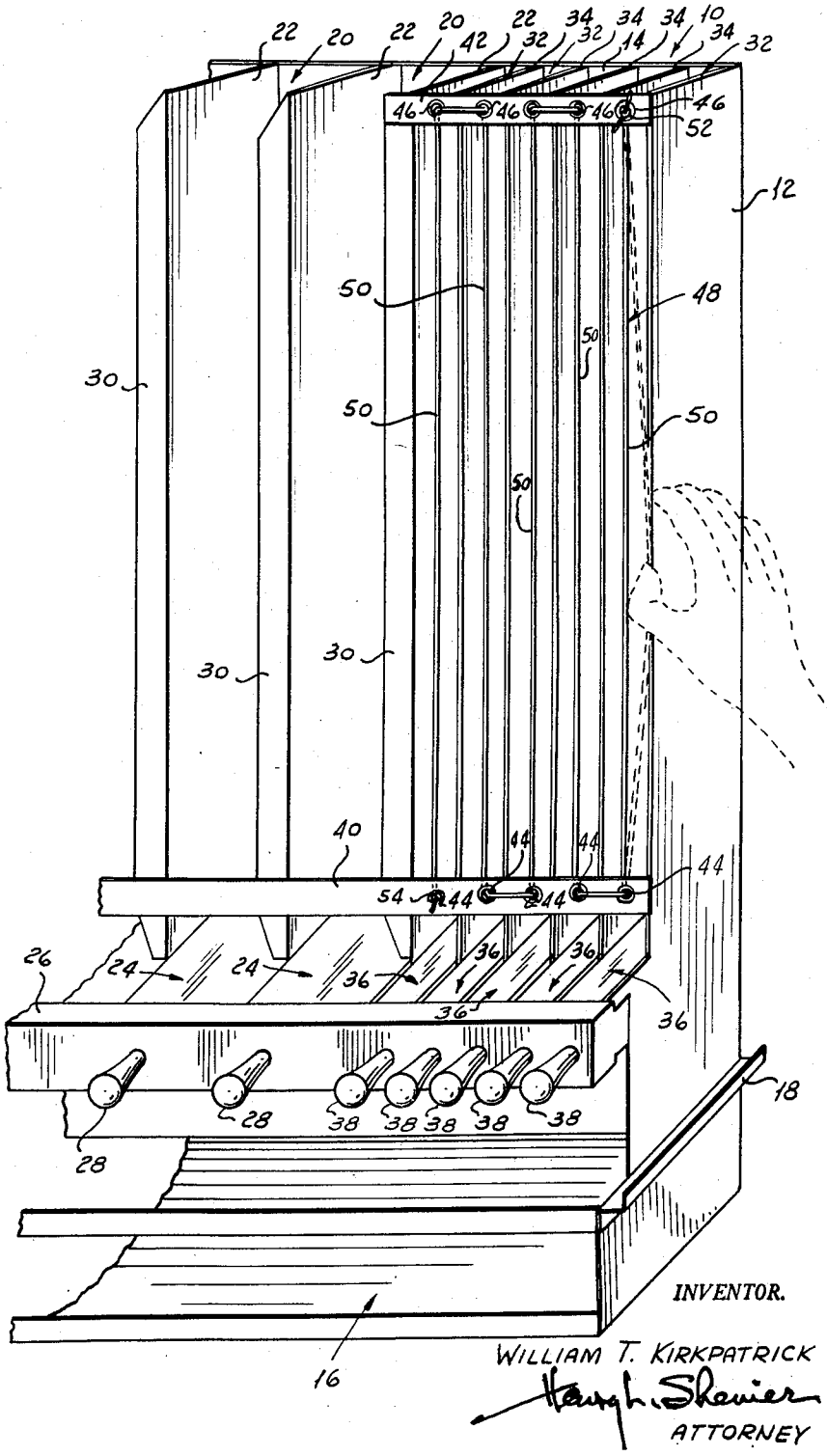
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CONTAINERS FOR COLUMNAR MERCHANDISING MACHINE

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CONTAINERS FOR COLUMNAR MERCHANDISING MACHINE

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My invention relates to an improvement in containers for columnar merchandising machines and more particularly to a means for retaining packages of merchandise in position within the columns of a merchandising machine.

An ever increasing number of different brands of cigarettes are being placed on the market by manufacturers. Not only has the number of brands increased but the same cigarette may be sold in different forms. For example, there are filter-tip cigarettes, king-size cigarettes, and straw- or cork-tipped cigarettes, as well as regular cigarettes. Some cigarettes are packaged in pouches while other cigarettes are boxed for sale. Because of the very large variety of different kinds and different brands of cigarettes being marketed, a cigarette merchandising machine must be provided with a large number of columns or sections if the market for the various kinds and brands of cigarettes is to be covered. The size of cigarette merchandising machines is, however, limited by the floor space available in the location at which the machine is to be installed. Cigarette merchandising machines are located in attended locations, such as diners, taverns, and other retail establishments. Since the sale of cigarettes is an incidental enterprise with the proprietors of these establishments, they wish to have the merchandising machine installed in an unobtrusive location where it does not detract substantially from the floor space of the establishment. Owing to the fact that the available space for machines is limited, and because of the large number of kinds and brands of cigarettes being marketed, it is desirable that a machine be provided which occupies only a small amount of floor space and yet which has a large number of columns or sections for dispensing a large number of different respective varieties of cigarettes. Some varieties of cigarettes have only a small demand. Manufacturers, however, offer inducements to machine operators to install a column of their brand of cigarettes in the machine. This fact further increases the desirability of providing a machine with a large number of columns. Moreover, since the number of kinds of cigarettes has increased, the demand for a particular brand has decreased so that more varieties of cigarettes must be sold to maintain the same volume of sales.

In most cigarette merchandising machines of the prior art the packages are normally piled or stacked with the intermediate dimension or width of the package horizontally disposed, and the longest dimension, or height, of the package extending from front to back of the machine. It will readily be appreciated that this disposition of packages limits the number of columns of packages which can be arranged in a machine cabinet of a given width. A greater number of columns can be provided in the same cabinet space by employing the "split column" arrangement in the machine cabinet. In this arrangement the columns are made narrow and the packages are piled or stacked with their narrowest dimension or thickness horizontal and with the length of the package extending from the front toward the rear of the machine. While this construction provides a greater number of columns, it will be understood of course that the number of packages which can be contained in a given column is reduced. However, a machine may be made with both the normal column and the "split column" construction with the less popular kinds of cigarettes contained in the narrow columns.

In cigarette machines of the prior art the partitions forming the respective columns are provided with transverse lips extending vertically along their respective forward edges to keep the packages from being shaken or jarred out of the columns. These lips also serve to prevent a disarrangement of the packages which would interfere with the proper ejection of packages from the columns. These retaining lips may be employed on the split columns of the machine. The width of the split columns, however, is such that the use of retaining lips on these columns interferes with convenient loading of the machine. In loading a column of a machine, packages of cigarettes are inserted in the top of the column and lowered therefrom to the base of the column. In order to perform this operation and to ensure that the packages do not become disarranged as they are moved from the top toward the base of a column, it will be appreciated that the fingers of the person servicing the machine must be inserted into the columns past the retaining lip. The split columns, however, are so narrow that retaining lips would effectively reduce the openings at the forward ends of the respective columns to prevent convenient entry into the columns of the fingers of the person loading the machine. The packages could be dropped into the top of the column and be permitted to fall to the base thereof without maintaining them in stacked relation. If this is done the packages will almost always become so disarranged as to prevent proper ejection thereof when the machine is operated.

I have invented a novel retaining means for maintaining the position of packages of cigarettes disposed within the columns of a merchandising machine. My retainer is especially suited for use on a merchandising machine employing the "split column" construction. It effectively prevents shaking or jarring of packages out of the column and maintains the position of the packages therein to prevent a disarrangement which might interfere with ejection of the packages from the column. My retainer may readily and expeditiously allow the machine to be conveniently loaded by permitting entry into the column of the fingers of the person loading the machine to arrange a new supply of packages in the column.

One object of my invention is to provide an improvement in containers for merchandising machines which effectively retains packages of cigarettes within the columns of the machine while permitting ready and expeditious loading of the column.

A further object of my invention is to provide an improvement in containers for columnar merchandising machines employing "split column" construction.

Another object of my invention is to provide an improvement in containers for columnar merchandising machines which permits a large number of columns to be used in a given cabinet space and yet which provides for ready and expeditious loading of all columns.

Other and further objects of my invention will appear from the following description.

In general, my invention contemplates the provision of a retainer particularly adapted for use with machines employing the split column construction which eliminates the necessity for employing retaining lips on the partitions forming the columns. My retainer is an elongated elastic member disposed at the front of a column and

extending from top to bottom thereof between the partitions forming the column. This arrangement of the flexible member retains the packages within the column to prevent jarring or shaking of packages out of the column. It also prevents such disarrangement of the packages as the supply of packages is depleted which would interfere with proper ejection of the packages from the column. My retainer permits the column with which it is associated to be loaded in a ready and expeditious manner so that the packages of the new supply are properly arranged to permit effective dispensing thereof. Because of its inherent elasticity it may be drawn aside during the loading operation to permit the loader's fingers to be inserted within the column to arrange the packages. Thereafter the elastic retainer will automatically resume its position to retain the package in the column. My retainer eliminates the necessity for employing retaining lips on the column partitions. Preferably, I form a number of elastic members for use with a number of respective columns from a continuous length of material. This arrangement permits the service man to take advantage of the over-all elasticity of the continuous length when drawing aside an individual retaining member to permit loading of its associated column, thus permitting a greater deflection with a material having a comparatively limited elongation per unit of length.

In the accompanying drawing which forms part of the instant specification and which is to be read in conjunction therewith, the figure is a perspective view of a portion of a columnar merchandising machine showing a container assembly embodying one form of my invention.

More particularly referring now to the drawing, the assembly of container S, indicated generally by the reference character **10**, includes sides **12**, one of which is shown, secured by any convenient means such as welding or the like to the back **14** of the assembly. A delivery chute, indicated generally by the reference character **16**, is formed at the bottom of the assembly to provide a means by which cigarettes may be delivered to the customer. Brackets **18** fixed by any convenient means to the sides **12** provide a means by which the assembly **10** may be slid onto guides in the machine cabinet (not shown).

A plurality of normal columns, each indicated generally by the reference character **20**, are formed by partitions **22** fixed by welding or the like to the back **14** of the assembly at spaced locations therealong. A pair of adjacent partitions **22** form a single column **20**. Each of the partitions **22** extends from the top of the container toward the base thereof to an associated ejecting mechanism, indicated generally by the reference character **24**, which may be of any suitable type known to the art. A housing **26** supported between the sides **12** of the assembly slidably mounts the operating plungers **28** associated with the respective ejecting assemblies **24** and contains the conventional interlocking slides which allow the operation of only a single plunger at a time. Each of the columns **20** is adapted to contain packages of cigarettes each arranged with its intermediate dimension or width horizontal and with its longest dimension or height extending in a direction from front to back of the container. This is the normal arrangement employed in containers or columns of the prior art. Each of the partitions **22** forming columns **20** is provided with a retaining lip **30** extending along its forward edge from top to bottom of a partition **22**. Lips **30** extend generally in the direction of the width of the container to retain packages of cigarettes disposed within the columns **20** properly in position.

When the supply of packages in a column **20** is depleted, the column is reloaded by inserting packages through the top of the columns and moving them downwardly to the bottom of the column where they may be engaged by the dispensing mechanism **24**. It will be appreciated that in the course of this operation the fingers of the person loading the machine extend into the columns and pass downwardly between adjacent partitions **22**. The space between adjacent panels **22** permits this movement. Lips **30** do not extend a sufficient distance toward the center of the associated column **20** to interfere with the movement of the loader's fingers within the column.

My assembly is also provided with a number of columns, each indicated generally by the reference character **32**, of the "split column" construction. The left column **32**, as viewed in the drawing, is formed by a partition **22** and a second partition **34** spaced to the right from partition **22**. The right column **32** is formed by a side **12** and a partition **34** spaced to the left from side **12**. The remainder of the columns **32** are formed by additional partitions **34** disposed at spaced locations between the partitions **34** forming the left and right columns **32**. All the partitions **34** are fixed by any convenient means to the back **14** of the container assembly and extend from the top toward the bottom thereof. Associated with each of the columns **32** is an ejecting mechanism, indicated generally by the reference character **36**. Housing **26** slidably mounts a number of plungers **38** associated, respectively, with the ejecting mechanisms **36**. Each of the columns **32** is adapted to support a column of packages having their shortest dimension or thickness horizontal and their longest dimension or height extending in a direction from the front to the back of the container.

If columns **32** were provided with lips similar to the lips **30** for retaining the packages in the split column, they would properly be positioned within the columns. However, the spacing between partitions **34** is such that if a retaining lip **30** were employed, it would substantially close the opening between partitions **34** adjacent the front of the container. As a result, as column **32** was loaded, the person servicing the machine could not insert his fingers within the space provided between adjacent partitions **34**. The packages would of necessity have to be dropped into the top of a column **32** and could not be arranged or adjusted thereafter. In order to eliminate the necessity for employing lips **30** on the columns **32** and to retain packages of cigarettes in a proper position in the columns, I have provided a retainer which will not interfere with the loading of the split columns.

I provide a bracket **40** fixed to all of the partitions **22** and **34** by any convenient means such as welding or the like. This bracket **40** extends between sides **12** of the container assembly and lends rigidity to the container structure. It also performs an additional function as will be explained hereinafter. I mount a second bracket **42** by any convenient means on the partitions **34** adjacent the tops thereof. This bracket **42** extends between a side **12** and the extreme right-hand partition **22** as viewed in the drawing. Bracket **42** may conveniently be fixed to the side **12** and to the right-hand partition **22**. At spaced locations along the bracket **40** I pass bushings **44** through suitable holes formed in the bracket. Each of the bushings **44** is disposed substantially centrally of a column **32**. Bracket **42** is provided with bushings **46** passed through suitable holes formed at spaced locations along the bracket. Bushings or grommets **46** are also located substantially centrally of the respective columns **32**. Portions of a continuous length of elastic, flexible material, indicated generally by the reference character **48**, form the individual retainers **50** for the respective columns **32**. A knot **52** or the like formed in one end of the elongated elastic member **48** retains the member in position with respect to the extreme right-hand grommet **46** as viewed in the figure. From this grommet **46** the length **50** is passed downwardly through the extreme right-hand grommet **44**, through the next adjacent grommet **44**, upwardly in front of a column **32**, and through the grommet **46** adjacent the grommet at which knot **52** is disposed to form a second retainer **50**. The length **48** then passes through the re-

maining grommets 44 and 46 in a manner similar to that described until the last grommet 44 adjacent the bottom of the left-hand column 32, as viewed in the drawing, is reached. At this point the length 48 is drawn to the desired tension and a knot 54 is formed therein to retain this end of the length 48 in position with respect to the grommet 44. It will readily be understood that grommets 44 and 46 form bearing surfaces for the member 48 to prevent abrasion thereof.

The elongated member 48 may be formed of any material which is sufficiently elastic. For example, it may be formed of metal, rubber, or it may be a filament made of a synthetic resin such as nylon, orlon, or the like. Preferably I form the member 48 of nylon since this material is very elastic, is strong, resists abrasion and has such coefficient of elongation that it may stretch sufficiently to permit convenient loading. The use of an elongated member extending over a plurality of split column containers enables me to use a stronger and less easily stretchable material. Stated differently the elongation per unit of length need be comparatively small and yet will permit the elastic retainer member to be pulled aside to permit the ready and convenient loading of a split column. At the same time the stouter and stiffer retainer ensures the retention of the merchandise in the columns.

When it is desired to load the columns 32, the retainer portion 50 may be drawn aside from the column with which it is associated to permit packages to be loaded into the column and stacked neatly by the person loading the machine so that the package will feed without jamming or banging in the column. To accomplish this the loader grasps the retainer 50 with one hand and draws it aside while he loads packages of cigarettes with this other hand. It will be appreciated that when the retainer 50 is drawn away, the loader's fingers may readily be inserted within a column 32 between partitions 34 to arrange the packages being inserted. I have formed the retainers 50 of a continuous length of material 48 in order to take advantage of the inherent elasticity of the entire length rather than merely that of an individual retainer 50. It will be appreciated that while I have described my improvement as being primarily intended for use with columns of the "split column" construction, it should be understood that it may conveniently be used with columns such as the columns 20, replacing the lips 30 by flexible retaining members 50.

In use, my retainer normally serves to retain packages of cigarettes in position within the columns 32. Any tendency of the packages to be shaken or jarred loose out of a column is resisted by the retainers 50. Moreover, the retainers 50 maintain the alignment of the packages stacked within the column to prevent such a disarrangement as would interfere with a proper feeding or ejection of the packages during operation of the machine. When it is desired to load the machine, the member 50 may be pulled away from or drawn aside from the column with which it is associated by virtue of the inherent elasticity of the elongated member. As the person loading the machine draws a retainer 50 away with one hand, he may insert the packages being loaded with the other hand. After a loading operation is complete the member 50 is released to permit it to snap back into a position where it performs its retaining function.

It will be seen that I have accomplished the objects of my invention. I have provided a retainer for maintaining the position of packages of cigarettes within the columns of a columar merchandising machine. My retainer is especially adapted for use with columnar merchandising machines employing the "split column" construction. It replaces the retaining lips normally provided on the partitions forming the columns of the machine. My retainer may readily be displaced to permit loading of the column with which it is associated. When the split column construction is employed, my retainer permits entry of the loader's fingers between the panels forming a column as the container is being loaded.

It will be understood that certain features and subcombinations are of utility and may be employed without reference to other features and subcombinations. This is contemplated by and is within the scope of my claims without departing from the spirit of my invention. It is therefore to be understood that my invention is not to be limited to the specific details shown and described.

Having thus described my invention, what I claim is:

1. In a columnar merchandising machine container having a plurality of columns formed by pairs of adjacent vertically extending panels, a first support mounted adjacent the upper ends of said panels, a second support arranged adjacent the other ends of said panels, a plurality of elongated retainers extending between said supports and formed of a continuous length of elastic material, and bearing means carried by said supports along which said length of elastic material forming said retainers is adapted to slide.

2. In a columnar merchandising machine container having a plurality of columns formed by pairs of adjacent vertically extended panels, a first support mounted adjacent the upper ends of said panels, a second support arranged adjacent the other ends of said panels, a plurality of elongated elastic retainers extending between said supports and formed of a continuous length of nylon, and annular bearing means carried by the supports through which the length of nylon forming said elastic retainers is adapted to pass.

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