An inert scale cartridge ordnance component manufactured by programmed machining methods finding wide use as an advertising or informational carrier. The invention is characterized by being made in at least two sections allowing for contrasting finishes and or materials enhancing the appearance of the unit while allowing for low cost finishing methods. Illustrative applications of the unit are disclosed in drawing sheets.
Dummy Cartridge Component and Method of Manufacture

Cross Reference to Related Application

Applicant claims entitlement to benefit of PPA No. 60/349,896, filed Jan. 18, 2002.

Background

1. Field of Invention

The invention relates to safe inert dummy cartridges for such uses as engraving blanks, housings for commercial art and advertising, and components of awards and displays.

2. Prior Art

Dummy cartridges have long been available for various purposes. First known work in the area of an inert dummy cartridge may be found in U.S. Pat. No. 119,357 (Hobbs), primarily as an inert round for chambering, unloading, and drill. In addition to this usage, the term “dry fir’’ training” often is cited Recent patents in the area for this purpose include U.S. Pat. No. 5,291,832 (Plummer), U.S. Pat. No. 6,189,454 (Hunt), and U.S. Pat. No. 6,223,657 (Proffitt).

Another use for dummy inert cartridges is illustrated by patents issued primarily to US Ordnance for the use in testing the cycling of weapons. In particular, these are fabricated to have the same dynamic characteristics—i.e., center of gravity and balance as actual propellant rounds. U.S. Pat. No. 3,027,840 (Hannas & Oschell) U.S. Pat. No. 2,882,821 (Benson) are examples of this use.

A combination of the above purposes may be found in U.S. Pat. No. 4,450,769 (Moscr).

Another category of inert dummy ammunition exists in the form of training aids developed to teach troops the operation, characteristics, safe handling methods of various calibers and types of ordnance; usually these are models fabricated from a variety of materials including wood and plastics, sometimes full scale, or multiple scale for smaller projectile types.

In addition, much “barracks art” exists where actual live ammunition, discarded casings, projectiles relatively undamaged from use are put to such uses as “swagger stick” handles, doorstops, ashrays, and in large calibers, butt disposal containers and spitoons

Object of the Invention and Its Advantages

The principal objects and advantages of the invention include:

1. It is one objective to avoid the use of the use of potentially unsafe components (portions of live or fired ammunition).

2. It is a further objective to be able to provide economical short runs of varying sizes of a more or less standard shapes.

3. It is another objective to be able to provide a surface large enough for engraving information desired by the end user.

4. It is still another objective to provide surface finishes that are attractive.

5. It is a corollary objective to provide for ease of application of such surface finishes.

6. It is an overall objective to provide a component with multiple end uses.

In Summary

The advantages of the dummy inert cartridge component fabricated by the following methodology include safe raw materials, ease of fabrication and low cost despite short runs, the property of ease of fixturing for secondary and finishing operations, and the ease of application of the component to a wide variety of awards, displays, advertising items and products.

Description of Drawings

FIG. 1 is a view of the assembled inert dummy cartridge with an engraving.

FIG. 2 is an exploded view of the dummy cartridge body and projectile, illustrating the screw threads making possible both assembly and ease of holding for finishing operations.

FIG. 3 is an assembled pistol variant of the assembly of FIG. 2.

FIG. 4 is an assembled shotgun variant of the assembly of FIG. 2.

FIG. 5 is an illustration of the application of the assembly of FIG. 1 to a deer antler mounting as a hunting trophy.

FIG. 6 is an illustration of the assembly of FIG. 1 utilized as a mounting base for a thermometer on a plane surface or within a cavity.

FIG. 7 is an illustration of the assembly of FIG. 1 utilized in an advertising product

List of Reference Numerals

10. Assembled inert cartridge component

11. Engraving flat

21. Body, inert cartridge component

22. Projectile, inert cartridge component

23. External thread

24. Internal thread

50. Plaque

51. Left deer antler

52. Center antler mounting boss

53. Right deer antler

61. Thermometer

71. Advertising member
SUMMARY

[0037] The invention is an inert dummy cartridge capable of being manufactured in various scales, indeterminate in nature, on very short runs economically by simply changing a few variables on numeric controlled machine tools. Of particular note is that by fabricating two members which can be assembled, finishing operations are simplified as to fixtureing for buffing, chemical conversion, or organic coating. For instance, a polished aluminum body (21) may be assembled to a polished copper projectile (22), where each component requires a different polishing compound, and is difficult or impossible to hold without fixtureing. Organically applied coatings can be applied to each member without masking.

DESCRIPTION OF THE INVENTION

[0038] A preferred embodiment of the invention is shown in the exploded drawing of FIG. 2.

[0039] A Body, inert cartridge component (21) is manufactured by machining with numeric controlled program equipment. Dimensions of said Body (21), can easily be changed by manipulation of machine codes with or without physical limits of the machine.

[0040] A Projectile, inert cartridge component (22) may similarly be manufactured in an identical or different material as Body (21), scaled in accordance with Body (21).

[0041] Finishing operations, such as polishing, plating or anodizing, dyeing, or painting, chemical conversion, organic coating or other process may be accomplished on separate Body (21) and Projectile (22).

[0042] Assembly into an inert assembled dummy cartridge of FIG. 1, 3, or 4 may be accomplished by engaging the external thread (23) into the internal thread (24) and turning until tight.

[0043] Upon completion of the assembly operation, the assembled inert cartridge component may be engraved on the engraving flat (11) machined during CNC fabrication of Body (21), for certain applications. For other applications, the component (10) may have for example a Thermometer (61) or Advertising member (71) applied to the flat (11), depending on requirements. The flat (11) may be of such a depth that it is actually a cavity for some purposes.

[0044] The assembled cartridge (10), is then utilized in various manners, one such is FIG. 5, where an assembled cartridge is mounted with engraving showing perhaps date, hunt, hunter, etc upon a plaque (50), with trophy deer antlers (51,53) mounted by a center antler mounting boss (52), as a typical use of the invention.

CONCLUSIONS, RAMIFICATIONS, AND SCOPE

[0045] As disclosed, the reader will understand that an inert dummy cartridge component is desirable not only from a safety standpoint, but that one manufactured at a minimum cost of conversion for various sizes from a minimum of numeric controlled manufacturing processes enables almost custom manufacture of individual units.

[0046] The benefit of ease of fixtureing is an outcome of the ability to easily modify the program and manufacture each component piece, decreasing finishing cost to a minimum, which for simple products of limited volume, becomes a very significant cost factor.

[0047] Corollary to fixtureing advantage, the ability to make component parts from dissimilar materials, such as copper and aluminum, which take greatly different finishing operations, is a natural outcome of the manufacturing method.

[0048] In conclusion, the invention may be manufactured in great range of size, shape, and material configuration, which is limited only by machine capacity.

[0049] Accordingly, the scope of the invention should be determined by the appended claims and their legal equivalents, rather than by the specific examples given.

1. I claim an assembled inert cartridge component in the generally accepted shape of a bullet, shell, round, cartridge, or similar appearing article of ordnance of inert explosive nature, assembled from at least two components, where at least one area of said assembled inert cartridge component is specifically manufactured for the display of information.

2. I claim an assembled inert cartridge component according to claim 1 comprised of no less than two components manufactured on numeric controlled machine tools.

3. I claim according to claim 1, an assembled cartridge component where one component of said assembled inert cartridge component is manufactured by a different process than the mating component of the assembled inert cartridge component.

4. I claim according to claim 1, an assembled cartridge component where one component of the assembled inert cartridge component is manufactured from a different material than the composition of the mating component.

5. I claim according to claim 1, an assembled cartridge component where both components of said assembled inert cartridge component are finished by the same process.

6. I claim according to claim 1, an assembled inert cartridge component having an information display area in the form of a machined engraving flat.

7. I claim according to claim 1, an assembled inert cartridge component having an information display area in the form of a machined cavity.

8. I claim in combination, a display consisting of an assembled inert cartridge component and at least one additional member being a plaque, deer antler, thermometer, or advertising member.

9. I claim in combination, a display of claim 7, where an additional member is mounted on the assembled inert cartridge component.

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