

FM 23-20

Lt. G. B. Patton

WAR DEPARTMENT

BASIC FIELD MANUAL



BROWNING AUTOMATIC
RIFLE, CALIBER .30, M1918
WITHOUT BIPOD

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**BROWNING AUTOMATIC RIFLE
CALIBER .30, M1918
WITHOUT BIPOD**

**Prepared under direction of the
Chief of Infantry**



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FM 23-20, Basic Field Manual, Browning Automatic Rifle, Caliber .30, M1918, without Bipod, is published for the information and guidance of all concerned.

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BY ORDER OF THE SECRETARY OF WAR:

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Major General,
The Adjutant General.

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(This manual supersedes chapter 2, part one, Basic Field Manual, Volume III, March 25, 1932, and TR 1300-30E, October 12, 1939)

CHAPTER 1

MECHANICAL TRAINING

	Paragraphs
SECTION I. General	1-3
II. Disassembly and assembly	4-12
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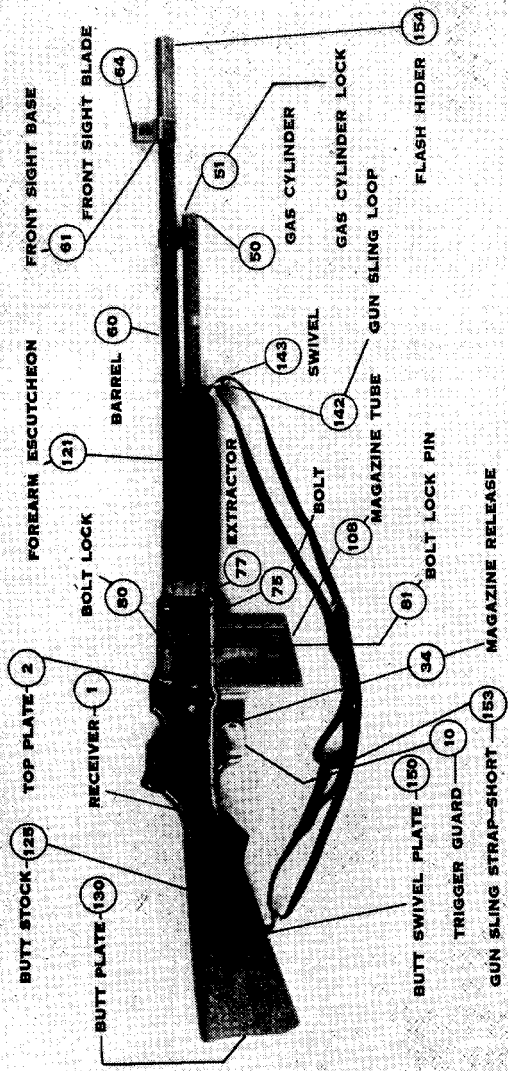
SECTION I

GENERAL

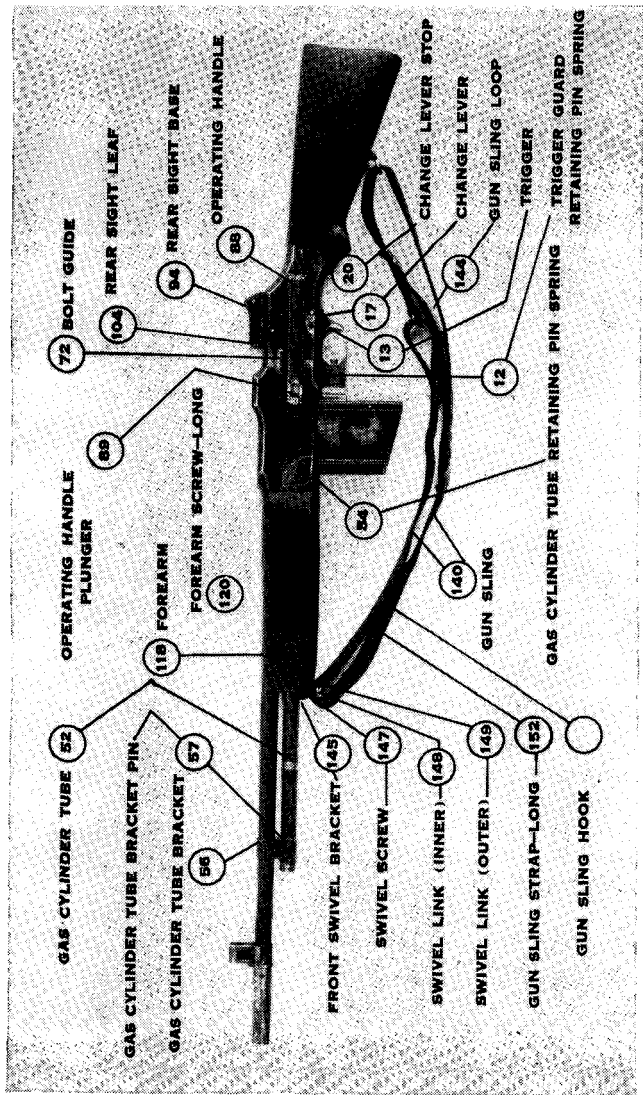
■ 1. **OBJECT.**—This chapter is designed to give the soldier training that will insure his ability to maintain the rifle and keep it in operation.

■ 2. **DESCRIPTION OF RIFLE.**—The Browning automatic rifle, caliber .30, M1918, without bipod, is an air-cooled, gas-operated, magazine-fed, shoulder weapon. (See fig. 1.) It weighs 15 pounds 14 ounces. The ammunition is loaded in magazines of 20 rounds each. The weight of the magazine when empty is 7 ounces; when filled, 1 pound 7 ounces. The design permits semiautomatic and automatic fire.

■ 3. **FIREPOWER.**—This rifle is capable of semiautomatic fire at the rate of 100 rounds per minute. Its rate of effective sustained fire is about 40 rounds per minute.



① Right side view.



② Left side view.

FIGURE 1.—Browning automatic rifle, caliber .30, M1918, without bipod.

SECTION II

DISASSEMBLY AND ASSEMBLY

■ 4. WHEN TAKEN UP.—This training will be taken up as soon as practicable after the soldier receives his rifle. In any case it will be completed before any firing is done with the rifle by the individual. Instruction in the care and cleaning of the rifle will also be covered.

■ 5. ORGANIZATION.—In units the size of a company or platoon, all enlisted men are combined into one or more groups under their officers, or selected noncommissioned officers, as instructors. Other noncommissioned officers supervise the work as directed. Squad leaders supervise the work of their squads.

■ 6. CARE TO BE EXERCISED.—*a.* The rifle can be readily disassembled and assembled without applying force. The use of force is prohibited.

b. The rifle will not be disassembled or assembled against time as this serves no useful purpose and results in burring and damaging the parts. Instruction in disassembling and assembling the automatic rifle blindfolded may be given to men who have passed their tests in mechanical training. In all work in disassembling the rifle, the men will be taught to lay the parts out on a smooth, clean surface in the proper sequence for assembling. The trigger mechanism will not be disassembled or assembled blindfolded.

■ 7. NOMENCLATURE.—The names of the parts to which reference is made in mechanical training are readily learned as this training progresses. Instructors will therefore take care to name the parts clearly and correctly in their work. A sufficient knowledge of the nomenclature of the rifle is gained by the soldier during the instruction in mechanical training.

■ 8. DISASSEMBLING.—*a. General.*—Authorized disassembly by the soldier is limited to that required for proper care and maintenance of the rifle. Further disassembly will be done under the supervision of an officer or ordnance personnel. The individual soldier is prohibited from disassembling the following:

- (1) Forearm group.
- (2) Barrel group.
- (3) Butt stock and buffer group.
- (4) Rear-sight group.
- (5) Receiver group.

b. Sequence.—The disassembly of the rifle authorized to be performed by the individual soldier without supervision is performed in the following sequence:

(1) *Operating group.*

- (a) Cock the rifle.
 - (b) Remove gas cylinder tube retaining pin.
 - (c) Remove gas cylinder tube and forearm (let mechanism forward easily).
 - (d) Remove trigger guard retaining pin.
 - (e) Remove trigger guard.
 - (f) Remove recoil spring guide and recoil spring.
 - (g) Push hammer pin through hammer pin hole in receiver.
 - (h) Remove operating handle.
 - (i) Remove hammer pin.
 - (j) Remove hammer.
 - (k) Remove slide.
 - (l) Push out bolt guide.
 - (m) Remove bolt, bolt lock, and bolt link.
 - (n) Remove firing pin.
 - (o) Remove bolt link pin and bolt link.
 - (p) Remove extractor and spring.
- (2) *Trigger mechanism.*
- (a) Remove ejector.
 - (b) Remove magazine catch spring.
 - (c) Remove magazine catch pin.
 - (d) Remove magazine catch.
 - (e) Remove magazine release.
 - (f) Remove sear spring.
 - (g) Remove trigger pin.
 - (h) Remove trigger and connector.
 - (i) Remove sear pin.
 - (j) Remove sear.
 - (k) Remove sear carrier and counter-recoil spring.

(l) Remove change lever spring.

(m) Remove change lever.

c. *Method.*—The following detailed explanation of the method of disassembling the automatic rifle is furnished as an aid to instructors:

(1) *Operating group.*—Lay the rifle on the table, barrel down, pointing to the left. Cock the piece. This must be done in order that the gas cylinder tube may clear the gas piston and gas cylinder tube bracket. Turn the cylinder tube retaining pin spring ((54), fig. 1 (2)), 180° in a clockwise direction and lift out gas cylinder tube (52) retaining pin. Remove the gas cylinder tube and forearm (118). Let the slide (fig. 2) forward *easily* by pressing the trigger with the thumb of the right hand and at the same time grasp the slide with the left hand so that the middle and index fingers are astride the gas piston. Turn the trigger guard retaining pin spring ((12), fig. 1 (2)), 90° in a clockwise direction and lift out the pin. Lift out the trigger guard group.

Remove the recoil-spring guide (Fig. 2) and the recoil spring by pressing the right index finger on the checkered surface of the recoil-spring rod and turning it until the ends are clear of the retaining shoulders. Line up the hammer-pin holes on the receiver and the operating handle by inserting the point of the recoil-spring guide or the point of a dummy cartridge in the hole on the operating handle with the right hand, press against the hammer pin and push the operating handle backward with the left hand. The recoil-spring guide will push the hammer pin through its hole in the receiver as the hammer pin registers with the latter. Remove the operating handle ((88), fig. 1 (2)) by pulling it straight to the rear. Remove the hammer pin. Push the hammer (fig. 2) forward out of its seat in the slide and lift it out of the receiver. Remove the slide by pulling it forward out of the receiver, being careful that the bolt link is pushed well down, thus allowing the slide to clear. In removing the slide, take care to avoid striking the gas piston or rings against the gas cylinder tube bracket ((56), fig. 1 (2)). Force the bolt guide (72) out with the left thumb or the point

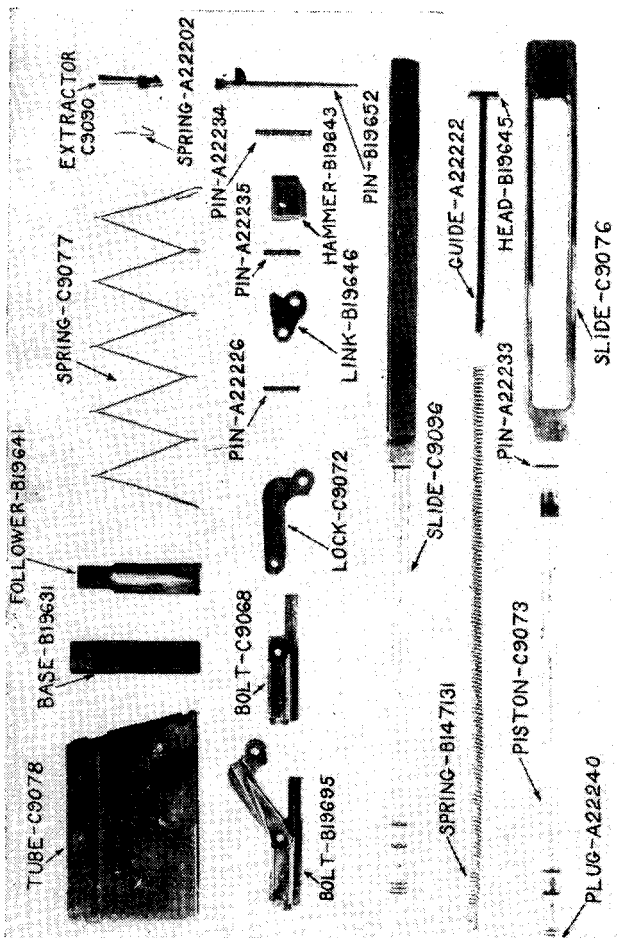


FIGURE 2.—Gas piston and bolt group parts.

of a bullet. Lift out the bolt, bolt lock, and bolt link by pulling them slowly to the rear end of the receiver and up with right thumb and forefinger. Pull out the firing pin (fig. 2) from its way in the bolt. Push the bolt-link pin and remove the bolt link. Remove the extractor by pressing the point of a dummy cartridge against the claw and exerting pressure upward and to the front. Remove the extractor spring.

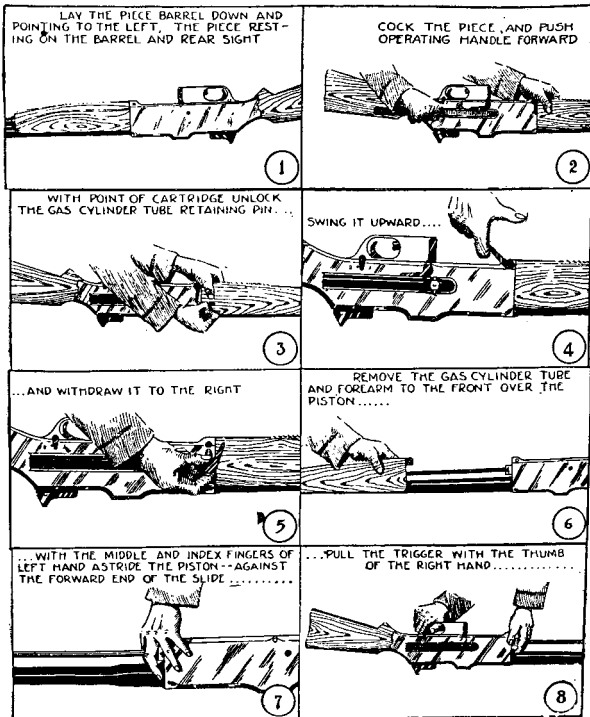


FIGURE 3.—Method of disassembling.

(2) *Trigger mechanism.*—(a) Depress the ejector lock with the point of a dummy cartridge. Hold the thumb in front of the magazine-catch spring to prevent it from flying out and then slide the ejector out of its seat. (See fig. 5.) Remove the magazine-catch spring. Remove the magazine-catch pin, lift out the magazine catch (see fig. 6) and magazine release (see fig. 7).

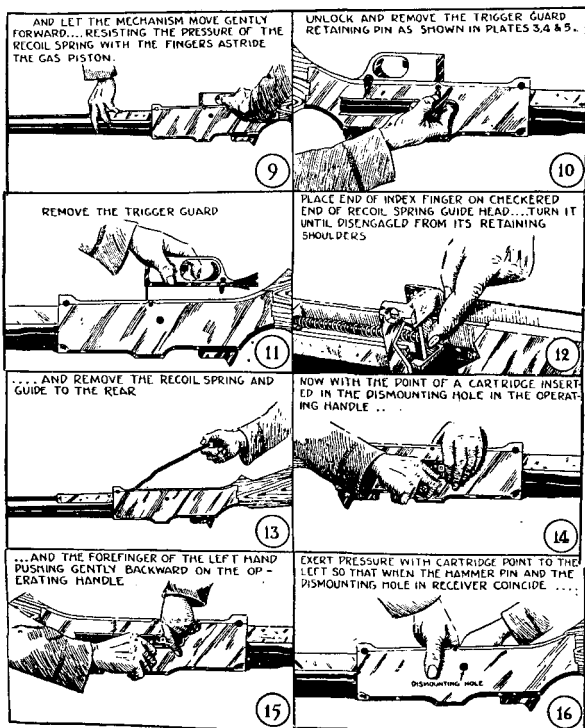


FIGURE 3.—Method of disassembling—Continued.

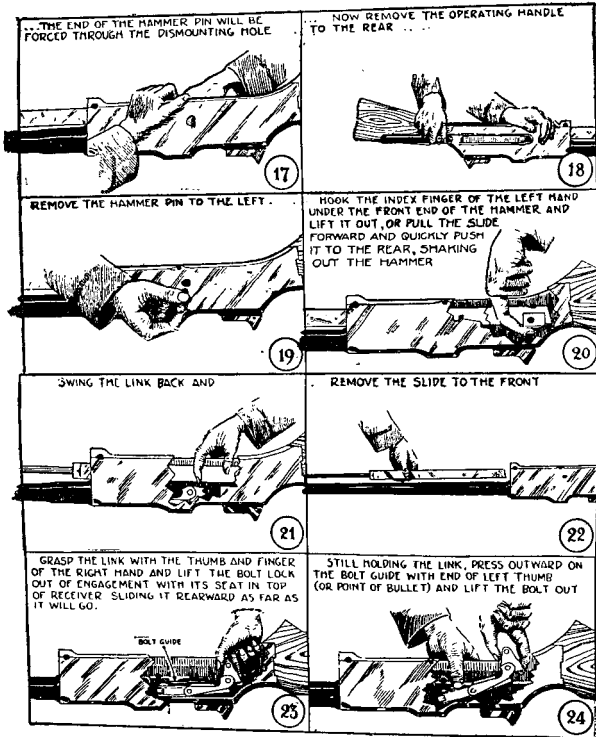


FIGURE 3.—Method of disassembling—Continued.

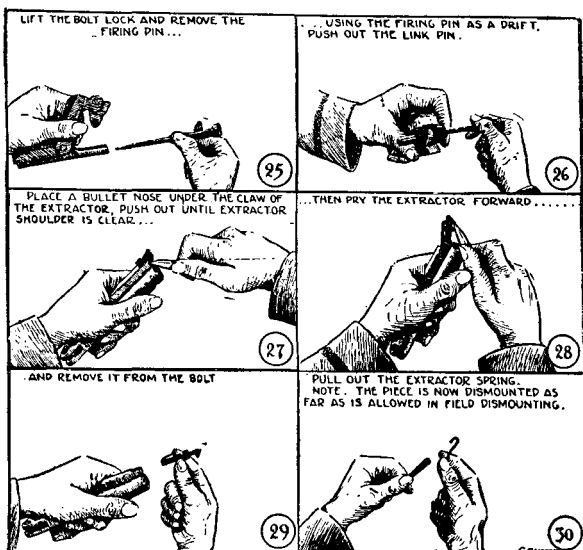


FIGURE 3.—Method of disassembling—Continued.

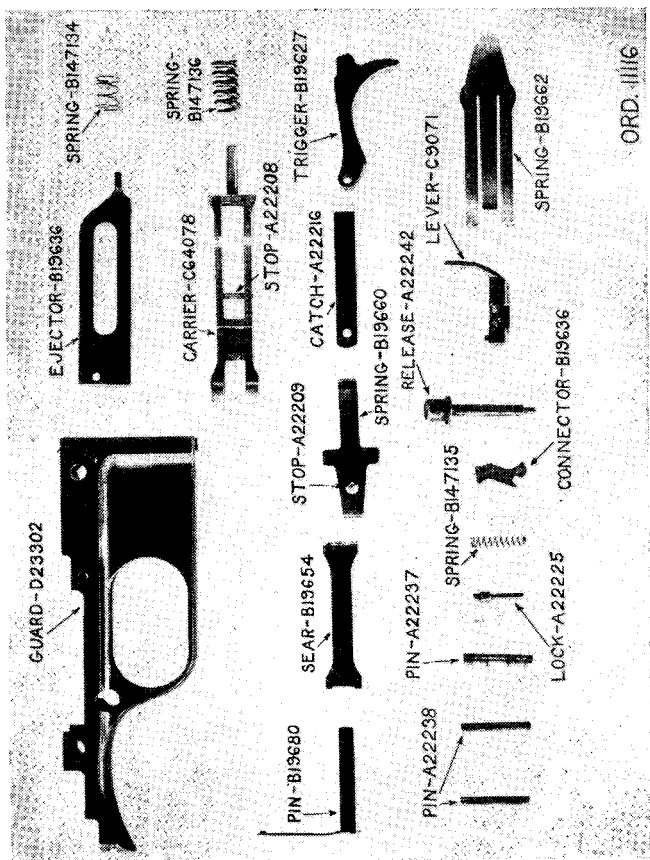


FIGURE 4.—Trigger guard group.

(b) Insert the trigger guard retaining pin spring under the sear spring above the connector stop. Pry up, pressing against the sear spring with thumb and pull it out to the rear. (See fig. 8.) Push out the trigger pin (see fig. 9). The trigger pin must always be removed before the sear pin in order that the tension of the counterrecoil spring will always be on the sear pin. Remove the trigger and connector through top of trigger guard. (See fig. 10.) Push out the sear pin, using the recoil spring guide (fig. 2). Remove the sear (see fig. 11). Pry up on the sear carrier (see fig. 12) and lift out the sear carrier and counterrecoil spring. Remove the change lever spring by prying the bent end out of its seat with the rounded end of the sear spring and moving the change lever from front to rear. When clear of the change lever, push it out the rest of the way by pressing with the thumb against the sear stop. Pull out the change lever.

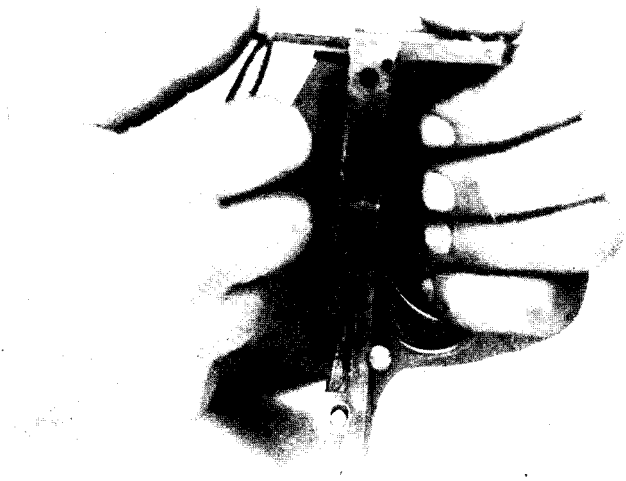


FIGURE 5.—Removing ejector.

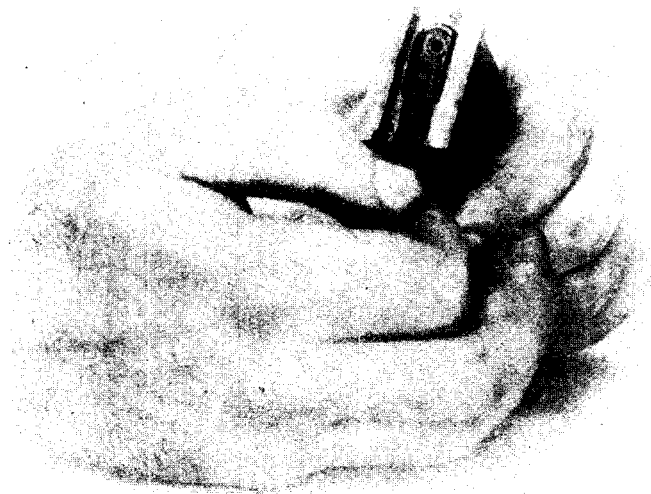


FIGURE 6.—Removing magazine catch.

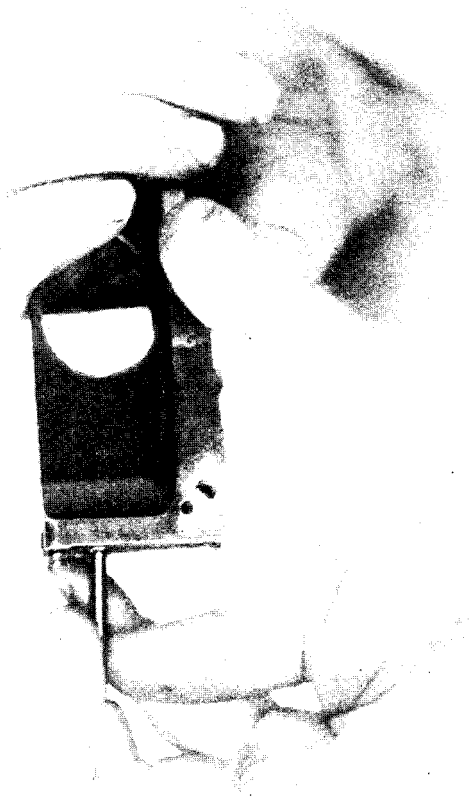


FIGURE 7.—Removing magazine release.



FIGURE 8.—Removing sear spring.