United States Patent [19]

Minneman

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[54] **LOADING BLOCK**

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[52] **U.S. Cl.** **86/44,** 206/3, 224/20

[51] **Int. Cl.** **F42b 5/30,** F42b 9/30

[58] **Field of Search** ..... 86/44; 206/3, 17; 211/60 A, 60 T; 217/25.5; 224/20; 269/37

[56] **References Cited**

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Attorney, Agent, or Firm—Biebel, French & Bugg

[57] **ABSTRACT**

A loading block for ammunition cases has a plurality of variously sized chambers on both sides thereof for holding ammunition cases during filling. Each chamber has a shelf therein enabling it to accommodate at least two different case sizes.

10 Claims, 6 Drawing Figures

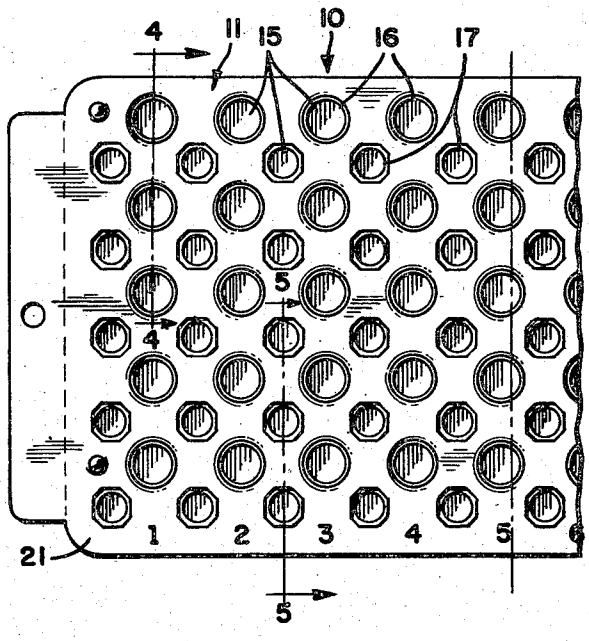


FIG-1

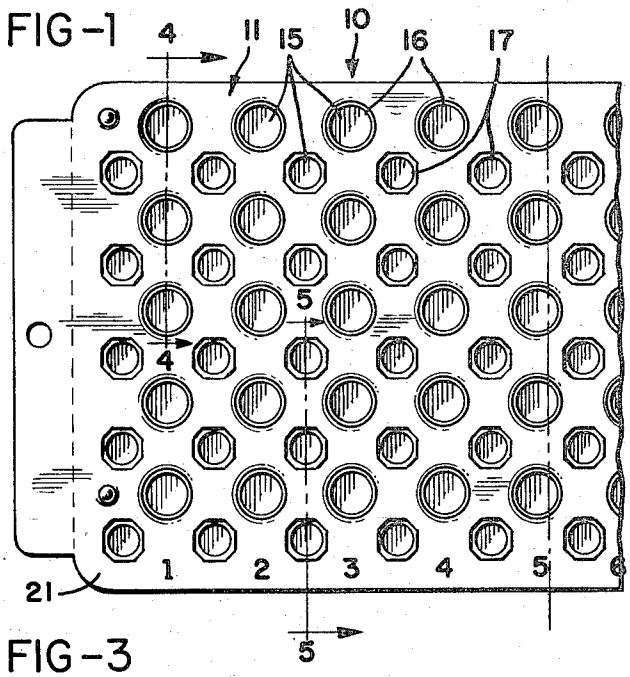


FIG-2

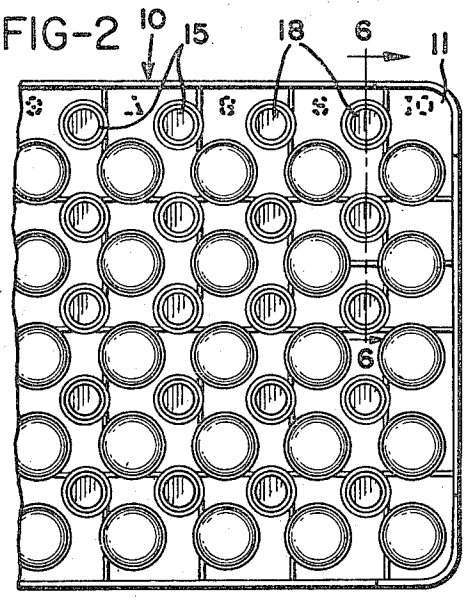


FIG-3

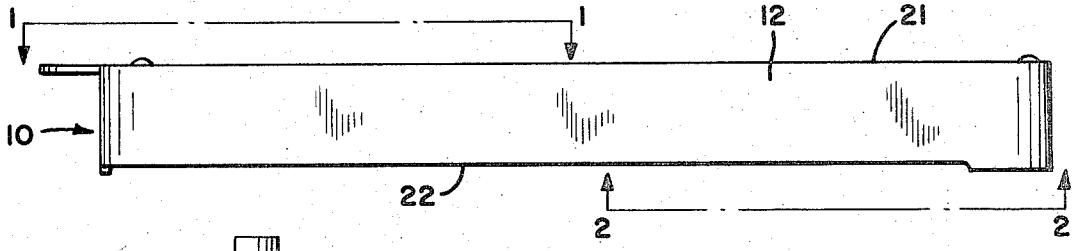


FIG-4

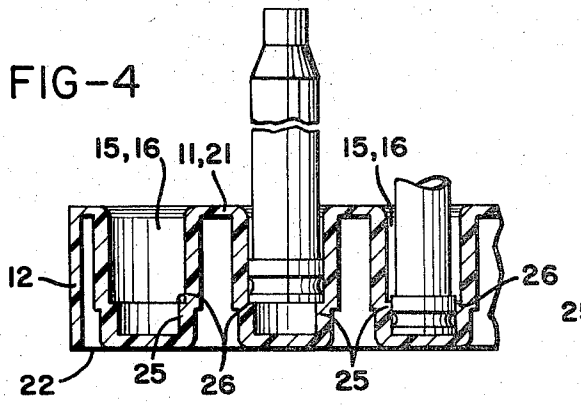


FIG-5

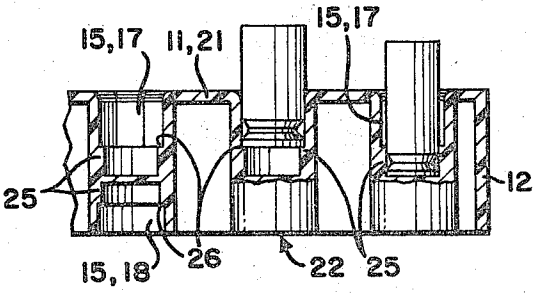
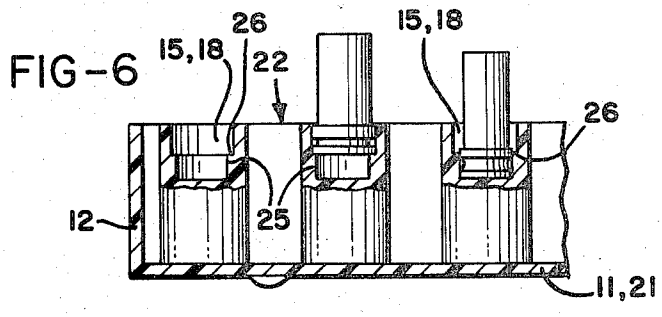


FIG-6



LOADING BLOCK

BACKGROUND OF THE INVENTION

This invention relates to loading blocks, and more particularly to a universal loading block adapted for holding large quantities of ammunition cases of a wide variety of sizes for the filling thereof with powder. The block holds the cases upright and prevents them from wobbling while they are being filled.

In the refilling of spent ammunition cartridges, or cases, it is customary first to replace the primer and to re-size the neck of the case, and then to fill the case with a measured amount of powder. In order to facilitate filling the case, the case is usually placed in a holder which maintains it in a convenient, upright position. The holder customarily accommodates a large quantity of cases of a given size, to expedite the filling process.

Where several different cartridge sizes are to be filled, it is generally necessary to have a loading block adapted to each particular size. This is not only unnecessarily costly but is also bulky and often quite unwieldy.

Alternatively, where there is not a great difference among the case sizes being handled, it is possible to choose one or a few loading blocks appropriate to a certain range of sizes. However, the smaller cases within each range are then free to wobble within the blocks, making such a system equally cumbersome.

SUMMARY OF THE INVENTION

It is therefore an object of this invention to provide a loading block which can accommodate a wide variety of case sizes; a loading block which will closely engage each case to prevent wobbling thereof regardless of the case size; a loading block which is compact and convenient in size and use but which also has high capacity; and to accomplish the above in an inexpensive, uncomplicated, durable, easily fabricated, and high useful configuration.

Briefly, a preferred embodiment of this invention includes a frame having a plurality of chambers attached thereto. The chambers are of three different sizes and are arranged in rows. The rows of the largest chambers alternate in interfitting relation with those of the smallest, for overall compactness of the block. The intermediate size chambers are located on the opposite side of the block and are attached to the bottoms of the smallest chambers. The intermediate size chambers thus fit into the spaces left by the small chambers on the opposite side of the block, in between the bases of the large size chambers.

Inside each chamber and at the base thereof is a wall, called the shelf wall, which extends part way up into the chamber. The wall reduces the diameter of the chamber at the base, and the top of the wall forms a shelf. A shell of one size may thus be inserted all the way to the base of a chamber. A shell of a slightly larger size will rest upon the shelf. The smaller shell will then be prevented by the shelf wall from wobbling. The upper chamber walls will similarly hold the larger shell.

Thus a total of six different shell diameters can be accommodated by this invention, either of two sizes in each chamber. The chambers interfit for maximum compactness, and the sizes thereof are such that ample depth is provided to prevent the cases from wobbling.

Also, since the graduation from size to size within and among the various chambers is small, other intermediately sized cases can also be accommodated with a minimum of wobbling.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a top view of a portion of the loading block of this invention, taken generally in the direction of arrows 1—1 in FIG. 3;

FIG. 2 is a bottom view of a portion of the loading block of FIG. 1, looking generally in the direction of arrows of 2—2 in FIG. 3;

FIG. 3 is a side view of the loading block of FIG. 1;

FIG. 4 is a cross-sectional view of the FIG. 1 device taken along line 4—4 thereof;

FIG. 5 is a cross-sectional view of the FIG. 1 device taken generally along line 5—5 thereof; and

FIG. 6 is a cross-sectional view of the FIG. 1 device taken generally along line 6—6 of FIG. 2.

DESCRIPTION OF THE PREFERRED EMBODIMENT

With reference to the drawings, and more particularly to FIG. 1, there is illustrated the loading block 10 of this invention. Loading block 10 includes a frame 11 which is supported by frame walls 12.

A plurality of chambers 15 is attached in frame 11 and opens in a direction away from one side or the other thereof. The chambers 15 are of three different sizes, large chambers 16, small chambers 17, and intermediate chambers 18. Chambers 16 and 17 open through and in a direction away from the top side 21 of loading block 10; intermediate chambers 18 open away from the bottom 22 thereof.

Large chambers 16 are arranged in rows, five chambers in each row. Similarly, small chambers 17 are arranged in rows which interfit with and alternate with the rows of chambers 16. This arrangement provides for maximum density of the chambers and minimizes the waste of space in the loading block.

Intermediate size chambers 18 are attached to the bottoms of small chambers 17, as may be seen in FIGS. 2 and 5. The large size chambers 16 extend all the way from the top 21 to the bottom 22 of block 10 (FIG. 4), but the combined depths of the small and intermediate chambers 17 and 18 are such that they may be disposed oppositely from one another in this same distance (FIG. 5). The arrangement of chambers 17 and 18 thus further enhances the compactness and utility of this invention, making maximum use of the space available therein.

Adjacent the bottom of each chamber 15 is a shelf wall 25. Shelf walls 25 are walls of limited thickness around the walls of each chamber 15, and serve to narrow the effective size or diameter of each chamber in the vicinity thereof. On top of each shelf wall, on the end opposite the bottom of the chamber, is a ledge or shelf 26.

As may be seen, therefore, this invention provides numerous advantages. For example, each chamber is able to accommodate an ammunition case of either of at least two different sizes. For a case having a diameter no larger than that in the base of the chamber within shelf wall 25, the case rests upon the base of the particular chamber 15 and is prevented from wobbling therein by contact with shelf wall 25. On the other

hand, a case of slightly larger size will rest upon shelf **26** and will be prevented from wobbling by contact with the upper portions of the wall of the chamber itself. Since three different chambers are provided, a total of six sizes of case may be received for exact fit, and these sizes are chosen for the six most commonly encountered cases. Where other sizes appear, the graduations among the six sizes are sufficiently small that such in between sizes may easily be accommodated with a minimum of wobble.

In addition to supporting and holding the ammunition cases for loading, this invention is also useful, for example, in holding the cases in an inverted, neck down, position for cleaning and inspecting the primer pockets.

The arrangement of the chambers within the loading block provides for maximum density therein with very little waste of volume or space. The small and medium size chambers are arranged with the large size chambers in interfitting rows for maximum packing density. Similarly, the small and medium chambers are opposite each other, making maximum use of the available space.

Each chamber thus does "double duty." In fact, the volume occupied by the small and intermediate size chambers actually does "quadruple duty," since any of four different sizes may be accommodated in the space required by earlier devices to accommodate but one size. At the same time, the loading block of this invention is no larger than typical loading devices which can handle only a single size shell. Yet this invention replaces six or more of them. Furthermore, the loading block of this invention is uncomplicated and easy and inexpensive to fabricate. At the same time, it is rugged and durable, thereby further enhancing its utility.

While the form of apparatus herein described constitutes a preferred embodiment of this invention, it is to be understood that the invention is not limited to this precise form of apparatus and that changes may be made therein without departing from the scope of the invention which is defined in the appended claim.

What is claimed is:

1. A loading block for ammunition cases comprising:

a. a frame,
b. a plurality of chambers in said frame,
c. a shelf wall inside the lower portion of each chamber wall to narrow the effective size of each said chamber in the vicinity thereof and to support a case therein for filling, and
d. a shelf on the top of each said shelf wall for supporting a larger case thereon within the upper portions of each said chamber to enable each of said chambers to accommodate a case of either of at least two different sizes, for the filling thereof.

2. The loading block of claim **1** wherein a portion of said chambers opens from one side of said frame and a portion from another side.

3. The loading block of claim **1** further comprising a plurality of larger chambers and a plurality of smaller chambers, to enable the loading block to accommodate cases of any of at least four different sizes, for the filling thereof.

4. The loading block of claim **3** wherein said chambers are arranged in interfitting rows of alternate sizes for maximum density thereof.

5. The loading block of claim **3** wherein a portion of said chambers opens from one side of said frame and a portion from another side.

6. The loading block of claim **3** further comprising a plurality of chambers of at least one additional size to enable the loading block to accommodate cases of additional sizes, for the filling thereof.

7. The loading block of claim **6** wherein a portion of said chambers opens from one side of said frame and a portion from another side.

8. The loading block of claim **6** wherein chambers of at least two different sizes are arranged in interfitting rows of alternate sizes for maximum density thereof.

9. The loading block of claim **6** wherein each of said chambers opening from said one side of said frame is mounted opposite a chamber opening from the opposite side of said frame.

10. A loading block for ammunition cases comprising:

a. a frame,
b. a plurality of chambers of a large size arranged in rows in said frame and opening from one side thereof,
c. a plurality of chambers of a small size arranged in rows in said frame and also opening from said one side thereof, said rows being between and in interfitting relation with said rows of large size for maximum density thereof,
d. a plurality of chambers of intermediate size each attached one each to the bottoms of said small chambers and opening oppositely from the openings in said small chambers,
e. a shelf wall inside the lower portion of each chamber wall to narrow the effective size of each said chamber in the vicinity thereof and to support a case therein for filling, and
f. a shelf on the top of each said shelf wall for supporting a larger case thereon within the upper portions of each said chamber to enable each of said chambers to accommodate a case of either of at least two different sizes, and to enable the loading block to accommodate cases of any of at least six different sizes, for the filling thereof.

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