

[54] **FLAT PACK FOR REVOLVER CARTRIDGES**
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[73] Assignee: **MTM Molded Products Company**, Dayton, Ohio
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FOREIGN PATENTS OR APPLICATIONS

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99,129	6/1940	Sweden.....	206/804

[52] **U.S. Cl.**..... 206/3; 206/372; 206/443; 206/478; 206/804; 220/339
[51] **Int. Cl.** B65D 43/16; B65D 85/20; F42B 37/00
[58] **Field of Search**..... 206/3, 214, 349, 364-366, 206/372, 379, 443, 473, 478, 480-481, 483, 528, 804; 220/20, 339

Primary Examiner—William I. Price
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[56] **References Cited**
UNITED STATES PATENTS
2,228,493 1/1941 Will 206/214

[57] **ABSTRACT**
Ammunition cartridges are carried in individual compartments and released one by one by pressing each toward the base of the ammunition pack.

7 Claims, 11 Drawing Figures

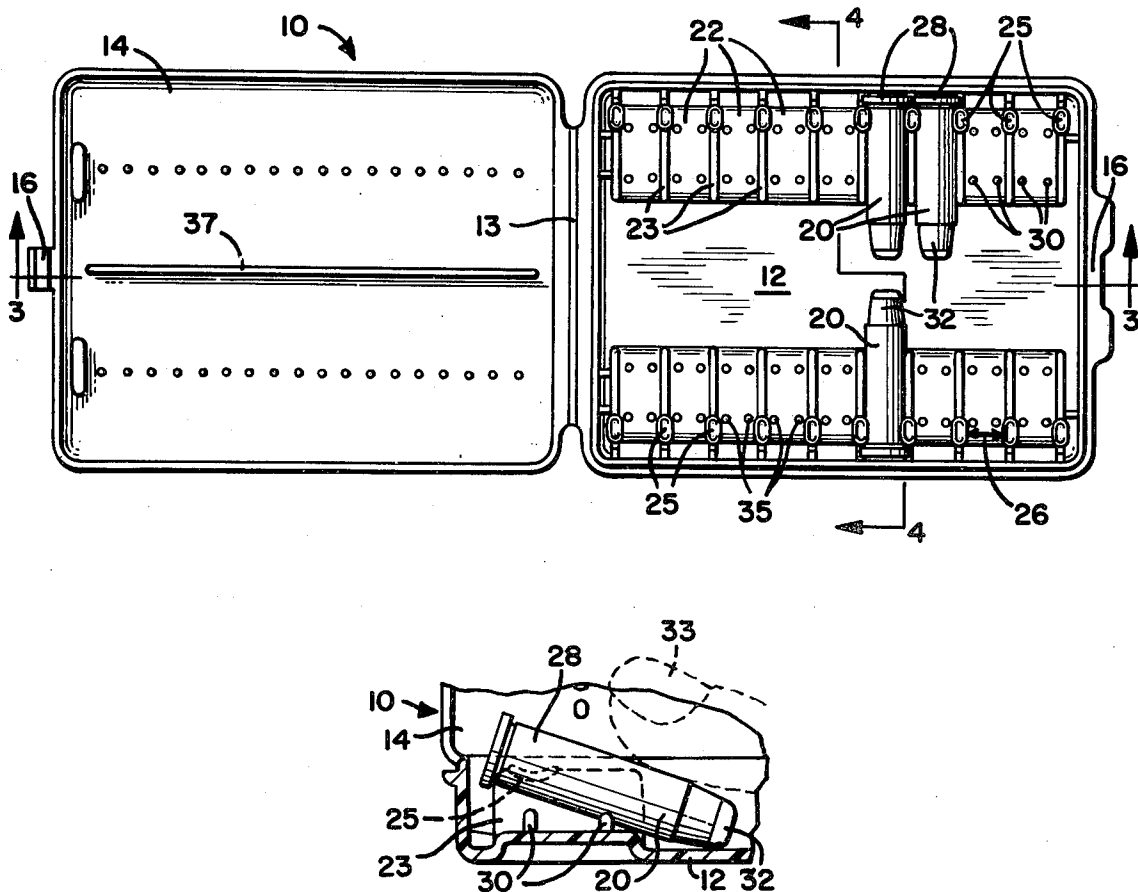


FIG-1

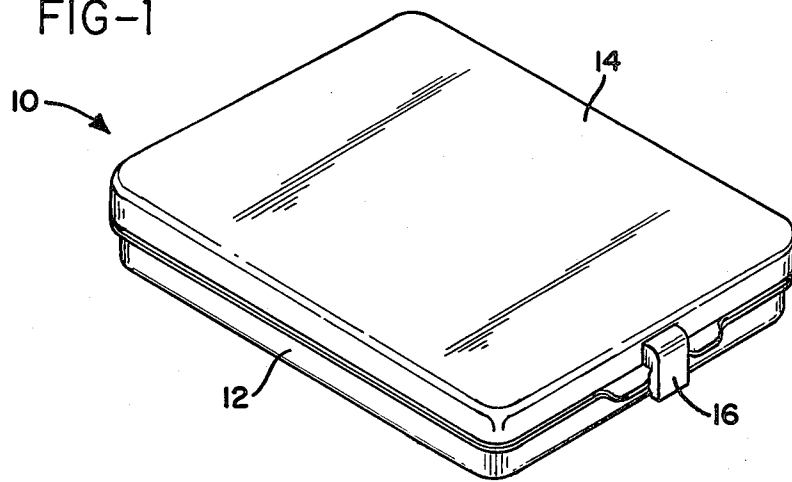


FIG-2

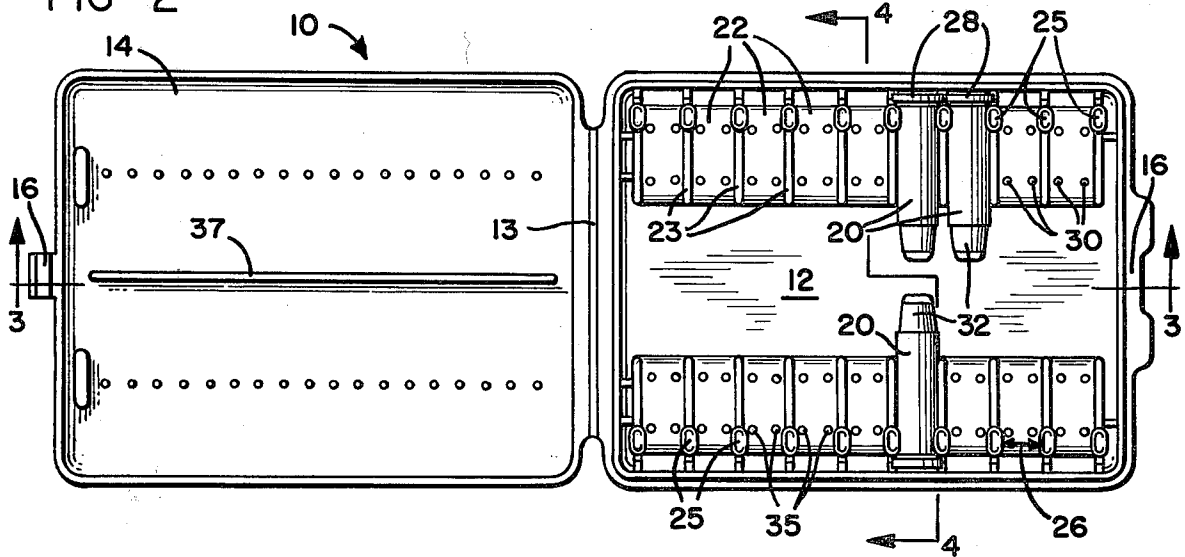


FIG-3

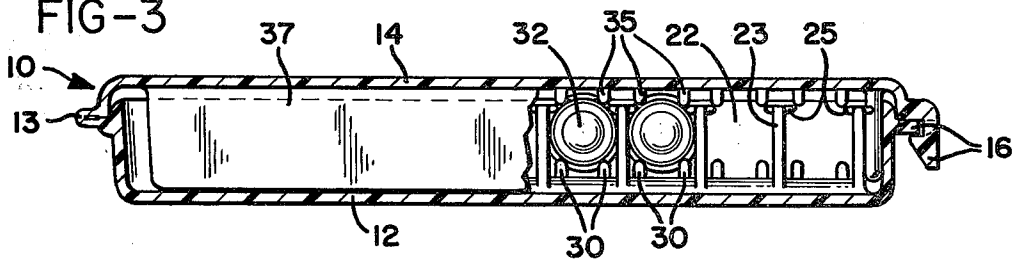


FIG-4

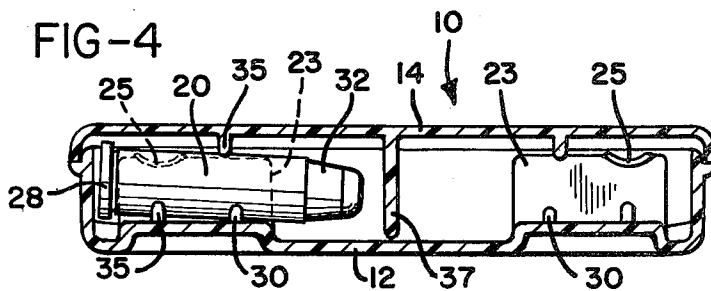


FIG-5

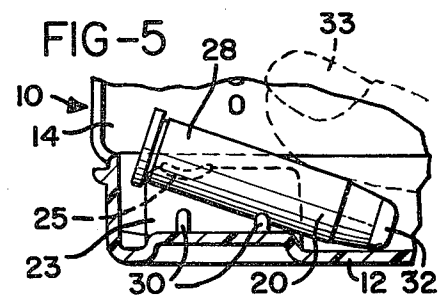


FIG-6

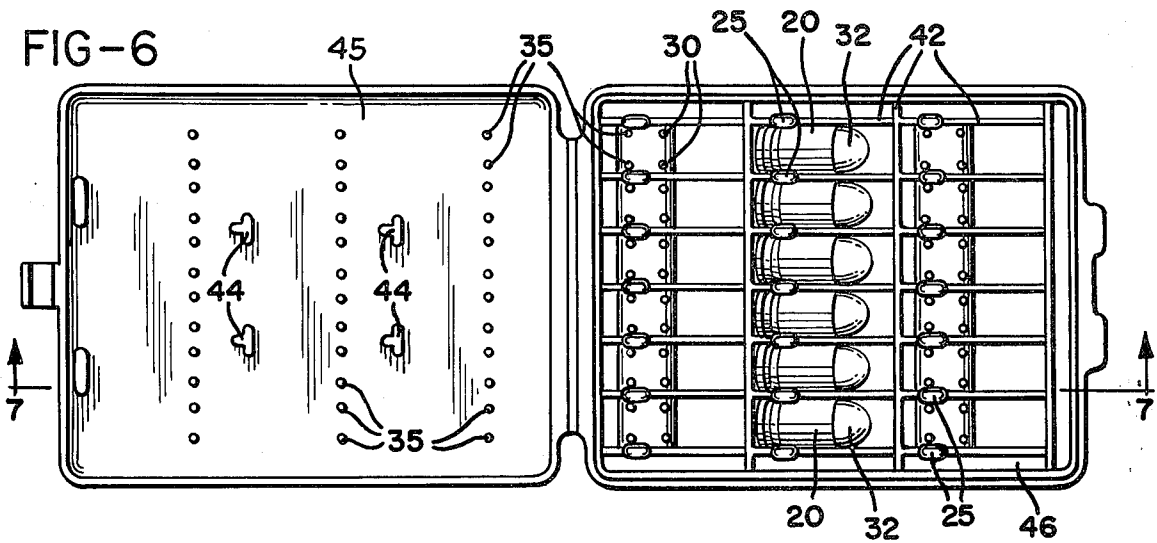


FIG-7

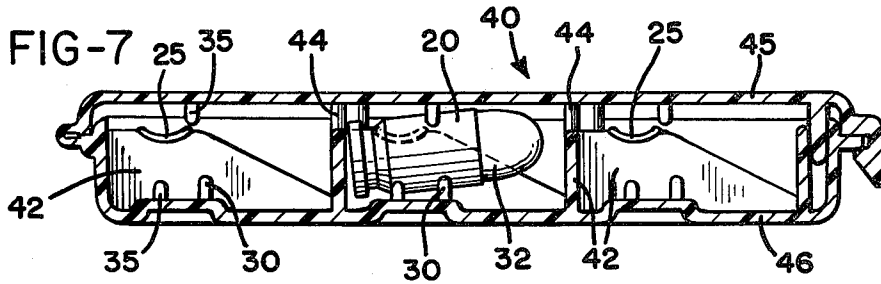


FIG-8

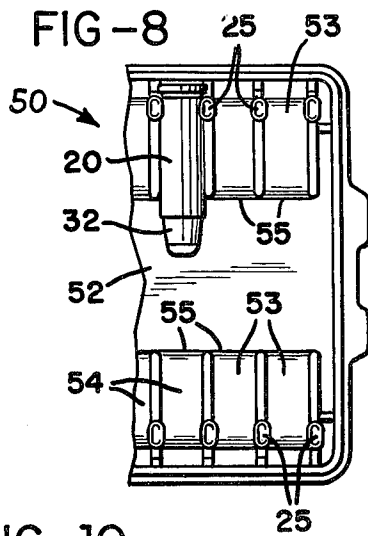


FIG-9

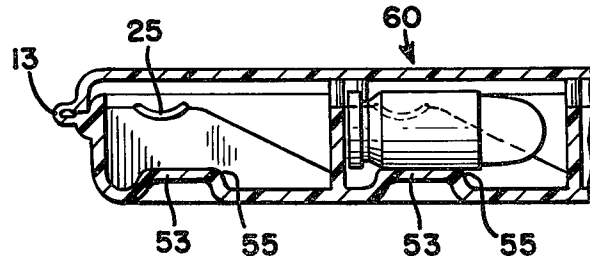


FIG-10

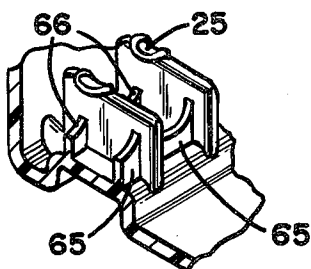
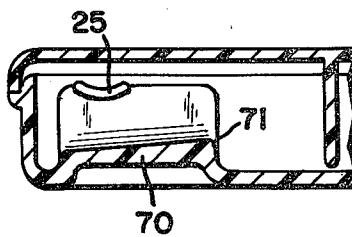


FIG-11



FLAT PACK FOR REVOLVER CARTRIDGES

BACKGROUND OF THE INVENTION

This invention relates to ammunition packs, and more particularly to a flat, pocket sized pack for ammunition cartridges.

The safe transportation of live ammunition has long received careful consideration. On the one hand, it must be protected against damage or premature discharge, yet it should be easily accessible for use. Proposed solutions to this problem include U.S. Pat. Nos. 808,854, 847,833 and 3,593,873.

The marksman does not face the same problems as the hunter, or police and military personnel, since the latter are usually mobile, continuously armed, and carry reserve ammunition. Whereas marksmen often prefer the more bulky type of ammunition carriers (such as illustrated in U.S. Pat. No. D-227,517, assigned to the assignee of the present invention), the policeman rarely carries his ammunition in such fashion. Rather, as is well known, the ammunition is usually carried on a belt, where, if not inconspicuous, it is at least unrestricting and reasonably comfortable. Unfortunately, ammunition carried this way is not as accessible as that carried in bulk.

A need thus exists for a comfortable, inconspicuous and compact ammunition pack with provides immediate and rapid access to the ammunition carried therein.

SUMMARY OF THE INVENTION

Briefly, the present invention provides a flat pack for ammunition cartridges. The pack may be easily slipped into a trousers or shirt pocket, and the cartridges are securely held within the pack, whether open or closed, and in any position. When ammunition is needed the pack may be opened and the cartridges individually and quickly dispensed with but a single hand. The present invention is thus particularly well tailored to the needs of hunters, police, military personnel, and sportsmen in general.

These advantages are provided through a unique fulcrum system which causes each cartridge to be pried loose from under corresponding engaging projections whenever the particular cartridge is pressed downwardly on the end opposite the projections. The engaging projections resiliently accept and hold the cartridges within individual compartments in the ammunition pack. The pack may therefore be held and opened, and the cartridges individually dispensed, all with but a single hand.

It is therefore an object of the present invention to provide a flat pack for ammunition cartridges; a compact pack which may be comfortably carried and which provides rapid and individual access to the ammunition cartridges; which includes fulcrum means for prying individual cartridges loose as needed; in which the cartridges may be actuated against the fulcrum means and released with the same hand which supports the pack; which may accommodate variations in cartridge sizes; and to accomplish the above objects and purposes in an inexpensive, durable, and versatile configuration particularly well suited for carrying ammunition in a convenient and comfortable manner.

Other objects and advantages of the invention will be apparent from the following description, the accompanying drawings and the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of the closed flat pack for ammunition cartridges;

FIG. 2 is a plan view of the FIG. 1 pack with the lid fully opened;

FIG. 3 is a section on line 3—3 of FIG. 2, showing the lid in the closed position and the separator wall partially broken away;

FIG. 4 is a section on line 4—4 of FIG. 2 showing the lid in the closed position;

FIG. 5 is a fragment of the FIG. 4 pack with the lid open, showing a cartridge being released from its compartment;

FIG. 6 is a plan view of a modified version of the flat pack;

FIG. 7 is a section on line 7—7 of FIG. 6 showing the lid in the closed position;

FIG. 8 is a fragmentary plan view of a third embodiment of the flat pack;

FIG. 9 is a fragmentary cross sectional view of a fourth embodiment of the flat pack;

FIG. 10 is a perspective fragmentary view of portions of a fifth embodiment; and

FIG. 11 is a fragmentary cross sectional view of a sixth embodiment of the flat pack.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The flat pack 10 (FIG. 1) of the present invention includes a base 12 connected by a hinge 13 to a lid 14. In the closed position, lid 14 is held against base 12 by latch members 16.

Ammunition cartridges 20 are carried in pack 10 in individual compartments 22 separated by flexible divider walls 23. Divider walls 23 are attached along one edge to base 12 and have projections 25 integrally formed therein on the wall edges opposite base 12. The projections 25 are "integral" since they are each formed from the same single piece of material as the wall to which attached. This is accomplished in the preferred embodiment by applying a heated bar across the walls 23 to melt them to form the projections 25 thereon.

Walls 23 are spaced apart somewhat farther than the diameters of the cartridges 20 in order to accommodate them therein. The projections 25 project over the compartments leaving spacings 26 therebetween somewhat less than the cartridge diameters, so that cartridges placed within the compartments 22 are engaged and held therein by the projections 25. Thus, in order to insert a cartridge 20 into a compartment 22, the cartridge is simply pressed against the engaging and holding projections 25 and the flexible walls and projections yield temporarily to accept the cartridge into the compartment.

The flexible walls 23 and projections 25 similarly yield to release the cartridges 20 individually from the compartments 22. Each cartridge is easily pried loose from the projections 25 by using the fulcrum means provided in the ammunition pack 10. Thus, the projections 25 engage the cartridges near the cartridge bases 28, and a pair of pin means 30 is located intermediate the cartridge base 28 and base 32 to serve as the above-mentioned fulcrum. The fulcrum 30 holds the cartridge nose 32 above the base 12 of pack 10, so that, as illustrated in FIG. 5, the cartridge is released by depressing

the cartridge nose 32 toward base 12 with the finger or thumb 33. Fulcrum pins 30 then pry the cartridge base loose from under the projections 25 by moving the cartridge base 28 between the projections and away from the base 12 of the ammunition pack. Ordinarily, pack 10 may be held in one hand and the thumb of the same hand used for individually releasing the cartridges.

Pack 10 includes a number of flexible fingers 35 in the compartments 22 and on the lid 14 which engage and straddle the cartridges 20 (FIGS. 3 and 4). Fingers 35 serve the dual purpose of accommodating variations in cartridge sizes within pack 10 and preventing the cartridges from rattling and shifting about within the ammunition pack.

Since pack 10 may be carried in the pocket, it includes a separator wall 37 which bridges the space within pack 10 between the base 12 and lid 14 (FIG. 3). Separator wall 37 is integral with lid 14 and serves to reinforce the pack in order to maintain a minimum separation between the lid and base. This protects the pack against crushing of the lid toward the base, so that a person who sits on the pack will not crush it.

FIG. 6 illustrates a second version of the present invention in which the flat pack 40 is essentially the same as pack 10 (FIG. 1) except that the cartridges and compartments face longitudinally rather than transversely. In addition, the divider walls 42 fully surround the cartridge compartments. In this embodiment, the pack 40 is protected against crushing by separating studs 44 which are integral with the lid 45 and directly engage the divider walls 42 (FIG. 7), which are in turn integral with the base 46.

FIG. 8 illustrates another embodiment in which the pack 50 does not include the fulcrum pins 30 or fingers 35 of pack 10. Rather, the base 52 of pack 50 has a raised portion 53 at the bottom of the individual cartridge compartments 54, similarly as in the other embodiments. The raised portion 53 forms a shelf, and the edge 55 of the shelf 53 serves as the fulcrum for prying the cartridges loose from the projections 25. That is, as a cartridge nose 32 is pressed toward base 52, the cartridge will pivot on the shelf edge or fulcrum 55 to pry the cartridge base 28 free from the projections 25.

FIG. 9 illustrates another version wherein a flat pack 60 has cartridges and compartments arrangement similarly as in pack 40 (FIG. 6), but employs a shelf fulcrum such as in pack 50 (FIG. 8).

FIG. 10 illustrates yet another version which includes a pair of walls 65 and 66 forming a saddle for supporting a cartridge within the compartment. The forward wall 65 of the saddle serves as the fulcrum for prying the cartridge loose from the projections 25.

FIG. 11 illustrates still another version using a shelf 70 similar to that in FIGS. 8 and 9. However, shelf 70 is inclined to raise the cartridge nose higher to facilitate removal of the cartridges as they are pivoted about the shelf edge or fulcrum 71.

As may be seen, therefore, the present invention provides numerous advantages. The illustrated versions are all designed for convenient manufacture as a single piece by injection molding, and the integral engaging and holding projections 25 are easily formed in the divider walls by melting them therein as discussed above.

The present invention provides a convenient and compact pack for carrying ammunition. The pack may be easily carried in a pocket where it is neither bulky nor conspicuous. It may be held immediately adjacent

the weapon as it is reloaded, may be entirely managed by one hand, and the cartridges are more easily accessible than when carried in conventional ammunition belts. A variety of cartridge sizes may be accommodated within each compartment, yet each is securely held and protected within. The pack is also reinforced so that it may be safely carried in the pocket without fear of crushing.

While the forms of apparatus herein described constitute preferred embodiments of this invention, it is to be understood that the invention is not limited to these precise forms of apparatus, and that changes may be made therein without departure from the scope of the invention.

What is claimed is:

1. A single piece flat pack for ammunition cartridges, comprising:
 - a. a base,
 - b. a lid,
 - c. integral hinge means attaching said lid and said base,
 - d. thin, laterally flexible and vertically stiff compartment divider walls each attached along one edge to said base and spaced apart somewhat farther than the diameters of the cartridges to form individual compartments for each cartridge,
 - e. engaging and holding projections integral with said walls on the wall edges opposite said base and projecting from said walls over said compartments with spacings somewhat less than the cartridge diameters to overlie and releasably engage individual cartridges to hold the cartridges individually within said base, said flexible walls and projections yielding to accept and release cartridges being inserted into and pried from said compartments, and
 - f. at least one fulcrum on said base for prying individual cartridges loose from said engaging and holding projections whenever a predetermined portion of such a cartridge is pressed toward said base, said fulcrum including means for supporting a cartridge intermediate the ends thereof and cooperating with said projections to hold one end elevated above the other end for rotation about said fulcrum as said one end is pressed toward said base to pry the respective cartridge loose from said engaging and holding means, said engaging and holding projections being sized and spaced to release the cartridges upon being pressed toward said base.
2. The pack of claim 1 wherein said fulcrum comprises pin supports.
3. The pack of claim 1 wherein said fulcrum comprises a shelf.
4. The pack of claim 1 wherein said fulcrum comprises a saddle.
5. A single piece flat pack for ammunition cartridges, comprising:
 - a. a base,
 - b. a lid,
 - c. integral hinge means attaching said lid and said base,
 - d. thin, laterally flexible and vertically stiff compartment divider walls each attached along one edge to said base and spaced apart somewhat farther than the diameters of the cartridges to form individual compartments for each cartridge,
 - e. engaging and holding projections integral with said walls on the wall edges opposite said base and pro-

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- jecting from said walls over said compartments with spacings somewhat less than the cartridge diameters to overlie and releasably engage individual cartridges to hold the cartridges individually within said base, said flexible walls and projections yielding to accept and release cartridges being inserted into and pried from said compartments,
- f. at least one fulcrum on said base for prying individual cartridges loose from said engaging and holding projections whenever a predetermined portion of such a cartridge is pressed toward said base, said engaging and holding projections being sized and spaced to release the cartridges upon being pressed toward said base, and
- g. flexible fingers extending upwardly from and integral with said base for engaging the cartridges to accommodate variations in cartridge sizes within said pack and to prevent the cartridges from shifting about within said pack.
6. The pack of claim 1 further comprising integral flexible fingers extending downwardly from said lid for engaging the cartridges to accommodate variations in cartridge sizes within said pack and to prevent the cartridges from shifting about within said pack.
7. A unitary flat pack for ammunition cartridges comprising:
- a base,
 - a lid,
 - integral hinge means attaching said lid and said base,
 - integral separator means engageable between said lid and said base to bridge the space therebetween in order to maintain the separation between said lid and said base to reinforce said pack against inward

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- crushing of said lid and base,
- e. thin, laterally flexible and vertically stiff compartment divider walls each attached along one edge to said base and spaced apart somewhat farther than the diameters of the ammunition cartridges to form individual compartments for each cartridge,
- f. engaging and holding projections integral with said walls on the wall edges opposite said base and projecting from said walls over said compartments with openings somewhat less than the cartridge diameters to overlie and releasably engage individual cartridges to hold the cartridges individually within said compartments, said flexible walls and projections yielding to accept and release cartridges being inserted into and pried from said compartments,
- g. integral flexible fingers extending upwardly from said base and downwardly from said lid for engaging the cartridges to accommodate variations in cartridge sizes within said pack and to prevent the cartridges from shifting about within said pack, and
- h. means defining a fulcrum on said base for supporting a cartridge intermediate the ends thereof and cooperating with said projections to hold one end of the cartridge above the other end for rotation about said fulcrum means as said one end is pressed toward said base to pry the respective cartridge loose from said engaging and holding projections by moving said cartridge between said projections and away from said base, said engaging and holding projections being sized and spaced to release the cartridges upon being pressed toward said base.

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