Dec. 29, 1942. E. OJALVO 2,306,747

GUN DISCHARGE REGISTERING DEVICE

Filed Jan. 13, 1941

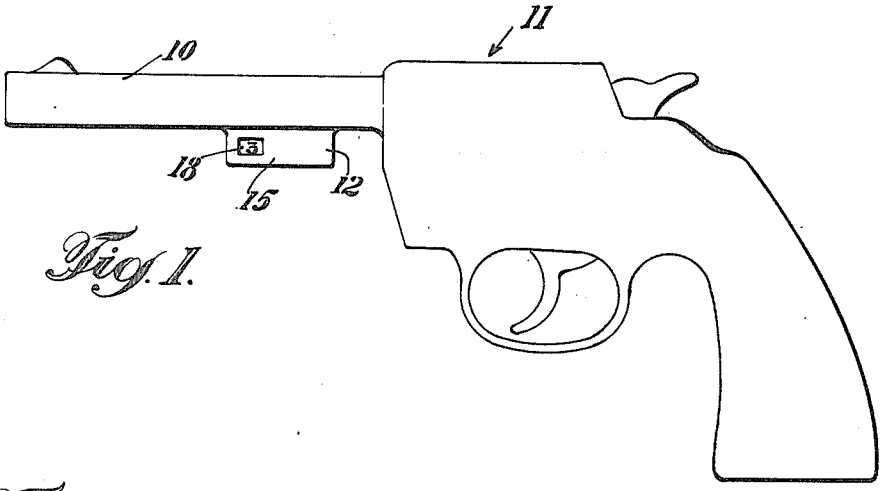


Fig. 1.

Fig. 2.

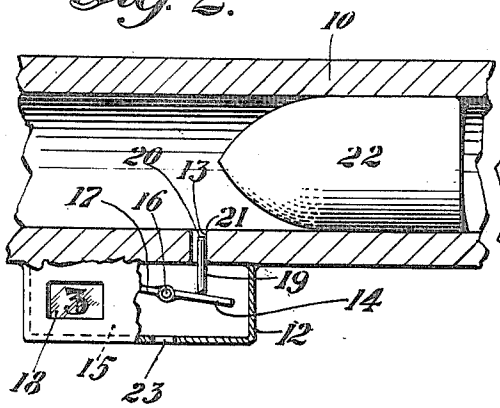


Fig. 3.

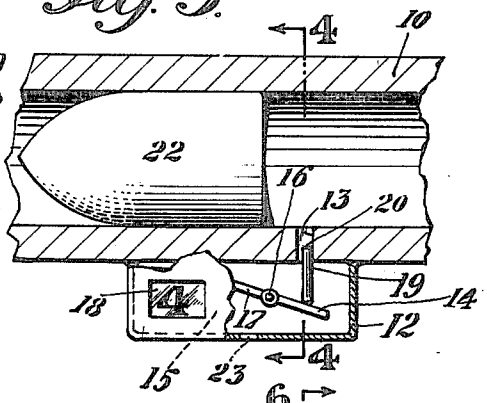


Fig. 4.

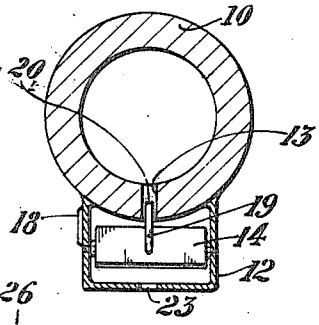


Fig. 5.

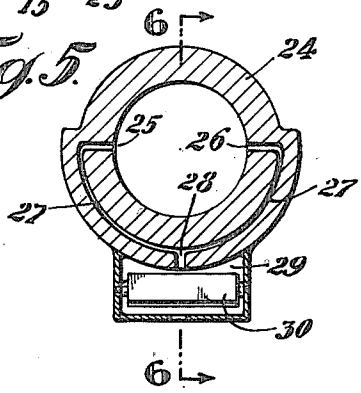
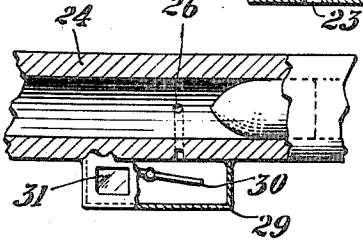


Fig. 6.



INVENTOR.

BY Edmond Ojalvo

E. R. Posnack

ATT'Y.

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GUN DISCHARGE REGISTERING DEVICE

Edmond Ojalvo, New York, N. Y.

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3 Claims. (Cl. 42—1)

This invention relates to gun discharge registering devices, and more particularly to a shot recording meter operatively associated with a gun for indicating the number of times the weapon had been fired since the last setting thereof.

It is primarily within the contemplation of my invention to facilitate the solution of crimes, particularly in cooperation with permit and registration data available to police authorities for ascertaining the identity of persons owning or using firearms. To accomplish this objective I employ, as an element of a gun, a simple mechanism adapted to be actuated upon the firing of the weapon whereby a counter or meter will visibly register each shot as it is fired, thereby indicating the total number of discharges since the last setting of the instrument.

It is a further object of this invention, in the preferred form thereof, to enable the registration or metering mechanism to be actuated by the pressure differential created upon the explosion of the shell.

It is still another object of my invention to enable the aforesaid device to function without in any way affecting the travel of the bullet through the barrel or muzzle of the gun.

Still another object of this invention is to enable the registration mechanism to be readily made either as an integral part of the gun, or as an attachment affixed to it after its completion.

It is also another object of my invention, to enable the mechanism thereof to be conveniently positioned in such manner as not to affect either the sighting of the gun or the balancing thereof.

It is within the further contemplation of this invention to provide means for preventing a tampering with the mechanism thereof, without in any way interfering with its operation.

Other objects, features and advantages will appear from the drawing and the description hereinafter given.

Referring to the drawing,

Figure 1 is an elevation of a gun showing the position of the registering device constituting my invention.

Figure 2 is an enlarged fragmentary longitudinal section of the barrel of the gun showing the position of the essential features of my invention before the discharge of the gun.

Figure 3 is a view similar to Figure 2, showing the position of the parts after the firing thereof.

Figure 4 is a transverse section of Figure 3 taken along line 4—4.

Figure 5 is a transverse section, substantially similar to that of Figure 4, of a modified form of my invention, and

Figure 6 is a fragmentary longitudinal section of Figure 5 taken along line 6—6.

In the drawing, the barrel 10 of gun 11 contains preferably at the underside thereof the casing 12 containing therein certain of the mechanism comprising my invention. In the form of my invention illustrated, the barrel contains at the bottom thereof the channel 13 communicating with the interior of said casing 12. Directly below said channel is the lever 14 operatively connected through suitable linkage to a conventional counter or registering device 15. A detailed description of such device is not herein given, inasmuch as it is well known in the art. In the construction illustrated the said lever 14 is pivotally mounted at 16, the forward end 17 of the lever being operatively connected to the device 15 whereby upon successive pivotal movements of said lever 14, the said device 15 will successively register, and display through the window 18, numbers that will be readily visible. In the preferred arrangement, the rear portion of the lever 14 supports a pin 19 extending into the channel 13, the uppermost edge 20 of said pin being preferably a trifle below the uppermost edge 21 of the channel, the pin having at all times a portion spaced from the walls of the channel.

In the operation of this mechanism, the lever 14 is normally in a neutral position, such as that indicated in Figure 2. After the gun is fired and the bullet is in the position shown in Figure 3 beyond the said channel 13, any pressure differential between the interior of barrel 10 and the interior of casing 12 will cause a flow of air or gas through said channel 13, the said pin 19 being sufficiently thin to permit such a flow. Under normal operating conditions the expanding hot gases behind the bullet 22 will pass through said channel 13 and impinge upon the upper surface of lever 14 to cause a pivotal movement of the lever, an operative actuation of the device 15 and a registration of the next successive number which will be visible through window 18. It is of course understood that the lever can be so arranged that upon an upward or counter-clockwise movement thereof it will actuate the device 15, an arrangement which would be necessary only in the event the speed of the outflowing gases in the barrel will cause a depression therein. In either event, an aperture 23 is provided in the casing 12 at some suitable point

so as to permit communication with the atmosphere.

It is apparent from the construction hereinabove described that there is no obstruction whatsoever to the passage of the bullet 22. Neither need there be any substantial structural change made in the weapon, inasmuch as the registering device, although coactively associated with the barrel, is otherwise disconnected with any other operative part of the gun. If it is desired to make this device a built-in part of the gun, the casing 10 can be constructed integral with the barrel. If on the other hand it is desired to affix the device to a completed gun, it is apparent that all that need be done is to drill a hole 13 within the barrel, and by any suitable means attach to the barrel the casing 12 with the assembled mechanism therein.

It will be further observed that the entire casing 12 is positioned below the barrel and not in the line of sight. Furthermore, it is centrally located along the medial portion of the barrel, so as not to adversely affect the balance of the weapon. This is made possible by the fact that the lever 14 is longitudinally disposed with respect to the barrel 10.

The pin 19 which is supported by the lever 14 will prevent a wire or other instrument from being inserted through the barrel 10 into the channel 13, in an attempt to tamper with the lever. Should such a wire actually be brought into contact with the pin 19, it will merely cause a depression thereof and an operative movement of the lever to cause a registration of the next succeeding number. This will defeat the very purpose of tampering with the device, as it will actually register a shot rather than prevent the registration thereof.

In Figures 5 and 6 is shown a modified form of my invention in which the barrel 24 contains two diametrically opposed apertures 25 and 26 in the lateral sides thereof, these apertures being in communication with channels 27 extending circumferentially around the lower portion of the barrel and communicating through channel 28 with the interior of casing 29. The said channels 27 are preferably formed by making the lower portion of barrel 24 slightly heavier than the upper portion. The meter actuating mechanism is essentially the same as in the form hereinabove referred to, the lever 30 being operatively associated with the registering device 31.

In this last-referred-to form of my invention, any pressure differential between the interior of barrel 24 and casing 29 will be transmitted through the channels 27, thereby actuating the lever 30 and the device 31 substantially as in the first form above described. The employment, however, of the two apertures 25 and 26 not only enhances the sensitivity of the device and gives greater assurance of its operation, but also provides a balancing effect caused by the simultaneous movement of gases through apertures 25 and 26 in opposite directions. Furthermore, the device of Figures 5 and 6 provides greater assurance against tampering, inasmuch as it would be exceedingly difficult for a wire or other instrument to be forced through either of the apertures 25 and 26 to ultimately reach the lever 30.

It is of course understood that the various embodiments above described and shown in the drawing are illustrative of my invention and not employed by way of limitation, inasmuch as numerous changes and modifications may be made within the scope of the appended claims without departing from the spirit of this invention.

What I claim is:

1. A discharge indicating device in combination with the barrel of a gun, comprising a casing associated with the barrel, an aperture communicating between the interior of the barrel and the casing, a counter device within the casing, and movable means within the casing and operatively connected to said counter device and having a portion thereof adjacent and in the path of said aperture, whereby said movable means will be actuated by a flow of gases through said aperture upon the discharge of the gun and the counter device accordingly operatively actuated, said movable means supporting a pin extending into the said aperture and spaced from the wall thereof a sufficient amount to permit the flow of gases therepast.

2. A discharge indicating device in combination with the barrel of a gun, comprising a casing positioned on the underside of the barrel, two laterally enclosed channels extending circumferentially around the lower portion of the barrel and communicating with the interior of said casing, said channels communicating with the interior of said barrel through two oppositely disposed apertures therein, a counter device within the casing, and pressure responsive means within said casing and operatively connected to said counter device, said means being responsive to a pressure differential induced between the casing and barrel by the operative discharge of the gun, whereby the counter device is operatively actuated.

3. A discharge indicating device in combination with the barrel of a gun, comprising a casing positioned on the underside of the barrel, two laterally enclosed channels extending circumferentially around the lower portion of the barrel and joined at the underside thereof to form a single aperture communicating with the interior of the casing, said two channels communicating with the interior of the barrel through two diametrically oppositely disposed apertures therein, a counter device within the casing, a lever pivotally mounted within the casing and extending longitudinally of the barrel, one arm of the lever being operatively connected to the counter device and the other arm being disposed adjacent said aperture and in the path thereof, whereby the lever will be movably actuated by a flow of gases through said aperture upon the discharge of the gun and the counter device accordingly operatively actuated.

EDMOND OJALVO.