July 2, 1935. A. H. FOX 2,006,591

CONTAINER FOR SELF LIGHTING CIGARETTES

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Fig. 1.

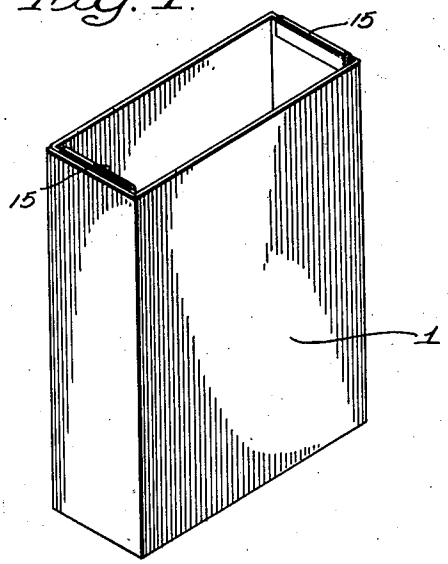


Fig. 2.

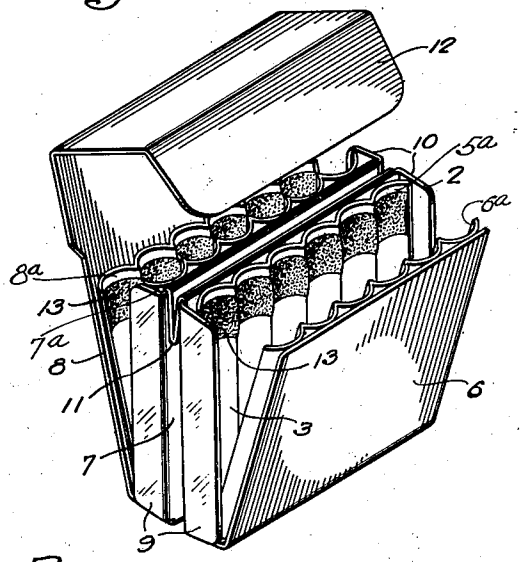


Fig. 3.

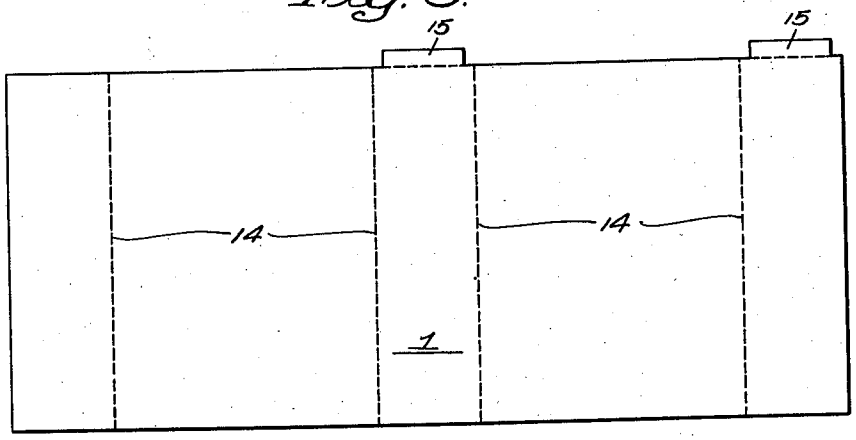


Fig. 10.

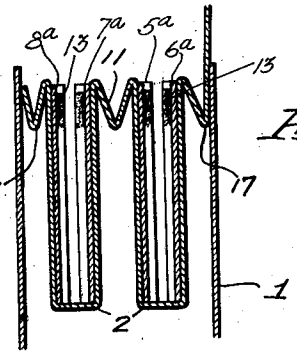
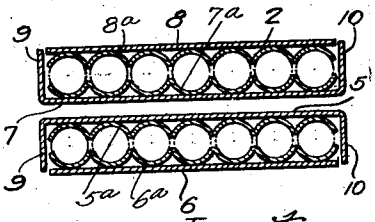


Fig. 8.



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Fig. 4.

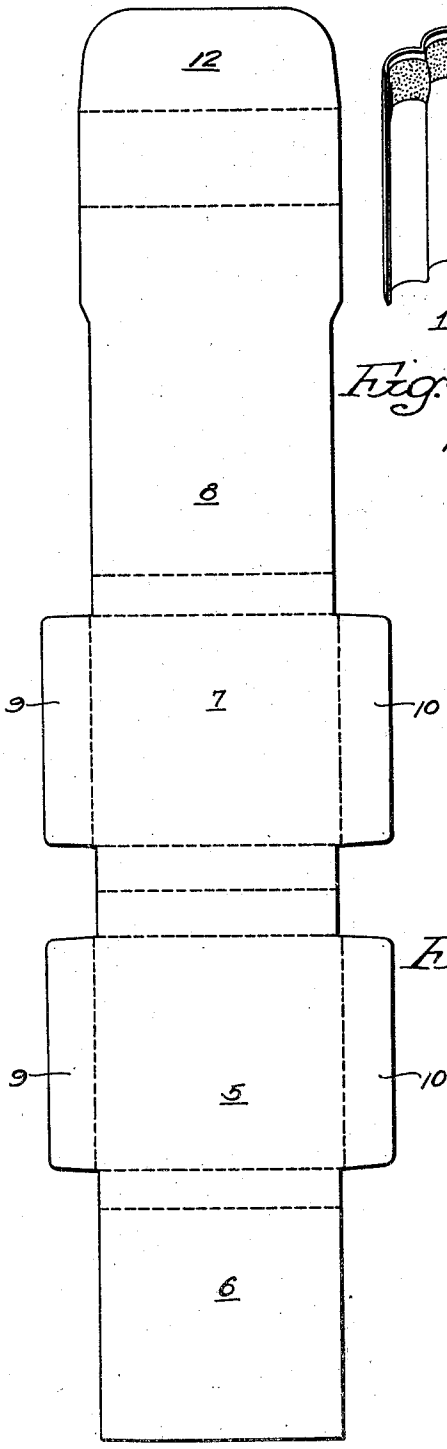


Fig. 9.

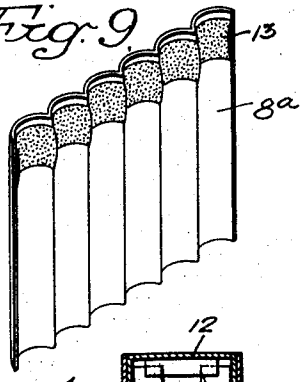


Fig. 5.

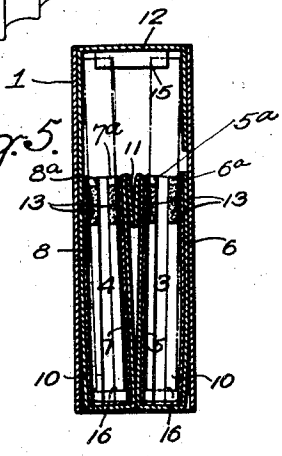


Fig. 6.

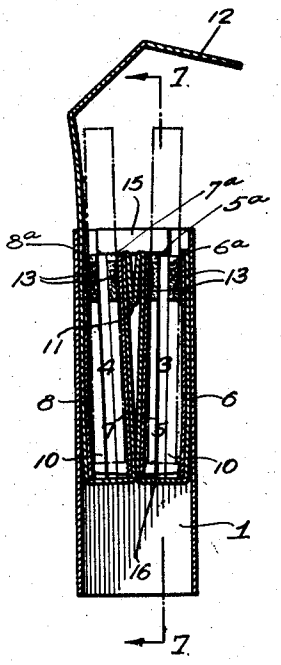
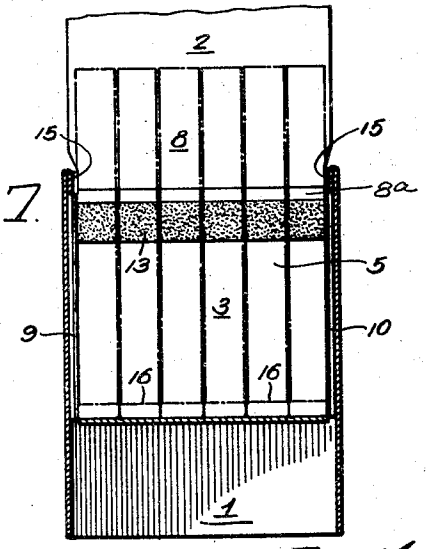


Fig. 7.



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UNITED STATES PATENT OFFICE

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CONTAINER FOR SELF-LIGHTING CIGARETTES

Ansley H. Fox, Pleasantville, N. J., assignor to Inventions Holding Corporation, a corporation of Delaware

Application May 24, 1933, Serial No. 672,691

15 Claims. (Cl. 206—41)

This invention relates to containers for so-called self-lighting cigarettes and the like, and has for its principal object to provide a container of extremely simple construction and capable of manufacture at a relatively low cost which shall contain one or more striking surfaces so positioned as to frictionally engage ignition bands carried by the cigarettes when the latter are withdrawn from the container whereby said bands will be ignited, said container being provided with means for increasing the effective area of the said striking surfaces and at the same time for preserving the substantially cylindrical form of the cigarettes against such crushing forces as may be required to support the frictional contact between the striking surfaces and the said friction bands.

The invention further resides in certain novel structural details hereinafter set forth and illustrated in the attached drawings, in which:

Figure 1 is a view in perspective of the outer shell or casing of the container;

Fig. 2 is a view of the inner receptacle of the container;

Figs. 3 and 4 are views of the blanks from which the outer and inner members of the container may be respectively produced;

Fig. 5 is a vertical sectional view through the container showing the latter closed;

Fig. 6 is a sectional view of the container showing the inner member adjusted to a position facilitating removal of the cigarettes;

Fig. 7 is a transverse vertical sectional view on the line 7—7, Fig. 6;

Fig. 8 is a transverse sectional view of the inner receptacle;

Fig. 9 is a detached perspective view of one of the corrugated inner elements, and

Fig. 10 is a fragmentary sectional view showing a modification within the scope of the invention.

With reference to Figs. 1 and 2 of the drawings, the container in a preferred form comprises an outer rectangular open-ended shell or casing 1 which is adapted to receive an inner container member or receptacle 2. The inner member 2 comprises two cigarette compartments 3 and 4 each defined by inner and outer walls 5, 6 and 7, 8, respectively, and by side walls 9, 9 and 10, 10. The walls 5 and 7 are, respectively joined to the walls 6 and 8 at their lower ends, and the walls 9 and 10 are in the form of free flaps or flanges projecting transversely and in opposite directions from the side edges of the inner walls 5 and 7. The inner walls 5 and 7 are connected to each other by means of a V-shaped juncture 11 which preferably possesses a natural resiliency tending to separate the said walls 5 and 7 at their upper ends, this for a purpose hereinafter set forth. The outer wall 6 terminates adjacent the top of the inner wall 5, while the outer wall 8, as illustrated, is extended above the top of the inner wall 7 and has at its upper end a turned-over flap 12 which functions as hereinafter set forth as the top closure for the container.

To the outer face of each of the inner walls 5 and 7 and to the inner faces of the outer walls 6 and 8 are suitably secured, as by adhesive, corrugated liners, 5*a*, 7*a*, 6*a* and 8*a*, see Fig. 9, and on each of these liners I provide striking surfaces individually designated by the reference numeral 13, these surfaces lying adjacent the upper edges of the outer wall 6 and the inner walls 5 and 7, and the striking surface 13 on the liner 8*a* being located in a corresponding position whereby the striking surfaces of the two liners of each compartment are located opposite each other. This inner receptacle member is adapted for insertion in the outer shell 1 after the manner illustrated in Fig. 5, the flap 12 being inserted in the open upper end of the shell and thereby, in effect, closing the container.

The construction of the shell 1 of the container and the inner member 2 thereof will be readily understood by reference to Figs. 3 and 4, which respectively, show blanks from which these members may be formed. Thus with reference to Fig. 3 the blank for the shell 1 may be of simple rectangular form transversely scored at 14 if desired to facilitate folding into the rectangular form of the finished shell. Preferably this blank comprises at one edge projecting tabs 15, 15 so positioned that when the blank is folded they lie at one end of the narrow sides of the shell and of such character as to permit their being folded inwardly, as shown in Fig. 1, against the inner faces of said narrow walls against which they may be secured by suitable adhesive. These tabs, as hereinafter set forth, constitute stops limiting the movement of the inner member 2 within the shell.

Referring to Fig. 4, it will be noted that those portions of the blank which constitute the outer walls 6 and 8 of the receptacle 2 are narrower than the portions which constitute the inner walls 5 and 7 whereby when the blank is folded and inserted in the shell 1 the outer walls lie completely within the opposite side walls 10, permitting the outer edges of these side walls to bear against the inner faces of the side walls

of the shell 1. It will be noted further that the flaps which constitute the side walls 10 of the cigarette compartments 3 and 4, particularly at their upper ends, are slightly less in width than the diameter of the cigarettes which the compartments are adapted to contain whereby the juncture member 11 is effective to place the cigarettes, particularly at the upper edges of the containers, under a slight compression, which insures a desirably firm frictional contact between the cigarettes and the striking surfaces 13. This compression cannot crush the cigarettes, however, by reason of the corrugated inner liners which provide cells for the individual cigarettes of the approximate cylindrical form of the cigarette.

The container as described is adapted for reception of cigarettes having an ignition band 16 at one end, the relative proportions of the container parts being such that when the cigarettes are assembled in the compartments 3 and 4, as illustrated in Fig. 5, they project above the upper ends of the compartments. When it is desired to withdraw a cigarette, pressure is applied to the under side of the inner receptacle, forcing the receptacle in the shell 1 to the position shown in Fig. 6 in which the flap 12 is released and the upper edges of the side walls 9 and 10 of the compartments 3 and 4 engage the stops 15. This function of the stops in limiting the movement of the inner receptacle 2 is best shown in Fig. 7. Cigarettes may now readily be drawn from the container, this withdrawal bringing the ignition band 16 into frictional contact with the igniting surfaces 13. The curved walls which carry the striking surfaces insure a relatively extensive contact surface between the said surfaces and the ignition bands, and by reason of the pressure exerted by the juncture element 11 and the construction previously set forth, the effectiveness of the frictional contact between the ignition band and the striking surfaces 13 is assured whereby the said band is ignited. If all the cigarettes are withdrawn from either of the compartments, it will be apparent that the normal relation of the walls of the respective compartments is maintained since the side walls 9 and 10, as previously described, engage the side walls of the shell 1 and prevent the empty compartment from collapsing. Thus the resilient member 11 is permitted to continue its function to maintain the necessary frictional contact between the striking surfaces 13 of the compartment 4 and the cigarettes.

In the aforedescribed embodiment of my invention, the resilient means for assuring adequate frictional engagement between the ignition bands of the cigarettes and the striking surfaces is confined to a position between the cigarette compartments of the inner receptacle.

In the embodiment shown in Fig. 10, a similar device is applied to the two outer walls of the compartments, which at their upper edges are provided with one or more folds 17 which react with the walls of the outer shell 1 to resiliently force the outer walls of the compartments inwardly upon the cigarettes to thereby compress the cigarettes between the outer and inner walls of the receptacles, at least at the upper edges thereof and in the areas embraced by the striking surfaces as previously set forth. In Fig. 10, the walls of the compartments are identified by the same reference characters used in the preceding figures of the drawings. In this instance, the intermediate resilient element 11 may be retained as illustrated or may be eliminated.

There may be still other modifications without departure from the invention.

I claim:

1. A container for self-lighting cigarettes or the like comprising an outer open-ended shell, an inner receptacle slidable in the shell and having oppositely arranged cigarette compartments, striking surfaces adjacent the upper edges of said compartments positioned to frictionally engage the cigarettes as the latter are withdrawn, resilient means for maintaining said frictional engagement, and means for preserving the normal substantially cylindrical form of the cigarettes.

2. A container for self-lighting cigarettes or the like comprising a cigarette compartment having relatively movable side walls, striking surfaces on said walls positioned for frictional engagement with the cigarettes as the latter are withdrawn, resilient means associated with said walls for compressing the cigarettes therebetween at the striking surfaces, and means for preventing undue crushing of the cigarettes by said compression.

3. In a container for self-lighting cigarettes and the like, the combination with an outer shell, of an inner receptacle comprising a pair of cigarette compartments arranged back to back, striking surfaces adjacent the upper edges of said compartments arranged to frictionally engage the cigarettes as the latter are withdrawn, resilient means interposed between the upper ends of said compartments for placing the cigarettes under compression within the areas embraced by said striking surfaces, and means for preventing said compression from crushing the cigarettes.

4. In a container for self-lighting cigarettes and the like, the combination with an outer shell, of an inner receptacle comprising a pair of cigarette compartments arranged back to back, striking surfaces adjacent the upper edges of said compartments arranged to frictionally engage the cigarettes as the latter are withdrawn, resilient means interposed between the upper ends of said compartments for placing the cigarettes under light compression within the areas embraced by said striking surfaces, means for limiting compression of the cigarettes by said resilient means, and means providing individual substantially cylindrical cells for the cigarettes preventing crushing of the cigarettes by said limited compression.

5. In a container for self-lighting cigarettes and the like, the combination with an outer shell, of an inner receptacle having a pair of cigarette compartments each defined by inner and outer relatively movable walls and side walls in the form of free flaps extending from the opposite sides of the said inner walls, resilient means interposed between the upper edges of said inner walls and tending to force said walls apart at the top, the outer edges of said side wall flaps contacting the side walls of said outer shell to limit the movement of said inner walls under the action of said resilient means, and said side walls being slightly narrower than the diameter of the cigarettes held in said compartments whereby said cigarettes are placed under light compression between the walls of said compartments by said resilient means, corrugated liners for the walls of said compartments affording substantially cylindrical cells for the individual cigarettes, and striking surfaces on the exposed faces

of said liners adjacent the upper edges thereof and adapted for frictional contact with the cigarettes when the latter are withdrawn from the container.

6. In a container for self-lighting cigarettes and the like, the combination with an outer casing, of an inner receptacle, said receptacle having a pair of cigarette compartments arranged back to back, each compartment being defined by inner and outer walls and side walls in the form of free flaps projecting transversely from the edges of said inner walls, the width of said flaps being slightly less than the diameter of the cigarettes to be carried in said compartments, and the joint thickness of said compartments being less than the corresponding interior dimension of the outer shell, striking surfaces on the walls of said compartments adjacent the upper ends thereof arranged for frictional engagement with said cigarettes as the latter are withdrawn from the compartments, means interposed between the upper ends of the inner walls of said compartments for bringing the upper ends of the side walls of said compartments into contact with the inner surfaces of the side walls of said shell whereby the cigarettes are placed under compression within the areas embraced by said striking surfaces, and means for preventing crushing of said cigarettes by said compression.

7. In a container for self-lighting cigarettes and the like, the combination with an outer shell or casing, of an inner receptacle consisting of an integral elongated blank folded transversely to produce a pair of cigarette compartments connected at their upper ends by an interposed section of V-formation, transverse extensions on said blank constituting the side walls of said compartments, corrugated liners secured to the front and rear walls of said compartments, and striking surfaces on the inner faces of said liners adjacent the upper ends thereof, substantially as described.

8. In a container for self-lighting cigarettes and the like, the combination with an outer shell or casing, of an inner receptacle adapted for insertion in said casing and consisting of an integral elongated blank folded transversely to produce a plurality of cigarette compartments, the adjoining compartments being connected at their upper edges by means of a transverse fold of said blank, and each of the outer walls of said compartments also being provided with a folded portion adjacent the upper ends of the compartments, said folds cooperating with the outer shell or casing to place the cigarettes under compression at the upper ends of said compartments, means for preventing said compression from crushing the cigarettes, and striking surfaces adjoining the said upper ends of said compartments and arranged for frictional engagement with the cigarettes as the latter are withdrawn from the container.

9. In a container for self-lighting cigarettes and the like, the combination with an outer shell or casing, of an inner receptacle adapted for insertion in said casing and comprising an integral elongated blank folded transversely to produce a plurality of cigarette compartments, the adjoining compartments being connected at their upper edges by means of a transverse fold of said blank, and each of the outer walls of said compartments also being provided with a folded portion adjacent the upper ends of the compartments, said folds cooperating with the outer shell or casing to place the cigarettes under compression at the upper ends of said compartments, means for preventing crushing of the cigarettes by said compression, striking surfaces adjacent the said upper ends of said compartments arranged for frictional engagement with the cigarettes as the latter are withdrawn from the container, said inner receptacle being less in length than the outer shell or casing and being adapted to be slid towards one end of the latter to expose the cigarettes for retraction, and stop elements adapted to engage the inner receptacle to limit the said sliding movement of the receptacle in the casing.

10. In a container for self-lighting cigarettes and the like, the combination with an outer shell or casing, of an inner receptacle comprising a pair of cigarette compartments each having outer and inner walls, resilient means interposed between the upper edges of the inner walls to separate the latter at their upper edges, means providing cylindrical cells for said cigarettes within the compartments, means for maintaining said cigarettes under compression between the walls of said compartments, and striking surfaces adjacent the upper edges of said walls and in position to frictionally engage the cigarettes as they are withdrawn from the cells.

11. In a container for self-lighting cigarettes and the like, the combination with an outer shell or casing, of an inner partitioned receptacle providing a plurality of cigarette compartments, substantially cylindrical cells in said compartments for the individual cigarettes, resilient means for compressing the cigarettes between the walls of said compartments, striking surfaces on the walls of said compartments positioned to frictionally engage the cigarettes when the latter are withdrawn from the container, and means for preventing collapse of said compartments when all of the contained cigarettes are withdrawn therefrom.

12. In a container for self-lighting cigarettes and the like, an outer shell in combination with a sliding receptacle adapted to hold two rows of cigarettes, said receptacle having a central double-walled partition separating said rows and provided at the top with resilient means for pushing said walls away from each other and outwardly whereby the cigarettes of the respective rows are resiliently confined between the said partitioned walls and the opposed walls of the outer shell, and means for preventing crushing of the cigarettes by reason of said confinement.

13. In a container for self-lighting cigarettes and the like, an outer shell in combination with a sliding receptacle adapted to hold two rows of cigarettes, said receptacle having a central double-walled partition intermediate the said rows of cigarettes and a pair of oppositely arranged outer walls forming the respective compartments for said rows, V-shaped spring sections integral with said walls and positioned respectively intermediate the upper edges of the walls of said partition and at the upper edge and on the outer sides of said outer walls, striking surfaces adjacent the upper end of each of said walls, and on those faces thereof constituting the inner surfaces of said compartments, said spring sections reacting with the walls of said partition and with the walls of said outer shell to force the inner surfaces of said compartments into firm resilient contact with the cigarettes of the respective rows, and means for preventing crushing of said cigarettes under action of said spring sections.

14. In a container for self-lighting cigarettes

and the like, an outer shell in combination with a sliding receptacle adapted to hold two rows of cigarettes, said receptacle having a central partition separating said rows and free end portions forming the outer walls of the receptacle and of the cigarette compartments, the said outer walls having at their upper edges integral folds adapted to react with the outer shell to resiliently force said outer walls inwardly to thereby confine the cigarettes in said compartments under firm but resilient pressure, and means for preventing said pressure from crushing the cigarettes.

15. In a container for self-lighting cigarettes and the like, an outer shell in combination with a sliding receptacle adapted to hold two rows of cigarettes, said receptacle having a central partition separating said rows and free end portions forming the outer walls of the receptacle and of the cigarette compartments, the said outer walls having at their upper edges integral folds adapted to react with the outer shell to resiliently force said outer walls inwardly to thereby confine the cigarettes in said compartments under firm but resilient pressure, striking surfaces on the inner surfaces of the walls of said compartments and adjacent the upper edges thereof, and means in said compartments for preventing crushing of said cigarettes by said pressure.

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