CHAPTER FOUR

Breathing

THE successful marksman has been compared, in previous chapters, with the carriage and recoil mechanism of an artillery piece. But the field guns have no pumping hearts, no intricate and sometimes balky nerve systems, no straining, trembling muscles, no breathing apparatus nor pulsing arteries. YOU HAVE ALL OF THESE.

Brother, breathing rhythm is as essential to good shooting as Position and Holding. It has been estimated that 95 percent of Canadian Army riflemen do not breathe properly while using their rifles and as a consequence, their scores are not as good as they are capable of producing.

As your recruit has slowed down the movement, or "dance", of his rifle by correct Position and Holding, so can he 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 — *a brief period when you virtually DO NOT BREATHE* — and it is during that pause that your rifle is steadiest, thus giving you the opportunity to squeeze the trigger.

It is not suggested that the sigh should be one of weariness or exasperation but rather one of those heavy, normal sighs which one probably gives fifty or sixty times a day, probably in place of a cuss-word.

The instructor should show his recruit exactly how breathing affects the control of the rifle. He will see that if he is breathing normally, while in the prone firing position, every breath he takes causes the rifle to move up and down.

This is only natural because of the fact that he and his rifle have become a part of each other. Yet, when the normal rhythm of breathing is interrupted

by the natural sigh, the rifle remains most steady in that momentary dead pause which follows the sigh.

This is the point in breath control which, if the rifle is correctly positioned, held and aimed, that the trigger should be squeezed. It is this point at which the rifle's movement has been reduced to almost a dead stop.

The illustrations opposite show the three common types of breath control in shooting. "A" portrays that type of soldier who takes a deep breath, filling his lungs. His muscles are all tensed up and there is bound to be body tremble and strain.

Panel "B" illustrates the normal breathing, which is the natural sigh. The lungs are neither over-inflated nor are they deflated excessively.

Panel "C" shows what has happened when the natural sigh has been taken but with an ADDITIONAL and FORCED sigh, causing too much air to be expelled from the lungs. The lungs are virtually gasping for air and body trembles are bound to result.

Muscular strain, imposed by faulty breathing, is never apparent when the normal, relaxed, comfortable sigh as in "B" is taken.

HOW TO DEVELOP SIGH AND PAUSE

THE PROPER shooting sigh by the recruit is made by taking two or three breaths that are deeper than usual and then releasing the air in a slightly audible manner. (Be sure you, the instructor, can hear it).

It is not meant that more air than the normal amount should be forced from the lungs but, rather, just the amount which would be released if a heavy sigh were given. As in other phases of good musketry, the natural functions of the body are always the best.

The musketry class can learn proper breathing by holding the breath for periods of 30 seconds. This is accomplished by asking your recruits to close their eyes and with the class members taking deep breaths in unison, you can clock them off at five-second intervals until thirty seconds have elapsed.

Ask them to mentally note their reactions as to comfort, then proceed to have them expel as much air as convenient from their lungs and clock them again. Now have them take a heavy sigh and pause for another thirty seconds.

TENSION

increases rifle vibrations

A

NO SIGH

Lungs fully inflated

Breath held

Result:
strain and tension

UNNATURAL

B

NORMAL SIGH

Lungs partly deflated

Breathing momentarily suspended

Result: relaxation

NATURAL

C

NORMAL SIGH *PLUS* FORCED SIGH

Lungs fully deflated

Breath held

Result: strain and tension

UNNATURAL

RELAXATION

decreases rifle vibrations

HOW TO DEVELOP SIGH AND PAUSE—Continued

A vote of the reactions, experienced by the class, should reveal better than 85 percent preference for the pause when the lungs are normal. It is recommended that between phases of this demonstration, that you allow your class members to rest so that normal breathing rhythm may be restored before attempting a new phase.

To fit the sigh into marksmanship, the recruit only has to momentarily stop breathing, immediately after he has given the sigh and to pause long enough to squeeze the trigger.

Have your recruit assume the firing position and indicate to him the way the three types of breathing habits affect his rifle's steadiness, when it is pointed at the target. He will readily see that the normal way, with the sigh, causes the rifle to visibly rest much steadier.

You can check the recruit's breathing habits by watching the rise and fall of the muzzle, by watching the movement of the small of the back or by feeling, with your hand, for any tension or tautness in the back. It will be easy to determine whether the muscle action is tensed or relaxed. The muscles of the back should be relaxed.

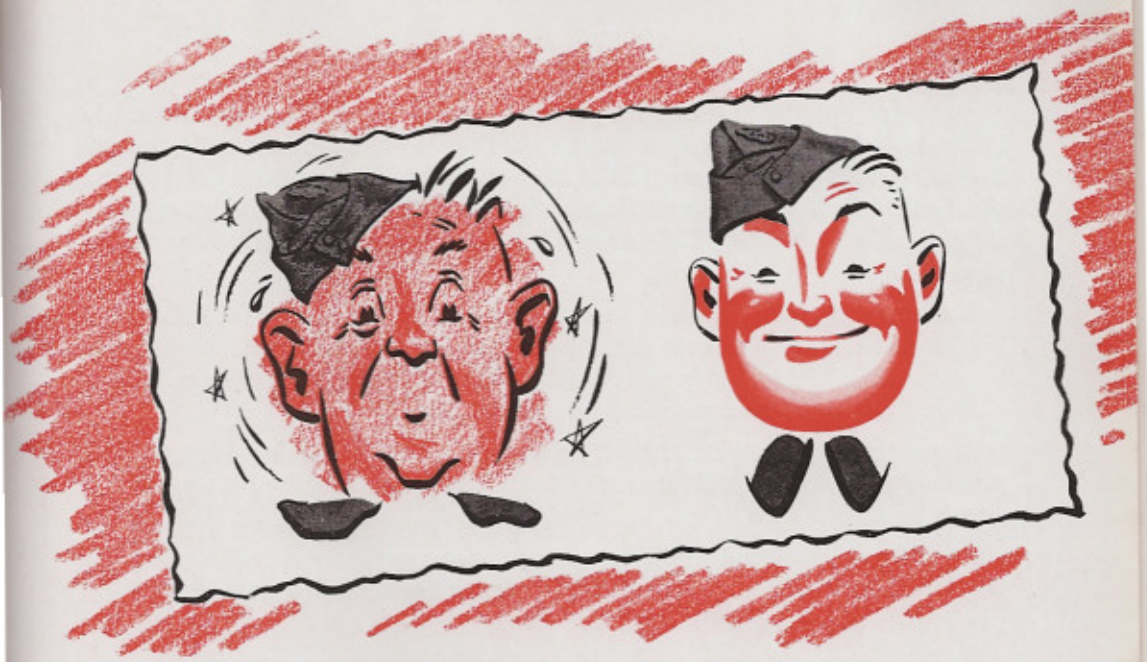
A piece of white paper placed upon the bayonet of the recruit's rifle will demonstrate to him the rise of the muzzle with the exhale and the fall with the inhale. Those movements are caused by the action of the chest in breathing and are relayed into the rifle.

Some times it is necessary to take a minor adjustment to the rifle's position after the exhale or sigh, by sliding the left hand forward, or backward, to correctly reach the elevation upon the target, which you desire.

Should, however, a soldier feel that he cannot get his shot away during that brief, breathless pause following the sigh, he should not endeavour to force himself. He must take a few normal breaths to rest himself and then try the shot again.

Instructors should check upon all recruits, at all times, to insure that they are not tightening up their muscles in acquiring this shooting sigh. Any unsteadiness that is apparent can be corrected by a patient coach who keeps insisting each pupil should be fully relaxed.

Eventually, through practice, the recruit will be able to approximate the expert's 10 seconds interval between the sigh and the squeeze of the trigger. This, of course is the maximum time expected of a sigh, when normal targe firing is being done. It would be appreciably shorter under battle conditions or in rapid-fire shooting.



TENSION versus RELAXATION

BY NOW, the recruit understands that steadiness, comfort and correct breathing deserve his full attention before starting the bullet on its way to the target.

He will see that in attempting to hold his breath too long, his muscles will tighten up; he will get red in the face; he will commence to shake and his rifle will dance. Hence, tension must give way to relaxation.

The instructor should synchronise his breathing with that of the recruit. If the soldier's breathing, while he is in firing position, is not correct, then the coach will note from his own uncomfortable breathing, timed to the recruit's, that it is wrong. The coach will know that if he is uncomfortable in following an unnatural breathing tempo, then the recruit must be uncomfortable, also. If this condition prevails—and it will be quickly noticed by the observant coach—then the recruit is holding his breath too long. This is a common fault.

If the recruit holds his breath longer than 20 seconds, stop him and insist that he start over again after a few deep, restful breaths. If necessary, let him bring his rifle down from the firing position, for a brief rest.

You have probably observed theatre audiences which became so intensely interested in the dramatic developments of the play that they virtually stopped breathing. When the climax of the moment had passed and the heroine had been saved from the designing clutches of the villain, there was an audible sigh from the audience. This is exactly the kind of a sigh you will want from your recruits.

The recruit is similar to a theatre audience in his reactions while shooting. He is inclined to become so interested in some of the phases of good marksmanship that he will forget to breathe. This will only cause him to be uncomfortable and unwanted tremors and tightness will result.

Proper breathing, when firing, is not difficult. If carefully taught and practiced, the soldier will learn it is the normal and comfortable experience which he will want to adopt.

He will note, too, that as his breathing is done properly while shooting, he will lose the tension and instead acquire the relaxed, normal and comfortable pause good marksmanship requires.

BREATHING AND AIMING

CORRECT breathing is always accompanied by its twin—proper Relaxing. Together they will reduce the tremors of a front sight of a rifle at least 30 percent.

If the front sight is wobbling or dancing, despite proper position and holding, then something is wrong with your recruit's breathing or he is holding himself all tightened up like the core of a golf ball.

Have your pupil resume his firing position and aim his rifle at a target. Now if he will watch the reaction of his fore sight upon the centre of the target and take a deep breath, he will note that the muzzle has lowered. See Figure 1, opposite.

As the breath is exhaled, the foresight will naturally return slowly to the mark again and it will be more steady than it was before, owing to the relaxation introduced into the body reactions by the sigh which was taken—or should have been. See Figure 2.

A recruit should not be allowed to restrain his breathing until he becomes uncomfortable. He should, instead, experience the natural, deep sigh. If he fails to experience it, he should be given a rest before trying it again.

THE COACH MUST INSIST UPON AN AUDIBLE SIGH BEING GIVEN. IT IS THE SECRET IN CHECKING PROPER BREATHING.

This type of breathing is not done instinctively by the student marksman but it is not difficult for him to learn and this can be done by concentration, practice and good coaching until it becomes a habit.

FIG. 1

FIG. 2

AUTOMATIC ALIGNMENT

THE TERM Automatic Alignment means that if a rifle is properly positioned, held and steadied by correct breathing habits, it will be dead upon the target to which it is pointed.

By that, it is inferred that if you had three targets in front of you and you wished to fire at either the right or left one, instead of the centre target toward which the rifle is pointing, the change could be made around the pivot which is your left elbow.

The artilleryman can shift the horizontal direction of his field piece by wheels and gears but if he wants to make a major shift he has the trail lifted and swung with the gun carriage's wheels serving as the pivot until the desired direction is attained.

To the recruit, this change is as easily made by shifting the body so that it pivots around the solid, upright, left forearm. This means of automatic alignment keeps the marksman's body and rifle directed upon the selected target as rigidly as a field piece. Note Figures 1 and 2, opposite.

The correctly held rifle comes to rest upon some target. To make it coincide with the target which you want to hit, you must shift your whole body and rifle together so that the rifle will naturally come to rest in the direction of the selected aiming point.

Far too many recruits entertain the viewpoint that if a new target is selected, all that is required is to shift the rifle so that it points in the desired new direction. This calls into play unnecessary muscular effort.

A recruit cannot shift his rifle from one target to another, properly, without altering his whole body direction around that left elbow pivot. If muscles are used, instead of this pivoting method, good position, perfect holding and proper breathing rhythm are all lost.

Your recruit must learn that he and his rifle are wedded and welded and as one moves, so must the other. He should be so thoroughly taught this phase that once having spotted his target, he will, through sheer force of habit, so adjust his body that when he aims his rifle at the target, no muscular effort will be required to register it perfectly.

A pitcher facing third base can instinctively whip around and nick a runner off first base. He knows exactly the direction his throw will take. He knows the first baseman will be ready to take the catch. He knows exactly how his feet must be placed in order to deliver the throw. The same things should apply to your recruit, so that he will automatically and instinctively place his body in order that the rifle may be pointed directly toward the target.

When his body is in alignment, with the target and he raises his rifle to the firing position, it should point precisely to the spot where he wants it to point. When he can do this, he will not have to rely upon unsteady muscles.

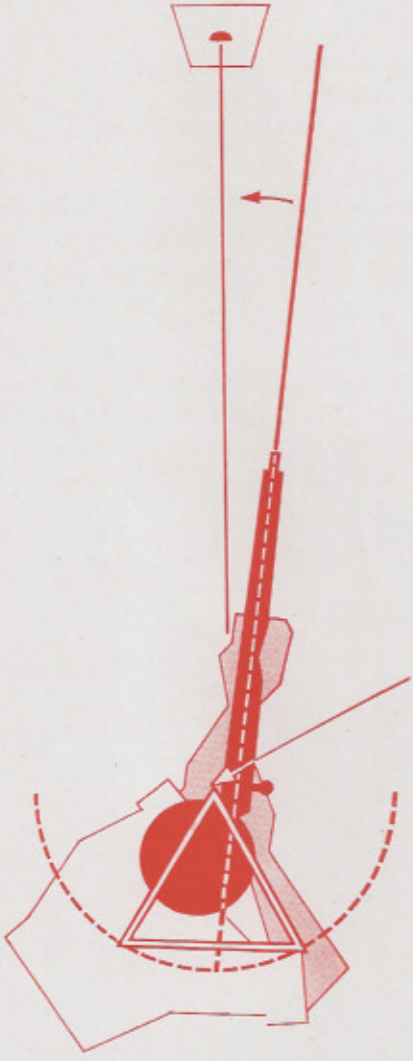
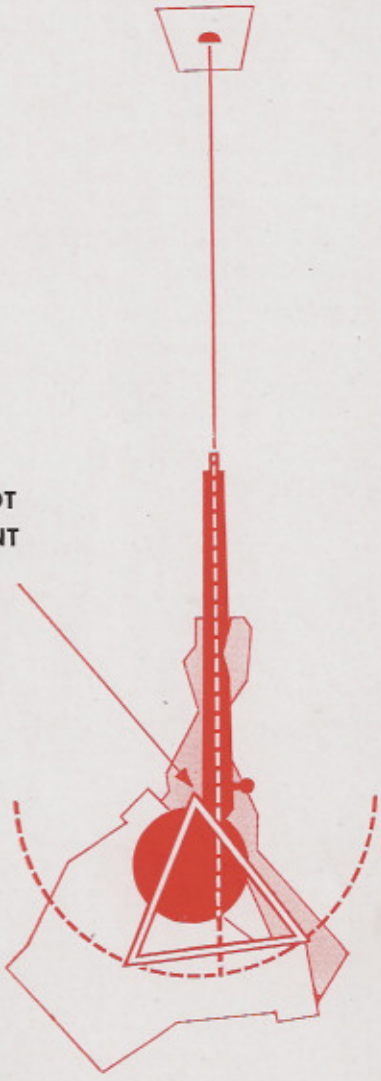


FIG. 1

FIG. 2

PIVOT
POINT



AUTOMATIC ALIGNMENT—Continued

An easy demonstration would be to place a carpenter's square upon a flat surface and aim one end of it at a target. Place your thumb upon the angle. (See illustration below). Now select a new target and by moving the second leg of the square, swing the whole instrument so that it is aimed at the new target. The point where your thumb has rested has performed the same function as the left elbow pivot.

The major value of automatic alignment, in war, is that the soldier who uses it, knows he can take his "stance" in shooting each enemy and that he will get that enemy with one shot and no alibis. Automatic alignment, as a worthwhile shooting habit, is the secret of successful rapid-fire and snap shooting.