1911-100 linkless barrel system is modified drop in barrel and spring guide assembly for Colt 1911 style pistol platform. It uses angled teeth machined into the lower barrel lug and in the groove of recoil spring guide assy to lock and unlock the barrel from slide in pistol cycling process. This improves consistency, longevity, strength, accuracy and simplicity in Colt 1911 style pistols. As drop in barrel system 1911-100 can be installed in a brand new or any already produced Colt 1911 pistol, which gives it very big marketability potential.
1911-100 LINKLESS BARREL SYSTEM

BACKGROUND OF INVENTION

[0001] Colt 1911 style pistol platform uses barrel link to “pull down” the barrel during recoil stage of slide cycling.

[0002] Proper installation, fitting and maintenance of barrel with barrel link takes long time and high level of gunsmithing skill compared to new style Glock, HK, Sig etc style pistols.

[0003] Eliminating of barrel link would make colt 1911 pistol platform barrel installation and fitting more simple and cheaper. Accuracy and reliability of the gun would be improved significantly.

BRIEF SUMMARY OF INVENTION

[0004] 1911-100 linkless barrel system eliminates barrel link in function of colt 1911 style pistols. It improves simplicity, reliability and consistency of barrel/slide lock up, without any change (machining) to frame, slide or any other part of colt 1911 style platform. It’s made of solid barstock 416 stainless steel (heat treated to 38-43 R.C.).

DESCRIPTION OF DRAWINGS

[0005] DRAWING 1: Item (1) right side view of 1911-100 barrel in 1 to 1 scale Item (1.2) left side view of 1911-100 linkless barrel system assy in 1 to 1 scale Item (3) left view of 1911-100 recoil spring guide assembly in 1 to 1 scale Item (1.4) back view of 1911-100 recoil spring guide assy in 1 to 1 scale.

[0006] DRAWING 2: Item (1.3) is left view of 1911-100 linkless barrel lower lug in 2 to 1 scale. Item (1.4) is back view of 1911-100 lower barrel lug in 2 to 1 scale. Item (2) is colt 1911 (original) left side view of lower barrel lug in 2 to 1 scale. Item (2.1) is colt 1911 (original) lower barrel lug back view in scale 2 to 1. Item (2.2) are for comparative purpose only. Item (3.1) is left side (cut) view of 1911-100 recoil spring guide assembly in 2 to 1 scale. Item (3.2) is front view of 1911-100 recoil spring guide assembly in 2 to 1 scale. Item (3.3) is back view of 1911-100 recoil spring guide assembly in 2 to 1 scale.

[0007] DRAWING 3: is left cut view of 1911-100 barrel system in “locked/battery/barrel up” position installed in colt 1911 pistol in 4 to 1 scale. Item (1) is 1911-100 lower barrel lug. Item (3) is 1911-100 recoil spring guide assembly Item (4) is colt 1911 slide stop Item (5) is colt 1911 frame

[0008] DRAWING 4: is left cut view of 1911-100 barrel system in “slide unlock-barrel down” installed in colt 1911 pistol in 4 to 1 scale. Item (1) 1911-100 lower barrel lug Item (3) is 1911-100 recoil spring guide assembly Item (4) is colt 1911 slide stop Item (5) is colt 1911 frame

DETAILED DESCRIPTION OF INVENTION

[0009] 1911-100 linkless barrel system is modified drop in barrel and recoil spring guide for colt1911 style pistol. It does not require any machining of frame, slide or any other standard colt 1911 part (to be installed). Though, use of Briley rotating barrel bushing would be recommended. 1911-100 system is based on a modern system of pistol operation (like sig, glock, 1k etc).

[0010] DRAWING3 is left side cut view of 1911-100 system installed in colt 1911 pistol in lock up (battery) ready to fire position. 1911-100 barrel is identical to standard colt 1911 barrel except in lower barrel lug as visible in DRAWING1—(item 1). 1911-100 lower barrel lug has 40 degrees angled tooth and 0.120 inch wide groove added (machined in front) of the modernized standard barrel lug.

[0011] 1911-100 recoil spring guide (DRAWING1—item 3) has a bigger front flange (0.200 inch nominal). It is grooved on top (0.322) with of groove—nominal. Smaller flange is 0.561 inch long-nominal length. 1911-100 recoil spring guide is locked in the colt 1911 frame by slide stop (item 4).

[0012] 1911-100 system uses 40 degrees angled lugs in barrel bottom and recoil spring guide asy to move barrel in vertical plane (locking and unlocking the barrel) instead of barrel link. But stopping of the barrel in recoil phase is done when back of 1911-100 standard part of lower barrel lug (item 1) hits the frame (item5—DRAWING3)—the same way as standard colt 1911 system.

[0013] Stopping of the slide, when it is pushed back to battery by recoil spring, is done when front part of 1911-100 standard lower lug part (DRAWING2—item1) hits the slide stop (item4—DRAWING2)—same as standard colt 1911 pistol.

[0014] When round is fired gases push the casing against the slide. Both slide and the barrel (still locked) are pushed back together for 0.140 inch. Bullet has left the barrel. 40 degrees angled tooth of 1911-100 lower barrel lug (item1) engages reversed 40 degrees angled tooth of spring recoil guide (item3).

[0015] barrel forced by interaction of teeth (lugs) goes 0.085 inch back and 0.070 inch down unlocking upper barrel lugs from the slide. Rear side of 1911-100 “standard part” of lower lugs (item) hits the frame (items)—it is position of 1911-100 system as shown in DRAWING3.—

[0016] Barrel is stopped but slide continues to go back. It ejects empty casing and cocks the trigger.

[0017] slide is stopped by force of the recoil spring, or when it hits big flange of 1911-100 spring recoil guide (item 3). Then slide goes forward (pushed by recoil spring) feeding new round in to the chamber. After that barrel is pushed up for 0.070 and 0.085 inch forward by interaction of 40 degrees reversed 1911-100 recoil spring guide tooth (item 3) and the groove of 1911-100 lower barrel lug (item1).

[0018] Barrel is in locked up position and is pushed 0.140 inch forward in to the battery-ready to fire position. Slide/barrel assy is stopped by interaction of front side of “standard part” of 1911-100 lower barrel lug (item1—DRAWING2) and slide stop (item4—DRAWING2). Gun is ready to fire again.

[0019] Many colt 1911 owners install plastic recoil buffers. They are plastic pieces sandwiched between slide and recoil spring guide bigger flange to prevent hard hitting of the slide in to the recoil spring guide/frame during stoppage of slide in recoil cycle. This buffers are about 0.100 inch thick.

[0020] recoil spring with appropriate strength is going to do even better job than buffers because slide is stopped by spring force in recoil mode, before it touches the recoil spring guide/frame.

[0021] This is the point where Idea for 191-100 linkless barrel system started. Thickness of bigger diameter flange (on standard colt 1911 pistol) recoil spring guide is 0.088 inch. Thickness of recoil buffer is 0.100 inch.

1. For 1911-100 system Bigger flange on recoil spring guide (item 3 DRAWING 1) should be thick 0.200 inch nominal. Rear flange of 1911-100 recoil spring guide (item3) is nominal 0.448 inch diameter and length is nominal 0.565.
2. 1911-100 recoil spring guide (item 3) has groove machined on top of it with 0.322 inch nominal width. And 40 degrees angled tooth is machined inside the groove.

3. 1911-100 lower lug (item 1) is made longer but a bit slimmer than original colt 1911 lower lug (item 2). 1911-100 lower barrel lug has a groove and 40 degrees angled tooth added in front of “modified” standard colt 1911 lower barrel lug.

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