TRAINING

SACM 50-2

SMALL ARMS TRAINING PROGRAM

JUNE 1960

HEADQUARTERS STRATEGIC AIR COMMAND

SAC MANUAL
NO. 50-2

HEADQUARTERS STRATEGIC AIR COMMAND
Offutt Air Force Base, Nebraska
June 1960

FOREWORD

1. PURPOSE. This manual presents detailed procedures designed to train both officers and airmen in the use of small arms.

2. BACKGROUND. a. While we in SAC are not primarily concerned with fighting battles using small arms, there is always the possibility that any one of us may find it necessary to use a handgun or shoulder weapon. This could happen either by being downed in enemy territory or perhaps in a base or civil defense situation. Whichever event should occur, it will then be too late to prepare. We must prepare now and remain prepared to overcome any obstacle which may hinder the accomplishment of our assigned mission.

b. The quality of training which instructor personnel in the SAC handgun program impart to trainees may have considerable effect in any struggle in which we may engage for national survival.

FOR THE COMMANDER IN CHIEF:

Byron K. Enyart

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20 - DOTOG, Hq SAC

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CHAPTER 1

INTRODUCTION

1. PURPOSE. a. The purpose of this manual is to provide the small arms range instructor with the basic tools of his teaching job and to acquaint him with the source material and additional information with which to accomplish his duties. It is a training directive and a reference document.

b. The purpose of the small arms training program is to train and develop in all personnel in Strategic Air Command the confidence and ability to utilize hand held weapons whenever necessary to carry out the mission of this command. In conducting small arms training, we are complying with the provisions of Unit Training Standard 5-1, AFR 50-8 and AFR 50-22. More detailed itemization of the purpose of this program appears in paragraph 2, below.

2. GENERAL. This manual is designed to provide the range officer and NCOIC with a directive for range operation and a source document of data and information vital to the training programs which they are required to conduct.

a. The art of good shooting is not relegated to target matches alone. There is a definite requirement in the military environment for personnel to be capable of meeting a wide variety of situations as they arise in which intelligent use of a pistol or rifle is necessary. Civil law enforcement agencies have long been aware of such a need. The US Army, in the Korean situation, recognized that accurately aimed and intelligently directed small arms fire was far more important under most circumstances than large volleys of sprayed fire. The accuracy and timing of a shot have always proven to be most important in determining the finality of a hit, particularly against a skilled opponent.

b. A need for accurate pistol shooting was indicated for combat crew personnel in this command. To meet this need, the SAC Handgun Course was developed. More information on this development is included in chapter 4. After development of the SAC Handgun Course, Headquarters USAF directed that all aspects of small arms training should be given increased emphasis and required that all echelons seek methods of improving training. A portion of this requirement is included in the Small Arms Competition Program. This program is designed to elevate the level of skill in shooting among all personnel and is an important part of every base training program.

c. Properly conducted small arms training programs require that the student not only learn to shoot accurately, but to fire in the correct situation. This means, also, that he be able to handle his weapon without danger to himself or his associates. Various jobs, locations, and situations demand varying degrees of skill in arms, but every military person in SAC (except chaplain, medical, dental and WAF personnel) is required to have some ability with a weapon. Primarily, this need stems from the possibility that each person in the command may be required at any time to defend himself, his weapon system, classified materiel, or information from opposing forces which might include enemy military forces, saboteurs, guerillas, or riotous civil groups. Regardless of the reason for proficiency in arms, all personnel must be capable of safely handling loaded weapons. This predetermines the requirement for a familiarization course for all personnel. From this basic requirement, those personnel potentially included in a base defense force must be qualified in arms at a minimum level. Above this group, selected individuals whose jobs require more expert shooting ability, such as air police, combat defense force, investigators, range instructors, and combat crew personnel, must receive more specialized and intensive training. In order to develop new techniques, test new weapons, and motivate all personnel towards skill in firearms, a well organized competition program is also required.

d. The instructor's job is to organize and present material applicable to each of the groups listed above. This manual shows what is required and enumerates the reference material which he must utilize in performing this job.

CHAPTER 2

SMALL ARMS RANGE MANAGEMENT

3. GENERAL. The basic directive in operating a small arms range is AFM 50-18. Every range section in the command is required to have a copy of AFM 50-18 immediately available in its policy file. Other references appear at the close of this chapter.

4. RESPONSIBILITY. a. The combat support group on each SAC base will appoint a range officer, whose responsibilities are outlined below:

(1) He will be responsible for the buildings and equipment issued to the range for small arms training.

(2) He will monitor the receipt, handling, issue, and disposal of ammunition for training, except for bulk amounts stored in the ammunition storage area.

(3) He will supervise and approve preparation of detailed lesson plans for small arms training and will monitor the conduct of training to assure safe, effective instruction.

(4) He will prepare Airman Performance Reports for the NCOIC of the range and will monitor the reports prepared by the NCOIC on subordinate personnel.

(5) He will inspect the range or ranges at regular intervals and direct the initiation of work order requests for building improvements and maintenance.

(6) He will familiarize himself with the reference material listed in this manual and cause a file to be maintained in the range administration area which includes all up-to-date directives pertaining to small arms training, range operation, and small arms competition.

(7) He may act as the small arms competition project officer, if one is required.

b. The duties of the range NCOIC are as directed by the range officer, in addition to those listed in AFM 50-18 and, in more detailed fashion, as listed in this manual.

c. The duties of the weapons maintenance shop are as outlined in SACR 136-5, Hand, Shoulder, and Base Defense Weapons.

5. SAFETY RULES. a. The foremost consideration in every phase of shooting, ammunition loading or handling, competition, and weapons handling is safety. The following safety rules, along with additional rules determined to be necessary in accordance with local conditions, will be thoroughly discussed immediately after a student's introduction to the program. Never give safety rules in a short or rushed lecture. In order to stimulate safety consciousness, instructors should prepare and describe several incidents in which the value of these rules is illustrated.

b. Thousands of National Rifle Association competitors attend matches at ranges all over the country every year. A fatality has never been recorded. The reason for this is that the people who fire are educated in shooting safety. From this, we can learn that, with proper emphasis on safe range practices, large numbers of personnel can fire on the range without incident.

c. If a shooter sees someone doing wrong, he has the right to tell him about it. If he himself is not observing safety practices, he should be told. Horseplay and inattention will not be tolerated on any range.

d. The range officer and/or the instructor will immediately disqualify anyone who, in his opinion, displays dangerous actions on the range or violates the rules below:

(1) Never point a gun, loaded or unloaded, at anyone unless you expect to shoot. You are being taught the deadliest game in the world--shooting to kill. In a friendly game, you could shoot your best friend. Never offer or accept a challenge to "draw" on the spur of the moment. One gun or both may be loaded.

(2) Never ask if a gun is unloaded. Look for yourself with finger off the trigger and gun pointed in a known safe direction. There is an unwritten law among sportsman shooters: "Never touch another man's gun without permission." Make this a habit even though it may be Government property. Know how to clear any weapon before you handle it.

(3) Never practice dry firing except in a place provided for it and then only after a rigid inspection of the weapon. A class must form the habit of weapon inspection at every firing order, dry fire order, or practice quick draw and other phase. Make it a rule to inspect before each phase of shooting.

(4) When on a range, ALWAYS carry or lay aside the weapon with the cylinder swung out. With the automatic, the slide should be locked back and magazine removed. Keep the muzzle pointed down range. In this manner, the first glance will assure you that the weapon is safe. This rule of safety is a law on all shooting ranges.

(5) Whenever or wherever a group is firing, always put someone in charge to establish control. On a range, this person will be in complete charge and will be known as the range officer. Observe this rule when you are in a hunting party, a Sunday shoot, or just plinking. Anyone should assume control any time he notes a dangerous situation.

(6) Know your gun or the gun you are about to shoot. Use only standard loads and shoot only a clean gun. Before loading any weapon, make sure the bore is clear. A gun is considered too dirty to fire when there is trouble with loading or ejecting cartridges.

(7) Never leave a gun loaded unless it is for a special purpose. A gun is always cased or put away when not in use. You deserve to lose any weapon you leave unattended. The initiated will leave it alone; the uneducated may kill you with it.

(8) Never shoot at objects which may cause a bullet to ricochet or glance. Water, stones, hard wood, as well as metal, can turn a bullet into screaming death in any direction.

6. RANGE SUPPLY PROCEDURES. a. Problems in conducting small arms training and competition programs are often encountered due to lack of familiarity with pertinent supply directives. For this reason, it is highly beneficial to the training program and to his unit's efficiency if the range NCOIC can maintain a working knowledge of certain basic supply procedures and directives.

b. Small arms range equipment is authorized in T/A 014 and in ECL 291, Org B, and in SLOE 117. These are authorization documents from which your UAL is prepared.

c. The documents to which range officials will have to refer are listed below. They cover all aspects of materiel, including authorization, issue, use, storage, and requisitioning:

(1) USAF Supply Manual, AFM 67-1, volumes I, II, and IV.

(2) Federal Stock Catalogue--FSN 6920.

(3) Equipment Component List--ECL 291, Org B.

(4) SLOE 117.

(5) Unit Allowance List--UAL.

(6) Table of Allowances--T/A 014.

(7) Army Stock Lists.

(8) AFR 50-22.

(9) AFM 50-11.

(10) AFM 50-17.

(11) SACM 400-8.

d. You will note that the documents listed above govern some aspect of obtaining or handling the following items:

(1) Range training weapons.

(2) Weapons for issue to individuals.

(3) Competition weapons.

(4) Survival training weapons.

(5) Base defense and security weapons.

(6) Targets and target materials.

(7) Ammunition procurement, storage, and issue.

(8) Electronic scoring devices.

(9) Slings, holsters, mats, and related equipment.

(10) Range maintenance equipment.

(11) Ammunition reloading equipment.

(12) Weapons maintenance equipment.

(13) Communications equipment.

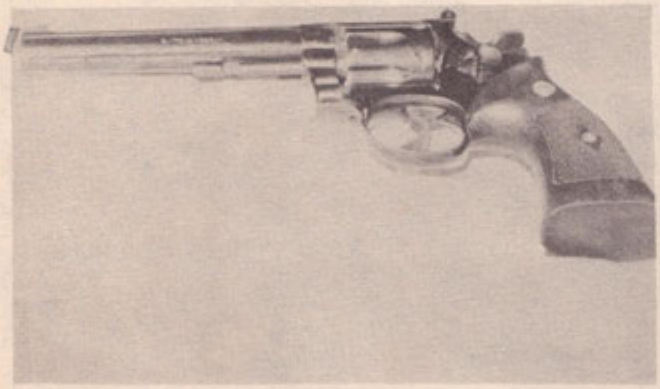
e. The weapons you will handle as an instructor are shown in figures 1 through 6.

.45 CALIBER AUTOMATIC M1911

FIGURE 1

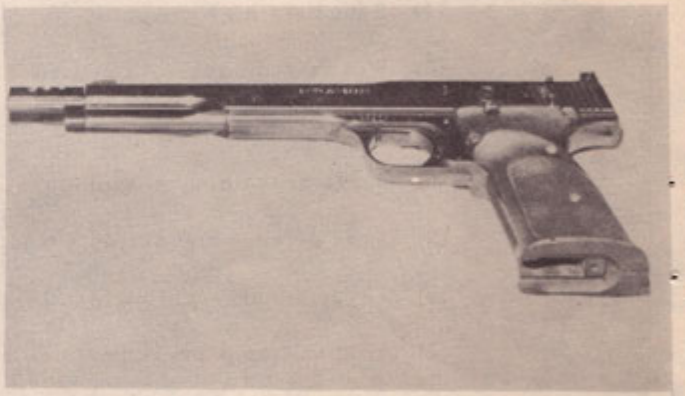
REVOLVER, COLT, .38 CALIBER, MATCH

FIGURE 2



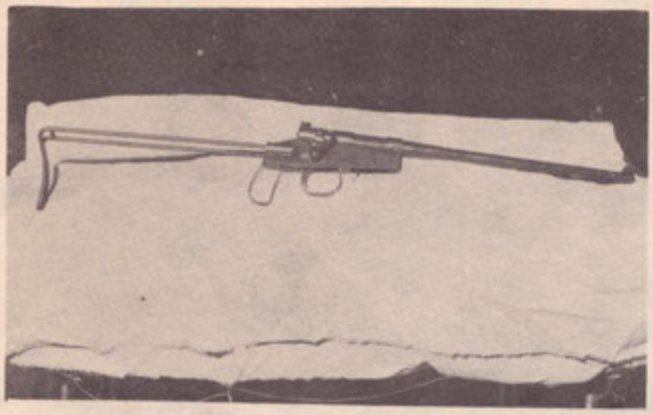
REVOLVER, S&W, K38, MATCH

FIGURE 3



S& W, .22 CALIBER, AUTOMATIC

FIGURE 4



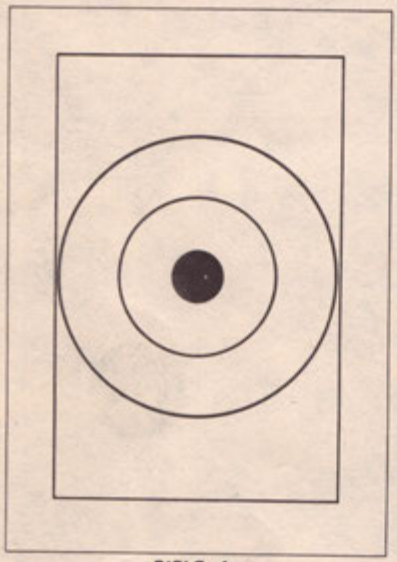
M-4 SURVIVAL RIFLE

FIGURE 5

M-13 REVOLVER--LIGHT WEIGHT

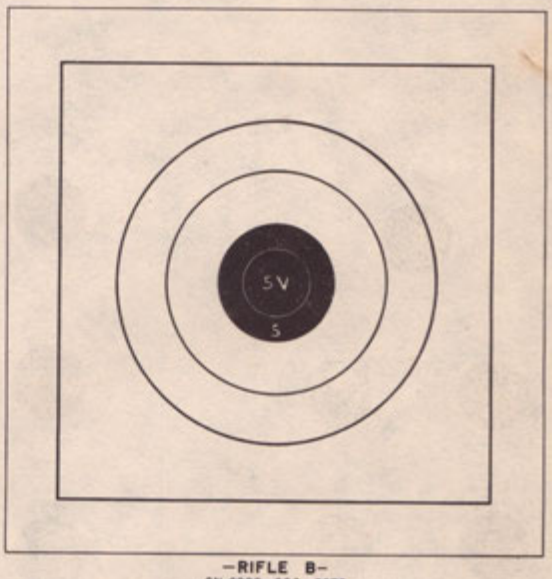
FIGURE 6

f. The targets used in training and competition are shown in figures 7 through 18.



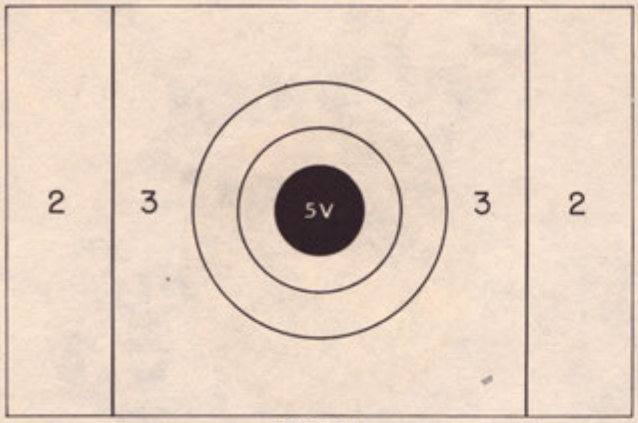
—RIFLE A—
SN 6920--716--2768
SIZE 8 1/2 X 12 INCHES

FIGURE 7



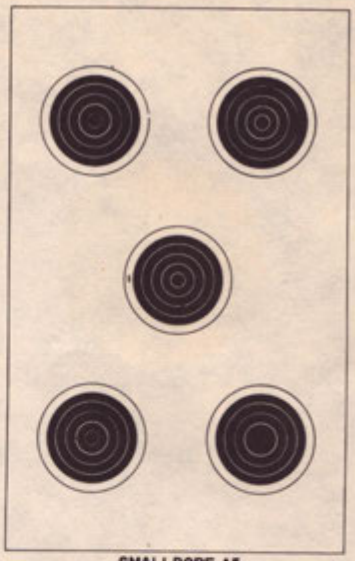
—RIFLE B—
SN 6920--600--6876
SIZE 12 X 12 INCHES

FIGURE 8



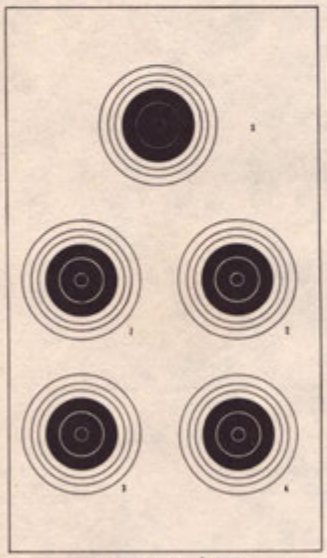
—RIFLE C—
SN 6920--600--6877
SIZE 73 X 120 INCHES

FIGURE 9



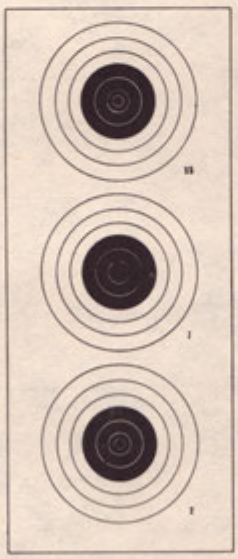
—SMALLBORE A5—
50 FT. GALLERY
SIZE 7½ X 10½ INCHES

FIGURE 10



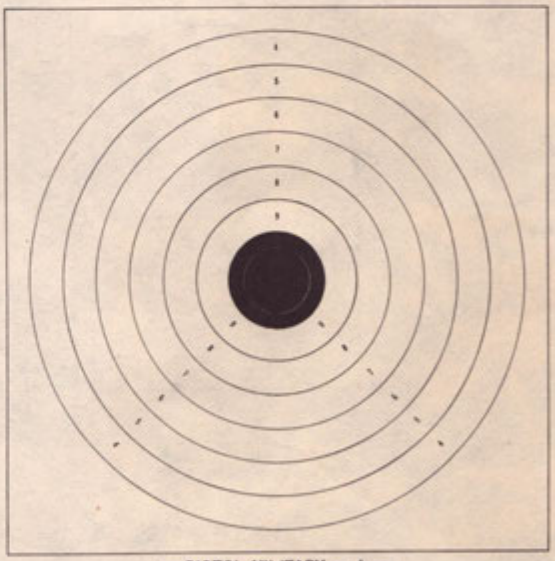
SMALLBORE A-23
50 YARD---OUTDOOR
14 X 24 INCHES

FIGURE 11



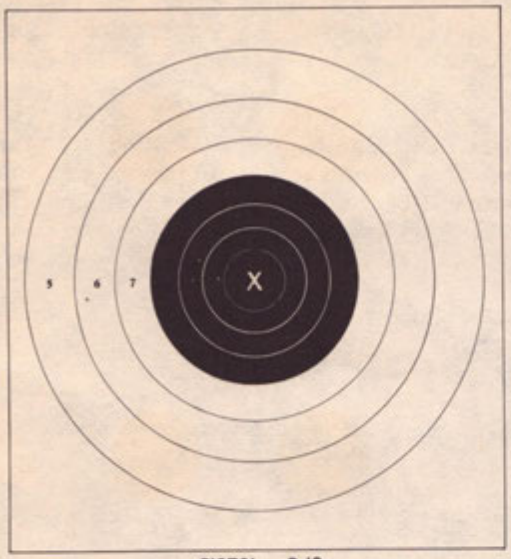
SMALLBORE A25
100 YARD TOURNAMENT
SIZE 14 X 42 INCHES

FIGURE 12



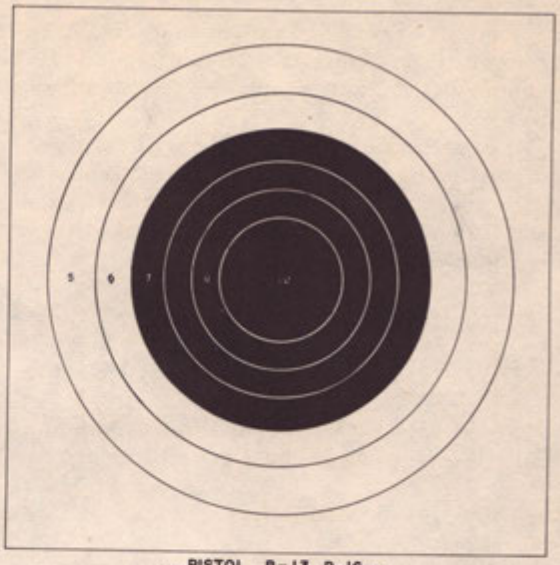
—PISTOL MILITARY — L—
25 YD SLOW, 15 YD RAPID
SN 6920-550-7903
SIZE 28 X 28 INCHES

FIGURE 13



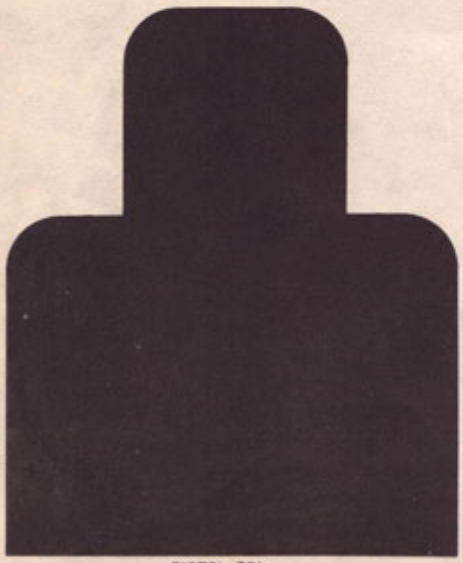
— PISTOL B-12 —
50 YD SLOW
SN 6920-550-9830
SIZE 21 X 24 INCHES

FIGURE 14



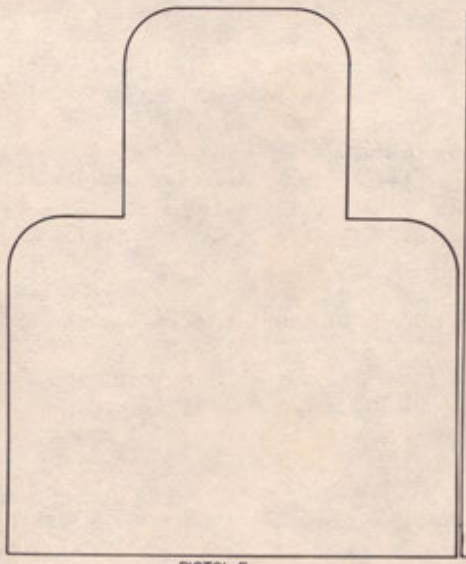
— PISTOL B-13, B-16 —
25 YARD, TIMED, RAPID
SN 6920-554-5064
SIZE 21 X 24 INCHES

FIGURE 15



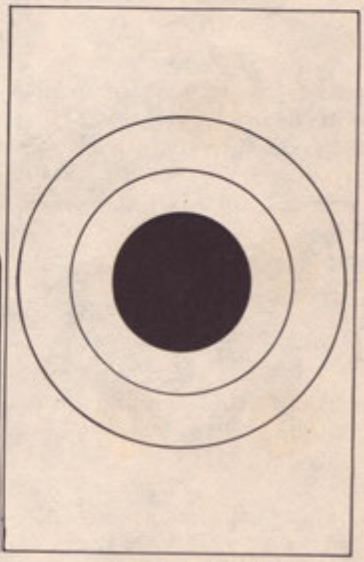
— PISTOL 3BI —
DUELING
SN 6920-551-1794
SIZE 21 X 18 3/4 INCHES

FIGURE 16



— PISTOL E —
SILHOUETTE
SN 6920-600-6879
SIZE 40X 18 3/4 INCHES

FIGURE 17



SBA 50 YARD TARGET
SN 6920-556-6631

FIGURE 18

g. Targets and target materials are listed in Federal Stock Catalogues, SL 6920, and in Army stock lists. Note that items in SL 6920 are listed alphabetically; for example, Center, repair, under "C," Pasters under "P," and Targets under "T."

h. Particular attention will be given to the requisition, maintenance, handling, and issue of competition grade weapons. This care is necessary because of the variety of types of weapons, their precision manufacture, the method of their procurement (local purchase), and their inherent desireability which makes them tempting items for pilferage. For these reasons, special rules for competition weapons are listed below:

(1) Account for all match grade weapons by serial number.

(2) Establish a monthly inventory for match grade weapons.

(3) Do not permit more than one-half of the match grade weapons in any caliber to be out on hand receipt at any one time.

(4) Match grade weapons will not be utilized for routine training.

(5) Except in caliber .45 automatic pistols; carbines M-1; and rifle, caliber 30.06, M-1, jacketed ammunition will not be fired through match grade weapons. In no case will ammunition with corrosive primers be utilized in match grade weapons.

(6) Individual personnel will not use USAF match grade weapons for hunting or "plinking."

(7) Individuals will be held liable for loss or damage of match grade weapons.

i. Ammunition authorizations are contained in AFR 50-22. The amounts listed therein represent the maximum that a commander may expend in training his unit. This maximum is obtained simply by multiplying the number of personnel in each category by the amount of ammunition authorized to train each person in that category. You must maintain accurate ammunition expenditure records such as AF Form 1143, Ammunition Lot and Locator Record, and AFTO Form 15, Ammunition and Explosives Materiel Serviceability Record, which should be prepared and maintained in accordance with section 28, volume I, AFM 67-1, and Technical Order 11A-1-11, respectively.

j. The reporting of on-hand ammunition shall be in accordance with local directives.

k. The Ammunition Forecast and/or Requirement Report should be prepared and submitted to the ammunition accountable officer in sufficient time to allow procurement and/or requisitioning action prior to use, or as established by local directives.

7. WEAPONS MAINTENANCE. a. On some bases, the location of the range building makes it more efficient to have the small arms maintenance shop located there. Placement of the shop is dependent solely on the local situation as determined by the operations squadron. Normally, if the range is located at some distance from the main base complex, it is more economical and efficient to conduct weapons maintenance, as required in SACR 136-5, in space provided on the base, utilizing space allocated for this function in the A&E area or in a separate facility, if available. Refer to TO 11W-1-10, 27 May 59, for instructions on magnafluxing weapons every 500 rounds.

b. Weapons maintenance is primarily a responsibility of the using agency; that is, the unit. Maintenance which is performed by the weapons maintenance staff in the combat support group is a service function designed to provide specialists for inspection of stored weapons and for minor maintenance within base capability.

c. Additional maintenance capability exists at the Warner Robins Air Materiel Area (WRAMA); however, weapons must be turned in through supply channels, reparable. Action is being taken to develop channels through which match grade weapons will receive major maintenance, overhaul, and accurizing at the USAF Marksmanship Center, Lackland AFB, Texas.

8. RANGE MAINTENANCE. The range itself will require continuous preventive maintenance for appearance, safety, and economy. Certain basic rules must be kept in mind.

a. Keep all concrete or metal surfaces which face the firing line covered with dirt or other absorbent material to prevent ricochet.

b. Inspect target frames regularly for damage and deterioration. Keep fresh target cloth applied at all times.

c. Keep all wooden parts of range structures painted to prevent weather damage.

d. Lubricate moving target frames and keep dust out of parts which move in contact with one another.

e. Never allow signs or warning flags to become excessively worn. They are the first indicators a visitor sees and must always present a favorable appearance.

f. Utilize students to police their own areas at the range and to perform minor assistance during firing sessions. Do not violate the privileges of rank or attempt to impose excessive work requests upon students.

g. Refer to local SOP, on file in the civil engineer's office, to be sure you can submit timely, correct work orders for maintenance, repair, and construction. Anticipate your needs so that the work you desire will be accomplished when you desire it, which means that you must take into account the delays in processing work order requests.

h. If a range backstop made of dirt is utilized on your outdoor range, a yearly maintenance program will keep it from deteriorating.

i. Refer to AFM 50-18, Weapons Ranges, for additional guidance in range maintenance and construction.

CHAPTER 3

AMMUNITION RELOADING

9. GENERAL. Ammunition is handloaded at base level for economy, to obtain special purpose loads, and to develop exceptionally accurate match grade ammunition. This chapter is to provide guidance for the safe, efficient organization and operation of a base level ammunition reloading program in order to accomplish these goals. Individuals who gain experience and practice in ammunition handloading will gain the ability to produce usable quantities of ammunition, the potential accuracy of which exceeds that of normal issue ammunition for training or competition.

10. SAFETY PRECAUTIONS. a. As in range firing, weapons handling and all other phases of small arms training, safety remains as the foremost principle to be considered in approaching handloading. Range personnel and their students must be constantly aware of the hazards involved in handling ammunition and ammunition components. Good housekeeping habits and rigid adherence to some common-sense rules of handling will assure that dangerous situations or incidents do not occur.

b. Accidents in handloading are possible as a result of the following factors:

(1) Misuse of tools, resulting in damaged or wasted loading components, broken tools, or bodily injury.

(2) Mishandling of loading components, resulting in damaged supplies, possible primer explosion, powder burning, or injurious spillage of molten lead.

(3) Negligent storage and housekeeping, which inevitably leads to sun or water damage, distortion of powder burning rates, corrosion, or shop accidents involving falls.

(4) Careless loading operations, which produce distorted cartridges or bullets, dangerous or inaccurate loads, and wasted loading components.

c. In approaching handloading, it is necessary to be aware of the precautions necessary for adequate safety; however, the fact that handloading involves working with gun powder need not cause unnecessary fear. Modern smokeless powders require care in handling, but are not dangerous or unpredictable if correctly stored and used. On the other hand, black powder is still dangerous to handle and unpredictable in storage, despite modern manufacturing methods and decades of experience. Consequently, its use or storage in the SAC ammunition reloading program is prohibited.

(1) Modern military smokeless powder is a solid propellant with ignition and burning characteristics similar to celluloid. It is a class 2 and/or 2A explosive and will be handled in accordance with SACM 136-4 and TO 11A-1-40. Safety precautions to be followed in its storage and handling are as follows:

(a) Always store powder in airtight containers in a metal locker or cabinet, in a dry area away from sunlight, and in storage temperatures less than 100 degrees Farenheit. If the moisture content is changed by drying, the burning rate is increased. Conversely, if the powder becomes too damp, its burning rate is slowed. In the weapon, dry powder burns so much faster than its

normal rate that excessive overpressures may result. Keep containers closed at all times except for transfer of powder.

(b) No more than five pounds of each type of powder will be stored in the reloading room. Bulk quantities of powder will be stored in the ammunition storage area.

(c) Identification data will be firmly affixed to powder containers. This data will include type of powder, rifle or pistol identification number, manufacturer, and lot number, if available. Powder in containers from which this data is lost or removed will be destroyed. Unserviceable powder will be destroyed in accordance with the base SOP.

(d) Remove unused powder from reloading tools when operations are completed.

(2) Safety precautions for primers are as follows:

(a) Handle primers with care.

(b) Store primers in airtight containers, such as metal ammunition cans with air seals. Keep containers sealed except when in use and place in metal lockers or cabinets.

(c) No more than 5, 000 of any type primer will be stored in the reloading room. Excess amounts may be stored in ammunition storage facilities.

(d) Any primers which have lost their identity as to whether they are pistol or rifle type will be disposed of. Unserviceable primers will be destroyed in accordance with the base SOP.

(3) Safety precautions in reloading operations are as follows:

(a) Absolutely no smoking will be permitted in the reloading room at any time. A fire extinguisher will be located in or adjacent to the loading room.

(b) The agency responsible for the operation of the loading room will post, in prominent view, enlarged copies of condensed safety rules to be followed in handloading and handling of components and tools.

(c) Exits will be unlocked and/or open during loading operations.

(d) Maintain good housekeeping practices during loading operations. Remove spillage, recover containers after use, and place wrappers or discarded containers in trash receptacles. In no case will powder or primers be placed in trash containers. Use funnels wherever required to minimize spillage.

(e) Inspect components and tools prior to use.

(f) Inspect cartridge cases for proper shaping and soundness.

(g) Bullet casting, if accomplished in the reloading room, will not be performed during loading operations. Explosive items will be kept in closed containers

and removed to a safe distance. Do not use flame type furnaces within confines of the reloading room. Add fresh lead to the melting pot slowly to prevent splashing.

(h) Do not force components or equipment beyond damaging pressures. Instructions furnished by loading tool manufacturers will be adhered to.

(i) Remove unused powder and primers from tools when completed.

(j) Dispose of improperly loaded or deformed ammunition.

(k) No ammunition will be loaded to exceed issue service ammunition ballistics.

(l) Unserviceable assembled ammunition will be destroyed in accordance with the established base SOP.

11. HANDLOADING OPERATIONS. a. The safety precautions outlined in paragraph 2 of this chapter will be strictly followed by all personnel in the area designated for reloading operations. Units may add local rules to assure safe and orderly conduct of reloading operations, but in no case will the above rules be modified or reduced. Additional information specifically applicable to local conditions can be had from munitions maintenance squadron ammunition personnel and the base fire prevention inspector.

b. Only individuals designated by competent authority will operate handloading equipment. Graduates of the USAF Marksmanship Training Course are qualified to operate the equipment and perform or supervise reloading operations. Local commanders may designate additional personnel to perform this operation if they demonstrate proficiency and knowledge of safety rules. Reloading equipment will not be left unsupervised for indiscriminate use by unqualified personnel.

c. Before beginning actual reloading operations, refer to ballistic tables in reloading guides shown in publications listed in the bibliography at the end of this chapter. Suggested normal loads for competition firing are as listed below:

(1) .38 Special: 2.7 grains bullseye pistol powder, 146-grain bullet.

(2) .45 Automatic: 3.5 grains bullseye pistol powder, 185-grain bullet.

(3) .30 M1 Rifle: 48.0 grains IMR 4895 rifle powder, 173-grain, M72 Boattail bullet (FSN 1305-573-4714).

NOTE: The 48.0 grain IMR 4895 powder charge for the .30 M1 rifle cartridge will not be exceeded. Commercial caliber .30 bullets of 180-grain weight may be substituted for the 173-grain bullet without reducing the powder charge.

d. Consult local SOPs and review instructions for operation of loading machinery. A brief period spent in assuring your own cognizance of all safety precautions, local procedures, and planned loads will preclude waste of loading components and prevent damaged equipment. Check, clean, and lubricate the equipment to be used. Arrange your components in an orderly manner and

provide small receptacles for components as they are completed in the loading process. Experience may determine the order in which you wish to conduct the steps in loading, but they are listed below as basic information for those to whom handloading is unfamiliar:

(1) Mold bullets.

(2) Resize and lubricate bullets.

(3) Select cases for use in reloading.

(4) Remove primer caps.

(5) Resize cases if desired.

(6) Insert new primers.

(7) Check accuracy of powder charge.

(8) Load powder charge in case.

(9) Press bullets into cases.

(10) Inspect finished product for size, shape, and condition.

e. The steps listed above may be performed in certain combinations simultaneously by the machinery available in your base range reloading room. For example, lubrication and bullet sizing are often completed in the same operation. Specific and detailed information on each step in the reloading operation is available in numerous commercial publications as referenced below. Most of the books on this subject are profusely illustrated and are of great benefit to the beginner.

f. Chamber the first cartridge and the last cartridge of a reloading run in a weapon to assure proper fit. To do this, point muzzle in a safe direction and keep hands off the trigger. In rifles, keep the safety on. In automatics, keep hand clear of grip safety. In revolvers, keep cylinder open.

g. In case of an accident or malfunction in which an unknown or inaccurate powder charge was thrown, all ammunition of the same lot which was previously reloaded will be inspected prior to use. Likewise, if an accident in firing occurs which is attributable to ammunition, all ammunition of that lot will be withdrawn from service and suspended pending inspection.

h. When an ammunition lot has been loaded, it will be placed in a suitable container and the following information will be printed on a firmly affixed label:

(1) Bullet weight in grains.

(2) Powder identification number and/or trade name.

(3) Powder charge in grain weight.

(4) Date ammunition was loaded.

(5) Name of individual who loaded.

i. After reloading operations are completed, clean and lubricate presses and equipment and replace dust covers. Remove all powder and primers from the working area, checking for spilled powder or primers. Replace unused powder and primers in their proper containers.

12. REFERENCE MATERIAL. There are no other military publications on the subject of handloaded ammunition; however, numerous commercial publications are available, some of which are listed below:

a. Lyman Ammunition Reloading Handbook.

b. Speer Handloader's Manual.

c. Belding and Mull Handbook.

d. Why Not Load Your Own? by Whelan.

e. Complete Guide to Handloading, by Sharpe.

CHAPTER 4

FUNDAMENTALS OF MARKSMANSHIP

13. GENERAL. In order for anyone to protect his life with a handgun, he must attain a certain degree of accuracy and speed. To do this, there are certain fundamentals to be learned on the target range which must then become second nature so that they will be employed automatically both on and off the range, either in contest or actual combat. These fundamentals are not new; they have been used for years and have been proven over and over again by all types of shooters. By mastering the basic principles of shooting a handgun and by intelligent consistent practice, anyone can learn to use a handgun effectively. This chapter is written specifically to cover revolvers.

14. TECHNIQUE OF PISTOL SHOOTING. There are two methods by which a revolver may be fired--"deliberate" and "quick" shooting. In deliberate shooting, after each shot is fired, the shooter uses his thumb to cock the hammer for each succeeding shot. Quick shooting is generally referred to as "double action" shooting. In double action shooting, the weapons is cocked and fired simply by pulling the trigger. The fundamentals of deliberate shooting will be covered in this paragraph. For quick or double action shooting see paragraph 15.

SINGLE ACTION POSITION

FIGURE 19

a. Stance. The first of these fundamentals to be taken up will be the proper stance for target shooting. The keynote to proper stance is relaxation and comfort. If the shooter is not at ease, he will have difficulty with every phase.

(1) Take a position on the firing line facing the target, then turn approximately 45 degrees. Right-handed shooters turn to the left and left-handed shooters turn to the right. Spread the feet about 15 to 25 inches, depending upon the height of the shooter, in a comfortable stand. The body should be erect, but not stiff, and the muscles should be relaxed so that the weight of the abdomen falls solidly on the lower trunk. The weight should be equally distributed on both legs and the whole position should feel comfortable. The shooting arm is extended all the way toward the target until there is no bend in the elbow. If the arm does not point naturally at the target, move the position of the feet. For instance; after you have taken the stance and extended the shooting arm, you may find it naturally trying to move to the left or right of the bullseye. If your arm is pointing to the left, move your left foot slightly forward. If your arm is pointing to the right, move your left foot slightly back (move the right foot if a left-handed shooter). Do not hold the head in such a position as to strain and twist the neck. When the position feels natural, then that is your position and should be used for target shooting. After the position is selected, the instructor will observe that the student's position appears natural and easy.

(2) Physical condition means a lot with regard to the proper position and the ability to hold over long periods without tiring. The arm and shoulder muscles may become fatigued by holding the weight of the gun. Do not hold the pistol extended for long periods. Take advantage of all the time allowed in firing a stage to rest the arm between shots.

b. Single Action Grip.

(1) In target shooting, it is best to fit the pistol into the shooting hand with the other hand. In this manner, it is easier to gain the same grip for each shot. There should be as much contact between the hand and the gun as possible and this means that all the fingers except the trigger finger will be used to hold the gun. The thumb should lie along the side of the frame, either high or low (preferably high) at the discretion of the shooter. In either position, there should be no pressure by the thumb against the side of the frame. The thumb is there for only one reason--to cock the hammer. A grip should be taken that can be maintained without interfering with the thumb when cocking the hammer, especially in rapid fire stages. The trigger finger should be entirely free from the frame or stock, with the cushion of the first joint squarely upon the trigger. The pistol should be held firmly, but not so tight that the muscles tremble. At first, even slight pressure may cause the hand to tremble violently for some shooters, but after practice, it will be found that a firm grip can be maintained without any quiver. A very light grip will permit the gun to move in the hand from shot to shot so that the grip will vary and the gun can become unmanageable. This is readily noticeable when shooting a light-weight pistol.

(2) It is essential that nearly the same pressure on the stock be used each time a shot is fired and that the pressure should not change from shot to shot. It must be remembered that the recoil will cause the pistol to move back and up. The

proper stance, arm position, and grip is as far as you need go in counteracting recoil. The gun's recoil goes straight back into the hand and arm first, rather than whipping the wrist up.

(3) The grip should allow the front and rear sights to align naturally without effort on the wrist. Once this alignment is made, the wrist is locked and the aim is started.

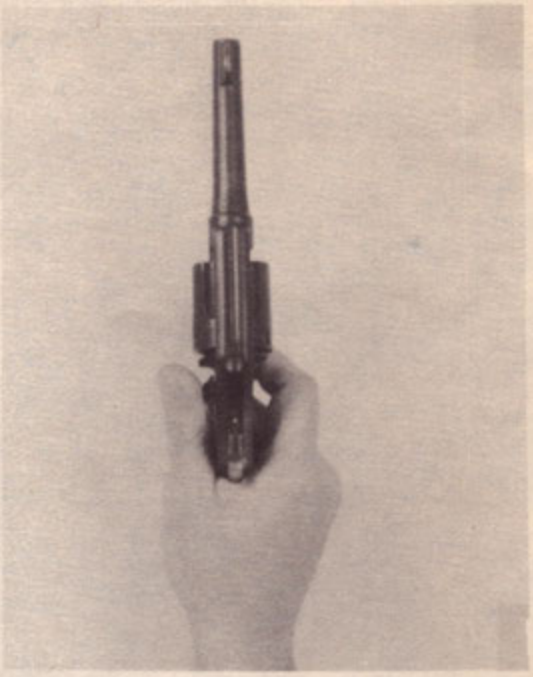
(4) It should be pointed out that the proper grip will show that the barrel axis is in a direct line with the forearm.

SINGLE ACTION GRIP

FIGURE 20

FITTING THE GUN IN THE HAND

FIGURE 21



BARREL AXIS IS IN A DIRECT LINE WITH THE FOREARM

FIGURE 22

A SAFE METHOD OF MAKING MINOR GRIP ADJUSTMENTS

FIGURE 23

c. Breathing.

(1) At the time the gun is being raised into the aiming position, the shooter should inhale a slightly deeper breath than normal and then exhale until the lungs are relaxed, with no tendency to draw in or expel any air. Hold the breath by cutting if off at the throat slowly until you stop exhaling. An ideal condition will exist for about 15 or 20 seconds, in which time a shooter should be able to get the shot off; if not, simply repeat the procedure.

(2) Good target shooting cannot be done unless the breath is held while shooting. If a shooter fails to hold his breath, his shooting arm will swing up and down, disturbing the aim with poor shots resulting. Holding the breath too long can have the same results, as the heart and pulse will start to hammer for more oxygen.

d. Sighting.

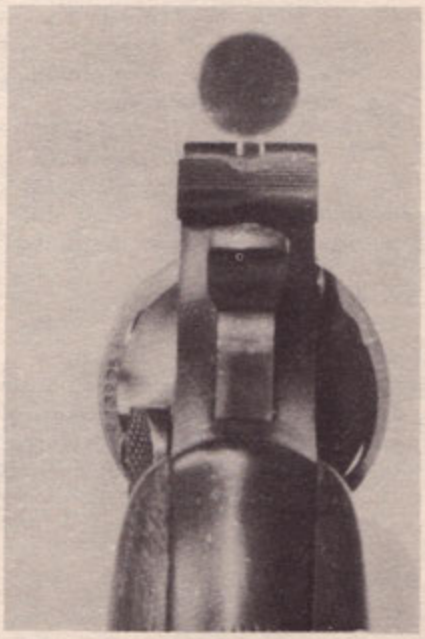
(1) It is a physical impossibility to focus the eyes on both sights and target at the same time; one or the other is not brought into sharp relief. Therefore, the shooter must look at the sights by focusing his eyes upon them. The target does not have to be perfectly clear, but the sights must be outlined distinctly. It is the relation of the sights to each other that is all-important. The relation of sights to target is secondary. If the hold is not perfect and the sights are lined up, the bullet will strike where the sights were aimed. Even though the hold is excellent, if the sights are not lined up, a poor shot results. Correct sight alignment is an important phase of revolver marksmanship that must be thoroughly understood and practiced. It is a simple thing, the lining up of two objects--the front and rear sights. If the sights are not correctly aligned, or are carelessly aligned, they only serve to guide the bullet to some point other than the desired one. Carelessness in aligning the sights is the main fault with most shooters. Many don't seem to realize the importance of correct sight alignment and this point should be emphasized.

(2) When the arm is first extended, the operation of aligning the sights with one another is uppermost in the shooter's mind but when he starts to think of holding on his aiming area, and then about the let-off, the mental process necessary to keep the sight in alignment seems to get sidetracked. The let-off may be perfect and the hold can be good, but a poor shot results if the sights and their relation to each other are not uppermost in the shooter's mind at the instant the shot is fired.

(3) Correct sight alignment means that the front sight is centered in the rear sight notch, with the front sight straight up and down, the arm not "canted" right or left, and the top of the front sight level with the top of the rear sight. When the front sight is centered in the rear sight, equal "lines of white" will show on both sides of the front sight. The top of the front sight should be on a level with the top of the rear sight. When the front sight is a little off to one side, then the line of white on that side closes up, and the line of white on the other side opens a corresponding distance. If the front sight is too high, or low, in the rear sight notch, it is readily apparent because the top of either side of the rear sight is a ready reference. Therefore, it is true that lining up the sights--with two guide lines and two reference points--is relatively simple.

(4) It is the eye (or eyes) of the shooter that really determines whether the sights are in alignment. One or both eyes can be used. The use of both eyes is recommended. It is merely a matter of effort, and practice, to align the sights with only one eye, then, concentrating on the sights with that eye, to slowly open the other eye. If vision is faulty, the eye that had been closed is again closed and the process repeated. It is worthwhile to put a little effort into developing the ability to use both eyes--"binocular" vision--as a much sharper definition of the sights will result. Sufficient clarity is secured with the use of only one eye for all practical purposes in target shooting, but in combat the closing of one eye is a definite handicap.

(5) Don 't worry about which eye is the "master" eye (the one that's open is the master eye for our purposes). If an oculist has been consulted and he states that one eye is much stronger than the other, then that eye should be used. Incidentally, a man with one eye weaker than the other finds it easy to learn to sight with both eyes open.



DESIRED SIGHT PICTURE

FIGURE 24

(6) The question as to where the eye, or eyes, should be focused seems to confuse a great many shooters. It is common knowledge that eyes cannot be focused on two objects so far removed from each other as the sights and the aiming point. No one would try to read a newspaper held at arm's length and at the same time try to read the lettering on a sign 20 or 25 yards distant, but give a person a gun and a target and he will try to look at--read--the sights at the same time as his eyes are focused on the target.

(7) When the arm is extended, the initial sight alignment is usually good because the shooter is looking at the sights, but as he starts to aim the gun--to hold somewhere upon the target--then the trouble starts. There seems to be a decided tendency to focus the eyes upon the target, to concentrate on the relation of the front sight and the bullseye, and to keep the sights in alignment with each other only because they are in the field of vision. This is normal. Every shooter has experienced it. The warning signal is "fuzzy sights," and you can readily check yourself.

NOTE: When the sights are first lined up they are sharply defined, but as you continue to hold, the sights become fuzzy; the sharp picture of front and rear sights disappear. True, the target is sharply defined, but the sights are not. Fuzzy, blurry, or hairy sights are the signal that the eyes are being focused on the target. That the shooter is looking through the sights instead of at them.

(8) We cannot focus the eyes on the sights and the target at the same time, but while we know this to be a fact, only a small number of people seem to remember it. This is particularly strange when we are also aware of the fact that the sights will only "fuzz" up when we are looking through them instead of at them.

(9) To sum up, the proper grip is secured, the arm extended, the eyes focused upon the sights. Once lined up, there must be no change in the grip pressure; errors are corrected by movement of the wrist only. Once corrected, the wrist is locked in position. As the trigger is pressured, the shooter continues to look at the sights, guarding against the impulse to look through them at the target.

e. Area Aiming.

(1) No one can hold a revolver on any certain "point" on a target. In aiming a firearm, it is necessary to fully realize that an aiming point is in reality an aiming area. When an experienced shooter states that he aims at "6 o'clock," or the "middle of the bullseye, he does not mean that he holds a point exactly at 6 o'clock--which is the bottom center of the bullseye." He means only that he tries to hold as close to such a point as is possible.

(2) Perhaps the fault lies with aiming charts. These charts show the sights of a gun faultlessly aimed at a point just below the bullseye. Perhaps it lies with shooters who stress the fact that they show a line of white at the bottom of the bullseye, or others who say they hold "dead center." It is a physical impossibility for any person to hold a gun steady enough to aim either dead center or with a line of white. Actually, shooters try to hold as close as they can to their imagined point and thus confine the movement of their gun to a limited area with such a point in

the center of that area. This is simple enough for experienced shooters, but it bewilders beginners. The experienced would explain to the novice just where to hold, but would fail to explain that anywhere close to that point was the best that could be expected.

(3) Every shooter's arm shakes or moves when he is aiming a gun, but the extent of the movement depends on muscles and nerves. The experienced shooter's muscles and nerves are conditioned and trained, his natural movement is much less, and his aiming area is thereby cut down. He may think he is holding an aiming point because he does not move too far away from it, but move he does, whether he realizes it or not.

(4) This belief that you must hold on an aiming point is very harmful to the new shooter; he will try to do something that is just not possible. It is this belief that causes a shooter to try to "frame" a shot--to make the gun go off when it is aimed exactly at the aiming "point." Naturally the effort to make the gun go off results in a sudden pressure on the trigger, disturbing the aim and resulting in a poor shot. This concentration on an aiming point also causes a shooter to focus his eyes on the target instead of the sights--he is actually "optically hopping" from sight to target and from target to sights. Bullseyes are three to five inches in diameter at normal ranges, and we are satisfied if all the shots are within the bullseye--well satisfied. If it were possible to hold a certain aiming point, allowing for the mechanical deficiencies of the revolver, all the shots fired would be well within a one-inch circle.

(5) A novice shooter should realize that he cannot hold a gun perfectly steady, but that he can hold it steadily enough to confine the movement of his sights to an area. In the beginning, a newcomer to shooting can hold well within a 10- to 12-inch circle at 25 yards. If he aligns his sights properly, presses on the trigger in such a manner that the let-off is good, and aims within such a circle, all his shots will hit in that area; and since that area is approximately equal to the area of the eight ring, he should score at least 80 percent. Remember, too, that if all shots score within the diameter of the eight ring, some will be nines and tens.

(6) All revolvers can be sighted to shoot so that they will hit exactly where they are aimed or where desired. The two common holds now used are "center" and "6 o'clock." A man shooting with a center hold will sight his gun to hit around center when he aims around the center of the bullseye. The man shooting at 6 o'clock will hit around center when holding immediately below the bullseye. If the sights on the revolver are movable, this can be readily accomplished; if they are fixed sights, it will perhaps take some filing, by qualified personnel.

(7) When a gun is sighted to hit center, then every shot fired while the sights are aligned will be somewhere within the bullseye, either at the top or bottom or on either extreme edge. If the sights are correctly aligned and at the moment the shot is fired they appear to be about two to three inches below the bullseye, then that shot should strike about two to three inches below the bull where it was aimed.

(8) The same is true of a 6 o'clock hold. If the sights were lined up properly and the shot let off well, and if the sights appeared to be at the extreme top of the

bullseye at the moment of discharge, then the bullet will strike a few inches above the bull.

(9) Some shooters will miss a target completely or record several shots in outside scoring rings--near misses--from time to time. Again, this may be due to trying to hold on a certain point and looking at the target instead of the sights. The correct technique is to hold on an aiming area equal in size to the particular shooter's ability to hold. When it is possible for even a beginner to hold on a twelve-inch circle, using the area aiming method, then it is illogical for a man to aim at a point and end up with 10 shots that cannot be confined within a 24-inch area.

(10) An analysis of the problem will lead to only one conclusion--a shooter can hold in an area centered around some point, but he should be satisfied with any shot that goes off within this aiming area and not try to make any go off just because the gun hangs near the center of the area.

(11) When a shooter is fully aware that any shot fired when the sights are lined up anywhere within his aiming area will be a good shot, then he has removed the cause of most of this trouble. He will focus his eyes on the sights; the temptation to focus on the target is no longer present as he is not concerned with trying to aim at a certain point. He will steadily increase the pressure on the trigger so that his let-off should be perfect. His temptation to make the gun go off by putting sudden pressure on the trigger is removed because he is not anxious to make it go off at any certain point on the target. He will then be a good shot. (See figures 25 and 26.)

f. Trigger Control.

(1) The manner in which the trigger is pressed in order to release the hammer is neither intricate nor involved; however, it is a difficult operation to master. The simple amount of coordination necessary to put a steadily increasing pressure upon the trigger appears to create no great problem, but no other phase of revolver shooting requires more attention and study then this simple act.

(2) The first step is to realized that no matter how carefully the sights are lined up with each other, and no matter how steadythe hold, a poor shot will result if the "let-off" is not right. It is the trigger let-off that finally determines the accuracy of every shot fired, because a poor let-off will disturb the alignment of the sights. Every shot fired should be fired by a steadily increasing pressure upon the trigger.

(3) A steadily increasing pressure means just that. A gentle pressure is immediately exerted upon the trigger and is then steadily increased until the hammer falls. Pressing a trigger steadily 90 percent of the way and then suddenly increasing the pressure in the last 10 percent produces no better results than applying the entire pressure with a sudden jerk.

(4) The final pressure, when the trigger is just about to release the hammer, is the really important part. When it is said the let-off must be good, this means that no sudden pressure is to be applied at the last instant.

LOOK AT
YOUR SIGHTS

USE
AREA
AIMING!

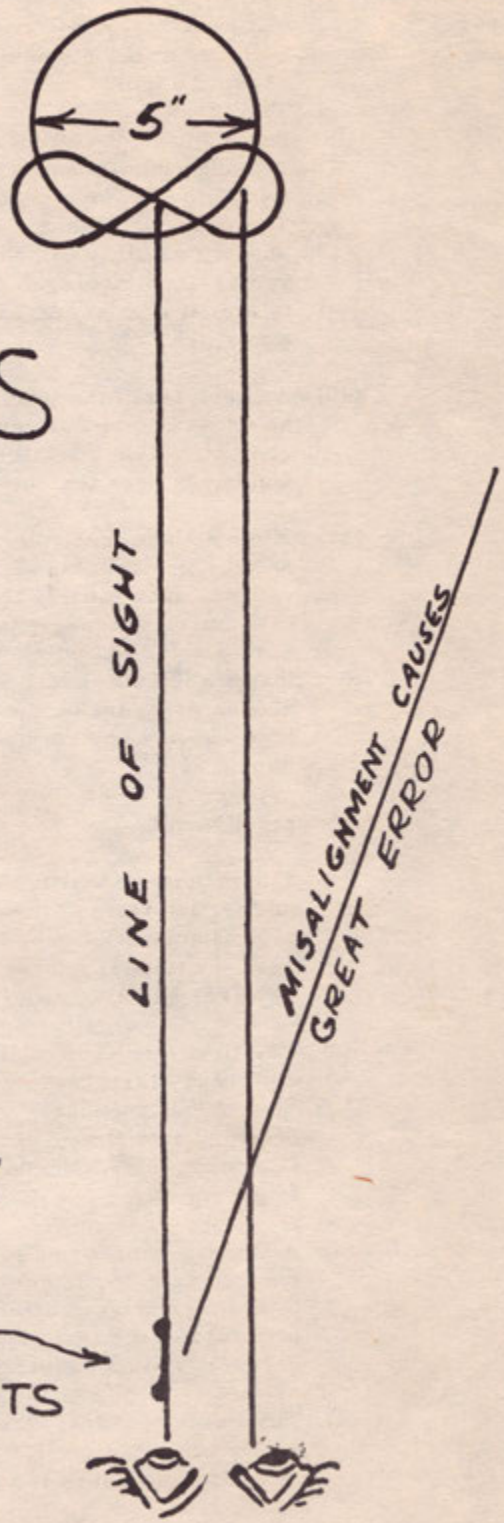


FIGURE 25

AREA AIMING

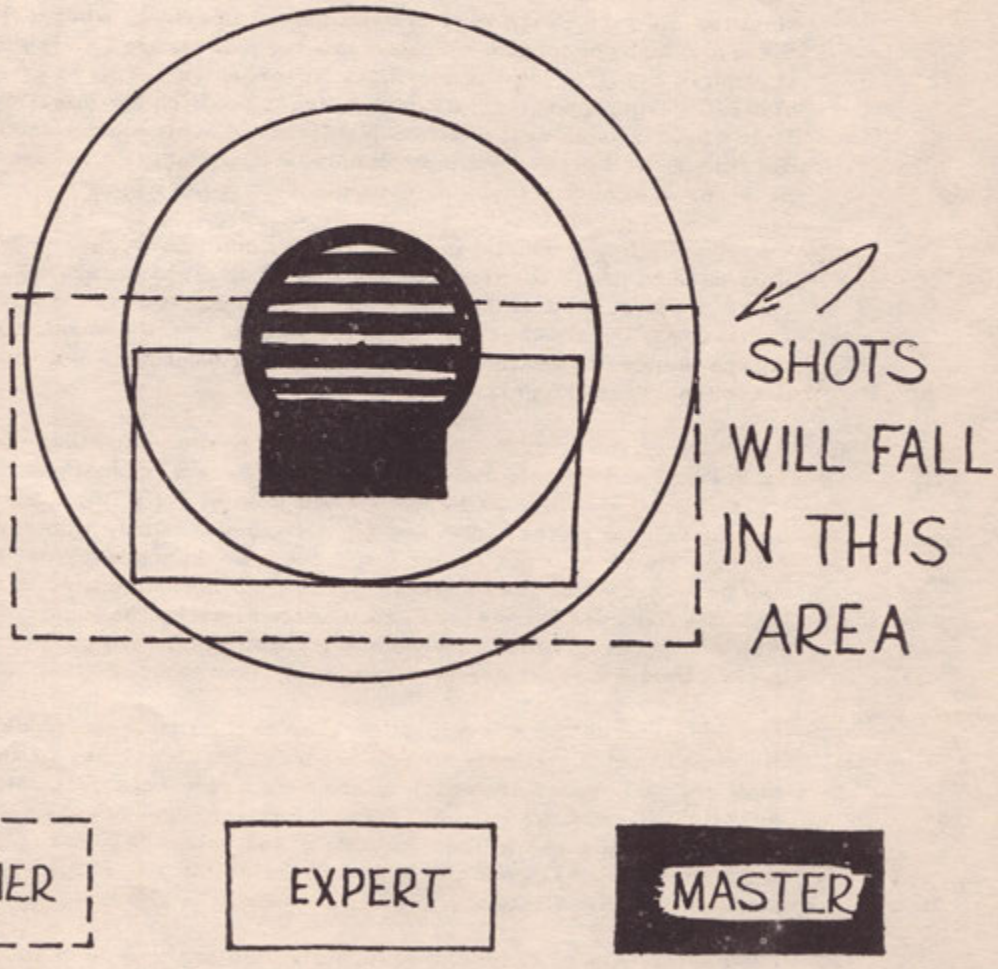


FIGURE 26

(5) All revolvers have curved triggers, some more curved than others, depending upon the make and style. In all cases the trigger is pivoted at its upper end. Therefore, care must be exercised that the trigger finger is placed as deeply in the curve of the trigger as possible and that the finger is in the same spot for each shot. A look at the gun, the shape of the trigger, and the pivot point should make a shooter realize the need for placing the trigger finger in the same spot for each shot. If the finger is placed too high on the trigger, it will require more pressure; if too low, less pressure. This would be similar to firing one shot with a revolver having a very heavy trigger pull and then another one with a much lighter trigger pull. When the finger is placed on the same spot within the curve of the trigger for each shot, the pressure required for the let-off remains uniform--a necessity for good shooting.

(6) Trigger pressure starts by placing some portion of the first joint of the index finger upon the trigger. Many shooters claim that the extreme tip of the finger should be used, but this depends on each individual shooter, the length of his fingers, his grip, and, what is even more important, what feels most natural to the individual concerned. When a shooter has secured his grip, he should use that portion of the first joint of his index finger which seems to give him the best control. This, then, is the correct finger position for him. To bend the trigger finger into an unnatural position just because some expert shoots with the tip of his finger, or because some book once stated that good trigger control could only be secured in such a fashion, does not show good judgment.

(7) The trigger finger can be inserted further into the trigger guard and the second joint used to press the trigger, but it is difficult to secure effective control because the first joint of the finger has a tendency to "curl" to the rear before the actual pressure reaches the trigger. This is faulty control, since it is difficult for the shooter to realize when he is bending his finger and when he is putting pressure on the trigger.

(8) Pressure on the trigger is always directly to the rear along the same line as the barrel axis. Some old rifle shooters may have a tendency to press downward; right-handed shooters using the second joint of their finger have a tendency to pull the trigger to the right; and right-handed shooters who squeeze with the extreme tip of their finger seem to have a slight tendency to press to the left. Any pressure other than straight to the rear is transmitted to the entire revolver when the hammer is released and usually disturbs the sight alignment between the time of the hammer release and the actual ignition of the cartridge. Make every effort not to let any such tendency become a habit.

(9) Any pressure on the trigger, other than to the rear, can be detected by lining up the sights, putting almost enough pressure on the trigger to set if off (but not quite enough), carefully watching the sights, and then releasing the pressure entirely. If you have been pressing the trigger downward or to the side, the front sight will move in the direction of the released pressure. If the trigger is being pressed straight to the rear and the above test is made, the sights will not move out of alignment.

(10) The easiest way to assure pressure directly to the rear is to pick a spot on the inner surface of your hand directly behind the trigger, then try to press toward such spot with the portion of your finger that rests upon the trigger.

(11) Picking such a spot and pressing toward it every time you press on the trigger also helps to overcome a natural desire to tighten up on the grip with the other fingers as pressure is placed upon the trigger. This tendency must be guarded against, for any increase in pressure on the grip will ruin your sight alignment and also the control of the pressure on the trigger.

(12) Sudden trigger pressure is called "jerking." Jerking is fathered by the desire for a good shot--a really good shot. The sights are lined up and for an instant hang motionless; in this instant the shooter tries to make the gun go off by a sudden pressure, a jerk, on the trigger. Sight alignment and hold are not good enough to assure a well-placed shot unless the let-off is good. If the trigger is jerked suddenly, it will disturb either the sight alignment or the hold or both.

(13) Sudden pressure upon a trigger not only leads to jerking, but also to other faults, such as flinching or stabbing and pressing or heeling.

(14) The knowledge that the gun is about to go off, with its resulted recoil and noise, produces a reflex in most shooters; they push the entire arm and shoulder forward to meet the recoil. In some cases only the arm is moved, in others only the heel of the hand, and in some only the thumb pressure is increased. In any event, a poor shot can be guaranteed.

(15) Any relaxation in the steady pressure upon the trigger leads to "freezing." Freezing upon the trigger is a result of applying trigger pressure only when the hold is good. The so-called "squeezing" a trigger that used to be recommended and taught was precisely that technique. Since novices were also instructed to use an aiming "point," they were told to squeeze only when they were holding on such an aiming point. If the sights moved away from the aiming point, they were instructed to stop any further pressure on the trigger until they moved back again, then to increase the pressure; stop the pressure again when the sights moved away again, then to increase it when they moved back; and so on until the shot was fired.

(16) Years of employing this method revealed a decided tendency to freeze on the trigger. Apparently some mental block arises when the hold is not good and, even though the shooter tries to squeeze the shot off, it is almost impossible to do so without a sudden pressure.

(17) This old-fashioned method of trigger pressure took the shooter through at least several different steps in trigger pressure, each one of which almost pleaded with the shooter to put sudden pressure on the trigger--to make it go off.

(18) Freezing on the trigger by putting pressure on the grip with the other fingers of the hand, instead of pressure on the trigger with the trigger finger, was also caused by this method of trigger squeeze. Many years ago, when shooters were instructed to put pressure on the trigger by squeezing the entire hand as they would when squeezing a lemon, the term "squeeze" might have been appropriate, but now that we know the best method is to maintain a uniform grip pressure at all times, it is a term that should no longer be used. For one thing, it seems to make the beginner tighten up on his grip pressure as he puts pressure on the trigger.

(19) A method of pressing on the trigger that may give the shooter seven or eight good shots out of ten and lead him into freezing on the trigger or framing and jerking the remainder is certainly not so good as a method that, once mastered, assures ten accurate shots out of every ten fired, particularly when such a method has developed from a study of the faults associated with the old system.

(20) In mastering this steadily increasing pressure on the trigger, you will have to exercise some restraint at the beginning. If the hold is not good, bring the arm back to the position of 45° depressed pistol, then start over again. Don't fire a shot unless the sights are properly aligned and aimed somewhere within the aiming area.

(21) This method of applying a steadily increasing pressure will be found to be particularly valuable in both time and rapid fire, when it is necessary to fire rapidly. Since it will prove to be invaluable in combat firing, it is a "must" for everyone learning to shoot. After all, target practice is a point toward making a person proficient in the use of a revolver under all conditions, and it may someday be necessary to defend his life with it. Certainly a method of pressing the trigger that involved squeezing-holding-squeezing would be a poor asset in combat firing.

g. Timed and Rapid Fire.

(1) Timed and rapid fire simulates a condition where the trainee would be required to fire accurate successive shots.

(2) Timed and rapid fire is the same as slow fire except that the pistol remains pointed at the target for five consecutive shots, and there is very little pause or delay between the discharge of one shot and the application of the operations to fire the next shot.

(3) For timed fire, the allotted period to fire five shots is twenty seconds. In rapid fire, the allotted time is ten seconds for five shots.

(4) To attain a high degree of accuracy and proficiency in timed and rapid fire, the revolver must be cocked by use of the thumb and not by using double action. A semi-automatic pistol can perhaps be fired more rapidly than the revolver under these conditions, but a shooter who is familiar with cocking the hammer for successive shots and who has the correct grip to avoid shifting due to recoil will cut the difference to a very small amount.

(5) Basically, the grip on the stock (except for a slightly tighter grip and the fact that the finger tips should now contact the stock), the position of the arm, and body are the same as for slow fire.

(6) It is important that a uniform grip be maintained throughout the firing. Any shift in the position of the pistol in the hand or variation in the pressure of the fingers during firing will result in inaccurate shots.

(7) After the command "Ready on the left" is given, the shooter should raise the pistol from the resting position to the aiming position. This is done by a smooth

but deliberate and rapid extension of the shooting arm from the shoulder, cocking the pistol, inserting the trigger finger in the trigger guard during the movement, and holding the breath.

(8) After the command "Commence firing" is given, the shooter should fire his first shot without undue delay. Succeeding shots should be evenly spaced in order that the last shot will be fired immediately prior to the expiration of the time limit.

(9) There are two methods of cocking the revolver for succeeding shots--the "rolling method" and the "straight-back method." Both methods are good. Each requires a great deal of practice before sufficient skill is acquired to cock the hammer without shifting the position of the stock in the hand. The method to be used by the trainee depends upon the size, shape, and muscular development of the hand. For that reason, both methods should be taught and practiced until it is determined which one proves to be most satisfactory. Thereafter, only that method should be used.

(a) Rolling method.

1. The recoil of the revolver causes it to rise about four to six inches above the point of aim. As it reaches the top of the upward movement, the grip is relaxed slightly and the ball of the thumb is placed on the spur of the hammer. A downward pressure is exerted with the thumb and at the same time the muzzle is moved with a wrist movement to the right. This combined action of the thumb and movement of the muzzle causes the hammer to snap to full cock. During this movement, it is important that the fingers on the left side of the stock be kept in place to assist in controlling the revolver.

2. Immediately after the hammer has snapped to the full cock position, the revolver is moved back into the aiming position and the thumb replaced along the side of the frame.

3. Some trainees may experience difficulty in keeping their grip in the same position on the revolver during the firing of a string. In most cases, the hand tends to work higher on the stock, thus restricting the action of the thumb in cocking and making it necessary to regrasp the revolver in the middle of the string. This difficulty may be overcome by altering the grip slightly so that the little finger is placed under the bottom of the stock.

(b) Straight-back method.

1. With this method of cocking the revolver, the grip is not loosened nor is the revolver shifted from its line of recoil. As soon as the shot is fired and while the gun is in recoil, the thumb is placed on the hammer spur and the hammer drawn straight back to the full cock position by the action of the thumb only. During the time the hammer is being drawn back, the revolver is lowered from its upper-most recoil position to the aiming position. As soon as the hammer is cocked, the thumb is replaced alongside the frame.

ROLLING METHOD OF COCKING REVOLVER

FIGURE 27

COCKING THE REVOLVER, STRAIGHT-BACK METHOD

FIGURE 28

2. The straight-back method is simpler and has the following advantages over the rolling method:

a. Permits the grip to be more uniformly maintained throughout the firing of successive shots.

b. Since there is no side movement of the revolver during the process of cocking, the sights can be more readily realigned and brought back into the aiming area.

3. The straight-back method has the disadvantage, however, that many men are unable to flex their thumbs sufficiently to draw the hammer all the way back. This causes the thumb to become cramped when the hammer is about two-thirds of the way to full cock and necessitates regripping the pistol to complete the cocking of the hammer. This results in a loss of time and cadence in firing the string. In some cases, this difficulty may be obviated by slightly lowering the grip, although care should be exercised so that the grip is not too low. A trainee who experiences this difficulty should be required to use the rolling method of cocking the hammer.

(10) In timed and rapid fire, time is gained by:

(a) Proper arm and body position.

(b) Applying pressure on the trigger while the sights are being aligned in the aiming area and then maintaining a continuously increasing pressure until the shot is fired.

(c) Rapid and smooth cocking of the revolver.

(d) Focusing the eye (or eyes) on the sights while aiming and waiting for the weapon to come back into view while cocking the hammer. If the target gets out of the shooter's view (do not confuse with focus) even for a moment while shooting, except when sighting, it will have to be found again before he can fire his next shot, thus losing valuable time.

(e) Absorbing the shock of recoil at the shoulder, not at the wrist or elbow, thereby reducing the movement of the gun to a minimum. The shooting arm should fall back to the proper position automatically and not be forced back.

15. COMBAT SHOOTING. a. General.

(1) Shooting in combat is vastly different from firing on a target range at a known distance. The paper targets cannot return the fire or move into concealment. The target range provides the best training there is for the fundamentals and, later, precision shooting. A hit is easily scored after firing and mistakes can be corrected. Compare this with a sudden encounter with an enemy soldier armed and ready to fire. A hit is scored by a kill or wound and generally mistakes cannot be remedied.

(2) The combat phase of this course was designed to provide various times, distances, positions, and a series of exercises that will give a shooter practice in a realistic manner. The distance and/or time factor will generally determine the shooting position that is best for a given situation. It should be remembered that regardless of how the firing started, the intelligent shooter will be continually trying to better his position until the firing ends.

(3) For example, if three or four shots were fired at an "adversary" from the hip, it shows that sufficient time was available to permit the second and succeeding shots to be fired in a sequence, while continuing to the shoulder point position, thereby increasing the probability of a hit. If time is not a factor, using the single action method with deliberate aim will enhance the probability of a hit over all other methods. It should be always in the mind of the shooter that a man at close range and capable of shooting back presents a situation requiring speed with a slightly reduced need for accuracy, but one must never totally sacrifice accuracy for sheer speed.

(4) In most cases, time and distance will both be factors, and previous training alone will provide judgment for making the decision. The same is true with a moving target. Practice in shooting and handling the weapon teaches where the hits are made in relation to how the weapon is pointed. A person who has received a training course of this type can be expected to correct his aim for a moving target. All established positions are specifically designed to allow flexibility of movement, yet maintain the best possible balance.

(5) In teaching the art of handgun shooting, it is felt necessary to point out the continued need for intelligent use of the weapon. In all cases where the gun is fired, the decision to fire should have been made with the thought that each shot will definitely aid the present or existing conditions. Wise use of the handgun in some instances could be a decision not to draw the weapon from the holster.

(6) The quick draw and combat type shooting phase of the course provides for a wide variety of demonstrations by the instructor. He should work with the minimum number of students possible at any one time. It should be borne in mind at all times to teach or demonstrate a basic or standard course. The student should be shown the basic factors on which to develop his own technique by the instructor. Showing a student the way you do it may retard the development of his technique and natural style.

NOTE: Instruction should be given in a designated sequence, so that the final phase will give the desired result; i. e., from the basic stance to a draw and complete shoot-out.

b. Double Action Grip and Trigger Control. Because the trigger pull is longer and almost twice the weight is required when firing double action, a different grip is necessary. A revolver fired double action generally requires 6 to 10 pounds pull. The trigger action does all the work necessary in cocking the hammer and rotating the cylinder. Firing double action is much the same as learning to shoot with a trigger that has a lot of creep and a hard pull. The mechanism can never be made as smooth as when used single action. Practicing dry fire slowly and then rapidly while watching the weapon for excessive movement is a good way to develop a technique and condition the hand to grip for actual shooting. It is possible to counteract excessive movement with varying trigger pressures so that a steadier gun is apparent when practicing.

(1) The double action grip is accomplished as follows:

(a) Fit the back strap against the base of the thumb in the palm of the hand in the usual manner. Then slide the entire hand around the butt so that more of the trigger finger is through the guard.

(b) Tighten all fingers around the grip, including the thumb.

(c) Pull the trigger to actuate the revolver through a complete cycle. Make any adjustment necessary for a comfortable grip.

NOTE: The barrel axis is not in a direct line with the forearm, but slightly cocked to one side. The grip is very firm over the entire stock. The thumb is held low and against the stock to aid in holding the weapon firmly.

DOUBLE ACTION GRIP

FIGURE 29

(2) Double Action Trigger Control. It has been pointed out how the trigger pull is longer and harder in double action fire. Even though this difference is readily apparent, every effort should be made to make a smooth steady pull. In most cases of double action shooting, the trigger is pulled rapidly. This should not be construed as a snapped or jerky type of action. Some explanation of the trigger mechanism may aid in teaching this phase.

(a) In single action shooting, the trigger requires small movement and an almost equal pressure throughout the full trigger pull. In double action shooting (most revolvers), the trigger pressure required may appear to lessen

near the end of the pull. When the trigger is pulled, spring tension is overcome and the cylinder is levered into rotation. As the cylinder reaches alignment, it stops, and the weight of rotating the cylinder is no longer on the trigger. At this point also, it should be noted that the action of cocking the hammer is coming to a stop. This means that further mainspring compression is also stopping. Generally speaking, all that remains is a camming type of action on the last part of the pull to release the hammer. (The manufacturer has engineered, through a system of springs and leverage, a trigger pressure that is close to constant throughout.) When the trigger is pulled rapidly, the force in the first stage required to accelerate the rotation of a loaded and weighted cylinder is noticeably more than the last stage of the pull required to release the hammer. It should be apparent that a fast tug on the trigger subjects the trigger to excess pressure at the end of its travel which will cause erratic movement from point of aim.

(b) Learn to pull the trigger rapidly and steadily throughout its full range. Watch the muzzle for wobble or movement. Practice by dry firing will enable a trainee to fire several fast shots with apparently little muzzle bounce.

c. Hip Shot. The hip shot is the basic position for future phases of combat type firing. This position refers to the pistol height rather than the proximity of the pistol to the hip. The desired results of this exercise are one or more double action shots fired from a semicrouch, facing an imaginary target. The pistol is well forward and pointed from body center. This will be known as the "hip position." The pistol at the correct hip level position is in the shooter's field of vision, and he can see the pistol by side sight without taking his eyes off the target. With proper training and practice, shooting the hip shot can be developed to give a fair degree of accuracy up to 15 yards.

(1) Stand erect, feet slightly apart and comfortable, with the eyes focused on the target. Pistol is in the depressed position, using the double action grip.

(2) Take a short shuffle step, with the leg opposite the shooting hand, to the side and forward. The knees will bend naturally and the body will assume a crouch.

(3) Shoulders are perpendicular to the line of fire and level. Do not drop the shoulder or arm holding the pistol.

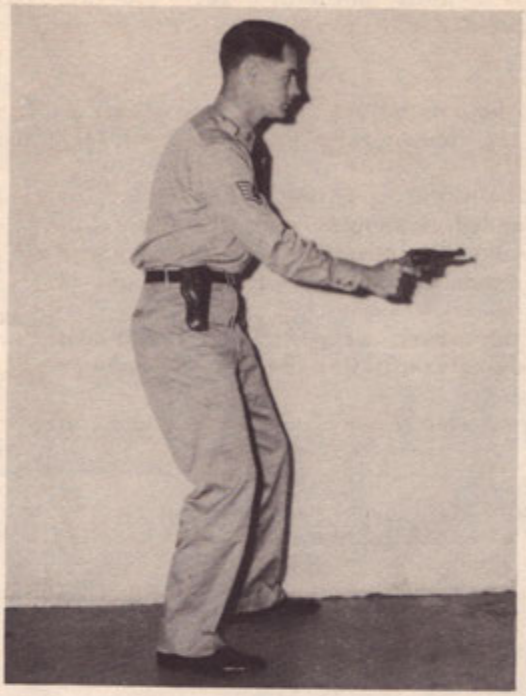
(4) At the step, thrust the arm forward as for a low punch. Do not raise or straighten arm.

(5) The pistol is centered with the body and fired in a position in front of body center line.

(6) Firing may begin any time the pistol is leveled, even though it is still moving forward.

NOTE: This motion allows an early trigger pull and the pistol is pointed at the target over a longer period of the movement than any other method.

(7) Step back to an erect position and practice assuming the hip position with an easy coordinated motion.



HIP-SHOOTING POSITION

FIGURE 30

(8) Check the following items for proper hip-shooting:

(a) Step is short and to the side while flexing knees slightly. Point out how this puts body in balance and a quick swivel is possible to either side.

(b) Pistol is level, well-pointed, and eyes stay on the target.

(c) Pistol is low and out. Elbow can be slightly flexed with arm in a natural position and the wrist stiff or locked.

(d) Shoulders level and perpendicular to the target. Gun shoulder not dropped. Point out how this shifts weight to one side.

(e) Arm is extended (hand following a line level with holster) in a thrust, not raised--straight. (Emphasize.)

(f) Note good trigger control.

(g) Continue practice until position is mastered with a relaxed appearing stance.

(9) There are trainees who will encounter trouble with hits in this position. A recommended procedure is to teach them to hold a straight arm (out and down) and

cock the wrist up until the pistol is level. In this position, some hits may bring the confidence necessary to teach them the recommended position as described previously.

NOTE: It should be pointed out that the use of this position is to be limited until such time as the student gains sufficient "gun feel" and confidence.

d. Shoulder Shot. The hip shot is limited in accuracy by range. When speed is still essential but the range is increased, a shoulder point shot is easily gained from the hip position. The shoulder point shot can be used to advantage when the target is not more than 25 yards, or when more accuracy is desired than by the hip shot. (See figure 31.)

(1) Stand facing the target, weapon at depressed position. Feet are comfortably apart and body relaxed. Use the double action grip.

(2) Eyes on target, step forward in a short shuffle step with the right foot (right hander).

(3) Raise the pistol straight forward with the step, in center line with the body. Arm is fully extended and the wrist is locked.

(4) Eyes are kept on target and weapon is brought into view.

(5) Fire one or more double action shots; concentrate on steady smooth pull.

(6) Repeat procedure until ease of motion and desired position is noted.

(7) Check the following items for proper shoulder point shooting:

(a) Keep student fairly erect. Avoid ducking head to align sights.

(b) Step forward is kept short. Avoid a lunge forward that affects balance and allows the body to totter on leading foot.

(c) Observe that the shoulder is not thrust forward too far, twisting the trunk.

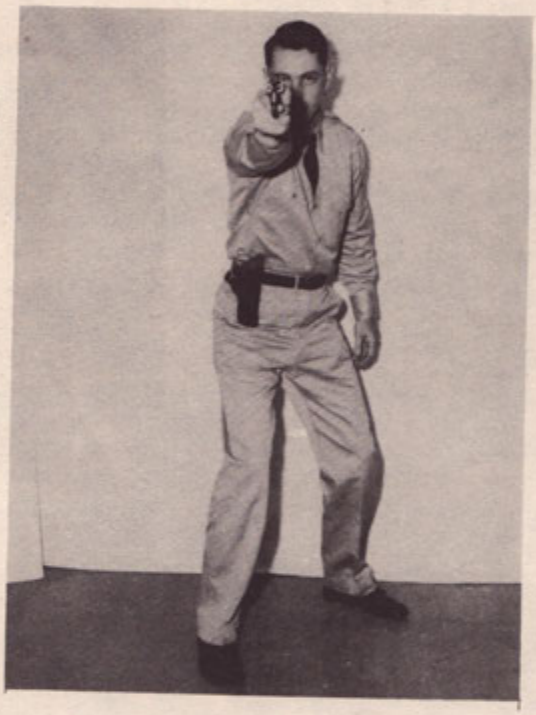
e. Quick Draw. The hip draw phase is all dry fire practice. Actual fire will be done only on the personal encounter course.

(1) The quick draw is demonstrated and taught with the holster mounted on the hip position (generally on the trouser belt). This position is most natural and in all probability personnel will carry the pistol at or near the waist. The purpose of a quick draw is to keep the hands free while allowing instant use of the pistol when necessary. It should be pointed out that in a situation of danger, the pistol should be held ready in the hand; however, concealment to the last moment may be necessary in other situations.

NOTE: No attempt will be made at the present time to discuss the many different types of holsters and the kinds of draw they inspire. The hip draw from an open top holster is the basic draw and will be described in this lesson guide.

It has been found that easy transition is made to other types of draws once the basic or hip draw is mastered.

(2) The desired result in this exercise is a smooth draw, assuming the hip shot position and firing one or more double action shots as soon as possible. Follow the designed sequence. There are two definite phases--Grip and Draw. Draw is taught first. (See figures 32, 33, and 34.)

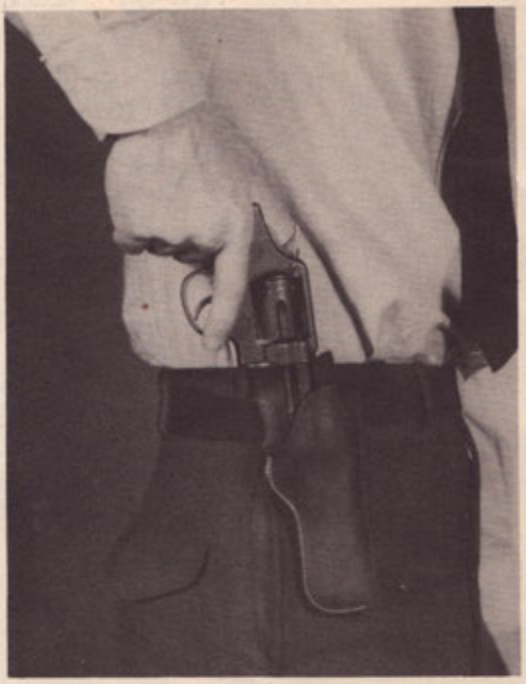


SHOULDER POINT POSITION

FIGURE 31

GRIP

FIGURE 32



DRAW

FIGURE 33

POINT

FIGURE 34

(a) Position the holstered pistol in a comfortable position on the hip. Practice with the arm hanging relaxed; reach up and grip the butt. Adjust the holster until a good feel is obtained each time a grip is tried.

(b) After the holster is in the desired position, stand relaxed, feet comfortably apart, with arms hanging beside the hips. The gun hand is placed on the gun with a double action grip; finger is not in the trigger guard.

(c) Draw the pistol and assume a "shooter's stance"--short shuffle step to the side away from gun hand and forward. As the pistol is drawn, have the trigger finger seek the trigger.

NOTE: Finger seeks trigger only after the draw starts.

(d) Body should be in good balance and pistol well pointed same as in hip shot. Fire double action one or more shots then reholster the gun and step back. Continue practice starting from this position with the hand gripping the pistol. Practice slowly, with movements smooth and coordinated. Don't pick up speed until the action appears natural, then move up to full speed, checking the position carefully each time.

(e) Grip. Stand relaxed with both arms hanging beside the hips. On command, reach up and grasp the weapon. It is not necessary at this stage to complete the draw; merely raise the pistol from the holster as practice gaining the grip continues.

(b) The hand should come up and inward from below and alongside the holster until the three lower fingers of the hand intercept the butt. It should be noted that unless the large finger is grasping up between the butt and trigger guard, some odd grips result. Continue practice until motion becomes easy and smooth.

(g) The complete draw. Although the draw is taught in two different stages, it becomes a single motion with practice. Merely put the grip and draw phases together and add the trigger finger. When done in slow motion, the hand generally describes an arc or part circle as the gun is gripped and drawn. Stand relaxed and on command, grip, draw, and punch the gun forward. The first shot is fired as soon as the gun is out of the holster and is leveled. Keep all motion deliberate yet smooth. Add speed only after there is no fumbling of the grip or tripping the gun on the holster. Continue practice, on command, of drawing and shooting the hip shot.

(h) Trigger finger. If the grip and draw style is properly taught, the pistol will be leaving the holster as the trigger finger seeks its position. By teaching a student to apply a full grip first (before drawing) he may gain the trigger much too early. As the gun is drawn, then start the finger through the trigger guard. It is not necessary or desired to wait until the pistol is pointed at the target before gaining the trigger.

(i) Student is near final phase of combat shooting. The basic positions previously taught; i. e., double action grip and hip shot, should be checked as the quick draw continues. Slow down any student who is lunging or showing too much wasted motion.

(3) Check the following items for proper quick draw:

(a) Observe students who stop hand to grasp the butt. Emphasize pulling with lower three fingers and gaining the rest of grip and trigger position as the pistol is drawn. Demonstrate in slow motion how easy this appears.

(b) Allow full speed draws after the principles involved are well mastered.

(c) Check basic position and observe that pistol is moving forward in a straight line. Do not allow pistols to be lifted high and barrels snapped down with a loose wrist action.

(d) Look for late trigger pulls. Emphasize trying to get first shot off as pistol is leveled and still moving forward.

(e) Keep students drawing on command. This keeps the natural self-consciousness to a minimum. Stop class occasionally and demonstrate how quick draws are used; refer to Extra Demonstrations (paragraph 16d, below).

f. The Shoot-Out. The shoot-out is an exercise designed to incorporate almost all elements of combat shooting. It consists of a quick draw, hip and shoulder point, and firing six timed shots, all in a given sequence. It is used only as a dry fire practice exercise.

(1) Select an imaginary target and execute a quick draw and dry fire six times.

(2) Make the first shot as soon as the pistol is level (hip position); second shot at full out-thrust of the arm (hip position); third and fourth shots as the gun is raised to shoulder point; and fifth and sixth shots at shoulder point.

(3) The desired sequence is as described in subparagraph (2), above; however, the pistol once drawn is never stopped until the shoulder point is reached.

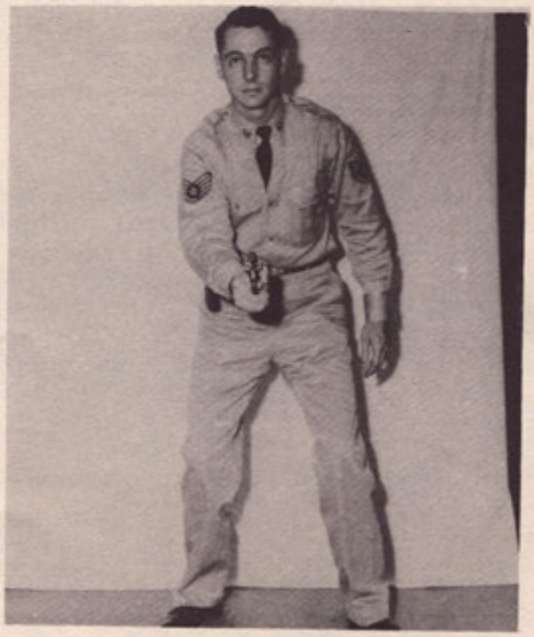
(4) The observation of a student's performance should indicate that he adheres to the fundamental positions of firing as previously taught. The most common error, generally, is a great amount of pistol wobble as trigger is worked vigorously. Allow the student to work as fast as possible.

DRAW

FIGURE 35

FIRST SHOT IS FIRED AS SOON AS THE PISTOL IS LEVEL

FIGURE 36

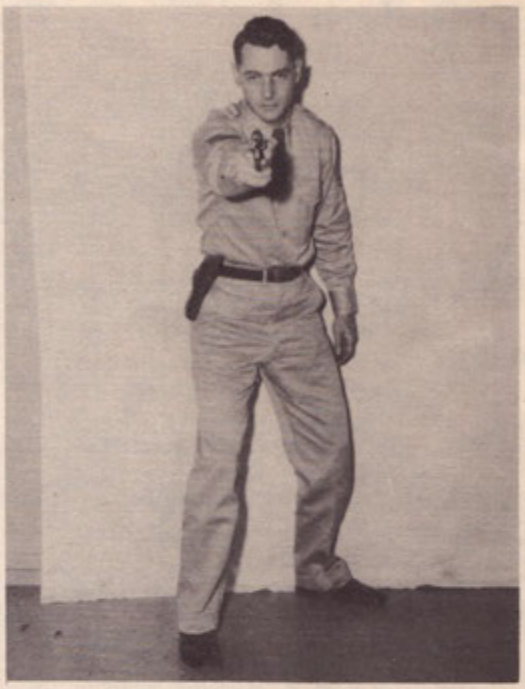


SECOND SHOT AT FULL OUT-THRUST OF THE ARM (HIP POSITION)

FIGURE 37

THIRD AND FOURTH SHOTS ARE FIRED AS THE GUN IS RAISED TO SHOULDER POSITION

FIGURE 38



FIFTH AND SIXTH SHOTS ARE FIRED AT THE SHOULDER POSITION

FIGURE 39

g. Firing from Behind Barricade. The purpose of this phase of firing is to acquaint the shooter with using the maximum concealment possible. The barricades used in the instruction may well represent the side of a building. For this reason, shooting is done from both left-handed and right-handed positions. Whenever a shooter is in the proper position, only the pistol hand, the eye, and a small portion of the face are visible from the target.

(1) Right-hand side. Place the palm of the left hand flat against the barricade. The thumb only is extended beyond the right side of the barricade. Push the left foot up close to the barricade, turning the toe outward toward the right. Right foot is positioned in a comfortable stand, drawn back of left foot with leg out of a "line of sight" with the target.

(2) The right arm and pistol are fully extended and the pistol is cradled on top of the extended thumb.

NOTE: A certain amount of flash and spatter is prevalent at the end of the cylinder. For this reason, the pistol should mount the thumb with the front of the cylinder forward of the edge of the barricade and the supporting hand.

(3) A good rest is attained by mounting the pistol trigger guard on the left thumb. The arm can be extended well forward and the wrist mounted on the thumb. The only objection to holding the wrist is that more of the pistol arm and more of the face are exposed to view.

(4) This position should afford single action fire only. Only very slight pressure is put on the thumb by the pistol to steady the hold. No effort is made to press the pistol against the barricade or left hand.

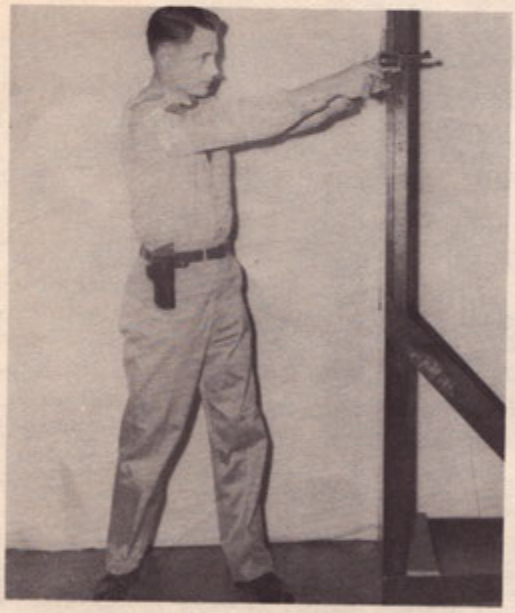
NOTE: Any extra pressures against the pistol will change the point of impact for a normal aim.

(5) Firing from the left side is done in much the same manner with the exception of applicable changes with pistol in left hand.

(6) Check the following items for proper barricade firing:

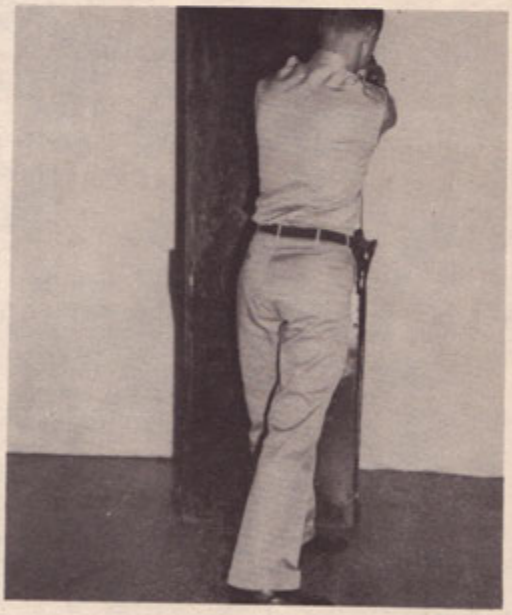
(a) Pistol arm is always straight and wrist is locked.

(b) Upon recoil, if pistol is noted to pull down from thumb, student had been using too much pressure on the thumb.



ARM IS FULLY EXTENDED AND PISTOL IS COCKED AFTER IT IS PLACED IN POSITION

FIGURE 40

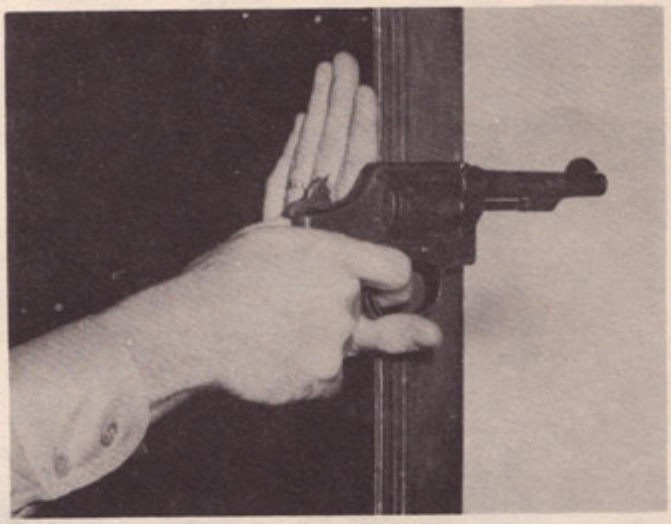


SHOOTER ASSUMES AN UNORTHODOX POSITION BY PLACING LEFT FOOT FORWARD IN ORDER TO TAKE ADVANTAGE OF COVER

FIGURE 41

(c) Stress allowing pistol nearly as much freedom as normal offhand.

(d) Keep the student well concealed.



CLOSE-UP OF HANDS. FRONT OF CYLINDER IS AHEAD OF INDEX FINGER AND REAR EDGE OF BARRICADE

FIGURE 42

h. Kneeling Position. The kneeling position may be used whenever the distance or size of the target requires greater accuracy. The kneeling position affords the shooter a steadier aim than the off-hand or hip position.

(1) Right-hand shooters. Stand facing 90° to the right of the target. Kneel down on the right leg with the knee resting on the ground. Buttock is rested on the heel of the right foot. The left knee is in a raised position to provide support for the left arm. Extend or retract the left leg for target height.

(2) Pistol grip may be either single or double action or a combination of both. The left elbow is rested on the left knee for support. Elbow and knee point of contact can only be established by practice. A good steady rest can be accomplished by placing the fleshy portion, back of the elbow, on top of the knee. For best all-around results, left leg should be extended far out as possible commensurate with target height.

(3) The two-handed grip best suited for this position is to cup the left hand, palm up, and lay the pistol hand or wrist in it, using shooting arm biceps as a rifle stock. Any other two-handed grip may be tried or demonstrated.

(4) Check the following items for proper kneeling position:

(a) Pistol arm extended fully.

(b) Whichever two-handed grip is chosen by the student must appear steady, and only one hand should touch the pistol.

(c) Emphasize selecting an uncomplicated position that can be gained quickly from a standing position.

KNEELING POSITION

FIGURE 43

i. Sitting Position. The sitting position and the kneeling position afford about the same amount of steady rest. Such positions would be used under actual firing conditions for distance shooting where obstructions interfered with use of the prone position.

(1) From a standing position, stoop down by collapsing the knees until the buttocks are a scant few inches off the ground. Roll back on the heels until the feet are free. Move the feet slightly forward and dig in the heels, toes held well up.

(2) Both arms are stretched straight forward and placed on top of the knees for support.

(3) Any approved two-handed grip can be used. The pistol arm is straight forward with locked elbow and wrist. One of the best two-handed grips to use is the last three fingers of the left hand held firmly against the last three fingers of the right hand. This position affords both double and single action shooting.

(4) It should be noted that leaning backward will be the easiest manner of correcting for elevation.

(5) Check the following items for proper sitting position:

(a) Pistol arm straight out and locked.

(b) Good double or single action grip.

(c) Two-hand grip should afford good hold, with only one hand touching the weapon when firing.

SITTING POSITION

FIGURE 44

TWO-HAND GRIP. IN THE PRONE, SITTING, AND KNEELING POSITIONS, THE TWO-HAND GRIP IS ADVANTAGEOUS

FIGURE 45

j. Prone Position. The prone position enables the shooter to achieve the steadiest possible aim. It also gives a small target for return fire if the terrain is level and without obstructions of tall grass or boulders. Trainees should be able to attain a good prone position from a normal standing one in the shortest time possible.

(1) Stand facing the target, bend at the knees, and reach forward. With the left hand, brace the forward fall until the body is unfolded into the prone position.

(2) Stretch both arms straight forward into two-hand grip.

NOTE: For the purpose of elevation, it is best to cup the pistol hand or wrist with the other hand. The legs and feet should be together.

(3) Pistol may be fired either single or double action.

(4) Check the following items for proper prone position.

(a) Pistol arm fully extended and locked.

(b) Good two-hand grip.

(c) Elevation alignment is made by bending elbows.

(d) Stress body flat for concealment.

(e) In actual fire, point out that generally hits are slightly lower. Stress two-handed grip, sighting, etc.

PRONE POSITION

FIGURE 46

k. Personal Encounter. This course is designed to allow the student opportunity to test his skill against another shooter. This is done by use of electronically controlled and timed targets, with one target for each shooter. As the target begins to swing into view, a time clock is started. When a hit is made, the clock stops and an alert light appears to show that a hit has been made. (A horn may be substituted on outdoor ranges.) The trainees are generally walking toward the target, and as the target turns into view they draw and fire. This dramatic test of skill is perhaps the most interesting course ever developed in the field of handgun shooting.

(1) Shooters are paired off by any suitable method that will reasonably match their abilities.

(2) Shooters will start from the 15-yard line with a holstered pistol and 50 rounds of ammunition each.

(3) A command "Start Walking" is given and any time after that, the instructor may trip the switch which will turn the targets, and the students draw and fire at will.

(4) Since this is a test of the shooters over-all ability, several ways are devised to make the shooter think. One good procedure is to hold the alert light (one that lights when a hit is scored) back until the student empties his pistol. In this manner, he is checked to see whether he will automatically go into a quick reload (see subparagraph 1, below) and fire again, without being told. Attempt to do this once to a student who has demonstrated a failure to project himself into a combat situation, such as strapping his holster over the pocket containing his ammunition.

(5) Student should be told to load after each shot or shots at least twice during his first session.

(6) Students starting from the 15-yard line will stop walking to fire, then restart at whatever distance is left. When students get down to 7 or 5 yards, bring them back to the 15-yard line and start over.

(7) Do not delay target turning for excessive periods. This gets the students tense and often becomes confusing.

(8) Maintain safety discipline at all times; never allow clowning of any type.

(9) At least one instructor will accompany each pair of students through each session to act as an official observer and to offer advice. This observer should allow students to work out problems for themselves.

(10) Each time a hit is made, the scorer will call out "right or left hit, time _____" (in seconds).

(11) Weapons of paired "opponents" will be cleared and cylinders opened upon completion of personal encounter course.

1. Quick Reload. One disadvantage of a revolver when compared to a clip-fed semiautomatic pistol is the manner of loading and unloading. With a clip, all that is necessary for reloading is to release the empty one and replace a full one. When the clips are empty, however, loading the individual rounds is again a problem. In the case of the revolver, each time the cartridges in the cylinder are expended they must be replaced individually. A method for quick replacement has been designed whereby this operation can be done rapidly. It should be pointed out that a pistol can be loaded for a series of fifty shots faster than a semiautomatic pistol using only two clips.

(1) As the shooter finishes a string of fire, he will turn facing down the firing line to the right (right-hander).

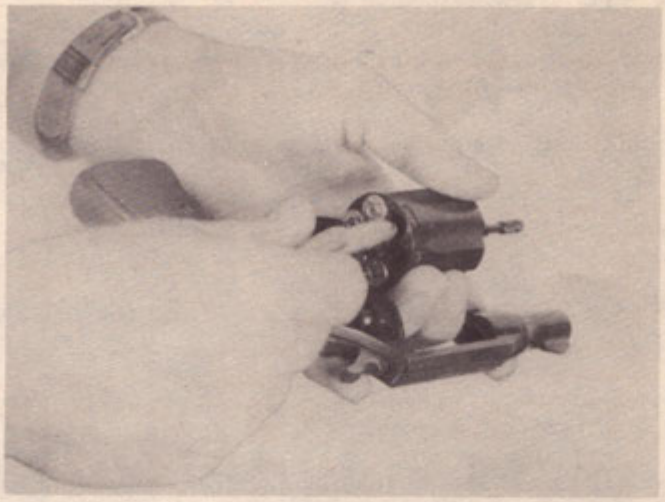
(2) In the same motion of turning, unlatch the cylinder with the right thumb. With the left hand, use the two middle fingers to break out the cylinder.

(3) The forefinger of the left hand is laid against the frame and barrel and the little finger is held near the hammer to hold the pistol.

(4) The thumb is used to press down the ejector with sufficient force to eject the spent cases.

(5) Loading is now done with the free hand. The thumb and two fingers through the cylinder part of the frame are used to rotate the cylinder.

(6) Close the cylinder, DO NOT SLAM IT SHUT WITH A WHIPPING MOTION, and check to assure that it is locked. It is then ready to fire again.



LOADING THE REVOLVER

DRAW BACK THE LATCH WITH THE RIGHT THUMB, SWING OUT THE CYLINDER WITH THE MIDDLE FINGER, AND INSERT THE CARTRIDGES WITH THE RIGHT HAND, ROTATE THE CYLINDER, LOADING EACH CHAMBER AS IT COMES ON TOP. KEEP GUN POINTED DOWN RANGE.

FIGURE 47

16. METHODS OF INSTRUCTION. This paragraph will be used as a guide to better enable the instructor to analyze and alleviate the faults of the trainee. Every shooter has many faults--major and minor, psychological and physical. This paragraph, however, will deal only with the most important or outstanding faults and the correction of these faults. Remember that the purpose of the course is NOT to make everyone who carries a side arm a master shot. It is to enable all personnel equipped with a handgun to adequately use that weapon for survival and defense.

NOTE: No live or dry fire practice will be conducted until the trainees have attended the lectures: Safety, Fundamentals of Marksmanship, and Dry Firing.

a. Live and Dry Firing.

(1) The diagnosis and correction of difficulties encountered by trainees can best be accomplished during the "Live and Dry Firing" phase. This phase of training usually takes place at the 15-yard line, because a large error on the part of the shooter will, more than likely, still be registered on the target, whereas the same error from the 25-yard line would miss the target and the instructor would not have the visual indication of a hit to analyze a discrepancy.

(2) Close supervision by a qualified instructor is required during this phase. The range controller will appoint an instructor to review the safety rules and to

demonstrate the position (stance), grip, breath control, and sighting on the firing line. On the range, controllers command the trainees to take their position on the firing line and pick up their empty weapons* or unholster carried pistols.

(3) On the range controller's command, the trainee will practice dry fire on the "L" target. The instructor will note any errors made by the trainee and will correct them.

(4) At the range controller's command, the trainees will clear and ground their weapons and move back off the firing line. The instructors will move forward to the firing line, pick up the empty weapons, and load not more than two live rounds. The remainder will be empty rounds in the cylinder.

(5) On the range controller's command, the trainees will move forward to the firing line, pick up their weapons take the proper stance, grip, etc. (Indoors, weapons are usually held at 45° depressed pistol position; outside, 45° raised pistol position.) This position is held while the range controller gives the command "READY ON THE LEFT, READY ON THE RIGHT." At the command "READY ON THE FIRING LINE," the trainee will raise (or lower) the weapon and start sighting on the target. After the command "COMMENCE FIRING," the trainee will fire on the "L" target.

* ANY TIME A WEAPON IS PICKED, UP IT MUST BE CHECKED TO SEE IF IT IS LOADED.

45° DEPRESSED PISTOL POSITION

FIGURE 48

b. Listed below are some of the most common causes of inaccuracy and the corrective action necessary to correct the inaccuracy.

DIFFICULTIES ENCOUNTERED BY TRAINEES	CORRECTIVE ACTION REQUIRED	PROOF
Shooter is consistently hitting high, low, right, or left.	Check shooters grip, correct if necessary.	Increased accuracy.
	Check shooters sight picture, correct if necessary; (use appropriate training aid; i. e., sighting bar or chart showing correct sight picture).	
	Have trainee hold sight picture as instructor squeezes off the round.	
	Check sights on weapon.	
	Check position of trigger finger.	
	Check for trigger jerk or trigger follow-thru pressure.	
Scattered pattern.	Check and correct, as necessary, the following:	Closer and more accurate picture.
	Trainees stance.	
	Trainees grip.	
	Trainees breath control.	
	Check sighting picture.	
	Definite jerk.	
	Check and correct as necessary for:	
	Flinching.	
	Closed eyes on hammer fall.	
	Nervousness.	
	Eyesight.	

	Test fire weapon to insure that barrel is alright.	
Good accurate pattern with occasional "lost" or "stray" shot.	Have trainee rest between shots and fire every shot as though it were his first.	Using these principles on every shot will reduce the number of "strays."
	Emphasize the importance of squeezing the shot off while in the aiming area and not to attempt holding a perfect sight picture.	
	Check to determine if student is focusing on sights or target.	
Student shows lack of self-confidence and lack of desire to learn to shoot.	Have OIC talk to the trainee and attempt to emphasize the importance of a weapon in self-defense and survival; also the ability to use the weapon.	More vigorous participation.
	Sometimes a very active or interesting demonstration will incur interest.	
	Put this trainee with the most patient, best qualified instructor in the school.	
	Attempt to build the shooter's confidence in himself by moving him up until he hits the target well, then start moving him back and continue the practice until he does as well as or better than average.	

c. Properly supervised practice is essential to good marksmanship, but practice haphazardly undertaken and inadequately supervised is very likely to cause harm rather than to achieve any benefit. During all practice sessions, instructors must impress on the coaches the absolute necessity for requiring correct performance by the shooter. Coaches and instructors must be alert. They must not allow an individual to persist in erroneous practice which will form an undesirable shooting habit. AFM 50-9 should be used in application of "How to Instruct."

d. Extra demonstrations may be used as follows:

(1) Hands Up--Quick Draw.

(a) This demonstration shows the trainee what he can accomplish with sound thinking and quick reaction, if the attention of the person covering him is diverted even for an instant.

(b) Trainees are lined up facing the same direction and pistols are checked by the instructor to insure that they are unloaded. The instructor stands in front of and off to one side, facing down the line of trainees with his empty and cocked pistol pointed from the hip position. The trainees raise their hands. The instructor should distract his attention from the trainees from time to time. The trainee should make the draw and shoot (straight in front and not at the instructor) anytime he thinks there is a chance to fire before the instructor could recover and get off a good shot. The demonstration may be reversed and only one trainee used.

(c) This exercise should be done at the conclusion of the quick draw period.

NOTE: At no time should anyone be in front of a weapon.

(2) Gun in Hand Against Holstered Gun.

(a) The purpose of this demonstration is to show the trainees that with a quick draw and fast and accurate shots, a person can shoot his way out of some situations even while covered by a gun--that with proper training and practice, this degree of proficiency can and should be reached by most trainees.

(b) A trainee is selected from the class and instructed to stand on 7-yard line with the pistol in his hand at the depressed pistol position. Anytime the targets turn, he should assume the hip position and fire the weapon by using the double action method. The instructor stands on a line with the trainee, facing the other target, with gun in the holster. When the targets turn, the instructor must draw his weapon from the holster and fire.

(c) It should be noted that if both shots were fired so close together that they sounded almost as if fired at the same time, both may have hit the target, but only one will register. With shots fired this close, it would not necessarily mean that the shooter who fired first would get the "kill" in an actual situation. The winner would depend on who got the most crippling and/or vital hit or hits.

NOTE: The instructor used for this demonstration must draw consistently under 90/100 of a second to make the demonstration effective.

(3) Right and Wrong Demonstrations. Throughout the training course, the instructor should demonstrate both the right and the wrong methods in shooting techniques (grip, trigger control, sitting and barricade positions, etc).

e. The following true stories are added in this guide to act as specific examples in the need for better and a different type of training. These stories present many problems that the type of course you are teaching will answer. Encourage instructors to tell similar stories or be on the alert for the story that will help sell the point.

(1) An infantry captain was commanding two patrols in World War II. He noted that the patrols were splitting. He went back to radio them of their relative position. He approached his radio man just as a young German soldier popped up over a small rise about 15 yards away. The enemy had an issue Mauser rifle pointed at hip level with his finger on the trigger. The captain made a quick draw of his .45 auto and blazed away for 7 fast shots. The enemy soldier stood as if transfixed. An American soldier that observed this exchange quickly used his BAR and killed the enemy. The officer who is now a civilian stated that they later went over the dead soldier's body and found that there were no .45 hits. An inspection of the enemy's rifle showed the safety off and the rifle was loaded and ready to fire. Since this instance of a quick draw was related to parts of the handgun course, the former captain was questioned at great length to get the whole story. He states that on rest periods behind the lines he had practiced religiously on the quick draw with his automatic. He even made up his own holster for this purpose. He stated that he was getting very proficient at hitting silhouette targets at short ranges. He thought about preparing himself for just such an encounter as he had survived. He was confident in his ability and he knew that in the close fighting, then involved, there was no time for either side to take prisoners. This officer was asked to give a demonstration on how he had practiced and fired at the opponent. A brief description is as follows: The draw was made with the right hand in a normal grab and pull. The left hand palmed the hammer to cock for the first shot. The forearm was held pressed to the body above the hip. The body was leaned slightly to the right. The pistol was canted to the right approximately 10 degrees. No actual firing was done but the captain was shown how to shoot in our combat position. He said, "No wonder I missed. This way is faster and simpler."

(2) Let's listen in on an American Army colonel describing what happened when his command post was overrun by Chinese Reds in Korea: "I took cover as the enemy broke into the command post, and later, as they were departing under fire, several Reds passed by me so close that I could have slapped them on the back of their heads with my .45. I chose to shoot, however, and fired seven shots without hitting a single Red." A funny story? Hardly, when we consider that the .45 was given to the colonel to use effectively against an armed and brutal enemy.

17. SMALL ARMS. This paragraph is designed to acquaint the student and instructor with a few of the basic principles of design and use of some typical small arms. It is included to assure the student that if he were suddenly thrust into a position where his life depended upon whatever weapon was available, foreign or otherwise, he should have some knowledge of how the weapon operates. General information on the purpose of design, safeties, and their locations and principles of chambering and firing are as follows:

a. Types. All automatic weapons of fairly recent vintage, and probably all future weapons of the automatic type, are blow-back or gas-piston operated. A simple explanation of blow-back operation is that when the round is fired, the gas expansion forces the bolt or slide to the rear, also ejecting the spent round. On the return forward the bolt or slide takes a round from the magazine for chambering. The forward motion is accomplished by spring pressure. The cycle will be repeated until the trigger is released. For our purpose the gas-piston operated weapon may be considered in the same category.

(1) Semi-automatic. The operation is the same as the automatic, with one exception, that difference being that the trigger of a semi-automatic must be pulled for each round fired.

(2) Bolt action. Bolt action is that operation whereby each round must be chambered manually. In other words, the bolt or slide is hand operated for each round chambered. The bolt or slide also cocks the piece for firing on either the opening or closing stroke.

(3) Revolver. The revolver has a cylinder feed and is either single or double action. The single action is anolder model which must have the hammer manually cocked for each round fired. In double action, the weapon can be fired by cocking the hammer for firing or can be fired by pulling the trigger without cocking the hammer. The first part of the trigger pull cocks the weapon and the last part releases the hammer.

b. Safeties. Most small arms weapons (other than revolver) are equipped with safety devices or locks, which prevent the weapon from being fired until the safety is released. The normal function of the trigger is to control the mechanism which causes the striker to prime the round. Thus, in order to have a safety, it must be located somewhere between the trigger and the striker.

(1) On hand guns, the safety will more than likely be found in the vicinity of the thumb, when the weapon is held in the right hand. On rifles, it will usually be found on the trigger guard or the trigger housing. However, on older rifles such as the Enfield or Russian type now in use, it is a leaf type located on the rear of the bolt or a rotating cocking piece on rear of bolt.

(2) Other types of safeties are lever type, which moves in an up and down or back and forward motion. There is also a button type which when pushed from one side is safe, and when pushed from the other side will be unsafe. When unsafe, there is usually a red band on the button as an indicator.

c. Feeding.

(1) The break open type is a weapon such as a revolver, which pivots forward and down at a point just forward of the trigger guard, raising the cylinder clear for loading. Many shotguns and rifles are loaded in the same fashion by breaking open. Most late revolver cylinders swing open to the left, by releasing a latch on the left side, exposing the cylinder for loading.

(2) Magazine feeding, a type common to many types of rifles, is done by pulling the bolt to the rear and inserting the ammunition from the top in front of the bolt. Some are fed individually and others use small retaining clips, but in either case amounts of ammunition vary.

(3) Clip feeding is done under spring pressure, with the rounds of ammo being fed into the top of the clip and inserted into the weapon, as in the case of the .45 cal. pistol and in rifles such as the .30 cal. carbine. Clip releases are mostly push-button types and are generally located where the clip is inserted into the weapon or a pushbutton back of the trigger.

(4) Drum type feeding is a system which is very seldom used on recent weapons of small arms type, but will be covered mainly as information, as larger caliber weapons do use it quite often. Ammo is fed into a round drum, such as in the older style Thompson submachine gun. The rounds are fed under spring pressure and, on some types, the drums are wound by placing the ammo in the drum. Others have to be wound manually with a means for doing so in the center of the drum. Rounds are rotated around the drum into the feed by the unwinding action of a large (clock-like) mainspring.

d. For instructional purposes, it is recommended that the instructor have weapons available for demonstration, such as .45 cal pistol, .38 revolver, carbine, and, if possible, rifles covered in the subject. Demonstrations should only cover feeding, safeties, and clip releases to prevent the instructor from entering into a field of controversy. Do not try to be exactly technical, and remember that the purpose of this phase is only for general familiarization.

18. THE NEW LIGHTWEIGHT RIFLE SYSTEM. On 1 May 1957, the institution of a new small arms weapons system was announced with approval of plans to adopt a new standard rifle. Adoption of this new rifle, which replaces four current US shoulder weapons, rounds out a program for a new weapons system. Both the new rifle and the new machine gun fire the 7.62 NATO cartridge, which will be common to all NATO allies. It gives the modern army a better and lighter rifle while cutting the number of weapons in the small arms system from seven to two (one machine gun and rifle in two-barrel versions). The newly adopted rifle, designated M-14, weights 8.7 pounds and is capable of either fully automatic or semiautomatic fire. When equipped with the heavier barrel and bipod, it is called the M-15 and weighs 13 pounds.

a. Description of the M-14 rifle is as follows:

(1) The Rifle, caliber .30, M-14, is a lightweight, air-cooled, gas-operated, magazine-fed, shoulder weapon, designed primarily for semiautomatic fire. The rifle is chambered for the NATO 7.62mm (commercial equivalent of Winchester .308) cartridge. This rifle is similar to the M-1 rifle in appearance and in operation.

(2) The M-14 "action" (i.e., receiver, bolt, and trigger group) is basically the same as that of the M1 rifle. The differences, in nearly all instances, were required to accommodate the shorter cartridge and the 20-round box magazine. The receiver, bolt, and firing pin are shorter. The bolt has a stud with a roller (for reduction of friction) which contacts the operating rod cam surface. The trigger group, with the exception of the sear, is basically the same as that of the M1 rifle, but a new housing and trigger guard are utilized. The trigger housing floor plate has been cut back to allow for insertion of magazine, while sufficient surface area has been maintained to provide proper clamping of the stock. The magazine latch is located in a recess in the forward face of the trigger housing.

(3) The bolt lock is mounted on the left side of the receiver.

(4) The rear sight group, mounted on the receiver, is composed of M1 rifle parts.

(5) The sear release, selector shaft, and connector assembly, mounted on the right side of the receiver and positioned by the selector lock, are inoperative during semiautomatic firing.

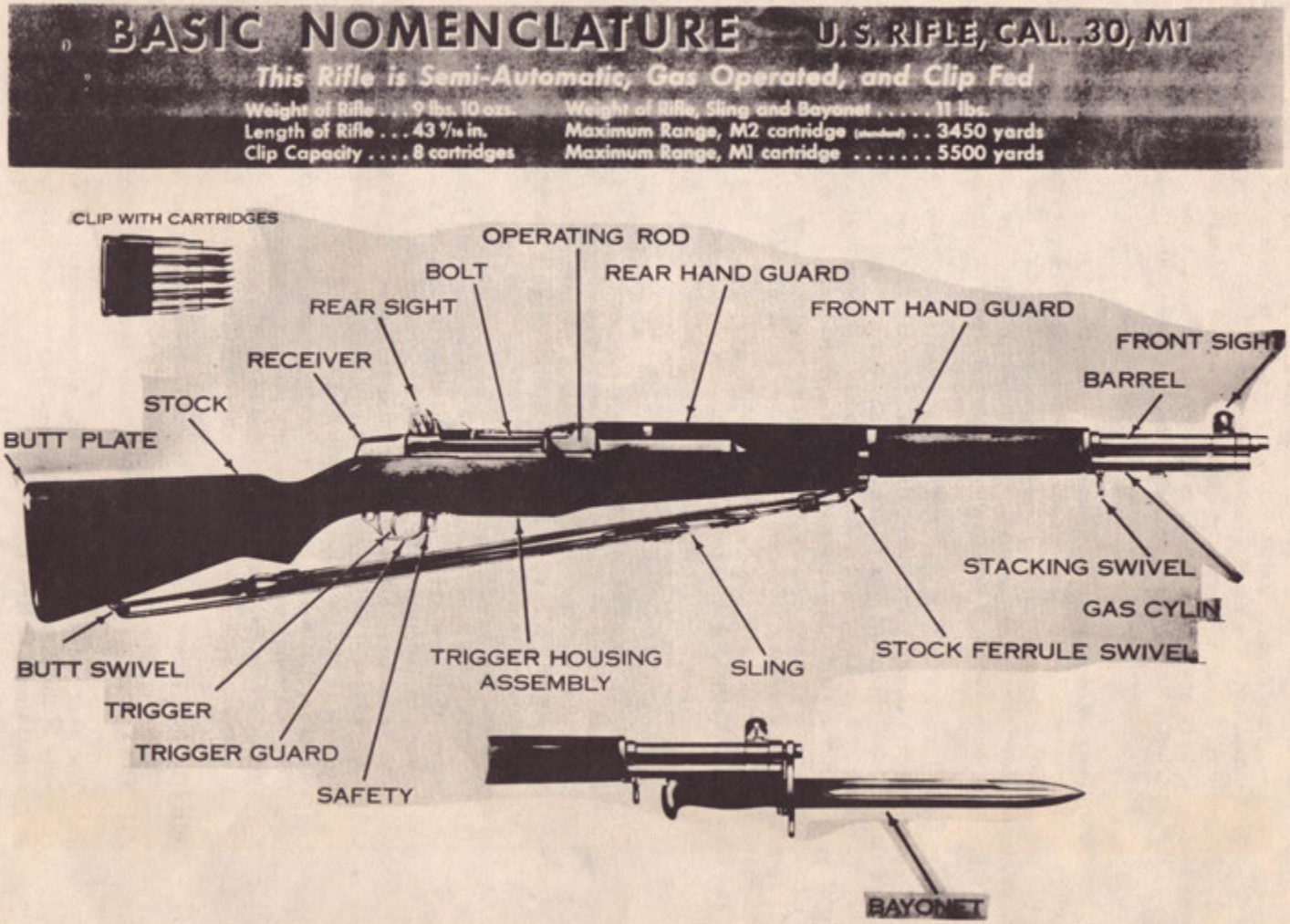

BASIC NOMENCLATURE U.S. RIFLE, CAL. .30, M1
This Rifle is Semi-Automatic, Gas Operated, and Clip Fed
Weight of Rifle . . . 9 lbs. 10 ozs.
Length of Rifle . . . 43 5/16 in.
Clip Capacity . . . . 8 cartridges
Weight of Rifle, Sling and Bayonet . . . . . 11 lbs.
Maximum Range, M2 cartridge (standard) . . 3450 yards
Maximum Range, M1 cartridge . . . . . 5500 yards
CLIP WITH CARTRIDGES
OPERATING ROD
BOLT
REAR HAND GUARD
REAR SIGHT
FRONT HAND GUARD
FRONT SIGHT
RECEIVER
BARREL
STOCK
BUTT PLATE
STACKING SWIVEL
GAS CYLIN
BUTT SWIVEL
TRIGGER HOUSING ASSEMBLY
SLING
STOCK FERRULE SWIVEL
TRIGGER
TRIGGER GUARD
SAFETY
BAYONET

FIGURE 49

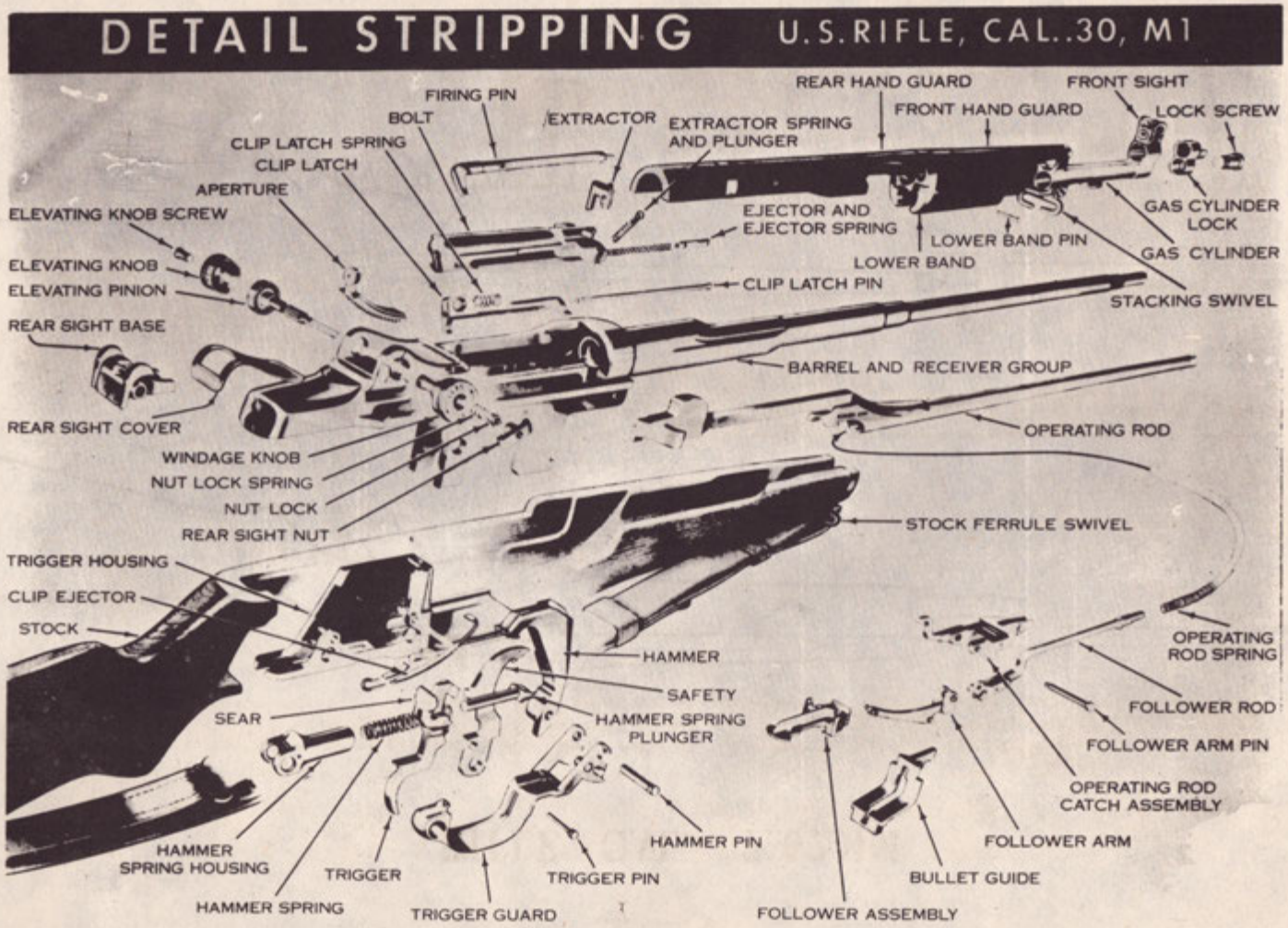
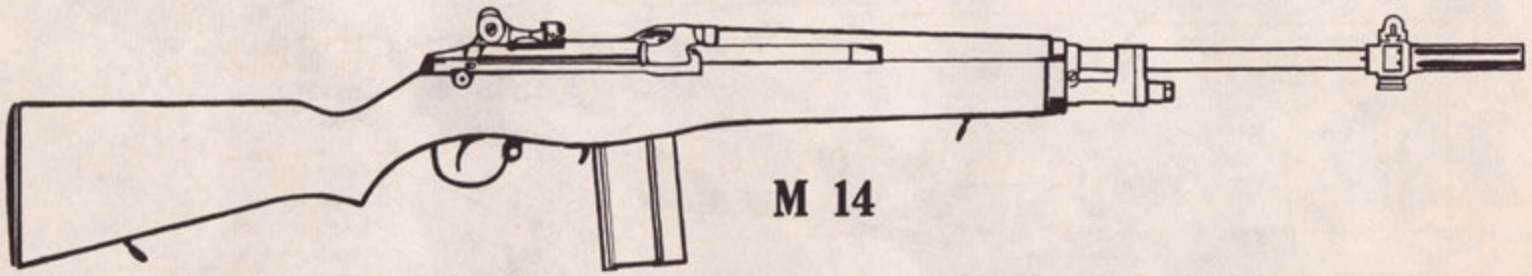
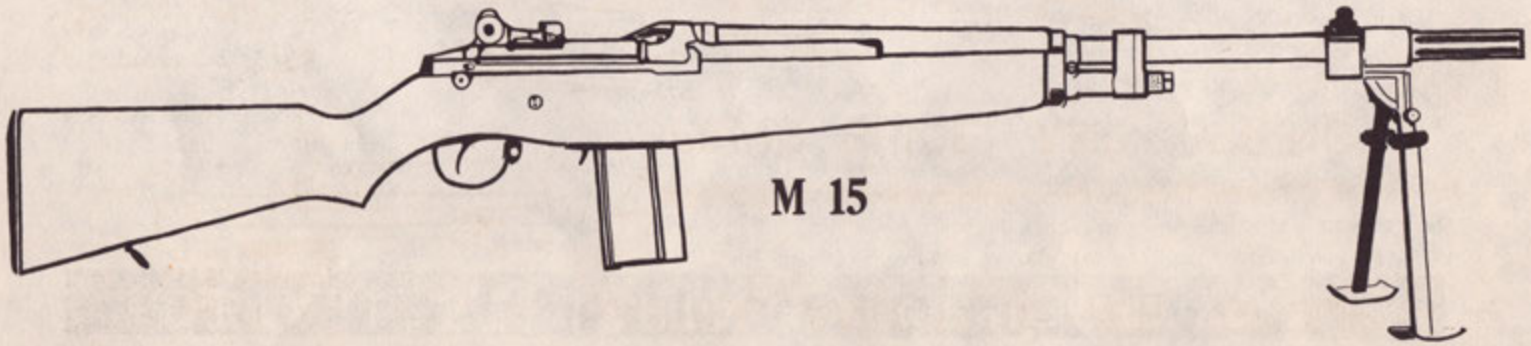

DETAIL STRIPPING U.S. RIFLE, CAL..30, M1
FIRING PIN
BOLT
EXTRACTOR
EXTRACTOR SPRING AND PLUNGER
REAR HAND GUARD
FRONT HAND GUARD
FRONT SIGHT
LOCK SCREW
CLIP LATCH SPRING
CLIP LATCH
APERTURE
ELEVATING KNOB SCREW
EJECTOR AND EJECTOR SPRING
LOWER BAND
LOWER BAND PIN
GAS CYLINDER LOCK
GAS CYLINDER
ELEVATING KNOB
ELEVATING PINION
CLIP LATCH PIN
STACKING SWIVEL
REAR SIGHT BASE
BARREL AND RECEIVER GROUP
REAR SIGHT COVER
OPERATING ROD
WINDAGE KNOB
NUT LOCK SPRING
NUT LOCK
REAR SIGHT NUT
STOCK FERRULE SWIVEL
TRIGGER HOUSING
CLIP EJECTOR
STOCK
HAMMER
OPERATING ROD SPRING
SAFETY
FOLLOWER ROD
SEAR
HAMMER SPRING PLUNGER
FOLLOWER ARM PIN
OPERATING ROD CATCH ASSEMBLY
HAMMER PIN
FOLLOWER ARM
HAMMER SPRING HOUSING
TRIGGER
TRIGGER PIN
BULLET GUIDE
HAMMER SPRING
TRIGGER GUARD
FOLLOWER ASSEMBLY

FIGURE 50

RIFLE CAL. 7.62MM



M 14



M 15

FIGURE 51

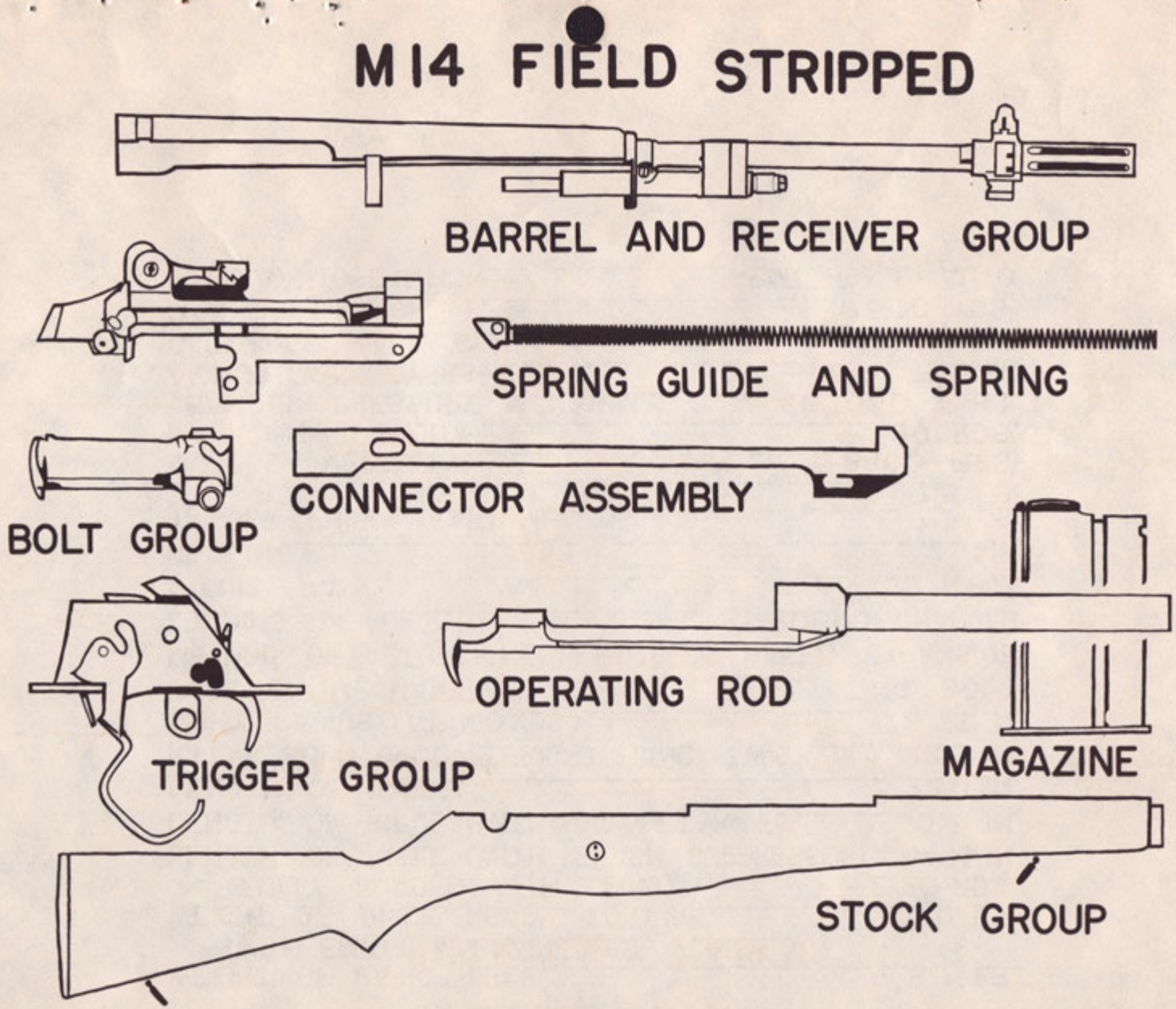


FIGURE 52
(Page 1 of 2)

GENERAL DATA

WEIGHT OF BASIC RIFLE (WITH EMPTY MAGAZINE, LESS SLING)	8.7 LB.
WEIGHT OF RIFLE, READY TO FIRE (FULLY LOADED WITH SLING)	10.0 LB. 2/20 RDS.
LENGTH OF RIFLE (WITH FLASH SUPPRESSOR)	44.14 IN.
LENGTH OF RIFLE (WITH BAYONET-KNIFE	50.71 IN.
LENGTH OF BARREL	22.0 IN.
RIFLING, FOUR GROOVES, RIGHT HAND TWIST	12.0 IN.
SIGHT RADIUS (AT 100 YDS.)	26.75 IN.
TYPE OF MECHANISM	ROTATING BOLT
METHOD OF ACTUATION	GAS-OPERATED EXPANSION
LOADING DEVICE	10-ROUND CHARGER
CYCLIC RATE	750 R.P.M.
COOLING	AIR
TRIGGER PULL, MAXIMUM	7.5 LB.
MINIMUM	7.5 LB.
MUZZLE VELOCITY	2800 F.P.S.
MAGAZINE CAPACITY	20 RDS.
CHAMBER PRESSURE, MAXIMUM	50,000 P.S.I.
AMMUNITION TYPES	BALL, A.P., TRACER
CARTRIDGE, BALL TYPE	CALIBER 7.62MM., M59
MAXIMUM RANGE	3500 YDS.
TYPE OF OPERATION	SEMI, FULL AUTO

FIGURE 52
(Page 2 of 2)

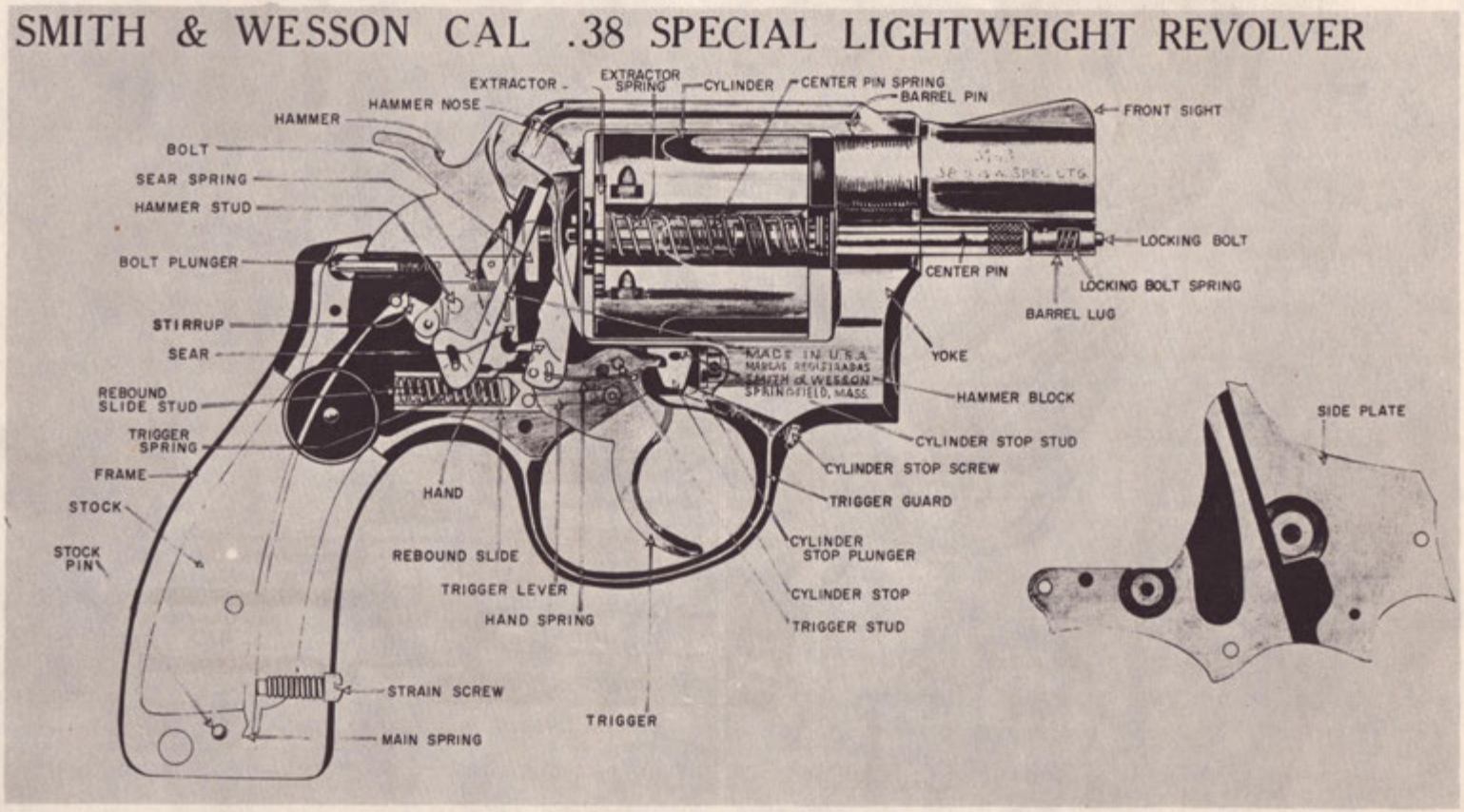

SMITH & WESSON CAL .38 SPECIAL LIGHTWEIGHT REVOLVER
EXTRACTOR
EXTRACTOR SPRING
CYLINDER
CENTER PIN SPRING
BARREL PIN
FRONT SIGHT
HAMMER NOSE
HAMMER
BOLT
SEAR SPRING
HAMMER STUD
BOLT PLUNGER
LOCKING BOLT
CENTER PIN
LOCKING BOLT SPRING
BARREL LUG
STIRRUP
SEAR
YOKE
MADE IN U.S.A.
SMITH & WESSON
SPRINGFIELD, MASS.
REBOUND SLIDE STUD
HAMMER BLOCK
TRIGGER SPRING
CYLINDER STOP STUD
FRAME
CYLINDER STOP SCREW
HAND
TRIGGER GUARD
STOCK
CYLINDER STOP PLUNGER
STOCK PIN
REBOUND SLIDE
TRIGGER LEVER
CYLINDER STOP
HAND SPRING
TRIGGER STUD
STRAIN SCREW
TRIGGER
MAIN SPRING
SIDE PLATE

FIGURE 53

COLT CAL .38 SPECIAL LIGHTWEIGHT REVOLVER

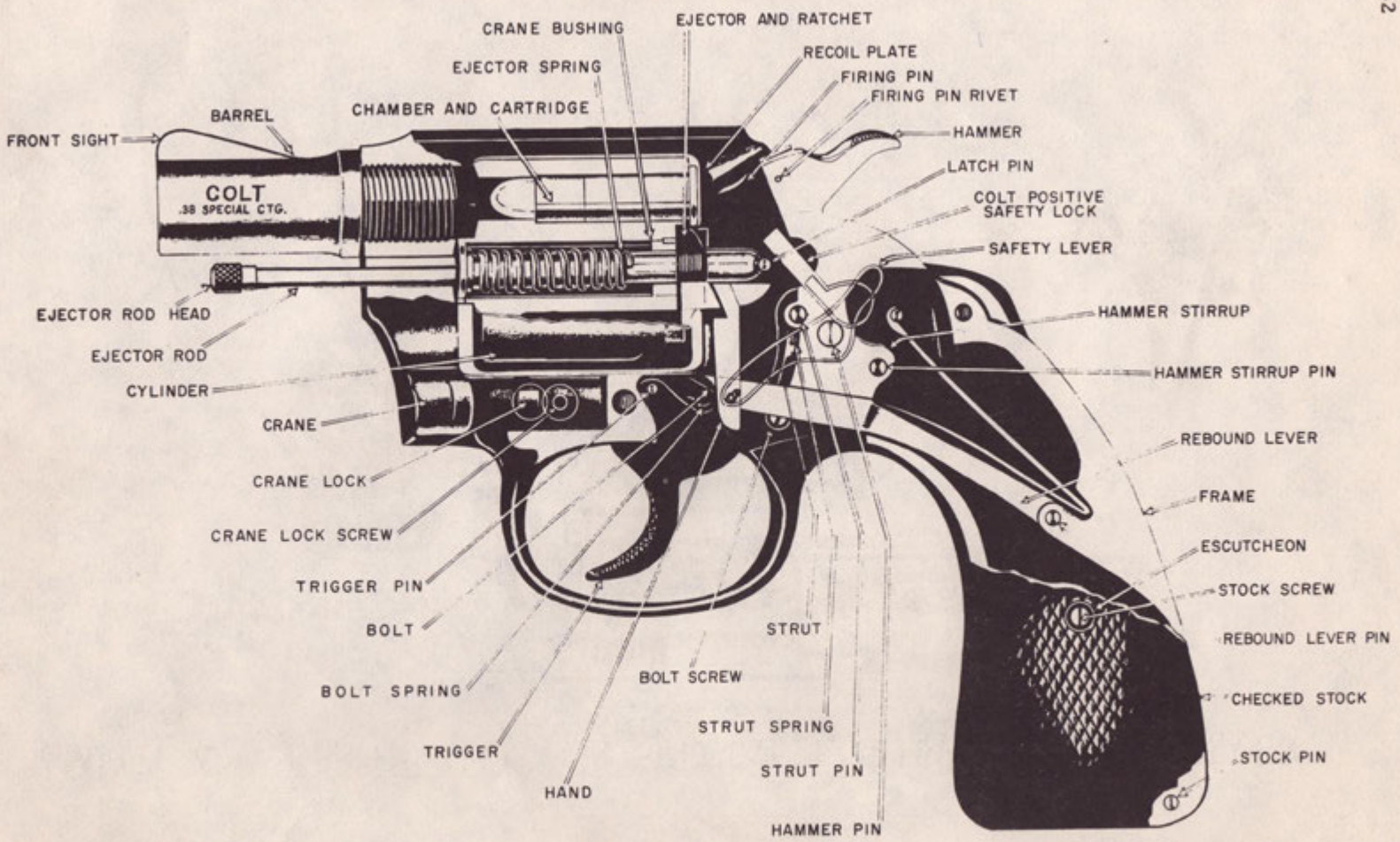


FIGURE 54

SURVIVAL RIFLE M-4

.22 HORNET

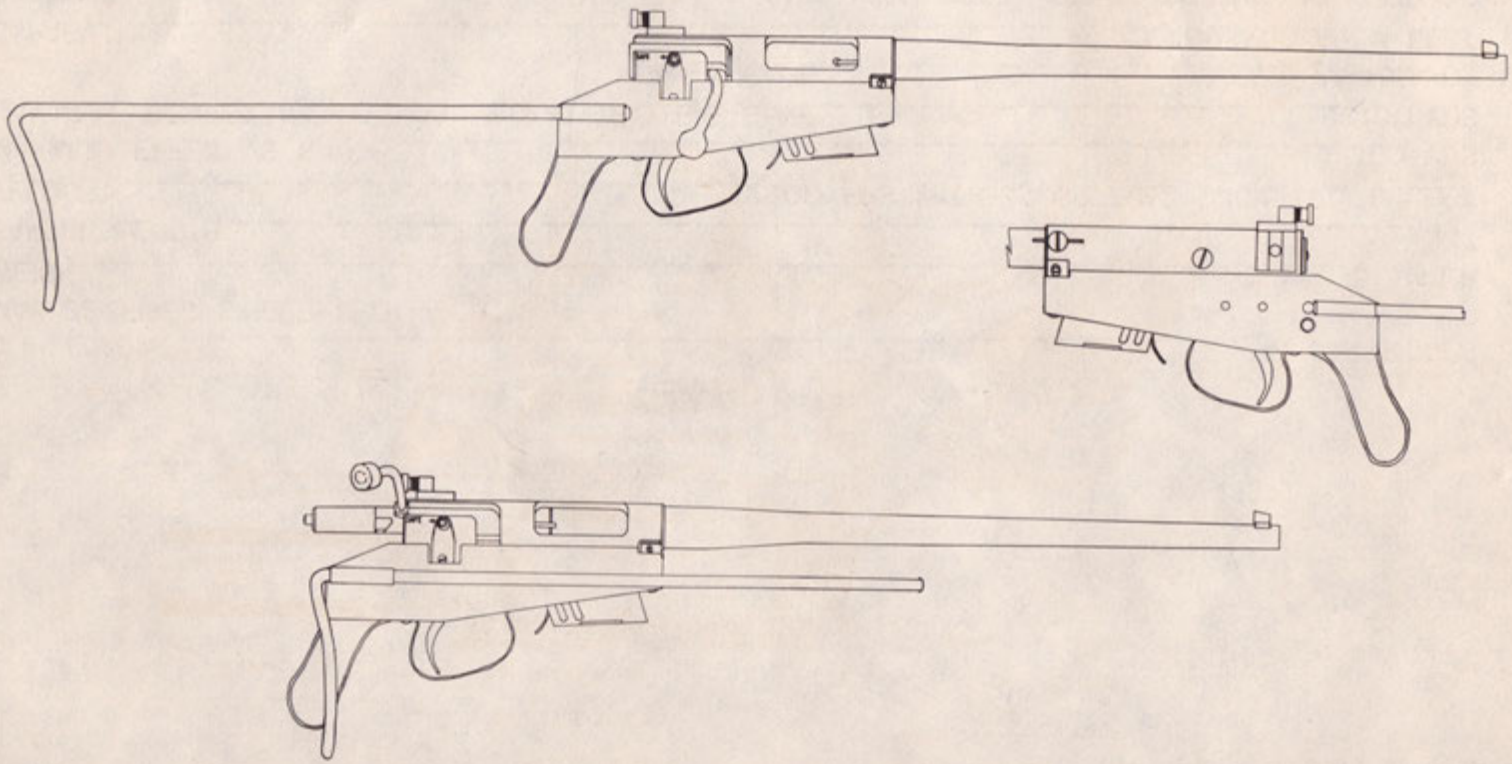
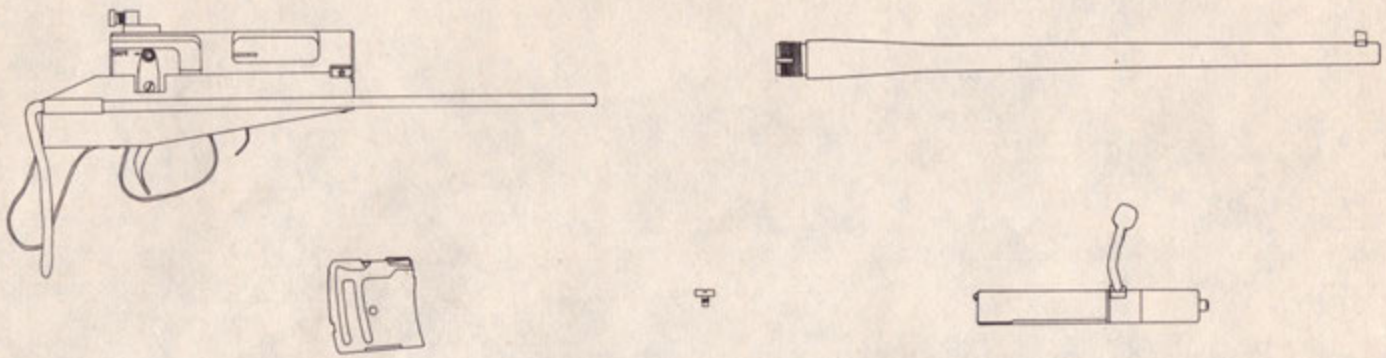


FIGURE 55
(Page 1 of 2)



GENERAL DATA

CLIP LOADING ..... 4 CARTRIDGES
MAY BE FIRED SINGLE SHOT
WEIGHT ..... 3 3/4 LB.
BARREL LENGTH ..... 14"
VELOCITY ..... 2900 FPS WITH 35 GR FULL JACKETED BULLET
MAXIMUM EFFECTIVE RANGE ..... 300 YDS
MAXIMUM DESIRED RANGE FOR MEDIUM AND BIG GAME ..... 100 YDS
SMALL GAME ..... 25—50 YDS
CAPABILITY ..... 4" AT 100 YDS FROM REST
POSITION: ..... ALWAYS WITH REST ; PRONE, SITTING OR KNEELING

SAFETY:
- SAFETY ON RIGHT SIDE OF RECEIVER
- WATCH MUZZLE FOR MUD OR SNOW
- SHORT BARREL
- ALWAYS CHECK POSITION OF BARREL IN RECEIVER AFTER ASSEMBLY
- IF IMPROVISED SLING IS USED, CARRY WITH EMPTY CHAMBER

FIGURE 55
(Page 2 of 2)

(6) The operating rod is a welded assembly, composed of a handle and a capped short tube. This tube houses the operating rod spring and the operating rod spring guide. The rear end of the operating rod spring guide serves as a front latch for the box magazine and is attached to the receiver by the connector lock. The operating rod tube slides in the operating rod guide which is pinned to the barrel. The end of the operating rod tube abuts the gas piston when the operating rod is in its forward position.

(7) The gas cylinder, unlike that of the M1 rifle, contains a hollow gas piston and is mounted on the barrel with the gas port located approximately eight inches from the muzzle. The gas cylinder positions the front band against a shoulder on the barrel and is locked in place by the looped gas cylinder lock and gas cylinder plug. The wooden hand guard is secured to the barrel by the front and rear bands.

(8) The flash suppressor is of the five-pronged type with a closed front end. The wide lower prong provides moderate compensation for muzzle climb.

(9) The front sight is mounted on the flash suppressor. The lug on the bottom of the flash suppressor provides a means of attaching the bayonet-knife and the grenade launcher to the rifle.

(10) The barrel and receiver group is "bedded" in a conventional drop stock. The butt plate assembly and the butt swivel, attached to the stock, are M1 rifle components. The bracket of the front swivel assembly is riveted to the forearm of the stock. The stock is locked to the barrel and receiver group by the trigger group.

b. The M-14 rifle is operated as follows:

(1) Loading. Place the safety in the SAFE position by cocking the hammer and snapping the safety rearward. Insert a loaded magazine into the magazine well, front end leading, until the front catch snaps into engagement, then pull backward and upward until the magazine latch snaps into position. Pull the operating rod handle to its rearmost position and release; this allows the top round to rise and the bolt to move forward, thus stripping and chambering a round from the magazine.

(2) Semiautomatic fire with selector lock. With the selector lock in the rifle, it cannot be fired automatically. Load the rifle and release the safety. The rifle will now fire one round upon each pull of the trigger.

(3) Semiautomatic fire with selector. Press in and turn the selector until it snaps into position with its blank face to the rear and its projection downward. The connector assembly is inoperative in this position since the connector is held forward and out of engagement with the operating rod. Load the rifle and release the safety. The rifle will now fire one round upon each pull of the trigger.

(4) Full automatic fire with selector. Press in and turn the selector until it snaps into position with the face marked "A" to the rear and the projection upward. This rotation of the eccentric selector shaft moves the sear release to the rear into contact with the sear and moves the connector assembly rearward into contact with the operating rod. Load the rifle and release the safety. Pull and hold

the trigger. The rifle will fire automatically as long as the trigger is squeezed and there is ammunition in the magazine. To cease firing, release the trigger.

(5) Bolt lock. When the last round of ammunition is fired, the magazine follower engages the bolt lock and raises it into the path of the retracted bolt; this holds the bolt in the OPEN position.

(6) Unloading of rifle. Place the safety in the SAFE position. Grasp the magazine, placing the thumb on the magazine latch, and squeeze the latch. Push the magazine forward and downward to disengage it from the front catch and remove the magazine from the magazine well. Pull the operating handle rearward to extract and eject a chambered round, and inspect the chamber. The rifle is now clear.

(7) Gas shutoff valve. For semiautomatic and full automatic firing, turn the valve to the OPEN position by pressing in and rotating. The valve is open when the slot in the head of the valve spindle is perpendicular to the barrel. For grenade launching, turn the valve to the CLOSED position, thus avoiding possible damage to reciprocating components and discharge of unburned powder near the firer's face. The valve is closed when the slot in the head of the valve spindle is parallel to the barrel.

NOTE: The shutoff valve in the gas cylinder opens and closes the port in the cylinder between the barrel and the gas piston.

19. CONDUCTING THE COURSE OF FIRE. a. Discipline. The safety of trainees, range personnel, and spectators requires continuous attention by all to the careful handling of firearms and caution in moving about the range. Self-discipline is necessary on the part of everyone. Where such self-discipline is lacking, it is the duty of range personnel to enforce discipline and the duty of trainees to assist in such enforcement.

b. Loud Language. Loud or abusive language will not be permitted. Trainees, instructors, and range officers will limit their conversation directly behind the firing line to official business.

c. Firing Line Commands.

SHOOTERS ON THE FIRING LINE:	The range controller (usually an instructor or the NCOIC) gives his command when ready to start a firing order. Each trainee then immediately takes his assigned place at this firing point.
PICK UP YOUR WEAPONS AND LOAD____ ROUNDS:	The range controller, having made sure that the range is clear, gives this command. NOTE: The 45° depressed pistol position is used indoors.

READY ON THE RIGHT:

READY ON THE LEFT:

When the range controller ascertains that all trainees are ready to fire, he gives preparatory commands. "Ready on the Right," "Ready on the Left." Trainees may cock their hammers and point their guns toward the target after the command "Ready on the Left." Any trainee who is not then ready to fire must immediately so state by saying "Not ready on Target No. ___." His instructor or range controller immediately investigates and assists the trainee to correct the cause of the delay. Guns may be cocked or safety locks disengaged if no trainee has called "Not Ready."

READY ON THE FIRING LINE:

With no trainees having announced they were not prepared to fire, the range controller commands "Ready on the Firing Line," which means that all trainees are considered ready to fire and that the signal to commence firing will be given within approximately three seconds.

COMMENCE FIRING:

The controller then commands "Commence Firing," which means to start firing without delay as timing of the string is started with this command. "Commence Firing" may be signalled verbally; by a short, sharp blast on a whistle; or by moving the targets into view.

CEASE FIRING--UNLOAD--CYLINDERS OPEN--(SLIDES BACK) GROUND YOUR WEAPONS:

The command "Cease Fire" is given by the range controller at the end of the time limit for each string or at ANY OTHER TIME he wishes all firing to cease. Firing must cease immediately. Even if a trainee is about to let off a carefully aimed shot, he must hold his fire and open the action of his gun. Failure to immediately obey this command is one of the worst infractions of range discipline, as it may result in the wounding or death of some man, woman, or child who has wandered into the line of fire somewhere on the range or behind the targets. On this command, cylinders shall be opended or slides locked back and all guns placed on the shooting stand and not handled until the next command of the range controller. "Cease Firing" may be signalled verbally, by a short blast on a whistle, or by moving the targets out of view.

CLEAR AND GROUND WEAPONS:	When the command to "Clear and Ground Weapons" has been given, all assistant range controllers (instructors) check their trainees to make sure each one obeys the command before signalling the range controller that their portion of the firing line is clear.
SCORE TARGETS AND PASTE (OR "CHANGE"):	This command is given after all assistant range officers have given the "clear" signal.

d. Other commands used less frequently are:

AS YOU WERE:	Means disregard the command just given. For example, if the commands were given "Ready on the Right" followed by "As You Were," it would mean that someone was not ready and trainees should put their weapons in a "safe" condition.
CARRY ON:	Means proceed with whatever was being done before some interruption occurred.

e. When to Score. Targets are scored after each 10 shots. After each target is scored, shot holes are pasted.

f. How to Score. A shot hole, the leaded edge of which comes in contact with the outside of the bullseye or scoring rings of a target is given the higher value. A scoring gauge approved by the NRA may be used to determine the value of close shots. The higher value will be allowed in those cases where thr flange on the approved gauge touches the scoring ring. In case of keyholed or tipped shots, the higher value is awarded if the leaded edge of the bullet hole touches the scoring ring or higher value even though the hole is elongated to the bullet's length rather than being a circle of the bullet's diameter. A shot hole which comes in contact with any part of the "E" target (silhouette) is scored as a hit. Each hit on the "E" target has a value of one point.

g. Misses. Hits outside the scoring rings are scored as misses. If a shooter fires less than the prescribed number of shots through his own fault, those rounds not fired are scored as misses.

h. Early or Late Shots. When stationary target frames are used, if any shots are fired at the targets before the command "Commence Firing" or after the command "Cease Firing," the shots of highest value equal to the number fired in error will be scored as misses.

i. All Shots Count. All shots fired by the competitor after he has taken his position at the firing point will be counted in his score, even if the pistol is accidentally discharged.

j. Hits on the Wrong Target. Hits on the wrong target are scored as misses.

k. Ricochets. A hole made by a ricochet bullet does not count as a hit and will be scored as a miss. It must be noted that a bullet which keyholes is not necessarily a ricochet.

l. Hits Must be Visible. Only those hits which are visible will be scored.

m. Excessive Hits. If more than the required number of hits appear on the target, any shot which can be identified by the type of bullet hole as having been fired by some shooter other than the shooter assigned to that target or as having been fired in a previous string will be pasted and will not be scored. If more than the required number of hits then remain on the target, a complete new score will be fired and the original score will be disregarded except: (a) if all hits are of equal value, the score will be recorded as the required numbers of hits of that value; (b) if the competitor wishes to accept a score equal to the required number of hits of lowest value, he shall be allowed to do so; (c) if a shooter fires less than the prescribed number of shots through his own fault, and there should be more hits on the target than the shots fired, he will be scored the number of shots of highest value equal to the number he fired and given a miss for each unfired cartridge.

n. Defective Cartridge. A defective cartridge is one that is unsafe to fire by reason of improper loading or structural deficiencies, one that fails to fire when the primer is indented by the firing pin, or one from which the bullet has not left the barrel. No claim for defective cartridge will be allowed if bullet has left the barrel.

o. Disabled Pistol. A disabled pistol is any pistol which does not function properly, cannot safely be fired, or has suffered damage to the sights, rendering it impossible to properly aim at the target.

p. Malfunction. This is the failure of the pistol to function properly due to mechanical defects or to defective ammunition. Functional failures due to improper manual operation are not to be considered as malfunctions.

q. Procedure in Case of Defective Cartridge, Disabled Pistol, or Malfunction. If a cartridge fails to fire or a pistol fails to function, the trainee will call a range officer. The range officer, when satisfied that there is a defective cartridge, disabled pistol, or malfunction, will permit the trainee to replace the unfired cartridge or clear the jam and continue firing. Additional time may be allowed such trainee equal to the time lost because of the defective cartridge or disabled pistol.

CHAPTER 5

COMPETITION MANAGEMENT

20. GENERAL. The small arms competition program in SAC was instituted in order to accomplish the following:

a. Stimulate all personnel, by participation and example, to increase their skill level in their issue weapons.

b. Encourage commanders, by participation and by association with the competition program, to keep their local small arms training programs and ranges operating at top efficiency.

c. Keep range instructor personnel keenly aware and highly active in all phases of the shooting program.

d. Develop new weapons and techniques for the primary SAC mission and the Small Arms Training Program.

e. Maintain a high level of interest and shooting skill among civilian and dependent personnel.

21. COMPETITION MATCHES. a. The competition program is organized into a ladder elimination system, supplemented by outside competition in NRA and inter-service sponsored matches, as indicated below:

(1) Base elimination matches.

(2) Numbered air force or area elimination matches.

(3) The annual Strategic Air Command Championship Matches.

(4) The USAF World-Wide Pistol and Rifle Matches.

(5) The National Matches, Camp Perry, Ohio.

(6) Other matches:

(a) The USAF Midwinter Pistol Matches.

(b) The National Midwinter Matches.

(c) The Flamingo Open Matches.

(d) The Dixie Pistol Matches.

(e) Other local NRA matches.

b. To support the match program, a complete set of all necessary equipment has been authorized to each base. The operations squadron in the combat support groups, on SAC-owned bases, has responsibility for this equipment. A competition project officer, who should be the

range officer (although this is not required), will have primary responsibility for its care. Rules for storage, issue, distribution, and repair of this equipment are contained elsewhere in this manual. It is repeated here that, except for competition training weapons in the caliber .22 LR pistol and rifle category, high quality, precision manufactured competition grade weapons will not be issued or utilized by any person for any other use except competition or competition practice. The officer charged with their responsibility will assure that inexperienced or unqualified personnel do not use or have these weapons in their personal possession.

c. The foundation of the Strategic Air Command Competition Program is the local match and the base team. The range staff will have the major responsibility for this activity and, by referring to the ample guidance available on the subject, a successful base program can be assured. The National Rifle Association (NRA) is the primary proponent of competition shooting, and they have developed excellent guidance for the conduct of shooting matches. They can provide literature and answer specific questions on publicity, trophies and awards, range layout, spectator control, NRA rules, officials, and scoring. At some time during the planning for each match, you should write to them for information at the National Rifle Association, 1600 Rhode Island Ave, Northwest, Washington 6, D.C.

d. In organizing your local matches, refer to the annual SAC Competition Guide which outlines the entire program. This guide is published each year in January by this headquarters. As a rule of thumb, the following steps must be taken to organize a base match in the SAC program.

(1) Brief the commander on your plans.

(2) Contact the information office for assistance.

(3) Order enough match grade ammunition.

(4) Police the range prior to the match.

(5) Write to the NRA for approval, if desired.

(6) Disseminate wide publicity by letters, posters, and press.

(7) Request a special allocation of base welfare funds for trophies. Monetary limitations imposed by paragraph 15b(5)(c)2b, AFR 176-2/SACSUP 1, 1 Oct 59, will not be exceeded.

(8) Arrange for an NRA official to supervise scoring.

(9) Organize a coaching clinic for beginners prior to the matches.

(10) Purchase trophies and awards.

(11) Arrange for travel pay and orders for winners to the next higher match.

(12) Contact local police or other military groups for assistance or possible participation.

e. It cannot be emphasized enough that the most important single advance preparation for your match is the widest possible dissemination of information and publicity about the match. You will find that most senior officers, probably your commander or the base commander, are

enthusiastic about the shooting program. If you can present a well-planned idea to them and show how you are prepared to carry it out, they will invariably be pleased to help you over a few rough spots if such should occur.

f. At the matches, you will have to provide:

(1) Signs pointing to the range, if necessary.

(2) Ample supply of NRA targets.

(3) Containers for waste.

(4) Match weapons and clear, concise instructions for their use.

(5) Match officials and supervisors.

(6) Ammunition of the best grade your base can afford.

(7) Trophies or awards.

(8) Local photographic and press coverage.

(9) Transportation.

(10) Spectator parking and seating.

(11) Rules for brass recovery.

(12) Water, refreshments, and sanitation facilities.

(13) Gun cleaning table covered with cloth.

(14) Bulletin boards and scoring forms.

g. After the matches, select teams to represent the base. You should have several weeks interval to train them prior to the numbered air force matches. During this time, enter the team in at least one local or nearby NRA match to familiarize the shooters with the tensions of competition. Provide adequate ammunition and issue weapons and equipment on a hand receipt. Brief the commander so that he can assist you in obtaining full support from the comptroller for TDY funds, supply for equipment, and unit commanders and the base operations officer for possible airlift to the next match.

h. It is essential that a regular training program be prescribed. Military personnel are normally disciplined to the point where they will accept guidance if it is given to them. The team captain or other designated authority must give that guidance to assure that the individual shooters practice and build their scores.

i. In addition, practice must be supervised. The shooting principles expounded elsewhere in this manual apply to target shooting as well. A brief resume is listed here so that the coach will observe each shooter to correct his faulty habits.

(1) Check breathing.

(2) Use the meaty tip of the finger.

(3) Grip correctly, use the heel of the hand.

(4) Area aim.

(5) For rifles, keep the holding arm under the weapon.

(6) Use all of the time allocated for timed fire.

(7) Check high groups for flinching.

(8) Pull the finger with steadily increasing force.

(9) Balance the stance and the weapon.

(10) Remind shooters of the correct sight picture.

j. When teams depart for competition at another base, make certain that each person brings his entire complement of equipment, including such items as slings and mats. •No excesses are available to bases which host matches for issue in case competitors forget their own.

CHAPTER 6

SAC HANDGUN COURSE TROPHY

22. GENERAL. The SAC Handgun Course Trophy was originated by Lieutenant General Francis H. Griswold, Vice Commander of Strategic Air Command. This trophy will be awarded to anyone in SAC who shoots a possible score (550 x 550) over the SAC Handgun Course and strictly according to the rules and procedures of the course.

23. AWARD REQUIREMENTS. To be recognized, the score must be fired on a SAC range and during a scheduled training class. The score must be witnessed and certified by four individuals other than the person firing the score. Two of the witnesses must be trainees and the other two range instructors. A statement by the range officer must be sent to the Small Arms Project Officer, Directorate of Operations, Headquarters SAC, Offutt AFB, Nebraska, through channels, for approval before being declared official, and should contain the following information: Date and place score was fired; the shooter's name, rank, service number, and organization; and type of weapon and ammunition used. A signed statement by each witness certifying the score and his name, rank, service number, and organization will be attached.

SAC HANDGUN COURSE TROPHY

FIGURE 56

ARSENAL AND AMMUNITION CODE

CODE	ARSENAL
KS	ALLEGANY ORD PLANT
DEN	DENVER ORD PLANT
DM	DES MOINES ORD PLANT
DAQ	DOMINION ARSENAL
EW	EAU CLAIRE ORD PLANT
EC	EVANSVILLE CHRYSLER ORD PLANT
ECS	EVANSVILLE CHRYSLER SUNBEAM ORD PLANT
FCC	FEDERAL CARTRIDGE CO.
FA	FRANKFORD ARSENAL
PC	KINGS MILLS ORD PLANT
LC	LAKE CITY ARSENAL
LM	LOWELL ORD PLANT
M	MILWAUKEE ORD PLANT
PCC	PETERS CARTRIDGE CO.
RA or REM	REMINGTON ARMS CO.
SL	ST. LOUIS ORD PLANT
TW	TWIN CITIES ARSENAL
UT or U	UTAH ORD PLANT
VC	VERDUN ORD WORKS
WCC	WESTERN CARTRIDGE CO.
WRA	WINCHESTER REPEATING ARMS CO.
ANN	ANNISTON ORD DEPOT
BA	BENCIA ARSENAL
BG	BLUE GRASS ORD DEPOT
CB	CURTIS BAY SUBDEPOT OF LETTERKENNY ORD DEPOT
NAN	NANSEMOND ORD DEPOT
NAV	NAVAJO ORD DEPOT
OA	OGDEN ARSENAL
POD	PUEBLO ORD DEPOT
RA	RARITAN ARSENAL
LS or RR	RED RIVER ARSENAL
SAA	SAN ANTONIO ARSENAL
SJD	SAN JACINTO ARSENAL
SOD	SAVANNAH ORD DEPOT
SND	SENECA ORD DEPOT
SR	SIERRA ORD DEPOT
TOD	TOOELE ORD DEPOT
UOD	UMATILLA ORD DEPOT

APPENDIX B

TARGETS AND TARGET MATERIALS

The following listed targets and target materials are normally used in training and competition courses of fire:

STOCK NUMBER	ORDNANCE NO.	ITEM	UNIT OF ISSUE
8305-281-2884		Cloth, cotton, Osnaburg, target, 72 in. wide	Yard
8345-025-3355	6507397	Streamer, danger, target range, scarlet, 5'9 3/4" hoist by 18' fly	Each
8345-555-9733	5559733	Flag, red, target range, 24 inch hoist x 36 inch fly	Box of 50
6910-716-0903	7160903	Trainer, rifle sighting: device, M 15	Each
6920-555-9740	5559740	Target, bobbing M1913	Each
6920-650-7425	6507425	Target, combination, sliding, 6x6 ft	Each
6920-600-6879	6006879	Target, silhouette, E, kneeling pasteboard	Bundle
6920-600-6874	6006874	Target, silhouette, E, kneeling, paper	Package
6920-610-1798	6101798	Center, target repair, L-C	Roll
6920-714-0236	7140236	Center, target repair, rifle "A"	Roll
6920-714-0237	7140237	Center, target repair, rifle "B"	Roll
6920-713-8255	7138255	Disk, target spotter, 3 inch	Roll
6920-713-8254	7138254	Disk, target spotter, 5 inch	Roll
6920-713-8256	7138256	Disk, target spotter, 10 inch	Roll
6920-550-7907	5507907	Marker, target, long range	Each
6920-550-7906	5507906	Marker, target, mid-range	Each
6920-555-9748	5559748	Marker, target, short range	Each
6920-716-2350	7162350	Pasters, target, black (5,000 per carton)	Carton
6920-716-2351	7162351	Pasters, target, bull (5,000 per carton)	Carton

STOCK NUMBER	ORDNANCE NO.	ITEM	UNIT OF ISSUE
6920-713-8257	7138257	Spindle, target spotter (200 per carton)	Carton
6920-716-2768	7162768	Target, bullseye, "A" rifle (50 per roll)	Roll
6920-600-6881	6006881	Target, silhouette, trapezoidal, pasteboard (50 per bundle)	Bundle
6920-716-2769	7162769	Target, bullseye, "B" rifle (50 per roll)	Roll
6920-600-6877	6006877	Target, bullseye, "C" rifle (25 per roll)	Roll
6920-550-7903	5507903	Target, bullseye, "L" pistol (50 per roll)	Roll
6920-600-6879	6006879	Target, silhouette "E" kneeling paste-board (500 per bundle)	Each
6920-713-5385	7135385	Target, Olympic, scoring (25 per roll)	Roll
6920-554-5054	5545054	Target, bullseye, pistol, 25 yard standard American (100 per roll)	Roll
6920-550-9830	5509830	Target, bullseye, pistol, 50 yard standard American (100 per roll)	Roll
6920-554-5943	5545943	Target, bullseye, rifle "A", 1,000 inch (1,000 per bundle)	Bundle
6920-557-4606	5574606	Target, bullseye, small bore rifle, official 50 ft (500 per bundle)	Bundle
6920-695-0133	6950133	Target, pistol, slow fire, 50 ft gallery (500 per bundle)	Bundle
6920-695-0134	6950134	Target, pistol rapid fire, 50 ft gallery (500 per bundle)	Bundle
6920-550-8328	5508328	Target, gallery rifle, official 75 ft (500 per bundle)	Bundle
6920-556-6631	5566631	Target, rifle, SB-A, 50 yard (500 per bundle)	Bundle

APPENDIX C

BIBLIOGRAPHY

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AFR 50-22	Ammunition Allowances for Individual Training
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