An apparatus for adapting a clamshell-type of gunlock for a shotgun to lock a rifle. The clamshell gunlock can be easily modified using the apparatus without the need for basic changes to the gunlock. The apparatus has two parts: a first insert, attached to the base of the gunlock to reduce the volume of the gunlock to hold a rifle; and a second insert, fractionally attached to said first insert to provide a snugly fitting constraint to hold a portion of the rifle such that the rifle will not vibrate or move causing rattling sounds or damage to the barrel.
CLAMSELL GUNLOCK WITH RIFLE BARREL INSERT

[0001] This application claims benefit of U.S. Provisional Application Serial No. 62/156,370, filed May 4, 2015, pursuant to 35 USC §119(e).

FIELD OF THE INVENTION

[0002] This invention relates to gunlocks, in particular, a clamshell type of gunlock for a shotgun such that the gunlock can be adapted to lock a rifle.

BACKGROUND OF THE INVENTION

[0003] The pump shotgun, a staple for law enforcement, is provided a locking mechanism in police vehicles as long ago as the early 1930's. This gunlock was originally designed by Smith & Wesson of 2100 Roosevelt Avenue, Springfield, Mass. The design proved to be so successful that it remained unchanged for many years.

[0004] During 1988, this design was improved by Santa Cruz Gunlocks of Webster, New Hampshire by providing a manual override with a key so that the lock could be opened in the event of a power failure. (See FIG. 1, Prior Art).

[0005] Since police cruisers now have patrol rifles as a part of their weapon accessories, it was recognized that it would be advantageous to be able to convert the shotgun clamshell gunlock into a lock for rifles as well. This was easily done by the addition of insert 18 (see FIG. 3). This part of the gunlock is an aluminum casting insert that is held in place by a hex head bolt (not shown) that is screwed in base 15, (see FIG. 3) which has a threaded hole to receive the bolt.

[0006] However, despite the improvement, it was found that the rifle would rattle when being held by the modified lock. Further, the rattling caused cosmetic damage to the barrel resulting in scratches and dings to the metal. Most importantly, it was annoying to the police officer who was spending many hours driving in a vehicle and was forced to listen to his/her weapon rattling due to the weapon being held loosely within the lock.

[0007] At this time, there is no design that permits easily modifying standard clamshell gunlocks to lock a patrol rifle firmly within the lock without rattling or vibration yet still be able to inexpensively and simply change the gunlock from locking a shotgun to a patrol rifle.

SUMMARY OF THE INVENTION

[0008] It is an aspect of the invention to provide a clamshell type of gunlock for a pump shotgun which can be easily modified to fit a rifle by insertion of a rubber molded insert.

[0009] Another aspect of the invention is to provide a clamshell type of gunlock for a pump shotgun which can be easily modified to fit a rifle by insertion of a rubber molded insert that holds the rifle barrel without any vibration.

[0010] Still another aspect of the invention is to provide a clamshell type of gunlock for a pump shotgun which can be easily modified to fit a rifle by insertion of a rubber molded insert which prevents the rifle barrel from rattling when holding a rifle.

[0011] Still another aspect of the invention is to provide a clamshell type of gunlock for a pump shotgun which can be easily modified to fit a rifle by insertion of a rubber molded insert that prevents any cosmetic damage to the rifle while it is being held within the gunlock.

[0012] Finally, it is aspect of the invention to provide a clamshell type of gunlock for a pump shotgun which can be easily modified to fit a rifle by insertion of a rubber molded insert that can be inexpensively manufactured and adapted to present a clamshell type of gunlocks without any modifications or changes to the original structure.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013] FIG. 1 is an isometric view of a typical clamshell type of gunlock for a pump action shotgun such as made by Santa Cruz Gunlocks, Model SC-1.

[0014] FIG. 2A is a left isometric view of a typical clamshell type of gunlock with rifle barrel insert in place shown in a closed position.

[0015] FIG. 2B is a left isometric view of the typical clamshell type of gunlock with rifle barrel insert in place shown in an open position.

[0016] FIG. 3 is a partially exploded left isometric view of a typical clamshell type of gunlock with a rifle barrel insert shown with rubber molded and aluminum block inserts removed.

[0017] FIG. 4 is a partially exploded right isometric view of a typical clamshell type of a gunlock with a rifle barrel insert shown with rubber molded and aluminum block inserts removed.

[0018] FIG. 5A is a partially exploded end view of a typical clamshell type of gunlock with rifle barrel insert shown with rubber molded and aluminum block inserts removed.

[0019] FIG. 5B is a closed end view of the gunlock shown in FIG. 5A is a closed position.

[0020] FIG. 6 is an isometric view of the invention being used to lock a typical police rifle with the gunlock in an open position.

[0021] FIG. 7 is an isometric view of the gunlock shown in FIG. 6 in a locked position around the barrel of the typical police rifle.

DETAILED DESCRIPTION OF THE INVENTION

[0022] As shown in FIG. 1, prior art clamshell gunlock 10 is depicted in an isometric view. The apparatus is quite simple. Base 15 can be mounted on a structure such as a police vehicle such that a shotgun (not shown) can be firmly mounted wherein it cannot be removed by an unauthorized person. The shotgun is placed between arm 12 and base 15. Then arm 12 is hinged down on base 15 and locked, thus holding the shotgun firmly in place. Spring 14 keeps arm 12 fully open when the lock is in an unlocked position.

[0023] Now referring to FIGS. 2A and 2B, the rifle barrel insert modification is shown in accordance with the invention. An aluminum insert 18 is firmly attached to base 15 to narrow the opening between arm 12 and base 15. While this modification permits locking a patrol rifle to the officer’s vehicle, it does present difficulties. In particular, since the modified lock does not snugly constrain the rifle barrel sufficiently to prevent vibration and movement, the rifle barrel will rattle. This is obviously extremely annoying to the vehicle occupants and will cause the barrel to suffer cosmetic damage.
The essence of the invention is to provide an additional part, a rubber molded insert 16 is attached to insert 15 by inserting cylinder tab 17 (see FIG. 3) into opening 20 in aluminum insert 18. Opening 20 is already in insert 18 since it serves to provide access to thread a hex headed bolt (not shown) into a threaded opening (not shown) in base 15 (see FIG. 5A). Tab 17 is friction fitted into opening 20 but it could be glued if necessary to provide a more secure connection.

Referring to FIG. 5B, it can be easily seen that the addition of rubber molded insert 16 into aluminum insert 18 reduces the opening between arm 12 and base 15 so that barrel 26 of rifle 24 fits snugly within the invention without vibration, rattling or damage to barrel 26. (See FIGS. 6 and 7). As shown in FIG. 7, the gunlock can be firmly anchored to a vehicle by mounting plate 28.

Insert 16 is preferably about 3 inches long and about 1¼ inches wide. Cylindrical tab 17 is preferably a little more than ⅜ inch in diameter. The curved bed of insert 16 has a diameter of about ⅛ inch so that the barrel of an officer's patrol rifle will be firmly held within the lock when arm 12 engages base 15.

Although the present invention has been described with reference to certain preferred embodiments thereof, other versions are readily apparent to those of ordinary skill in the preferred embodiments contained herein.

What is claimed is:

1. An apparatus for adapting a clamshell-type of gunlock for locking up a shotgun wherein said clamshell-type of gunlock having a base which can be mounted on a structure and having an articulating arm wherein the barrel of the shotgun is releasably held between the base and the articulating arm, and wherein said apparatus adapts the clamshell-type of gunlock to lock up a rifle, said apparatus comprises:

   a first insert wherein said first insert is firmly attached to the base of the gunlock wherein said first insert takes up a substantial volume of the space provided for a shotgun barrel when the gunlock is used to lock up a shotgun barrel;

   a second insert attached to said first insert to take up the remaining volume provided for the shotgun barrel yet providing sufficient space to firmly hold a portion of a rifle barrel to sufficiently restrain the rifle barrel thus keeping the rifle barrel from rattling or moving when the gunlock is in the locked position.

2. The apparatus of claim 1 wherein said first insert is made of aluminum and is held to the base of the gunlock via a threaded bolt.

3. The apparatus of claim 1 where said second insert is molded and made from rubber.

4. The apparatus of claim 3 wherein said first insert further comprises an opening which serves to provide access to a threaded opening in the base of the gunlock which attaches said first insert via said threaded bolt to the base.

5. The apparatus of claim 4 wherein said second insert further comprises a cylindrical tab that attaches said second insert to said first insert via said opened in said first insert.

6. The apparatus of claim 5 wherein said cylindrical tab of said first insert is friction fitted into said opening of said second insert.

7. The apparatus of claim 5 wherein said cylindrical tab of said first insert is glued into said opening of said second insert.

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