Dec. 5, 1944. F. L. MacNEILL 2,364,231

DISPENSING APPARATUS

Filed Dec. 8, 1942

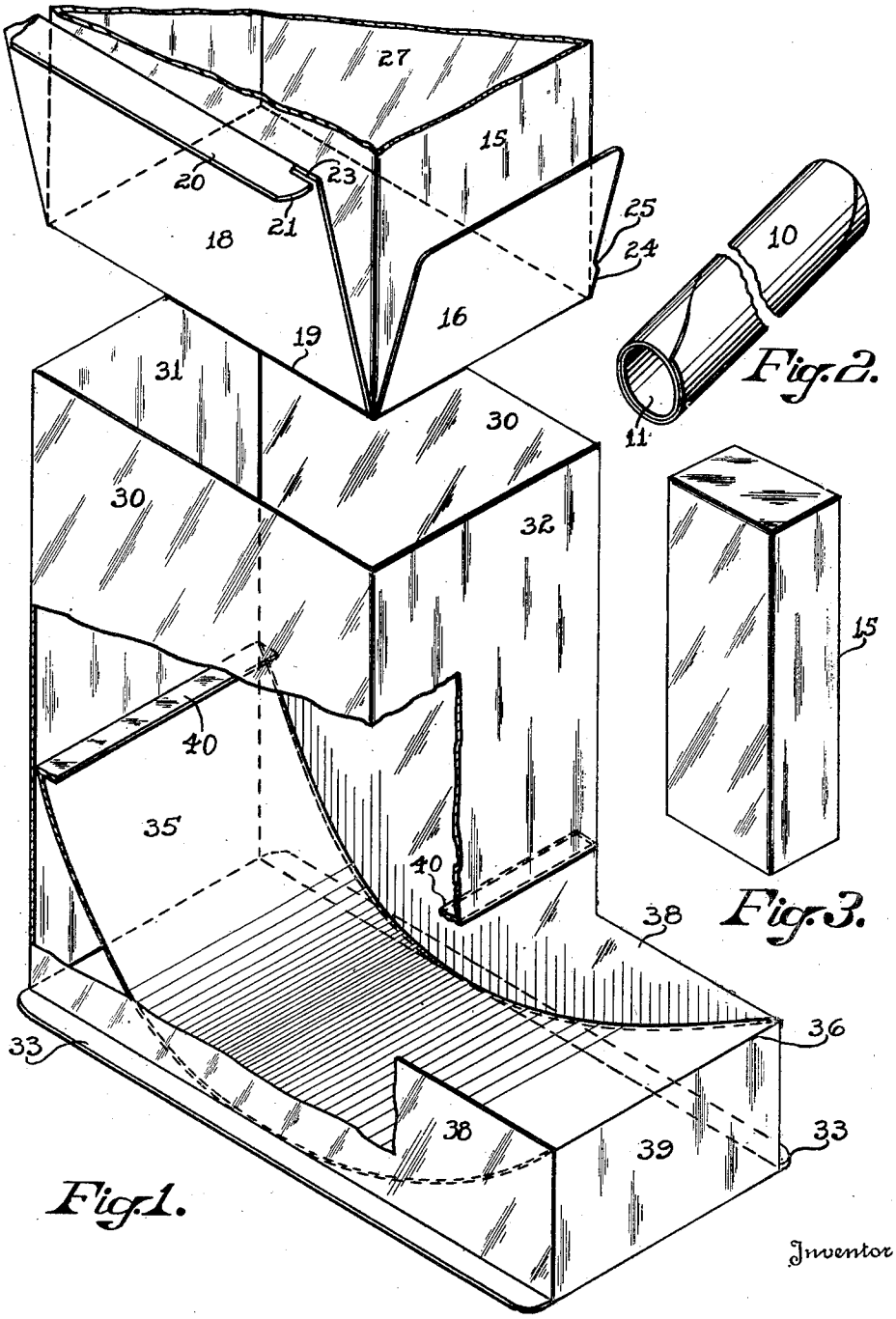



Fig. 1.




Fig. 2.




Fig. 3.

Inventor

Frank L. MacNeill

By Clayton R. Jenks

Attorney

Witness

Herbert E. Covey

Patented Dec. 5, 1944

2,364,231

# UNITED STATES PATENT OFFICE

2,364,231

## DISPENSING APPARATUS

Frank L. MacNeill, Worcester, Mass., assignor to Standard Paper Goods Mfg. Co., Worcester, Mass., a corporation of Massachusetts

Application December 8, 1942, Serial No. 468,233

1 Claim. (Cl. 312—72)

This invention relates to dispensing apparatus and more particularly to a device arranged to dispense round articles while held in their original storage or sales package.

A coin cartridge is customarily made of paper rolled to a cylindrical or tubular shape and folded to form a retaining wall at one end. The cartridge may be filled with similar coins by a manual operation, but ordinarily in banks a counting machine is employed to deposit the correct number of coins in the cartridge while the latter is held in position by hand. The operator requires, for rapid and efficient work, that the cartridge be readily available and presented to his grasp in a uniform and orderly array. Various methods are employed for taking the cartridges from the original package in which they are purchased, such as where the operator removes several at a time by inserting his fingers into the open ends of vertically arranged cartridges; but after part has been removed, the remainder may fall over into a disarrayed mass and thus require careful and patient handling. Also, if the cartridges are packaged in a deep box, the operator finds it increasingly difficult, as the box is emptied, to secure the cartridges as fast as the packaging machine requires. It, however, is desirable to package the cartridges in a long narrow box because of the convenience of loading it by means of a scoop filled with a single width mass of cartridges arranged in axial parallelism.

The primary object of my invention is to provide a dispensing apparatus for round articles, such as coin cartridges, which will serve to dispense them freely and in an orderly manner from a long narrow container in which they were originally packed in a single series or column and wherein the parts are so constructed that the unused articles may be readily returned to the container and there sealed, without requiring undue effort on the part of the operator. Further objects will be apparent in the following disclosure.

Referring to the drawing:

Fig. 1 is an isometric view, partly broken away, of a preferred form of dispensing and packaging apparatus;

Fig. 2 is a fragmentary isometric view of a coin cartridge which is to be dispensed; and

Fig. 3 is a reduced size isometric view of the container in which the cartridges are originally packaged.

In accordance with my invention, the coin cartridges or other articles to be dispensed are packaged in a sales or storage container which opens at one end, and the articles are dispensed directly from the container by placing the latter with its open end down in a dispensing device having a tube or suitably shaped walls arranged to hold the container in position above a dispensing space defined by walls arranged to expose some of the articles for manual removal.

As shown in Fig. 2, a coin cartridge may be made of a single piece of paper wrapped in such a manner as to form a hollow tube 10 which is so shaped that coins may be inserted into the open end 11. The paper may be folded or rolled under at the other end so as to form an abutment arranged to hold the coins in place. After the cartridge has been filled, the paper of the open end is likewise folded inwardly so as to retain the coins. A supply of these cartridges is packaged in a container made of paper or other suitable material.

In order that the cartridges may be dispensed satisfactorily, the container is preferably made as a long and narrow tube of such a width as to hold a single series or column of cartridges. For example, for coin cartridges which are 3.75 inches long, a suitable container may be about 6 by 4 inches in cross section and 27 inches long, so that a column of cartridges may be packaged therein with the cartridge axes extending parallel with the shortest dimension of the container.

The preferred form of container 15 is made of paper board cut and folded to form a box that opens at its ends. One end of the container may be so constructed that it remains permanently closed and sealed by the label that identifies the articles therein. The other end, shown in Fig. 1, has one or more flaps suitably shaped and arranged to close the container and to be folded back or removed to permit access thereto.

In the construction illustrated, there is a flap 16 at each end which folds part way across the open end of the container tube. Another flap 18 is folded or hinged to the edge 19 of the wide side of the tube and arranged to close the end thereof. The flap 18 is bent at its end to provide an outer hinged flap 20 which has rounded ends 21 and is so bent as to be inserted within the container tube close to the wall 27 opposed to the hinge 19. This flap end 20 has slots 23 so arranged that the flap 20 may interlock with the portion 24 of the flap 16 which is cut away at 25 to permit ready insertion of the flap into the locking position. Many other constructions may be employed for closing the cartridge container provided each has a closure that may be opened and folded back to lie against the outside of the

container, or which may be removed, when the container is positioned within the outer casing of the dispensing device.

The cartridges are supported within their original packaging container and they are dispensed from the open end thereof, which is provided by folding back the flaps 16 and 18 to the positions shown in Fig. 1. The container is supported in a dispensing position by standards or walls which position the open end of the container above a bottom and between associated walls arranged to confine the cartridges and expose them for removal from a dispensing space.

As shown in the drawing, a preferred construction comprises a casing of metal or other suitable material shaped to form an open tube which slidably receives the container 15. The casing may be formed of side walls 30 and end walls 31 and 32 secured together to provide a tube of rectangular cross section slightly larger than the container 15. The rear end wall 31 and the side walls 30 extend downwardly through the same distance, and the side walls 30 have horizontal flanges 33 which form a supporting base.

A bottom 35 is arranged to support the cartridges as they feed downwards from the container, and this bottom is preferably shaped as a curved plate secured to the rear wall 31, as by solder, and sloping downwardly from that rear wall so as to cause the cartridges to roll forward. The front wall 32 terminates well above that bottom so that the cartridges may escape therebeneath. The curved bottom 35 has its concave portion facing upwardly and it preferably reaches a low point beneath or forward of the front wall 32 so that the cartridges are presented in front of the same. The bottom curves upwardly in front of that wall, and its front edge 36 is of such a height and distance from the bottom edge of the front wall 32 that the cartridges filling the casing tube will come to rest in the dispensing space beneath and forward of the front wall 32. The side walls 30 are L-shaped, as shown, and their forwardly projecting vertical wall portions 38 are connected together at their front edges by a low front plate 39 suitably secured thereto. The front edge 36 of the curved bottom 35 is suitably secured to the top edge of the front plate 39 and thus makes a rigid structure.

The cartridge container 15 is supported above the dispensing space. It is preferably carried on two inwardly projecting flanges 40 secured to the inner faces of the rear and front walls 31 and 32 which are located in a horizontal plane adjacent to the bottom edge of the front wall 32 so that the container cannot interfere with ready removal of the cartridges. The side walls of the casing are made high enough so as to hold the tall container firmly in position and to protect the folded flaps 16, 18 and 20 from injury.

When the cartridges in the container 15 are to be dispensed, the end flaps 16 and 18 are folded back as shown in Fig. 1. Then, with the container placed open end up, the casing is shoved, bottom side up, down over the open container end until the latter strikes the supporting flanges 40. The flaps are pressed between the walls of the container and the metal casing and are thus held out of the way. The assembled parts are then reversed, and the cartridges feed down into the dispensing space and they are readily accessible for removal as desired. When the desired number have been used for packaging the coins, the operator tips the assembled parts to roll the cartridges back into the container. Then the dispensing casing may be removed and the flaps 16 and 18 folded to close the end of the container. Thus, the parts are useful for both storing and dispensing the articles.

It will be appreciated that many modifications may be made in the construction to satisfy the primary object of this invention; hence the above disclosure is to be interpreted as defining the principles of this invention and a preferred embodiment thereof and not as imposing limitations on the claim appended hereto.

I claim:

A dispensing and storing apparatus comprising a casing having rear, front and side walls forming a rectangular tube which is open at its top, the lower end of the front wall terminating above the lower ends of the other walls and the side walls being L-shaped to provide extensions forward of the front wall, a bottom plate means beneath the tube which is so arranged that the lowermost of round articles filling the tube will lie beneath and forward of the front wall and be exposed for manual removal, the casing being open at the top of the extensions, a closable, open ended storage container for said articles shaped as a parallelepipedon and slidably fitting within the top of said tube and said container having a closed top end for holding articles when reversed and bottom end flaps having interengaging means foldable from a closure position to an open position where the flaps are held between a container wall and a wall of the tube, and a support on an inner wall of the tube which holds the open end of the container above said bottom plate and a cooperating support at the lower edge of the front wall, said supports permitting discharge of the contents of the container, said parts being so constructed that the assembled tube casing and container may be reversed to return the unused articles to the container and the latter then withdrawn and its end flap restored to a closure position for securing the articles within the container.

FRANK L. MACNEILL.