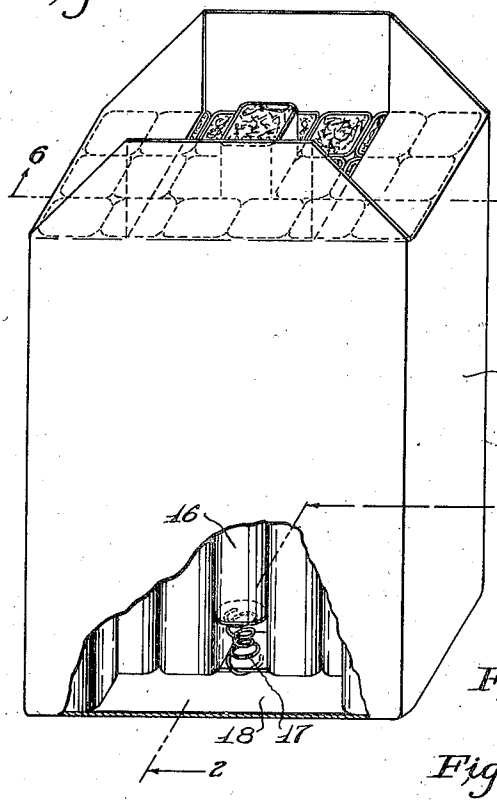
Feb. 16, 1937. W. W. KELLETT 2,071,167

CIGARETTE PACKAGE

Original Filed Aug. 16, 1933

Fig. 1.



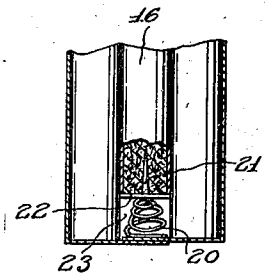




Fig. 3.

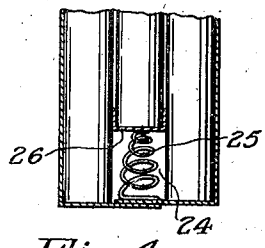
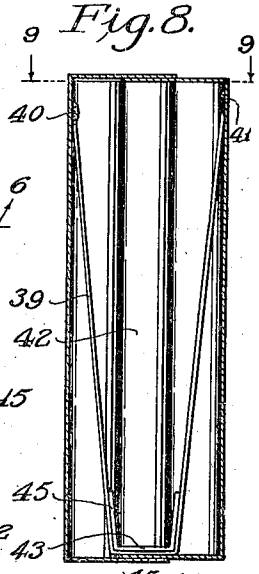



Fig. 4.

Fig. 8.



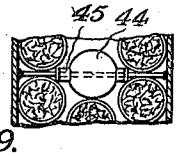




Fig. 9.

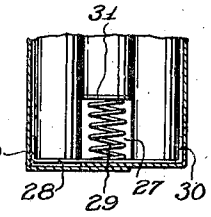



Fig. 5.

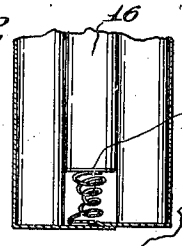



Fig. 2

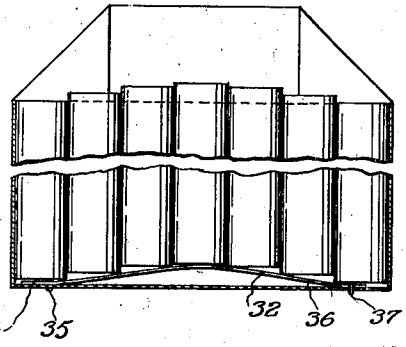
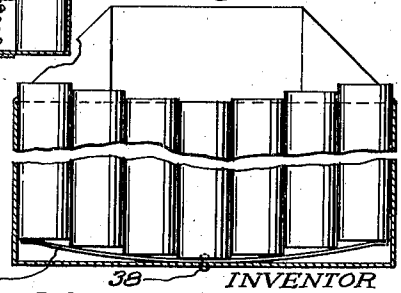



Fig. 6.

Fig. 7.




INVENTOR

William W. Kellett.

By Leonard L. Kalish

Attorney

Patented Feb. 16, 1937 2,071,167

# UNITED STATES PATENT OFFICE

2,071,167

## CIGARETTE PACKAGE

William W. Kellett, Philadelphia, Pa.

Application August 16, 1933, Serial No. 685,336
Renewed July 15, 1936

4 Claims. (Cl. 206—41)

My invention relates to a new and useful cigarette package.

My invention further relates particularly to an original vendable package of cigarettes, wherein any suitable number of cigarettes are arranged parallel to each other and in contiguous relation to each other within a more or less flexible case or stiff case of one or more thickness of paper, tin foil, cardboard or the like, and particularly wherein the closure of the package is in juxtaposition to the ends of the cigarette, so that when the package is opened the cigarettes must be removed endwise.

My invention further relates to novel means whereby one cigarette (or several cigarettes) in the package may be partially ejected automatically, as soon as the package is opened at one end, thereby enabling the smoker or cigarette user readily to grasp the slightly projecting end of the partially ejected cigarette or cigarettes and thereby to remove the same first, and thus facilitate the removal of all the other cigarettes in the package.

It is an object of my present invention to form an original vendable cigarette package or vendable unit of cigarettes having self-containing means for facilitating the initial removal of the first cigarette of the package and thus to eliminate the somewhat unsatisfactory practice of tapping the package endwise to shake loose the first cigarette, or to grip the end of one or more cigarettes with the fingernails in order to loosen one of the cigarettes.

With the above and other objects in view, which will appear more fully from the following detailed description, my invention consists of an original sealed vendable cigarette package having any suitable number of cigarettes packed therein in more or less contiguous relation to each other, and a spring or other resilient means within said package and operatively related to one or several of the cigarettes in the package and tending partially to eject the same, and held under tension or compression, or otherwise deflected, (as the case may be), while the cigarette package is still closed or sealed.

My invention further consists of other novel features of construction, all of which will appear more fully from the following detailed description.

For the purpose of illustrating the invention, I have shown in the accompanying drawing forms thereof which are at present preferred by me, since the same have been found in practice to give satisfactory and reliable results, although it is to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized, and that the invention is not limited to the precise arrangement and organization of the instrumentalities as herein shown and described.

Referring to the drawing, in which like reference characters indicate like parts,

Figure 1 represents a perspective view, partly broken away, of an original vendable cigarette package embodying my invention, showing the same in the opened condition.

Figure 2 represents a fragmentary section on line 2—2 of Figure 1.

Figure 3 represents a fragmentary sectional view, similar to that shown in Figure 2, illustrating a modified form of construction embodying my invention.

Figure 4 represents a fragmentary sectional view, similar to that shown in Figure 2, illustrating another modified form of construction embodying my invention.

Figure 5 represents a fragmentary sectional view, similar to that shown in Figure 2, illustrating a further modified form of construction embodying my invention.

Figure 6 represents a fragmentary sectional view taken generally on line 6—6 of Figure 1, illustrating another embodiment of my invention, wherein a flat spring is employed.

Figure 7 represents a sectional view, similar to that shown in Figure 6, illustrating another embodiment of my invention.

Figure 8 represents a sectional view of a cigarette package illustrating another embodiment of my invention.

Figure 9 represents a fragmentary sectional view taken on line 9—9 of Figure 8.

According to my invention, a cigarette package 15 of any suitable construction may be employed. Thus, the cigarette package 15 may be of any of the conventional constructions now employed, and formed of sheets of paper, tin foil, cellophane, etc., folded and adhesively secured along their edges, so as to form a package, one or both of the ends of which may be opened wholly or partly, either by unfolding, as indicated in Figures 1, 6 and 7, or by tearing open an edge portion of one of the ends of the package.

For the purpose of simplifying the illustrations of the invention, I have not shown all the layers of paper, tin foil and "cellophane" generally employed in forming cigarette packages, but have illustrated the package as simply con-

sisting of a single layer or ply of material. It will be understood however, that my invention consists of a novel combination of resilient cigarette ejecting means in any conventional form of cigarette package, and so combined with said cigarette package as to be "tensioned" by the end portions of the cigarette package.

In the preferred embodiment of my invention I provide any suitable spring or other resilient member in operative relation to the end of one or more of the cigarettes **16** within the package. Thus, as illustrated in Figure 1, I provide a helical compression spring **17**, having large terminal portions with the diameters of the convolutions gradually decreasing towards the center. The spring **17** is interposed between the end of one of the cigarettes **16** and one of the end walls **18** of the package. When the package is closed and sealed in its original condition, the spring **17** is held under compression between the end of a cigarette and the end wall **18** of the package. When the package is then opened, as for instance in the manner shown in Figure 1, the spring **17** ejects the cigarette **16** to a suitable extent, thereby permitting the more ready removal of the first cigarette. The other cigarettes may then also be readily removed, because the removal of the first cigarette from the normally tightly packed group of cigarettes, permits the other cigarettes to be freed or loosened to a suitable extent, so that they will readily slide out merely by turning the package upside down or so that the user's finger may be inserted for the removal of the other cigarettes as needed.

The ends of the spring may be suitably anchored, as shown for instance in Figures 1 and 2, by inserting the lowermost convolution of the spring between one of the folds of the paper of the package. If desired, a fairly stiff paper or other suitable member **19** may be interposed between the other ends of the spring and the end of the cigarette, so as to prevent the spring from pressing into, and embedding itself in the tobacco of the cigarette while under compression in the closed and sealed package.

In Figure 3 I have shown another embodiment of my invention, wherein a helical compression spring **20** is employed, the convolutions of which are of successively smaller diameter, so that the entire spring may be collapsed into a thin layer of an approximate thickness no greater than the thickness of the wire. Another feature of construction illustrated in Figure 3 is the use of a pin or similar member **21**, which projects into the tobacco at the end of the cigarette **16**, so as to hold the spring in place and to prevent the spring from taking an oblique position. A plate of paper or metal or other suitable material **22** may be interposed between the pin **21** and the spring **20**. The spring **20**, and the pin **21** and the plate or stop member **22** are preferably all fastened to each other in a more or less permanent manner by soldering, by adhesive means, or by any other suitable means, so as to form a unit which may then be automatically applied to one of the cigarettes of each package during the packaging operation in any of the conventional packaging machines now employed. By inserting this spring unit, (designated generally by the numeral **23**) into one of the cigarettes, prior to the insertion of the cigarettes into the package, the spring will be carried into the package and properly placed.

In Figure 4 I have illustrated another embodiment of my invention wherein the spring unit **24** consists of a helical spring **25** and a socket-like member **26** fixedly secured to the end of the spring **25**. The socket member **26**, having a bottom and generally cylindrical side wall, is adapted snugly to receive the end of one of the cigarettes.

In Figure 5 another embodiment of my invention is illustrated, wherein the spring unit or ejector unit **27** consists of a spacer or retainer member **28** of any suitable stiff material, to which a spring **29**, either of uniform diameter or of gradually decreasing diameter (of the type shown in Figures 3 and 4) is fixedly secured by any suitable means. The spacer or retainer member **28** is provided with side members **30**, which are adapted to bear against the sides of the package and to frictionally retain the member in place. The dimension between the side members **30** is such that the retainer member will fit into the package snugly. The member **28** may be formed of a stiff paper or cardboard or of thin sheet metal or any other suitable material. To the top of the spring **29** a suitable plate **31** may also be secured.

In Figures 6 and 7 I have illustrated embodiments of my invention wherein flat leaf springs **32** or **33** are employed. The leaf springs **32** or **33** are normally bowed. In the embodiment of my invention shown in Figure 6, one end of the spring, as for instance the end **34**, may be fixedly secured by any suitable fastening means **35**, such as a rivet, wire staple or the like, while the other end **36** is slidably secured beneath a bridging staple **37** or the like. In this embodiment of my invention, more than one cigarette is raised as the package is opened. In the embodiment of my invention shown in Figure 7 the center of the spring is secured to the bottom of the package, by stapling or other means **38**, while the ends thereof are freely movable so as to eject a cigarette at each end as the package is opened.

In the embodiment of my invention shown in Figure 8 I have illustrated the use of a tensioned rubber band or the like, **39**, having its opposite ends fastened to the side of the package by adhesive or other suitable means, as at points **40** or **41**, and having the center portion thereof extending beneath the end of one of the cigarettes **42**. A saddle-like paper member **43** may be interposed between the rubber band **39** and the end of the cigarette **42**, so as to prevent the rubber band from cutting into the cigarette and so as also to retain the rubber band in place. The saddle-like member **43** may consist of a circular paper disc **44** and the side members **45**, to which the rubber band may be adhesively secured.

As will be seen, when the cigarette package is in a closed and sealed condition, the spring or resilient member is held under compression or tension, or is held under any suitable stressed condition by the closed ends of the package. Thus, the spring or resilient member is either interposed between one end of the package and the end of one or several of the cigarettes of the package, or, as in the case of the rubber band, is interposed between the end of a cigarette and the side walls of the package. The cigarette upon which the spring or resilient member acts, is held in its initial position (more or less flush with the other cigarettes) by the closed ends of the sealed package, against which said cigarette is constantly pressed by the spring while the package is closed. When the end of the package is opened, either completely or partially, at a point in registration with the compressed cigarette, the cigarette is at once ejected to a suit-

able extent. Thus, one or several of the cigarettes are thus kept under suitable compression (while the cigarette package is closed and sealed) between the spring or resilient member acting upon one end of the cigarette and the end wall or closure member of the package acting upon the other end of the same cigarette. Any particular cigarette in the package may be selected for this purpose. Thus, as shown, one of the centermost cigarettes may be selected, or, if desired, a cigarette near one of the longitudinal edges of the package may be selected for this purpose, depending upon the manner in which the cigarette package is to be opened. If desired, any suitable rip cord may be inserted into the end of the package, with the end of the cord extending, so that by pulling the rip cord, the end of the package may be torn open to a suitable extent without opening the entire end of the package. When using such a rip cord for opening the package, the spring or resilient member should be used in juxtaposition to a cigarette in registration with a portion of the package which is to be opened with the rip cord. Thus, any other suitable means may be provided for opening any particular portion of the end of the package. In any such case, however, the cigarette under compression should be located in registration with the portion of the end of the package which is to be opened for the removal of the cigarettes, so that upon the first opening of the end of the package either by tearing or by unfolding the paper layers, the compressed cigarette will at once be projected to the desired extent.

According to my invention, the spring unit may be fastened to the package in any suitable manner, as for instance by interlapping the terminal convolution of the spring with one of the folds of the paper or wall of the container or by adhesively securing the spring to the bottom of the container, or by securing it with rivets, staples, or other means. In this manner, or by means of the construction shown in Figure 5, the spring is prevented from leaving the package as the cigarettes are removed, and is more or less permanently held in place.

While in the drawing, the cigarette or cigarettes acted upon by the spring or resilient means, are shown abutting the terminal wall of the package, yet a retaining member may be interposed if it is desired more or less to relieve the end of the package from this constant pressure. Thus, a paper band or other suitable paper or similar member may be placed within the package and held by the side walls of the package, for holding the spring under compression (through the cigarette) thereby to relieve the top of the package of the pressure of the spring (acting through the cigarette or cigarettes) to a greater or lesser extent, depending on the relative strengths or stiffnesses of the retainer band and the end of the package.

I am aware that the invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof, and I therefor desire that the present embodiments be considered in all respects as illustrative and not restrictive, reference being had to the appended claims rather than to the foregoing description to indicate the scope of the invention.

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

1. An original cigarette package, as a vendable unit, comprising a plurality of adjacent rows of cigarettes, with adjacent cigarettes in contiguous relation to each other, a relatively pliable paper sheathing wrapped around said plurality of cigarettes sufficiently tightly so as to press adjacent cigarettes against each other to such an extent that the frictional contact between adjacent cigarettes would prevent any cigarette from falling out of the group merely by gravity;—said paper sheathing forming a package having side walls and end walls, and a resilient member operatively interposed between a cigarette and one of said end walls for maintaining said cigarette under end-wise compression between it and the other end wall sufficient to overcome the friction between it and adjacent cigarettes so that when the last mentioned end of the package is opened, such cigarette will be ejected to a suitable extent from between the group of adjacent and laterally compressed cigarettes;—said end-wise compressed cigarette, which is later ejected to a suitable extent, constituting a loosening device for relieving the side-wise compression exerted upon the group of cigarettes by the wrapping.

2. An original cigarette package as a vendible unit, comprising a plurality of adjacent rows of cigarettes, with adjacent cigarettes in contiguous relation to each other, a relatively pliable paper sheafing wrapped around said plurality of cigarettes sufficiently tightly so as to press adjacent cigarettes against each other to such an extent that the frictional contact between adjacent cigarettes would prevent any cigarettes from falling out of the group merely by gravity;—said paper sheafing forming a package having side walls and end walls, a resilient member operatively interposed between a cigarette and one of said end walls for maintaining said cigarette under end-wise compression between it and the other end wall sufficient to overcome the friction between it and adjacent cigarettes so that when the last mentioned end of the package is opened, such cigarette will be ejected to a suitable extent from between the group of adjacent and laterally compressed cigarettes, and means for locking said resilient member to the end wall of the package against which it thrusts;—said end-wise compressed cigarette which is later ejected to a suitable extent constituting a loosening device for relieving the side-wise compression exerted upon the group of cigarettes by the wrapping.

3. An original cigarette package, as a vendible unit, comprising a plurality of adjacent rows of cigarettes, with adjacent cigarettes in contiguous relation to each other, a relatively pliable paper sheafing wrapped around said plurality of cigarettes sufficiently tightly so as to press adjacent cigarettes against each other to such an extent that the frictional contact between adjacent cigarettes would prevent any cigarette from falling out of the group merely by gravity;—said paper sheafing forming a package having side walls and end walls, a resilient member operatively interposed between a cigarette and one of said end walls for maintaining said cigarette under end-wise compression between it and the other end wall sufficient to overcome the friction between it and adjacent cigarettes so that when the last mentioned end of the package is opened, such cigarette will be ejected to a suitable extent from between the group of adjacent and laterally compressed cigarettes, and a plate section interposed between said resilient member and the end of the cigarette against which it thrusts;—said end-wise compressed cigarette, which is later ejected to a suitable extent, constituting a loosening de-

vice for relieving the side-wise compression exerted upon the group of cigarettes by the wrapper.

4. An original cigarette package, as a vendible unit, comprising a plurality of adjacent rows of cigarettes, with adjacent cigarettes in contiguous relation to each other, a relatively pliable paper sheafing wrapped around said plurality of cigarettes sufficiently tightly so as to press adjacent cigarettes against each other to such an extent that the frictional contact between adjacent cigarettes would prevent any cigarettes from falling out of the group merely by gravity;—said paper sheafing forming a package having side walls and end walls, a resilient member operatively interposed between a cigarette and one of said end walls for maintaining said cigarette under end-wise compression between it and the other end wall sufficient to overcome the friction between it and adjacent cigarettes, so that when the last mentioned end of the package is opened, such cigarette will be ejected to a suitable extent from between the group of adjacent and laterally compressed cigarettes, and a spike fixed to said resilient member and arranged to project into the end of the cigarette against which the resilient member thrusts;—said end-wise compressed cigarette, which is later ejected to a suitable extent, constituting a loosening device for relieving the side-wise compression exerted upon the group of cigarettes by the wrapper.

WILLIAM W. KELLETT.