIGARETTE AND MATCH DISPENSER

William H. Banck, Washington, D. C.

Application December 8, 1941, Serial No. 422,155

1 Claim. (Cl. 312—80)

My present invention relates to an improved cigarette and match dispenser which, while herein referred to, for convenience of illustration and description, for the purpose of dispensing cigarettes and matches, is also well adapted for dispensing cigars and matches or for dispensing other slender articles that are required for joint use.

The present invention is a continuation in part of my co-pending application Serial Number 339,787, matured into Patent No. 2,265,336 issued Dec. 9, 1941.

In carrying out my invention I employ a device of this character that is especially designed for individual use by a smoker, and from which a cigarette first may be readily extracted after which the required match also may be extracted for lighting the previously extracted cigarette. A normally closed feed-hopper is employed in which a plentiful supply of cigarettes may be preserved in proper condition, and a normally closed match-container or drawer is also employed in which a supply of matches may also be safely stored, either in package form, or in loose bulk as desired.

In the physical embodiment of my invention I provide a device that is compactly arranged and simple in construction; which may be manufactured at comparatively low cost of production; and which is simple and convenient in manipulation for the performance of its functions.

The invention consists in certain novel combinations and arrangements of parts involving particularly a box having a front wall opening and having therein a slide carrier adapted to reciprocate through the opening. The carrier is provided with a dispensing trough in which a cigarette is presented to the operator when the drawer or carrier is withdrawn. A pivotally suspended inclined partition is attached within the box and forms a feed hopper above the slide carrier. Means are provided on the carrier and the partition whereby the cigarette immediately above the cigarette in the carrier trough is prevented from dropping by gravity until the carrier is returned.

The invention further includes other features in combination that form the unitary structure of the device and which will hereinafter be more specifically set forth. In the accompanying drawing I have illustrated one complete example of the physical embodiment of my invention wherein the parts are combined and arranged according to one mode I have thus far devised for the practical application of the principles of my invention, but it will be understood that various alterations and changes are contemplated and may be made in these exemplifying structures within the scope of the claim, without departing from the principles of my invention.

In the drawing:

Figure 1 is a perspective view of the combined cigarette and match dispenser involving my invention.

Figure 2 is a transverse vertical view in section showing the match drawer and the cigarette carrier in closed position.

Figure 3 is a perspective view of the match drawer.

Figure 4 is a perspective view of the cigarette dispenser or slide carrier and the trough.

Figure 5 is a perspective view of the pivotally suspended inclined partition that forms the movable bottom of the feed hopper, and co-acts with the slide carrier to control the feed of the cigarettes from the hopper to the trough of the carrier.

Figure 6 is a detail sectional view showing the initial dispensing movement of the cigarette carrier, with the feed-chute closed to prevent feeding movement of the cigarettes.

In carrying out my invention I preferably employ hardened plastic material of suitable composition in the manufacture of parts and the box or casing 1 is here shown as of rectangular shape, but it will be understood that the shape and size of the box or casing may be varied to suit different purposes and other suitable material may be employed in the construction of the parts of the device.

The open top of the box is closed by a slide lid 2, having a flange 3 which fits into a recess 4 in the front wall of the box. In order to frictionally hold the slide lid in place I preferably use oblique beads 5 at the opposite sides of the lid which fit in complementary grooves 6 in the opposite side walls of the box. The use of these oblique slide beads and grooves provides a structure that holds the lid in place when it is closed.

In Figure 1 it will be seen that recesses 7 are provided in the exterior faces of the box to facilitate grasping the flange 3 when opening or closing the lid. These recesses 7 are also shown at the bottom of the box and will be later described.

In the top of the lid I provide an ashtray 8 and at the four corners of the tray I provide cigarette holders 9, and in Figure 2 it will be seen that a humidifier 10 is mounted in the bottom face of the tray. This humidifier may be made of moist blotting paper or any other suitable material that

is mounted in the under face of the sliding lid in order that the interior of the box may be maintained in a humid condition conducive to the reservation of the cigarettes.

Between the front and rear walls of the box I provide an inclined partition 11 which at its rear upper end is provided with trunnions 12 by means of which the partition is suspended in recesses 13 in the opposite side walls of the box. These recesses 13 are located at the lower ends of vertical grooves 14 in the interior faces of the box, and by means of these grooves the partition may be slid down into position so that its front end declines toward and terminates a short distance from, the front wall of the box.

On top of the upper face of this partition I provide a ledge 14a that extends the full width of the partition, and below the lower edge of the partition I provide a pair of spaced guide lugs 15 which together with the front wall of the box form a feed-chute as best seen in Figure 2. In Figure 2 it will be seen that a column of cigarettes is nested in the chute and the cigarettes are free to slide through the chute. In order to feed a single cigarette from the dispensing device the lowermost cigarette is discharged, but the second cigarette from the bottom is clamped against the front wall of the box to retain the cigarettes in the feed-hopper while one cigarette is being dispensed.

For this purpose I provide a pair of cams 16 that project below the lower end of the partition and are located just behind the guide lugs 15.

For dispensing a single cigarette I provide a carrier which comprises an open frame 17 and a front trough 18, the latter extending transversely of the carrier and located just behind a front plate 19 of the carrier. This carrier has guide edges 20 that are adapted to slide in grooves 21 in the side walls of the box and in Figure 1 it will be seen that the plate 19 may be grasped at its ends by a thumb and finger for the purpose of reciprocating this carrier. As seen in Figure 2 the trough 18 of the carrier is located directly below and forms the bottom of, the feed-chute from the hopper formed in the box above the partition 11, and the guide lugs 15 guide the lowermost cigarette into the trough.

As best seen in Figure 4 the carrier is provided with two parallel slide faces 22 which at their forward ends terminate in cam faces 23 and these cam faces 23 terminate in sockets 24. As seen in Figure 2 the lower ends of the cams 16 fit in these sockets when the carrier is in closed position, and it will be apparent that when the carrier is moved to dispensing position the co-action of the two cam-faces 23 with the two cams 16 will result in swinging upwardly or tilting upwardly for a slight distance, the front free edge of the partition 11, and the lower faces of the cams 16 ride over the slide faces 22 of the carrier.

In addition to the cigarette dispensing device, I provide a match dispensing device comprising a slide drawer 24' having guide beads 25 which fit in complementary grooves 26 in the side walls of the box.

The front plate 27 of the match box fits into a recess or opening 28 at the rear end of the box, and this match drawer is alined with the carrier so that the two parts may be relatively reciprocated, one to dispense matches, and the other to dispense cigarettes. The match drawer and the open frame 17 of the cigarette carrier are loosely coupled together by means of a cross bar 29 at the rear of the match box and which projects upwardly into the open frame.

With the lid 2 removed, the hopper is filled with cigarettes C, and by gravity feed the cigarettes roll down the inclined bottom of the hopper, the lowermost one taking the position in the trough 18 as in Figure 2, with a short column standing vertically above the cigarette in the trough. The cigarette shown in the trough in Figure 2, of course, is the one to be dispensed and this action is accomplished by grasping the ends of the front plate 19 and pulling or sliding the carrier to the right in Figures 1 and 2. The initial motion of this dispensing movement causes the two cams 16 to ride up over the two cam faces 23 with the result that the partition 11 forming the bottom of the feed hopper is swung on its trunnions 12 in the recesses 13 and the guide lugs 15 at the free lower end of the partition are pressed against the bottom cigarette remaining in the feed chute, as indicated in the detail Figure 6. In this manner the feed of cigarettes is cut off at the bottom of the chute and the feed remains cut off as long as the cams 16 are held elevated out of their sockets 24. As the carrier is pulled out of the box-front the cams 16 are supported by and ride along on top of the surfaces 22 of the carrier. When the carrier has been withdrawn sufficiently to permit the thumb and finger to grasp the ends of the dispensed cigarette, the latter is removed from the trough 18 and the carrier is pushed back into the box, its movement being guided by the lateral edges 20 of the hollow frame sliding in the grooves 21 in the interior opposite faces of the box. As indicated in Figure 2 the outward movement of the carrier is limited by contact of the cross bar 17 of the carrier with the abutment 29 on the back wall of the match-drawer 24'. As the carrier with its empty trough is pushed back into the box the cams 16 ride on the faces or surfaces 22, then down over the cam faces 23, and finally the cams drop by gravity into the sockets 24, and thus as the partition 11 swings on its trunnions 12 the guide lugs 15 that have been pressing on the bottom cigarette of the chute are withdrawn therefrom and this cigarette is permitted to fall into the trough 18. The remaining cigarettes in the hopper gradually move toward the chute and a supply of cigarettes is thus maintained in the feed chute in the positions indicated in Figure 2. The swinging or tilting movement of the partition 11 due to the co-action of the cams 16 and the cam faces 23, although comparatively slight, is sufficient to agitate the bulk of cigarettes in the hopper and the ledge 14 assists in this agitation, so that an ample supply of cigarettes is maintained in the column in the feed chute, and jamming of the cigarettes is prevented.

After a cigarette has been dispensed the carrier may be either pushed back, as described, or it may be pulled back into the box by the act of withdrawing the match drawer 24 from the rear end of the box; in the latter action, the abutment 29 in contact with the rear cross bar 17 pulls the carrier into the box while the drawer 24' is being pulled out of the opening 28 in the rear end of the box.

As indicated in Figure 1 the plate 27 of the match drawer may be grasped by a thumb and finger, and the match box may then be withdrawn to permit access to the interior of the drawer. The match drawer is guided by its beads or tongues 25 sliding in the grooves 26 in the opposite walls of the box, and its outward move-

ment is limited by contact of the abutment 29 on its rear wall with the cross bar 17 of the carrier.

Thus it will be seen that the carrier or cigarette dispenser and the match drawer are loosely coupled together so that they may be relatively reciprocated. Should the match drawer, through inadvertence be left open, the opening movement of the cigarette carrier will pull the drawer back into the box, and the same action will occur in the event the cigarette trough is left open when the match drawer is opened.

As indicated in Figure 1 the front plate of the carrier may have the word cigarettes thereon; and as in Figure 3 the match drawer may be designated by the word matches, and in addition the plate 27 may be provided with a suitable abrasive or match-lighting coating to provide a scratching surface for the matches.

The exterior of the box may be decorated or ornamented, or fashioned to simulate attractive objects, and the shape and form of the device may be changed, together with dimensions, in order to adapt the device for use with different slender articles of this type, without departing from the principles of my invention.

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

In a cigarette dispenser including a box having a front wall opening, the combination with a slide carrier reciprocable through said opening and having a dispensing trough, of a pivotally suspended inclined partition forming the bottom of an interior feed hopper above the slide carrier, said carrier having spaced longitudinally extending slide faces, a pair of sockets and cam faces below the plane of the slide faces, a pair of spaced cams depending from the partition for co-action with said sockets and faces, a pair of spaced guide lugs also depending from the partition and spaced from the front wall, and a ledge extending across the lower edge of the partition and forming an upper wall of the feed-chute.

WILLIAM H. BANCK.