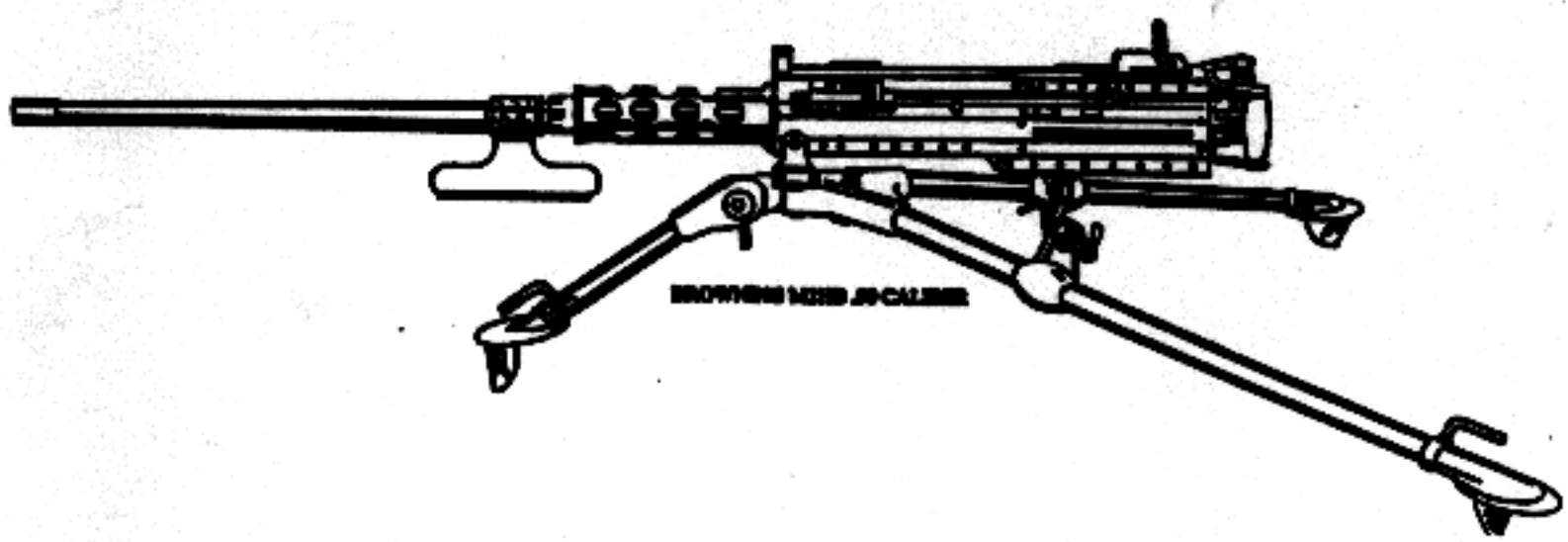
FIELD MANUAL

BROWNING MACHINEGUN CALIBER .50 HB, M2



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BROWNING MACHINEGUN CALIBER .50 HB, M2

			Paragraph	Page
PART ONE.		MECHANICAL TRAINING AND CREW TRAINING		
CHAPTER 1.		INTRODUCTION		
Section	I.	General	1, 2	1
	II.	Description	3–5	1–3
CHAPTER 2.		DISASSEMBLY AND ASSEMBLY		
Section	I.	Introduction	6	4
	II.	General Disassembly	7	4
	III.	General Assembly	8	19
	IV.	Detailed Disassembly and Assembly	9, 10	24–67
	V.	Headspace and Timing	11, 12	77–79
CHAPTER 3.		OPERATION AND FUNCTIONING		
Section	I.	Operation	13–17	81, 82
	II.	Functioning	18–26	82–88
CHAPTER 4.		MOUNTS		
Section	I.	Ground Mounts	27–29	95, 96
	II.	Vehicular Mounts	30–33	97–99
CHAPTER 5.		MALFUNCTIONS, STOPPAGES, IMMEDIATE ACTION, MAINTENANCE, INSPECTION, AND DESTRUCTION		
Section	I.	Malfunctions and Stoppages	34, 35	100
	II.	Immediate Action	36–38	101
	III.	Maintenance (Care and Cleaning)	39–43	103
	IV.	Inspection	44	104
	V.	Destruction	45, 46	104
CHAPTER 6.		CREW TRAINING		
Section	I.	Crew Drill	47–52	106–111
	II.	Hand Carry	53–55	114, 115
PART TWO.		TECHNIQUE OF FIRE AND EMPLOYMENT		
CHAPTER 7.		TECHNIQUE OF FIRE DURING PERIODS OF GOOD VISIBILITY		
Section	I.	Introduction	56, 57	118
	II.	Characteristics of Fire	58–61	118–120
	III.	Classes of Fire	62–65	120
	IV.	Range Determination	66–71	123–126
	V.	Fire Control and Fire Commands	72–76	127–130
	VI.	Principles of Application of Fire	77–80	130–133
	VII.	Application of Fire (Target Engagement/Direct Lay)	81–86	134–136
	VIII.	Overhead Fire	87–89	137, 138
	IX.	Defilade Position	90–96	138–141
CHAPTER 8.		TECHNIQUE OF FIRE DURING PERIODS OF LIMITED VISIBILITY		
Section	I.	Introduction	97, 98	142
	II.	Techniques of Engaging Targets	99–101	143
	III.	Techniques of Delivering Preplanned Fires	102–105	143, 144
	IV.	Range Cards	106, 107	147

* This manual supersedes FM 23–65, 5 December 1958, including all changes.

CHAPTER 9.	MARKSMANSHIP TRAINING	108—110		151
Section I.	General	111—121		151—159
II.	Preparatory Exercises	122—124		160
III.	Range Firing	125—132		161—168
IV.	Conduct of Range Firing	133—145		168—175
V.	Conduct of Exercises			
CHAPTER 10.	COURSES OF FIRE: FIELD TARGET FIRING	146, 147		177
Section I.	Introduction	148—150		177—179
II.	Day Defensive Field Firing	151—154		180—182
III.	Predetermined Firing Courses			
CHAPTER 11.	ANTIAIRCRAFT GUNNERY	155—157		184, 185
Section I.	Engagement and Employment	158, 159		185
II.	Target Courses	160—162		187
III.	Requirements for a Hit	163, 164		188, 189
IV.	Lead	165, 166		190
V.	Target Engagement	167—170		191—195
VI.	Tracer Observation			
CHAPTER 12.	ADVICE TO INSTRUCTORS	171—175		196
Section I.	General	176—180		196—198
II.	Mechanical Training	181, 182		199
III.	Mounts	183		200
IV.	Organizational Maintenance	184, 185		200
V.	Mounting and Placing the Gun in Action	186—189		200—202
VI.	Marksmanship	190—197		202—205
VII.	Technique of Fire, General, Direct Lay, Predetermined Fires, and Position Deflade	198		205
VIII.	Familiarization Firing	199—201		205—207
IX.	Antiaircraft Gunnery Training			
APPENDIX A.	REFERENCES			208
B.	POSITION OF PARTS FOR LEFT-HAND FEED			209
C.	BEFORE, DURING, AND AFTER OPERATION CHECKLIST			210
D.	INSPECTION CHECKLIST			211
E.	AMMUNITION			212
F.	TELESCOPIC SIGHTS			215
G.	CREW-SERVED WEAPON NIGHT VISION SIGHT			216
H.	AERIAL TARGET ENGAGEMENT			217
INDEX				219

PART ONE
MECHANICAL TRAINING AND CREW TRAINING

CHAPTER 1
INTRODUCTION

Section I. GENERAL

1. Purpose and Scope

a. This manual is a guide for training on the Browning machinegun, caliber .50 HB, M2. It provides a sound and detailed basis for the conduct of training, to include mechanical and crew training, techniques of fire, employment, and layout and operation of machinegun ranges and courses of fire. Information in this manual is presented in a logical sequence from the basic to the more complex phases of instruction. All instruction can be given either on the range or in the vicinity (concurrent training stations).

b. The material contained herein is applicable without modification to nuclear and conventional warfare.

c. Users of this manual are encouraged to submit recommended changes or comments to improve the manual. Comments should be keyed to the specific page, paragraph, and line of the text in which the change is recommended. Reasons will be provided for each comment to insure understanding and complete evaluation. Comments should be prepared using DA Form 2028 (Recommended Changes to Publications) and forwarded direct to the Commandant, US Army Infantry School, Fort Benning, Georgia 31905.

2. Roles of the Machinegun

a. The machinegun supports the infantryman in both the attack and defense. It provides the rifleman with the heavy volume of close, accurate, and continuous fire necessary to accomplish his mission in the attack. The long range, close defensive, and final protective fires delivered by this gun form an integral part of the unit's defensive fires.

b. The caliber .50 machinegun is also used to:

(1) Provide protection for motor movements, vehicle parks, and train bivouacs.

(2) Defend against low-flying hostile aircraft.

(3) Destroy lightly armored vehicles.

(4) Reconnaissance by fire on suspected enemy positions.

Section II. DESCRIPTION

3. Principles of Operation

The Browning machinegun, caliber .50 HB, M2, is a belt-fed, recoil-operated, air-cooled, crew-operated machinegun. The gun is capable of single-shot, as well as automatic fire (fig 1).

a. Belt Feed. By repositioning some of the component parts, the gun is capable of alternate feed (ammunition can be fed into the weapon from the right or the left side of the receiver); however, the infantry uses only left side feed. A disintegrating metallic link belt is used in feeding.

b. Recoil Operation. The force for recoil operation is furnished by expanding powder gases which are controlled by various springs, cams, and levers.

c. Air Cooling. Maximum surface of the barrel and receiver are exposed to permit air cooling. Perforations in the barrel support allow air to circulate around the breach end of the barrel and help in cooling the parts. The heavy barrel is used to retard early overheating.

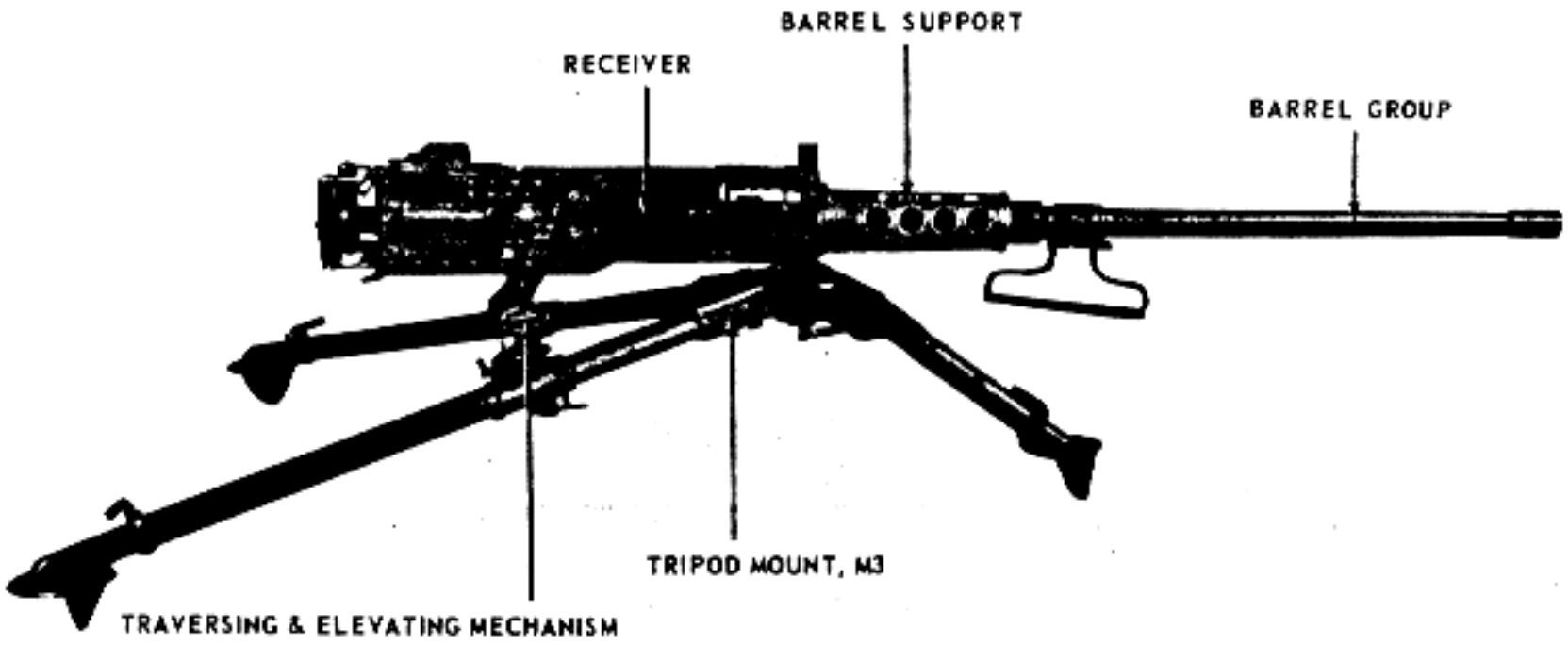

Figure 1. Browning machinegun, cal .50 HB, M2 on tripod mount, M3.

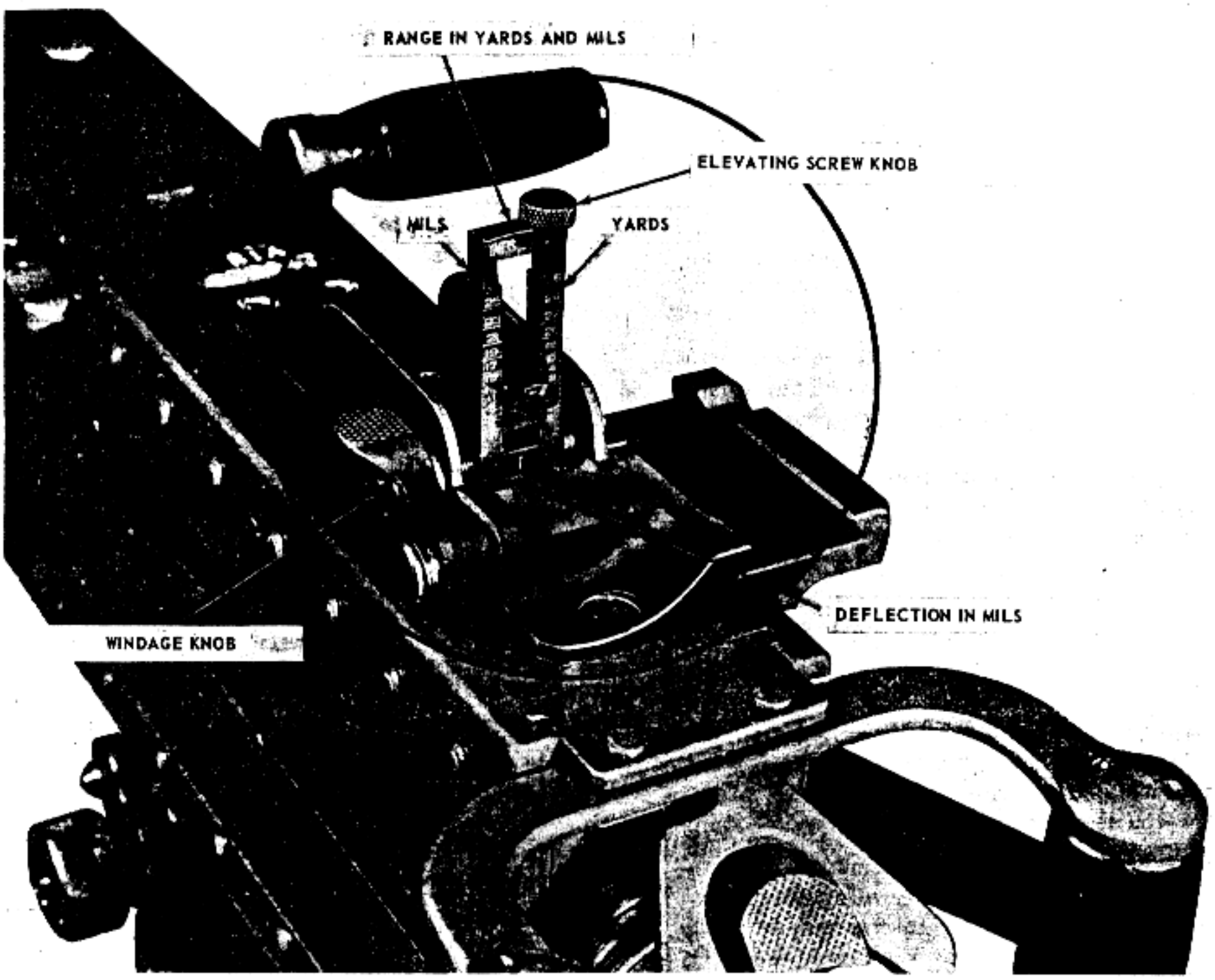

Figure 2. Leaf type rear sight.

4. Sights

The gun has a leaf-type rear sight, graduated in both yards and mils for ranges from 100 to 2,600 yards, and from 0 to 62 mils. A windage knob permits deflection changes of 5 mils right or left of center (fig 2). The front sight is a semi-fixed blade type with cover (fig 3).

5. General Data

Weight of receiver group	60 lb.
Weight of barrel	24 lb. (approx.)
Weight of tripod mount M3 (w/traversing and elevating mechanism and pintle w/bolt)	44 lb.
Total weight of gun, complete, on tripod mount, M3	128 lb. (approx.)
Maximum range (M2 ball)	6,800 meters (approx.)
Maximum effective range	1,830 meters
Rates of fire:	
Sustained	40 rd. or less per min.
Rapid	40 rd. or more per min.
Cyclic rate of fire	450–550 rd. per min.
Muzzle velocity (M2 ball)	3,050 ft per sec (2,080 mph)
Length of gun, overall	65 in. (approx.)
Length of barrel	45 in.

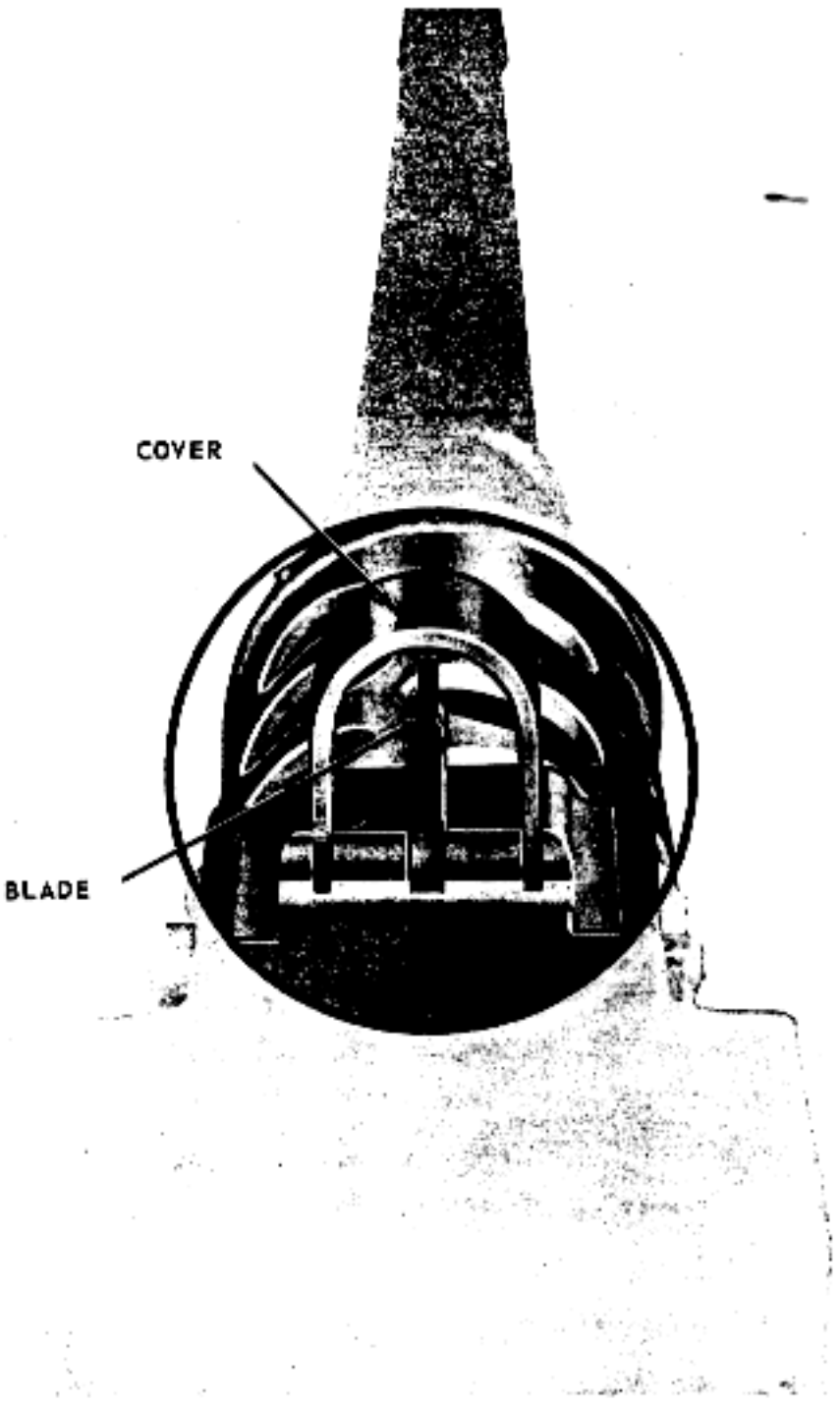

Figure 3. Front sight, cover, and blade.

CHAPTER 2

DISASSEMBLY AND ASSEMBLY

Section I. INTRODUCTION

6. General

a. Types of Disassembly and Assembly. The two classifications of disassembly and assembly are:

(1) *General disassembly and assembly.* Removing and replacing major groups and assemblies of the gun.

(2) *Detailed disassembly and assembly.* Removing and replacing all component parts of each major group and assembly.

b. Changing Parts. When time is critical and a major group or assembly is available, a broken part can be replaced by substituting a complete group or assembly containing the part. When a major group or assembly within the receiver is replaced, headspace and timing must be set.

Section II. GENERAL DISASSEMBLY

7. Procedure

General disassembly consists of removing the major groups and assemblies for inspection or cleaning.

a. Clearing the Gun. Before disassembly can be conducted, the gun must be cleared as prescribed in paragraph 15.

b. Barrel group. Turn the cover latch and raise the cover group (fig 4). Grasp the retracting slide handle with the right hand, *palm up,* and pull the recoiling parts to the rear until the lug on the barrel locking spring alines with the ⅝-inch hole in the right sideplate of the receiver (just below the feedway exit). The barrel can be turned only when the lug is alined with the ⅝-inch hole. Place the smallest loop of a caliber .50 link, or suitable spacer, between the trunnion block and the barrel extension (fig 5 and 6). This holds the barrel locking spring lug alined with the ⅝-inch hole in the right sideplate. Unscrew the barrel from the receiver (fig 7). Be careful not to damage the threads or barrel locking notches when setting the barrel down. Pull back slightly on the retracting slide handle and remove the link or spacer from the receiver.

c. Backplate Group. Insure that the bolt latch release is in the up position, free of the bolt latch release lock. If it is not, push down on the bolt latch release and turn the buffer tube sleeve to the right to free it (fig 8). *The bolt must be forward before the backplate is removed.* If the bolt is to the rear, push down on the bolt latch release allowing the bolt to go forward.

***Caution.* Care must be taken to prevent the bolt from slamming forward with the barrel removed.**

Use the retracting slide handle to ease the bolt forward after the bolt latch is released. The backplate latch lock and latch are below the buffer tube. Pull out on the lock and up on the latch; remove the backplate by lifting it straight up (fig 9).

d. Driving Spring Rod Assembly. The inner and outer driving springs and driving spring rod are located inside the receiver next to the right sideplate (fig 10). Push in on the head of the driving spring rod and push to the left to remove the driving spring rod retaining pin from its seat in the right sideplate. Pull the driving spring assembly to the rear and out of the receiver.

***Caution.* Never attempt to cock the gun while the backplate is off and the driving spring assembly is in place. If the backplate is off and the driving spring assembly is compressed, the retaining pin on the driving spring rod can slip from its seat in the sideplate and could cause serious injuries to anyone behind the gun.**

e. Bolt Stud. Grasp the retracting slide handle and give it a quick jerk, freeing the bolt from the barrel extension. Aline the shoulder on the bolt stud with the clearance hole in the bolt slot on the rght sideplate, and remove the bolt stud (fig 11).

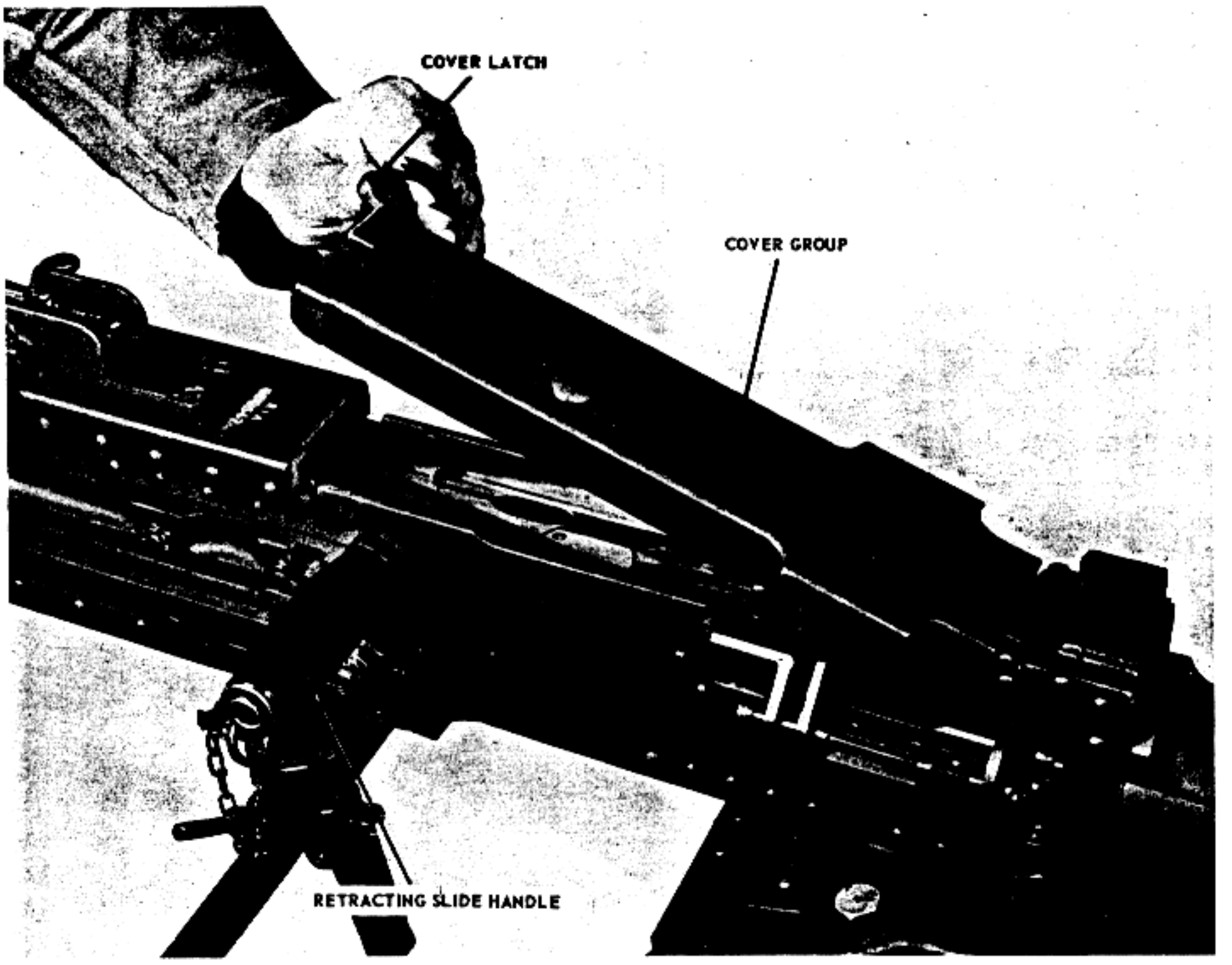

Figure 4. Raising the cover.

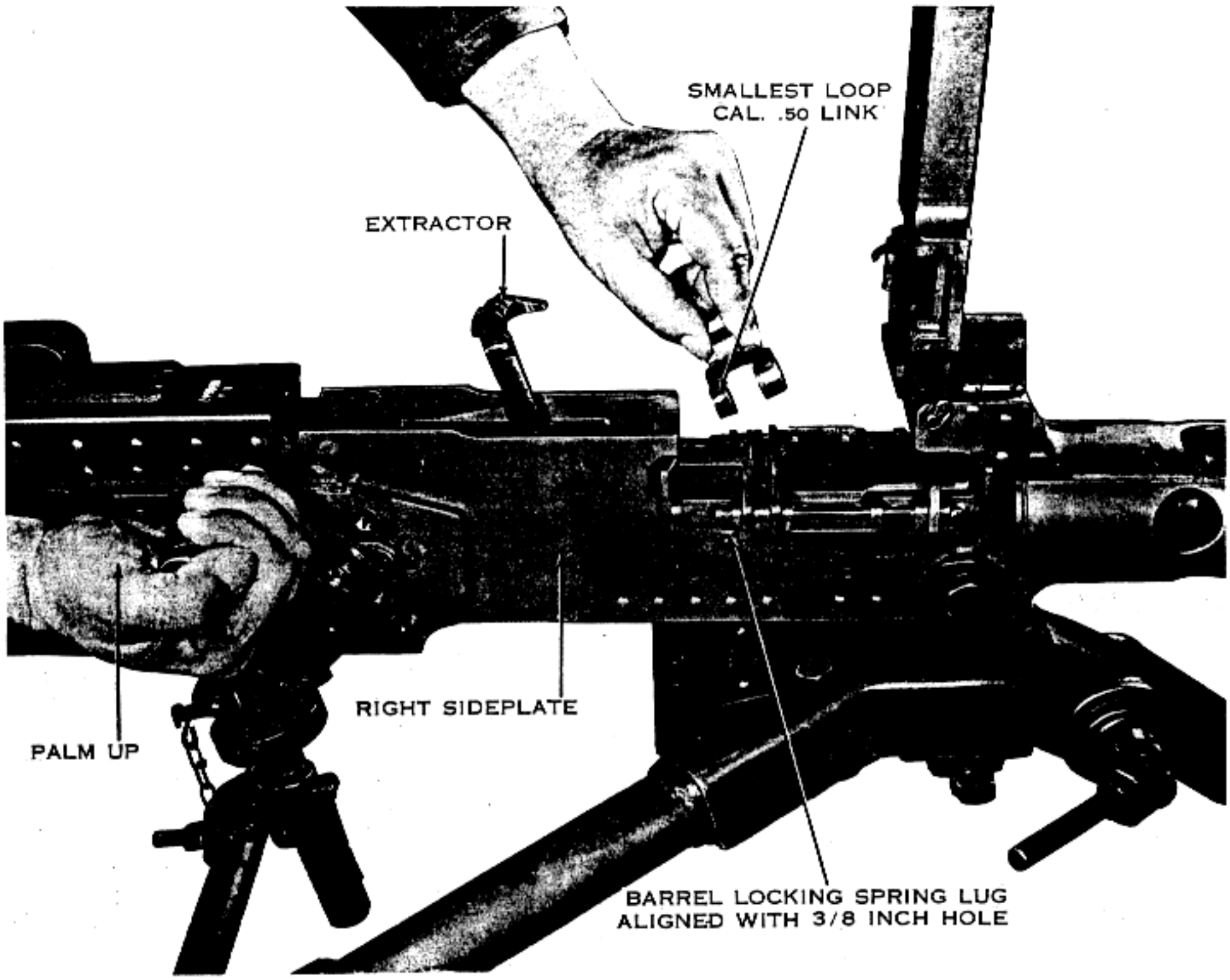

Figure 5. Alining the lug on the barrel locking spring with the ⅜-inch hole in the right side plate.

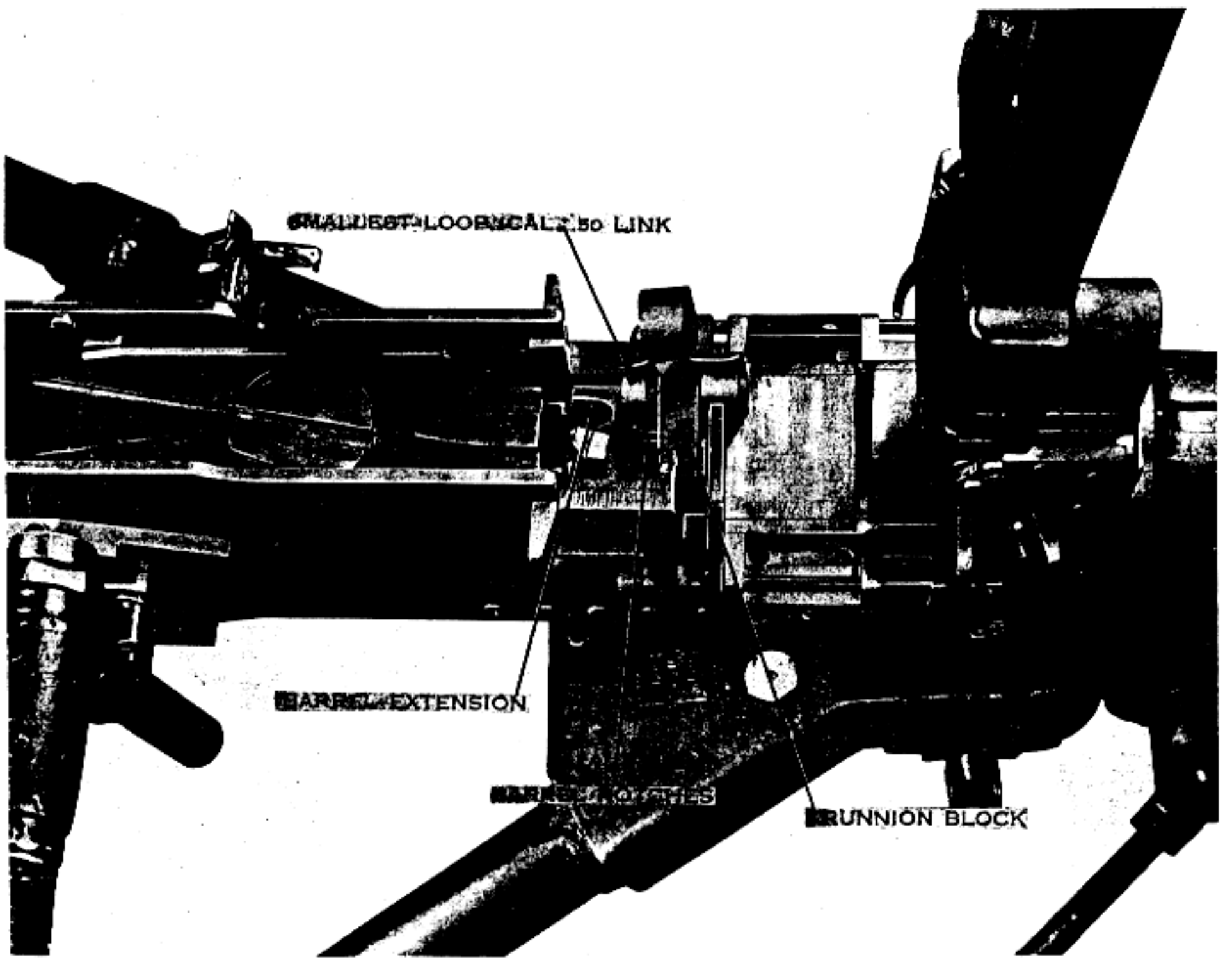

Figure 6. The smallest loop of the cal .50 link is used in alining the barrel locking spring lug with the ⅝-inch hole in the right sideplate.