Aug. 27, 1963 G. CANNING, JR., ET AL 3,101,840

PACKAGE FOR SMALL ARMS AMMUNITION

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Fig. 1.

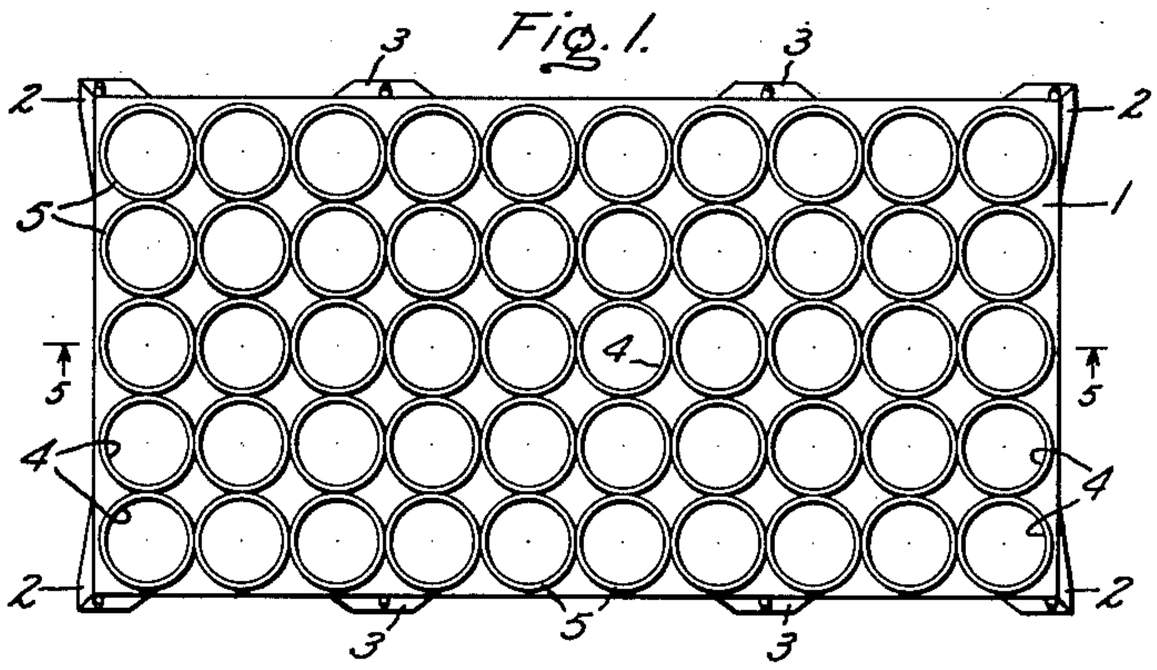


Fig. 2.

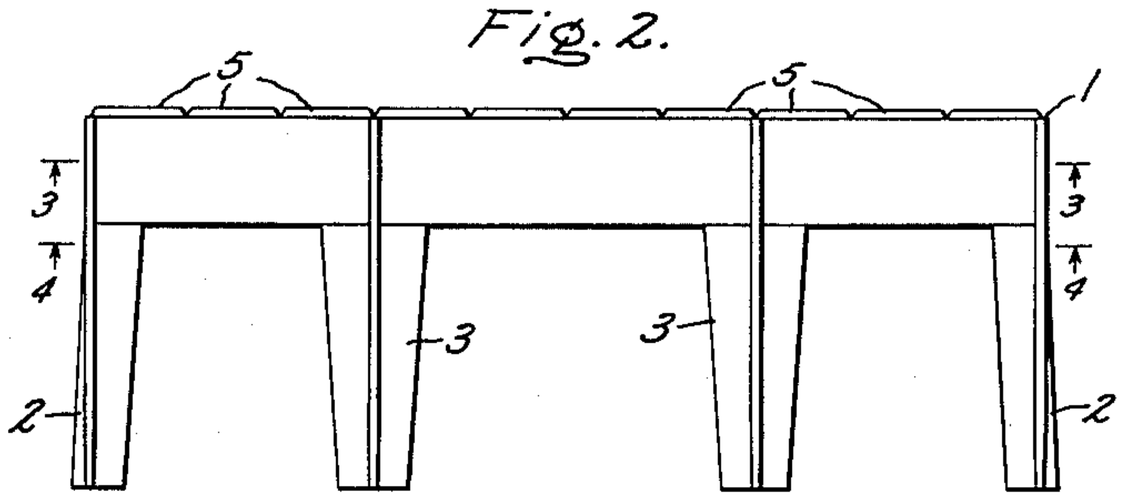
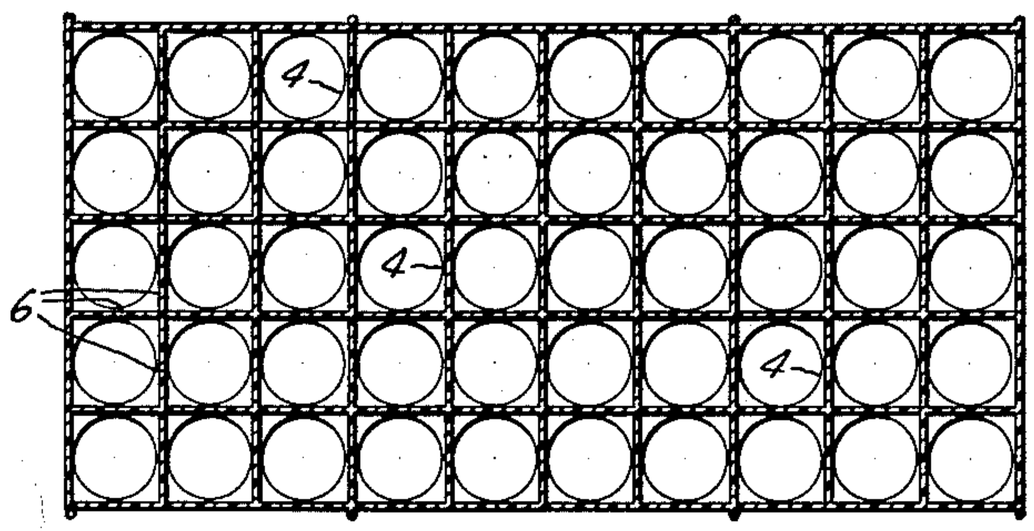


Fig. 3.



Inventors:
Gordon Canning, Jr.,
Robert E. Clough,
by John H Lewis Jr.
John W. Phipps
Attorneys.

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Fig. 4.

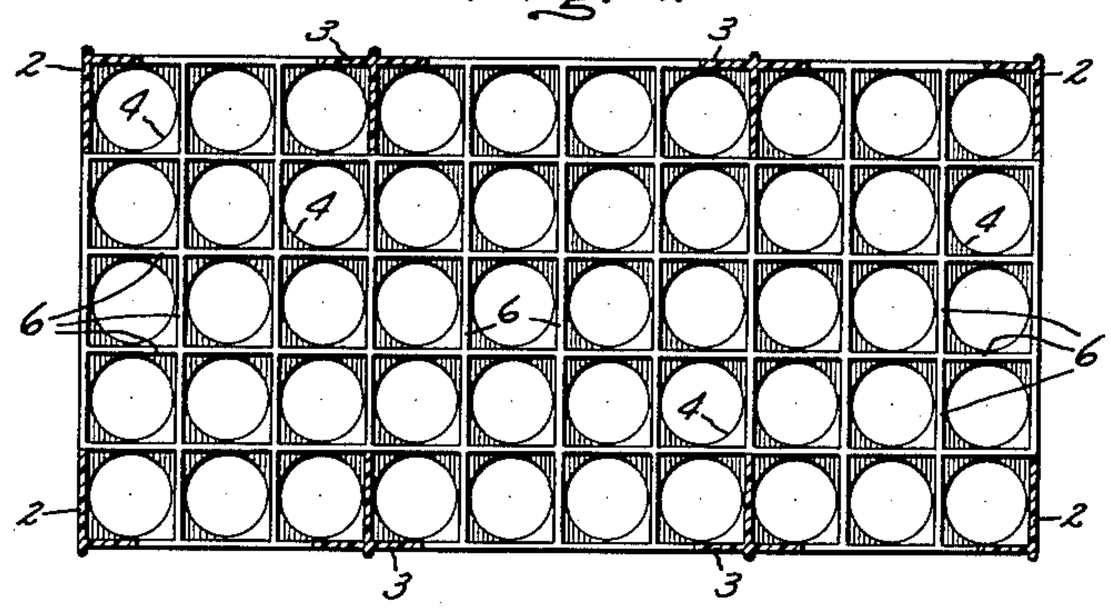


Fig. 5.

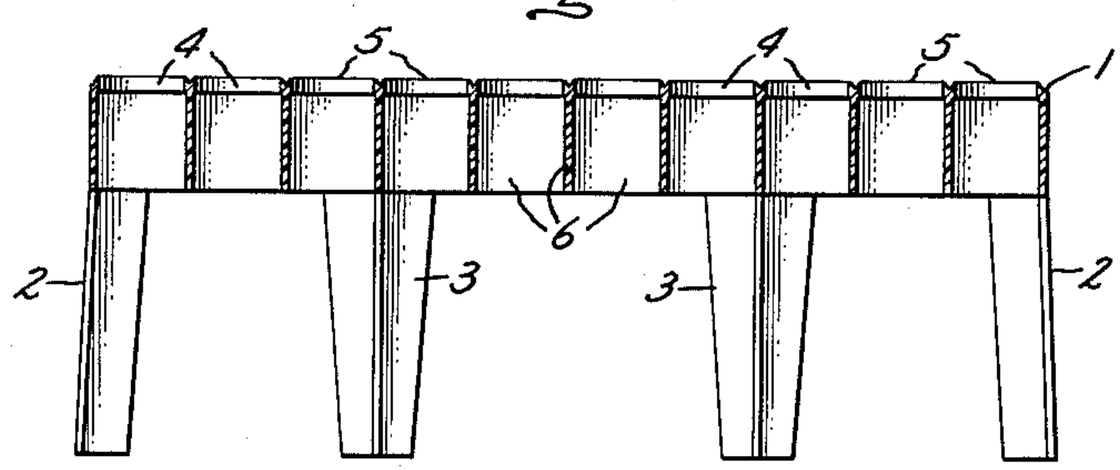
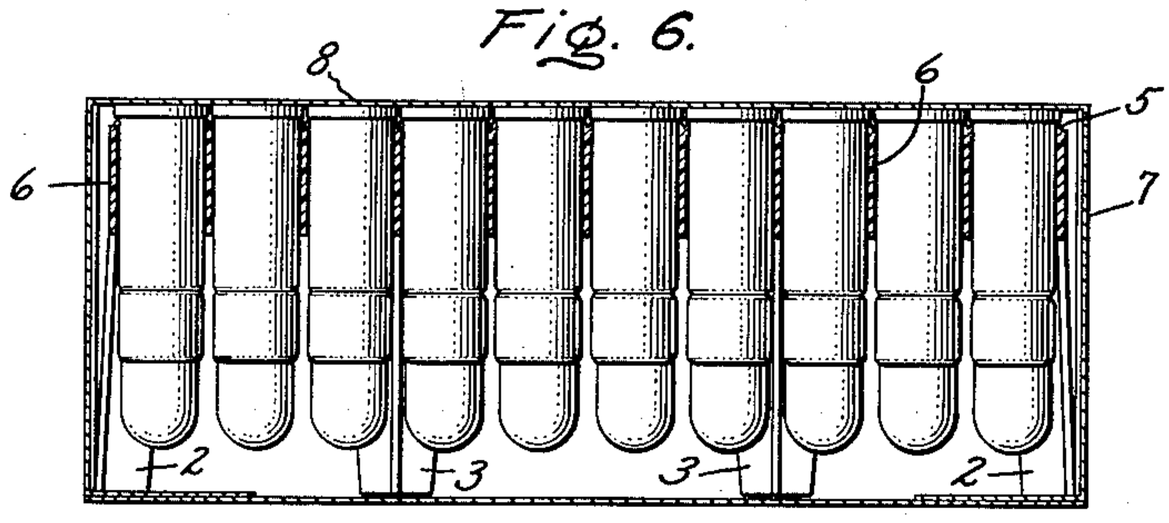


Fig. 6.



Inventors:
Gordon Canning, Jr.,
Robert E. Clough,
by John H. Lewis Jr.
John W. Phillips
Attorneys.

United States Patent Office

3,101,840

Patented Aug. 27, 1963

3,101,840

PACKAGE FOR SMALL ARMS AMMUNITION

Gordon Canning, Jr., Westport, Conn., and Robert E. Clough, Newark, Del., assignors to Remington Arms Company, Inc., Bridgeport, Conn., a corporation of Delaware

Filed May 22, 1961, Ser. No. 111,543
4 Claims. (Cl. 206—3)

This invention relates to an improved package for small arms ammunition, and has particular reference to the provisions of a package which has the principal object of supporting rimmed cartridge cases with their bullet ends free from contact with each other and free from contact with any portion of the packaging material.

Another object is to provide a cartridge supporting member for such a package, which member, when removed from the enclosing package, is adapted to function as a loading block which supports the bullet ends of cartridges out of contact with the ground, table or other structure on which it is placed.

I contemplate that one of the best methods of accomplishing these and other objectives is to provide an integral tablelike structure having perforations in its top equal in number to the cartridges to be supported thereby. These perforations each closely engage the body of a cartridge, which will hang therefrom supported by its rimmed head. Flanges or legs depending from the top are provided to support the structure with the bullets free in space, and the assembly may conveniently serve as a loading block and may be inserted into the conventional tubelike package with one side face of the tubelike package in planar contact with the heads of the cartridges, to secure them in place.

The nature of the invention, as well as other objects and advantages, will more fully appear from consideration of the following specification, referring to the attached drawing in which:

FIG. 1 is a top plan view of a cartridge support unit embodying our invention.

FIG. 2 is a front elevational view.

FIG. 3 is a horizontal sectional view on the line 3—3 of FIG. 2.

FIG. 4 is a similar sectional view on the line 4—4 of FIG. 2.

FIG. 5 is a longitudinal sectional view on the line 5—5 of FIG. 1.

FIG. 6 is a longitudinal sectional view taken through a package of packed ammunition on a plane corresponding to 5—5 of FIG. 1. The cartridges are shown in elevation.

Referring to the drawing by characters of reference, it will be noted that a preferred embodiment of the invention comprises a molded cartridge supporting member of a thermoplastic resinous substance of fairly rigid resilient character. In broad outline this member resembles a table with a generally flat rectangular top 1 and with a plurality of depending legs. In the preferred example, eight of such legs are shown, with the four corner legs 2 being of right angle cross section and the four centrally disposed legs 3 being of T cross section, so that all are rigid and self supporting.

The top of the table is provided with a plurality of equally spaced perforations 4 having a diameter adequate to receive the body of a cartridge but small enough to engage the rim of a cartridge and prevent it falling through. Conveniently, fifty perforations may be provided, arranged in five rows of ten. As a refinement, each perforation may be bordered by an upstanding rim 5 of lesser outside diameter than the rim of a cartridge so that such rims are slightly spaced from the top of the table to facilitate manual removal.

The underside of the perforated table top 1 is preferably formed with a plurality of intersecting depending webs 6 defining square cells enclosing peripherally and extending downwardly from each perforation. These cells should be of such length and should fit the bodies of the cartridges suspended from the top so closely that two adjacent cartridges may not swing far enough to bring their bullet ends into contact.

The length of the legs which support the table top should be such that the bullet end of a cartridge suspended from the top may not contact a surface upon which the legs are supported.

The commercial line contains many groups of cartridges of such similar dimensions that a single cartridge supporting member may be used interchangeably with several cartridges. For example:

	Approximate Rim Diameter	Approximate Diameter Under Head	Approximate Length
357 Magnum	.439	.379	1.55
38 Special	.437	.379	1.53
32–20 Winchester	.410	.352	1.54
218 Bee	.410	.350	1.63
25–20	.410	.350	1.55

All of the cartridges listed above may be accommodated by a single support unit in which the diameter of the perforations is about .395 inch and the upstanding rim about each perforation has an outside diameter of about .41 inch and a height of about .03 inch. Since the rim diameter of a 38 Special cartridge, for example, is about .437 inch, it will be seen the cartridges may be readily lifted from the perforations. The cells formed beneath the top of the support member have a depth of substantially one-half inch and inside transverse dimensions not significantly greater than the diameter of the perforations. The height of the legs is such as to support the table top about 1.62 inches above the surface on which the legs rest, which allows .16 inch clearance between the tip of a 158 grain lead bullet of the 38 Special Police Service cartridge.

A support unit such as that described above may be filled with cartridges and placed in an enclosing paper board tube 7 of the type used to enclose the conventional paper board tray and partition units previously used. Such a tube has an unbroken flat surface 8 on one of its sides adapted to lie in close contact with the heads of the cartridges suspended by the perforations in the top of the support unit. Obviously, with the rims of the cartridges sandwiched between the surface 8 and the top of the support unit, the package may be turned in any direction without interfering with the completeness of the support of the individual cartridges.

Preferably in multiple package units which may be subject to round handling during transit, it is desirable to pack the individual filled tubes in such a way that they will normally be standing on their end or side, so that the long axis of the cartridge is parallel to the floor of a freight car or other transportation unit. In this way, the weight of the cartridges will be supported by the cellular top of the support unit and there will be no tendency for the end of the legs to apply concentrated loadings which might tend to wear through the enclosing tube.

Various thermoplastic materials have been used to form the support units, including various grades of polystyrene, low density polyethylene and high density polyethylene. We have chosen as our preferable material high density polyethylene because it appears to best combine the qualities of rigidity, strength, impact resistance

and low cost. Obviously, many other materials could be used, which have sufficient rigidity and resilience to adequately support and protect the product. Injection molding is a desirable method of forming.

Although we have here illustrated and described a preferred embodiment of our invention, it will be obvious that variations are practicable within the limits defined by the appended claims.

We claim:

1. A package of small arms ammunition of the type having a cartridge case with a rimmed head at one end and a projectile at the opposite end thereof, said package comprising a support member of tablelike form defined by a top and by a plurality of legs depending therefrom, a plurality of spaced perforations in said top of sufficient size receiving a cartridge case and supporting said case in suspended fashion with the rimmed head in engagement with the upper face of said top, said legs extending downwardly from said top a greater distance than said suspended cartridges, and means depending from the lower face of said top and cooperating with each of said perforations to limit lateral movement of said suspended cartridges and to prevent physical contact of one cartridge with the other cartridges, and an enclosing tube within which said support member is received, said tube having at least one imperforate planar wall in substantial engagement with the rimmed cartridge heads to limit axial movement of the cartridges in one direction while the rimmed cartridge heads engage the upper face of said top to limit axial movement of the cartridges in the opposite direction, thus providing an ammunition carrying package which substantially eliminates contact of the projectiles with each other or with the walls of the tube.

2. A package as defined in claim 1, wherein said means to limit lateral movement of said suspended cartridges comprise depending cellular partitions which stiffen said top and provide a plurality of individual cells, each of which surrounds and extends downwardly from one of said perforations.

3. A package as defined in claim 2, wherein the depth of the individual cells formed by said partitions is less than the length of the suspended cartridges but sufficient, when considered with the closeness of the fit of said perforations to the body of the cartridge case, to prevent such movement of the cartridges as to permit the projectile ends of said cartridges to come into contact with each other or with the walls of the enclosing tube.

4. A package as defined in claim 3, wherein each of said perforations is surrounded by an upstanding rim of lesser diameter than the outside diameter of the rimmed head of the cartridge, said upstanding rim serving to raise the head of an associated cartridge above the top of said member an amount sufficient to facilitate gripping the cartridge.

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