Sept. 19, 1967 S. L. COHEN 3,342,536

CONTAINER

Filed July 23, 1965

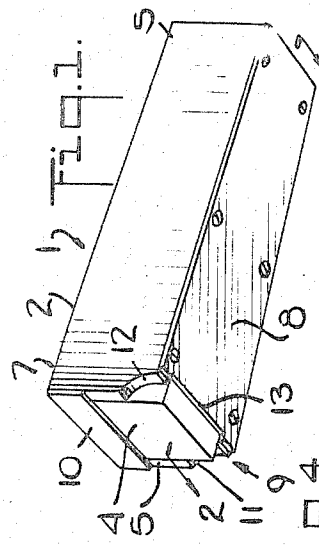


Fig. 1.

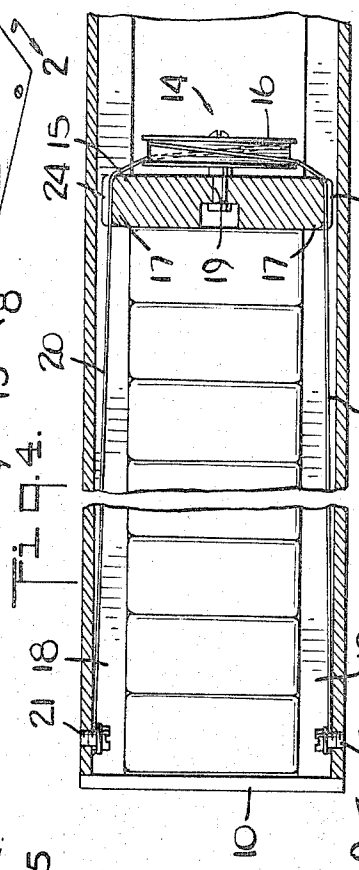


Fig. 4.

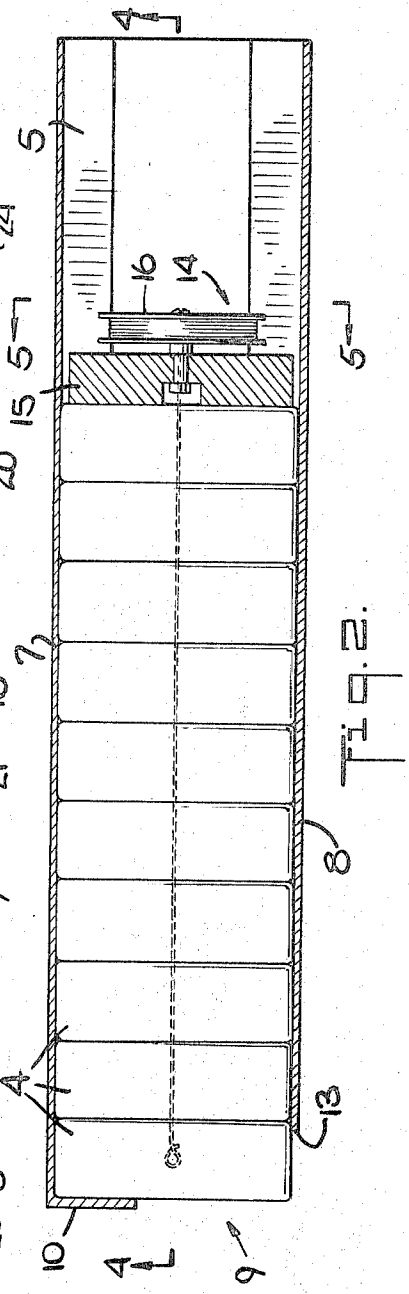


Fig. 2.

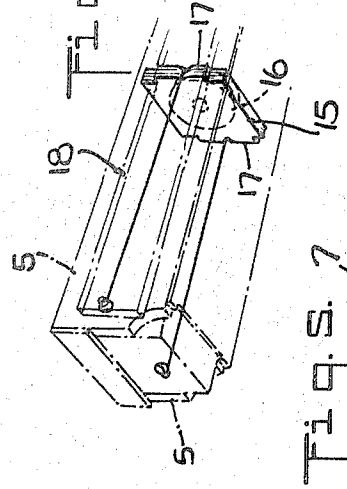


Fig. 3.

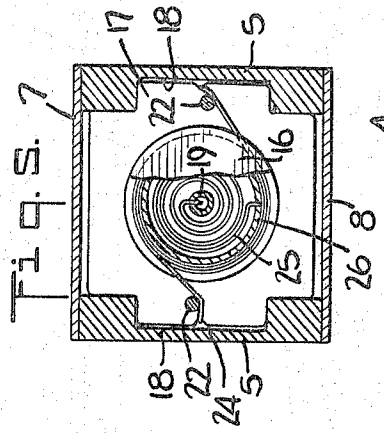


Fig. 5.

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CONTAINER

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ABSTRACT OF THE DISCLOSURE

The present invention relates to a dispensing container for packages comprising a hollow housing having a front dispensing mouth. A pressure plate is movably mounted within the housing in order to urge the packages toward said dispensing mouth. A spring pressed drum lies flat on the rear of said pressure plate and has strings extending therefrom which extend along the side walls and are anchored near the dispensing mouth. With this structure, as each package is removed the other packages are pushed forward by the pressure plate.

The present invention relates to containers for articles and more particularly to an improved container for efficiently storing articles in a position where they are available for ready selection and dispensing.

When articles are stacked in upright position in containers there has been a difficulty in maintaining the articles in upright position especially if the articles do not completely fill the container. The tendency of such articles in a container is to lean over and drop down to the floor of the container. Means are presently used to apply pressure to the articles to keep the articles in upright position. However, the means have been unsatisfactory since they must be adjusted manually and many times, because of age or other deterioration, are not easily movable.

The present invention particularly provides an improved dispensing container for storing and dispensing packaged articles such as typewriter ribbons or cigarettes. These items are available in a variety of grades and brands and it is often necessary to read the grade marks or brand marks before a particular package may be selected. With typewriter ribbons, for example, different ribbons are available in different colors and only certain ribbons will fit a particular typewriting machine. If the packaged articles are stacked vertically it is difficult to read the identifying marks on the package front and more time is required to select a particular article. Moreover, vertical stacking represents inefficient use of space since it is not practical to position one dispenser behind another on a shelf.

One object of the present invention is to provide an improved container for efficiently storing packages.

Another object of the present invention is to provide an improved container for articles which will automatically apply pressure to hold articles therein in upright position without the necessity of manually moving a pressure applying plate.

Another object of the present invention is to provide a dispenser where the next succeeding package is automatically moved to the dispensing position after one has been removed from the dispenser.

Another object of the present invention is to provide a dispenser which may be filled conveniently with a stack of packages.

Another object of the present invention is to provide an improved container whereby a plurality of dispensers may be stacked horizontally on a shelf and the packages in each horizontally disposed dispenser are readily accessible for selection.

Other and further objects of the invention will be obvious upon an understanding of the illustrative embodiment about to be described, or will be indicated in the appended claims, and various advantages not referred to herein will occur to one skilled in the art upon employment of the invention in practice.

The objects of the present invention are accomplished by providing a dispensing container for packages which includes an elongated hollow housing having top and bottom walls and side walls terminating in a dispensing mouth. A pressure plate is mounted for movement within the housing and a drum is rotatably mounted on the plate. The axis of rotation of the drum is perpendicular to the plane of the pressure plate. Means are provided for rotating the drum with respect to the pressure plate and string means wound about the drum extend along side walls. The string means are anchored adjacent the dispensing mouth so that the pressure plate exerts a force tending to push the packages toward the dispensing mouth. If desired the string means may be a pair of strings. The pressure plate may be provided with ears which are adapted to be inserted into slots in the side walls. The slots may also be used to accommodate the strings.

A preferred embodiment of the invention has been chosen for purposes of illustration and description and is shown in the accompanying drawings, forming a part of the specification, wherein:

FIG. 1 is a perspective view of an improved container according to the present invention;

FIG. 2 is a sectional view taken along line 2—2 of FIG. 1 to illustrate a row of packages within the container;

FIG. 3 is a partial phantom view corresponding to FIG. 1 illustrating the preferred arrangement for pressing containers toward the mouth of the container;

FIG. 4 is a sectional view taken along line 4—4 of FIG. 2 and illustrating the preferred arrangement for applying pressure to the packages in the container; and

FIG. 5 is a sectional view taken along line 5—5 of FIG. 2 showing in detail the preferred pressure plate for use with the present invention.

For clarity the present invention will be described with particular reference to a dispensing container as shown in the drawings. However it will be understood that the present invention may also be used with containers which do not have a dispensing opening at the front end.

Referring now to FIG. 1, the improved dispensing container **1** comprises an elongated hollow housing **2** which receives the packaged articles **4** such as packages for typewriter ribbons. Preferably, the housing **2** is rectangular in cross section and comprises side walls **5** and top and bottom walls **7** and **8** all of which terminate in a generally common plane to define a dispensing mouth **9** at one end of the housing. A suitable detainer such as stop plate **10** may be located over the upper portion of the dispensing mouth **9** for detaining the packages **4** in the container.

Both of the side walls have recesses **11** and **12** at their lower corners to provide for gripping and removing packages from the dispenser. The bottom plate of the dispenser housing may be provided with a slight recess **13** which serves two purposes. First, the recess facilitates loading the dispenser through the dispensing mouth **9**, that is, the packages may be moved into the dispenser under the stop plate by passing the package through the bottom plate recess **13**. Secondly, the recess **13** as best shown in FIG. 2 forms a narrow ledge for engaging and supporting the foremost package in the container.

FIG. 2 further illustrates a row of packages within the container housing. According to the present invention the packages **4** within the container are constantly pressed

toward the dispensing mouth **9** by a pressure mechanism **14** so that when one package is removed the remainder automatically advance and the next package in the stack moves to the removal position. The preferred pressure mechanism **14** for applying pressure to the stack comprises a pressure plate **15** and a spring loaded drum **16**.

As best shown in FIG. 3 the pressure plate **15** is of suitable cross section for fitting within the dispensing container. The pressure plate has a pair of ears **17** which fit into corresponding slots **18** in the side walls **5** of the container housing. These ears **17** and slots **18** cooperate in guiding the pressure plate **15** within the dispensing container when it is moving relative thereto.

Referring now to FIGS. 4 and 5, the pressure mechanism **14** further comprises a spring loaded drum **16** rotatably mounted on the outer face of the pressure plate **15** by a suitable shaft **19**. The spring loaded drum **16** urges the pressure plate **15** forward by means of a pair of strings **20** which are anchored by suitable bolts **21** in the side wall slots **18** of the container adjacent the mouth **9** of the container. The strings **20** are wound about the drum in the same direction (e.g. clockwise) so that both strings will be taken up or paid out together as the drum rotates. As best shown in FIG. 5 the strings **20** are led from opposite sides of the drum **16** around guideposts **22** and through slots **24** in the pressure plate **15**.

The drum may include a coil spring **25** (FIG. 5) which tends to rotate the drum in a direction (e.g. counterclockwise) for taking up both strings and retaining them in a taut condition. The ends of the coil spring are fastened to the shaft **19** and the drum cylinder **26** to give the necessary rotary bias to the drum **16**. It will be appreciated therefore that the presure plate constantly exerts a force on the stack of packages because of the tendency of the drum to take up whatever slack exists in the strings and to retain them in a taut condition.

In operation, packages **4** are stacked in the dispensing container **1** by inserting them through the dispensing mouth **9**. The pressure plate **15** in cooperating with the spring biased drum **16** constantly exerts pressure on the stacked packages **4**. When one of the packages **4** has been removed, the spring drum by reason of its tendency to take up slack in the strings advances the remaining packages and presents the next package to the removal position. By this arrangement a plurality of the dispensing containers may be stacked horizontally on a shelf.

Each dispenser will present the front face of a package for easy identification and selection.

It will be seen that the present invention provides an improved container which efficiently stores packages and automatically applies pressure to the articles in order to maintain them in an upright position. It will be further seen that the present invention provides an improved dispensing container in which the succeeding package is automatically moved in a dispensing position if one has been removed from the dispenser.

As various changes may be made in the form, construction and arrangement of the parts herein without departing from the spirit and scope of the invention and without sacrificing any of its advantages, it is to be understood that all matter herein is to be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, I claim:

1. A dispensing container for packages comprising an elongated hollow housing having top and bottom walls and side walls terminating in a dispensing mouth, a pressure plate mounted for movement within said housing, a drum rotatably mounted on the plate, the axis of rotation of said drum being substantially perpendicular to the plane of said pressure plate, means for rotating the drum with respect to the pressure plate, string means wound about the drum and extending along said side walls and means for anchoring said string means adjacent the dispensing mouth whereby the pressure plate exerts a force tending to push the packages toward the dispensing mouth.

2. A dispensing container as claimed in claim **1**, wherein a pair of strings are wound around said drum, each of which are anchored adjacent said dispensing mouth.

3. A dispensing container as claimed in claim **2**, wherein said pressure plate is provided with an ear extending from each side thereof, a slot in each side wall adapted to receive said ear and each of said strings being adapted to be positioned in said slot.

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