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M. B. DAVIS

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CELLULAR CIGARETTE PACKAGE

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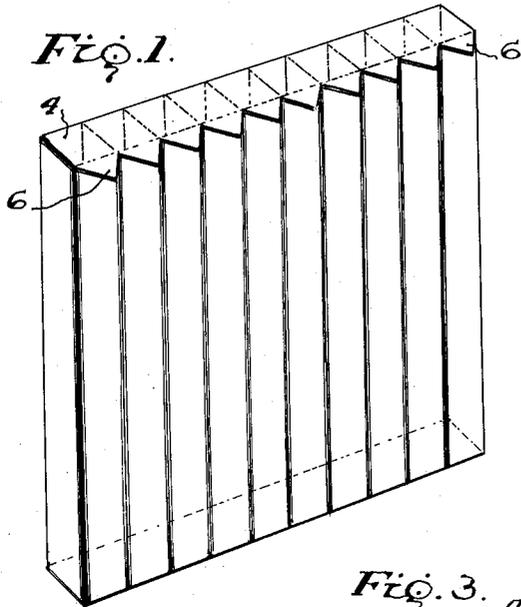


Fig. 5.

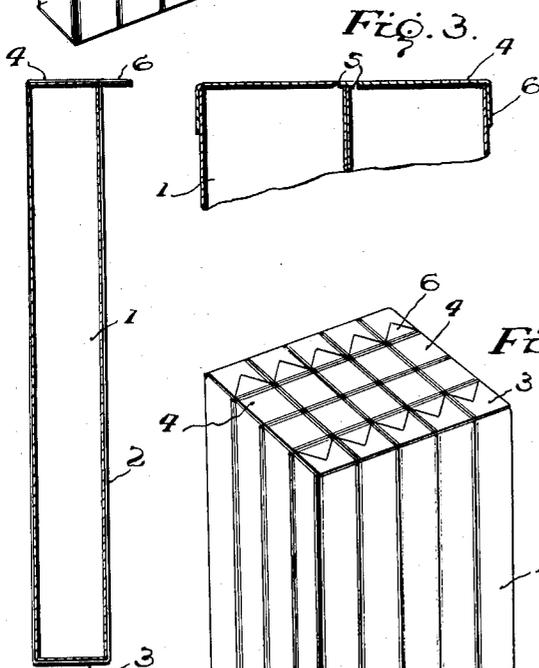
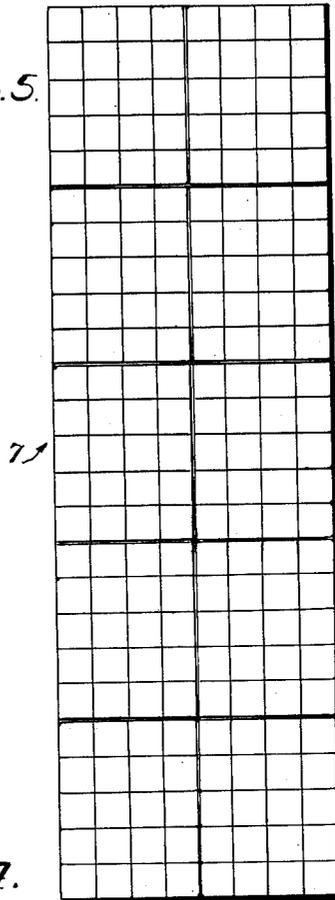


Fig. 3.

Fig. 2.

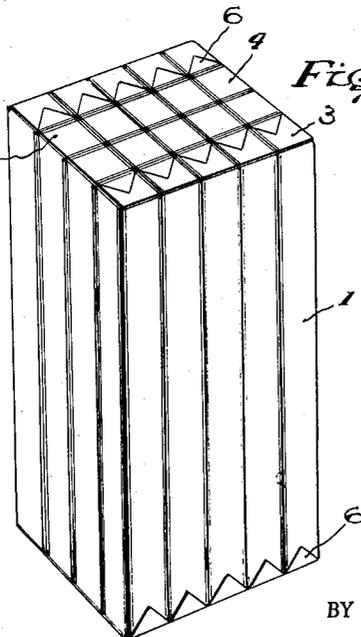


Fig. 4.

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CELLULAR CIGARETTE PACKAGE

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3 Claims. (Cl. 206-56)

(Granted under Title 35, U.S. Code (1952), sec. 266)

The invention described herein, if patented, may be manufactured and used by or for the Government for governmental purposes, without the payment to me of any royalty thereon.

This invention relates primarily to cigarette packages.

One of the objects of the invention consists in providing variable sized, inexpensive cigarette packages and cartons to replace conventional packages.

A further object of the invention consists in providing a package formed of a plurality of individual units which may be readily detached from the main package, or from which the items may be individually extracted without such detachment.

Another object of the invention consists in the provision of a package which will maintain the freshness of each cigarette, and protect it from moisture, etc., until it is removed from its individual compartment.

Other objects and advantages of the invention will be apparent from the following description when taken in connection with the accompanying drawings, in which,

FIGURE 1 is a perspective view of one of the novel packages composed of a strip of ten cells having laterally extending pull-tabs;

FIGURE 2 is an edge view of the cellular package of FIGURE 1;

FIGURE 3 is an enlarged sectional view through a rectangular package of twenty cells similar to the package of FIGURE 1 but showing the pull-tabs bent into parallel relationship with the cells;

FIGURE 4 is a perspective view of a cellular rectangular package composed of four 5-cell strips comprising twenty compartments; and

FIGURE 5 is a plan view of a composite package of 200 cigarettes, composed of 10 packages, such as shown in FIGURE 4.

Referring to the drawings in greater detail and by reference numerals, the individual cells for inclosing the individual cigarettes are indicated by the numeral 1, and are preferably formed of transparent plastic material, such as polyester or polyethylene, or equivalents. The coating for these cells, indicated by the numeral 2, which serves to render them moisture-proof, may be a vinylidene chloride acrylonitrile copolymer or equivalent, and will serve as an adhesive when heat and pressure are applied. These cells may be formed in various ways; for instance, by extruding a continuous strip and cutting it to cigarette lengths. Moreover, while the cells are shown as being rectangular in cross section, they may be of other cross-sectional shapes, if desired.

These individual cells may be connected to form packages, such as the 10-cell package shown in FIGURE 1, the 20-cell narrow package shown in section in FIGURE 3, or the 20-cell substantially square package shown in FIGURE 4, and a plurality of the latter may be connected together to form a carton of 200 cigarettes, as shown in FIGURE 5. The individual cells formed in packages may be united in parallel relationship by means of an adhesive, or by heat and pressure, as mentioned above.

After the cells have received their cigarettes or commodities, the lower ends are sealed by strips 3, and the upper ends by strips 4. Each of these strips is preferably formed of the same transparent plastic material of which

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the bodies of the cells are formed, and is coated in the same way. These strips are secured to the ends of the cells after the latter are arranged in the packages shown in the various figures. In FIGURE 1, the strip has a length corresponding to the width of ten of the cells. Here, also the securing means may be adhesive or by heat and pressure.

The strips 4 are preferably scored or weakened on their under side at the junctures of the several cells, as indicated by the numeral 5, thereby providing individual closures for each cell. Each of these closures is provided with a pull-tab 6 which facilitates manual removal of the closures. In FIGS. 1 and 3, these pull-tabs are shown as extending horizontally, but it will be readily understood that they may be bent down to contact the sides of the cells, as shown in FIGURE 3.

Reverting to the substantially square package of FIGURE 4, which consists of four rows of 5-cell strips adhesively connected together, or connected by heat and pressure, if desired, the two outer cell strips are inverted so that the pull-tabs are shown at the bottom of the package while the lower strips 3 are shown at the top, and the inner cell strips are arranged in upright position so that their closures and pull-tabs 6 are shown at the upper end of the package.

To form the composite package 7 shown in FIGURE 5, ten of these substantially square packages are secured together side-by-side, and may be peeled off from the body of the composite package, just as the individual cells of the various packages may be peeled off one-by-one. If desired, however, the individual cells may be opened by means of pull-tabs 6 to release a cigarette without removing the cells from the body of the package.

The packaging of cigarettes in the manner described above has many advantages. In the first place, the expense of a carton is eliminated. Second, the number of cigarettes in a package may be varied without costly changes in the manufacturing process. Third, each individual cigarette remains fresh in its cell until it is removed for consumption. Fourth, the individual cigarettes are invulnerable to moisture, perspiration, etc., until they are removed for use. Fifth, each individual cigarette is protected against the hazards of chemical, bacteriological, radiological, and fallout contamination until the cigarette is removed from its cell. In addition to the foregoing advantages, it may be mentioned that cigarettes of different brands and aromas can be contained in the same package without danger of cross-flavoring. Also, empty cell strips may be separated from full cell strips and discarded, thereby reducing the size of the cigarette package as the cigarettes are consumed. A still further advantage of the cellular package disclosed herein resides in the fact that various types of cigarettes in the same package allow for greater choice of cigarettes in brand and flavor, since by varying the type of cigarettes contained in adjacent cell strips, a person can peel off and exchange cell strips with someone having cell strips containing other brands of cigarettes.

In accordance with the patent statutes, I have described what I now consider to be the preferred forms of the invention, but since various minor changes may be made in structural details without departing from the spirit of the invention, it is intended that all such changes be included within the scope of the appended claims.

I claim:

1. A package for cigarettes, comprising a plurality of individual open-ended cells detachably connected together in side-by-side relation, each of said cells having four rectangular side walls of a width substantially corresponding to the diameter of a cigarette, and each of said cells being formed of transparent plastic material and coated

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with a moisture-proof coating, and a pair of elongated strips of plastic material similarly coated, one at each end of said package, and each strip sealing the plurality of end openings of the cells at its respective end, and at least one of said strips being transversely weakened at the junctures of the cells to provide a detachable end closure for each cell and to facilitate individual detachment of said cell and of the single cigarette contained in said cell.

2. A package according to claim 1, wherein each said detachable end closure is provided with a pull-tab.

3. A package according to claim 1, wherein said moisture-proof coating is vinylidene chloride.

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