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TITLE

U. S. Rifle Marksmanship Training As Compared With The Rifle
Marksmanship Training Of Canada

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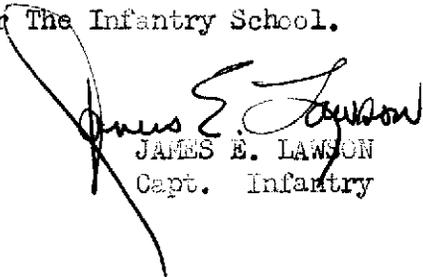
PREFACE

Appreciation is expressed to the members of the staff of The Infantry School Library, and members of the Weapons Committee, The Infantry School, for assistance given in the preparation of this study.

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2 December 1953


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INTRODUCTION

Throughout the years many changes have been made in the methods employed by the United States Army in teaching the soldier the use of the rifle, with the understanding that the rifleman is the backbone of the Army. Even though the methods now in use are believed to be the best obtainable, the United States Army is always ready for new ideas to incorporate into the existing program of marksmanship training.

Better methods and new ideas may be found by comparing the methods used by the United States Army with those used by other well known armies throughout the world, and in this case the Canadian Army.

Good shooting to the Canadian Army is but the simple and complete mastery of five (5) prime essentials, those essentials being:

1. Positions
2. Holding
3. Breathing
4. Aiming
5. Trigger Control

The United States Army also consider five (5) essentials necessary for good shooting, those being:

1. Sighting and Aiming
2. Positions
3. Trigger Squeeze
4. Sustained Fire Exercises
5. The effects of Wind, Sight Changes and Use of the Score Card.

When we break down the marksmanship training which the Canadian soldier receives, as compared to that taught the United States soldier, then we find that (he) is taught only Positions, Sighting and Aiming and Trigger Squeeze.

Of the five steps which the United States Army lists that are taught the soldier, the first four are listed in the order of instruction. As

the fifth step is not based on material covered in any of the first four steps, it may be taught any time before the examination.

In making a comparison of the sequence in which the steps are taught it will be noted the Canadian Army begins with position exercises, whereas the United States Army starts with sighting and aiming. The United States Army stresses this sequence because it is believed that after the soldier masters the sighting and aiming phase it can be used concurrent with all other steps; therefore, giving more time to this important phase of marksmanship.

Position exercises is the next step to which the United States soldier progresses and we find the Canadian Army at this point begins with holding exercises. Holding exercises deal with the method by which the rifle is held into the shoulder, thereby making the position more steady. Since the Canadian soldier does not use a sling for this purpose then this subject must be taught as a separate step.

The Canadian Army lists breathing as the third step, and here the United States Army express this as a phase of position exercises. Both countries employ the same methods in teaching this subject.

Sustained fire and rapid fire have the same meaning, although the United States Army feels the word rapid has an adverse effect upon the accuracy of the soldier, in that it may cause the soldier to fire faster than is necessary. For many years the word rapid was used but lately this word has been changed to the better sounding word sustained. The Canadian Army still use the word rapid in describing this type of fire, this being the only difference in this phase of training between the two countries.

Both the United States Army and the Canadian Army agree that trigger squeeze is the most important step in marksmanship training and the methods by which this subject is taught are the same throughout the course.

The fifth step, the effects of wind, sight changes and the use of the score card, which the United States Army teaches is not presented in

*When do the
revisions of the
book...*

formal classes to the Canadian soldier. The Canadian Army feels that the effect the wind has upon the bullet is negligible at ordinary combat distances; therefore, the time which would normally be taken up here could be used elsewhere. Also the rifle used by the Canadian soldier is not designed so the rifleman can change the sights. Any change in sights that is required after the soldier has zeroed his rifle is handled by the unit armorer.

It is the purpose of this study to compare the rifle marksmanship training of the United States Army with that of the Canadian Army, with the thought in mind as to whether any of the principles employed by the Canadian Army can be employed by the United States Army.

DISCUSSION

DESCRIPTION OF THE RIFLES EMPLOYED BY THE U.S. AND CANADA. The rifle use by the United States Army is a .30 caliber, gas operated, clip-loaded, air cooled, self-feeding shoulder weapon. It weighs approximately 9.5 pounds and with the bayonet it weighs an additional pound. Ammunition is issued in an expendable clip which holds eight rounds. This rifle is noted for its rapid mechanical operation, which enables the rifleman or a group of riflemen to deliver a large volume of accurate fire upon any designated point or area within range.

Pass
Standard } The rifle employed by the Canadian Army is the British Rifle Number 4, Mark III. This rifle is a .303 inch, bolt operated and is loaded through the top of the receiver with two clips which hold five rounds each. The rifle weighs 9 pounds 3 ounces, the overall length is 3 feet 8½ inches. The sights are adjustable from 200 to 1300 yards. — *not covered with maintenance program.*

METHODS EMPLOYED TO TEACH MECHANICAL TRAINING. The purpose of teaching the soldier how to disassemble and assemble his rifle is to provide him with an understanding of functioning, without which is almost impossible to reduce stoppages which may occur. When a trainee enters the United States Army his first encounter with marksmanship training is mechanical training. At this time he is taught to disassemble and assemble the rifle. He also learns the name of each part and the role which it plays in the functioning of the rifle. The soldier who thoroughly understands functioning can clear the stoppages which might occur, and through this knowledge the soldier gains confidence in his ability to keep his rifle in perfect condition.

The Canadian Soldier is taught this phase of training with the same purpose in mind, but for him this lesson is very simple due to the simplicity of the rifle which is used. For the Canadian Army good teaching does not call for a recitation of the various parts of the rifle, a name for the part is much less important than the operation of firing a bullet

*hesitating to
↓
idea*

so that it hits the target toward which it has been steered. Therefore, it is easily understood why so very little time is devoted to this phase of training.

The next phase of training for the United States Army soldier is known as preparatory marksmanship training. At this point the trainee begins to learn a little about actually firing the rifle. The purpose of preparatory marksmanship training is to teach the soldier the essentials of shooting, and to develop fixed and correct shooting habits before he undertakes range practice.

expanding

"Preparatory marksmanship training is divided into six steps as follows, and is concentrated in the period of time allotted: *what is the time allotted?*"

- (1) Sighting and aiming exercises.
- (2) Position exercises.
- (3) Trigger-squeeze exercises.
- (4) Sustained-fire exercises.
- (5) Instruction in the effects of wind, sight changes, and use of the score book.
- (6) Examination of men before starting range practice." ¹

*could
possibly
be taken*

As stated above, the first step in this phase of training for the United States soldier is sighting and aiming exercises.

METHODS EMPLOYED TO TEACH SIGHTING AND AIMING. The United States Army teaches that sighting and aiming MUST come first when teaching the soldier marksmanship.

"The sighting and aiming step of preparatory marksmanship training consists of three exercises. They are--

- (1) Making correct sight alinement and correct sight picture using the sighting and aiming bar.
- (2) Making correct sight alinement and correct sight picture using the rifle sights.
- (3) Testing your sight alinement and sight picture by having three sight pictures marked at a distance of fifty feet. These three markings will form a shot group." ²

1. The Military Service Publishing Co, The Junior ROTC Manual, Harrisburg, Pa, 1950, p.512.
2. DA, FM 23-5, U.S. Rifle Cal .30 M1, Government Printing office, 1951, Washington, D.C. p. 130.

"The Canadian Army trainee is taught that he will grasp the lesson of aiming only if he has mastered the preceding factors of positions, holding, and breathing. He cannot hope to aim correctly if he has not learned those lessons well." ³

The sighting and aiming phase of training for the Canadian Soldier consist of the following steps:

- (1) Breathing
- (2) Automatic Alinement
- (3) Aiming
- (4) Sight Pictures

It appears that a large amount of attention is placed upon these steps, and it holds true that if the soldier can master each of these steps he is certain to become an expert marksman.

A great deal of time is spent instructing the Canadian soldier in the effects breathing has upon the accuracy of his firing. He is taught that after the movement or "dance", of the rifle has been slowed down by correct positions and holding, he can further slow it down by proper breathing habits. "Correct breathing resolves itself into relaxed, normal breathing interrupted by a heavy, normal sigh just before firing. This sigh is naturally followed by a pause in breathing and at this time the rifle is fired." ⁴ The student is also reminded that the sigh should be audible.

Correct breathing habits are also taught in the marksmanship classes which the United States Army trainee attends, but not with the emphasis placed upon it as is with the Canadian soldier. The United States Army soldier is only told not to breathe while aiming, and a short explanation and demonstration is given as to the effect of breathing if it is practiced while aiming.

3. General Staff, Canada, Shoot to Live, Ottawa, 1945, p. 83.

4. General Staff, Canada, Shoot to Live, Ottawa, 1945, p.73.

← for a low 50
on a mark

The next step, as mentioned previously, is the Automatic Alignment Step. To the Canadian soldier, this means that if a rifle is properly positioned, held, and steadied by correct breathing habits, it will be aligned upon the target after each shot is fired. If the soldier wishes to fire upon another target then he must move his body around the pivot point, which in this case, is his left elbow. (What position?) can be in the line of alignment

(The sights will be correctly aligned on the target)

This same bit of information is passed along to the U. S. soldier in his marksmanship training, but it is not referred to as automatic alignment. For the United States soldier, this alignment comes about by the correct use of the sling which is used in all firing positions. If the sling is correctly adjusted, the M1 rifle will fall back upon the target after each shot. This sling is an advantage which the United States soldier has over the Canadian soldier since the Canadian does not use a sling in his range work.

Aiming is the next step presented to the Canadian soldier in the presentation of the Sighting and Aiming phase of rifle marksmanship training. A large portion of the time devoted to the teaching of sighting and aiming is designed to teach the soldier to use the sights. The three things which must be considered when aiming the rifle are the front sights, the peep sight, and the target at which the soldier is firing. The eye looks through the rear or peep sight so that the vision is condensed down to a single, straight stream, directed onto the front sight so that the latter is seen as a clear, sharp, square picture while the target rests in the background of the picture. The important factor at this time is in seeing that the tip of the front sight is SHARP. Everything else in aiming becomes secondary.

Do the same
post

The rear sight serves a similar purpose to the windshield. It is something to see through, enabling the user to pick out the optical center. The recruit must be encouraged to exclude all distractions and instead, focus upon the tip of the front sight. The eye will assist

him in this because it is impossible to focus the eye upon more than one object. The stress up to now has been placed upon the front sight, and the target, so far, has been left in the background where it belongs. Therefore, it will appear as a hazy blob. It is necessary for the instructor at this time to tell the student that he should form a mental picture of the target while aligning his sights upon the hazy blob, which is the target.

Station
sights where

Relaxing?
hazy blob

The United States Army trainee receives the same instructions but it is not put across to the student with the emphasis this important information should have. If the American soldier were told exactly how to look at the sights of the rifle while firing, meaning the exact point at which to concentrate his vision, it would probably raise the score of many of those men who do not qualify on the firing range.

conf

The last step to be considered here, in the Canadian soldier's sighting and aiming instruction, is the sight picture. One of the most common mistakes made by the soldier at this point is getting the same sight picture for every shot. This is a mistake which is very hard for the instructor to correct or teach unless he can present the class with hard and fast rules as to the location of the eye behind the peep sight each time a sight picture is taken.

Peep

At this point the Canadian soldier seems to be at a loss in his initial firing exercises. He is taught that with practice he will begin to find the exact spot, or he should mark a spot mentally on the stock where his eye should go when he is getting his sight picture. In the initial stages of marksmanship training the soldier will not be able to find this exact spot for his eye each time, and he has so many things which he must remember he will forget to mark that spot mentally each time; therefore, his score when firing will be unsatisfactory. With practice this deficiency will correct itself for the majority, but a few will never be able to make this correction, causing them to continually make unsatisfactory scores.

what point?

Chin not
eye

Confusing?

hang in mid air!

The United States soldier will fare a little better in this phase of marksmanship training in that he does have a hard and fast rule which he can go by to obtain the correct position for his eye each time he fires. The thumb, which is placed around the small of the stock, and the cheek bone will form a "spot weld", thus making sure the eye will be in the same position and at the same distance from the rear sight each time the rifle is fired.

Dangling?

During the sighting and aiming stage of marksmanship training, the instructors in the United States Army take advantage of the many training aids which are designed to show the student exactly what the sight picture should look like. Also, the student is required to demonstrate his proficiency by using these training aids. In speaking of training aids, one of the best for this purpose is the sighting and aiming bar. The United States Army begins the course of instruction with the sighting and aiming bar and the student does not graduate to the actual rifle until he has demonstrated his ability to align the sights correctly on this training aid.

Consistent?

The Canadian Army trainee begins his sighting and aiming training with the rifle, and the sighting and aiming bar is used in most cases to show the student why he is not shooting correctly.

The American soldier begins his work with the actual rifle in an exercise designed to use the rifle sights in making shot groups. This exercise requires two students to work together. One man works with the rifle, which is stationary, and the other man, fifty feet to the front, works with a movable miniature target. The firer has the target moved until it is in line with his sights, then it is marked. This is done three times and each time the firer attempts to put the target in the same spot. If he is successful the three marks will be very close together, or one upon the other.

what the sights?

obvious?

In summary, the important points brought out in the methods used in

teaching sighting and aiming by the two countries are:

1. The United States Army:

- "a. That the front sight is accurately centered in the rear sight. This is the most important part of aiming.
- b. That you do not breathe while aiming.
- c. That the bull's-eye is centered above and appears to barely touch the top of the front sight.
- d. That the last focus of your eye is on the front sight. This will leave the front sight clear and sharp, while the bull's-eye will appear to be a bit foggy."

2. The Canadian Army:

- "a. Foresight- The tip of the front sight must be placed upon the point which the recruit wants his bullet to strike.
- b. Optical center- The eye must automatically find the optical center of the back sight and then focus its vision upon the knife edged, square, clear tip of the foresight.
- c. Sight Picture- The marksman must always see the same sight picture.
- d. Aperture- The marksman must look through the aperture of the back sight and not at it.
- e. Precision and Practice- The recruit must understand precision of aim and practice it religiously."

METHODS EMPLOYED IN TEACHING POSITIONS. After the United States Army trainee has progressed through the sighting and aiming phase of marksmanship training, he moves into position exercises. The trainee is taught how to assume the five positions which the United States Army uses. At this stage of training, the Canadian soldier begins his training in Trigger Control exercises, so here we see that the United States Army trainee and the Canadian trainee are not getting marksmanship training in the same order.

To get back to the United States Army soldier, his first position is the prone position, and he also begins to learn how to adjust the sling for this position. A correctly adjusted sling is of great assistance in shooting. It helps to steady the rifle and is adjusted to give firm support without discomfort to the soldier. The instructor assists each man to obtain the correct adjustment for his sling. This adjustment is marked or remembered for each position. The hasty sling and the loop

5. DA, FM 23-5, U.S. Rifle Cal. 30 ML, Government Printing Office, 1951, Washington, D.C. p.114
6. General Staff, Canada, Sheet to Live, Ottawa, 1945, p.134

sling are the two authorized for use in firing the rifle.

For the United States soldier to assume the prone position, he lies at an angle of about 30 degrees or less to the line of aim with the spine straight. The exact angle of the body to the line of aim is limited by the conformation of the body. The legs are kept well apart, the inside of the feet flat on the ground, or as nearly so as can be attained without strain. The elbows are well under the body so as to raise the chest off the ground. The right hand will grasp the small of the stock, with the right thumb over the small of the stock or on top but not placed alongside the stock. The left hand is as far forward as is comfortable and convenient, with the wrist straight. The rifle is placed in the crotch formed by the thumb and the index finger, resting upon the heel of the hand. The cheek is pressed against the thumb forming the "spot weld" and the eye as close to the rear sight as possible. When the correct position has been attained it is found that upon discharge the muzzle moves slightly up and very slightly to the right, then settles back close to the original aiming point.

"These are the important features of the prone position:

1. The rifle rests in the V formed by the thumb and the first finger and against the heel of the hand.
2. The left wrist is straight.
3. The left elbow is under the rifle.
4. The fingers and thumb of the left hand are relaxed.
5. The left hand is forward against the stock ferrule swivel.
6. Daylight is visible between the sling and the crook of the elbow.
7. The left shoulder is relaxed forward.
8. The spine is straight; the legs are spread a comfortable distance apart.
9. The toes are pointing outward; the heels, if possible without discomfort, should touch the ground.
10. The angle made by the pupil's spine and the rifle is 30 degrees or less.
11. The butt of the rifle is seated well into the pocket formed in the shoulder as the right elbow is moved forward.
12. The right elbow is far enough out so that the shoulders are parallel to the ground.
13. The small of the stock is gripped firmly with the right hand, the thumb on top of or over the top of the stock.
14. The trigger finger, between the tip and the second joint, contracts the trigger. As a general rule, it is best if no part of the trigger finger touches the stock as this may hinder proper trigger squeeze.

15. The neck is relaxed. The cheek should rest firmly against the stock and the thumb of the firing hand. This contact between the cheek and the thumb is known as the "spot weld". It is natural to take the same grip with the right hand each time, and the "spot weld" will position your eye the same distance from the rear sight for every shot.
16. The weight of the upper body is relaxed forward against the tension of the sling."

The Canadian soldier goes through the same procedure except for a few minor differences, and the stress in some cases is placed upon different steps. The only big difference noted in this comparison is the absence of a sling while firing.

Good position in successful shooting becomes a matter of placing the student in a restful, relaxed position from which he can establish the foundation for good marksmanship. The prone position is rated as the best because it provides the solidness and comfort which induces accurate fire. The instructor will inform the student that to the right handed person the left forearm is the pillar of bone upon which the rifle must solidly rest while the left elbow is the pivot upon which the whole position of the firer depends and revolves. The initial stress is placed upon the exact location of the left elbow. In proving the exact position to the student the instructor removes the magazine from the rifle and vertically slips a strip of wood down through the space. If the elbow is in the correct position, there will be a space of no more than one and one-half inches from the inside of the elbow to the vertical stick.

The correct position of the left elbow is hard for some men to reach. In situations such as this, the student is directed to make a half roll over onto his right side and at the same time keeping the right elbow stationary. The student should then pull his left elbow well toward the center of his body, then roll back into the firing position.

Having established the correct position for the left elbow and forearm, the left hand now takes on a vital role. The axis of the rifle

7. DA, FM 23-5, U.S. Rifle Cal .30 M1, Government Printing Office, 1951, Washington, D.D. p. 159.

U.S. or Canadian?
 Note clearly
 the Canadian vs.
 the U.S.
 who is
 talking
 about U.S.
 rifle

will bisect the angle formed by the lines running from the center of the wrist to the thumb and the fourth finger. The rifle now in this position is directly above the solid upright bone formed by the left forearm. The left hand should be as far forward of the magazine as comfort will allow, with the rifle well down in the hand so that it will permit a firm but not too tight grip of the rifle. In checking the left hand as it clasps the rifle it should be noted that the fingers curl up and over the handguard so that the fingers and thumb almost touch. In this position, the job of the left hand is to hold the rifle firmly and draw it back into the shoulder. This is frequently referred to as "backward pressure."

The right hand should clasp the small of the butt so that the thumb nearly touches the rear of the cocking piece when the rifle is fully cocked. The trigger finger should be around the trigger so that it is between the first and second joints. The thumb should go over the small of the butt with the second, third and fourth fingers gripping the butt from below and across the small of the butt. The grip does not need to be so tight that the hand will ache, yet it should be firm enough to steadily hold the rifle and exert its required backward pressure against the shoulder.

The shoulders should be almost level, but if they are not, this error may be corrected by moving the right elbow either to the right or left.

The body must be at an angle to the rifle if it is to be held properly, and the left elbow must be well out in front of the right elbow. This is known as the Oblique Body Angle. The size of this angle will depend upon the physique of the soldier and in most cases this angle will measure between 30 and 45 degrees to the axis of the rifle. The wider the angle, the closer the eye will be to the rear sight, a factor of importance when considering the sighting and aiming phase of instruction. The instructor does not teach oblique angles to the trainee. He uses the methods of determining those angles as a means of checking and adjusting the position of the trainee so that the body angle is in proper relation

7/10/15

Not clear

I believe you are writing about the position of the hand on the butt

to the line of fire and suitable to his physique.

At times it will be found necessary to raise or lower the rifle in order to aim at higher or lower targets, and these changes can be effected by either major or minor adjustments without disturbing the solid position which the trainee has been taught to maintain. If the trainee wishes to make a large change in the elevation of his rifle, he should be taught to dig his toes into the ground and push himself forward without changing the position of his elbows. This is known as major adjustment. The minor adjustment is made by raising or lowering the rifle by sliding the left hand forward or backward.

The legs should be well apart, and the toes should be pointing downward and out from the body, with the heels as close to being flat as possible. Some men cannot get their heels flat onto the ground and if they cannot do this they should not be forced by insistence. *Necessary in clear expression*

METHODS EMPLOYED TO TEACH TRIGGER SQUEEZE. The next phase of training which the United States Army soldier receives that can be compared to the training received by the Canadian Soldier is Trigger Squeeze. Both nations agree completely upon the importance of this particular phase of training. The Canadian marksmanship instructor has had the importance of this subject explained to him in these words: "Trigger Control is the top priority item in teaching expert shooting. There is nothing in this whole course that will reflect itself so much upon the expertness of the shooting, by your class, as will a thorough understanding of what trigger control is and the values of its constant use and practice." 8

The importance of this subject to the United States soldier is also stressed, and it is stated in Field Manual 23-5 as follows: The most important single factor in marksmanship is trigger squeeze. Everything about your position and aim may be perfect, but, unless you squeeze the trigger correctly, your shot will not go where you have aimed it. Squeezing the

quoted

8. General Staff, Canada, Shoot to Live, Ottawa, 1945, p. 135.

trigger correctly is not as easy as it might appear; the technique must be fully understood before you can hope to do it perfectly." 9

The methods employed in teaching this particular phase of marksmanship training to both the Canadian Soldier and the United States soldier are identical except the method by which the "follow through" stage of trigger squeeze is taught. For this the Canadian Army instructor employs a training aid consisting of a thin sheet of paper held taut in front of the muzzle of the rifle. The firer assumes the prone position with the muzzle of the rifle just in front of the paper, positioned in such a way so the muzzle will cast a shadow upon the paper which may be seen by the assistant who is holding the paper from the opposite side. As the firer squeezes the trigger the assistant will be able to tell the firer whether he is flinching and if his follow through is correct.

To become proficient in rifle marksmanship the United States Army teaches the soldier there is one requisite that exceeds all others in importance; the ability to squeeze the trigger properly. With the sights aligned on the target, the firer in squeezing the trigger, applies such a steady increase in pressure that he realizes that the piece has been fired only after the bullet is on its way. A great deal of trigger squeeze exercise is necessary, and it must be carefully supervised. The instructor allows the soldier to simulate fire until he has been thoroughly instructed in trigger squeeze, and then in all drills and field exercises where fire is simulated, he cautions them to aim at definite objects and to carry out the correct principles of aiming, squeezing the trigger, and calling the shot.

The Canadian Army has accepted the considerations of the world's leading rifle shots who have placed the importance of trigger squeeze at almost twice the combined importance of all the other basic principles. 10

9. DA, FM 23-5 U.S. Rifle Cal .30 M1, Government Printing Office, 1951, Washington, D.C. p. 194.
10. General Staff, Canada, Shoot to Live, Ottawa, 1945, p. 135.

The Canadian soldier is taught that no matter how expert one may be in all other phases of rifle marksmanship, all this effort can be easily lost if faulty operation of the trigger causes aiming precision to be disturbed even the slightest. The soldier must have a thorough understanding of trigger control and then practice. The Canadian instructor is reminded that practice is never effective if it is boring, and that the student can take just so much. He will respond to two or three, five-minute practices of trigger squeeze a day but anything longer than that, per period, will become tiresome and will implant a fast growing germ of thought that trigger squeeze is too monotonous and hard to learn.

Poor sentence

Poor sentence

Instructor or student?
punctuated?

Too long

Poor title

EXTENT OF AND METHODS EMPLOYED TO TEACH SUSTAINED FIRE. Sustained fire as we know it in the United States Army is referred to as Rapid fire by the Canadian Army. At one time the United States Army used this term to designate this type of fire, but it was changed due to the mental effect which it was thought to have upon the firer. The word rapid tends to cause the soldier to fire faster than is necessary.

We have been over this before, see page 2.

The extent and methods used by the United States Army and the Canadian Army differ very little. The United States Army soldier is taught that all principles learned in slow fire are applied in sustained fire, those methods being correct breathing, aim and trigger squeeze. Time is gained by taking position rapidly and by reloading quickly and without fumbling. Accuracy is not sacrificed for speed. Sustained fire is considered as an uninterrupted sequence of slow fire shots delivered without loss of time. For the United States Army soldier the most important principle in sustained fire is the development of correct timing in firing. Correct timing varies from about 6 seconds per shot for the beginner to about 2 seconds per shot for the experienced man. By conducting cadence exercises, the instructor gradually increases the speed at which the student will simulate firing, until an approximate rate of 4 seconds per shot is attained.

The Canadian Soldier is taught that Rapid Fire is most effective if the basic principles of good shooting are followed carefully and put into rhythmic operation. The soldier must make every movement of shooting appear as automatic as the automobile driver who coordinates the clutch, the accelerator, the gear shift lever and the steering wheel all into one combination of synchronized movements. The Canadian soldier begins his rapid fire exercise by taking correct position and holding it with automatic alignment for his first shot. After it is fired, he uses a regularly spaced interval for extracting the empty shell and reloading a new round; this is bolt manipulation. He now takes up the trigger slack, lets out his pre-firing sigh while he places his front sight directly on the point where he wants the bullet to hit. As the rifle is fired his eye continues the follow through by mentally calling the shot before the process is repeated.

is the auto driver automatic? too hard said

manipulation of shell?

leave and!

The one big difference which is noted between the two countries, in this phase of training, is brought about by the difference we find in the rifles. The Canadian Army, using a bolt operated rifle, must incorporate bolt operating instruction; whereas, the United States Army, using a rifle which is self loading and gas operated, can teach the soldier to fire faster with more accuracy.

You enter that notation to make for ranges over 500.

Now title

EXTENT OF AND METHODS USED TO TEACH EFFECTS OF WIND; SIGHT CHANGES; USE OF THE SCORE CARD. The United States Army instructor teaches the soldier that in firing at 500 yards or under, he must carefully study the influence of the wind. The soldier is taught to use the horizontal clock system in describing the direction of the wind. He considers the firing point as the center of the clock and the target as 12 o'clock. At 3 o'clock wind comes directly from the right, a 6 o'clock wind comes from the rear, and at 9 o'clock the wind comes from the left. The velocity of the wind is described in miles per hour. The soldier is given a windage rule to determine how many clicks he must turn his rear sight windage knob to compensate for a wind from the right or left. This

windage rule is: "To find the number of clicks to be allowed for a 3 o'clock or 9 o'clock wind, multiply the range (expressed in hundreds of yards) by the velocity of the wind and ^{Speller} (divide) by ten." 11

The Canadian soldier is taught that the wind has no effect upon his shooting. Therefore, he receives no instruction in this phase of marksmanship training. The manual from which the Canadian instructor receives his information has this to say about the wind:

"Aiming off for wind is a bugbear to good shooting because it does not apply to normal service combat conditions. A bullet is not like a light football which has to be booted with regard to wind. It is a lead pellet discharged from a rifle with terrific velocity. It should only be fired straight at the target centre and nowhere else.

A Kansas tornado might throw a bullet 15 inches off a 300 yard target, but you won't be doing much shooting in tornadoes. Solid holding as taught here will take care of the average breeze. A poll of top-notch Canadian marksmen has revealed that wind has little or no effect upon a bullet at ordinary combat distances, therefore its effect from a soldier's point of view is negligible." 12

In the United States Army, sight changing exercises are given the trainee in order for him to zero his rifle correctly. To do this the instructor points out the graduations on the elevating and windage knobs and explains their use. The clicking sound which the knobs make as they are turned are brought to the attention of the student and he is told, a click from either knob means that the strike of the bullet will be moved a given distance. The soldier will also be given problems to solve to test his ability to change the sights intelligently.

The Canadian Army does not teach the individual soldier a method of changing his sights, this job being handled by the unit armorer. The information which the armorer receives to adjust the sights is provided with the target which the soldier is required to turn in after he has zeroed his rifle. The shot group will determine just how much the sights should be moved.

11. DA, FM 23-5, U.S. Rifle Cal .30 M1, Government Printing Office, 1951, Washington, D.C. p. 235.

12. General Staff, Canada, Shoot to Live, Ottawa, 1945, p. 212.

for a change, give

Soldier finds shot groups
armorer actually zeros rifle

not clear

Score cards are kept by soldiers of both countries and the methods employed in teaching their use and purpose are identical. The students are given blank score cards and instructed in the correct procedure in use of the card.

METHODS EMPLOYED IN CONDUCT OF KNOWN DISTANCE RANGE. The conduct of the known distance range firing for the United States Army is organized so that each man loses only a minimum of his firing time. Long periods of inactivity should be avoided and to do this no more than six men nor less than three are assigned to a target. When four orders are designated on each target, the double coaching system is employed. This system engages four men on each target, one pair (a coach and a firer) on the right side of the numbered stake will fire live ammunition. The other pair (a coach and a firer) on the left side of the numbered stake will simulate firing. This method keeps four men busy and also gives valuable instruction to the pair who are "dry" firing.

During the instruction practice, the soldier works under the supervision of the coach. Any man who has been correctly instructed in preparatory marksmanship training, and who has been given instruction in coaching methods can be used with good results. On the firing line the coach takes a position similar to that of the man who is firing so he will be able to watch the firer's trigger finger and eye. In this position, the coach will be able to see if the trigger is being jerked, and if the firer is flinching.

The conduct of the known distance range firing for the Canadian Army provides for three men to each target, and also a trained coach for each firing point. The three men for each target are broken down as follows: A WORKER- Who works in the pits, a WATCHER- Will get the score from the pit, and the FIRER- The man who fires the rifle.

These men change over in this order: The FIRER becomes the WORKER, the WORKER becomes the WATCHER, the WATCHER becomes the FIRER. The coach remains in his position throughout the course. This system is very

Spelling
complicated and requires a very large cadre to be used as the coaching staff. The only advantage to this system is that with the trained coach excellent supervision is given to the group, and again every man is kept busy.

complicated and requires a very large ^{ing}cadra to be used as the coaching staff. The only advantage to this system is that with the trained coach excellent supervision is given to the group, and again every man is kept busy.

CONCLUSIONS

By comparing the rifle marksmanship training of the United States Army with that of the Canadian Army we find that the essential elements of marksmanship training are the same. Both countries feel that the program should include aiming exercises, position exercises and trigger control exercises. The United States Army has added two other elements which are believed necessary, those being sustained fire, and a combination of the effects of wind, the score card and sight changes.

*Poor
sustained
fire*

As for sustained fire, the Canadian Army feels this is only a continuation of slow fire and is not considered as an essential element since this will come as the soldier becomes more proficient.

The United States Army teaches that the wind will have a bearing upon the course of the bullet and the soldier is taught how to compensate for this, whereas the Canadian Army teaches this is not true and the soldier does not deal with this subject, thus saving valuable time.

Sight changes for the Canadian soldier are made by a unit armorer, so here again the time which would ordinarily have been taken up here is spent elsewhere.

The sequence in which the essential elements of marksmanship are taught vary in that the United States Army begins the training with sighting and aiming whereas the Canadian Army begins with position exercises. The Canadian Army teaches that the soldier should know how to use the rifle before he begins to learn how to aim, just as a baby learns to crawl before it can walk. Therefore, the training should begin with position exercises.

After the sighting and aiming exercises, the United States Army soldier progresses into position exercises and here correct breathing habits are stressed. The Canadian Army teaches breathing as an essential element and should be taught as a separate subject, thereby spending more time in this phase of training. Also, the Canadian Army feels that holding

the rifle correctly should be a separate step; whereas the United States Army covers this subject by teaching the soldier correct use of the sling, which will serve the purpose of holding the rifle in against the shoulder as it should be.

The Canadian soldier is taught to fire the rifle in the same manner he would use it in combat, and because of this he does not use a sling, the thought being he would not use the sling in combat.

Both countries agree that trigger control is the most important phase of marksmanship training and the methods used in teaching this subject coincide exactly.

The effect of these considerations could bring about a better program of marksmanship training; thereby making the United States Army soldier a more effective soldier in combat.

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LESSON PLAN

Title of Lesson: U.S. Rifle Marksmanship Training As Compared With the
The Rifle Marksmanship Training of Canada.

ESSENTIAL INFORMATION

Day and Date: _____ Hour: _____
Place : _____
Instructor : Capt J. E. Lawson Assistants : _____
Uniform & Equipment: A (Instructor) Faculty
References : Student Monograph Monograph
Adviser : Major W. J. Fellenz
Training Aids: Vu-graph, Blackboard, Chalk, Eraser.
Rehearsal : _____

LESSON OBJECTIVE: To acquaint the student with the Rifle Marksmanship Training received by the U.S. Soldier as compared to the Rifle Marksmanship Training received by the Canadian Army Soldier and offer certain conclusions as to whether any of the principles employed by the Canadian Army can be employed by the U.S. profitably.

LESSON OUTLINE

1. Introduction (3 Min)
 - a. The purpose of marksmanship training.
 - b. A description of the rifles employed by the U.S. and Canada.
 - c. Reason for making the comparison between U. S. and Canada.
 - (1) Whether any of the principles employed by Canada can be employed by the U.S. profitably.
 - d. Outline the points which are to be covered during this period.
 - (1) Mechanical training methods
 - (2) Sighting and aiming exercises
 - (3) Position exercises
 - (4) Trigger Squeeze
 - (5) Sustained fire
 - (6) Effects of Wind, Sight Changes and Use of the Score Card.
 - (7) Extent and methods employed in the conduct of known distance range firing.
 - (8) Comparison of the coach and pupil system with similar system used by the Canadian Army.

2. Discussion.

(20 Min)

a. A description of the rifles uses by:

- (1) The United States Army
.30 cal. gas operated, clip-loaded, air cooled, self feeding
(semi-automatic) shoulder fired weapon.
- (2) The Canadian Army
British Rifle Number 4, Mark III
.303 inch
Bolt operated, loaded through top of receiver
Ten round capacity

b. Methods employed to teach the following:

- (1) Mechanical Training.
- (2) Sighting and Aiming.
- (3) Positions.
- (4) Trigger Squeeze.
- (5) Sustained Fire.
- (6) Effects of Wind, Sight Changes, and Use of Score Card.
- (7) Examination before range firing.

c. Extent and methods employed in the conduct of known distance and transition firing.

d. A comparison of the Coach and Pupil system with that system used by the Canadian Army.

3. Conclusions.

(2 Min)

a. Determine whether any of the principles employed by the Canadian Army can be employed profitably.