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SHOT SHELL DISPENSER

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This invention relates to a dispenser for shot shells or the like which is comparatively simple and inexpensive and which facilitates the dispensing of one shot shell at a time, thereby facilitating gun loading operations of trap shooters and hunters.

One object of the invention is to provide a dispenser which will hold as many as twenty-five shells in a compact space and dispense them one at a time as required, and which will also receive the empty shells.

Another object is to provide a dispenser of the character referred to having an escapement means adjacent the lower end thereof which can be manually actuated to dispense one shell at a time in such manner that the shell drops into the shooter's hand as he actuates the escapement means.

A further object is to provide a dispenser which can be opened in such manner that the shot shells can be laid in position therein, and can be then closed whereupon the shells will be arranged automatically in a stacked position for gravity feed from the lower end of the stack when the dispenser is properly supported as by being hung on the belt of the shooter.

Still a further object is to provide a dispenser comprising a pair of channel-shaped elements to receive the shells when open, and a partition, the channel-shaped elements being hinged together and the partition being hinged to one of them so that all three can be folded over with the partition between the channels to separate the two stacks of shells for proper alternate dispensing from the channels when the escapement mechanism is subsequently operated.

An additional object is to provide the channels with a detent means that permits reception of the empty shot shells to both dispose of the empties and provide for proper feed of the remaining shot shells, the detent means coacting with the empty shells to prevent undesirable dislocation thereof from the dispenser.

Another additional object is to provide a dispenser inexpensively formed of plastic material such as polypropylene wherein parts thereof are hinged together by thinned-down sections of the plastic material, and the parts are so designed that the partition is properly held in position between two stacks of shot shells, the housing for the shells being formed with a coacting detent means to hold the dispenser in closed position after it is filled.

With these and other objects in view, my invention consists in the construction, arrangement and combination of the various parts of my shot shell dispenser, whereby the objects above contemplated are attained, as hereinafter more fully set forth, pointed out in my claims and illustrated in detail on the accompanying drawing where-

FIG. 1 is a perspective view of a shot shell dispenser embodying my invention and showing it opened and filled with shot shells;

FIG. 2 is a perspective view thereof in the closed position;

FIG. 3 is a vertical sectional view on the line 3-3 of FIG. 2;

FIG. 4 is a horizontal sectional view on the line 4-4 of FIG. 2 showing the open position by means of dotted lines;

FIGS. 5 and 6 are enlarged portions of FIG. 4 showing the hinging means for the dispenser housing in open posi-

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tion, and by means of dotted lines in closed position, and FIGS. 7 and 8 are enlargements of the lower end of FIG. 3 showing the escapement action for dispensing shells from the housing.

On the accompanying drawing I have used the reference numeral 10 to indicate a first channel-shaped element and 12 a second channel-shaped element. These two elements form a dispenser housing, and a third element 14 forms a partition between two stacks of shot shells in the housing.

FIG. 1 shows the housing open and the two channels, 10 and 12, filled with shot shells 15. The housing is adapted to be closed as in FIG. 2 whereupon the two stacks of shot shells 15 appear as in the sectional view FIG. 3. The channel-shaped elements are provided with curved lower ends 16 to construct the outlet as required for an escapement gate 18 and an escapement lever 20 which form a T-shaped section of the partition 14 as will hereinafter appear.

Referring to FIG. 1 the escapement gate 18 is arranged in a gate clearance opening 21 of the partition 14 and a portion of the escapement lever 20 is formed by slots 19 which terminate at hinge means 30 for the escapement mechanism 18-20. The housing 10-12-14 may be molded of a suitable plastic material such as polypropylene and the hinge means 30 formed by thinned-down sections of the partition 14. A proper operating "living hinge" is provided by flexing the thinned-down section immediately after molding. Similar thinned-down sections 24 and 26 are provided between the channel-shaped element 12 and the partition 14, and between the two channel-shaped elements 10 and 12 for providing hinges longitudinally of the housing for permitting it to be closed and opened as shown, for instance, in FIG. 4, the open position being shown by dotted lines. FIGS. 5 and 6 further illustrate the thinned-down sections 24 and 26 forming the hinge means.

The hinge means 24 is of a suitable cross section to form a groove 27 to receive the free edge of the partition 14, and the hinge means 26 is so formed that a detent 28 extending longitudinally of the free edge of the first channel-shaped element 10 and coacting with the hinge 24 serves as a means to hold the dispenser in closed position.

For the convenience of the user of my shot shell dispenser, it is provided with a belt clip 34 shown in FIG. 3 whereby the dispenser may be suspended from his belt in a suitable position to facilitate removal of shot shells 15 therefrom.

The partition 14 is provided with an empty shell detent 22 which has a blade 23 connecting it to the partition. Slots 25 permit bending along a line indicated 32 which, however, is not a hinge as at 24-26-30. Accordingly, the blade 23 and the detent 22 have sufficient stiffness to retain empty shot shells in position against accidental dislodgement from the dispenser, yet the detent permits insertion thereof by slight bending of the blade 23. The empty shot shells provide weight on the undispensed shells to properly dispense them and serve to keep the shells against being jostled out of alignment by movements of the shooter. The detent thereby insures proper dispensation of loaded shot shells until all have been used.

Practical operation

In the operation of my shot shell dispenser, after it is filled as shown in FIG. 1 and closed as shown in FIGS. 2 and 3, the shells 15 may be dispensed one at a time by the dispensing means 18-20. When both channels 10 and 12 are filled as in FIG. 1 the shells will assume the stacked positions shown in FIG. 3 and by swinging the escapement lever 20 toward the left from the position shown action will take place as shown in FIG. 7, the

left side of the escapement gate 18 holding both stacks in position while dispensing the particular shot shell indicated at 15^a. FIG. 7 shows the lever swung about half way and FIG. 8 shows it swung all the way. In FIG. 7 the right-hand curved lower end 16 of the channel-shaped element 10 is holding the shell 15^a against falling out. Further movement of the escapement mechanism, however, to the position of FIG. 8 permits the shell to fall out as indicated at 15^b and into the hand of the shooter as he manipulates the escapement mechanism. At the same time, the gate 18 is so displaced toward the right that the lowermost shot shell 15^c in the channel-shaped element 12 will assume the position illustrated and be ready for dispensation.

The next dispensing operation consists of swinging the escapement means 18-20 back to the original position of FIG. 3 which dispenses the shot shell 15^c in the same manner that the shot shell 15^b was dispensed.

As the shooter removes empty shot shells from his gun he replaces them in the dispenser by merely inserting them into the top thereof and they are retained by the detent 22.

A dispenser of the character disclosed permits easy and proper filling when in the open position (FIG. 1) as distinguished from those types of dispensers in which the shells are dropped from the top end into channels. The simple arrangement of two stacks of shells and escapement mechanism provide an easily operated arrangement for dispensing the shot shells right into the hand of the shooter. The channel-shaped elements 10 and 12 are provided with offset portions 36 to accommodate the rims of the shot shells which are loaded with the rims 17 opposite each other as shown in FIG. 1 or with the rims toward each other depending on whether the shooter is right-handed or left-handed. When the dispenser is closed both stacks of shells point in the same direction.

The construction of the dispenser is such that it is readily adaptable to plastic molding techniques and can thereby be formed all in one piece without the necessity of hinging or otherwise attaching separate pieces together. Accordingly, the dispenser is comparatively inexpensive to produce and is relatively light in weight.

Some changes may be made in the construction and arrangement of the parts of my shot shell dispenser without departing from the real spirit and purpose of my invention, and it is my intention to cover by my claims any modified forms of structure or use of mechanical equivalents which may reasonably be included within their scope.

I claim as my invention:

1. In a dispenser of the character disclosed, a vertically elongated housing having a pair of channels therein each adapted to receive a stack of shot shells or the like, said channels being side-by-side, a partition between them, and escapement means at the lower end of said channels adapted to release shot shells alternately from said channels upon successive oscillations thereof, said partition and said escapement means being formed of plastic material and being integral with each other, said escapement means being hingedly related to said parti-

tion by means of a thinned-down section of said plastic material.

2. A shot shell dispenser according to claim 1 wherein the upper ends of said channels are open to receive empty shot shells, and detent means is provided to permit of such reception, said detent means being in the form of a flexible detent blade integral with said partition and an enlargement along the outer margin of said blade.

3. In a dispenser of the character disclosed, a vertically elongated housing having a pair of channels therein, each adapted to receive a stack of shot shells or the like, said channels being side-by-side, escapement means at the lower end of said channels adapted to release shot shells alternately from said channels upon successive oscillations thereof, said channels being channel-shaped elements hinged together along the length thereof to permit opening of the dispenser and to facilitate loading of said channels with shot shells, and a partition hinged to one of said channel-shaped elements along the free edge thereof to assume a position between the two channel-shaped elements when the dispenser is closed.

4. A shot shell dispenser according to claim 3 wherein said channel-shaped elements and said partition are formed of plastic material and the hinge means comprise thinned-down sections thereof.

5. A shot shell dispenser according to claim 3 wherein said channel-shaped elements are formed adjacent the hinge between them with a groove to receive the free edge of said partition when the dispenser is closed.

6. A shot shell dispenser according to claim 3 wherein the free edges of said channel-shaped elements are formed with coating detent means to hold the dispenser in closed position.

7. In a dispenser of the character disclosed, a vertically elongated housing having a pair of channels therein, each adapted to receive a stack of shot shells or the like, said channels being side-by-side, escapement means at the lower end of said channels adapted to release shot shells alternately from said channels upon successive oscillations thereof, a partition between said channels, the free edges of said channel-shaped elements being formed with coating detent means to hold the dispenser in closed position.

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