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TITLE

HOW TO IMPROVE RIFLE MARKSMANSHIP IN THE UNITED STATES ARMY

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PREFACE

It is desired that consideration be given to the practical application of rifle marksmanship training on a unit level. Assuming that the training programs as written are sound, it is hoped that this study will call attention to a few of the measures which can be taken to increase the proficiency of our soldiers in the firing of their basic weapon.

The author wishes to acknowledge the assistance given to him by the members of the staff of the Infantry School Library and members of the Weapons Department, The Infantry School, in the preparation of this monograph.

The points of view represented are those of the author and do not necessarily represent those of the Department of the Army or the Infantry School.

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INTRODUCTION

Periodically the question arises, "How can the rifle proficiency of the United States Army be improved?" Vast studies, research, and experiments have been conducted to answer that well-worn puzzle but to date, considering the constant discussion in which the topic is involved, a fool-proof method has yet to be devised. This author will make no attempt to outline a training schedule to be followed, various courses to be fired, or training aids beneficial to good marksmanship; but instead, will confine himself to suggestions and recommendations gained from experience on the firing line. It is to be assumed that the current Army Training Programs, establishing a procedure to follow in teaching a recruit the proper method of handling the rifle, are sound; however, the practical application of those programs on a unit level leave much to be desired. No attempt will be made to discuss the problem of training the individual soldier in combat firing, that is an entire subject in itself, but will remain within the boundaries of preparatory marksmanship and known distance range firing where he, the recruit, learns to position himself, aim, fire, and hit a target under the most ideal conditions which can be devised for rapid and efficient training of a functional rifleman. Specific areas of discussion will include: the coach and pupil method of instruction, the procedure of teaching sight manipulation, the use of the .22 caliber rifle as a training aid, the uniform worn on the range, and the need for an incentive to learn.

DISCUSSION

Preparatory marksmanship training as prescribed by the United States Army is divided into six fundamental steps: sighting and aiming exercises, position exercises, trigger squeeze exercises, sustained fire exercises, effect of wind, sight changes, and use of score card, and an examination before range firing. Years of experience in training and vast research have evolved this system which, for all practical purposes, is the best in the world.¹ By comparing our method with that of other armies, it becomes apparent that the best points of each have been or are incorporated into our system. Consequently, it is extremely difficult to discover any novel means of improving this system which has proved so successful under existing conditions. Although the over-all method is satisfactory, some of the techniques in application of the system can be improved.

One of the basic procedures in the instruction of rifle marksmanship is the coach and pupil method, whereby a man is alternately required to perform and supervise certain actions relative to the training. The coach and pupil process is introduced to trainees early in the training program and is carried on throughout the first four steps of instruction. As designed, this practice is supposed to train the recruit in the proper methods of handling the rifle and enable him to pick out errors during the performance of his partner. In theory, the two men critique each other, pointing out errors of commission or omission, and discuss the various means of correction whereby the performance of each is steadily improved.² As stated, this procedure is excellent in theory but falls far short of satisfactory in practice. This man we are training to fire the rifle has probably had little or no experience with firearms prior to military service. As a result, the demonstrations and explanations of correct and proper technique are an entirely new and strange field of endeavor. When suddenly called upon to

1. FM23-5, Department of the Army, October 1951, "U. S. Rifle Caliber .30.M-1" p. 127.

2. Ibid. p. 128.

correct the deficiencies of another, one or the other of two conditions probably occur: the inability to distinguish incorrect practices or the belief that correct practices are incorrect. Generally speaking, the recruit coach fails to say anything of a detrimental nature to avoid this discomfort. He retreats into a shell and tells his pupil the performance was perfect. These imperfect actions of the coach not only hold true during the day firing stage of instruction but also on the firing line. Picture the untrained, unskilled, and inexperienced soldier attempting to fulfill the requirements of a coach as defined by one writer,

"When your recruit is on the range he must have a trained coach who will watch the firer's two-foot circle for clues. The coach cannot watch the target and expect to aid the pupil. He must constantly check for a comfortable, relaxed position, correct and steady trigger squeeze. He must see that the front sight is the object of vision, that the firer calls his shots, has follow through, correct breathing, solid holding, and doesn't flinch."³

Is it any wonder the average coach found on the firing line is watching the target, stacking brass, or carrying on a conversation with someone nearby? The technical assistance required of him is lacking and at no time during the training cycle have provisions been made to adequately school the coach in these proper techniques. The effectiveness of good coaching was particularly noticed at the Western Signal Corps Training Center during World War II. At this center, a great number of "bolos", individuals who fail to qualify in rifle marksmanship, were salvaged due to the introduction of proper coaching. After the initial firing, selected officers and non-commissioned officers were specially trained until each became an expert in all fields of marksmanship training. These personnel retrained the "bolos" and acted as coaches during the complete cycle. After refiring the qualification course adopted at the Center, it was noted that most "bolos" had improved their original score by twenty or thirty points.⁴ Using this experiment as a basis, it can be said that proper coaching will greatly assist in the bettering of unit qualification percentage. The borderline

3. Shoot to Live, (OTTAWA, 1945), p. 210.

4. A. S. Daley, "The Recruit and the Rifle", The Infantry Journal, (April 1949), p. 15.

cases would be qualified and the proficiency of those men who fired satisfactorily would be correspondingly increased.

Current training programs devote a certain number of hours to the six steps of marksmanship training. Properly coached, this time is sufficient to prepare the recruit for adequate performance on the firing line as far as sighting and aiming, positions, trigger squeeze, and sustained fire are concerned. One step seems to be pushed into obscurity, although it is important for proper range procedure. This step, effect of wind, sight changes, and use of score card, is given four hours of the available training time.⁵ Most training units add an orientation of range procedures and regulations to this step to facilitate the operation of the range. As a result, it becomes customary to devote only one hour to each of the four subjects. Much of this block of four hours will have little or no value on the battle field. Yet, each and everyone aids immeasurably in satisfactory performance on the firing line. This cursory manner of instruction gives the recruit practically no understanding of "clicks", mil relation, or the "WORM" formula. Once on the firing line, experience has shown that the average man has little or no knowledge of how to correctly "zero" his rifle at a prescribed range. The usual procedure is to slowly but surely change sight settings until a "bullseye" is attained. Because the firer does not understand what happens when he moves his rear sight a click in elevation or windage, a waste of time and ammunition is prevalent. It is not uncommon to see a range supervisor "zeroing" many of the weapons himself and then talking the firer through the final individual corrections. The mathematical end of sight manipulation confuses the rifleman; therefore, more time should be devoted to the subject during the preparatory marksmanship training period. If the recruit had a more thorough knowledge of this subject, it would give him more confidence in the weapon. He could see that correct data placed on the rear sight would visibly affect the accuracy of his rifle. When

5. ATP 7-300, Department of the Army, 5 Sept 1952, p. 37.

weather conditions change, he would be able to rapidly determine the effect on his bullet and take the necessary corrective action. What happens when a "click" of elevation or windage is taken is not only important on the range but also is necessary in combat when his life may depend on accurate fire under varying weather conditions. Sight manipulation must be drilled into the recruit until it becomes automatic; therefore, more hours should be devoted to the subject during the pre-range instruction.

Once the soldier has completed the six steps of preparatory marksmanship training he is ready to enter the firing phase of instruction. To the novice, the M-1 rifle initially frightens him because of the noise and recoil. With the .22 caliber rifle, which has very little or no recoil and only a slight report, fear is quickly dispelled and technique improved or corrected. If the recruit possesses improper firing habits and suffers physical pain when shooting the M-1, chances are highly probable he will be afraid of his basic weapon. By using the .22 after the dry firing phase of instruction, the recruit gains confidence in himself by being able to hit a "bulls-eye" and becomes familiar with firing without suffering.⁶

The .22 is also a valuable training medium for more experienced soldiers. The expression "Practice Makes Perfect" is as applicable to rifle firing as any other field of endeavor. The Army recognizes this necessity and requires a man to perform an act over and over again until it becomes second nature. To the basic infantryman, what more important act is there than the ability to shoot the rifle? Yet, the practical work of firing is so limited that the ability to shoot never reaches the stage of automatic performance. It is required that every man fire his basic weapon annually; however, the brief time allotted serves little more than a reintroduction to the wide field of marksmanship training. To acquire the desired degree of performance, constant practice is axiomatic. Granted it is not feasible to conduct range firing at various times during the training year; nevertheless, it is possible to conduct firing and give the rifleman the practice

6. Shoot to Live, (OTTAWA, 1945), p. 211.

he needs. That continued practice can be accomplished through the use of the small bore rifle on indoor and outdoor ranges. In a garrison type of situation, there are usually enough non-training hours available to rotate members of a unit through a brief period of firing several times throughout the year by using small bore weapons. The muscles required to take up the various firing positions would be kept limber so that in subsequent, known distance firing, the firer would not be faced with the problem of muscle retoning. In addition, most soldiers enjoy firing weapons and would welcome this form of recreation. Liberal use of the .22 would overcome the lack of enough firing and at the same time would keep the cost of the training to a minimum.

The Army advocates the .22 but does not insist on its use.⁷ Although there are differences between the .22 and M-1, notably the rear sight and method of operation, the performance of the individual in positions, sighting, trigger squeeze, and follow through remain the same. These individual acts determine the degree of proficiency of a man on the range and the .22 is capable of supplying the type of training necessary for maximum efficiency.

When on the firing line, the uniform worn by the soldier may influence his performance. In every book or manual prescribing firing technique, one point is emphasized in all - relaxation during firing. The steel helmet may be a fire protective device in combat but on the range the only purpose it serves is the lowering of proficiency. Because of the weight, it is difficult to attain a correct sight picture; therefore, many men hurry their aim and trigger squeeze simply to get into a more relaxed position. Similarly, other items of equipment, required to be worn by the soldier on occasions, tend to hinder him from applying himself completely to the task of learning how to fire the rifle correctly. The Canadian Army has become cognizant of this uniform problem and has taken steps to rectify out-moded practices:

7. FM 23-5, Department of the Army, October 1951, "U. S. Rifle Caliber .30, M-1, p. 319.

"Recruits having preliminary training in the elementary principles of musketry will not wear steel helmets, web equipment or anti-gas equipment. This is established in DMT Circular Letter No. 1376 (Hq 6974-G1-7) (TNG26) dated 29 June 1944 which reads as follows:

1. "I am directed to advise you that effective immediately steel helmets, web equipment and anti-gas equipment will NOT be worn by recruits receiving instruction during Basic Training in the principles of rifle firing, i.e. Position, Holding, Breathing, Aiming and Trigger Control and during the preliminary firing practices on the miniature or 30 yard ranges.
2. Experience has shown that recruits wearing such equipment are handicapped. It has been found that after a recruit has mastered the basic principles of rifle firing and has completed the preliminary firing required in basic training, less difficulty is experienced in completing range classifications during the advanced training wearing battle order.
3. This information is applicable to the Reserve Army."⁸

During any introductory phase of training, the accent should be placed on getting the recruit to retain as much as he possibly can. Certainly the uniform he wears will assist in that retention to a very great degree. It has been noted from personal observation that troops will shoot better when not burdened with items of equipment designed primarily for combat use. In order to attain maximum performance, as many detriments as possible should be eliminated to insure complete and thorough understanding of firing technique. Individual comfort, when applying dry firing techniques to range performance, is a must. If other military subjects, deemed necessary to transform the civilian into a soldier, are scheduled to facilitate learning, should not rifle marksmanship be treated in the same light? One of the better means of facilitating that learning is insuring the comfort of the students. More interest is created, "know-how" magnified, and the desire to shoot stimulated when firing becomes not so much a burden as a pleasure.

As a final step in the improvement of our marksmanship training, an incentive should be added to stimulate the men to do their best. When talking to some of the older non-commissioned officers who have many years of service, one of the points which constantly arises in a discussion of range firing is the regret of losing the monetary reward after attaining "Expert"

8. Shoot to Live, (OTTAWA, 1945), p. 216.

status. In those days, the increase in pay was well worth the long hours spent in practicing for the day of qualification. The money was an incentive to training since every man vigorously pursued and practiced the principles introduced during the instruction phase. Even today, the desire for reward is strong because competition is very keen when a unit offers a prize for the highest three scores after completion of record practice. It goes without saying that a man will try harder if he knows he will receive a reward in recognition of exceptional achievement. If higher standards were obtained through reward in past years, would not the same condition exist today? It is difficult to imagine anyone not trying to gain more money simply by meeting a certain standard with the rifle. By having such a goal before him, the individual will put more heart into his practice, will probably practice by himself, and will endeavor to completely satisfy the few fundamentals of marksmanship. Some critics will no doubt say that such a reward would become commonplace because expert status would be attained by use of the "M-1 pencil"; however, unfair methods would be avoided rather than promoted. The constant threat of losing the privilege if too many experts suddenly emerge in a unit or the Army as a whole would be a deterrent, as well as, the individual jealousies which would discourage anyone from gaining something he did not rightfully earn. Pit scoring has reduced considerably the improper methods of scoring which have become common practice during recent years. Under a reward system, pit scoring, as well as other scoring checks, would eliminate false figures on score cards. The benefits attained from establishing a reward system are two-fold: training would be facilitated and enhanced because both new and old soldiers would be more susceptible to instruction because of the opportunity of receiving an increase in pay, and unit commanders would have a much clearer idea of the effectiveness of their riflemen since true scores, reflecting the proficiency of every man, would be received.

CONCLUSIONS

In conclusion, it should be stated that marksmanship training should be conducted in the same manner as any other subject of military instruction. Because the art of rifle firing has been lost during the rapid increase of the American standard of living, the recruit and experienced soldiers should be given the best training possible. Slipshod methods and undersirable practices should be eliminated in order to insure that the rifleman knows, understands, and appreciates the value of his individual weapon - the best in the world. By giving the soldier a trained coach who is able to correct faulty performances and point out proper actions, he will be able to squeeze the trigger and be assured of a high percentage of hits - no matter what the target may be. During the phase of training devoted to preliminary rifle instruction and range firing, the soldier should be dressed as comfortably as possible. In this phase, uniform requirements should facilitate training and not indoctrinate the soldier with combat equipment. Comfort alone will aid immeasurably to build up the desire to achieve high proficiency. More time should be spent on sight manipulation, not only to speed up the range firing but also to give the soldier a thorough knowledge of how to correct his sight under the variable conditions of weather, wind, and range. When the soldier understands the principle of sight manipulation, his confidence in the rifle correspondingly increases. Without continued practice, anyone, no matter how well he would shoot at one time, will rapidly lose his ability. Through the use of the .22 caliber rifle, the needed practice is secured at little expense of time and money. At the same time, a recruit is introduced to rifle firing without suffering possible physical pain which may serve as a permanent deterrent to correct technique. By giving the soldier a financial reward for attaining expert status, an incentive for training is created which cannot be overlooked. To secure that reward, the soldier will pay closer attention, practice more diligently, and perfect his technique. All of these recommendations for marksmanship training are simple

in scope and easily adopted; yet, the end result would greatly improve the existing standards and proficiency of our rifle training.

BIBLIOGRAPHY

The Infantry School Library

- Daley, A.S., Captain. "Tips on The Bull Market," The Infantry Journal, L III (October 1943), p. 48. UDI .I6.
- Daley, A.S., Captain. "The Recruit and The Rifle," The Infantry Journal, LXIV (February 1949), p. 15. UDI .I6 (bU).
- Davis, W.P. "It's Either a Good Squeeze or a Miss," Infantry School Quarterly, 41 No. 2 (October 1952), p. 20. UD7 .U8.
- Groom, Kenneth G. Major. "Marksmanship," Infantry School Quarterly, 43 No. 1 (July 1953), p. 44.
- Martin, Glen E. Lt. Col. "They Call Their Shots," Marine Corps Gazette, 37 (April 1953), p. 24.
- Requirements Section, HQs Army Ground Forces. "Trigger Squeeze," The Infantry Journal, L III (July 1943), p. 48. UDI .I6.
- Shoot To Live, presenting the Johnson method of musketry coaching as adopted by the Canadian Army, OTTAWA 1945, p. 207-214.
- Wilkins, Frederick, Major. "Teach 'Em To Actually Shoot," The Infantry Journal, LXIII (November 1948), p. 27. UDI .I6.

The Infantry School Academic Department

- Department of the Army. Army Training Program 7-300, Government Printing Office, Washington, 5 September 1952.
- Department of the Army. Field Manual 23-5, U. S. Rifle, Cal. .30, M1, GPO, Washington, 1951.

Lesson Plan

Title of Lesson: How to Improve Rifle
Marksmanship in the United
States Army.

Essential Information

Day and Date:		Hours:	
Place :		Class:	
Instructor : Capt J W Lauterbach		Assistants:	
Uniform & Equipment: A (Instructor)		Faculty	
References : Student Monograph		Monograph	
Training Aids: None		Adviser:	
Rehearsal :			

Lesson Objective: To acquaint the student with several methods of improving rifle marksmanship training through the improvement of techniques presently prescribed.

Lesson Outline

I Introduction

(3 min)

- Rifle marksmanship training has been studied, researched, and experimented upon but a fool-proof method is still to be devised.
- No new system will be presented but instead recommendations for the improvement of technique.
- ATP's are sound but the practical application is improper.
- Areas of discussion will include: the coach and pupil method of instruction, sight manipulation, use of the .22 caliber rifle; uniform to be worn, and the need for an incentive to learn.

II Discussion

(10 min)

a. Six fundamental steps are used in preparatory marksmanship.

b. Coach and pupil method

1. Is used throughout the first four steps.
2. Theory is excellent, practical application is wanting.
3. Marksmanship is new field of endeavor for recruits.
4. Recruit coach fails to aid first because of ignorance.
5. Requirements of coach (read excerpt)
6. Western Signal Corps experiment with trained coaches.
7. Good coaching is essential in introductory phases.

c. Sight Manipulation

1. Usually only one hand is devoted to this subject.
2. Recruit has little knowledge of "clicks", Mil relationship, and "Worm" formula.
3. More time is needed for complete knowledge.
4. Confidence is acquired through knowledge.

d. The .22 caliber rifle

1. Noise and recoil of M-1 are absent.
2. Recruit will gain confidence in his firing ability.
3. "Practice Makes Perfect"
4. Small bore ranges permit all-around yearly firing.
5. Muscles needed in firing are kept toned.
6. Case of performance is result on known distance range.

e. Uniform

1. Relaxation - all important in firing.
2. Steel helmet hinders rather than assists.
3. Men hurry trigger squeeze and sight alignment because of the weight of the helmet.
4. Canadian Army has ordered that field gear (steel helmets, gas masks, and packs) will not be worn.

5. Comfort facilitates learning.

f. An incentive to learn

1. Reintroduction of extra pay for "expert" status.
2. Men will apply themselves more diligently.
3. A goal is provided.
4. True picture of ability will be painted.
5. Pit scoring and individual jealousies will aid in honest scoring.
6. Commanders will know their men's ability.

III Conclusions.

(2 min)

a. Restatement of five methods for improvement of techniques