June 5, 1945. B. BAKER ET AL 2,377,661

FIREARM

Filed Oct. 24, 1942

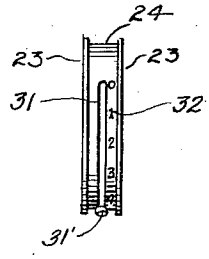


Fig. 3

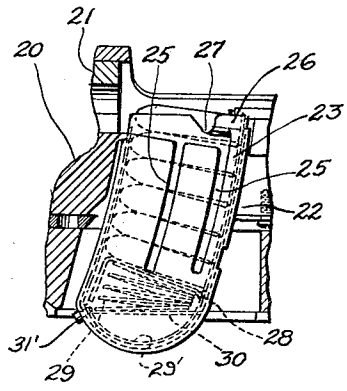


Fig. 1

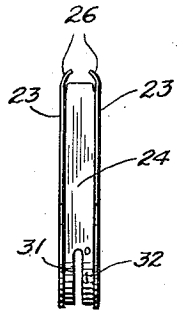


Fig. 2

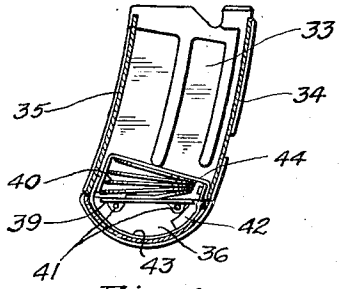


Fig. 4

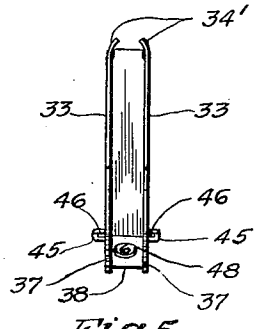


Fig. 5

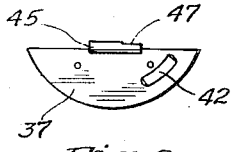


Fig. 6

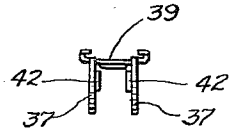


Fig. 7

INVENTORS.
Benjamin Baker
Charles H. Barnes
BY
D. Vetner Smythe
ATTORNEYS.

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FIREARM

Benjamin Baker, Thompson Falls, Mont., and Charles H. Barnes, Bridgeport, Conn., assignors to Remington Arms Company, Inc., Bridgeport, Conn., a corporation of Delaware

Application October 24, 1942, Serial No. 463,176

5 Claims. (Cl. 42—50)

This invention relates to a device for indicating the number of cartridges in the magazine of a gun and particularly the number of cartridges in the magazine of a hand or shoulder gun.

It is especially adapted for use in a box magazine. The usual box magazine contains a spring pressed follower to urge the cartridges upwardly so that movement of the bolt will carry a cartridge from the magazine to the chamber of the gun. An indicator to show the number of cartridges in the magazine must be simple, cheap and easy to construct.

The use of the flexible indicator means of the present invention allows the design of the indicating portion of the magazine to be compact and not interfere with the use of the gun in any manner.

The other objects of the invention will become apparent from the following description and illustrations.

Fig. 1 is a side elevation view partly in section of a portion of a gun with one form of magazine therein.

Fig. 2 is an end view of the magazine of Fig. 1.

Fig. 3 is a bottom view of the magazine of Fig. 1.

Fig. 4 is a sectional side elevation of another form of magazine,

Fig. 5 is an end view of Fig. 4.

Fig. 6 is an elevation of the bottom cap of the magazine of Figs. 4 and 5.

Fig. 7 is an end view of the cap of Fig. 6 with the outside curved end wall plate joining the two sides omitted.

The usual shoulder or hand weapon may be of the single shot variety or have a magazine containing a plurality of cartridges. The magazine gun may be of the automatic or hand operated variety. The cartridges in a magazine gun are fed in such a manner as to be carried into the chamber of the gun in some suitable manner by the operating mechanism of the weapon. The magazines are usually enclosed or completely located inside the gun in such a way as to render difficult or practically impossible the ascertainment of the number of cartridges in the magazine. It is desirable therefore to provide an indicating means to show the number of cartridges in the magazine when the magazine is in place within the gun or enclosed therein. The present invention discloses such an indicating device in connection with a box magazine of the removable variety.

Referring now to Fig. 1, a receiver is shown in fragmentary form at 20 having a barrel 21 fastened thereto. A passage 22 is located in the receiver to accommodate a box magazine of desired shape. The box magazine comprises two side plates 23 which are spaced apart by the end plate or plates 24. The plate 24 may be continuous or may be made in a plurality of sections. The side plates may be joined to the end plate or wall in any suitable manner, such as by a tongue and slot connection. The side plates 23 may have indentations 25 to assist in guiding the cartridge in its path upwardly within the magazine. The upper end of the magazine may have cartridge retaining means 26 in the form of bent lips. These can be made of such a size as to prevent the rim of the cartridge from passing through the cartridge retaining means in the case of rimfire cartridges shown in the illustration. The use of retaining means and the form thereof depends on the particular type of cartridge involved. An opening 27 allows the rim of the cartridge, as it is carried forward, to be moved upwardly and into position in front of the bolt so that it may be carried into the chamber by the bolt. The magazine has a follower (shown in dotted lines) at 28 which is pressed upwardly by the coil spring 29. The coil spring may have its lower portion resting on any suitable support such as shown schematically in dotted lines at 30. One leg or portion of the follower 28 may have a flexible ribbon or means 29' joined thereto which can be guided by the end wall 24, the end of said ribbon opposite the follower being free. The ribbon should be sufficiently stiff to follow the curved end. A slot 31 is cut in the end wall as shown. An indicator means 31' joined to the flexible ribbon and projecting out of the slot serves to indicate the location of the end of the flexible means. The projecting indicator 31' thus will serve to show the relative position of the follower 28 and thereby inform the user of the number of cartridges within the magazine. Suitable indicia 32 may be placed on the end wall member 24 so as to readily show the number of cartridges within the magazine.

Another modification of the indicator is shown in Figs. 4 to 7, inclusive. There are two side plates 33 joined by end plates 34 and 35. These parts may be made by stamping, with tongues on the end wall plates for engaging suitable holes in the side plates. When the parts are assembled, the tongues can be peened over so as to hold the plates together. The side plates 33 can have cartridge retaining lips 34' similar to Figs. 1 to 3, inclusive.

A cap member 36 composed of two side plates 37 and a curved end plate 38 is shown in place

at the bottom of the upper portion of the magazine. A platform **39** serving as a support for the magazine follower spring **40** is fastened between the two side plates by means of pins **41**. The platform may of course be made integral with the side plates if desired. The side plates **37** can have two raised guides **42** serving to direct the flexible indicator ribbon **43** in its movement downwardly into and around the interior face of the cap. Guides are not absolutely necessary on the other side of the cap because the ribbon will readily follow the inside surface of the end wall although they may be used. The guides can be formed by upsetting the side wall or can be separate pieces fastened to the wall. A cartridge follower **44** similar to that shown in Figs. 1 to 3 is provided.

The cap **36** may be held in place on the upper magazine portion by grooved projections **45** engaging the outstanding lips **46** of the magazine side walls. The aforementioned grooved projection and lips may be made by bending extended portions of the side plates of the two parts. The grooved members **45** can have a portion **47** cut away so as to facilitate joining of the parts or the grooved members can be made shorter.

The cap **36** is slid into place on the bottom of the upper portion of the magazine after the follower spring and ribbon are in place. The bottom surface of wall **35** and mating surface of end wall **38** can be made to overlap so that the bottom portion of **35** will hold the cap in place. The parts can be dismantled by prying them apart sufficiently so that the mating portions of the walls will clear and allow withdrawal of the cap from the upper magazine.

The indicator ribbon can have distinguishing indicia, such as numerals, indicating the number of cartridges in the chamber or the number fired as desired. These numerals cooperate with a means such as the window **48** as shown in Fig. 5 to give the indication.

The flexible ribbon will operate more smoothly with the guides **42** present although the shape of the cap shown is such that the ribbon will be guided by the end wall of the cap.

The construction shown in Figs. 4 to 7, inclusive, can be used to convert existent magazines of the type shown by knocking out the bottom plate and furnishing a cap similar to **36** together with the necessary follower and attached flexible ribbon.

It will be apparent that the parts may be die cast, made from stampings, or machined from solid stock. An indicator is provided herewith that can be easily read from the exterior of the gun and yet is simple, cheap and easy to build and will not be in the way of the user of the gun.

What is claimed is:

1. A removable box cartridge magazine including side and end walls, said magazine having an open end for discharging cartridges, the opposite closed end wall of the magazine being curved; a spring pressed cartridge follower in said magazine; and a flexible member operatively connected at one end to said follower, the opposite end of said flexible member being free, said flexible member being sufficiently stiff to be guided by engagement with the inner curved wall portion of the magazine, said flexible member forming an element of a magazine load indicator.

2. A removable box cartridge magazine including side and end walls, said magazine having an open end for discharging cartridges and an opposite curved end wall, said curved end wall having a slot therein; a cartridge follower in said magazine; a flexible member operatively connected at one end to said follower, the opposite end of said flexible member being free, said flexible member being sufficiently stiff to be guided by engagement with the inner curved wall portion of the magazine; and projecting means on said flexible member slidably mounted in said slot for indicating the magazine load.

3. A removable box cartridge magazine having side and end walls and having an open end for discharging cartridges; a curved removable cap member for the end of said magazine opposite to said open end; a cartridge follower in said magazine; and a flexible member operatively connected at one end to said follower and forming an element of a magazine load indicator, the opposite end of said flexible member being substantially free, said flexible member being sufficiently stiff to be guided by engagement with the inner curved wall of said cap member.

4. A removable box cartridge magazine having side and end walls; a curved cap member having sides and an end wall for one end of the magazine, said sides having means thereon engageable with the side walls of the box magazine; means on the side walls of the magazine for engaging said engageable members on the side walls of the cap for removably mounting the cap on the magazine; a cartridge follower in said magazine; a spring for said follower; a support in said cap for said spring; a flexible member operatively connected to said follower; guiding means on the side walls of said cap, said flexible member being slidably guided by the curved end wall of the cap and said guiding means; and indicia on said flexible means, said curved end wall having an aperture therein for cooperation with said indicia to indicate the magazine load.

5. A removable box cartridge magazine having side and end walls and having an open end for discharging cartridges; a cartridge follower in said magazine; a follower spring; a curved removable cap member for the end of said magazine opposite to said open end, said cap having side walls and a curved end wall, a platform located between said cap side walls for supporting said follower spring, and inwardly projecting guiding means on said cap side walls; and a flexible member operatively connected to said follower and forming an element of a magazine load indicator, said flexible member being guided by said curved end wall and guiding means of said cap.

BENJAMIN BAKER.
CHARLES H. BARNES.