

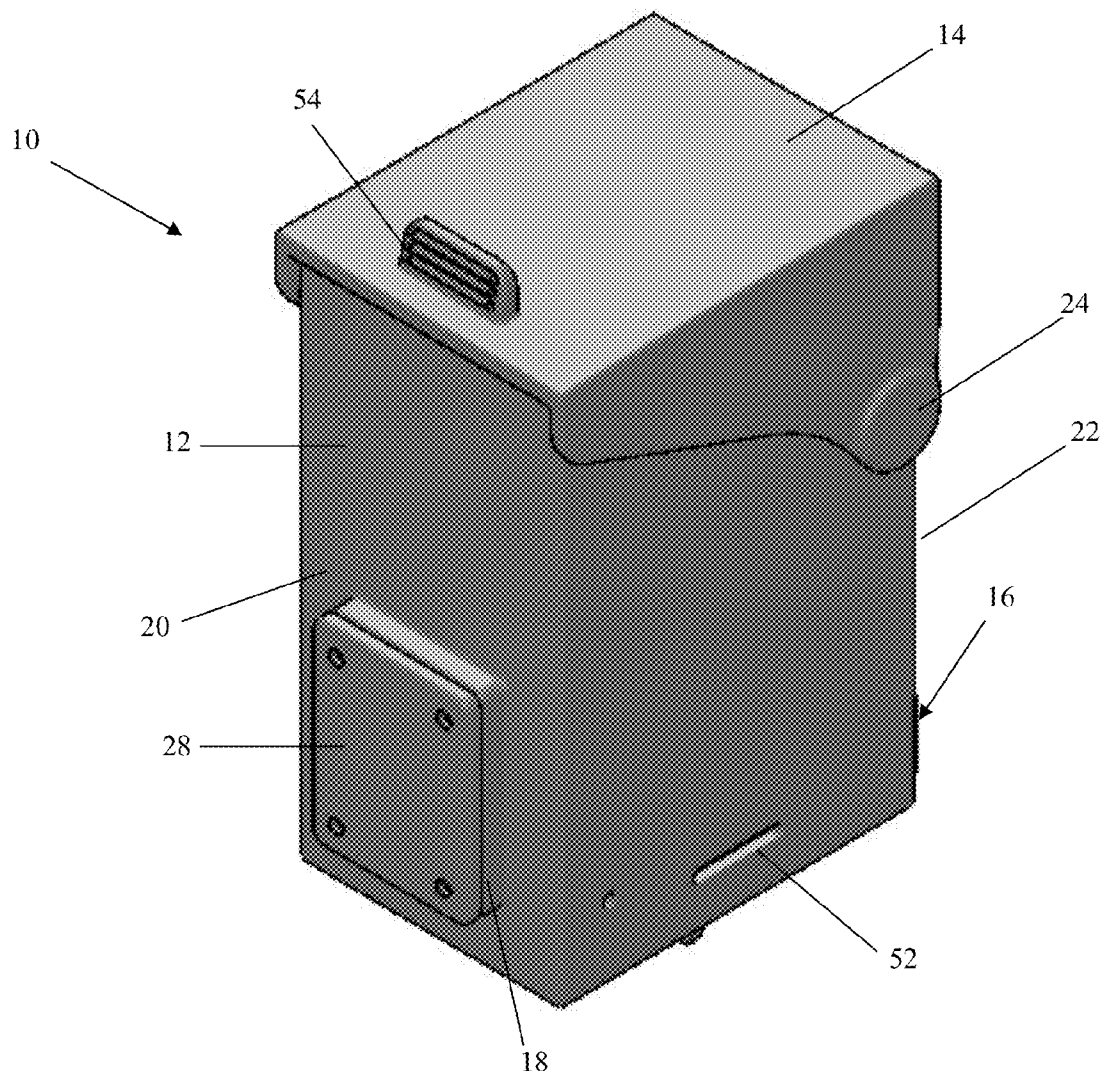


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Wid(10) **Pub. No.: US 2014/0158705 A1**(43) **Pub. Date: Jun. 12, 2014**(54) **SHOTGUN SHELL DISPENSER****Publication Classification**(71) Applicant: **Carl Mark Wid**, Lincoln, NE (US)(51) **Int. Cl.**
F42B 39/00 (2006.01)(72) Inventor: **Carl Mark Wid**, Lincoln, NE (US)(52) **U.S. Cl.**
CPC **F42B 39/002** (2013.01)
USPC **221/268**(21) Appl. No.: **14/074,411**(57) **ABSTRACT**(22) Filed: **Nov. 7, 2013****Related U.S. Application Data**

(60) Provisional application No. 61/723,437, filed on Nov. 7, 2012.

A shotgun shell dispenser is disclosed including a main body having at least a front, a back, and a bottom, the bottom having an opening. An interior blocking portion which, with the interior of the main body, at least partially defines an opening is provided. A dispensing tray is also provided having an opening configured to receive and dispense a shotgun shell, the tray configured to slide inwardly from a lower portion of the front.



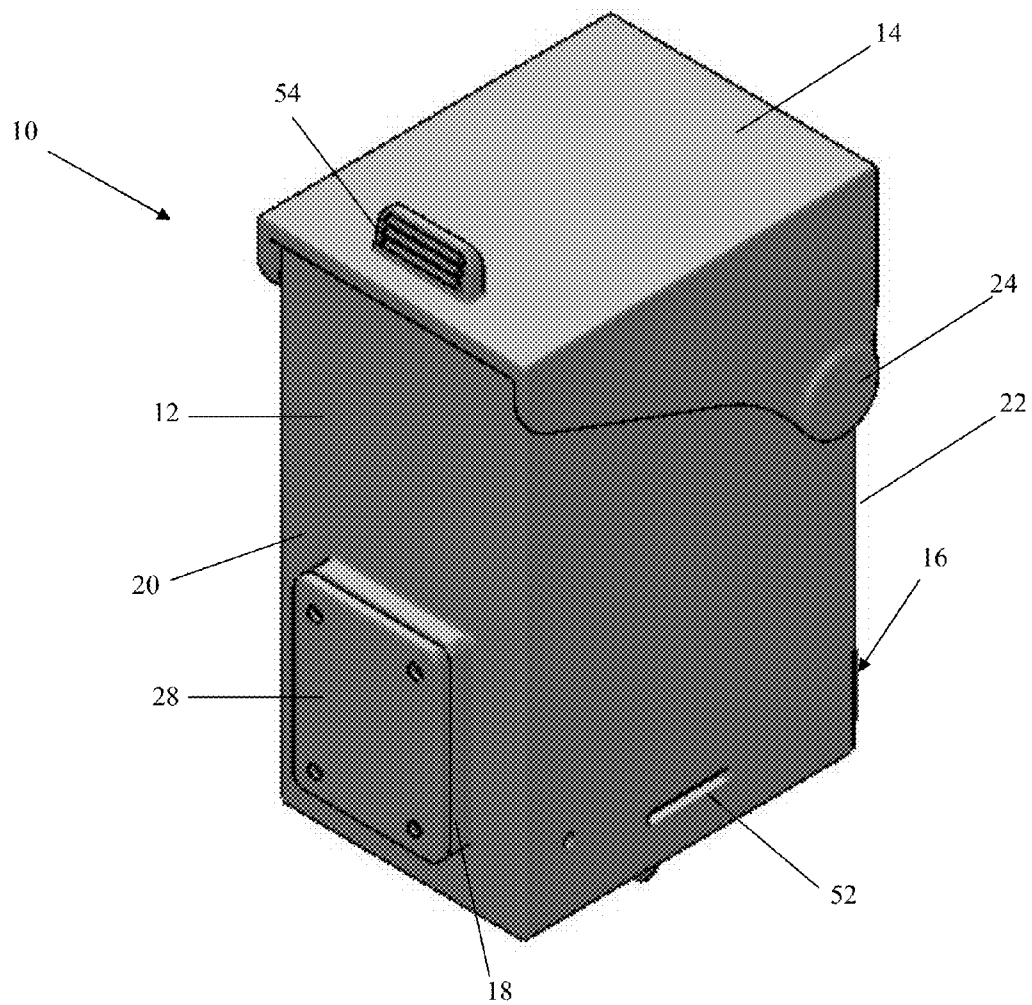


FIG. 1

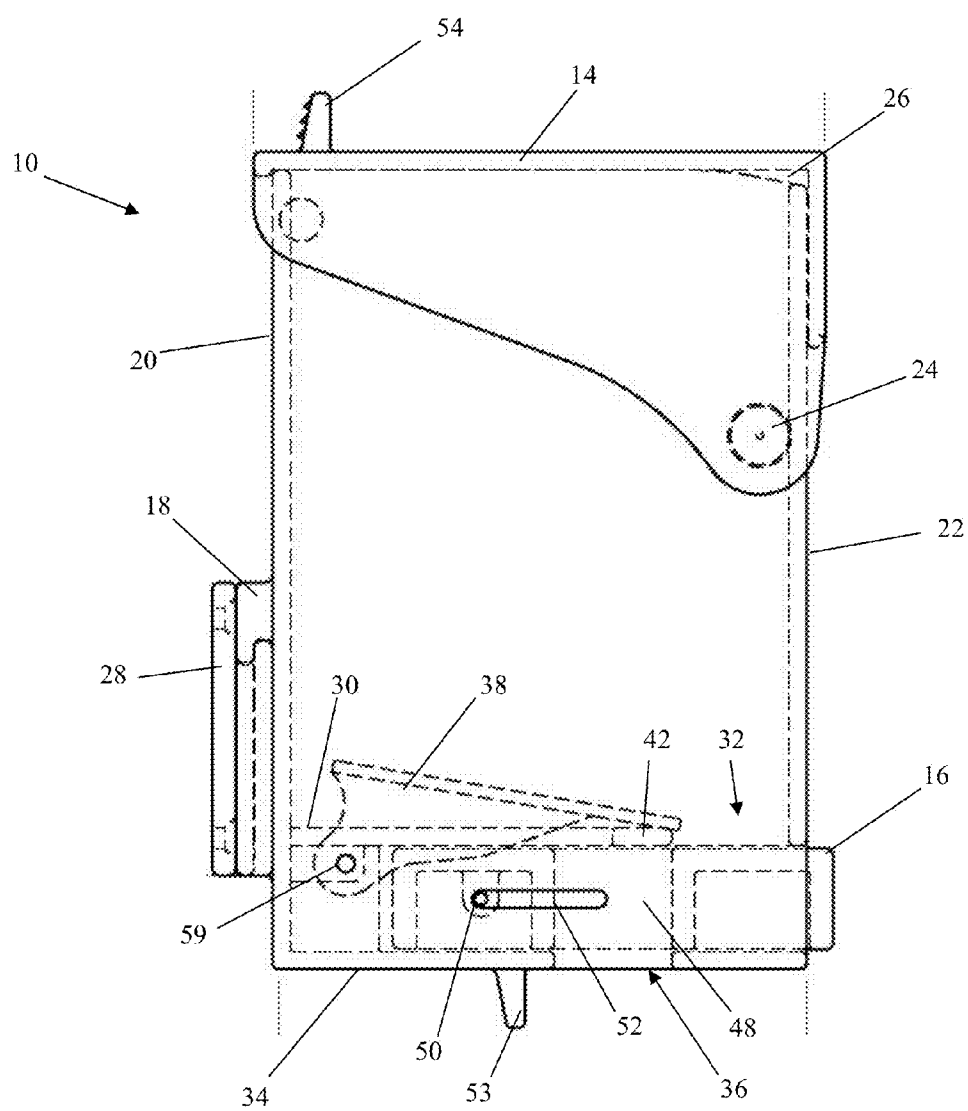


FIG. 2

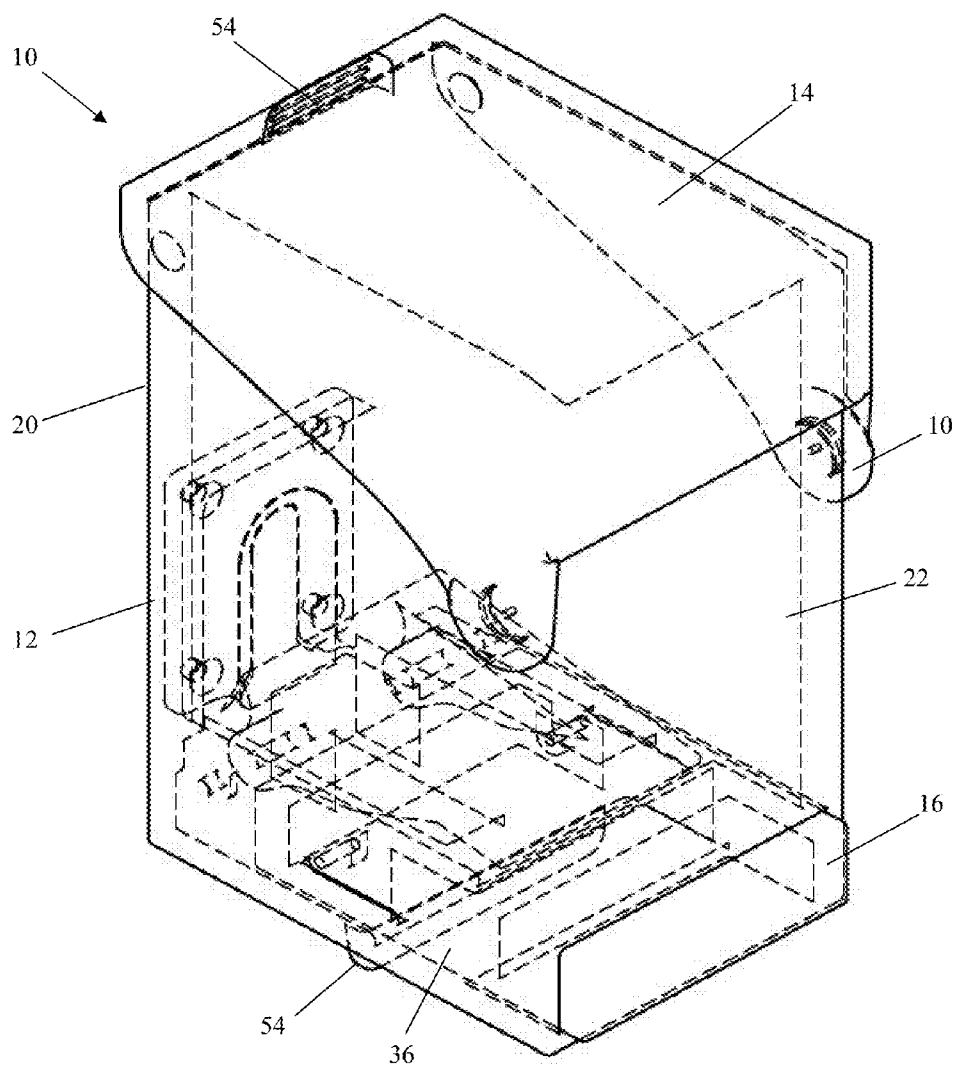


FIG. 3

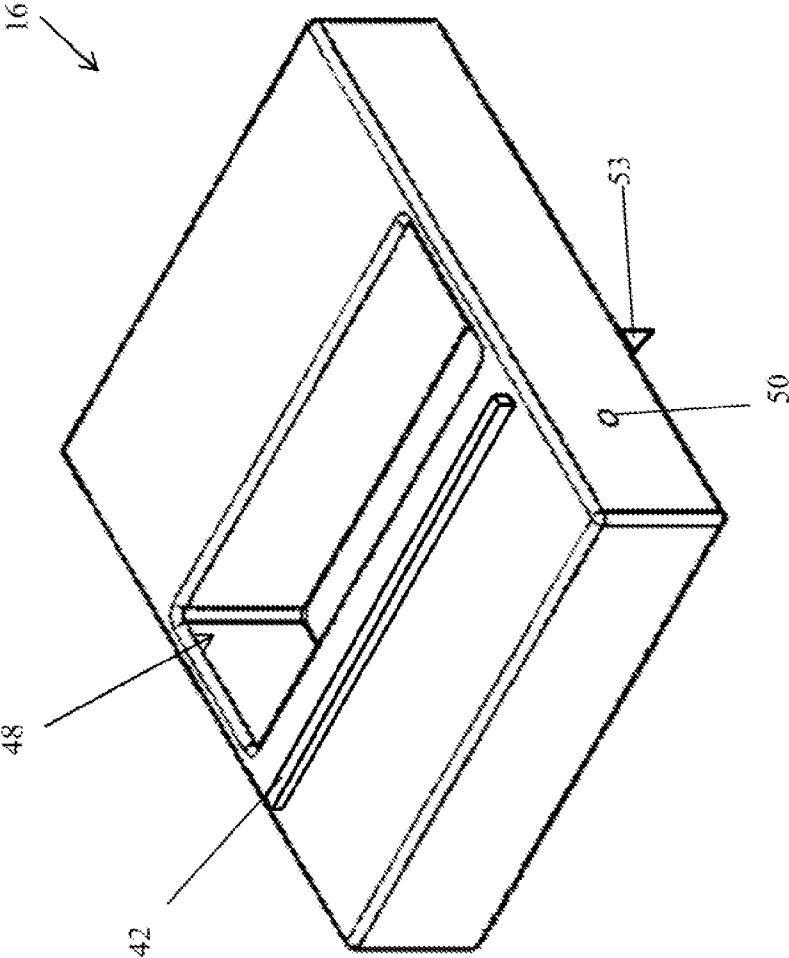


FIG. 4

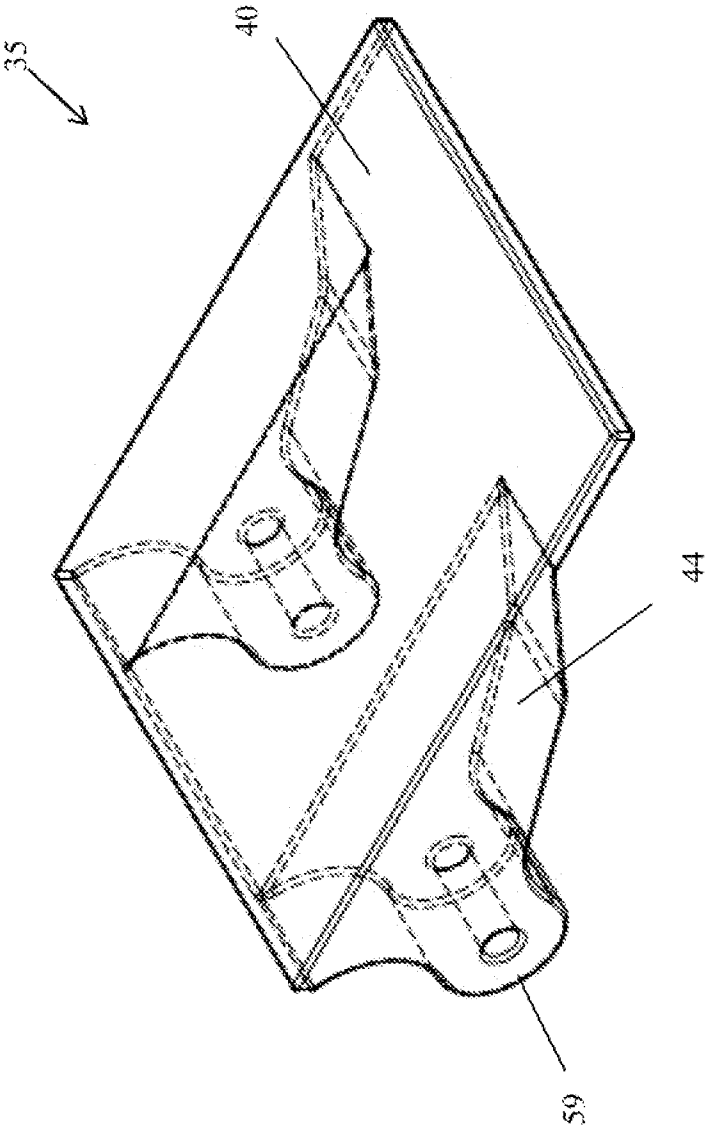


FIG. 5

SHOTGUN SHELL DISPENSER

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims priority pursuant to 35 U.S.C. 119(e) to co-pending U.S. Provisional Patent Application Ser. No. 61/723,437, filed Nov. 7, 2012, the entire disclosures of which are incorporated herein by reference.

BACKGROUND

[0002] Shotgun shells are relatively heavy compared to other types of ammunition such as rifle and handgun ammunition. Accordingly, when involved in an activity, such as sporting clays or skeet shooting, that requires a large number of shells, shooters may have to carry a heavy load of ammunition. Shooters will often use shell carriers that are large dump-type pouches on a belt, put the required shells in a shooting bag, or other carrier.

[0003] One drawback of these methods and devices is that the shooter must carry the amount of ammunition needed for a shooting event on their person, or in another carrier which prevents the shooter from using both hands to carry their shotgun from station to station. Using both hands to carry the shotgun is safer than using a single hand. Carrying the ammunition in a dump pouch can place an awkward load on the shooter's waist and contribute to fatigue as the user walks a course of skeet or shooting clay stations.

[0004] Also, when hunting, and in particular when hunting migratory birds, magazine restrictions often require hunter to be limited to a total capacity of three shells in their shotguns. Hunters can often expend these three shells quickly when a large flock of waterfowl is in range, but the time to reload often prevents a fourth or more shots.

[0005] Shells may be held in boxes near the hunters, placed in pockets, or otherwise kept near-at-hand. However, such methods of keeping additional ammunition ready for use are time consuming and often take too long to be effective.

[0006] Accordingly, there is a need for a system to allow storage and dispensing of shotgun shells at a shooting station so that a shooter need not carry a large number of shells from station to station.

SUMMARY

[0007] Some embodiments relate to a shotgun shell dispenser including a main body having at least a front, a back, and a bottom, the bottom having an opening. An interior blocking portion which, with the interior of the main body, at least partially defines an opening is provided. A dispensing tray is also provided having an opening configured to receive and dispense an shotgun shell, the tray configured to slide inwardly from a lower portion of the front.

[0008] Other embodiments relate to a shotgun shell dispenser including a main body having at least a front, a back, a right side, a left side, an open top, and a bottom having an opening therein between the front and the back. A lid is pivotally coupled to the main body, the lid having a plurality of portions downwardly extending about an exterior of the main body. A floor is positioned within the main body above the bottom, the floor in combination with the interior of the main body, at least partially defining an opening positioned proximate to the front of the main body. An agitator is disposed within the main body and coupled to the interior of the main body and a dispensing tray having an opening config-

ured to receive and dispense an shotgun shell is provided. The tray has at least one projection configured to mate with a slot in either the right side or the left side of the main body allowing the dispensing tray to slide inwardly from a lower portion of the front side.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] FIG. 1 is a perspective view of a shotgun shell dispenser.

[0010] FIG. 2 is a side elevation view of the shotgun shell dispenser of FIG. 1 in partial relief.

[0011] FIG. 3 is a front-side elevation view of the shotgun shell dispenser of FIG. 1 in partial relief.

[0012] FIG. 4 is a side, to perspective view of a dispensing tray for inclusion in the shotgun shell dispenser of FIG. 1.

[0013] FIG. 5 is a side elevation view of an agitator for inclusion in the shotgun shell dispenser of FIG. 1.

DETAILED DESCRIPTION

[0014] In general, a shotgun shell dispenser 10 includes a main body 12, a lid 14, a dispensing tray 16 and a mounting bracket 18. The main body 12 is generally shaped as a rectangular tube. In use the main body 12 will be oriented vertically with the lid 14 positioned at its top and the dispensing tray 16 at the bottom. The top of main body 12 is generally open and may have dimensions that allow for a standard box of shotgun shells to be dumped into the shotgun shell dispenser while orienting the shells so they are laying on their sides and oriented across the width of the main body 12.

[0015] As used herein, the "back" 20 of the main body 12 is that side having the mounting bracket coupled thereto. The "front" 22 of the main body 12 is the opposite side optionally proximate the lid hinge 24. The top edge of the main body may include a beveled surface on the sides proximate to the front 22 of the main body 12 such that the front 22 of the main body 12 is shorter than the back 20 of the main body 12. This permits adequate clearance as the lid pivots about hinge 24 that are offset from the top-front corners of the main body 12.

[0016] A mounting bracket 18 may be coupled to the back 20 of the main body 12. In some embodiments, the bracket 18, as shown, extends outwardly from the outer surface of the back 20 such that the mounting bracket 18 does not extend into the volume of the main body 12. In some embodiments, a coupler may be placed on a vertical mounting surface. Such surfaces include walls, posts, or other portions of shooting stations on trap, skeet, sporting clay courses, or in the interior of a hunting blind such as a waterfowl blind. As shown, the mounting bracket on the main body may be a female bracket portion while the coupler is shown as a male bracket portion that may mate with the mounting bracket 18 on the back of the main body. An advantage of such a mounting system is that the complete shotgun shell dispenser 10 (less the coupler 28) may be easily removed from the vertical surface at the end of a shooting event.

[0017] A lower portion of the main body 12 is configured to accommodate the dispensing tray 16. An interior blocking portion shown as floor 30 may extend from the back 20 of main body 12 and include an opening 32 proximate the front 22 of the main body 12. A bottom 34 is provided and also has an opening 36, similar in size to the opening 32 in the floor 30 but offset towards the back 20 of the main body 12. An agitator 38 may be provided in the main body 12 and provide a sloped surface 40 that is angled downward towards the front

22 of the main body 12. The agitator biases shotgun shells in the shotgun shell dispenser 10 towards the front 22 of the main body 12 where they may, in turn, be received by the opening 32 in the floor 30. In some embodiments, the floor 30 may be omitted as the presence of the agitator 38 may obviate the need for the floor 30 such that agitator 38 serves as the interior blocking portion. It may be advantageous to provide both floor 30 and agitator 38 as shown. When the tray 16 is pushed inwardly, a back edge of a projection on the tray 42 may contact a camming surface 44 coupled to or provided on the agitator 38 or a front edge of surface 40 and push the agitator 38 upwardly. As agitator 38 is pushed upward, it may pivot about pivot point 59. This may create a shaking action or agitation that may force the shell disposed at the front edge of the agitator to align with a slot 48 in the tray 16 and helps ensure smooth feeding.

[0018] A dispensing tray 16 may be received in an opening in the front 22 of the main body 12. The dispensing tray includes a vertical opening (shown as slot 48) extending from the top to the bottom of the dispensing tray 16. The tray 16 also includes at least one projection, and optionally two mounted on opposing sides, (shown as posts 50) or rollers that mate with corresponding slots 52 in the main body 12 to limit the forward and backward travel of the dispensing tray 12.

[0019] In use, a shooter or other user may pull the tray 16 forward by use of projection 53 so the opening therein (slot 48) clears the end of the agitator 38 and/or the opening 32 in the floor 30. In this position, a shotgun shell may drop into the slot 48 in the dispensing tray 16. The tray 16 may be sized such that only one shotgun shell fits within the slot 48. When pushed backward, the slot 48 in the tray 16 and the shotgun shell in it move under the agitator 16 and/or floor 30. The underside of the slot 48 then lines up with an opening 36 in the bottom 34 of the main body 12 such that the shotgun shell may freely fall from the dispenser 10 and into the hand of the user.

[0020] In some embodiments, the dispensing tray may be spring biased towards the front 22 of the dispenser 10 such that the tray protrudes out therefrom. When a user depresses the tray 16 inwardly against the spring tension, a shotgun shell may be dropped. The user may push the tray in with the heel of the hand such that the shell drops into the palm or on the fingers.

[0021] A lid 14 is positioned on the top of the main body 12. The lid 14 may extend downwardly past the top edge of the main body 12 when in the closed position to prevent the entry of water or debris into the shotgun shell dispenser 10. The lid 14 may be pivotally coupled to the main body 12 of the shotgun shell dispenser 10 and include one or more projections 54, recesses, or other features to facilitate gripping and opening and/or closing of the lid 14.

[0022] To accommodate various sizes of shotgun shells, a sleeve may be provided that restricts the interior width and/or depth of the main body 12. With the sleeve in place smaller (i.e. shorter or higher gauge) shells may be used without risk of misalignment. In some embodiments, a hopper may be used to receive shells and align them before they fall into the main body.

[0023] Although a few exemplary embodiments of the present invention have been shown and described, the present invention is not limited to the described exemplary embodiments. Instead, it would be appreciated by those skilled in the art that changes may be made to these exemplary embodi-

ments without departing from the principles and spirit of the invention, the scope of which is defined by the claims and their equivalents.

[0024] The terminology used in the description of the invention herein is for the purpose of describing particular embodiments only and is not intended to be limiting of the invention. As used in the description of the embodiments of the invention and the appended claims, the singular forms “a”, “an” and “the” are intended to include the plural forms as well, unless the context clearly indicates otherwise.

[0025] Unless otherwise defined, all technical and scientific terms used herein have the same meaning as commonly understood by one of ordinary skill in the art to which this invention belongs. All publications, patent applications, patents, and other references mentioned herein are incorporated by reference in their entirety.

[0026] It will be further understood that the terms “comprises” and/or “comprising,” when used in this specification, specify the presence of stated features, integers, steps, operations, elements, and/or components, but do not preclude the presence or addition of one or more other features, integers, steps, operations, elements, components, and/or groups thereof. It will be understood that relative terms are intended to encompass different orientations of the device in addition to the orientation depicted in the Figures.

[0027] Moreover, it will be understood that although the terms first and second are used herein to describe various features, elements, regions, layers and/or sections, these features, elements, regions, layers and/or sections should not be limited by these terms. These terms are only used to distinguish one feature, element, region, layer or section from another feature, element, region, layer or section. Thus, a first feature, element, region, layer or section discussed below could be termed a second feature, element, region, layer or section, and similarly, a second without departing from the teachings of the present invention.

[0028] It will also be understood that when an element is referred to as being “connected” or “coupled” to another element, it can be directly connected or coupled to the other element or intervening elements may be present. In contrast, when an element is referred to as being “directly connected” or “directly coupled” to another element, there are no intervening elements present. Further, as used herein the term “plurality” refers to at least two elements. Additionally, like numbers refer to like elements throughout.

What is claimed is:

1. A shotgun shell dispenser comprising:
 - a main body having at least a front, a back, and a bottom, the bottom having an opening therein;
 - an interior blocking portion which, with the interior of the main body, at least partially defines an opening; and
 - a dispensing tray having an opening therein configured to receive and dispense an shotgun shell, the tray configured to slide inwardly from a lower portion of the front.
2. The shotgun shell dispenser of claim 1, further comprising:
 - an agitator disposed within the main body and coupled to the interior of the main body.
3. The shotgun shell dispenser of claim 2, wherein the agitator is pivotally coupled to the interior of the main body.
4. The shotgun shell dispenser of claim 1, wherein the interior blocking portion is a floor within the main body.
5. The shotgun shell dispenser of claim 4, further comprising:

an agitator disposed within the main body and above the floor, the agitator being coupled to the interior of the main body.

6. The shotgun shell dispenser of claim 1, wherein the tray comprises one or more projections configured to mate with one or more slots in the main body thereby slidably coupling the tray with the main body.

7. A shotgun shell dispenser comprising:

a main body having at least a front, a back, a right side, a left side, an open top, and a bottom, the bottom having an opening therein positioned between the front and the back;

a lid, pivotally coupled to the main body, the lid having a plurality of portions downwardly extending about an exterior of the main body;

a floor positioned within the main body above the bottom, the floor in combination with the interior of the main body, at least partially defining an opening positioned proximate to the front of the main body;

an agitator disposed within the main body and coupled to the interior of the main body; and

a dispensing tray having an opening therein configured to receive and dispense a shotgun shell, the tray having at least one projection configured to mate with a slot in

either the right side or the left side of the main body thereby allowing the dispensing tray to slide inwardly from a lower portion of the front side.

8. The shotgun shell dispenser of claim 7, wherein the agitator is pivotally coupled to the interior of the main body.

9. The shotgun shell dispenser of claim 8, wherein the dispensing tray comprises a projection configured to engage a portion of the agitator when the dispensing tray is moved rearwardly in relation to the main body.

10. The shotgun shell dispenser of claim 7, wherein the main body comprises a mounting bracket.

11. The shotgun shell dispenser of claim 7, wherein the dispensing tray is biased towards a forward position.

12. The shotgun shell dispenser of claim 11, wherein the dispensing tray is biased towards a forward position by use of one or more springs.

13. The shotgun shell dispenser of claim 7 further comprising a removable sleeve configured to be received within the interior of the main body, the sleeve being configured to make the shotgun shell dispenser function more reliably with shotgun shells of a smaller size than would be reliably dispensed without the sleeve.

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