July 25, 1944. E. E. RICHARDSON 2,354,277

RECEIVER FOR FIREARM EJECTED SHELLS

Filed June 28, 1943

FIG. 1

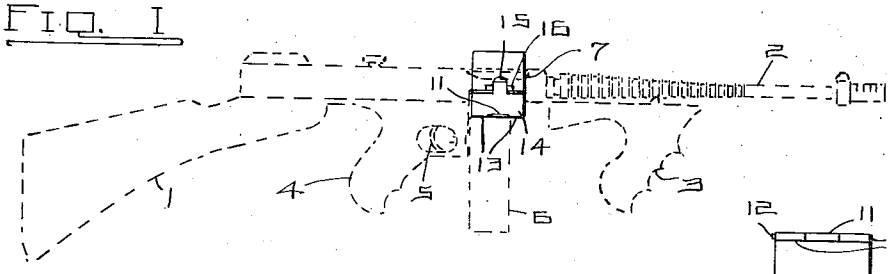
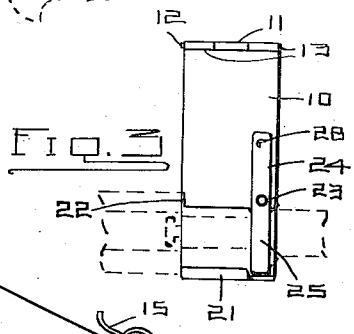


FIG. 3



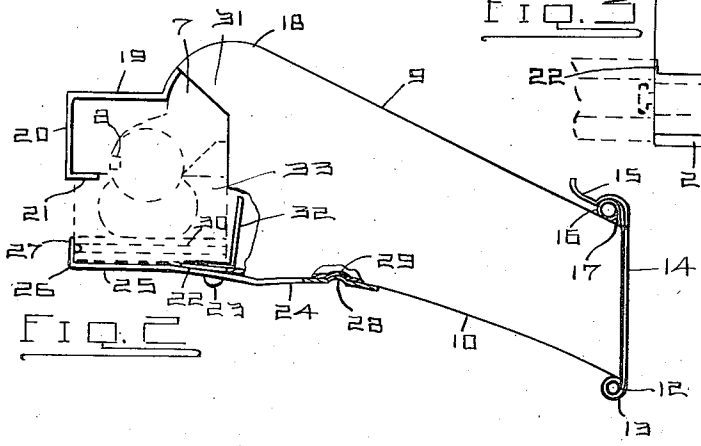


FIG. 2

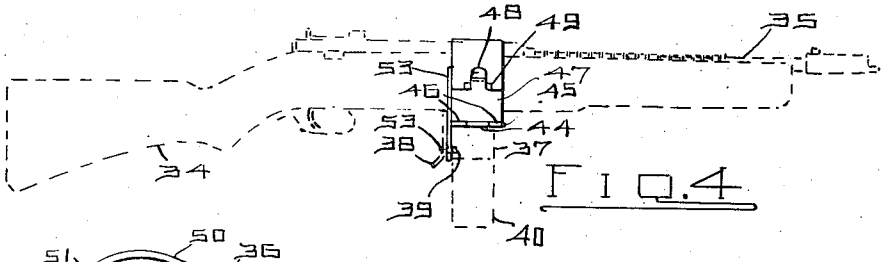


FIG. 4

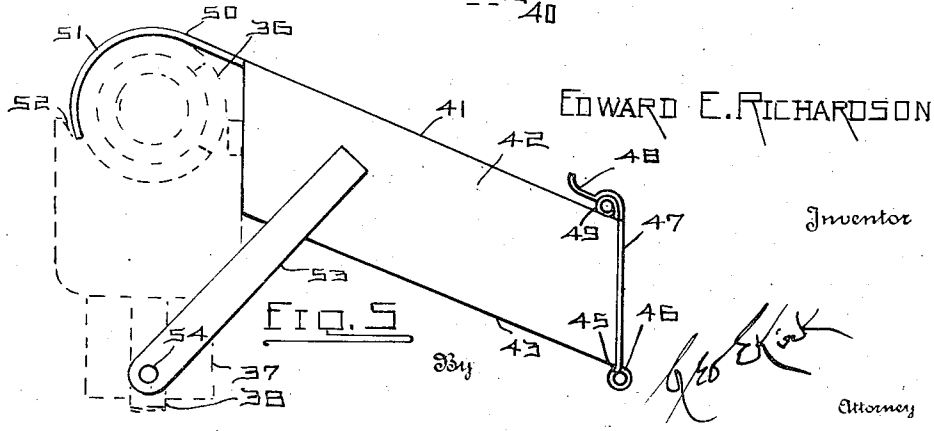


FIG. 5

EDWARD E. RICHARDSON

Inventor

By

Attorney

Patented July 25, 1944 2,354,277

UNITED STATES PATENT OFFICE

2,354,277

RECEIVER FOR FIREARM EJECTED SHELLS

Edward E. Richardson, Waterville, Ohio

Application June 28, 1943, Serial No. 492,552

2 Claims. (Cl. 42—1)

This invention relates to accumulating empty shells or cartridges, as on firing or discharge from firearms.

This invention has utility when incorporated in connection with multiple discharge firearms of the sub-machine gun type, and is adapted for ready mounting independently of mutilating or altering the firearm or interfering with the normal use thereof. The receiver or pocket may be quickly and easily cleared of its gathering of empty shells. The one using the gun may, without any tools whatsoever, attach the device in rigid working position, and with equal facility release the device by unsnapping from such assembly.

Referring to the drawing:

Fig. 1 is a view in elevation from the discharge or pocket emptying door end of the empty shell receiver as adapted to a submachine or anti-bandit gun of the Thompson type;

Fig. 2 is a side elevation of the pocket or receiver of Fig. 1, viewed from the left, the features of the gun being shown in dotted lines, as also in Fig. 1;

Fig. 3 is a bottom plan view of the device of Fig. 1;

Fig. 4 is a view similar to Fig. 1 of an embodiment of the device as in conformity with H & R Reising type of machine gun, also as with the Thompson, readily snapped into rigid assembly on the sub-machine gun proper independently of any mechanical alteration of the gun, and

Fig. 5 is a side elevation of the empty shell receiver from the left of Fig. 4.

Adaptation hereunder is to regular equipment, such as a gun having a stock or shoulder piece 1, a barrel 2, directing grip 3, holding grip 4 adjacent a trigger 5, with a loaded cartridge or charged shell magazine 6, and from the barrel at an angle upward, outward and rearwardly, an ejector port 7 for the used cartridges or empty shells as forcefully thrown and turned by catch 8 engaging at the rim of the shell being ejected.

Under the invention herein there is provided a generally rectangular cross-section tube 9 having a downwardly and outwardly inclined bottom 10 with a roll or eye 11 for a hinge pin 12 about which is wrapped a pair of rolls or eyes 13 on opposite ends of the roll 11, thereby completing a hinge for a closure or door 14 of this empty shell receiver or housing. The upper free end of the door 14 has a spring extension or catch 15 adapted to readily snap over a bead or roll 16 on the medial upper side of the receptacle or square tube 9. The bead 16 is at the outer end 17 of the pocket 9 upper side.

This upper side of the pocket in its ascent gradually widens or extends away from the lower side 10, and forms an arc 18 as an element of a bracket, catch or claw, having a straight or flat portion 19 across the top of the gun barrel 2, but clear of and under the sight line. The claw, from the portion 19 has at right angles thereto a flat section 20 to a reverse narrow flange 21, embracing metal gun parts to the barrel 2 at the upper portion adjacent the ejector port 7. This claw has some resilience for snugly interfitting in the clearance at the ejector port 7.

With the claw 18, 19, 20, 21, pulled into close nesting position across the top of the gun, the pocket 9 lower side 10, has a lip portion 22 which may just ride under the edge of the lower side of the gun. An increased extension portion of the lip 22 carries a pivot pin 23 for a spring strip or lever with an arm 24 outward from the underside and its other arm 25 along the lip portion 22. The free end of the arm 25 has an offset 26 carrying an inwardly projecting stud or boss 27. From this inactive position of the lever 24, 25, having the arm 25 over the lip 22, the arm 24 is now swung to have its terminal stud or boss 28, enter countersink or seat 29 in the underside 10 of the pocket 9. At this position, the spring arm 25 has its offset 26 approach the plane of the claw portion 20 and the stud 27 snap into groove 30 of the gun adapted to hold the reserve or loaded shell magazine 6.

Independently of any alteration of this weapon or multiple discharge firearm, there is now rigidly mounted at the ejector port thereof, a receptacle into which may be thrown ejected empty shells from such gun. In guns of this Thompson type, the ejector port 7 has such incline as to deflect the open end of such end-for-end turned shell that it strikes the inner side of portion 31 of the tube 9 as a web extending to the arch portion 18. The force of the Thompson ejector directs such empty shell slightly upward, possibly as much as 10'' or 12''. For one standing and firing the gun from one's shoulder, the thrown shell may land as much as 8' to 10' to the right of the one operating the firing piece, as well as 1' or 2' rearwardly from the ejector port 7.

While the tube 9 is rectangular in cross section, the throw direction for the empty shell as from the port 7, is a sort of glancing blow at the portion 31, with still wider directing angle given such shell as bouncing against the under-

side of the arc or curved side 18 and the downward and outward inclined upper side of the tube 9 therefrom. Further to protect the firearm against empty shell return to the vicinity of the ejector port 7, the receptacle hereunder is equipped with a baffle 32 upstanding from the wall 10 adjacent the lip 22, to shut off transverse way 33 of the gun as below the port 7.

A somewhat different specific gun structure with stock 34 (Fig. 4) and a barrel 35 with an ejector port 36, has a tendency to throw the end-for-end turned shell as discharged directly outwardly and slightly rearwardly, here also as much as 8' to 10' from the gunner if the port be 5' from the ground, and there may also be a deflection rearwardly of 1' or 2' in this landing to the right. Socket 37 from the gun underside has a spring arm 38 with a stud 39 to catch and lock a magazine 40 with a stock of shells to be used.

As for the tube 9 downward and outward slant for the wall between the portions 18, 17, efficient operation has been found to follow from such an inclination in the range of 25°; so a somewhat similar inclination is serviceable for a wall 41 (Fig. 5) of rectangular cross section tube 42 having bottom 43 terminating in a roll 44 about a hinge pin 45 having at opposite ends of the roll 44, rolls 46 in completing a hinge for a bottom or end door 47 having at its free upper end a spring catch extension 48 to snap over bead 49 of the wall 41 to hold the door 47 normally closed.

From the wall 41, remote from the door 47, there is a bracket or claw extension 50 having an arc or curved portion 51 beyond the port 36 to engage in a normal seat or recess 52 of the gun. As the spring claw 18, 19, 20, 21, pulls the pocket 9 snugly into seating position at the ejector port 7, so the spring claw 50, 51, snugly pulls the open upper end of the pocket 42 into position at the port 36. Downwardly and inwardly extending from the side of the tube 42 toward the gunner, is an arm 53, which may be rigid or resilient. The arm 53, has at its free lower end an eye or port 54 which as positioned adjacent the socket 37 of the gun, may have the clip 38 withdrawn and its stud 39 enter the eye 54, as well as still retain its utility in mounting the magazine 40. There thus results a rigid assembly of this receptacle or empty shell receiver 42 in a clearway position as to gun normal use. Used shells as accumulated in this "brass trap" may be taken therefrom by way of the door 47, to leave sufficient clearway for receiving other shells.

What is claimed and it is desired to secure by Letters Patent is:

1. An accessory for a multiple discharge gun having a charge supply magazine and an empty shell ejector port laterally from its barrel, said accessory being mountable adjacent the magazine and at the port independently of disturbing normal use of the gun nor requiring gun alteration, said accessory comprising a downwardly and outwardly extending box-like receiver having from its upper top portion an extension bracket over the barrel directly to engage the gun, and additional extension means from the receiver extending below the barrel in oppositely coacting relationship, relatively to the extension bracket, with the gun, in thereby rigidly and readily detachably anchoring the receiver in ejector port covering position.

2. An ejected shell receiver adapted to be mounted at the ejector port for shells from a firearm, said receiver extending downwardly and outwardly from the port, and having from its upper top portion an extension bracket over the barrel in providing a channel portion directly to engage the gun, and a pivoted arm mounted on the underside of the receiver adjacent the gun and swingable to snap position with the receiver and having at its other end a flange to engage the gun.

EDWARD E. RICHARDSON.