

April 22, 1947.

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2,419,458

COMBINATION CIGARETTE CONTAINER AND LIGHTER

Original Filed Oct. 3, 1941 3 Sheets-Sheet 1

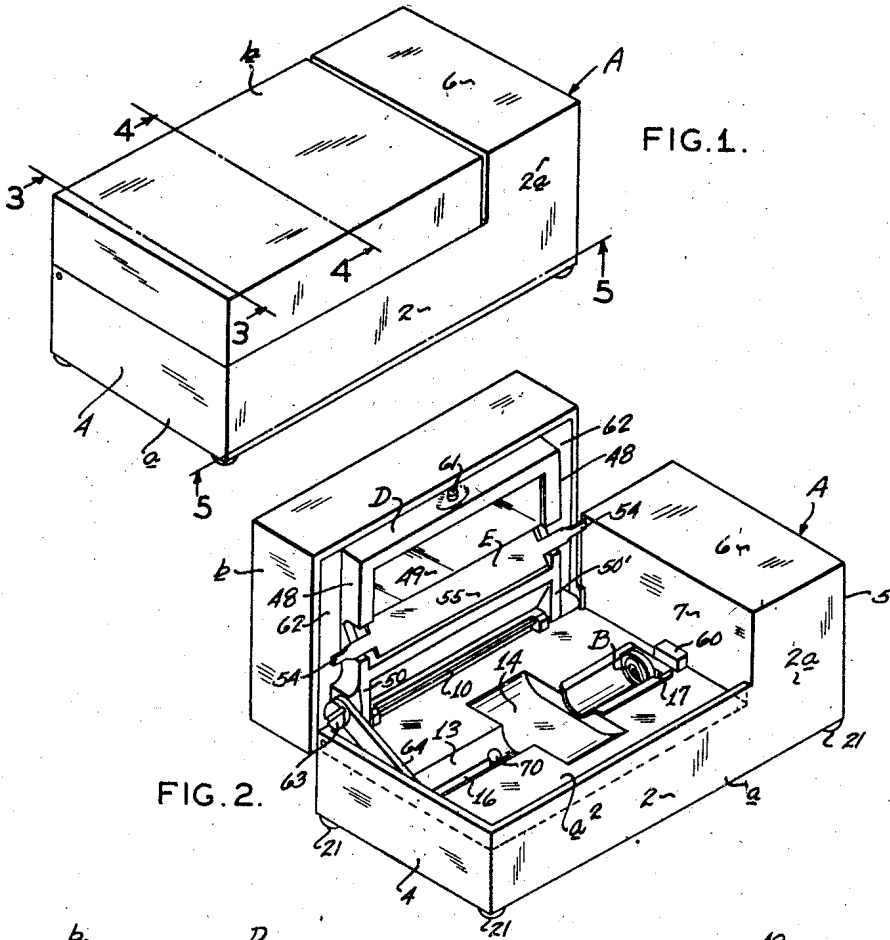


FIG. 1.

FIG. 2.

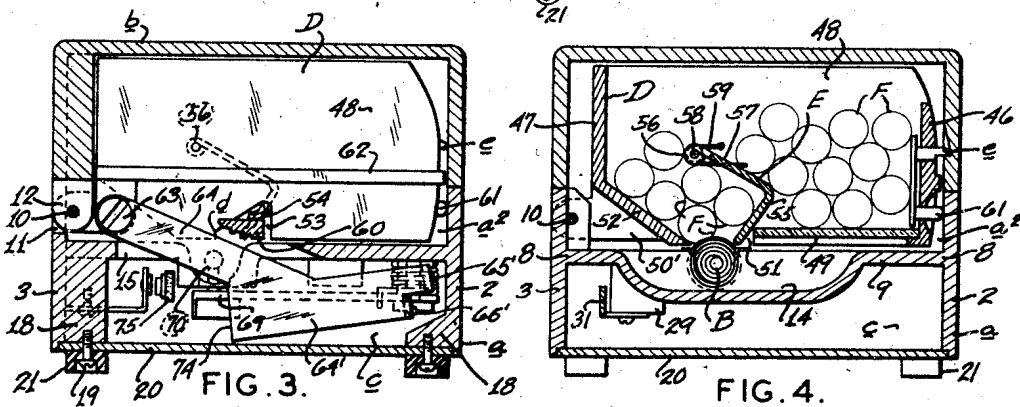


FIG. 3.

FIG. 4.

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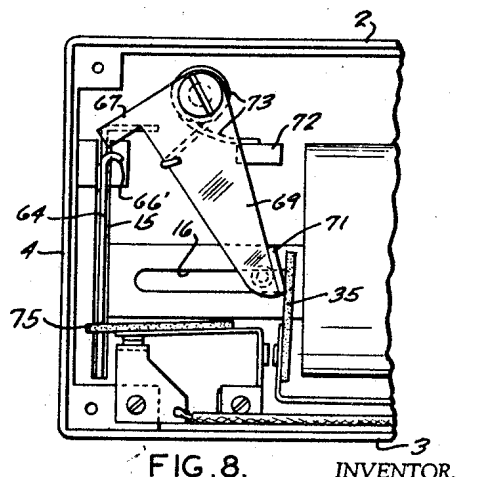
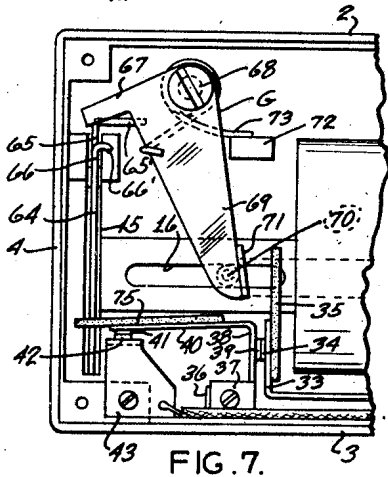
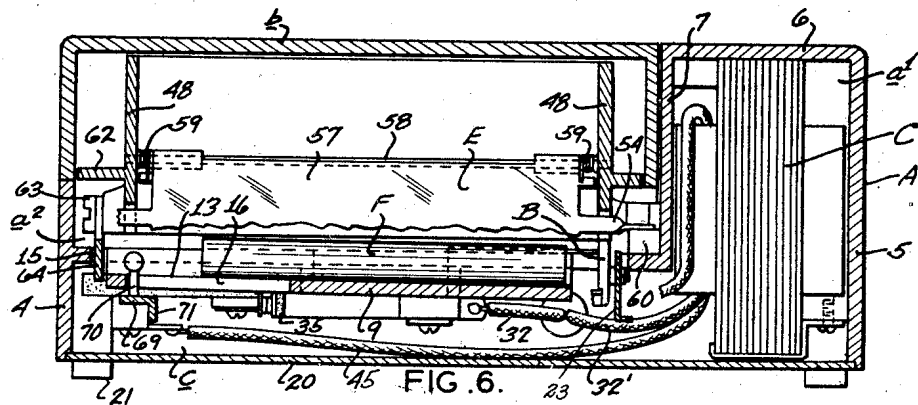
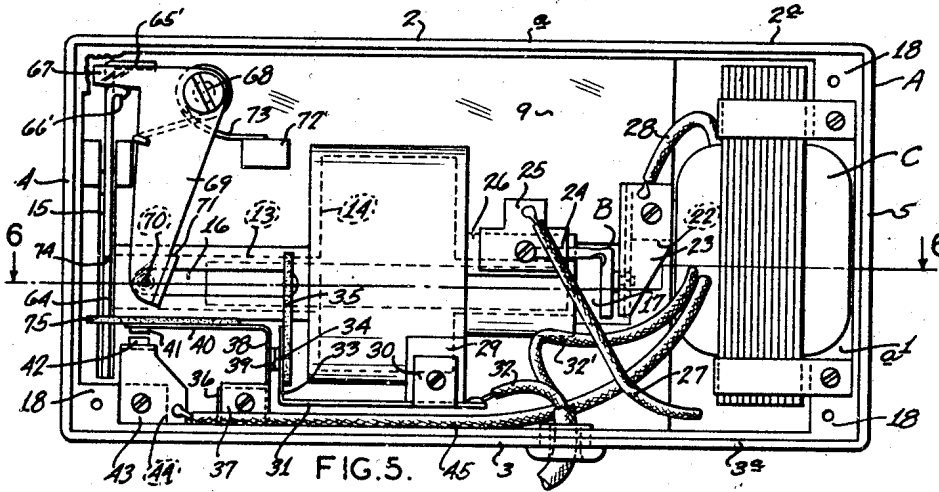
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COMBINATION CIGARETTE CONTAINER AND LIGHTER

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3 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

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COMBINATION CIGARETTE CONTAINER AND LIGHTER

Richard Mayer, New Rochelle, N. Y., assignor to
Universal Match Corporation, St. Louis, Mo., a
corporation of Delaware

Original application October 3, 1941, Serial No.
413,466, now Patent No. 2,373,772, dated April
17, 1945. Divided and this application April 3,
1944, Serial No. 529,264

5 Claims. (Cl. 219—32)

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My invention relates generally to cigarette
containers and, more particularly, to a certain
new and useful improvement in combination cig-
arette containers and lighters, and is a division
of my co-pending application filed October 3, 5
1941, Serial No. 413,466, issued April 17, 1945 as
Patent No. 2,373,772.

My invention has for its primary object the
provision of a cigarette receptacle which includes
a magazine and lighter-section or tray so unique-
ly joined and co-operable as to automatically, on
actuatuons of the magazine relatively to the tray,
successively drop the cigarettes from the maga-
zine into the tray and present the same fully
lighted for convenient manual removal from the
tray.

My invention has for another object the pro-
vision of a combination cigarette container and
lighter in which all of the essential parts or ele-
ments, other than in some instances a remote
source of electrical energy, are housed within a
lidded shell which may be easily "passed around"
for convenient successive removal of lighted cig-
arettes.

My invention has for a further object the pro-
vision of a combination cigarette container and
lighter comprising a lidded shell and in which
the cigarette magazine is uniquely associated
pivotally with the shell-lid for ready filling.

My invention has for a still further object the
provision of a combination container of the type
mentioned which may be readily constructed,
which is compact and artistic in form and ap-
pearance for service upon a desk or table or for
passing around among a group, which may be
readily filled, which is economical and entirely
safe in electrical consumption and operation, and
which is efficient and satisfactory in the perfor-
mance of its intended functions.

And with the above and other objects in view,
my invention resides in the novel features of
form, construction, arrangement, and combina-
tion of parts presently described and pointed out
in the claims.

In the accompanying drawings (three sheets),
Figures 1 and 2 are reduced perspective views
of a combination cigarette receptacle or con-
tainer and lighter constructed in accordance with
and embodying my invention, respectively illus-
trating the structure with its hinged lid or cover
in closed and open position;

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Figures 3, 4, and 5 are enlarged sectional views
of the structure taken approximately along the
lines 3—3, 4—4, and 5—5, respectively, Figure 1;

Figure 6 is a longitudinal sectional view of the
structure taken approximately along the line
6—6, Figure 5;

Figure 7 is a fragmental longitudinal sectional
view of the structure with its lid or magazine
lifted and with the cigarette-pusher in cigarette
shifted lighting position;

Figure 8 is a similar view of the structure with
the cigarette-pusher in so-called abnormal
shifted circuit-breaking position following re-
moval or excessive consumption of a lighted cig-
arette;

Figure 9 is a front elevational view, partly in
section, of the structure with its lid and maga-
zine in lifted or open position;

Figures 10 and 11 are transverse sectional
views of the structure respectively taken approxi-
mately along the lines 10—10 and 11—11, Figure
9; and

Figure 12 is a digrammatic view of the ciga-
rette-lighting-wiring of the structure.

Referring now in more detail and by reference
characters to the drawings, which illustrate a
preferred embodiment of my invention, the com-
bination cigarette receptacle or container and
lighter, for brevity merely designated container,
includes a shell or housing A comprising a box-
like tray *a* of cast-metal, plastic, or other suit-
able material comprising a front wall 2, a rear
wall 3, and an end wall 4, the front and rear
walls 2, 3, having extensions 2^a and 3^a, respec-
tively, of increased height and connected trans-
versely of the tray by an end wall 5. Joining
the walls 2^a, 3^a, and 5 at their upper margin, is a
top wall 6, and joined marginally to the walls 2^a,
3^a, and 6, all as best seen in Figures 2 and 6, is
a wall or partition 7 having its lower margin, for
purposes presently appearing, spaced upwardly a
suitable distance from the plane of the lower
margin of the tray *a*. Thus, it may be here said,
the tray *a* is longitudinally divided and neatly
equipped with a compartment, as at *a*¹, for hous-
ing and generally concealing some of the electri-
cal equipment of the shell or container A and
with a compartment, as at *a*², for the other op-
erable parts of the structure.

Marginally, as at 8, integral with or suitably
joined to the front and rear walls 2, 3, of the

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tray *a*, is a plate or so-called false-bottom 9, which extends approximately flatwise horizontally across the tray-chamber a^2 suitably intermediate the upper and lower margins of the up-standing walls 2, 3, 4, and registers at an end with the lower margin of the partition 7.

Seated at its opposite ends in the partition 7 and end wall 4 and extending longitudinally of the tray *a* adjacent the upper margin of the rear wall 3, is a pintle-shaft or rod 10. Adjacent the tray-wall 4 and partition 7, the tray rear wall 3 has cut-outs 11, 11, opening to its upper margin, and pivotally engaging the shaft or rod 10 at the cut-outs 11, 11, are arms 12 fixed, in turn, to a suitably flanged box-like lid *b* of complementary size and dimensions relatively to the tray *a* and its compartment a^2 to seat, when in closed position, marginally upon the tray walls 2, 3, and 4 and cover the tray-compartment a^2 and thus complete the preferable rectangular formation of the shell A, as best seen in Figure 1.

Suitably intermediate the shell front and rear walls 2, 3, the plate or false-bottom 9 is depressed in the provision of a longitudinally extending cigarette-accommodating rounded channel or trough 13 having a centrally enlarged and transversely widened finger-clearance 14.

Suitably adjacent the one end wall 4, the plate or false-bottom 9 is formed with a transverse slot 15, which extends from and crosswise of the trough 13 to substantially the shell rear wall 3, as best seen in Figures 3 and 10.

In the bottom of the trough 13, the plate 9 is co-operatively formed longitudinally with a suitable slot 16, which terminates at one end adjacent the slot 15 and at its other end a short distance from the finger-clearance recess 14, as best seen in Figure 2; and formed in the plate 9 adjacent the partition 7 and communicating with the trough 13, is an opening, as at 17, for accommodating, as also best seen in Figure 2, a cigarette igniting or lighting element B, presently fully described.

Suitably fixed or provided in the respective lower corners of the tray *a*, are bosses or the like 18, and set into the bottom of the tray *a* against, and by means of screws or the like 19 secured to, the bosses 18, and snugly marginally engaging the shell walls 2, 3, 4, and 5, is a bottom plate 20 suitably equipped with cushion-feet 21 for supporting the container on a desk or table with total elimination of scratches and the like. Thus the tray *a* includes an upper section and a lower or concealing compartment, the latter now designated *c*, for some of the moving or actuating parts of the structure.

Accordingly, suitably fixed to, and depending within the chamber *c* from the under face of, the plate 9, is an insulation block 22, and mounted, in turn, on the block 22, is a conducting strip or bracket 23 supporting the electric heating element or lighter B in such manner that the lighter B projects through the slot or opening 17 into the upper section of the tray-compartment a^2 and across the adjacent end of the trough 13. As best seen in Figure 5, the lighter B has electrical connection at one terminal with the bracket 23 and its other terminal is electrically connected, as at 24, to a conducting-plate 25 fixed upon an insulation block 26 depending from the plate 9, the plate 25, in turn, having electrical connection by means of a lead 27 with one side of the secondary of a suitable step-down transformer C suitably housed within the tray-compartment a^1 and having electrical connection

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upon the other side of its secondary by means of a lead 28 with the bracket 23.

The plate 9 is suitably provided with a depending insulation-block 29, and suitably fixed on the block 29, is a conducting-member 30 having upon a side face of the block 29 a yielding switch-member or strip 31 having electrical connection at one end with one side of a suitable preferably remote source of electrical current (not shown) by means of a flexible conductor 32 extending preferably through the shell rear wall 3, as best seen in Figure 5, the companion conductor 32' from the other side of said current source having electrical connection with one terminal of the primary of the transformer C, as also best seen in Figures 5 and 6.

At its opposite or free end, the yielding switch-strip 31 has a laterally projecting extension 33 provided upon one side face with a switch-contact or button 34 and upon its opposite side face with an insulation-strip 35 of such length that its free end is disposed adjacent to, and crosswise of, the inner end of the slot 16, as best seen in Figures 5, 7, and 8, and for purposes presently appearing.

Depending from the plate 9 adjacent the rear tray wall 3, is an additional insulation-block 36, suitably mounted upon which is a conductor-member 37 having a substantially rigid strip-extension 38 provided with a switch-button or contact 39, with which the button 34 is normally in electrical engagement, as best seen in Figures 5 and 7.

The strip 38 is, in turn, formed with a laterally projecting yielding extension or switch-member 40 likewise provided upon one side face with a switch-button or contact 41 adapted for electrical circuit-closing engagement with a companion button or contact 42 fixed upon a conducting member 43 suitably mounted upon an insulation-block 44 on the under face of the plate 9, the member 43 having electrical connection by means of a lead 45 with the other or opposite side of the primary of the transformer C.

D designates a rectangular shallow box-like magazine comprising a front wall 46, a main rear wall 47, opposite side or end walls 48, 48, and a bottom wall 49, the end walls 48 having projecting rigid arms 50, 50', having pivoted engagement or attachment at the cut-outs 11 with the rod or shaft 10 for swingably supporting the magazine D relatively to the lid *b* and tray *a*, the magazine D being sized and dimensioned to freely fit and be housed partially within the lid *b* when in dispensing position and also when the lid *b* is in open or lifted position, as best seen in full lines in Figures 2, 10, and 11, to freely fit and be entirely housed within the lid *b* and the upper section of compartment a^2 of tray *a* when the lid *b* is in lowered or closed position, as best seen in Figures 1, 3, and 4, and to freely fit and be housed partially within the tray *a* when the lid *b* is lifted or open and the magazine D is in filling position, as indicated by dot-dash lines in Figure 10.

As best seen in Figures 4 and 11, the magazine-wall 49, which, it may here be observed, is constructed preferably of glass or other transparent material for visually exposing the magazine-contents when the lid *b* and magazine D are in the relative open or lifted positions illustrated in Figure 2, is reduced in width, so as to provide a discharge-opening or slot, as at 51, between the inner margin thereof and the inner margin of an obliquely inwardly and downwardly

disposed rear wall member or extension 52, intermediate which latter and the wall 49, the magazine side or end walls 48 are provided with notches 53 shaped and contoured, as best seen in Figures 2, 3, and 10, for workably accommodating opposed arms 54, 54, oppositely presented laterally outwardly from the ends of one wall 55 of a slot-closure E of somewhat V-shape in section, having pivoted or swingable connection, as at 56, at the free margin of its companion wall 57 upon a bar 58 fixed at its opposite ends in, and extending longitudinally crosswise of the magazine D between, the end walls 48. As also best seen in Figure 3, the notches 53 include so-called seat or end-portions, as at d, with which, under the bias, influence, or urging of a suitable spring-member 59 engaging the closure E and the bar 58, the arms 54 are adapted to yieldingly engage, and when the arms 54 are so seated, the closure E movably extends over and closes the discharge slot 51, as best seen in Figures 2, 10, and 11. However, fixed upon, and adjacent the tray end wall 4 and partition 7 upstanding from, the plate or wall 9, are lugs or the like 60, with which the arms 54 are adapted to engage when the lid b and its housed magazine D are in lowered or tray-closing position or in the position thereof best seen in Figures 3 and 4, under which engagement, the closure E is swingably actuated against the bias or tension of spring 59 into the swung position thereof best seen in Figure 4 for opening the slot 51. In such connection, it may here be stated that the slot 51 is of such dimensions as to freely permit standard cigarettes F to pass singly or individually therethrough, and that the parts of the structure are so proportioned and arranged that the slot 51 neatly registers with the trough 13 when the lid b and magazine D are in lowered or tray-closing position.

By reason of its individual pivoted connection with the pintle-shaft 10, the magazine D is swingable with respect to the tray a both with and also relatively to the lid b. Normally, as it may be said, the magazine D is partially housed within and is substantially a part of the lid b, as best seen in Figure 2, in which position the magazine D is releasably retained through the engagement of a spring-pressed catch e with the lid b, as best seen in Figure 4. However, on depressing a stud or the like 61, the catch e is released from engagement with the lid b, when the magazine D may be swung to so-called open position relatively to the tray a and lid b, as indicated by dot-dash lines in Figure 10, for ready and convenient filling with the cigarettes F to be dispensed, the magazine D, when filled, being again partially housed within and closed by the lid b. It may here be remarked that the front wall 46 of the magazine D is suitably arcuated on its front face to facilitate relative swingable movement between the lid b and magazine D, as best seen in Figure 4, and that the magazine D is preferably equipped approximately midway of its side walls 48 with laterally outwardly presented strips 62, 62, for snugly engaging the opposite side walls of lid b when the magazine D is in partially housed position therein, as best seen in Figures 2 and 3.

Pivotally attached at one end to a screw-stud or the like 63 projecting laterally from the magazine-arm 56, is a link 64, which projects obliquely downwardly through, and works in, the slot 15, the link 64 at its other or lower end being formed

preferably integrally with a forwardly presented plate-extension or continuation 64' split or divided at its forward end to include a first portion or member 65 and a second portion or member 66.

As best seen in Figures 7 and 8, the first plate-portion 65 is preferably laterally extended at its forward end, as at 65', to work for smoothness of operation over, while the second plate-portion 66 is laterally extended, as at 66', for actuating engagement with, one arm 67 of a bell-crank lever or the like G pivoted upon a stud or the like 68 depending from the plate 9 for swingable movement in a fiatwise registering or horizontal plane under the wall or plate 9. As best seen in Figures 7 and 8, the other arm 69 of the bell-crank G is formed and extended for swingably working under and crosswise of the slot 16 and at its free end is provided with a finger or the like 70 projecting upwardly into and through, and for working in, the slot 16 and with a relatively small laterally projecting plate-like extension 71 working under the plate or wall 9 for engaging the insulation switch-arm extension 33, for purposes presently appearing.

Coiled on the stud 68 and engaging the bell-crank G and a fixed block 72 on the under face of the plate 9, as best seen in Figures 7 and 8, is a suitable spring 73 for yieldingly retaining the bell-crank G in, and returning the same to, inwardly shifted position with the finger 70 and plate 71 at the righthand or inner end of the slot 16, reference being made to Figures 2 and 5.

And as best seen in Figure 3, the link-extension 64' is suitably shouldered at its rear end, as at 74, for actuating engagement with an insulation arm-extension 75 fixed to, and projecting longitudinally from, the yielding switch-arm 40, for purposes soon now to appear.

In use and operation, the magazine D may be conveniently filled with cigarettes F by swingably lifting the lid b and then, on releasing the catch e, shifting the magazine D into approximately the position thereof indicated in dot-dash lines in Figure 10, as previously mentioned. The magazine D, being so filled, is again partially housed and, by means of the catch e, releasably retained within, and becomes substantially a part of and swingable with, the lid b.

Now when the lid b and magazine D are in normal lowered or tray-closing position or in the position thereof illustrated in Figure 1, the finger 70 and plate 71 are disposed at the left-hand end of the slot 51 and the arms 54 engage with the blocks 60, the closure E being thereby swingably shifted to open the slot 51, whereupon a contained cigarette F moves or drops from the magazine D through the slot 51 to rest within the trough 13 and crosswise of the finger clearance 14. It may here be remarked that, as will be clearly seen by reference to Figure 4, the dropped or, as it may be said, deposited cigarette F will not be completely out of the magazine D, the parts being so relatively proportioned that the distance between the bottom of the trough 13 and the free margin of the oblique closure-wall 55, when the lid b is in lowered or tray-closing position, is such as to permit merely one cigarette F to be discharged or dropped from the magazine D at a time.

Further, when the lid b and magazine D are in normal lowered or tray-closing position, the

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shoulder 74 of the link-extension or plate 64' is spaced forwardly from and out of engagement with the insulation switch-arm 75, the yielding switch-arm 40 taking its normal position and thereby spacing the contact-members 41, 42, and opening or breaking the circuit to the igniting-member B, it being remarked in this connection that, the parts being disposed as here set forth, the contact buttons 34, 39, are in circuit-closing engagement, as best seen in Figure 5.

Now, as the lid *b* and its partially housed or associated magazine D are swingably raised or lifted to open position, the link-plate extension 64' is shifted rearwardly, by and through the link 64, to first engage its shoulder 74 with the insulation-arm 75 and then shift the switch-arm 40 for electrically engaging the buttons 41, 42, the circuit to the igniter B being closed and the igniter B thereby energized. At the same time, through and by the link 66 and its plate-extension 66', the bell-crank G is swingably actuated by spring 73, when through and by the finger 70 the dropped or deposited cigarette F is shifted into igniting engagement at its opposite end with the energized igniter B. It may also here be noted that, as best seen in Figure 6, the bottom of trough 13 is, as a whole, inclined downwardly toward the shell end-wall 5, so as to facilitate endwise movement of the deposited cigarette F toward the igniter B.

Upon a short interval of time, the so shifted cigarette F will be lighted and may then be manually lifted, fully lighted, from the trough 13 and tray *a*, the manual gripping of the cigarette F being facilitated by the finger-clearance recess 14.

It may be here stated that, when the lid *b* and magazine D are in raised or swingably lifted open position, the closure E is yieldingly actuated by the spring 59 to slot-closing position, and that, when the lid *b* and magazine D are again swingably lowered to closed position, the closure E is again actuated against the bias of the spring 59 to open the slot 51 for permitting a successive cigarette F to be deposited in the trough 13 for lighting.

And, when the lid *b* and its associated magazine D are lowered to tray-closing position, the link 64 will shift its extension 64' out of engagement with the insulation switch-arm 75 and thereby permit the switch-arm 75 to yieldingly move or shift its carried button 41 out of electrical engagement with the fixed button 42 and thereby break or open the circuit to the igniter B and, at the same time, under the positive pushing engagement between the link-member 64-64' and the bell-crank arm 67, the bell-crank G will be pivotally actuated against the bias of the spring 73 for shifting the finger 70 to the lefthand end of the slot 16 for engagement, in turn, with the next succeeding deposited cigarette F and so on.

Thus, when the lid *b* and magazine D are in closed or lowered position, the circuit to the igniter B is definitely and positively broken. Hence the electrical and mechanical parts of the apparatus are prevented from becoming too warm and the useful life of the structure prolonged.

Again, should the lid *b* and its associated magazine D be swingably lifted without a cigarette F being deposited in the trough 13, the bell-crank G will immediately, under the influence of the spring 73, move to the right and through and by its carried plate 71 shift the insulation-member 35 and its supporting switch-arm 33 for disengaging the button 34 from the button 39 and thereby also open the circuit to the igniter B. Or, if a de-

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posited cigarette F should be permitted to remain too long in engagement with the igniting element B, the particular cigarette F will be gradually consumed, permitting the bell-crank G to yieldingly shift under the tension of the spring 73 for, in like manner, actuating the insulation switch-extension 35 for spacing the buttons 34, 39, and opening the circuit to the igniter B, thus, again, protecting and preserving the useful life of the structure.

Thus, as the lid *b* and magazine D are raised and lowered, the magazine D is emptied successively, one by one, of its contained cigarettes F, which successively, one by one, are deposited in the trough 13 and lighted and thus again successively, one by one, presented for removal, fully lighted, from the trough 13 and tray *a*.

It should be understood that changes and modifications in the form, construction, arrangement, and combination of the several parts of the container may be made and substituted for those herein shown and described without departing from the nature and principle of my invention.

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

1. A combination cigarette container and lighter including, in combination, a tray, a lid hinged to the tray for swingable movement, a normally open electric circuit comprising a fixed contact, a yielding contact, and a cigarette lighter in series with said contacts for energization when said circuit is closed, said lighter being disposed within said tray in position for engagement with a cigarette, a member shiftable relatively to the tray for engaging said yielding contact, and link-means actuated by and on opening movement of the lid and operatively connected to the shiftable member for actuating said yielding contact and thereby closing the circuit at said contacts responsive to opening movement of the lid.

2. A cigarette container comprising a box-like container having a hinged lid, an igniter mounted uprightly within the container, said container further being provided with a bottom wall having a longitudinally extending recess sloping downwardly toward the igniter, an upstanding finger actuated by opening movement of the lid engageable with a cigarette disposed in said recess for shifting the same into endwise engagement with the igniter and a link operably connecting the finger and the lid so that when the lid is opened the finger will push the cigarette.

3. A combination cigarette container and lighter including, in combination, a box having a hinged lid, a tray, a cigarette-igniting circuit comprising a fixed contact and a movable contact yieldingly engageable with the fixed contact, and means comprising a bell-crank pivoted on the tray and actuated by the lid for engaging the movable contact for spacing the same from the first contact when the lid is closed.

4. A combination cigarette container and lighter including, in combination, a tray, a lid movably attached to the tray, an electric circuit comprising a normally open first switch, a normally closed second switch, and a cigarette-igniter in the tray, a member yieldingly biased for actuating the second switch for opening the circuit, and means actuable by and on opening movement of the lid for actuating said member out of circuit-opening engagement with the second switch and for actuating the first switch for closing the circuit.

5. A combination cigarette container and lighter including, in combination, a tray, a lid movably attached to the tray, an electric circuit compris-

ing a normally open first switch, a normally closed second switch, and a cigarette-igniter in the tray, a bell-crank pivoted in the tray and yieldingly biased for actuating the second switch for opening the circuit, and means link-connected to, and actuable by and on opening movement of, the lid for swinging the bell-crank out of circuit-opening engagement with the second switch and for actuating the first switch for closing the circuit.

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