

April 25, 1967

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3,315,910

CARTRIDGE DISPENSER

Filed Oct. 4, 1965

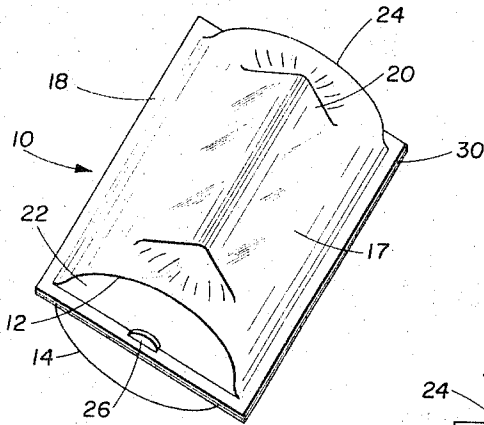


FIG. 1

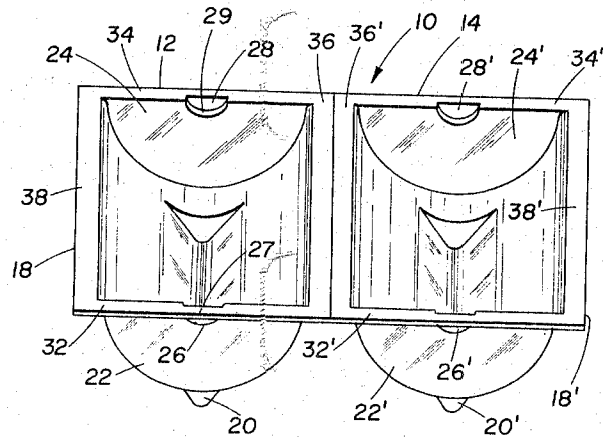


FIG. 2

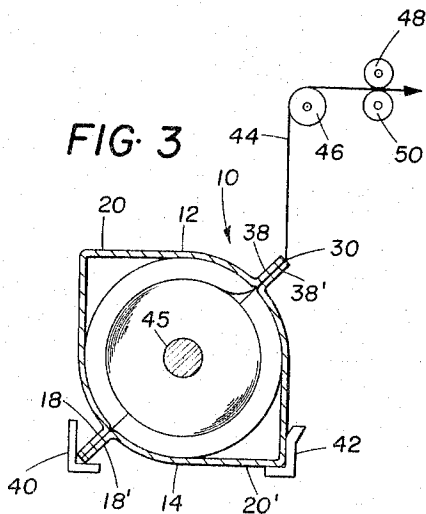


FIG. 3

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CARTRIDGE DISPENSER

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Filed Oct. 4, 1965, Ser. No. 492,680
8 Claims. (Cl. 242—71.1)

The present invention relates to a web dispensing cartridge and more particularly to a web dispensing cartridge designed to fit into a structure designed to support a box-like rectangular dispenser.

Web dispensing cartridges of several types are well known. However, the prior art dispensers are generally cylindrical in shape and thus are inadequate for use in various environments. It has been necessary to provide special housings for the dispensers used in prior art machines and this has proven both unwieldy and costly. Furthermore, many prior art dispensing cartridges required special web roll cores which were utilized to properly position the cartridge.

In an effort to overcome the disadvantages of the prior art dispensing cartridges many complex and increasingly cumbersome cartridges were developed. The dispensing cartridges have become necessarily difficult to manipulate and are thus inadequate for use in their intended purpose.

The web dispensing cartridge of this invention overcomes the deficiencies of prior art dispensing cartridges. The presently disclosed dispensing cartridge has the advantages of ease of manufacture and relatively low cost of manufacture. This dispensing cartridge is both simple to install and easy to operate. It is formed of two symmetrical portions which form the casing for a roll of web material and from which the web material is dispensed. Each symmetrical portion of the casing is formed with a foot member and a flange which facilitate the positioning of the cartridge in a structure designed to support a rectangular box dispenser. Each symmetrical portion has a bearing socket to rotatably support the core of a roll of web material to be dispensed. The symmetrical portions may be connected by various means along the flanges and an opening is provided along one edge of the flanges for dispensing the web material. One particular application of this dispensing cartridge is a light tight closure for dispensing photographic paper. The opening in the one edge of the flange may be made light tight by various means. The cartridge may be used for dispensing any desired web material.

It is therefore a prime object of this invention to overcome the objectionable features and limitations on use of prior art cartridge dispensers.

Another object of this invention is to provide a cartridge dispenser which is designed to readily fit into a structure which had been designed for a rectangular box dispenser.

A further object of this invention is the provision of a cartridge dispenser which is inexpensive to manufacture and is readily constructed.

Still another object of this invention is the provision of a cartridge dispenser which is easily placed in operative position and therefore ready for immediate use.

A still further object of this invention is the provision of a cartridge dispenser which is durable and rugged for its intended use.

Details of the foregoing objects and of the invention, as well as other objects thereof, are set forth in the following specification and illustrated in the accompanying drawings comprising a part thereof and in which:

FIG. 1 is a perspective view of a cartridge dispenser

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constructed in accordance with the principles of this invention.

FIG. 2 is a perspective view of the symmetrical portions of the dispenser in an open position; and

FIG. 3 is a section view of the dispenser of this invention placed in a machine frame structure in operative position.

Referring now to FIGS. 1 and 2 of the drawings, throughout which similar reference characters refer to similar parts in the several views, a cartridge dispenser indicated generally by 10 comprises a top portion 12 and a bottom portion 14. The top portion 12 and the bottom portion 14 are structurally identical half sections and each comprises one half of the cartridge dispenser 10. The portions 12 and 14 are identical in size and shape. The cartridge dispenser is symmetrical about the plane of connection of the top portion 12 and the bottom portion 14. The orientation of the dispensing cartridge set forth in FIGURE 1 will be utilized in describing the features of said cartridge. This orientation will be used for reference purposes only and it is to be expressly understood that in use the cartridge may be oriented in any position.

For convenience and ease of manufacture, it is preferable that the same method be used to fabricate the top portion 12 and the bottom portion 14. There are various methods which are suitable for fabricating the top and bottom portions. Examples of such methods are thermoforming of a sheet, such as vacuum-forming a heated plastic sheet; stamping and forming from any formable material, such as metal, paper, or plastic; injection-molding a thermoplastic or thermosetting material; and blow molding. Other methods of fabrication may be used without departing from the spirit and scope of this invention.

Since the top portion 12 and the bottom portion 14 are identical, only the structure of top portion 12 will be specifically described. Like structural members indicated on the top portion 12 will be indicated with a prime notation of the same reference character on the bottom portion 14. The top portion 12 comprises a semicylindrical section 17 bounded by a flange 18. The section 17 has semicircular integrally formed end walls 22 and 24. The flange 18 comprises outwardly extending bottom faces 32, 34, 36, and 38. The faces 32 and 34 extend along the semicircular end walls 22 and 24, respectively, and said faces are slightly longer than the diameter of said semicircular end walls. The faces 36 and 38 extend along the periphery of said semicylindrical section 17. While the faces 36 and 38 are shown as wider than the faces 32 and 34, the relative width of said faces are determined by the size and shape of the material to be dispensed. At the top of the semicylindric section 17 of portion 12 is a foot 20, which foot extends substantially along the axial length of portion 12. The foot 20 is spaced inwardly from the semicircular ends 22 and 24 of the semicylindrical section 17.

Extending outwardly from the semicircular ends 22 and 24 are integrally formed bearing sockets 26 and 28 which are utilized to rotatably support the core of a roll of web material therein. The bearing sockets have recessed portions 27 and 29 for rotatably supporting the core of a roll of material. Web material 44 is wound on a core 45 and the core is constructed to fit into the bearing sockets 26 and 28 so that the web material may be readily dispensed from the dispensing cartridge 10.

The top portion 12 is sealed to the bottom portion 14 along the flanges 18 and 18'. The seal is made only along the bottom faces 32, 32', 34, 34', 36 and 36' of the flanges 18 and 18'. The bottom faces 38 and 38' are left unsealed so that the web material is free to be pulled out from an opening 30 formed between the faces 38 and 38' of the top portion 12 and the bottom portion 14. The opening between these faces may be covered with an opaque

adhesive tape if the web contained is light sensitive and which tape can be removed to expose the free end of the web when the dispenser is to be used.

The top portion 12 may be connected to the bottom portion 14 by various means. The bottom faces 32, 34, and 36 of the portion 12 may be connected to the edges 32', 34', and 36' of the portion 14 by means of stapling, adhesives, ultrasonic seal, heat seal, adhesive binding tape, snaps, external clips or any other suitable manner. The enumerated connecting means are illustrative only and other means may be utilized without departing from the scope of the invention.

The opening 30 between the face 38 of top portion 12 and face 38' of the bottom portion 14 must be light tight when light sensitive web rolled products are to be dispensed from the dispensing cartridge 10. The opening 30 may be maintained light tight by attaching velvet or other light lock material to either one or both the bottom faces 38 and 38'. Other suitable methods for locking out light from the roll of web product 44 include a series of intricately formed passages formed or attached to the dispensing mouth 30 of the cartridge 10, or having the faces 38 and 38' in firm contact with each side of the web material to prevent the passage of light. The enumerated light preventative means are illustrative only and other acceptable means may be used without departing from the scope of the invention.

The dispensing cartridge 10 as shown in FIG. 3 is in operative position within a structure in which it is supported for dispensing the web material contained therein. Members 40 and 42 are stationary machine frame structure which are used to support the dispensing cartridge 10. It is seen that the dispensing cartridge 10 is readily positioned in the frame structure 40 and 42 by means of the flanges 18 and 18' and the foot member 20'. The flanges 18 and 18' and the foot member 20' cooperate with the frame structure 40 and 42, respectively, so that the dispensing cartridge 10 is positioned in the frame in the same manner a boxlike rectangular dispenser would be positioned. Web material product 44 is dispensed from the opening 30 and travels along a path defined by a series of rollers 46, 48 and 50.

The dispensing cartridge may be placed in a machine frame structure designed for a rectangular box dispenser and, due to the cooperation of the foot and flange of the dispensing cartridge with the structural framework of the machine, no further positioning structure is required. The cartridge is simple to construct and is durable and rugged for its intended purpose.

From the foregoing it will be readily apparent that a highly efficient and much more satisfactory dispensing cartridge has been provided by the present invention.

While the invention has been described and illustrated in its preferred embodiment, it is to be expressly understood that the drawings are utilized for purposes of illustration only, and are not designed as a definition of the limits of the invention, reference being had for this purpose to the appended claims.

We claim:

1. A web dispensing cartridge comprising a casing of substantially cylindrical shape for receiving a spool of wound material, said casing having flanges and feet thereon which cooperate to provide means for supporting the casing in a structure designed to support a rectangular box dispenser.

2. A web dispensing cartridge comprising two portions, each of said portions having a foot member and a flange member, said portions connected along said flange members and an opening in said cartridge for dispensing a web product therefrom.

3. A cartridge portion having the configuration of a semicylinder with semicircular ends including a foot member on said semicylinder, said foot member spaced inwardly from the semicircular ends of said semicylinder, flange means on said semicylinder, and said semicylinder

having bearing sockets for rotatably supporting a roll of material to be dispensed.

4. A web dispensing cartridge comprising a body having a generally cylindrical shape, said body having at least one flange member, at least one foot member projecting from said body, said foot member and said flange member cooperating to facilitate the positioning of the cartridge into a structure designed to support a rectangular box dispenser.

5. A web dispensing cartridge comprising two symmetrical portions, each of said portions having the general shape of a semicylinder, with a top rounded section and a base section, a projecting foot member on the top rounded section of each portion, a flange extending around the base section of each semicylinder portion, each of said flanges having bottom faces, said portions connected along the bottom faces of said flanges, said flanges being unconnected along one set of said bottom faces, said unconnected bottom faces providing an opening from which material may be dispensed from the cartridge, and said flanges and said feet cooperating to position said cartridge for the dispensing of web material therefrom.

6. A web dispensing cartridge as claimed in claim 5 wherein each symmetrical portion has a semicircular bearing socket and said bearing sockets cooperate to rotatably support a core of rolled web material to be dispensed through said opening in said flange bottom faces.

7. A container for dispensing rolled web material comprising the combination of a pair of structurally identical half sections, each section having a generally semicylindrical shape, a foot member on each half section, a flange member on each half section, said flange members having a plurality bottom face means thereon, said half sections connected along a segment of the bottom face means of said flange members, an opening defined by a further segment of said bottom face means of said flange members which are unconnected, and said flange members and said foot members cooperating to support said container in a structure designed to support a rectangular box dispenser.

8. A web dispensing cartridge, said cartridge comprising a pair of identical half sections, each half section comprising an integrally formed semicylindrical wall and end walls, flanges extending outwardly from the peripheral edges of the semicylindrical wall and end walls, a foot formed in said semicylindrical wall, said foot comprising a substantial right angle in the outer face of the semicylindrical wall, the flanges on the end walls and on one peripheral edge of the semicylindrical wall of one half section being secured to the identical flanges on the other half section, the flanges on the other peripheral edge of the semicylindrical walls of the two half sections forming a dispensing opening therebetween, the foot of one half section along with the flanges on said one peripheral edge of the semicylindrical walls of the half sections forming means for supporting the dispensing cartridge in a frame designed to support a rectangular cartridge.

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