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SHOOT
To Live



CANADA

Prepared under direction of the
Chief of the General Staff

* * * * *

Published as an OFFICIAL handbook

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TO ALL RIFLE INSTRUCTORS

WHOEVER AND WHEREVER
THEY ARE, WHO WISH
TO SUCCESSFULLY
TEACH OTHERS
TO STEER
BULLETS.

Foreword

IN publishing this handbook for officers, warrant officers and non-commissioned officers of the Canadian Army, an attempt has been made to present a sound, simple and sensible method of teaching men to shoot correctly, effectively and consistently.

The Johnson Method of Coaching was developed by Lt. Col. Stephen Johnson over a period of 20 years' experience in the art of shooting. During that time, Lt. Col. Johnson has earned an enviable reputation as one of Canada's outstanding rifle shots, winning several championships and being five times a member of Canada's Bisley team.

During the war he put his ideas into practice in the training of the Canadian Army with excellent results, and his methods have been put together in this handbook for the guidance of future instructors in musketry.

It is desired to acknowledge with gratitude Lt. Col. Johnson's work in this regard and to express appreciation to Mr. H. G. MacLean of the Directorate of Public Relations for his editorial assistance and to all others who were involved in the preparation of this work.

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The following material is a guide to the coaches and not to be taught.

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Meet "Little Chief Wildshot" — The Musketry Gremlin

CHAPTER ONE

Introduction

SO YOU are the instructor who is engaged in teaching soldiers of the Canadian Army how to correctly shoot their rifles that they may efficiently diminish an enemy's strength and thus speed victory?

How successful have you been? We know how you have boasted to other instructors about the large numbers of recruits you have speedily passed through the mill in accord with the teachings of the musketry drill pamphlets and directives. You have told the troops everything the booklets have contained. You have carefully recited the drill.

But can YOU shoot as good a lecture as you can spiel?

Certainly you can shoot or you wouldn't be an instructor. But can you shoot **ACCURATELY** and understand **WHY**?

By shooting accurately, we mean dead in the centre of a target 99 times out of 100 shots. We will lay a side bet that with all your pamphlet prowling you can either explain in logical detail how and why you get good scores or you are exaggerating your own rifle prowess. If you don't know what gives perfect target results you don't know shooting and cannot teach it. You stand a chance of winning the "Order of the Bengal Lancers" for being a better talking marksman than a practicing one.

On the other hand, if you will settle your mind down to getting rid of antiquated ideas about shooting and study, instead, the simple but scientifically developed methods explained in succeeding chapters, your record of successful musketry instruction will startle you.

Good musketry cannot be taught by long-winded lectures that are mildewed with age and given in a sing-song, memorized manner. Neither can you teach it without knowing the reasons why certain desired results are obtained.

Shooting is fun—not hard work. That is, if it is good shooting and most soldiers want to be good shots. They are not wearing battle dress just for the privilege of lugging a Lee Enfield around for ballast. They want to be able to kill the enemy and then get back to the "little woman" at home. But soldiers are human enough to sit through a dry lecture dreaming of what the cook will have in the dinner stew unless you can capture their enthusiasm with interesting, logical instruction.

Thus, to be a good coach, you must first be a good rifle shot yourself. You cannot afford to be careless. The boys you train are going out to fight while you give fighting instruction at home. If one of your candidate's names appears on a casualty list, blame yourself—don't curse the enemy. That boy would probably not have been a casualty had he been properly taught to shoot accurately. Remember, one bullet, perfectly fired and confidently delivered, can beat any foe.

Your first job, after reading this handbook, will therefore be to get out onto the range and learn to do everything it teaches. You must shoot perfectly and

INTRODUCTION—Continued

prove with your bull's eyes that you can. If you cannot shoot, then you cannot interest Private John Quincy Buck to shoot, nor can you deride these new methods of teaching, just because they differ from old and long-used systems.

The responsibility is **ALL YOURS**.

Before delving into a discussion of proper and effective teaching methods, your attention is called to **SAFETY**. The old bromide, "I didn't know it was loaded!", does not rate in musketry. **EVERY RIFLE IS LOADED UNTIL YOU HAVE SATISFIED YOURSELF OTHERWISE**. *If, while you are instructing, a soldier is wounded by rifle fire, don't call it an accident.*

You could be charged with attempted manslaughter if you were a civilian. Accidents are only caused by carelessness and any in **YOUR** class will be **YOUR CARELESSNESS**.

In wartime, good musketry resolves itself into shooting and killing the enemy—not shooting the gas. If you listen to canteen conversations you will hear plenty of men who, at the gulp of an ale, can tell you how good they are at hitting the bull's eye. Maybe they have scored a few good shots in their day but can they prove it at a rate of 99%? Every red-blooded Canadian regards himself as an ace marksman. If he never had a rifle in his hands before he joined the Army, he knows it is very simple. To him it is just a matter of picking up that old Lee Enfield, selecting a target and jerking the trigger.

So what happens?

Farmer Jones over in the next county is asking "whoinell" shot his brindle cow. The know-it-all soldier has only a blank target, his shoulder or arm is sore from the rifle's recoil, and his pride is so injured that he hates his rifle, his instructor, the Army and **HIMSELF**.

On the other hand, a properly taught recruit would not have been allowed onto the range until he had mastered the fundamentals of Position, Holding, Breathing, Aiming and Trigger Control. When that recruit did reach the range he would have a confidence that he could shoot accurately because that was the only way he had been taught.

Good shooting is nothing but the simple and complete mastery of the five prime essentials: **POSITION - HOLDING - BREATHING - AIMING** and **TRIGGER CONTROL** which are then all tied together by **CO-ORDINATION**. A soldier, to attain this mastery, must have **THOROUGH** and **ENTHUSIASTIC COACHING** in all these. He must know what every step means and why it has been taken. He must be convinced that each phase of training is a vital part to the eventual result.

No special aptitude is necessary in learning to shoot. Good marksmen are not born as such. No specially-perfect physique is required and only average intelligence and willingness is expected. The soldier must be keen enough to accept the methods of attaining good marksmanship through conscientious practice. To reach the goal that has been set he will see that with a sensible application to the business of correctly learning the values and reasons for good shooting, it will be easy. It will be much easier and much more natural than some other aspects of his military training.

You may ask, "Why does this new policy in teaching musketry come up now when the old, established methods served us for years? In other words, why change at this stage?"

INTRODUCTION—Continued

These are logical questions. The Canadian Army of 1914-18 was credited with being one of the finest shooting formations of all the British Armies but the modern Canadian Army does not command such honours. Nazi battle records captured in North Africa praised the sniping abilities of the New Zealanders. Then what is wrong with the Canadians?

Either we have become careless in our shooting or our training methods need modernizing to meet the current trends of war. If Canadians are to succeed, the Maple Leaf brand of shooting must be perfected. One rifleman, given the right opportunity, can decide a war with a well-placed bullet and YOU might be the lucky man.

War has no Hollywood-directed dramatics. The demands upon each individual rifleman crop up without warning. The enemy, who is not as well equipped as you, knows that he is out to kill you or die in the attempt. Your number is on his bullet and his number on your bullet. You can win the duel by beating him to the well-executed draw or you will be his victim. There is no time to discuss these factors with him. It is either a case of shooting accurately and immediately or of being a casualty.

A British rear guard was slogging over a bridge spanning the Corinth Canal in Greece, in the dark days of 1941. Royal Engineers who were engaged in mining the bridge were forced to flee from their task before affixing all detonators. Nazi paratroops showered down upon the bridge area in hot pursuit of the Tommies. The Germans frantically sought the TNT so that their pursuit of the British would not be impeded.

Lieutenant Rawlinson, Engineer officer, lay in a slit trench watching the feverish hunt of the Germans. He saw one of the cigarette-sized detonators dangling from a thin wire against a concrete abutment. Carefully aiming his rifle, he fired. The bridge was wrecked, the canal was choked with dead or drowning Germans and the withdrawal of the British troops to waiting warships was assured.

United States Marines will tell you about the Gopher who was the best shot the Japs had ever put up against the Leathernecks. The action in which the Gopher performed was on Peleliu, in the South Pacific. He operated on Bloody Nose Ridge, which was honeycombed with connecting caves and tunnels. He would pop out of a hole, fire his rifle and then disappear. While Marine marksmen hunted him, he would appear at another hole, fire his rifle and then disappear. He killed 87 Marines, each with a perfectly-aimed shot in the head.

Eventually, Marine marksmen were so placed that they covered all the holes in the ridge. When the Gopher popped out, on another deadly mission, he was killed—with a perfectly-delivered Marine bullet in his head.

The enemy fights for keeps and war is changing in order to keep up with its own demands. It is therefore obviously imperative that Canadian soldiers meet the challenge with accurate fire from their basic infantry weapons. Infantry instructors must be prepared to teach in terms of accurate yet maximum fire power. It is not claimed that the methods described in detail in the following chapters are the best, but they are far better than any others we have been able to muster or offer and their complete application will guarantee the results desired.

It is not intended that the steps outlined herein be memorized and then

INTRODUCTION—Continued

recited as mechanically as a phonograph recording. Rather, it is suggested that the instructor apply the material contained in this handbook to his own words. If you, as the instructor, have proven to your own satisfaction that the doctrine of good shooting as described, is effective, you will be able to enthusiastically lecture, accordingly. Your class will then capture the spirit and through practice attain consistently accurate sniping skill.

Much stress is placed upon the sequence, or order, of the material offered. Just as you crawled before you walked, walked before you ran and ran before you gained that sense of rhythm which is dancing, so must you study musketry step by careful step, until each is taken confidently and automatically.

The various phases of the training as outlined under the headings *POSITION, HOLDING, BREATHING, AIMING, TRIGGER CONTROL* and *CO-ORDINATION* have been presented in the sequence which practice has proven capable of producing the best results. Each chapter has been broken down so that the recruit may be taught, step by step, how to shoot properly. Each phase of the training comes in its logical order. To further assist you, illustrative material accompanies the text.

The story, presented in sequence, leads to the eventual steadiness of the rifle long enough for a bullet to be sped toward its target. The phases might be more clearly described as being relaxed position; scientific resting of the rifle on the body structure; steadied breath control; the correct use of rifle sighting devices and perfect trigger squeeze.

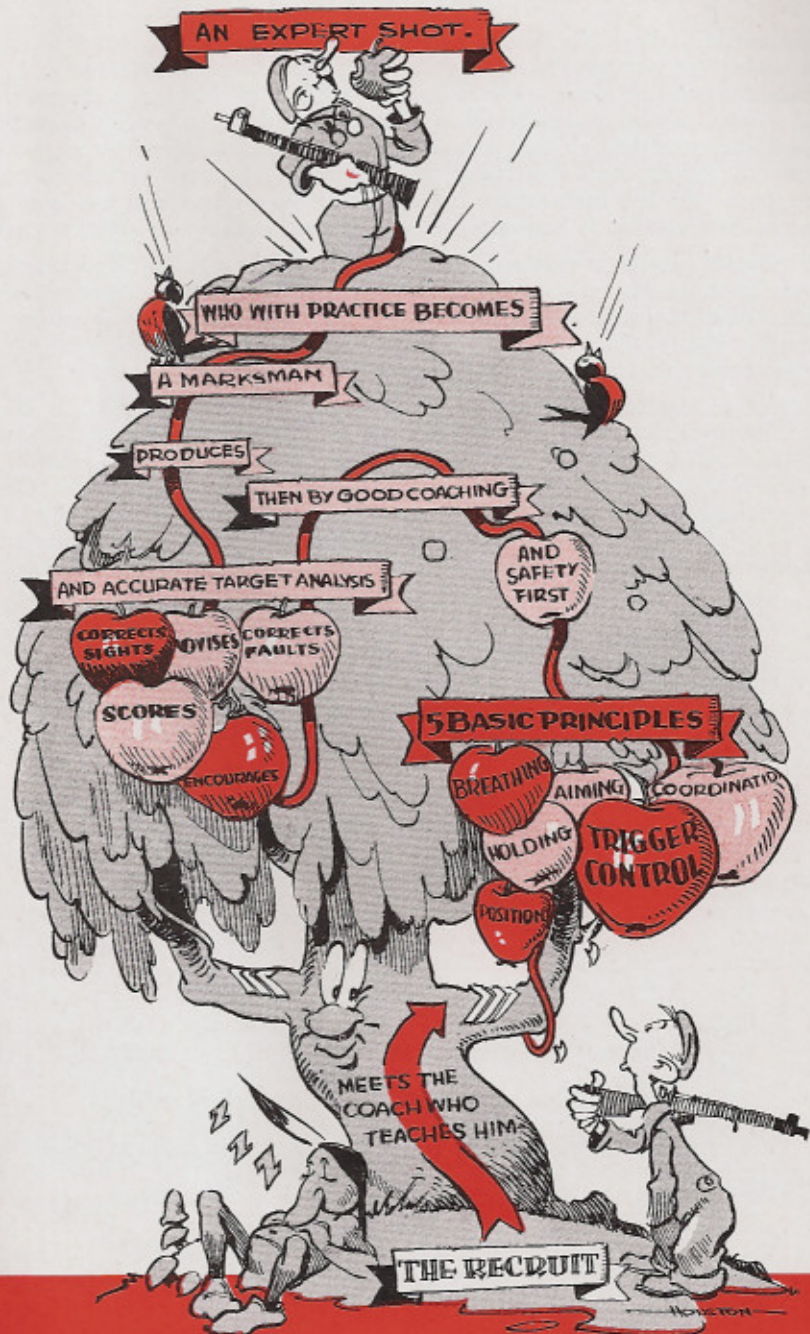
Baseball and golf provide good illustrations. In either one, you know that if you are to achieve good results, a comfortable stance (Position), a proper grip of the bat or club (Holding), a momentary but not strained breathing pause as the ball is struck (Breathing), your eye on the ball (Aiming) the perfectly struck ball (Trigger Squeeze) and the automatic use of all these together (Co-Ordination) are required.

All of this sounds mechanical and it should become mechanical, or automatic through practice. The methods outlined in succeeding chapters are the pet secrets of the crack shots and after they have been mastered, soldiers, thus trained, will be able to shoot accurately and as easily as they button their shirts.

Older methods of teaching musketry stressed aiming and avoided the intricate but necessary study of what leads up to the science of good shooting. That science has been so developed that now it can be discussed—which is this handbook. The training offered is thus streamlined enough to encourage a practical approach to the theories of musketry. Yet it is simple enough that the average soldier is assured of mastery of the art.

Any normal person can quickly learn good shooting; that is if he has been properly taught. Good teaching doesn't call for a recitation of the various parts of a rifle. If you are learning to drive an automobile, you don't study the names and functions of every gadget in the motor and transmission. All you are interested in is what makes the car go and stop. Musketry is similar. Soldiers want to shoot their rifles, not pull them apart. A set-screw's name is much less important than the operation of firing a bullet so that it hits the target toward which it has been steered.

The good instructor, therefore, should teach proper musketry fully, yet



INTRODUCTION—Continued

quickly and clearly. He should never be a "show-off" by using words, or terms, which are beyond the understanding of his class. He should not brow-beat nor ridicule his men. He once was a "dumb" beginner himself. He should teach a phase of a lesson and demonstrate it. The recruit should then imitate that demonstration and practice it until it has been mastered and fully understood. Then, and then only, should the next phase of the course be approached. As the instruction unfolds itself the recruit will see how each phase ties into another to become a complete and confidence-inspiring whole.

The successful coach studies his class carefully, as a football coach studies his beefy linemen and temperamental halfbacks. The boxer with poor training and little confidence is a certain loser when compared with the cocky one. Therefore a pat on the back, a kind word and ready co-operation on the part of the instructor will produce eager and efficient marksmen.

The instruction outlined, herein, is not for just a chosen few. It should, instead, be the keynote for every Officer, N.C.O. and soldier in the Canadian Army—including the natty lads of the Royal Canadian Army Cadet Corps. Nor is the matter, herein, restricted to rifle fire. The expertly-taught rifleman possesses the basic principles which will lead him to effective use of all small arms. If Canadians can restore their reputation as a nation of ace marksmen, war mongers will think twice before getting us onto any future battlefields.

What will be the results of this new method of teaching musketry? The confident, well-trained rifleman will be automatically able to stalk the enemy and "erase" him. He will know that his perfectly controlled weapon will prove more than a match for the enemy machine-gunners and snipers because with an economy of ammunition and effort he can pick off an enemy quickly and at will. He is a triple-threat which the enemy can neither readily counteract nor comprehend.

Because he can hit a target at 200 yards with consistent effectiveness, the well-trained Canadian rifleman can deal with practically every circumstance of battle. He will be able to win his own war, in his own way, and his nation will be rightfully proud of him.

For the purposes of this instruction all references and illustrations concern right-handed recruits, but should a soldier be left-handed or able to shoot somewhat better from his left shoulder, the instruction can easily be adapted to his needs.

... AND NOW WE'RE
GOING TO TEACH YOU
HOW TO SHOOT!



CHAPTER TWO

Position

GOOD position in successful shooting becomes a matter of placing the recruit into a restful, relaxed position from which he can establish the foundation for good marksmanship. The prone, or lying, position is rated as the best because it provides that solidness and comfort which induces precisely accurate fire. Note the similarities to artillery pieces portrayed on the opposite page.

When the recruit first takes his properly-fitted rifle and lies upon the ground or floor, nine times out of ten he will show a tendency toward bad shooting habits.

The instructor should not scold him but, rather, carefully and kindly correct those faults, step by step, and encourage him to practice each step carefully. As each phase of the training is taught, its value will be proved in comfort and in confidence. Bad shooting habits cannot be tolerated.

You cannot teach a recruit, with a few curt orders, how to hold his rifle. He may insist upon being shown how and why he should take a position or do thus and so. He can be shown by the professional interest which you take in him.

If he were to go to the medical officer with a sore throat he would have confidence in being cured because of the M.O.'s patient but expert approach, diagnosis and treatment. You, too, must approach patiently and scientifically the musketry problems peculiar to each individual whom you instruct.

It will not be necessary for you to teach the recruit the mechanics of horizontal or vertical triangles referred to in this chapter. They serve as a means for you, the instructor, to so adjust the individual pupil to correct position that he may engage in good shooting.

This is where coaching begins and the kindly manner in which you apply the proof will encourage him in his endeavours toward becoming a marksman of merit.

Keep your recruits **OFF THE RANGE** until they have mastered the fundamentals of good shooting. Encourage them to practice while in barracks or off duty.

You may have to repeat your lessons several times in teaching an individual to acquire correct shooting position but the time and effort will bring rich dividends.



FIG. 1



FIG 2

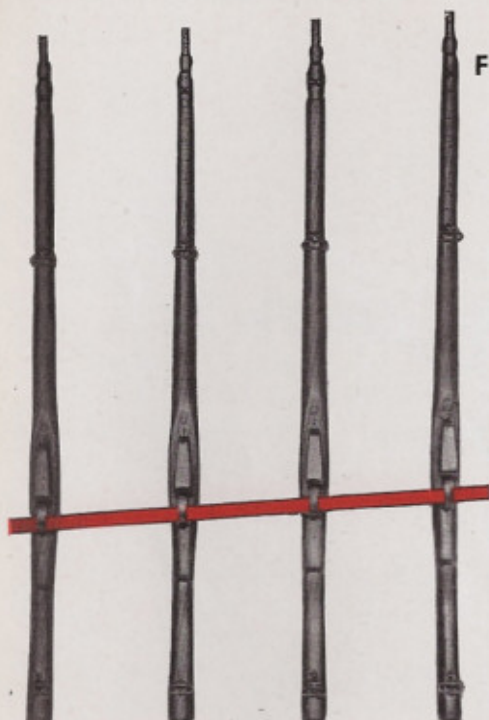
1

2

3

4

FIG. 1



B

S

N

L

FIG. 2



BUTT LENGTHS

THE Canadian Army rifle is made available to troops in four butt lengths. The varying differences in the lengths of arms and fingers naturally imply that the rifle which is comfortable for one person is uncomfortable for another.

Instruction of a recruit should not be commenced until he has been properly fitted with a rifle. Figure 1 above shows the comparison of butt lengths while Figure 2 gives the location of the markings which are "B" for bantam, "S" for small, "N" for normal and "L" for long.

Figures 3 and 4 opposite show the natural position of the right hand when the butt is placed in the crook of the elbow for measuring purposes. It will be seen that the wrist must be kept straight—not bent—and that if the rifle action is cocked, the trigger should come approximately midway between the first and second joints of the index finger and NOT on the tip of the finger.

As there are exceptions to the usual physiques, adjustments may necessarily be made by the instructor to insure that each recruit is as well fitted as possible. Moreover, there may be some recruits, whom you have fitted, who will require additional changes of rifle butt later.

FIG. 3



FIG. 4



THE LEFT ELBOW

THE instructor will quickly appreciate 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 marksman depends and revolves.

As the recruit takes his prone firing position, with his properly fitted rifle, the initial stress must be placed upon the exact location of the left elbow.

Proving the position of the elbow, you can remove the magazine and the bolt from the rifle and vertically slip a lath or yardstick down through the space. If the elbow is in the correct position, there will not be more than one and one-half inches from the inside of the elbow's point of contact with the floor and the point of contact of the vertical stick. Note Figure 1 opposite.

You can check the position from side views as shown in Figures 2 and 3.





FIG.
1

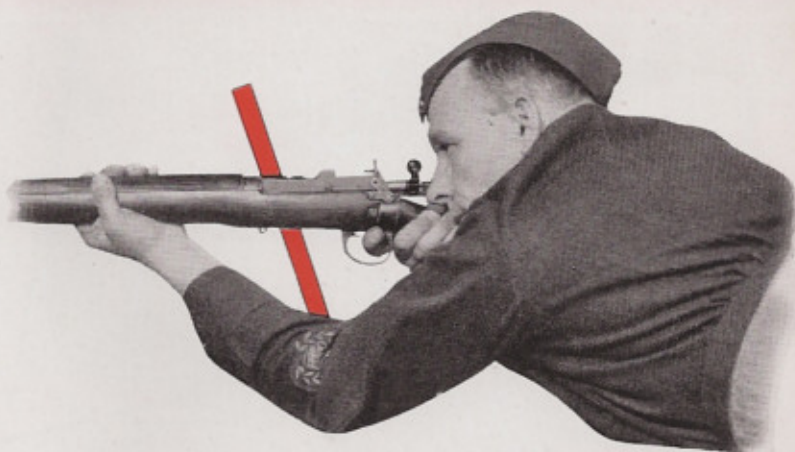


FIG.
2



FIG.
3

THE HALF ROLL

THE correct position of the left elbow is sometimes difficult for some recruits to reach. They will have a sideways slope to their left forearm no matter how much they grunt or stretch. In cases of this sort, you should have the recruit make a so-called Half Roll over onto his right side while keeping the right elbow stationary, and the rifle pointing upward. Remember—this is only a partial roll. The recruit should then pull his left elbow well in toward the centre of his body, then roll back into firing position. This method tends to release some joint in the shoulder which will permit the marksman to get his left elbow farther under the rifle and at the same time ease some of the tension upon his arm and shoulder muscles, which are somewhat taut at first.

In some cases, there still may be a bit of strain along the left arm but practice will loosen these muscles. Figures 1, 2 and 3 below, demonstrate how to use the half roll to assist in getting the left elbow closer to a direct position underneath the rifle.





FIG. 1

FIG. 2



THE FLAT HAND METHOD

ANOTHER effective means of acquiring the proper position of the left elbow and known as the Flat Hand Method is to have the recruit hold his left hand level. By that we mean *level*. If you were to place a spirit level on the hand the bubble would be plumb in the centre. The elbow should be about three or four inches from the floor. See Figure 1 above.

The recruit will quickly see that he cannot get his hand to flatten out level, unless his elbow is pulled in to the right. When he does get the elbow well in towards his body the hand will be level. Then have him lower the elbow to the floor with his hand still level. See Figure 2. By this time he should have an appreciation of the position the elbow and arm must take and he naturally is able to understand the strength which the position implies.

Now hand him his rifle and check the stick through the bolt-space of the magazine again. The elbow will be within that one and one-half inches of the stick.

IMPORTANCE OF THE LEFT HAND

HAVING established the correct place for the left elbow and forearm, the top of the pillar (the left hand) takes on a vital role. Note Figure 1 below and you will see the rifle lying across the heel of the left hand. The axis of the rifle bisects the angle formed by the lines running from the centre of the wrist to the thumb and third or fourth fingers.

This is the perfect groove, because the weight of the rifle is directly above that solid upright of bone. The rifle is now the girder lying balanced across the sturdy upright.

To attain this solidness, the centre of the wrist should be directly underneath the centre of the rifle. This is almost bound to occur if the recruit has been carefully taught the flat-hand method of adjusting his elbow into position. His left hand should also be as far forward of the magazine as comfort will allow. In fact there should be a clearance of at least the width of one finger between the wrist and the breach-cover staple on the lower side of the rifle.

The rifle should rest well down in the hand—right in the groove—so that it permits a firm but not too tight grip of the rifle. A grip that is too tight tends to promote tension and discomfort.

After the recruit has attained this position, the instructor will see that as in Figure 4 opposite, the rifle rests in a cradle and points toward the centre of

FIG. 1

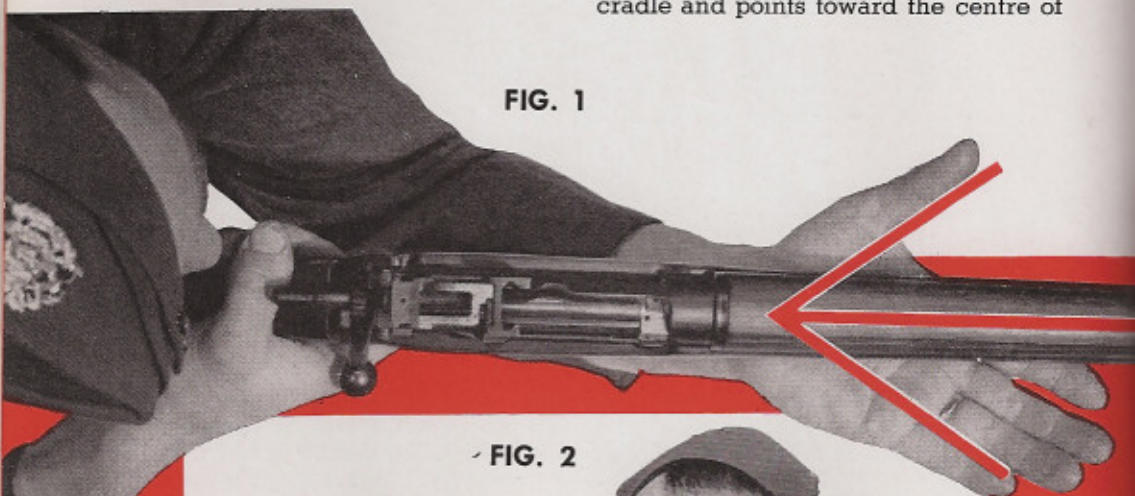


FIG. 2



IMPORTANCE OF THE LEFT HAND—Continued

the target when the recruit's breath is briefly held. The recruit will also see some progress in his training.

You can test the steadiness of the recruit's position by having him rest the rifle upon his open palm. If the rifle remains steady and apparently in its proper position, then the left elbow, arm and hand are doing their work properly. It will thus be seen that there will be no need for a tight grip which would only increase unwanted tremors of the body. If the rifle is not steady, then you should check back upon the position to ascertain wherein the fault lies.

Looking at the left hand (Figure 3) as it clasps the rifle, you will note that the fingers curl up and over the handguard so that the fingers and thumb almost, but not quite, touch. All parts of the inner surfaces of the hands and fingers should grasp the handguard without bending or straining the fingers or permitting light spaces between them and the rifle.

Let us check that hand for angles. The properly resting rifle will look exactly like Figure 1, when opened and viewed from above. It will look like Figures 2 and 3 when viewed from the sides while closed. As shown in Figure 4 it will appear to form a cradle or cup that virtually shouts solidness when seen from in front.

Should the recruit have long fingers, like those of a pianist, let him wrap them around the upper part of the handguard even to the extent of blocking out his vision toward the front sight. This can be corrected later. At the moment, the insistence is upon the proper placing of the left elbow and hand.

In this position, the left hand's job is merely to hold the rifle firmly and draw it backwards to the shoulder. This is frequently referred to in later chapters as "Backward Pressure."

FIG. 3



FIG. 4



THE RIGHT HAND

THE right hand, which does all the trigger squeezing, is nevertheless important to the correct position of a rifle when accurate shooting is sought. It is the top of the third leg of the tripod formed by the left forearm, your prone body and your right forearm.

The right hand should clasp the small of the butt so that the thumb nearly touches the rear of the cocking piece when the action is fully cocked. The forefinger or trigger finger should be around the trigger so that it is between the first and second joints or creases. The thumb should overclasp 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 recruit is now gripping the small of the butt just as he used to grip a toy pistol when he played cowboys and Indians. See Figures 1, 2 and 3 opposite.

Some recruits may not, however, attain this perfect grip too easily. So have the recruit place his hand upon the small of the butt and slide it forward until it touches the rear of the cocking piece when it is cocked. Then have him grip the small of the butt as in Figure 2. Now the index finger is in position to reach around the trigger with the slack taken up. His second, third and fourth fingers should be pointing upwards grasping the rifle across the butt.

Here the recruit must take firm grip. It must be solid enough that the tendons on the back of the hand will stand out more than under normal conditions. A good test of this would be for the instructor to have the recruit remove his hand from the small of the butt after a period of gripping it and show that his fingers are flatter and whiter than normal.

This 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 BUTT GRIP

WHEN it comes to the matter of proper grip of the rifle the old bugbear about differences in the physiques of soldiers again appears. Observe Figure 4, which illustrates a firm grip. If this cannot be attained readily, ask the recruit to hold the butt against his shoulder and then raise the right elbow slightly from the floor as shown by the dotted lines in Figure 4.

Now let him take the grip as illustrated and then lower the elbow without relaxing the grip. He will see how the elbow falls into the correct position.

As he becomes accustomed to the proper grip, this raising, gripping and lowering of the elbow will become less and less necessary until it can be abandoned.

FIG. 1

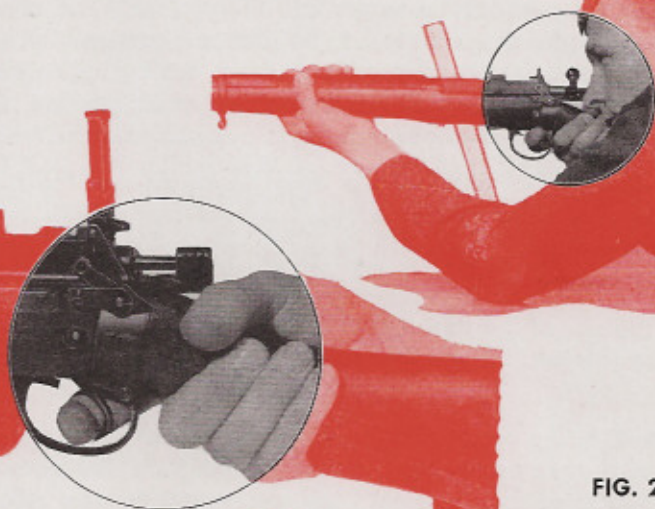
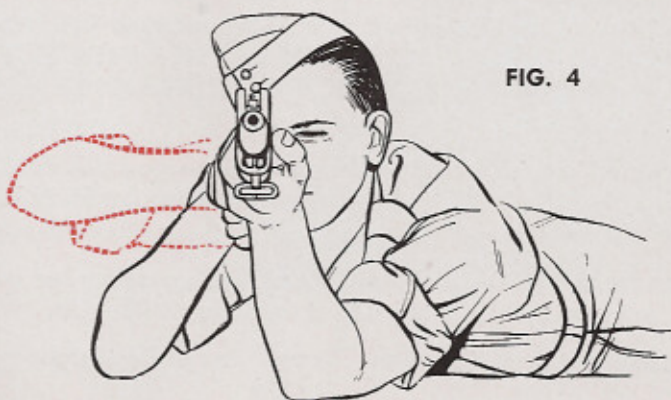


FIG. 2

FIG. 3



FIG. 4



THE HORIZONTAL TRIANGLE

HERE is where the professional comes into the picture. The recruit has done everything he has been told to do. But is it correct? Let's check, not by telling the recruit exactly what is being done, but by indicating in an expert manner that you are proving the correctness of his position, which is merely the means by which the body and the rifle are lined up together.

In achieving this perfect position, the body, the arms and the rifle form triangles the shape of which, when adopted by the recruit, will prove the correctness of his position. They will be the Stop-Go signals by which you will measure his progress.

Incidentally, the axis of the rifle is that imaginary line which runs through the centre of the weapon. It will frequently appear in subsequent chapters and sub-topics.

With the recruit in the prone position you have taught him to take, stand over him and with your eyes almost closed visualize the flat or horizontal triangle formed by imaginary, straight lines connecting the two elbows and the centre of his body. The centre of the body is that point directly beneath the spine and where the chest meets the floor. See Figure 1, opposite.

Now, if the recruit has religiously followed your previous instruction, the sides of that triangle will be almost of equal length. If he has not the proper position, the triangle's sides will be irregular in length. But again, if he is in correct position with his head on top of and against the butt, the triangle will be well nigh perfect.

You as the instructor, however, cannot just judge the correctness of position too much by casual observation. So you prove to yourself, by using chalk marks, how correct the position is—and at the same time prove to the recruit that you are taking a personal interest in him.

One chalk mark is placed just inside the left elbow where the bone touches the floor (see Figure 2 opposite). It can be labelled "LE". "RE" would similarly be inside the right elbow with "CB" marking the location of the centre of the body where it touches the floor. Now mark "BUTT" directly beneath the end of the butt, "MAG" directly beneath the magazine and "MUZ" beneath the end of the muzzle.

Ask the recruit to get up from the floor and with a yardstick or other straight edge join up LE, RE and CB and there you will have the recruit's horizontal triangle. If the rifle has been correctly held all three sides will appear equal.

Now join up BUTT, MAG and MUZ and if the position has been correct BUTT will be in the middle of the side of the triangle RE—CB.

Let us further prove this position. Draw a line at LE at right angles to the

THE HORIZONTAL TRIANGLE—Continued

rifle's axis. It should not go more than one and one-half inches before meeting the line BUTT—MAG—MUZ. Odd but true, that distance is the same as the distance between the elbow and the yardstick inserted through the open magazine.

Should it be that these proofs do not work out, corrections can now be made. If the left elbow is not in its proper place, now is the time to use it as a pivot and shift the body around until the left elbow is in correct position, under the rifle. The right elbow may have to be moved in or out to make further adjustment, or it may have to be moved forward or back but the left elbow is the all-important member. It is the key to the whole story.

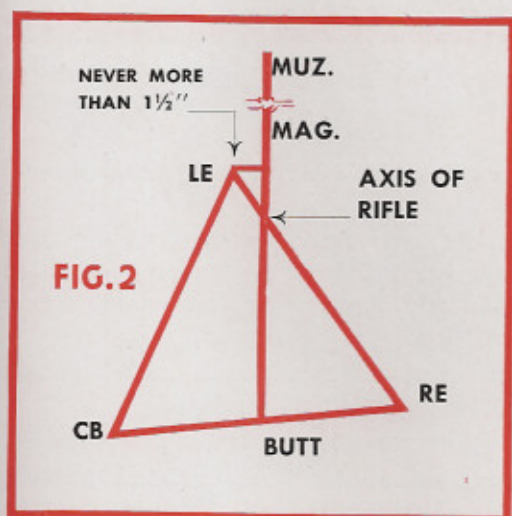
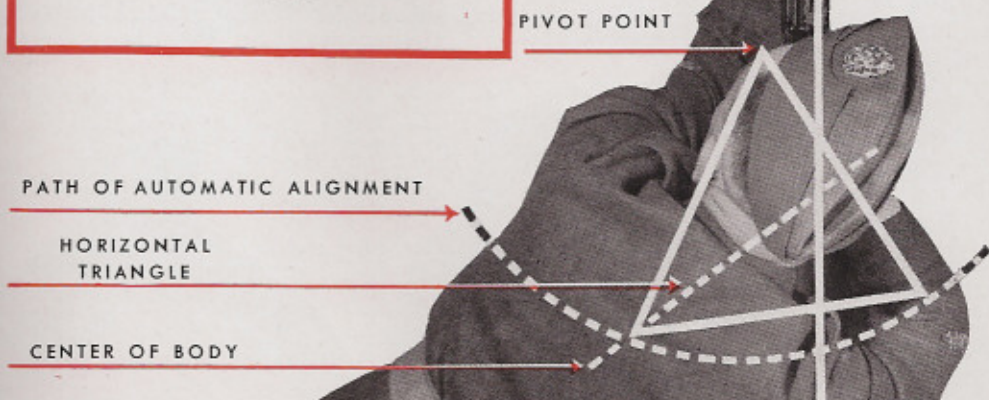


FIG. 1



THE VERTICAL TRIANGLE

WITH professional flare you are now commencing to impress your recruit. You now introduce a Vertical Triangle as further proof of correct position. This Vertical Triangle is not really what its name implies because it is oblique or sloping. Get down in front of the muzzle and look under it toward the tripod-like support which the recruit is giving to his weapon.

Visualize a line which will connect the inside of the two elbows and then two more lines which will extend slopingly upwards from each of the inner sides of the two elbows until they meet at the point of the grasp of the rifle. There you have your Vertical Triangle. If you wish, you can use laths upon the floor and along the inside of the forearms to further establish this triangle. Note Figure 1, opposite.

Now if you will refer to the illustrations below you will see that Triangle 1 is high and unstable caused by the elbows being too close together forcing upwards the apex of the triangle and permitting side motion if a rifle were held.

The illustration of Triangle 3 shows a low, flat, weak triangle which means that muscles and not bones are holding the rifle, thus permitting vertical motion.

Triangle 2 illustrates the normal position which is an equally-sided vertical triangle of strength.

The recruit at this juncture rightfully asks why this stress upon triangles. You can demonstrate the normal position to him by having him sit (just behind the left hand) upon your properly-held rifle. You can hold his weight and he will see the strength of the position. See Figure 2A.

But if he has a low triangle, pressure of your thumb and first two fingers will push the rifle from his grasp as in Figure 2B.

A high vertical triangle can easily be moved sideways as in Figure 2C.

The correct vertical triangle is shown being tested for strength in Figure 2D.



No. 1—HIGH

No. 2—CORRECT

No. 3—LOW

FIG.
2A



FIG. 1



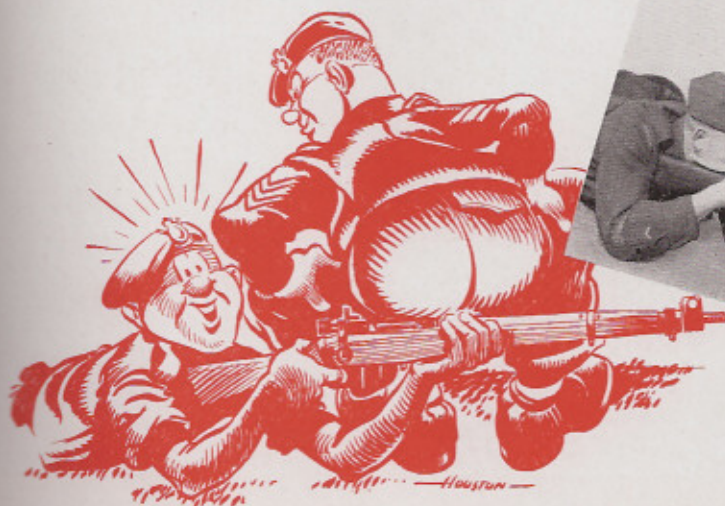
FIG.
2B



FIG.
2C



FIG.
D2



THE HIGH RIGHT SHOULDER

SUPPOSING your recruit has a high vertical triangle. What is the cause? Most likely it is because of an improperly-placed right elbow and this can be readily spotted by you. See Figure 1, below.

The shoulders should be almost level as in Figure 2, opposite. They cannot, in most cases, be positively level but they can be mighty close to it, which will suffice. Why has a man a high right shoulder? It is because his right elbow is too close to the body forcing the shoulder upwards from four to five inches.

Instructors should look at the shoulder level as it is almost as vital to good shooting as the perfectly placed left elbow. You have shown him the means by which the right hand has gripped the small of the butt. Now to insure that the right elbow is in perfect position as third leg of the tripod formed by the centre of the body and the two arms, have the recruit move his right elbow out from the body until the shoulders are level and there it will serve its purpose as a substantial support for the rifle.

Too much stress cannot be placed upon the fact that the right shoulder must not be humped if good musketry results are to be attained. Get it down now and Private Buck will benefit by your insistence and kindly coaching.



FIG. 1



HEY, SARGE!
IS THIS WHAT
YOU CALL THE
HALF-ROLL?



FIG.2

BODY SLOPES

A RECRUIT, in order to follow your direction in respect to correct position, may get himself all tensed up into unnatural slopes and angles. It will, therefore, be necessary to check his position so that he may be comfortable and relaxed.

Observing Figure 1, you will note the sharp angle or slope of the back. This abruptness has likely been caused by a high right shoulder or a high vertical triangle, which can be corrected by altering the position of the right elbow. A body slope that is low or flat, as in Figure 2, will not permit the strength of the position he seeks. This is caused by a low vertical triangle. If it is low, move that left elbow more beneath the rifle and bring the right elbow slightly closer to the body.

Proper body slope, a smooth curve as shown in Figure 3, indicates a proper vertical triangle and that means also a proper horizontal triangle and correct position. You see, now, how one phase of this course ties in with the other?

By now you have, or should have, the recruit in a perfect firing position but you want to make certain again that the left elbow, which is the key to the entire position, is in correct place.

You open the bolt of his rifle, drop a lath through the magazine opening, so that it touches the floor and is *ABSOLUTELY VERTICAL*. If you can place more than two fingers between the bottom of the stick and the elbow's point of contact with the floor he has lost the position of his left elbow and should bring it in again.



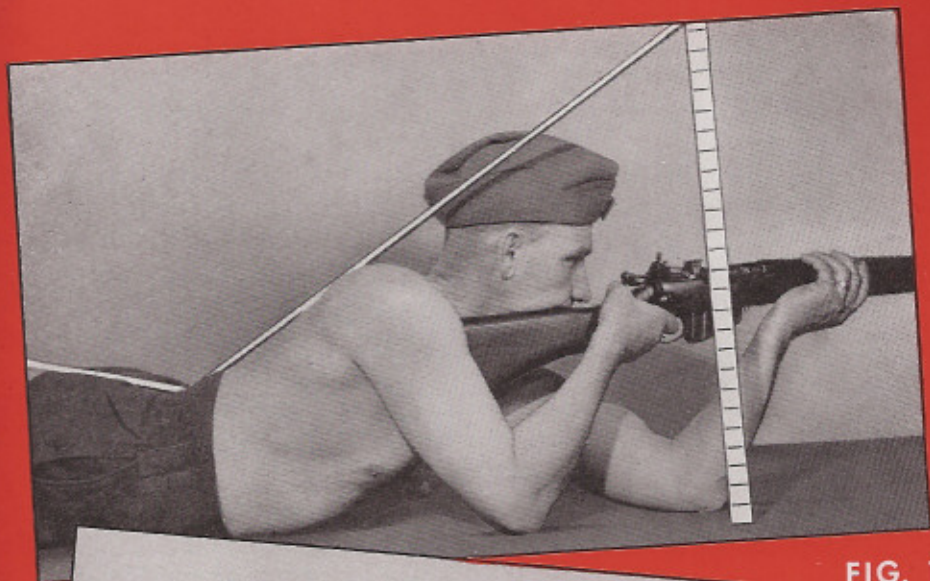


FIG. 1

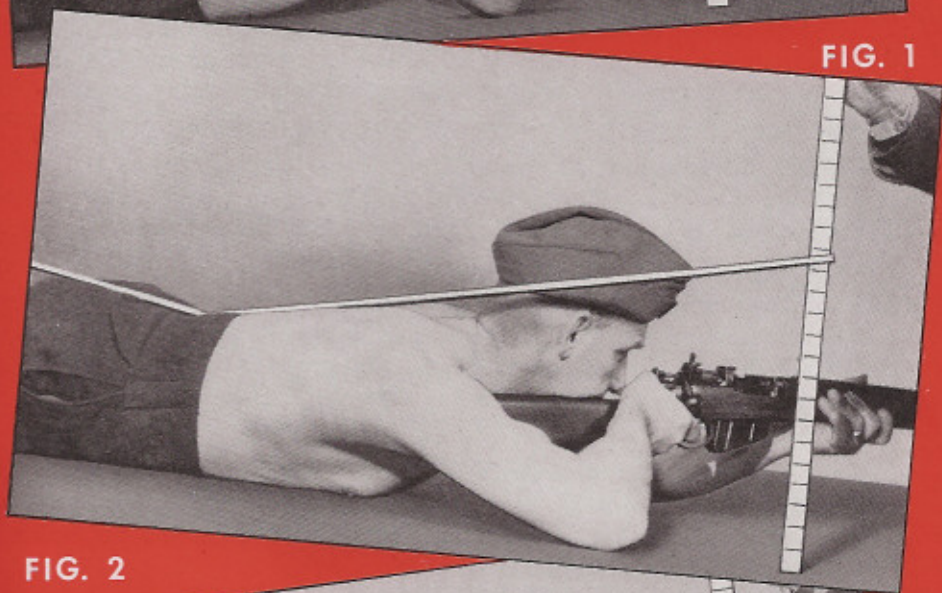


FIG. 2

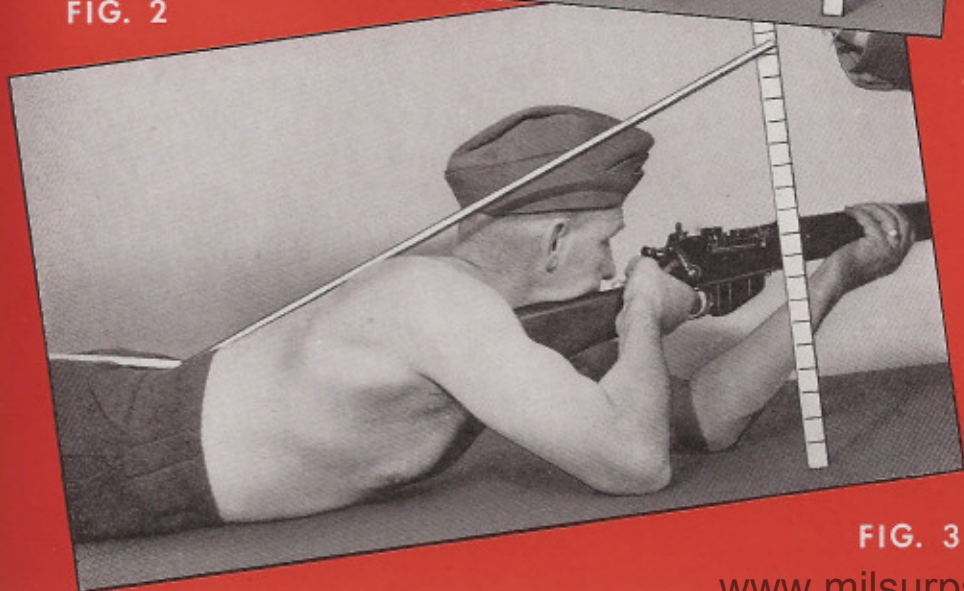


FIG. 3

OBLIQUE BODY ANGLES

YOU know that the body must be at an angle to the rifle if it is to be held properly. The left elbow must be well out in front of the right elbow and under the rifle. The right hand must firmly grasp the small of the butt and the trigger. The butt must be against the shoulder and the head on top of, and against, the butt. Your recruit cannot do all these things and lie directly behind the rifle. Instead, his body must be at an angle to the rifle and this is known as the Oblique Body Angle.

The size of this angle depends upon the physique of the recruit. **IT CANNOT BE STANDARDIZED.** It should measure somewhere between 30 and 45 degrees to his line of fire—the axis of the rifle.

The angle of the body to the line of fire should be established while the recruit is in proper position as outlined previously in this chapter. The wider the angle, the closer the eye will be to the rear sight or aperture sight, a factor the importance of which will make itself increasingly apparent.

THE INSTRUCTOR DOES NOT TEACH OBLIQUE ANGLES TO THE RECRUIT. He uses the methods of determining those angles as a means of checking and adjusting the position of the recruit so that the body angle is in proper relation to the line of fire and suitable to his physique.

After observing Figure 1, opposite, demonstrate oblique body angles by selecting two laths, a ruler, chalk and a protractor. Ask two men to assist you in measuring the angles of the recruit. Have one man hold a lath along the barrel, or axis, of the rifle and have the other place the second lath along the centre of the back and head of the recruit. This lath will represent the centre of the body.

Now, measure the angle formed by the two laths. Measure the distance between the two elbows, by drawing lines at the contact points of the two elbows at right angles to the axis of the rifle. Also measure the distance from the pupil of the recruit's eye to the aperture sight.

What do these measurements establish? By noting the table (Figure 2, opposite) you will see that as the body angle increases, the left elbow is farther forward than the right elbow and more easily placed directly underneath the rifle. The distance between the eye and the rear sight has been decreased.

Thus you will be able to determine the correct placing of the recruit's elbows and to either increase or decrease the distance from his eye to the rear sight.

It is advantageous in aiming, to have the eye as close as possible to the rear sight. Yet it cannot be so close that the face will be struck by the rifle's recoil.

By using the oblique body angle method, you can advise him as to the correct position his body should take. The average angle is approximately

FIG. 1

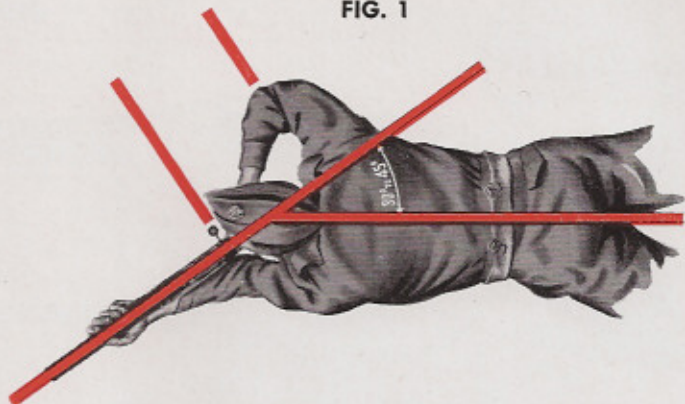


FIG. 2

OBLIQUE ANGLES	LEFT ELBOW IN FRONT OF RIGHT ELBOW	DISTANCE OF EYE FROM SIGHT
45°	14"	2½"
40°		
35°		
30°		
25°	11¼"	3½"
20°		
15°		
10°		
5°		
0°	4⅓"	6"

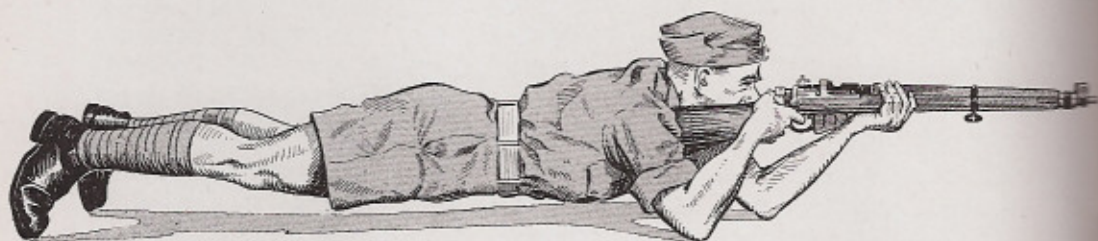
OBLIQUE BODY ANGLES—Continued

35 degrees, as the bulk of recruits range between 30 and 40 degrees. However, the closer he can come to an angle of 45 degrees, the farther his left elbow will be ahead of the right one and the closer the eye will be to the rear sight. If he is dangerously close to that rear sight, decrease the angle. If he has difficulty getting his left elbow under the rifle, increase the body angle.

FIG. 1
MINOR ADJUSTMENT



FIG. 2—MAJOR ADJUSTMENT



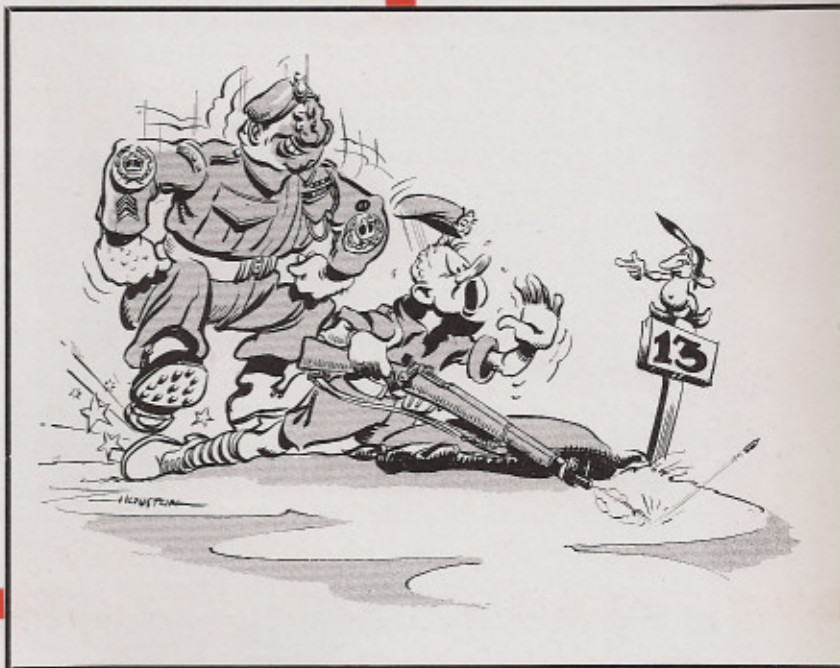
MAJOR AND MINOR ADJUSTMENTS

IT WILL be found necessary to raise or lower the rifle in order to aim at higher or lower targets. These changes in elevation can be effected by either Major or Minor Adjustments without shifting the solid position which you have already taught the recruit to maintain.

If the recruit wishes to make a large change in the elevation of the rifle's muzzle, he should be taught to dig his toes into the ground and inch himself forward without changing the position of his elbows. In this way he forces the butt of his rifle slightly upward, which in turn forces the muzzle down. The muzzle can be raised by using a reverse movement. Note Figure 2 above.

The Minor Adjustment is made by raising or lowering the rifle by sliding the left hand forward or backward as required. This will adjust the required height of the front sight according to the needs of accurate aiming. See Figure 1 above.

It can now be seen why some distance between the wrist and the magazine was insisted upon, because these minor adjustments cannot be made if it is tight against the magazine.



LEGS, FEET AND HEELS

LEGS should be well apart, so they may serve as the support or trail of your well-positioned rifle. Legs that are well apart give the sturdiness to the rest of the body that your position demands and usually adds to the comfort of the recruit.

Toes should be pointing downward and out from the body, with the heels as close to being flat as possible. Some physiques cannot get their heels flat onto the ground and if they cannot do this they **SHOULD NOT BE FORCED** by insistence to do it. You should never stand upon a recruit's heels in order to get them flat as this will be extremely painful and will reflect upon his shooting. Merely get them as flat as possible.

When he gets onto the battlefield and the enemy bullets start to fly, your pupil will get his heels down.

POSITION CHARTS

THE CHART on the opposite page has been designed to show, as graphically as possible, the various methods of checking a marksman's proper position.

If recruits are as close to the correct position as their physiques will permit, they will naturally attempt to get closer through continual practice.

By using these charts, which should be distributed to the recruits, they will be able to check each other's style of position against the illustrations. Two men, for instance, can work together in barracks to improve their musketry. By this time their interest in good shooting should be so keen that they will welcome a chance to do some homework.

While one assumes the firing position, the other can check it against the chart by viewing the marksman from above, from in front and from each side.

The points to be stressed are listed alongside the chart and the critic can check each, quickly.

The chart should not be used, however, until after the recruit has been thoroughly taught the correct position.

The correct position may appear to be awkward at first due to muscles being put into new and unaccustomed uses but this condition will be quickly overcome.

It must be remembered by instructors that the correct position can never be absolute because what may be satisfactory for a stout man will be difficult for a tall, thin one.

If you have mastered your own position in accord with this chapter and you have assured yourself that the student marksmen of your class have achieved similar perfection, proceed to the next phase of instruction in good musketry.

If a man has not acquired perfect position, then this chapter should be restudied and its recommendations implemented before he is permitted to undertake additional phases of this training.

POSITION CHART

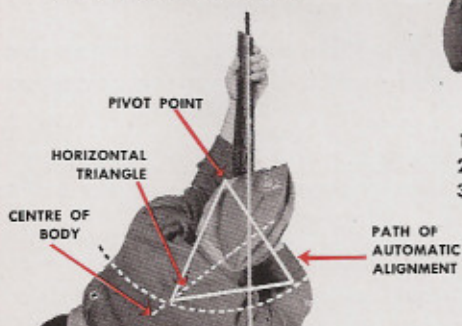
FRONT VIEW

1. Notice triangular position of elbows
2. Right elbow fairly well out from body
3. Left elbow almost underneath rifle

VERTICAL
TRIANGLE



VIEW FROM ABOVE



1. Rifle well down in palm of left hand
2. Notice position of left hand, and
3. Position of head on butt

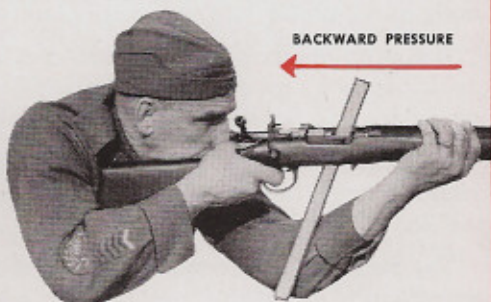
RIGHT SIDE VIEW

1. Rifle pulled well back into shoulder
2. Notice low position of butt,
3. Pressure of chin on butt, and
4. Firm grip of left hand

BACKWARD PRESSURE



BACKWARD PRESSURE



LEFT SIDE VIEW

1. Rifle well down in palm of left hand
2. Notice position of fingers on butt,
3. Position of forefinger around trigger, and
4. Low position of firer

