A novel, collapsible cleaning kit for guns.
COLLAPSIBLE GUN CLEANING KIT

FIELD OF THE INVENTION

[0001] This invention relates to the design and construction of a novel, collapsible cleaning kit for guns.

BACKGROUND OF THE INVENTION

[0002] Guns, including firearms such as rifles, shotguns and handguns, and non-firearms such as CO2 guns and air-guns, require occasional maintenance. Maintenance can include disassembly or routine cleaning of the gun barrel and firing mechanisms. It is advantageous to have a stand which is light, collapsible and thus portable yet the stand, when assembled, must be sturdy enough to withstand traverse and lateral stresses in the course of handling the gun for maintenance and cleaning. Particularly, stress is placed upon a cleaning stand along the axis of the gun barrel as a cleaning rod is drawn through the gun barrel, requiring each gun support to withstand these stresses without buckling or collapsing.

[0003] Various portable cleaning stands are disclosed in the prior art. U.S. Pat. No. 5,058,302 entitled “Shooter’s Portable Maintenance Center” describes a rectangular tray having gun support forks attachable to the rectangular tray and storage compartments within the tray. U.S. Pat. No. 4,875,777 entitled “Press Fit Gun Cradle for Firearm Maintenance and Repair” describes a base with two opposing gun support arms press-fit into the base. A centrally located well acts as a tray for temporary storage of miscellaneous items. U.S. Pat. No. 3,964,613 entitled “Rifle Support” describes a hinged box with opposing ends extending upward into rifle support arms. It does not appear from the drawings, specification or claims that the support arms are moveable or hingable, as they simultaneously constitute the end portions of the storage box.

[0004] Many stands of the prior art incorporate gun support arms and a tray or well to hold miscellaneous items. The prior art, however, fails to provide a traverse support to impart axial stability on the support arms. The prior art also requires a base which is manufactured to accept press-fit or attachable support arms, resulting both in increased manufacturing efforts but reducing the axial and traverse stability of the support arms to support provided at their base.

SUMMARY OF THE INVENTION

[0005] The present invention discloses a portable, collapsible gun stand for positioning a rifle or similar long barreled gun in the horizontal position for maintenance, service and/or cleaning. The present invention utilizes fairly conventional support means, supporting the rifle along the bottom edge of its stock and/or barrel. The invention incorporates subdivided trays to contain various parts, tools and cleaning supplies.

[0006] Novelty of the design is the manner in which the kit collapses for transport or storage, with each gun support supported on its outer face by the interior of each box short side and folding inward to rest on the bottom. In the upright position, the gun supports are supported on their inner face and held in position by a traverse support. The use of the traverse support in combination with the support afforded by the interior of each short side allows the gun supports to be constructed of thinner, lighter material, thereby reducing costs of manufacture, reducing bulk and reducing weight. Furthermore, the integral nature of the gun supports with the box side and bottom portions reduces the need for manufacturing of slots to contain the support arms. In other embodiments wherein the gun supports are formed integral with a box short side or box bottom, manufacturing costs are further reduced as is the possibility of parts loss and setup of the gun supports is simplified. In other embodiments, the use of multiple traverse supports increases support stability and traverse supports dimensioned to contact the gun further stabilize the gun from movement during maintenance operations and particularly those cleaning operations wherein a cleaning rod is drawn through the barrel, producing axial stresses which tend to move guns on their support platforms. Due to the use of lightweight materials, including but not limited to cardstock and cardboard, the proposed invention may also incorporate gun supports formed integral with the box bottom or box short sides, increasing the stability and support of the kit even more while reducing again the possibility of lost kit parts. This use of materials also offers the opportunity to form the box and cover of a single material, the box and cover formed integral and hinged as appropriate to create the invention, again increasing stability while reducing the possibility of lost kit parts.

[0007] This is all in contrast with the many gun supports currently on the market which incorporate more parts and thicker, heavier plastics and metals to adequately support the rifle, without allowing the rifle to move while being serviced. This is also in contrast with the prior art’s need to machine or manufacture slots or other mechanical means to hold support arms in an operable position while failing to adequately provide for axial and lateral stresses on the supports.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] FIG. 1 is an exploded view of one embodiment of the collapsible gun cleaning kit according to the embodiments described and claimed herein.

DETAILED DESCRIPTION OF THE INVENTION

[0009] Shown in FIG. 1 is an exploded view of one embodiment of the collapsible gun cleaning kit utilizing a single traverse support and non-hinged gun supports and a non-hinged top. The rectangular box (10) is defined by a bottom (1), two long opposing sides (2) and two short opposing sides (4). Each short side interior (6) acts as an outside support for gun supports (14) when said gun supports are raised into position. The box may be divided by use of partitions (8) extending between said bottom and said sides defining storage areas.

[0010] Gun supports (14) include a bottom portion (14a) and a top portion (14b), the top portion dimensioned for receiving a section of a gun stock or gun barrel, and said bottom portion being dimensioned to fit within the box dimensions defined by the two opposed long sides, or by one opposing long side and an opposing partition wall. The gun supports (14) further include opposing facing vertically cut slots (20) for receiving a traverse support (16). The interior face of one gun support depicted in FIG. 1 is not shown but contains a slot (20) identical to that shown in the opposing gun support (14). While FIG. 1 depicts a single gun support shown with a single slot (20), alternative embodiments may utilize multiple slots (20) to accept multiple traverse supports (16) for increased support stability. The traverse support (16) is dimensioned to fit within said slots (20) and between said opposing gun supports (14). The traverse support is removable as are the gun supports and all are dimensioned so as to fit within the space defined by said rectangular box when
disassembled for portability and storage. The kit further includes a cover (18) defined by a top (24), two opposed long sides (26), and two opposed short sides (28), dimensioned to fit over said rectangular box.

What is claimed is:

1. A collapsible gun support, comprising:
   a rectangular box defined by a bottom, two opposed long sides, and two opposed short sides;
   a pair of removable gun supports including a bottom portion and a top portion, the top portion dimensioned for receiving a section of a gun stock or gun barrel, and said bottom portion being dimensioned to fit within the box dimensions defined by the two opposed long sides, said gun supports further including opposing facing vertically cut slots for receiving a traverse support;
   a removable traverse support dimensioned to fit within said slots;
   said gun supports and traverse support dimensioned to fit within the space defined by said rectangular box when disassembled; and
   a cover defined by a top, two opposed long sides, and two opposed short sides, dimensioned to fit over said rectangular box.

2. A collapsible gun support as defined in claim 1, further including partitions extending between said bottom and said sides defining storage areas.

3. A collapsible gun support as defined in claim 1, further including two or more traverse supports dimensioned to fit between gun supports.

4. A collapsible gun support as defined in claim 1, further including a traverse support dimensioned to fit between gun supports, said traverse support dimensioned to contact a gun when said gun is placed on said gun supports.

5. A collapsible gun support as defined in claim 1, further including two or more traverse supports dimensioned to fit between gun supports, said traverse supports dimensioned to contact a gun when said gun is placed on said gun supports.

6. A collapsible gun support as defined in claim 1, wherein said gun supports are hingedly attached to said box wherein said gun supports may fold down to fit within the box dimensions when not in use and fold up into position adjacent an interior wall of each opposing short side.

7. A collapsible gun support as defined in claim 6, wherein said hingedly attached gun supports are formed integral with said box bottom.

8. A collapsible gun support as defined in claim 6, wherein each hingedly attached gun support is formed integral with a box short side.

9. A collapsible gun support as defined in claim 1, wherein said cover is hingedly attached to said box.

10. A collapsible gun support as defined in claim 1, wherein said cover is formed integral to said box.

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