Dedication

To my wonderful wife Mylinda, my son Christopher, and my daughter Allison.

I dedicate this transcription to my family.

The

Service Revolver and How to Use It

BY

CAPTAIN C. D. TRACY
The King's Own Royal Lancaster Regt.
The School of Musketry, Bisley

Author of
"Revolver Shooting in War"

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FIRING OVER COVER.

Foreword.

THIS little book, comprising the leading features of the author's methods of instruction in the use of the Service Revolver, has been compiled in response to the repeated and pressing representations of his brother officers in the Service.

As these methods are conveyed by lectures and individual oral instruction, and demonstrations, to large numbers of pupils, it is held desirable that authentic details should be embodied in print, so as to guard against undesirable, often unintentional innovations, or departures from practices of proved value.

It is hoped that its publication may be ol use both to those undertaking instructional duties, and to others who have not had the opportunity of receiving instruction on these lines. .

CHARLES D. TRACY,
Captain.

THE SCHOOL OF MUSKETRY,
BISLEY CAMP,
SURREY.

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CHAPTER I.

Introduction.

Before the Great War the value of the revolver as a weapon for hand to hand fighting was insufficiently appreciated in the military sense.

In this country practical interest in the expert use of the weapon was mainly confined to a small number of enthusiasts. For lack of a sound method of training for use in war, the revolver was quite commonly a greater danger to the owner and his friends than the enemy, the result being that the weapon itself was generally blamed and regarded as a somewhat perilous instrument.

With those who had experience of Service, whether military or civil, in certain distant quarters of the world, matters were different. It was freely admitted and appreciated that in many localities a man's life often depended on the quick and accurate use of the revolver.

It was a matter of personal care with men thus situated to study and practise with the weapon, Officers, for instance, of the Indian Army realised this necessity.

During the early stages of the War, the casualties which occurred amongst officers, both in trenches and in billets, through careless and uninstructed handling of revolvers, were numerous, if not altogether surprising, and strongly emphasised the need of correct training.

Latterly, owing to the realisation of this need and the gradually extended adoption of the authors method, accidents have proportionately diminished and much effective work has been done with the weapon.

In war it has been proved to demonstration that a revolver in properly trained hands is a most deadly weapon both of offence and defence. In the hand to hand fighting and action at close quarters it is of very high value. Not a few decorations have been earned by valiant and daring deeds wrought against the enemy with the revolver in hands soundly trained to its effective use.

Parties armed with revolvers, and specially trained on the practical lines of instinctive shooting, have proved to be very effective in trench raids—especially so in dark night

raids, where first contact with the enemy is often so close that our bombing would be as liable to cause casualties in our ranks as in those of the enemy.

In this War instances are known where the revolver in skilful hands has been successfully used to, beat off flank and rear attacks on our machine and Lewis guns, whilst they were supporting our attacking parties, or being got into action.

The deadly work we can do with the revolver has been appreciated by our foes as evidenced by their adoption of similar tactics.

The old delusion that experts with the revolver were either born with natural aptitude for shooting, or hailed from the woolly West, has been amply proved to be a misconception. Anyone without physical handicap can become a good revolver shot, that is a made shot. To be an expert depends chiefly on systematic practice and temperate habits.

If a man wishes to quickly master the art of practical revolver shooting, he must carefully study all the details which go towards the building up of that line co-ordination of speed and control which are so eminently essential.

CHAPTER II.

Revolver *v.* Automatic Pistol.

The revolver is, in very truth, the Army officer's weapon. The wisdom of the authorities in retaining it as such, has stood the rough test of war. Yet an impression seems to have gained ground amongst young officers that the automatic—the self-loading pistol, is the weapon for an officer.

Possibly this idea arises from the facts that the automatic pistol—

(1) Is somewhat more compact than the revolver.`

(2) Can be fired with great speed.

(3) Can be re-charged by the single quick insertion of a loaded magazine.

Regarding (1).—The effectiveness of the weapon should be the first consideration of all.

As for (2).—In trained hands the revolver can be fired at the extreme of any useful rapidity.

And (3).—The revolver can be re-charged and brought again into action as quickly as the automatic pistol, if a good magazine loader is used, and such an article is obtainable by private purchase.

But there are still other factors in the relative efficiency of the two weapons to be considered.

(*a*) The functioning of the revolver is reliable under the adverse conditions of rust, fouling, mud or dust on its frictional parts, It has passed the most severe tests in these respects, but the automatic pistol of to-day will frequently fail in these conditions.

(*b*) Should a misfire occur with the revolver, another live round can immediately be brought into alignment with the barrel, without the use of the "disengaged" hand.

But in the case of the automatic pistol, the other hand has to be brought into use to pull back the breech block, and eject the "misfire" round, in order to allow a fresh round to come into the chamber.

And it may here be observed that under Active Service conditions, the "disengaged" hand may be very much engaged, as for instance with a "Mills" bomb with the pin out I In the all-important matter of man-stopping power, the revolver is far the more effective weapon. The lead bullet of large calibre, and low penetration, delivers a smashing blow, most of its energy being absorbed in producing shock. The automatic pistol's nickel-jacketed bullet has high penetration, and much of its energy is apt to be expended in the form of velocity, after the missile has passed clean through a man with little shock effect.

(*c*) In view of these facts, if an automatic pistol is a man's personal choice, it should be of at least .450 calibre. Smaller bores have not the power necessary to stop a determined opponent at close quarters, unless by chance a vital spot is hit. But in the turmoil of trench or " no man's land " fighting, the probabilities of hitting such a spot are extremely remote, even when the pistol is handled by an expert.

The following instance, one of several given to the author at first hand, emphasises the necessity of stopping power in close fighting, and the deficiency in this respect of an automatic pistol of small calibre :—

"I saw an officer of ours fire five or six shots at a big Boche, but they didn't stop him. He merely coughed each time he was struck by one of those bullets and came on again. Of course he was blood mad. He got to the officer and killed him with°the bayonet. The officer was using a small automatic pistol, a .380 or a .320, I know the type as I have tried them."

Another instance, of special interest, is as follows :—

"During a political rising in South America, I was shot at close quarters, when mounted. My opponent was also mounted and we fired point blank. His bu1let—a small copper one, .25 calibre, I think—passed right through my left lung and also passed through some of the fleshy part of my heart. I got my man in the chest and, as far as I know, killed him, as I was

> using a revolver similar to the Colt. His shot did not stop me, for I rode on and took part in the affray for some twenty minutes afterwards, when I dropped. The bullet remained in me for three days. It was then extracted from the back. After two winters in France in this War, I am still carrying on. I owe my life to my opponent using such a small pistol."

The author has heard of other similar instances.

On the other hand an officer told him that he had killed five of the enemy with a .32 auto-pistol. On asking the details he was told: "The first three I got from behind a traverse early one morning just after they had dropped into the trench and were looking about. I shot each through the head at about three to four yards range. The other two I also shot through the head. They were working a machine gun and I stalked them, shooting each at short range from a point slightly to rear of their right flank."

In this case the small bore was effective, but it will be noticed that the conditions were exceptionally favourable. Had the firer been discovered and attacked, the probabilities are that the weapon would not have stopped his opponents.

To give an idea of the view taken of small bore weapons by that exceptionally competent judge, the "Western Gunman," the following authentic story may here be quoted :—

> "A train had been 'held up' by a party of 'Road Agents' Whilst one of their number kept the passengers in one car covered with his 'guns' (i.e., large bore revolvers) his 'pard' was proceeding down the aisle relieving the passengers of their rolls of 'bills,' pocket-books, and other portable valuables. When about half-way down the car this gentleman observed a pale, nervous-looking man with a small revolver in his hand; With the remark, 'Hand over that little old gun of your'n, Sport!' the desperado received the small pistol, held it up critically alongside his own 8-inch barrelled .44/40 'Frontier Colt,' threw it back to its owner, and proceeded on a pace or two. He then turned round and casually remarked, 'Now—you be a good boy and don't shoot me up none with that toy of your'n—for if you do, *and I happen to notice it.*

I'll come back and knock about four kinds of hell out of you!'"

The following is an instance of the failure of the automatic \pistol to function :—

"An officer of the Canadian Forces, an expert shot, armed with an automatic pistol in each hand, went into an enemy dug-out and encountered five men in it. *Both pistols failed to act!* He was shot, bayoneted, and left for dead. Later he dragged himself out and received further wounds from a bomb, losing both legs." Had this officer been armed with revolvers he would have undoubtedly made quick and short work of the enemy. An expert under such conditions would probably down all live of his opponents in less than so many seconds.

CHAPTER III.

Revolver *v.* Automatic Pistol.

The very highly skilled exponent of 2 inch grouping with the revolver in the pre-war days, attained his skill only by years of careful study, and practice, with high-class "target" weapons and selected ammunition.

In these days of short time training, of large numbers of officers, and other ranks, armed with the revolver, this high standard of accuracy cannot be reached. Neither would this class of shooting be of such value in war as that very different style, whereby, at the sacrifice of some degree of precision, there is gained rapidity in the delivery of one or more effective shots on disappearing or moving targets.

This latter method is based on the instinctive action of the man, who, being armed with a revolver, is suddenly confronted by an attacking enemy. He will instantly point his weapon and fire, with the object of hitting his opponent before the latter can fire at, or reach him. There is no delay through any attempt at fine alignment of sights. The weapon is directed and its mechanism operated without conscious calculation, the whole attention of the firer being centred on his enemy. To establish the habit of hitting quickly, surely, and with sufficient accuracy in placing the shot at short and medium range, is the main object of the author's practical method of training in the use of the revolver for active service.

Any man not disabled by physical deficiencies, can become a practical shot and fighter with fthe service revolver, by going through a short course of training on these lines, of instinctive shooting.

This has been amply proved by the fact that of some thousands of officers and other ranks, trained in this method, few have failed to reach the "War Shot" standard, *i.e.*, the ability to put a shot into a 16 by 12 inch rectangle in one second, at a range of ten yards.

It is further demonstrated by the high average of scoring in the practical tests, where active service conditions are reproduced as realistically as possible in the form of a trench attack practice.

With the foundation of such a course of training, the officer on active service acquires an instinct for the use of his revolver, and when suddenly put on the alert he instinctively grasps his pistol, just as on the alarm a private in stinctively seizes his rifle.

CHARACTERISTICS OF THE REVOLVER.

We must now consider some of the characteristics of the revolver.

1. The revolver is designed for the use of one hand only, therefore the first essential is a correct grip.

The cocking and firing should be done by the firing hand.

Equal proficiency with each hand is desirable.

Perfect "Let Off" is necessary or the direction of the barrel is disturbed at the moment the bullet is about to leave it.

The revolver has a short barrel and six chambers. It is therefore meant for the quickly firing of one or more shots at one or more targets. At the same time it is to be remembered that the shortness of the barrel renders the weapon liable to be misdirected, and a source of danger to friends if carelessly handled.

Six well-directed shots can be fired by a moderate shot in 12 seconds, by an expert in less than half the time. The size and weight of the bullet, the velocity, and striking energy, are admirably adapted to great shock-giving at short range.

All these characteristics prove the weapon to be a very handy and deadly small-arm, of great value in offensive and defensive close-quarter fighting in the hands of those who know how to use it, but in the hands of the untrained or careless of little use and dangerous.

CORRECT HABIT.

Having urged the importance of the revolver in war, we now come to the first step in training. This is the formation of correct habit in the handling of the pistol with safety to the firer himself, and to others.

Habit and habit only, is reliable in emergency and in routine alike. Therefore *correct habit* must be established as *early as possible*, and strict rules are necessary during the training.

An empty pistol must always be treated as though it were loaded, It must be broken open, *i.e.*, proved before empty pistol practice.

Correct habit in the directing and control of the weapon must also be acquired as early as possible. Hence the importance of preliminary training with the empty pistol, till the standard tests can be passed.

Once these tests have been passed, the beginner should *trust his hand* to perform correctly with the loaded weapon what he has accomplished with the empty.

CHAPTER IV.

The Standard Grip.

The first essential in revolver shooting is a correct grip.

Right Hand.

1. The first joint of the index finger must be on the lower part of the trigger.

2. The three remaining fingers clasping the butt, the second finger close up behind the trigger guard.

3. The second joint of second finger at or beyond the left* edge of trigger guard.

4. The inside surface of the three fingers and hand in close contact with the butt.

5. The part of the thumb on its inner side and between its first and second joints (second phalange) firmly in contact with the top of the left stock or shoulder of the butt.

6. The thumb fully extended, whenever possible, but the tip of the thumb not in contact with any part of the pistol or fingers.

NOTE.—If this grip can be obtained, and without the tips of the second or third fingers touching the ball of the thumb, it proves that the pistol fits the firer's hand—the first factor in obtaining control of the weapon.

THE STANDARD GRIP (amplified) .

1. The first joint of the index finger on the lower part of the trigger is the position by which the best leverage is brought to bear on the trigger-a factor in acquiring consistent trigger pressure.

2. The second finger close up behind the trigger guard is the best compromise of positions to control the weapon, and reduce the strain on the wrist at the moment of firing.

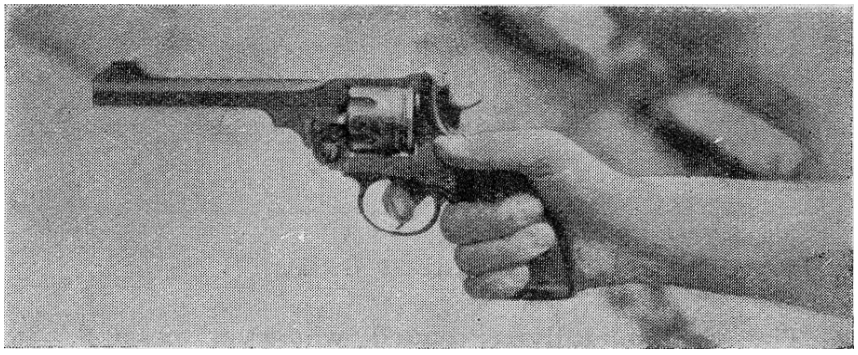
---

* For word "left" substitute "right" when applying these directions to the left-handed.

To illustrate this:—If the pistol were held by the lowest part of the butt and fired, the maximum strain would be brought on to the wrist. Whereas, if it were possible to hold a pistol with the axis of the barrel in line with the axis of the forearm, and to fire it in this position, no strain at all would come on the wrist, but the whole of the recoil would be directed towards the frame of the forearm.

3. The second joint of the second finger at or beyond the edge of the trigger guard, brings the back of the hand into almost the same plane as the outer side of the forearm. This again is an aid in acquiring control ; much of the recoil being directed up the arm instead of across the wrist.

Fig. 1.



THE CORRECT GRIP.

This position has obvious advantages for the weak or loose-jointed. It is also an aid in instinctive pointing of the pistol, for it is the position naturally taken in pointing at an object with the index finger. Most people in pointing, direct the index finger straight at the object, and have the ba ck of the hand in almost the same plane as the outside of the forearm, and the thumb pointing off at an angle of about 30 degrees (as shown in Fig. 1—"The Grip").

4. The inside surface of lingers and hand in close contact with the butt.

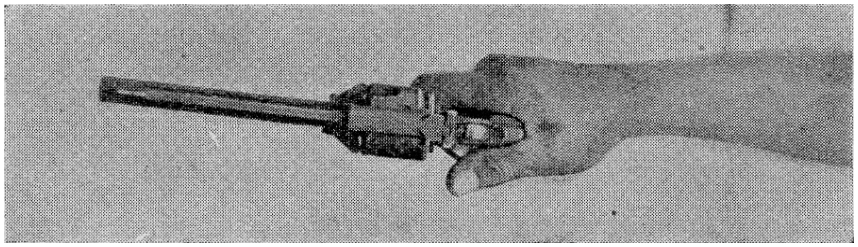
The fingers should be hooked round the butt, with a pressure directed from their tips towards their base. The

rest of the hand is to be "wrapped" round the butt. Unless care is taken a space may be left where the hand is not in contact. It this is so, then at the moment of discharge the pistol will, so to speak, discover this lack of support. The butt will move slightly in that direction, the muzzle at the same time moving in the opposite direction Thus causing an "inward" error on the target.

5. The part of the thumb on its inner side, and between its first and second joints, firmly in contact with the top of the left stock or shoulder of the butt.

This bears on the author's method of trigger pressing, which is described later.

Fig. 2.



THE CORRECT GRIP.

6. The thumb, fully extended whenever possible, but the tip of the thumb not in contact with any part of the pistol or fingers.

If the individual's thumb is of such a length that when fully extended its tip would come in contact with the shield or breech end of the cylinder, or any part of the pistol, full extension must be avoided. Otherwise the tip of the thumb will receive at blow when the pistol is fired, and flinching will result. In such 2. case the thumb must be bent down at the first joint, but never brought on to the fingers on the butt.

FIT OF THE PISTOL TO THE HAND.

It will be seen from the above amplification of "The Standard Grip," that correct grip is the foundation of the control and directing of the pistol. Hands vary much in

size and shape. There also are three different revolver of regulation issue, viz., the Webley, the Colt, and the Smith and Wesson. Some compromise on the standard grip will, therefore, often be found necessary.

It must always be borne in mind that in adjusting the individual hand to the grip on a pistol, the hand must be in such a position that :—.

(1) Correct trigger pressure can be applied.
(2) The pistol can be easily brought up on the mark.
(3) The recoil is taken as much as possible by the arm, and not by the wrist.

It is sometimes found necessary to "pack" the butts of revolvers in order to assist the individual to gain control. When the butt is too small for the individual hand, the pistol is liable to twist in the grip at the moment of firing.

In a hand above average size, the breadth being above the normal, the distance between the centre of the index finger and that of the second is also greater. Hence in this case the second finger must not come "close up behind trigger guard," or the trigger finger will be cramped, and liable to be placed too high on the trigger. A larger pair of stocks, made to cover in the back strap or frame of the butt, and a projection made so as to fill in a part of the space behind the trigger guard, will be of material assistance. It should be remembered that the filling in of the space behind the trigger guard by a projection from the stocks, 01* a pad, is only suitable for the wide-handed, for the reasons already given.

SIZES OF STOCKS.

The Webley Mark VI suits the average sized hand better than any other make. This style and size of stock might be classed as the "normal," that described as suiting the larger hand—the "large." And a pair of stocks of just half the thickness of the "normal," would make the pistol suitable for the smaller hand, and might be known as the "small" butt.

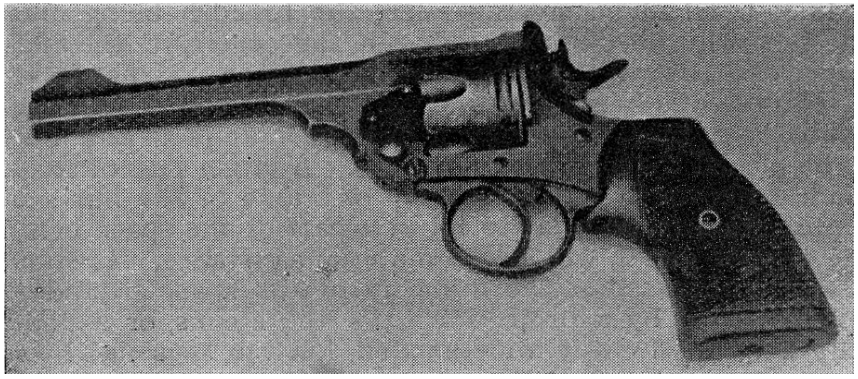
Measuring from the centre of the trigger to the back of the butt on a line parallel with the axis of the bore, the following are the results :—

Webley Mark VI . . . . . 3⅓ inches.
Smith and Wesson (.455 Service) . . . . . 3 5/12 inches.
Colt (new Service). . . . . 3½ inches.

There is also, however, the actual thickness of the stocks of each of these three pistols to be brought into calculation. For instance, though the Webley Mark VI measures only 3⅓ inches as above, it will often occur, that a small-handed man cannot control this revolver as well as the Smith and Wesson, which measures one-twelfth more. The reason for this is that the butt of the latter is less bulky. Hence the author's suggestion as regards the "small" stocks.

Flattened sides to the stocks are also of assistance in keeping one's grip in the same place. In this respect the author finds the Webley Mark VI stocks an advance on all others. The author's model for the "large" stocks carries this idea

Fig. 3.



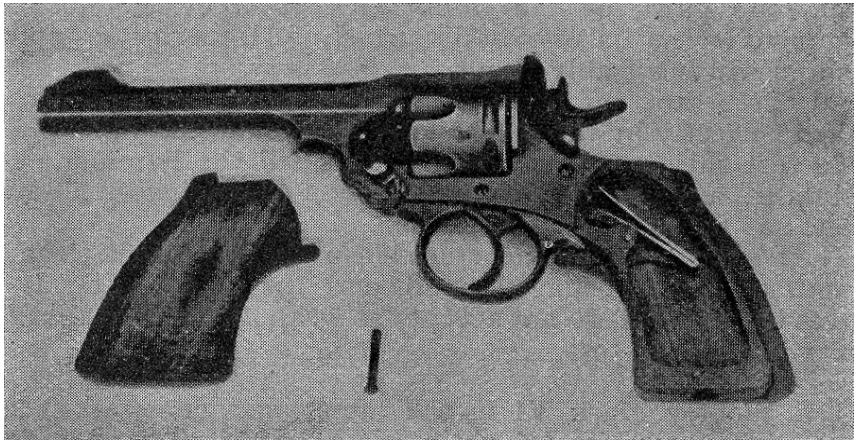
THE LARGE SIZE SOCKS.

still further. With this stock as adapted to the Webley Mark VI, the distance from centre of the trigger to back of the butt, measured parallel with the axis of the bore, is 3¾ inches. This has been found, after ample tests, to solve the difficulty for the large-handed man. With it he can obtain a good grip without the tips of the second or third fingers touching the ball of the thumb, the projection, already referred to, causes the trigger finger to come comfortably to the lower part of the trigger.

Indentations for the correct position of the tips of the three fingers on the butt, can, with advantage, be made in the stocks of the pistol. These indentations to be of any practical use must be made to suit each individuals grip, as the exact

position oi the finger tips on the butt, naturally vary according to the size and shape of each individual's hand. Wooden stocks are best for the purpose. When the position of the individuals correct grip has been accurately arrived at, the position of the finger tips can be outlined on each stock in chalk, or pencil, and the indicated spaces burned out into shallow grooves to at the lingers. When this has been done, the charred wood in the hollows can be removed by the application of sand-paper, and their surfaces checkered so as to assure a firm and comfortable hold with

Fig. 4.



THE LARGE SIZE SOCKS.

Note the projections back of the trigger guard and the extra depth over the butt strap.

the fingers. By the exact placing of these indentations, a. man's hand will instantly find its correct position on the butt.

SELECTING A REVOLVER.

When selecting a revolver, if possible, choose the weapon which fits the hand so that the correct "grip" can be obtained.

The test of suitability of size of "Grip" to size of hand, is the ability to obtain the position of the lingers, thumb,

and hand, as described in the "Grip," page 18, and as seen in Figs. 1 and 2.

If the first joint of the index finger cannot comfortably reach the lower part of the trigger, when the second joint of the second finger is at the inner edge of the trigger guard, the distance from the back of the butt to the position on the trigger, measured in a line parallel with the axis of the bore, is too great—*i.e.,* the pistol grip is too big for the hand.

If, on taking the grip the tips of the second and third fingers press against the ball of the thumb—the pistol butt is too small.

The accuracy of a revolver is mainly dependent on the perfect alignment of chamber and barrel. If the cylinder catch, the pawl, or the ratchet are injured, this perfect alignment is very liable to be disturbed, and imperfect grouping of shots will inevitably result.

An important point to observe is that the cylinder is locked perfectly by the stop when the hammer has fallen. To test this, press the trigger back till the hammer rises and falls, and retain the pressure on the trigger, holding it back as far as it will go.

Then take hold of the cylinder with the forefinger and thumb of the disengaged hand, and try to turn it. If it moves to the right, do not accept the weapon, but find another that will pass the test.

The Webley Mark VI is the latest service weapon. It has a 6-inch barrel, and the grip suits the average hand well.

It is the most suitable weapon of all those available.

In the first few years of the War, a large number of "Colts" and "Smith and Wessons" were also issued.

The calibre is the same in each, *i.e.*, it is for use with the .455 service cartridge.

Length of Barrel.

The "Colt," known as the "New Service Colt," .455 has a 5½-inch barrel

It is a handy, hardy weapon, but too large in the grip for the average hand.

The "Smith and Wesson" is somewhat more refined in finish. It has a 6½-inch barrel, and generally suits the smaller handed,

For active service the 6-inch barrel is the ideal. It is long enough. for fine accuracy in deliberate aim, and consistent with good balance in the weapon.

The 7½-inch is too long for convenient carrying, and not so handy for quickly bringing into use, but it will give better shooting at long ranges.

The 4-inch is altogether too short for deliberate aim. It is, however, a very handy weapon at close quarters, and easy to carry.

For active service, if possible, have a white metal or white tipped foresight.

CHAPTER V.

"Stance," or Position of Feet.

"Foot Pointing," for the beginner, is a very important factor in assisting him to quick and accurate directing of the pistol, in addition to the necessity of having the feet a suitable distance apart, to obtain a firm balance.

The importance of "Foot Pointing" in bayonet fighting, boxing, and many games of skill, is well-known—yet in revolver shooting it is often ignored.

The commonest fault is that of pointing the leading foot inwards, causing the pistol to point in a similar direction. This error is easily proved by the following test.

Stand with your advanced foot pointing inwards.

Select a mark to your front, level with your eyes. Close your eyes, and point to what you think is the spot you have just visualised. Open your eyes, and note the fault, if any. Repeat ten times, to find out your common error.

The writer has found that the majority of pupils carrying out this test, will point inwards, *i.e.*, to the left of the mark with the right hand, and to the right of the mark with the left hand.

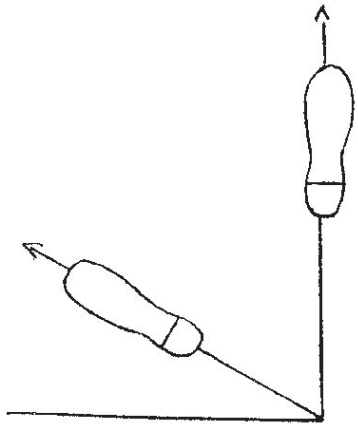
In night firing—when the object is visible, but the sights of the revolver cannot be seen, this inward pointing, combined with high elevation, is a common error.

In practical revolver shooting, the firer should not be standing side-ways—duelling style—to his mark (one does not advance down a trench sideways!) ; nor should he have one foot directly behind the other when halted to fire, but the advanced foot should be in the same vertical plane as his hand, pistol, and mark.

The rear foot should be at a distance from the advanced one, the individual's average pace, and placed at an angle of about 65 degrees, as shown in the following diagram.

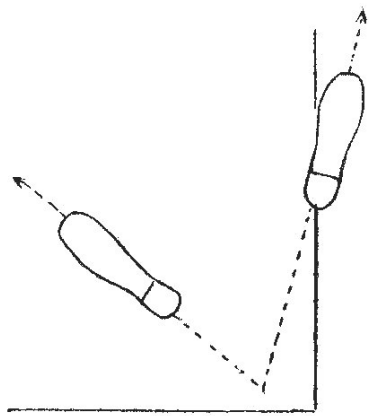
For right hand firing.

Diagram I.



If, when the feet are so placed, there still exists the common error of pointing inwards, it should be corrected by pointing the advanced foot outwards, and bringing the rear foot into relative position as in the following diagram.

Diagram II.



NOTE.—Very tall or short persons may have to modify the above positions in regard to the proportionate distance between the feet.

Individual Peculiarities should be noted by the instructor.

Some pupils will point feet out beyond the normal, others slightly turned in. These abnormal conditions should be taken into consideration by the instructor when teaching such a pupil to place his feet in harmony with his pointing sense.

EYES.

When firing, it is best to use the eye nearest the firing hand.

The eye which first focuses on an object is the master eye, and this is generally the right eye.

When this is the case, both eyes can be kept open if firing with the pistol in the right hand

If firing with the left hand, and both eyes open, a right master eye is apt to cause the pistol to be pointed across the direction of the mark, and towards the right, in quick shooting.

It is therefore better, under the latter condition, to close the right eye, and use the left only.

The converse of these conditions applies when the firer has a left master eye.

If the pupil is central visioned—*i.e.*, both eyes equal, he should always close the eye furthest from the firing hand. otherwise the result is inward shooting.

NOTE.—When a man is unable to close one eye at a time, he may overcome this difficulty in the following way :—

Closing both eyes he should place the tips of two fingers lightly in contact with the lid of the eye he wishes to keep shut; then opening the other eye, slowly drag the fingers down and off the closed eye ; repeating the operation several times. By regular daily practice, in this, and gradual easing of the touch of the fingers, he can finally acquire independent control of the eyelids, so that, without finger assistance, he can keep one eye closed when directing his pistol.

POINTING.

The natural pointing sense, possessed by the majority of men, is fairly accurate.

If, however, the pupil when pointing with his index finger shows any of the following faults, they must: be eradicated before handling the pistol.

Faults.

1. **Fault**.—*Right* or advanced foot pointing inwards.
Correction.—Correct foot pointing, as already described (*see* page 27).

2. **Fault**.—*Right* hand pointing across instead of at the object, the tip of index finger being in front of left eye, or between the eyes. This indicates either that the pupil has a left master eye, or that he is central visioned.
Correction.—He must keep the left eye closed, using the right eye only when employing the right hand.

3. **Fault**.—The body turned sideways.
Correction.—Position as described under "Stance."

4. **Fault**.—Finger tip pointing upwards instead of directly at the Instructor's eye.
Correction.—Pupil must be practised in pointing directly at the mark, with axis of ringer parallel with, and close up to the line of vision.

DEVELOPING THE POINTING SENSE.

By systematic practice, a man's pointing sense can be trained to a high degree of perfection.

The practice of attempting to point at a mark with the eyes closed, is a great aid in training. It can be carried out in the following way :—

With correctly held pistol the student will look carefully at his mark, then close his eyes and raise the pistol, pointing at what he thinks is the spot he has just looked at, open his eyes, and note his error, if any.

Before repeating the practice he should carefully think over what he has just carried out, and try to note any impressions in his mind. If, after repeating this practice a few times, he observes a common error, he should endeavour to correct it by noting carefully what it is, and then, when again attempting the practice, estimating the necessary correction.

The details of correct grip, stiff wrist, fully extended arm, and foot pointing, must be carefully observed.

As the arm is fully extended and the pistol brought up to the line of vision in the above practice, a man can check his own faults, and train himself, but to apply the method to empty pistol training for hip shooting, or firing with partially extended arm, and with the pistol below the line of vision, the assistance of another person to check the aim is necessary (as described later in “Hip Shooting”).

CHAPTER VI.

Preliminary Instruction in Stance, Pointing, Grip, and Vertical Lift.

In applying the principles of the grip to the individual, we should remember that the pistol must be placed in his hand so that he can, in addition to controlling it at the moment of discharge, bring it quickly up to a mark with ease and certainty, just as he would do in pointing at a spot with his index finger.

If he adopts the same mental attitude as when pointing the finger at the object and saying, "There," the nerves and muscles, accustomed to respond to this mental attitude, are the more likely to act in unison whilst directing the pistol, The following preliminary procedure will, therefore, be found helpful :—

The instructor and pupil should be about eight yards apart, and facing each other. The pupil having handed over the pistol to the instructor, advances three paces-leading off with the right foot, halts in his third pace, and points in his own natural way with the right index finger at the instructor's eye, and retains the position thus arrived at. The instructor will then note the following :—

(i) In what positions the pupil's feet are placed.

(ii) How he points-accurately or otherwise.

(iii) Whether he has a master eye, or central vision (as indicated by the relative positions of the pointing finger and his eyes).

The pupil having proved his ability, to halt with good stance, and accurately direct his index finger at the instructor's eye, the instructor will then place the pistol in his hand, with the pointing finger resting on the body of the pistol under the cylinder, and parallel with the barrel.

The instructor then goes to the other side of the pistol, and grasping the barrel with his left hand, and the pupil's forearm with his right hand—holds them in their relative positions, whilst the pupil places the first joint of his index fuger on to:the lower part of the trigger, and brings the second

joint of his second finger to the left side of the trigger guard ; the back of his hand is then approximately in the same plane as the outward side of his forearm (*see* "Grip").

Having accomplished this, the pupil tightens his hand to a firm grip, and keeping his arm fully extended, lowers the pistol till it points at the ground, about one yard in front of his advanced foot.

The instructor then takes up his position five yards away to the pupil's front. The instructor's eye being the mark, the pupil raises and lowers the pistol four or five times in the vertical plane, to and from the mark, without any jerk, or slackening of the muscles. The instructor meantime makes no comment, but judges whether there is any (*a*) consistent error in pointing, or (*b*) fault in lifting and controlling the pistol and arm. (*a*) The former can be corrected by moving the pistol in the hand, or adjusting the foot pointing, or by a combination of both ; (*b*) the latter, by insisting on the arm and wrist being kept straight and firm, and lifted as on a hinge at the shoulder joint, by a pump-handle like action. When the pupil can raise the pistol accurately to the mark four consecutive times, it is assumed that he has the correct grip.

The instructor will then carefully point out the position of his fingers on the butt, get the pupil to visualise this, and then, closing his eyes, try to sense his grip. The sense oi touch being possibly more acute when the eyes are shut.

When this stage is reached, the pupil returns his pistol to the holster, and with his eyes on the mark, draws the pistol and obtains the grip—proving it by raising the weapon to the mark, then verifying his aim by looking along the sights.

Exactitude of Grip.—Variations in grip mean variations in directing and controlling the pistol when firing ; *therefore the beginner, once having learned his correct grip, must be most careful always to grip the pistol in the same way.*

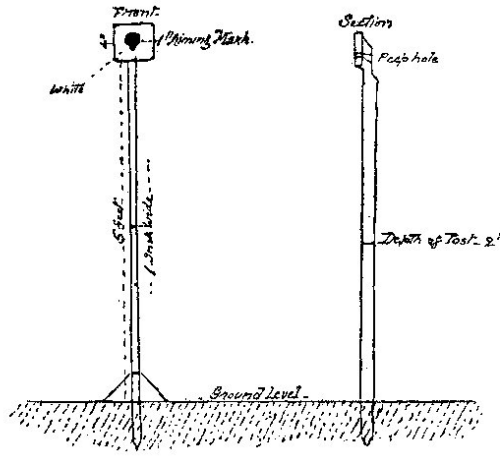
Firmness of Grip.—It is also very important that a stiff wrist and firm grip be maintained in all empty pistol practices. The pistol should be held just as if a round were about to be fired.

If this rule is not observed, the bad habit of loose holding is acquired, resulting in lack of control in actual firing.

The flesh between the first finger and thumb should at no time come in contact with the hammer; but, this part of the hand must be placed firmly against the butt, so that when firing there is no "take up" at this point.

Strength of Grip.—To control the pistol when firing great strength of grip is not required.

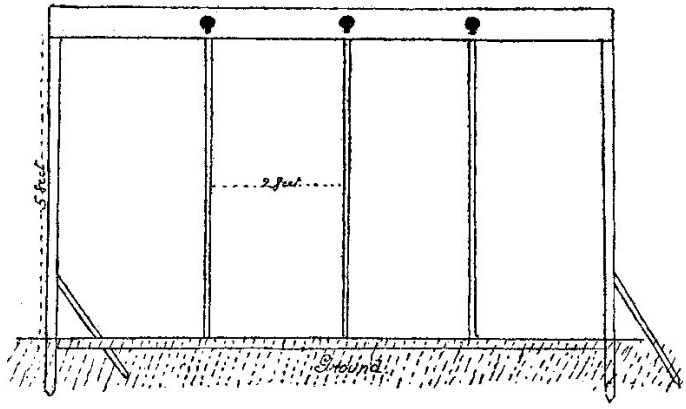
Diagram (a).



The author's aiming mark, with peephole for empty pistol practice.

The white faced stick is for training in vertical lifting of the pistol.

Diagram (b).



An adaptation of the above idea, as a permanent fixture on the training ground.

The individual's actual pressure of the hand on the butt may be up to a point just short of the degree which causes tremor of the muscles employed. It depends on the tone of the muscles as to what actual pressure can be obtained without tremor.

VERTICAL LIFT.

The lifting of the pistol in the vertical plane is important for the following reasons :—

As most of the shots fired on Active Service are directed at men who are on their feet, thus presenting a vertical target, slight errors in elevation are not so serious as lateral errors.

By the vertical lift of the pistol to the mark, vertical grouping is obtained, tending to elimination of lateral errors.

By this method of handling the pistol there is a much better chance of hitting an opponent somewhere, from his feet to his head, It is also the most effective way of directing the pistol in night firing when the target is visible, but the sights cannot be seen.

Common Faults in Raising the Pistol.

1. It will often be found that a beginner cannot manage at once to raise and lower his pistol in the vertical plane. To overcome this difficulty he should practise training his extended arm and hand to follow up and down a perpendicular line (such as the edge of a building, or upright stick—*see* Diagram, author's aiming mark)—following the pistol sights with the guidance of his eye—until his arm is trained to this vertical lift, so that eventually he may easily and automatically carry out this movement, with his eye focussed only on the mark.

2. If there is a tendency to take the pistol off the vertical line in the latter part of the lift, it may be corrected by the simple practice of standing in such a position behind a post, or a half open door, that the mark can just be seen clear of the edge. The pupil's position must be at such a distance from the door or post, that when he brings his pistol up to the horizontal with fully extended arm, the barrel will project just beyond, and almost touching the perpendicular edge referred to, in the direction in which his error lay.

3. The following is another successful way of training for precision and control in raising the pistol in the vertical

plane, and bringing it to a controlled stop on the mark, without any swing, or jerk.

With correct stance, arm fully extended, and correct grip. Take regulation aim on the aiming mark (*see* Diagram (*a*)). Keeping the arm fully extended, the muscles taut, and the wrist stiff, lower the pistol and arm as one in the vertical plane, following the sights with the eye down the white face of the post, till the spot is arrived at where it enters the ground —then, without pause or slackening of the muscles, lift the pistol in the reverse direction, bringing it again to the lowest centre part of the mark.

If the arm is controlled as described, and the body is kept erect and still, the pistol will come accurately to the mark. With practice the whole operation should soon become mechanical, the arm being raised and lowered in a pump-handle like manner ; thus practically becoming an auxiliary stock to the pistol, working on the shoulder joint as a hinge.

ELEMENTARY AIMING PRACTICE.

In training, it is useful for the pupil to know the correct amount of barrel to be seen when he is standing in the "Ready" position (*see* "Range Drill"). To find this view, assume the "Ready" position, then raise the pistol and take a regulation aim on a mark ten yards away, about the same height from the ground as a standing man's waist line. Keep the body and head erect and still; lower the fully extended arm and the pistol, in the vertical plane to an angle of about 45 degrees from the body, without *bending the wrist.* Close the eye furthest from the pistol hand, and without moving the head, glance down at the weapon.

About one-quarter of the top of the barrel will be visible to the average man.

The student should make a mental picture of the amount of barrel he can see, and then raise his eye and pistol to the mark.

If all the motions are carried out correctly, and mechanically, without any *bending of the wrist*, or s*lackening of the muscles*, the sights will come into view perfectly aligned on the mark.

When the pupil has mastered his grip, pointing, and vertical lifting, and trigger pressing should then be studied.

CHAPTER VII.

Trigger Pressing.

In pistol shooting probably over 50 per cent. of mis-directed shots are due to faulty "let off."

When employing the cooking action (*i.e.*, firing from the "Full Cock" position of the hammer) the pistol is fired by a squeeze of the whole hand, including a downward and forward pressure with the thumb.

The trigger finger, having been placed correctly on the trigger with a firm, light first pressure will automatically respond to the pressure of the thumb—thus a consistent, correct, and quite subconscious method of trigger pressing is obtained. (*See* Note.)

The first pressure is a light, firm touch of approximately 2 lbs. The sensing of this weight of touch can be aided by use of a trigger pull tester.

This is much like an ordinary pocket spring-balance, having, in lieu of the usual hook, a long straight wire, the last inch of which is bent at a right angle.

The first pressure has been given as approximately 2 lbs. The cocking action trigger pull of each of the three revolvers of regulation issue is as follows :—

Webley Mark VI . . . . . average 7½ lbs.
Smith and Wesson . . . . . " 5½ lbs.
Colt . . . . . " 5 lbs.

The trigger finger very soon acquires the sensing of the first pressure, so there is a safe margin in the remainder of the weight required to cause the fall of the hammer from full cock.

NOTE.—**Fingers and Thumbs**.—The automatic response of the trigger finger towards the thumb, can easily be tested in the following way :—

Place the tip of the index finger of the RIGHT hand on the nail of the index finger of the LEFT hand, with a firm, light touch. Then place the tip of the RIGHT thumb on the nail of the LEFT thumb.

Now, with the LEFT thumb offering slight resistance allow the RIGHT thumb to press it towards the index fingers,

at the same-time maintain the touch of the RIGHT fore-finger on the LEFT finger, and try to keep them in their first position.

It will be found that the RIGHT index finger will, not-withstanding, advance towards the RIGHT thumb.

THE "SQUEEZE" OF THE HAND.

When the squeeze is correctly performed the back of the hand does not move. This can be practised without any weapon in the hand, by placing the fingers and thumb as if holding a pistol in the correct grip, and by slowly squeezing them inwards, without allowing any movement of the back of the hand.

Much practice with the empty pistol is also necessary to acquire a consistent, steady, and progressive tightening of the whole hand.

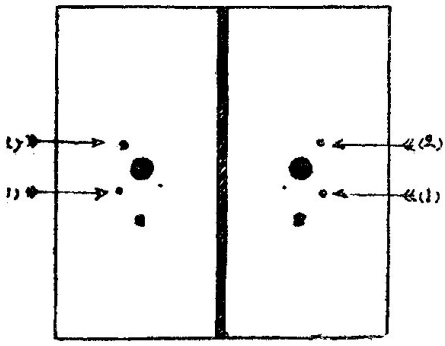
It is *most* important that the habit of progressive tightening of the hand be formed, so that the fall of the hammer occurs without any sudden muscular contraction at the end of the squeeze.

The firer must not worry about the precise moment when the hammer will fall. His whole attention should be con-centrated on directing the shot.

This is best attained by focussing the eye on a small spot in the mark, whilst continuing the squeeze of the hand.

Diagram (c).

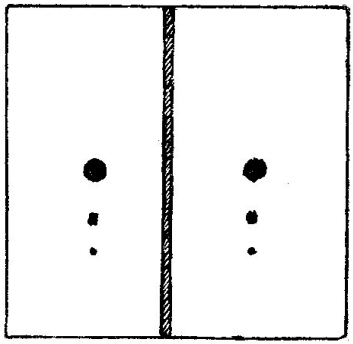
DIAGRAMS OF ERROS ON TARGETS.



LEFT. RIGHT.

(1) Outward shots caused by trigger finger pulling, right hand and left hand respectively.

(2) Combined trigger finger pulling, and loose grip or slack wrist.



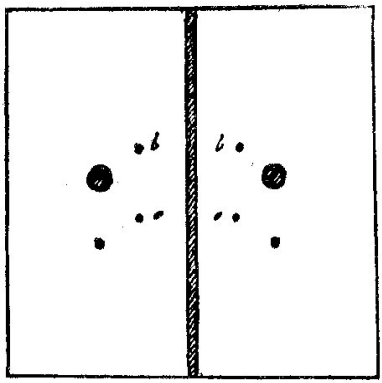
LEFT. RIGHT.

Low center shot due to

(1) Following through on the trigger, and thus pulling the muzzle down, or

(2) Premature "Let Off"; or

(3) Bent wrist.

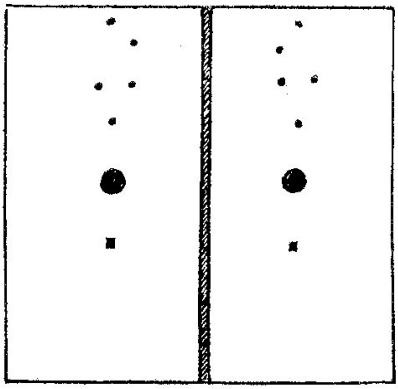


LEFT. RIGHT.

The low inward shot caused by—

(*a*) (1) "Grabbing" or (2) "Thrusting," or (3) combined twisting of the hand, and little finger grabbing.

(*b*) Sometimes caused by the pistol being too small for the hand.



LEFT. RIGHT.

(1) High shots due to late trigger pressure;

(2) or loose grip, and slack wrist;

(3) or backward movement of the body;

(4) or combination of all.

An instructor, by watching the muzzle, should know which of the above faults the firer has committed. All these faults have been deliberately achieved in actual practice, to demonstrate the analysis.

The secret of accuracy rests in keeping the attention on the mark, and trusting the hand to perform its function correctly.

One of the common causes of "flinching" and disturbing the direction of the pistol, is the attention coming away from the mark, and back to the pistol just before it fires.

The trigger finger must not continue the backward pressure after the trigger nose has released the hammer, but must instantly allow the trigger to go completely forward.

FAULTS IN TRIGGER PRESSING.

Cocking Action.

1. "Grabbing," i.e., sudden contraction of the hand, the antithesis of squeezing. The placing of the fingers too high on the trigger is often a primary cause.

Result.—Inward error.

2. Twisting inwards the lower part of the hand or too strong a pressure with the little finger.

Result.—Inward error.

3. Lack of first pressure.

Results.—(*a*) Pulling outwards, and delivering an outward shot ; or (*b*) "Grabbing" (with inward error).

4. "Bumping" or following through on the trigger and pulling downwards.

Result.—Low shot.

5. Trigger snatching—lack of first pressure, and sudden pulling of trigger.

Resu1t.—Outward error.

6. Excessive thumb pressure.

Resu1t.—High inward error.

INWARD SHOOTING.

The commonest errors on the target are those of inward shooting—*i.e.*, regarding the target as a clock face, the tendency of the error, with the right hand, is towards the centre

of the section on the 9 o'clock side of a vertical line through 6 to 12 o'clock ; and conversely on the 3 o'clock side with the left hand.

The reasons for the common error of inward shooting are :—

1. Inward Pointing.

(*a*) By individual habit.
(*b*) Turn of wrist.
(*c*) Lifting in a curved, instead of vertical line.
(*d*) Thrusting at the moment of discharge.

2. Fit of Pistol.

Too small in diameter of butt. A consequent lack of control results in the pistol twisting in the hand at the moment of discharge.

This is remedied by "packing up"—*i.e.*, adding material to the back strap of the butt, or fitting larger stocks.

3. The knuckle of second joint of second linger, behind or to the right of the trigger guard, with the consequence that the hand turns outwards, thus causing the strain of the recoil to come on the wrist.

With the weak, or loose-jointed, the recoil, taking line of least resistance, flicks the hand and pistol inwards at moment of discharge.

Hence the importance of using the nearest eye to the hand, so as to avoid having to turn the hand outwards.

Remedy, Correct practice.

4. Grabbing with the little nnger at the end of the squeeze-

The little finger occupying a strong position of leverage at the end of the butt will often greatly affect direction, if allowed to "take charge" at the moment of firing.

5. An occasional cause of inward and high shooting is the excessive pressure of the thumb on the shoulder of the pistol, causing the muzzle to move in the opposite direction.

6. Lack of firm contact of the palm of the hand with the butt, *i.e.*, loose holding.

At the moment of firing, the butt moves where unsupported, and the muzzle moves in the opposite direction.

7. Combinations of two or more of above faults.

CHAPTER VIII.

Range Drill and Positions.

For the sake of observance of correct habit in handling the pistol either before or after firing, certain positions must now be considered in detail, with a view to their adoption on a practice range.

1. The Rest Position.

The firer stands in the position of "Attention" but with the weapon in his hand, pointing at a spot on the ground, about one yard to his front.

The trigger linger is outside the trigger guard, and the pistol-arm elbow resting against his side, the forearm supported by his hip.

2. **Ready Position** (pistol in right hand).

From the "Rest Position" a partial turn to left should be made. Advancing the right foot, and fully extending the arm, pointing the pistol at a spot on the ground, one yard in front of the advanced foot, between the firer and the target.

The trigger finger must then be placed inside the trigger guard. The foot, hand, pistol, and mark, being in the same vertical plane. The eyes on the mark.

NOTE.—In cooking action practices—the pistol will be cocked when the "Ready" position is arrived at. (*Sec* Fig. 5.)

LOADING AND UNLOADING.

Correct method in loading and unloading should be a habit. In this the first thing to be remembered is that when opening, closing or loading the pistol the barrel must be kept pointing towards the target and downwards.

HOW TO LOAD.

Suppose that one is about to fire the Webley Service revolver with the right hand. When facing the target, and

Fig. 5.

READY POSITION SHOWING VERTICAL PLANE—ILLUSTRATION OF.

standing in the "Rest Position," turn half right and grasp the barrel with the fingers of the left hand, knuckles up. Treat the breech end of the cylinder as a clock face, the chamber opposite the barrel being the 12 o'clock. Place the left thumb on the fluting of the cylinder at 9 o'clock, and open the weapon. Take two cartridges at a time, holding them by their base, between the thumb and tips of

Fig. 6.

LOADING THE REVOLVER.

the first and second fingers of the right hand and insert these rounds in the 8 and 10 o'clock chambers.

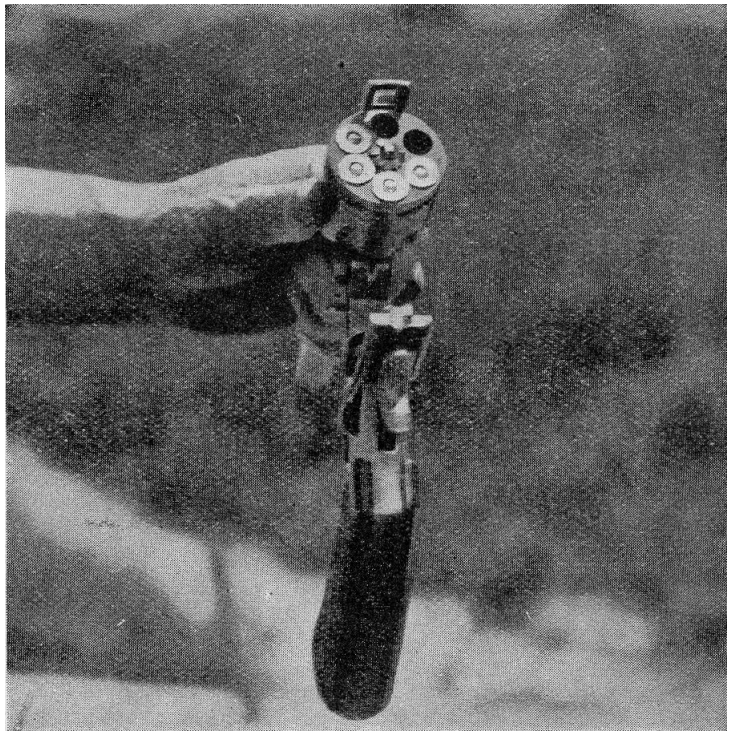
Take two more rounds and then rotate the cylinder anti-clockwise with the left thumb, so that the next two empty chambers occupy the 10 and 8 o'clock position, and the two just loaded rest at 6 o'clock and 4 o'clock. Repeat the operation. When the allotted number of rounds are in the

Fig. 7.

CLOSING THE REVOLVER.

chambers held the barrel firmly so that it does not move. Raise the butt till the pistol closes and the barrel catch engages. Retain the grasp of the butt with the firing hand,

Fig. 8 (a).



LOADING.

NOTE.--In emergency the pistol can be closed when only partially loaded, and each load will com consecutively under the hammer.

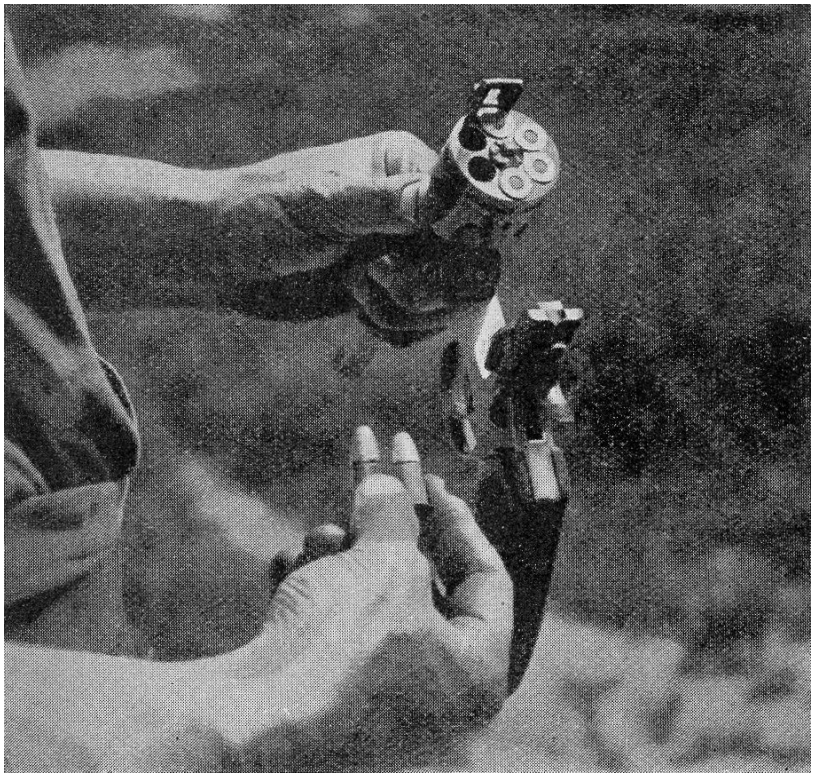
and assume the "Rest" position, the muzzle throughout being kept pointing towards the target and downwards.

See Figs. 6 and 7.

(*Also* Figs. 8 (*a*) and 8 (*b*), 9 (*a*) and 9 (*b*).)

NOTE.—The advantages of loading by this method are, that in emergency, the pistol can be quickly closed and though only partially loaded, the cylinder will have the loaded chambers in such a position that a live round will come under the hammer the first time it falls. It must always be remem-

Fig. 8 (b).



LOADING.

NOTE.--The empty chambers are moved into position as their rounds approach them.

bered that the 10 o'clock chamber is the first to come under the hammer after it has been cocked, The round or chamber which is in alignment with the barrel at the moment of closing the pistol, will be the last to come under the striker. When this system of loading has become a, habit, one will be able

to load more easily by sense of touch in the dark, or when the eyes must be kept on an approaching opponent.

Fig. 9 (a).

CLOSING THE REVOLVER THE RIGHT WAY.

NOTE.—The butt is being lifted to the firmly held barrel.

LOADING—GATE-ACTION PISTOLS.

In the case of the gate-action revolvers—the "Colt" New Service .455 and the "Smith and Wesson" .455, the cylinder catch on the left side of the body is pulled back in the former, and pushed forward in the latter; the cylinder being made to fall outwards to the left by finger pressure on the opposite side. The principles of the method of loading described can be applied; but to close this type of pistol, a smart turn of the wrist to the right is given with the firing hand when all six chambers are loaded. This twist must be made without imparting any forward thrust to the weapon,

or the rounds will fall out, or prevent the closing of the cylinder. If this type of revolver is loaded with less than six rounds, the finger and thumb of the left hand should

Fig. 9 (b).

CLOSING THE REVOLVER THE WRONG WAY.

NOTE the following faults:—
The barrel is being lifted to the butt. A cartridge is started from the chamber, and has engaged with the shield. The hammer is at full cock, the finger on the trigger.

be used, so that in closing the pistol the empty chamber next to the first round to be fired is in alignment with the bore.

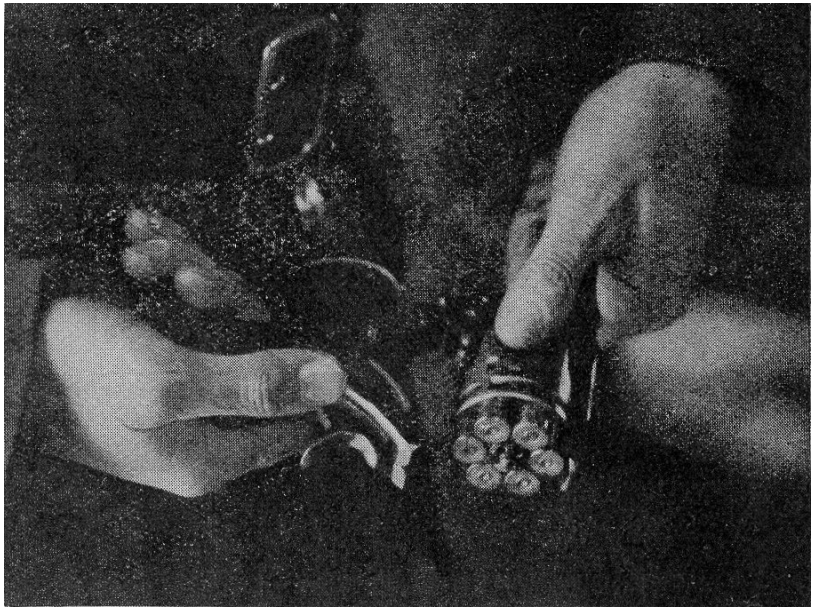
Fig. 10.

THE CORRECT POSITION WHEN UNLOADING.

TO UNLOAD.

To unload the Webley Service revo1ver.—Assume the loading position, break the pistol slightly then turn the end of the butt inward towards your body, slightly elevate the muzzle, and break fully with a smart jerk, so that the empty cases fall clear of the weapon, otherwise a case, or cartridge, may get underneath the extractor and the pistol is then jammed, and for the time being out of action. (*See* Figs. 10, 11, 12.)

Fig. 11.



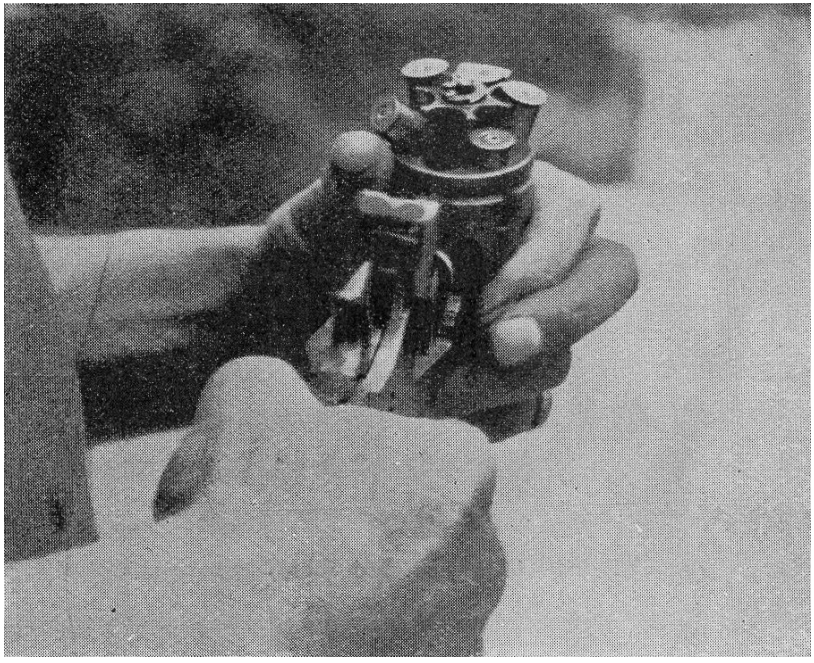
UNLOADING THE RIGHT WAY.

HOW TO CLEAR A JAM.

Hold the barrel with the left hand, as in loading. Tum the round to the 10 o'clock position. Hook the second finger of the right hand under the extractor, near the 6 o'clock chamber, and pull it out as far as possible, at the same time place the tip of the thumb of the same hand against the

breech end of the barrel strap. Now remove the left thumb from the cylinder, hook it into the trigger guard, and squeeze the barrel and trigger guard towards each other, point the muzzle upwards so that gravity will assist the misplaced round, or empty case, to fall out. If it does not drop out,

Fig. 12.



UNLOADING THE WRONG WAY.

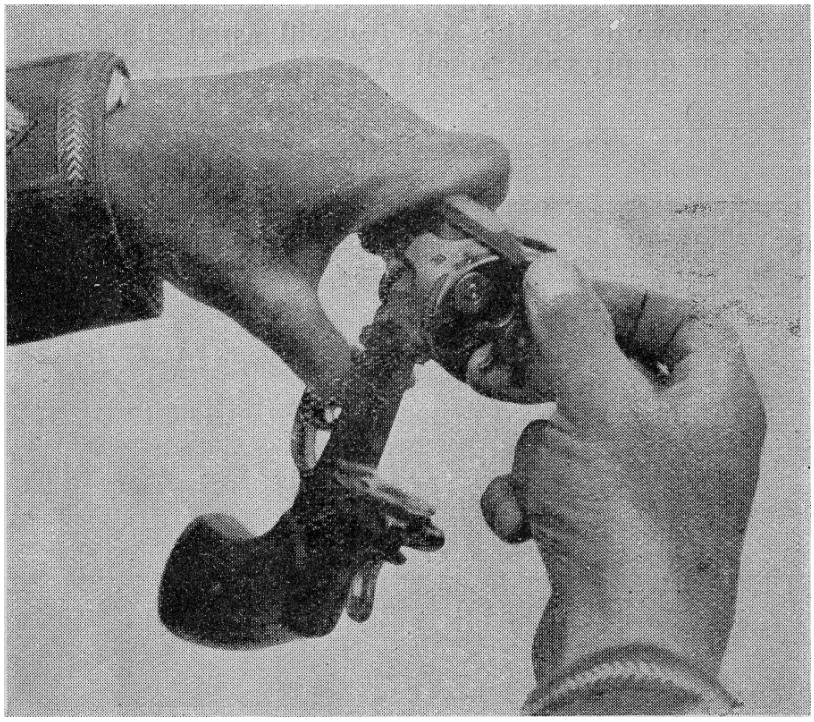
NOTE.—One of the empty cartridge cases has dropped back into the chamber under the extractor head. The hammer is cocked.

place the nail of the index ringer under the rim of the case, and lever it out, at the same time keep the extractor held out as far as it will go. (*See* Figs. 13 and 14.)

Practice with empty cases and dummy cartridges.

In the case of Gate-action pistols, in unloading and in clearing jams apply the principles already described.

Fig. 13.



CLEARING A JAM.

The 1st stage.

MANIPULATION.

How to Cock the Pistol.

When employing the cooking action, the pistol should be cocked by the thumb of the "firing" hand.

Assuming the pistol is held by the hand about to be used, and in the individual's correct grip, the following is the procedure :—

(1) Remove the trigger finger from the trigger, and press it against the inside forward part of the trigger guard.

(2) Place the first phalange of the thumb on the comb of the hammer. (*See* Fig. 18.)

Fig. 14.

CLEARING A JAM.

The 2nd stage.

(3) Whilst maintaining the forward pressure of the trigger finger against the trigger guard, draw the hammer back with the thumb until the nose of the trigger engages in the hammer "bent." The hammer is then at full cock.

(4) Return the thumb to the "Grip" position, and then replace the finger on the trigger.

Throughout the operation the tips of the other three lingers should retain their position on the butt, and the pistol be kept pointing forward and downward.

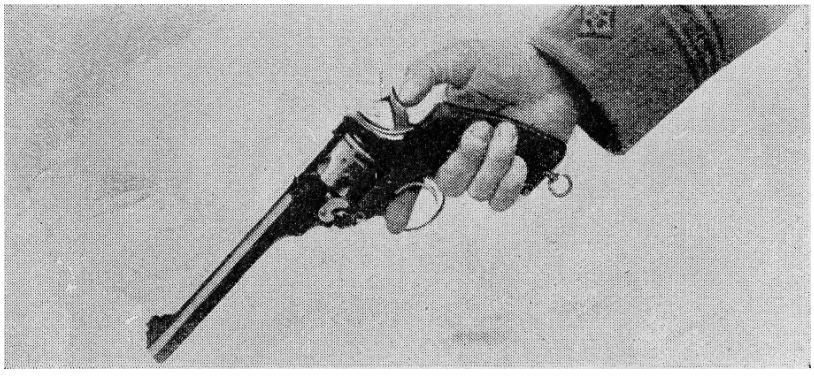
How to Uncock.

The occasion may arise when the ability to lower the hammer from the full cock to the rebound position without fumbling, or risk of accidental discharge, is of *vital importance.*

The man who uses a revolver should never snap the hammer down from full cock merely for the sake of getting it down to the rebound or safety position.

He should place the thumb firmly on the hammer, having at the same time a good hold on the butt, and his trigger finger *clear* of the trigger.

Fig. 15.



COCKING THE REVOLVER.

Holding the hammer back as far as it will go, he should then press the trigger with his trigger ringer, and allow the hammer and the trigger to go slowly forward under control.

The pistol throughout must be kept pointing downward and forward.

(*See* Fig. 16.)

The firer should have a thorough detailed knowledge of his weapon, and his hand should be so familiar with it, that all the above-described manipulations can be carried out by sense of touch only.

He should make a habit of remembering if a loaded pistol is at full cock, and he lowers the hammer, that on re-cooking, the cartridge to which he lowered the hammer will have passed by the firing hole.

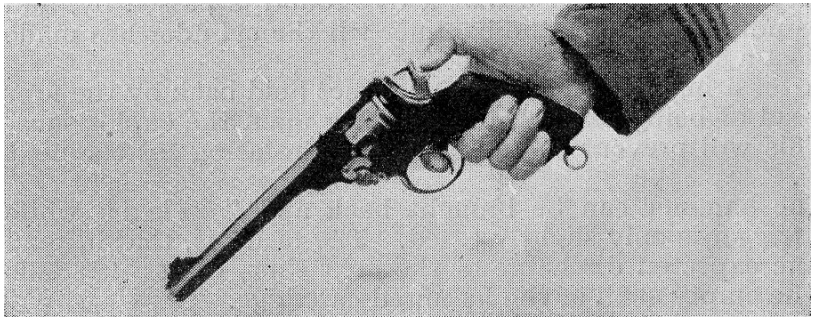
If he has fired several rounds and has not reloaded, it is quite likely, if he has not trained himself to note what has occurred in lowering the hammer, and also how many rounds have been fired, that the hammer will fall to an empty case when he meets an attacking enemy.

The man who uses a shot gun does not make the mistake of attempting to re-fire the barrel he has just emptied!

The remedy is, such familiarity with the weapon and correct habit of manipulation, that the firer will instinctively note what has occurred, and know how many rounds he has fired.

When a live round passes the firing hole, the firer can "quarter cock" or draw the hammer back just far enough

Fig. 16.



UNCOCKING THE REVOLVER.

to allow the cylinder to turn freely. He can then rotate the cylinder, till the loaded round arrives at the point immediately before the chamber in front of the hammer, *i.e.*, at 10 o'clock. In this position the next time the hammer is raised and released, this cartridge will come in alignment with the barrel and be fired.

(In applying above to the "S. & W." Service revolver, read 2 *o'clock.*)

The cylinders of most makes of revolvers turn clockwise, left to right, but in the " Smith and Wesson " Service .455, it turns the opposite way.

"Breakdown" revolvers, such as the Webley, are sometimes opened and closed when the hammer is at full cock. This should never be done, as the pawl and ratchet become

burred, or injured by this abuse, with the result that the chambers fail to align perfectly with the barrel.

The hammer in all cases should be down when a revolver is opened, or about to be closed.

Closing a loaded pistol when the hammer is at full cock is dangerous.

When loading with less than six rounds, it is important to make sure that the cylinder catch engages in its slot, so that the first round to be fired will be at 10 o'clock as the pistol is closed.

This detail is often neglected, and the pistol closed so that the division between two chambers is opposite the bore.

If the pistol is returned to the holster in this condition, the chances are that the cylinder will be moved at hazard, when in contact with the holster, or during the act of "drawing," and the result may be that the hammer falls to an empty chamber, or else that a live round is passed by, and does not come under the hammer till the cylinder has made almost a complete revolution.

After firing, the trigger is sometimes held back by the firer instead of being released immediately upon the explosion. This will prevent the cylinder from rotating for the next shot.

The hammer can be brought back and "cocked" while the trigger is only slightly eased. The result is, that instead of the expected discharge of the next shot, the striker falls on the empty shell of the last fired cartridge.

Any of the above-described ignorant or careless manipulations of the weapon, may result in the pistol failing to give the expected defensive shot at a critical moment in actual fighting.

CHAPTER IX.

Point of Aim.

The point of aim is the centre of the waist line, when firing at a standing man.

If only part of the man is visible, the principle must be applied of directing the shot at a spot two-thirds down from the top, *e.g.*, a man's face being-the target, shoot at his mouth.

In dealing with the full figure target, the object should be to place the shot somewhere within a few inches from the centre of the waist line, *i.e.*, the part of_the body known as the "Mark" in boxing.

TWO METHODS OF FIRING.

There are two ways of firing the pistol to be studied :—

No. 1.—Snap shooting.

No. 2.—Deliberate aim.

These again are each divided into two :—

No. 1.—Snap shooting employing the cooking action, and shooting (*a*) by sense of direction, known as the "Off Hand" method; (*b*) Snap shooting, employing the trigger action when shooting by sense of direction, and firing a series of shots with extreme speed, known as "Rapid Fire" method.

No. 2 (*a*) Deliberate aim, using the cooking action and with fine alignment of sights and employing both hands to control the pistol when lying down or shooting over cover, known as the " Prone " method ; (*b*) Deliberate aim, using the cooking action when standing, and employing one hand only, known as "Deliberate Aim" standing.

The "Off Hand" Method.

At all short and medium ranges effective shooting on active service can best be accomplished without any delay for fine alignment of sights. This is the instinctive action of a man when firing his revolver in self~defence, and one to which he will revert when suddenly confronted by an attacking enemy,

To carry it out effectively, he should be trained to speed in use of the "off hand" method, the foundation of which is perfect co-ordination and control of the nerves and muscles brought into use when pointing with the index finger.

Probably by far the larger majority of pistol shots are fired on active service at medium ranges, from 5 back to 20 yards, at a rough estimate.

The well-trained firer can cock and fire his pistol effectively in one second, He will, therefore, generally have sufficient time to use the cooking action, when firing over these ranges.

Wherever there is time enough, the cooking action of the revolver should be employed in preference to the trigger action, because with the former, better control of the weapon is obtained.

The "off hand" is, therefore, dealt with first—as it is the method best suited for use on most occasions when the pistol is fired on active service.

To obtain effective shooting by this method, the details of correct grip and angle of wrist, accurate instinctive pointing, and sound trigger pressing, as already described, must be mastered, and combined with a perfect timing of trigger pressure, so that the hammer falls the instant the pistol arrives at the mark.

Detailed Directions.

Obtain the correct grip. Stand firmly on both feet obliquely to the mark. The foot nearest the pistol arm in advance, and pointing in the direction of the target. (*See* "Stance," page 27.)

The body erect, and well-balanced.

The arm fully extended, with the pistol pointing at a spot on the ground about one yard in front of the firer, and directly between his forward foot and the target.

Cock the hammer with the thumb of the pistol hand.

Focus the eye sharply on the mark. With arm kept fully extended, firm grip, and stiff wrist, raise the pistol steadily in the vertical plane.

As the pistol is coming to the mark; gradually tighten the pressure of the hand (*see* Trigger Pressing, page 36), so that the hammer falls at the exact moment the pistol comes up to the line of vision, without any pause for fine alignment of sights.

The arm should be kept fully under control, and brought to a gradual stop without any jerk.

This controlled lift, and timing of pressure should, as soon as possible, become a subconscious action, whilst the firer's attention and gaze are concentrated on the spot he wishes to hit.

In the early stages of training, each shot should be fired in two seconds from the moment the lift of the pistol is begun. The arm should practically become an auxiliary stock to the pistol, working as on a hinge at the shoulder joint.

The acts of lifting the pistol to the mark and gradually tightening the pressure of the hand, should blend one into the other, so that, as the pistol comes to a steadily controlled stop at the line of vision, the fall of the hammer occurs without delay, and without any disturbance to the direction of the barrel.

The instant after the hammer has fallen, the trigger finger should release the trigger, and allow it to go completely forward.

When firing consecutive shots by this method, the thumb should automatically come to the hammer directly after each round is fired, cocking the hammer as the revolver is lowered.

The weapon is then immediately raised again to the mark, and fired.

Between shots, the pistol need not be lowered more than about a foot below the line of vision—*i.e.*, just enough to give time for re-cooking, and sufficient distance to impart the advantage of lifting in the vertical plane.

Advantages of the "Off-Hand" Method.

The off-hand method has the advantage of producing vertical grouping and reducing lateral errors. As probably 90 per cent. of pistol shots fired in action are fired at men who are on their feet, it will at once be realised that the method is of value in quick shooting at the human target, for in its application there is a considerable margin for error in elevation.

This method of directing the shot by the pointing sense is also the *practical* one for shooting in bad light, or at night —when the object can be seen, but the pistol sights are not visible.

Practice.

Extreme speed and practical accuracy can be obtained by systematic empty-pistol practice, together with occasional firing.

For empty pistol practice, it is a good plan to place a small mark, such as a disc of white paper, about the same in diameter as that of the ordinary cedar pencil, on a mirror, and level with the eyes. The mirror should be placed in such a position that a good light will fall on the firer, *e.g.*, in centre of a window, the firer placing himself about two yards from it so that he can easily see any error of direction, or vertical lifting. It is essential that the mirror be set in the same parallel plane as the firer, or he will not be able to observe accurately the results of his practice.

To acquire the correct timing of the trigger pressing for discharge of the pistol at the right instant, much practice with the *empty* pistol is needful. This must be combined with careful noting of that short period of time, and brief travel of the pistol, from the commencement of the "squeeze off" to the instant the hammer falls.

Common Faults in "Off-Hand" Firing.

1. Incorrect stance.
2. Arm not fully extended. ,
3. Wrist (*a*) bent, or (*b*) slack.
4. Loose hold.
5. Incorrect grip.
6. Finger on upper part of trigger.
7. Following up sights with the eye.
8.. Use of wrong eye.
9. Pistol canted.
10. Holding on to aim.
11. Wrong timing of trigger pressure.
12, Thrusting shoulder and arm forward at moment of discharge.
13. Flinching.
14. Insufficient thumb pressure.
15. Lifting with slack arm, and stopping with a jerk.
16. All trigger pressing faults.

Off-Hand Method—Common Faults.

Analysis of Corrections.

1. *Stance.* (Refer to page 26.)

2. *Arm Extension.*—In early training this must be strictly adhered to, as the variations in pointing with a bent arm cannot be easily followed and corrected at this stage.

3. *Wrist.*—(*a*) A beginner is often quite unaware of the fault of gradually bending his wrist down as he raises the pistol, and cannot account for the low shots thus resulting. If he gave a blow with his hand bent down at the wrist, he would soon gain a severe lesson—by a strained or sprained wrist.

To overcome this fault he should remind himself that, just before the beginning of the lift, his hand ought to be in the same position in relation to his forearm, as he would have it if delivering a punch.

(*b*) A slack, or limp wrist at the moment of the discharge of the pistol, means lack of control, and generally a high shot.

4. *Loose holding* results in lack of control at the moment of firing.

5. *Grip.*—Careful attention must be given by the beginner to the exactitude of his grip—and he must beware of changing it between shots when cooking the pistol. To prevent this error he must develop the ability—and habit—of keeping the three fingers firmly on the butt, and in their correct positions.

Impressions out in the stocks to fit the ends (or first phalanges) of his second, third and fourth fingers are a great aid, and act as a key to his correct grip.

6. *Trigger Finger.*—The trigger finger misplaced too high on the trigger is a fruitful cause of flinching. When the partially trained finger is beginning to acquire the sensing of trigger pressure, if placed too high on the trigger, it encounters a disproportionate strain and finds a lack of response—a sense of delay. The result is, that just when the discharge should take place, the attention of the firer is, at this critical moment, snatched away from the mark and brought back to the pistol.

Usually a moment of suspense ensues, then a "grab" and a misdirected shot.

7. *Following up Sights.*—During the earliest stage of training with the empty pistol, if it is found that the pupil does not lift his weapon in the vertical plane, it is sometimes necessary for him to follow the pistol sights with his eye, keeping them aligned whilst attempting to correct his fault. But when he has left this stage behind, and comes to actual firing, it is essential that he keeps his attention on the mark, or flinching will most probably occur.

8. *Wrong Eye.*—If the eye furthest from the pistol arm is used, the pistol hand will prove to be bent outwards, so as to bring the barrel in alignment.

In the case of a weak or loose-jointed beginner, the recoil not being directed into the frame of the forearm, takes the line of least resistance and flicks the hand and pistol inwards at the moment of discharge. This result may not apply to the strongly muscled man, but in these days of short time for training, or practice, it is a detail worthy of attention.

9. *Pistol Canted.*—The necessity of keeping the backsight level, applies to the revolver equally with the rifle. If the weapon is canted, inaccuracy of direction must result.

10. *Holding on to Aim.*—Vital loss of time in late trigger pressure and consequent errors, are liable to occur if the correct method is departed from. At short and medium ranges the man armed with a revolver is at no advantage over the man armed with a rifle, unless he uses his pistol as it ought to be used, and thus commands the advantega of the weapon which, of the two, can be brought more quickly into effective action.

11. *Wrong Timing of Trigger Pressure.*—Bad timing of the pressure required for the discharge may cause error of elevation. When it results in premature firing, as the pistol is approaching the mark, a low shot on the target may occur. But if the bad timing amounts to late trigger pressure, the pistol will be up to or even above the mark, and other errors are liable to creep in, *e.g.*, trigger snatching, grabbing, &c., with vital loss of time.

12. *Thrusting.*—Thrusting forward the shoulder and arm at the moment of firing (probably in anticipation of recoil) generally results in the shot being directed inward and downward, *e.g.*, 8 o'clock shot with *right* hand. It is a form of flinching.

The firer should exercise his determination until he overcomes this fault if it exists, and from the first should be vigilant to prevent it.

13. *Flinching.*—Flinching is caused by the firer's attention being on the pistol instead of on the mark at the moment of firing. It involves many of the faults separately described. The recoil of the Service pistol is so slight as to be hardly noticeable, if the details of the method of firing are correctly observed.

14. *Insufficient Thumb Pressure*.—Will often result in trigger-pulling, and a low outward shot.

15. *A slack arm and limp wrist* raised and suddenly brought to a stop with a jerk results in a high shot, through an upward throw of the muzzle.

FLINCHING.

People with rapid reflexes are likely to flinch. The more rapid the reflex action, the more erratic the shot.

Though fear of recoil is supposed by many to be the cause of *flinching*, more probably the nerve-jar occasioned by the sharp report of the pistol is the main *actual* cause.

The sound-wave emanating from the explosion of the Service pistol cartridge charge, is an extremely steep one. It gives a shock to the auditory nerves similar to that of a "box on the ear."

Individuals possessed of the nervous temperament, or who have suffered long strain, &c., in the war, will find that the use of "ear defenders" is a great help in overcoming this tendency to flinch. (There are two makes of "ear defenders"——"Mallock Armstrong," and "Elliot's." The former appears to be the most popular.)

Apart from such aids, the main effort should be to force oneself by exercise of will power to keep the whole attention fixed on the mark. Help may be obtained by endeavouring to see some ill-defined spot on the target near the mark.

The use of dummy, or blank rounds, interspersed with live rounds, assists the flincher to overcome his lack of nerve control. He will, by this means sometimes discover just what his fault is, by being able to observe the sudden grab or thrust on the pistol when the hammer falls to a dummy, instead of the expected live round.

The .22 cartridge makes little noise, and gives practically no recoil. This also applies to the "gallery" cartridge which is loaded with a light charge of propellant, and a spherical bullet.

In some cases their use with a revolver is a valuable aid in bridging over the flinching stage.

Most of the preliminary instruction, and first firing, can be carried out with advantage, using a .22 calibre revolver.

With good makes of revolver and ammunition, most accurate shooting can be done, and at small expense.

Fu1l-size weapons of the break-down pattern are better than miniature pistols, as they more nearly approach the balance of the Service weapon.

All .22 calibre pistols require frequent cleaning when in use. To retain accuracy, a wipe out should be given after every twelve shots.

Miniature Rifle Practice.

The high strung individual who finds he flinches badly when firing the Service revolver, can help himself to obtain control of his nerves by daily firing with a .22 calibre rifle.

The practice should be one which will call forth his utmost effort of concentration in aim, and perfect trigger-pressing, such as attempting to fire consecutive shots into a very small mark at short range; *e.g.*, he should get down at ten yards from a small white card, and place a shot as near the centre as possible, then fire a group of five, taking the first shot hole for the mark.

As a more advanced exercise, he may start by placing a centre shot, and then follow on by tracing a small circle of equally spaced shots round that centre.

The extreme effort of holding on to an exact shot, and getting a good trigger release, is a fine training for nerve control.

A Case of Flinching and its Cure.

A pupil—at the end of his first morning's firing instruction, was dissatisfied and discouraged by his practice.

The instructor in charge of the detail to which he belonged reported the case as one of extreme nervousness which resulted in "flinching" so that he failed to "group."

The pupil was put through the empty pistol test for "off-hand" method, the result proving that he could easily pass it.

A Full Figure target was then put up at 10 yards range, marked with a 3-inch square white patch in the centre of the waist line.

In the middle of this was a small piece of brown paper, about the size of a threepenny piece, and of irregular shape.

The pistol was then loaded with six dummy rounds, handed to the firer, and he was told to "carry on"—as he did when going through the empty pistol test—but taking the small brown paper patch as his mark. He was urged to concentrate his attention on this patch, and told that later he would be required to draw a diagram of its outline.

He "carried on"—not as when he knew the pistol was empty, but, thinking it loaded, perceptibly flinched each time the hammer fell.

Taking the pistol from him, and breaking it open, the instructor showed him that each round was only a dummy.

Replacing five of them, a live round was slipped into a chamber as well, without his noticing the change.

He was again told to "carry on."

Holding the pistol correctly, he fired without flinching, his eyes concentrated on the brown patch. He had full confidence in those dummy cartridges!

Suddenly "bang" went a live round, and the bullet cut the low centre part of the white patch. ·

"Did I do that?" he asked.

"It looks like it" was the reply.

Discovering the deception practised on him, he flinched at the next fall of the hammer.

Again the pistol was taken from him, and the five dummies and empty fired case ejected, and shown to him.

Once more the pistol was loaded with dummies and one live round—without his knowledge of the latter.

A similar performance resulted—no flinching, and an unexpected bullet in the patch.

He then remarked, "Now I've got it—let me have no more dummies."

Live rounds were then put into the pistol. He fired his next two consecutive shots—hitting the white patch without any flinching.

By this means a cure was effected, and complete confidence established.

NOTE.—If the beginner is in poor physical condition, there will be great difficulty for him in obtaining control of the pistol.

The weak and loose-jointed individual should first of all brace himself up—stand erect with shoulders back and head up—made sure of a good firm footing, and push the pistol arm out.

To impress such a pupil with the importance of pulling himself together, it is quite a good plan for the instructor to test his firmness of stance, by meeting his extended arm hand to hand—with a thrust in the direction of its axis. He may also with advantage, when the pupil is carrying out empty pistol practice, suddenly grasp the barrel from underneath—just when the pupil has the pistol up at the horizontal

—and push the weapon upwards and backwards, imitating as closely as possible the behaviour of the pistol at the moment of discharge.

Muscle exercises systematically practised for a few weeks, will generally do wonders for the physically slack, or weak man.

He should be careful not to overtire or strain himself when carrying out his exercises.

He should also pay particular attention to always handling the empty pistol with the firmness of grip and muscle contraction whiich should be applied when actually firing.

He must guard against *neglect* of correct way of handling the pistol for safety, for the man who easily tires, is very apt to suddenly go limp, and drop his arm down by his side, unconsciously pointing his pistol down his leg or at one of his feet.

Patience, perseverance, and wisely applied exercise and practice, will quickly give good results if the beginner keeps keen enough to follow up the work systematically.

The keen man will carry his gun whenever possible, and frequently draw it and do a little empty pistol practice.

Tests.

Before firing ball ammunition those undergoing instruction should be tested for proficiency in handling the empty pistol. The test to be carried out at a distance of 5 yards between firer and instructor. The mark being an aiming disc held to the instructor's eye. Four out of six aims should be accurate.

The test to be applied to both the "Deliberate" and "Off-Hand" methods. In the latter two seconds from the word "Fire" will be the time limit for each "Shot."

Weapons should be proved before all empty pistol practices and tests.

"Off-Hand" Firing Instruction

Preliminary Practice.

For this purpose a 4 ft. by 4 ft. white target is required, with a 4 ft. by 2 inch strip of brown paper placed down the centre parallel with the right and left edges of the target. (*See* Diagram (*d*).)

The first endeavour of the beginner should be to place a succession of shots on the 4 ft. vertical line at 10 yards range.

The object is to keep the pistol moving up this vertical line, at the same time applying the squeeze-off so that each shot hits somewhere on the line. In this way the beginner will learn to sense the timing, and coordination of lift, squeeze, and "let off" with a loaded weapon.

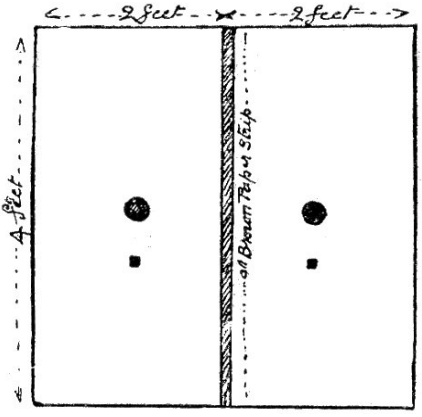
After a few shots fired in this way anywhere on the line, or within an inch or two of it, he should try to place his shots in the lower half of the line, *i.e.*, the first 2 ft. of it.

Having succeeded in doing this, he is ready to attempt a group on the grouping target.

THE GROUPING TARGET

For grouping practice a white 1 ft. 11 in. by 4 ft. target: is required with a 2 in. black aiming mark in its centre, and a square 1 in. black patch six inches below it at 6 o'clock. (*See* Diagram (*d*).)

Diagram (d).



For

Left hand. Right hand.

COMBINED PRELIMINARY AND GROUPING PRACTICE TARGET.

(a) The whole is 4 foot square, divided by a 2-inch by 4-foot brown paper strip, placed vertically through the centre. This line is the mark in the Preliminary Practice.

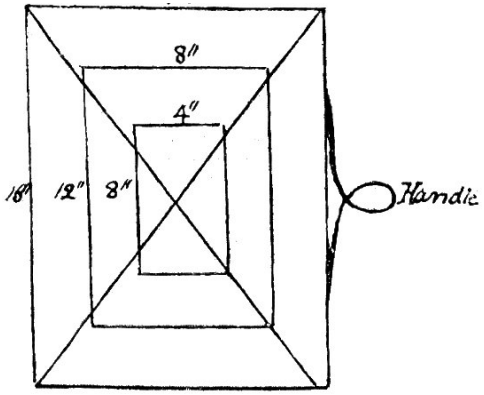
(b) The two 4-foot by 1 foot 11 inches white bull's-eye targets on each side of the vertical line, are grouping targets for the right and left hands respectively.

The aiming mark on each side, is a 2-inch black bull's-eye. The black 1-inch patch, placed 6 inches low centre, is placed

there to remind the firer that his "Let Off" squeeze must be started as this point is passed.

NOTE.—The above target has the advantage of economy in material, and time, and is suited to vertical grouping.

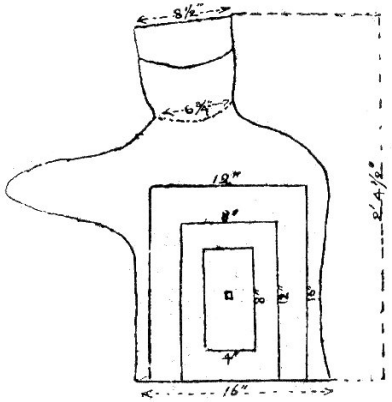
Diagram (e).



WIRE CONCENTRIC RECTANGLE GROUPING MEASURE

This is made of wire, and is to be used for measuring groups of shots. It is to be placed vertically on the target with its centre on the point of mean impact of the group. The lateral lines indicate the size of the group. *e.g.*, all shots contained by the centre rectangle 4 in. by 8 in., equals a 4 in. group.

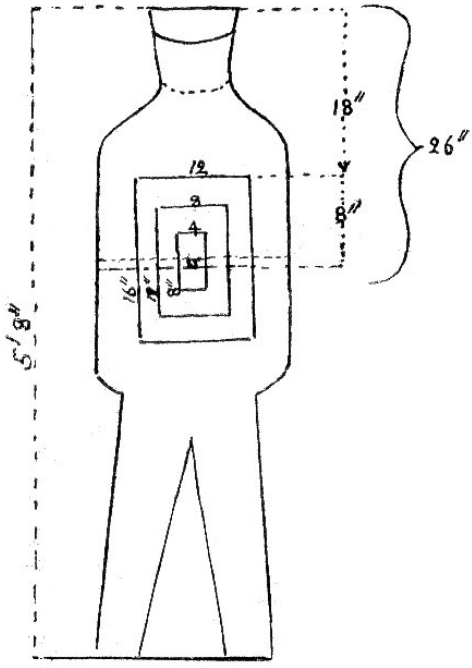
Diagram (f).



KNEELING FIGURE TARGET.
Showing correct position of the Rectangles.
The lines to be invisible from the Firing Point.

NOTE.—For figure targets, "b1ue-grey" paper is more suitable than brown, or khaki, in training, as it represents the enemy's uniform colour.

Diagram (g).



FULL FIGURE TARGET.
Showing the correct position of Belt-line and Rectangles.

"OFF-HAND GROUPING."

The object now should be strictly to carry out the method and place a group on the centre of the target. The square black patch below the aiming mark is placed there to remind the beginner, that as the pistol passes it, he must begin the squeeze off.

The importance of the time factor should be carefully observed, and each shot fired well inside of two seconds from the command "fire."

All the firers' faults should be noted (*see* Common Faults) and as far as possible remedied.

Having succeeded in making a group of shots which can be contained in a 16 by 12 rectangle placed vertically

on the target, the following practice will be found of value in acquiring more speed and facility in firing by the "off hand" method.

TIN SHOOTING.

Standing with loaded revolver—in the "ready" position at the 10 yards firing point. Cock the pistol, have some one close-up to your flank, throw empty tins to your front, so that they pitch about 8 to 10 yards away. As each tin nears the spot on which it is going to land, raise the pistol and firing "off-hand" endeavour to catch it with the bullet at the half volley.

This is a most useful practice.

The short time allowed for taking the shot results in real instructive shooting.

The firer can observe the strike of each bullet, and note his common error.

Another excellent practice is that of firing quick successive shots "off-hand" at a tin, attempting to keep it rolling.

In all this quick shooting there is a liability to the common error of low shooting, due to grabbing and sometimes to the movement of the object away from the spot where it landed, the moment the pistol was pointed at it, and during the short interval of time occupied by delay in firing.

Other causes of low shooting are those of premature "let off," ""bumping" through on the trigger, and "thrusting" (*see* Common Faults, page 60).

APPLICATION PRACTICE.

After firing the above practices, the beginner should be able to apply his shots.

The following application practice should be fired at the kneeling figure target—marked as on Diagram (*f*).

Each shot should be fired by the "Off-Hand" method—in one second from the command "Fire."

With the revolver loaded with five rounds—the firer at the 10 yards firing point will assume the ready position, cock the pistol, and on the command "Fire," raise the pistol and squeeze off his shot. He must then release the trigger, and lower the pistol to the ready position, cocking the hammer as the pistol descends

CHAPTER X.

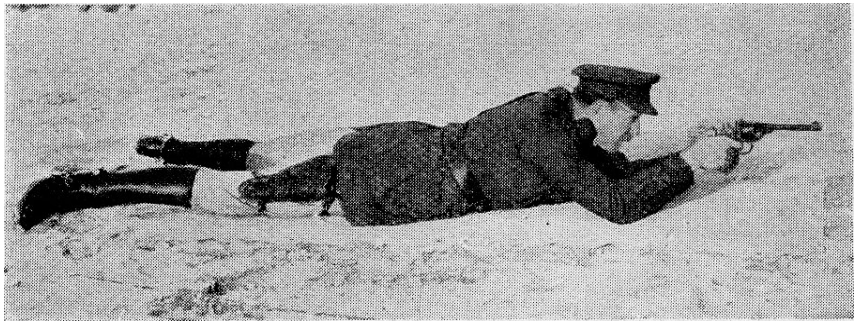
Deliberate Aim.

In war shooting, targets are frequently moving, or only visible for a few seconds.

This means that there is but little time in which to fire one or more shots.

The target may also be one which is talking offensive action, such as bomb throwing, or firing at rifle.

Fig. 17.



DELIBERATE AIM (Prone).

The importance of time as related to revolver shooting must, therefore, be a prominent factor in training the war shot. Time limit for shooting is frequently set by the enemy, hence, in employing deliberate aim for long ranges—20 yards and further, prolongation of aim in firing must not occur.

The first "catch" of the sights together is generally the best under *active service* conditions.

In *training* for "deliberate aim," fine alignment of sight and perfect "squeeze off" are essential.

Each shot should be fired within 2½ seconds from the command "Fire!"

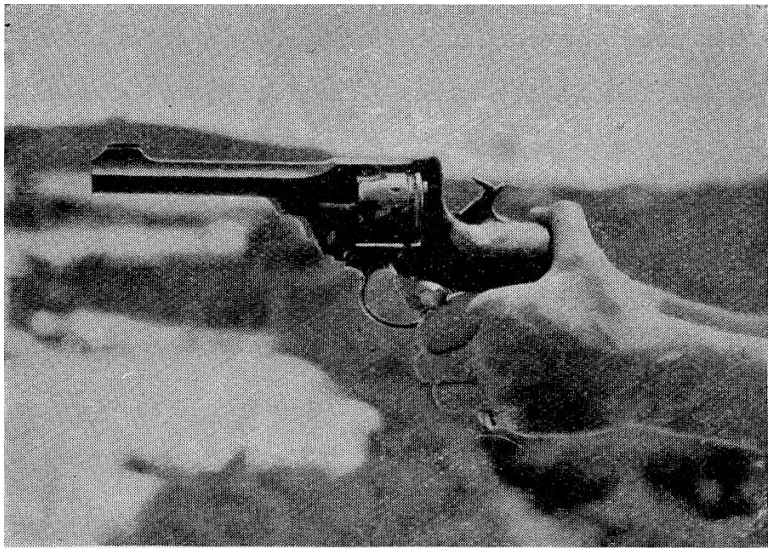
Two ways of firing with "deliberate aim" should bE mastered.

i. **"Prone Position, with two-handed Grip.**
ii. **"Standing" with the normal one-handed Grip.**

1. **Deliberate Aim—Prone, with two-handed Grip.**

The "*Prone Position*" will be dealt with first, as, apart from the fact that it is essentially suitable to active service

Fig. 18.



THE TWO-HANDED GRIP.

conditions, it is productive of remarkably early control of the weapon, even in the hands of the only partially trained, thus imparting to the pupil confidence in his revolver.

Position.

The pupil lies, on his stomach, legs straight. The body straight behind the line of fire. The chest raised and supported by the elbows. The pistol as far forward from the eye as possible without strain. (*See* Fig. 17.)

The two-handed Grip.

With the pistol held in the correct grip by the pistol hand —place the first joint of the thumb of the other hand over the second thumb-joint of the pistol hand. Close the four Fingers of the outside hand over the three fingers on the butt. (*See* Fig. 18.)

To Fire.

Raise the pistol and take first pressure. Align sights-restrain the breathing, and apply the squeeze with a uniform pressure of both hands.

NOTE,—The pistol can also be fired over cover-firer standing or kneeling, and employing the two-handed grip.

Cocking should be done by the thumb of the outside hand without removing its fingers from their position. The pistol must not touch any part of the cover.

See that the outside thumb does not touch the hammer, or slip off the pistol hand thumb when firing.

To obviate this, place the thumb of the outside hand in the correct position (*see* Fig. 21) before applying the rest of the hand.

Do not allow the outside hand to do most of the squeeze off, rather let it follow up the squeeze of the pistol hand.

Be careful not to let the muzzle of the pistol touch the ground before or after firing.

Great control of the weapon is obtained by this two-handed grip, consequently there is less jump of the muzzle at the moment of discharge, than when the pistol is fired held in one hand only.

At the factory revolvers are sighted from a rest and held by both hands. It is considered satisfactory when the point of mean impact of a group thus obtained, is from one to two inches low centre. When a revolver so sighted is fired by careful aim, and held in one hand, the shot can be put into the black.

The point of mean impact of a group is, therefore, liable to be slightly lower than the sighting allows for, *e.g.*, at 20 yards about 1½ inches. But as control varies so much with different individuals, it is best to discover the difference on the target, by firing groups at 20 yards, 50 yards and 100 yards, using the same sighting for each range, and noting the mean difference of the point of impact for each group.

As the revolver usually has a fixed back-sight, and is sighted for 20 yards, it will be found that at the longer ranges the bullet will fall short when aimed with the tip of the fore-sight even with the shoulder of the back-sight.

It is a good plan to take a *certain* amount of fore-sight *above* the shoulders of the back-sight when this extra range is required.

The exact extra portion to give the required elevation can be discovered by firing, then noted and marked.

The Webley Service revolver is sighted for 20 yards and 50 yards. The tip of the fore-sight even with the shoulders of the wide U is the 50 yard sighting. The small U at the bottom is for the 20 yards aim.

At 100 yards, aim may be taken with the 20 yards sighting at the face of a "full figure" standing man.

The "Colt" and "Smith and Wesson" revolvers—sighted for 20 yards, have a shallow U between curved shoulders, and a bevelled blade fore-sight.

In quick sighting there is a strong tendency to take too much fore-sight with these revolvers.

LONG RANGES.

In training, revolver shooting is seldom practised at longer ranges than 50 yards.

This, however, is not by any means the limit of its effectiveness.

At 200 yards a high percentage of hits have been made in actual practice on the full figure target.

At 300 yards the bullet has yet sufficient velocity to cause a fatal wound—and in still weather, at that range, it is possible to make hits with the Service revolver on the 6 ft. by 6 ft. target.

As there is a fixed back-sight to the revolver, elevation for these very long ranges must be largely a matter of guesswork, founded on some practical experience.

With the Webley revolver, Mark VI, the author has found that the top square of the blade fore-sight, above the shoulders of the back sight, is approximately the sighting for 100 yrads.

A small mark about one-third down on the fore-sight chair, held level with the shoulders of the back-sight—roughly the sighting for 200 yards.

During the retreat from Mons, some isolated officers drove off a party of Uhlans, by opening fire on them with their

revolvers at an approximate range of 250 yards, causing several casualties.

The aim in this case was estimated as the height of a man, above the mounted man's head.

ANGLES OF ELEVATION.

The author is indebted to Lieut. E. A, Robinson for the following :—

"I shot your gun at 300 yards and found the angles of elevation required for the 6-inch barrel to be—

R. Yards	Minutes,
0	0
20	7.4
50	18.9
100	39.2
150	60.9
200	84.0
250	108.6
300	134.5

"The height of trajectories are:—

Range in yards	40	80	120	200	300
Height in feet	.34	.54	1.74	3.88	9.5

The velocity of the ammunition used in this case was about 670 f.s.

In reading the above it must be remembered that the culminating point of the trajectory is at three-fifths of the range.

(ii) **DELIBERATE AIM**—Standing one-handed Grip.

The pupil assumes the ready position. He must apply the first pressure and raising the pistol quickly to the mark, restrain his breathing, take regulation aim, and apply the "Squeeze off" firing without undue delay. (*See* Fig. 19)

He must *not* try to know the precise moment the hammer is going to fall, but concentrate all his attention on the aim. The trigger must be released the instant the pistol is fired.

If other and consecutive shots are to be fired, the pistol must be cocked without delay, and the aim at once brought on to the next target, without lowering the pistol to the ready position.

Each shot should be fired in 2½ seconds.

Fig. 19.

DELIBERATE AIM (Standing).

The rough conditions contended with on Active Service will frequently make it extremely difficult to follow the method just described, which is suitable if the firer's footing is firm, and his aim is not disturbed by uncertain balance, or heavy equipment.

But rough conditions, such as uncertain or slippery foothold, stormy weather, &c., have continually to be encountered when fighting, causing the firer to sway off his mark, inducing lack of confidence and loss of vital time in readjusting his aim; but, having learnt control for deliberate aim by first training in the method described, the following is easily self taught, and for active service is the better one to adopt.

The slight vertical lift of the pistol in it, as also in the "off-hand" gives the advantage of producing vertical grouping, and helps to eliminate lateral error.

Its practice also tends to limit the time for a shot.

DELIBERATE AIM SPECIAL METHOD (standing).

1. Raise the pistol steadily, the arm fully extended.

2. Close the disengaged eye and focus the other on a spot some short distance *directly below* the mark you wish to hit, roughly one foot below for every 10 yards.

3. Restrain the breathing.

4. Align the sights perfectly on this auxiliary mark.

5. Raise *the eye* to the actual mark.

6. Incline the body steadily back from the waist, keeping the upper portion with the extended arm wholly rigid, thus raising the pistol till the sights come into the line of vision.

7. At this moment the hammer should fall.

CHAPTER XI.

The Double Action Revolver.

This type of revolver became known as the "double action" revolver, to distinguish it from the revolver with one action only. After its introduction, its trigger or second action, was often referred to as the "double action." This misnomer has now become practically universal, though strictly speaking the term denotes that a revolver has two actions, *i.e.*, the cocking action, and the trigger action.

RAPID FIRE.

The greatest speed of fire is obtainable by use of the trigger action.

This action should only be employed at short range, say five yards or less, and *in emergency when there is only the minimum of time* in which to fire one or more shots.

Whilst effective shooting should result, no close grouping can be expected, when the revolver is fired in this way.

The cooking of the hammer should be dispensed with, and the revolver fired by the trigger action *only* at close quarters when time is short—as might happen if a man was suddenly attacked by more than one enemy at a time.

On such occasions the pistol may be fired from the hip, or with shortened, or fully extended arm.

The eye should be focussed sharply on the point of aim. The pistol must be fired by a steady squeeze of the trigger and with a strong grip, firm thumb pressure, and stiff wrist.

A slightly diagonal pressing of the trigger towards the thumb, will, to some extent, offset the tendency to pulling outwards.

The trigger pressure must be started well before the pistol comes to the target, and its completion timed to occur at the same instant that the barrel is brought into alignment on the mark.

When firing rapid consecutive shots on several targets, it is very important to release the trigger smartly on the fall of the hammer, and instantly *re-start the trigger pressure as the pistol is moving to the next mark.*

Once started, the trigger pressure should be continued right through to completion, so that the cylinder rolls steadily, and not with any sudden jerky stops or starts, or the cylinder will rotate without the hammer nose penetrating the firing-hole, and in this way rounds may pass unfired.

It is well for the beginner to keep in mind that a common fault in all quick shooting is that of thrusting downwards with the pistol at the moment of firing.

Another cause of low shooting in rapid fire is that of pulling the muzzle down by heavy manipulation of the trigger.

A common fault in rapid tire is that of bringing the pistol to the mark with a jerk, and then firing by a sudden grab.

Importance of a Firm Grip.

In rapid continuous fire with the trigger action, strong tension of the muscles of the forearm, together with firm thumb pressure, greatly helps in controlling the pistol.

FIRING IN A WIND.

When firing at long range in a strong cross wind, bring the pistol up on to an auxiliary mark level with the real mark, and down wind. 'Then swing the pistol against the wind to the real mark, timing the "squeeze off" so that the shot gets away just as the aim crosses the mark.

MOVING TARGETS.

When firing at traversing or crossing targets, the cocking action should be employed. The pistol must be kept moving in the direction the target is going, and not stopped at the moment of firing.

The arm and upper part of the firer's body should be kept rigid, the movement being from the waist.

At ranges of 15 to 25 yards, aim should be taken on the front edge of the running man target, and at his waist line.

At shorter ranges, say 8 to 10 yards, aim may be taken about four inches further back on the target.

With some practice, the moderate shot should score a high percentage of hits on a running man target crossing at a "five minute gait" that is, at about 12 miles an hour.

Not until the firer becomes fairly expert in his practice at the shorter range should he attempt the longer.

When firing at a target which is advancing or charging down hill, some movement with the target is necessary at all but very short ranges.

When hanging on to the aim, the movement should be from the waist—gradually bending forward, and keeping the arm and body rigid as before described.

When practising on moving targets the pistol should be brought into action again for a second or third shot before the target completes its course.

The firer will thus have a better opportunity of judging the mean difference of his errors, or gain speed and confidence in making consecutive hits.

This plan also leads to greater facility in quick manipulation of the weapon.

If being attacked at close quarters by a number of men, the firer must shoot as quickly as possible employing the trigger action, and depending on his pointing sense for directing each shot. He should concentrate on a mark on each when firing.

To stop a determined opponent actually in his tracks, when very close and almost making his point with his bayonet, two shots should be fired as quickly as possible.

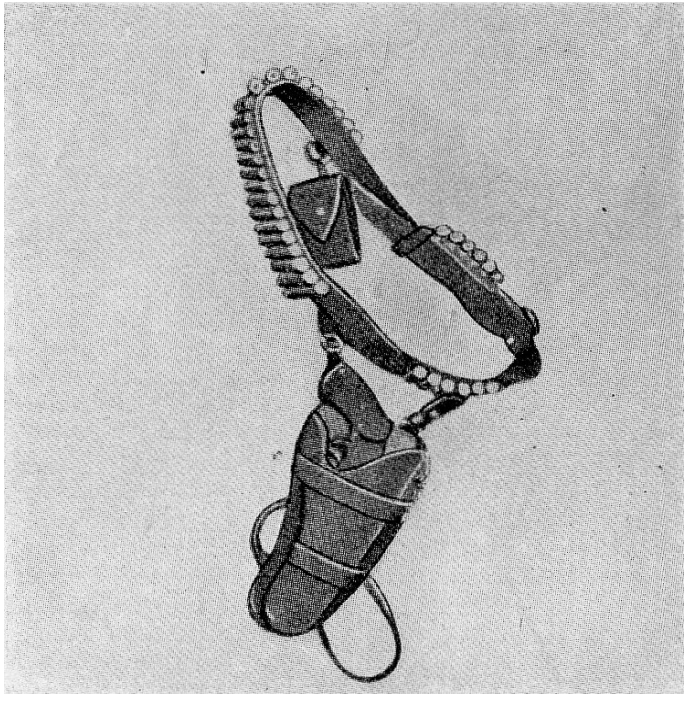
CHAPTER XII.

Holsters.

The holster should be worn in such a position that the right hand can easily and quickly draw the revolver and bring it into action.

The placing of the holster on the belt at the waist-line under the right elbow, is a most ill—chosen position from which to draw the weapon.

Fig. 20.



THE COWBOY HOLSTER.

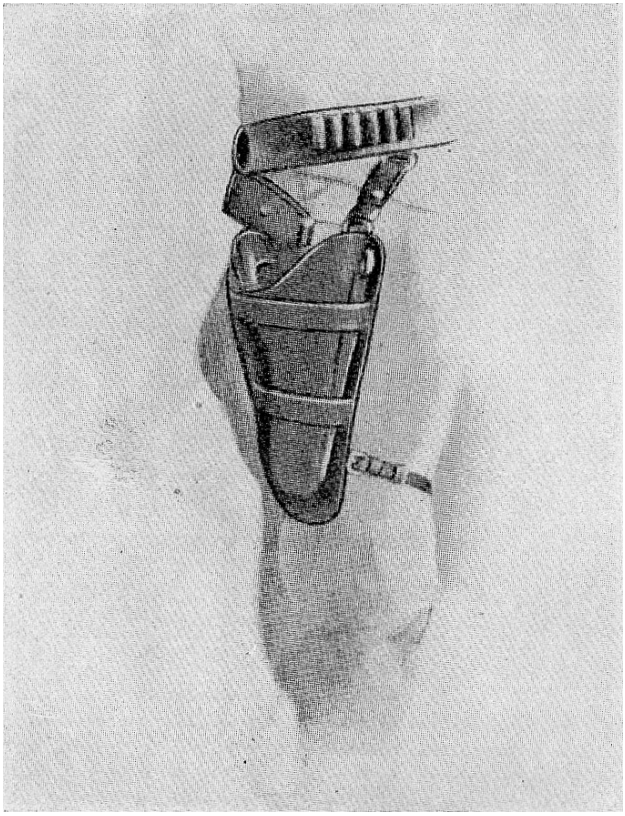
Certainly, this would be about the last place a cow-boy, or any other "quick-fire citizen," would select to wear his "gun."

If an officer carries his revolver at his waist-line, a better place would be below, and slightly to the left of his left breast pocket. In this position it is clear of the box respirator.

Another good position for the holster is to have it slung just below the right hip, as the cow-boy wears his. (*See* Fig, 20B.)

There the hand comes to the butt instantly, and it is as easy to draw and return, as putting your hand into your breeehes pocket.

Fig. 20b.



THE COWBOY HOLSTER.

The present-day regulation holster is quite a good article for carrying and protecting the revolver from dust and mud, but it not so handy for quick drawing of the "gun" as the Mexican or bucket type, the kind used by cow-boys. The latter has no flap; it is made of one piece of leather fitting closely to the weapon. (*See* Fig. 20A.)

The "cow-boy" type of holster must be made to fit the pistol. It should be deep, and grip the pistol from the back-sight to just back of the centre part of the trigger guard, so that when the pistol is pushed home into its holster, it cannot be easily shaken out, even when the holster is held up by the muzzle end.

A good place to carry a cleaning rod is in a small leather pocket sewn on to the holster, and in line with the part nearest that which covers the top of the barrel.

The author has designed a holster* which combines the good features of the present day regulation and "bucket" type, with the additional advantages that the flap automatically springs open directly the holster is unbuttoned, so that it does »not impede the pistol hand when quickness of drawing is important. (*See* Fig. 21.)

HOW TO DRAW THE PISTOL.

The pistol must be drawn by a sweeping motion, without any fumbling.

To acquire this skill, hang the holster in such a position that the gun can be drawn without hindrance or awkwardness.

Visualise the course the hand takes. Hook the three fingers under the butt, and lift the gun with the trigger finger extended outside the trigger guard.

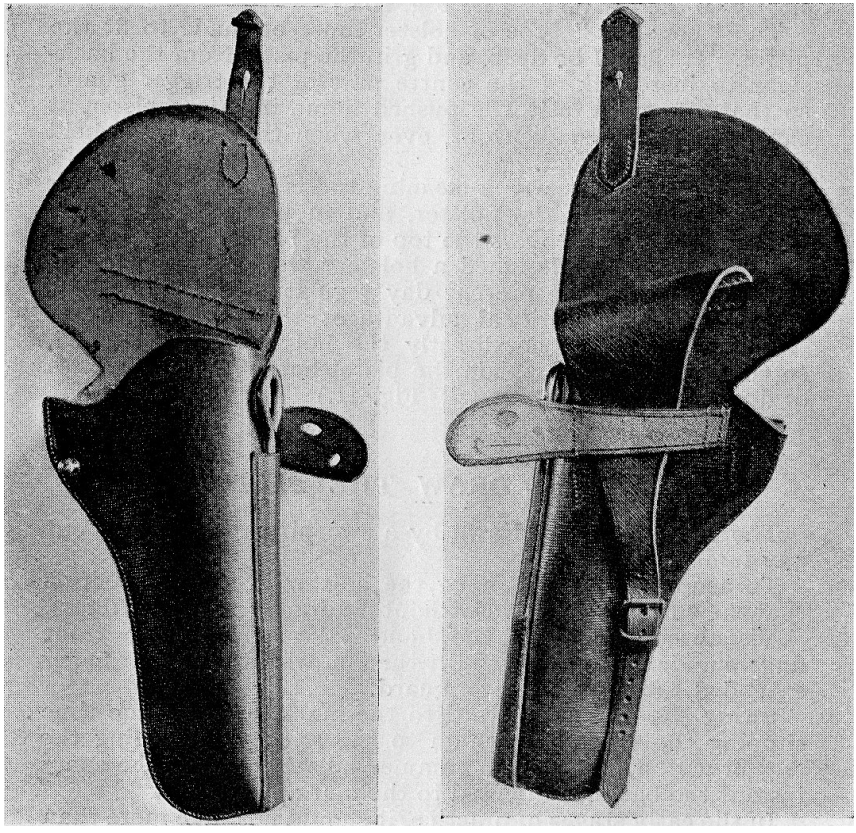
Swing the muzzle forward to the mark, at the same time slipping the trigger finger on to the trigger, and using the trigger action, so that the hammer falls forward at the exact instant the barrel is directed to the mark.

In the early stages of practice, it should not take more than one second to bring the pistol into action in this way.

When the pistol can be drawn and directed in this manner, without any fumbling for the grip or hitch in clearing the holster, and with approximate accuracy in pointing to the mark, the pupil should practise for speed.

• Supplied by all gun makers.

Fig. 21.



Front View. **Back View.**

THE "TRACY" HOLSTER.

THE AUTHOR'S IMPROVED MILITARY TYPE OF HOLSTER.

HOW TO PRACTISE "THE DRAW."

If two students will work together systematically for mutual instruction, taking turn and turn about as instructor and pupil, they should readily gain skill if the following instructions are carried out with exactness.

Assuming the two students are helping each other, they should proceed as follows :—

FIRST—**Prove Arms**, *i.e.*, immediately before commencing practice they must open their respective pistols and show each other they are not loaded, then return them to their holsters.

The man taking the part of instructor will seat himself with his back to the light, so that he can get a clear view of the pupil's pistol when it is pointed at him, and with his eye at a position about level with a standing man's waist line.

The pupil must stand at a distance of four of live yards, with the foot nearest his pistol arm in advance, pointing towards the instructor, knees slightly bent, pistol arm and hand extended to his front, knuckles up, index linger and thumb extended, the remaining fingers pointing downwards, and arm poised almost level with his shoulder, eyes on the mark. This is known as the "Alert Position."

On the word "Draw" from the instructor, the pupil will immediately draw and fire, employing the trigger action.

If possible a stop watch should be used to check the time from the word "Draw" to the fall of the hammer; the instructor carefully pointing out the direction of each shot.

Foot Pointing is a great assistance for obtaining direction in this, as in other practices.

When the pupil has, by this method, gained a fair standard of accuracy, say four out of six aims correct, he can then practise "hip-shooting."

Hip-shooting.

With the service revolver this can be carried out by bringing the butt to the hip, and firing by the trigger action. (*See* Fig. 23.)

The_instructor must be seated with his eye level with the firer's waist, so that in practising, the pupil acquires the habit of directing the pistol with correct elevation for hitting an opponent at "the point of aim."

OTHER WAYS OF FIRING AT CLOSE QUARTERS.

Revolver shooting amongst American cow-boys is still very popular, but the "gun-man" of the Western States fame is either dead, or "turned good."

A "greenhorn" seeing the sights of a camp town, was suddenly addressed by a burly man who carried a "gun" in a holster slung low on his right thigh:

"Young fella, do you pack a gun?"—and to the prompt answer "No," he drawled, "Wal, you're wise to yu'rself, unless yu're mighty punctual; this hayr commoonity is composed of the quick and the dade."

In the frontier towns and in mining and construction camps of the Western and Southern States, no man was so foolish as to "pack a gun," unless he was both quick and accurate in its use. In fact he was safer without a gun if he was not "mighty punctual," for in a quarrel, to be slow on the draw, was qualifying for the category of the "dade."

Texas men were noted for their speed on the draw. Some of them wore the holster very low on the thigh, and tied to the leg by a small strip of raw hide, passed through the muzzle end of the holster.

The pistol was frequently fired from the hip at close quarters. As the muzzle of the gun, on being drawn, cleared the top of the holster, it was raised and pushed forward, the end of the butt brought to the hip, the barrel directed by the pointing sense, and at the same instant the thumb allowed the hammer to fall, the whole action being performed with extraordinary speed.

In the Western States of America, during the palmy days after the Civil War, and up to the early nineties, nearly all the firing was thumb and hammer snapping.

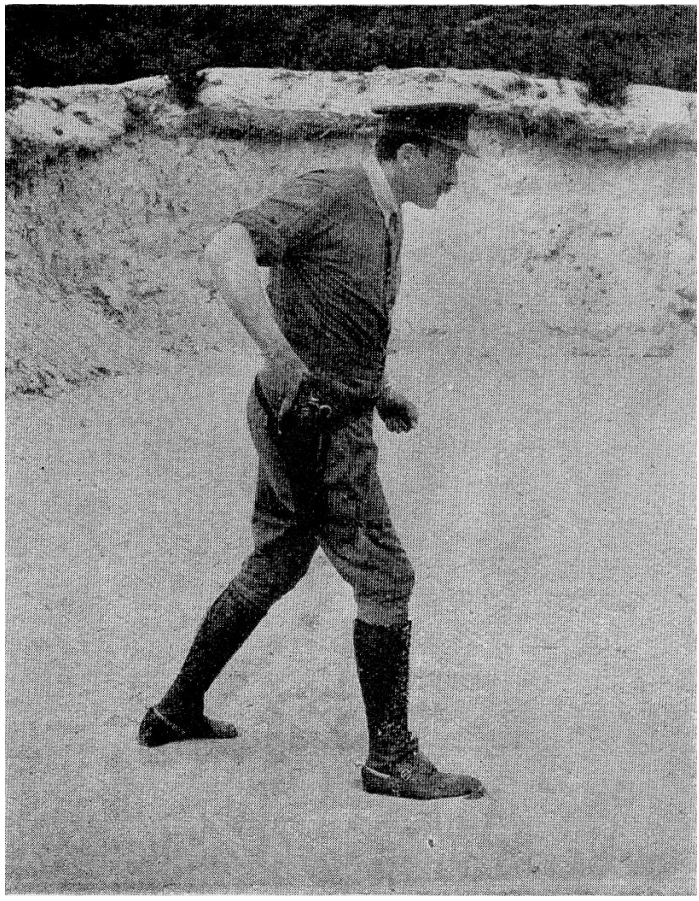
The popular revolver was a single action, such as the Frontier Colt ".44/40," or Colt ".45," both firing heavy charges which gave a considerable recoil.

To obtain better control of the weapon, firing such heavy charges, and also speed in delivering the shot, the following plan was frequently adopted. A part of the trigger mechanism was removed, or the trigger was lashed back to the trigger guard, with the result that the hammer would not remain at full cock by itself. As there was then no trigger pressing to be done, four fingers instead of three could grip the butt.

The pistol was fired by the "throw"—that is, drawn with an upward swing on the muzzle, the hammer pulled

back and held by the thumb, the pistol then instantly brought down and forward to the mark, being checked with a jerk, thus freeing the hammer at the moment the barrel reached the desired downward and forward throw. The jerk freed the hammer from under the thumb, thus causing the discharge.

Fig. 22.

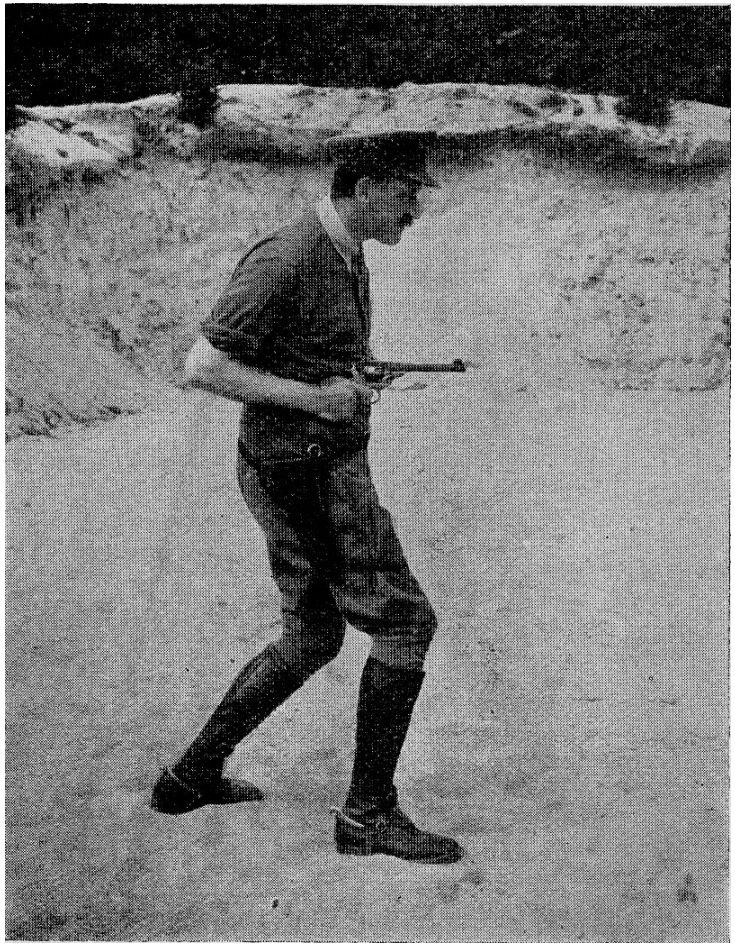


THE COWBOY HOLSTER.

This shows the act of drawing the revolver. Note the trigger finger outside the guard.

The downward impetus of the muzzle was supposed to overcome the jump to some extent, The muzzle was, in a sense, projected at the mark, and the bullet left it exactly as the act was completed ; just as a stone will leave the hand in the "chuck" the instant the arm is brought to at some-

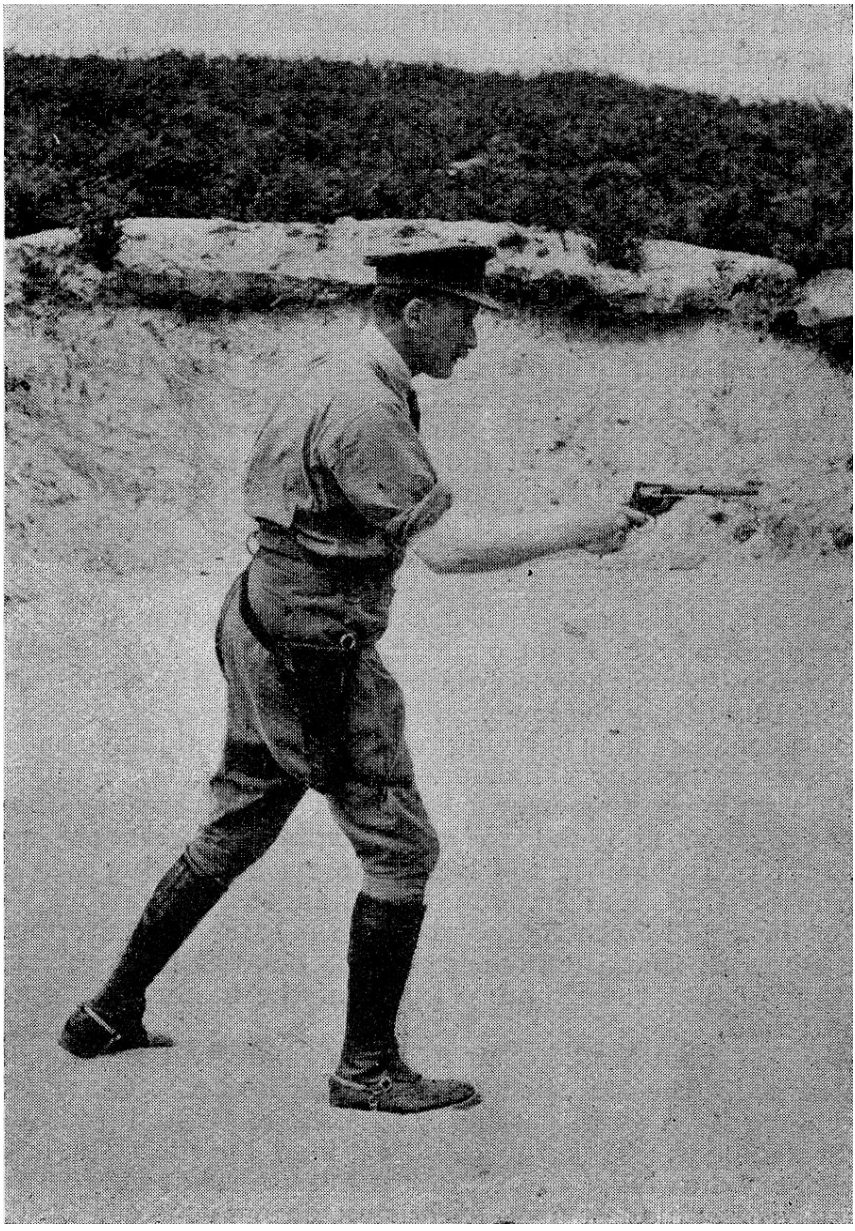
Fig. 23.



HIP SHOTOING.

This position is used at close quarters, when there is only the minimum of time in which to draw and fire the pistol.

Fig. 24.



SNAP SHOOTING WITH BENT ARM.

NOTE.—The pistol is below the line of sight. The firer is depending on his pointing sense to direct the weapon.

what violently checked stop against the side. This method no doubt originated in the use of the revolver from horseback. If, however, the trigger of a double action revolver is lashed back, the cylinder will not rotate to the successive raising and snapping of the hammer from under the thumb, so this method obviously does not apply to the revolver of to-day, with its double action and comparatively light recoil. If the "throwing" style is attempted without thumb snapping, but firing by use of the trigger, the general result is that of loosing off at high angles. Moreover raising the pistol above the head to bring it down again on a mark is waste of time for the infantry man, and if employed in a shallow front line trench may act as a signal for an enemy bomb.

The method of firing the revolver known as "fanning" can be applied only to the single action weapon. It was carried out by holding the gun at the hip with the trigger held, or lashed back, and the palm of the left hand passed over the hammer, drawing it back, and freeing it again and again in rapid succession, firing a burst of six shots, the firer turning his body at the hips to direct each shot on a different mark.

There is an instance of a man dropping four men in this way before any of them could fire on him. Another way was to fire through a holster lashed to the leg, the shot being directed by lifting the knee.

Occasionally a man carrying two "guns" would have one in a sham or "phony" holster. This was made to appear like an ordinary holster or sheath, but was in reality fixed to the revolver, and made so that it pivoted on a rivet through a metal plate against the leg. The trick of firing was to catch the butt and hammer simultaneously, drawing the latter back under the thumb, and at the same time dropping the elbow so that the muzzle at once pointed to the mark; at that instant the thumb slipped off the hammer, and the round fired.

Another plan was to carry a short-barrelled pistol concealed under the coat, just below the left breast. The sheath was slung by a strap passing across the chest and over the right shoulder. This gun could be fired by the right hand without " drawing," the wearer turning his left side to the mark, lifting his left arm, and firing through his coat. The following is an instance of this trick scoring successfully:—

A sheriff was " looking " for a certain " bad man." The latter hearing of this, rode into a little border town to "shoot

up" the sheriff. He was told that he would find him in a local saloon. With a gun in each hand the outlaw suddenly appeared in the doorway. The sheriff was leaning against the bar, and without turning round he took in the situation from his view in a big mirror behind the counter. To turn and attempt to draw his hip gun meant instant death so, without moving his elbow from the bar, his right hand went to the concealed breast gun. Calculating his shot from his view in the glass, he fired under his arm by the method described, and killed his man.

To shoot through the outside pocket of a coat is another way of using a pistol, and is not confined to the Western States alone.

CHAPTER XIII.

The Offensive Spirit.

When training in the use of the Service revolver the ultimate object must be kept in mind, that is—the mastery of the weapon for its use in fighting.

In addition to acquiring speed and accuracy with the weapon, the offensive spirit must be encouraged in the training.

In most practices figure targets are used, and it should be borne in mind by the firer that such targets represent opponents who can, and will, hit first or hit back if not quickly and properly put out of action.

An unloaded or disabled Service revolver is by no means a useless weapon in hand-to-hand fighting provided one knows how to use it.

It should never be held by the barrel, and the butt or breech end used as a club. The correct grip on the butt should be retained, and the barrel employed as if it were a bayonet for jabbing the enemy in the neck or eye.

A back-handed blow delivered with force across the neck, temple, or bridge of the nose, is another practical way of using the unloaded weapon. A handful of earth or stones thrown into the face of an opponent may prevent the directing of his shot, or making his "point," and give the opportunity to close with him.

When attacked with the bayonet, and assuming you have an empty revolver in your right hand, endeavour to divert your opponent's point by grasping the muzzle end of his rifle with your left hand, at the same time advancing your left leg, and turning sideways for protection from a kick, instantly deliver your jab or blow for face or neck. If you miss with this, and your opponent has his head low, a blow on the side or back of his neck, if delivered with force, should prove a "knock out."

This empty pistol *versus* bayonet fencing should be practised. A piece of wood shaped like a pistol can be used for practising in place of a revolver.

Fig. 25.

DOORS,—How to enter.

Some who have followed it up have proved that they can score quite frequently against the bayonet man.

Whilst the author does not claim that the man armed with an unloaded revolver, is a match for the with man a rifle and bayonet, he wishes to emphasise that victory in personal combat, frequently rests with the man who has quickness of decision and a definite plan of action to meet an awkward situation.

Some reasons against using the butt end of a pistol as a club, are, that downward blows are the easiest to stop; that should the enemy be smart enough to get hold of the butt, the barrel is easily torn through the owner's hand. Again, by retaining the correct grip on the pistol, the fact that it is unloaded is not "given away," and a successful "hold up" may be scored.

An. instance is known of an officer, whilst clubbing an enemy with his revolver, succeeded in shooting himself. This instance shows that handling the weapon in this way may be dangerous.

DOORS—HOW TO ENTER.

In tackling a dug-out, or house, a man should never stand directly in front of a door when there is the possibility of hostile reception. If possible he should get on one side of it, free the latch, and kick the door suddenly and violently open, commanding the room in sectors, exposing only his pistol hand and eye round the door-post. (*See* Fig. 25.)

If he wishes to draw fire before opening the door, he should post himself well on one side, and close to the wall, then kick the lower part of the door, or fumble with the latch, and instantly withdraw his foot or hand.

Curtains covering entrances to dug-outs, &c., should be lifted quickly by a corner, without any fumbling, so that the pistol can at once be brought into action; (*See* Figs. 26 and 27.)

SHOOTING IN THE DARK.

A man trained in the "Off Hand" method of snap-shooting has a great advantage over one not so trained when firing in a bad light, or darkness. He has skill in automatically directing his revolver, and speed in firing, which makes him both confident and effective.

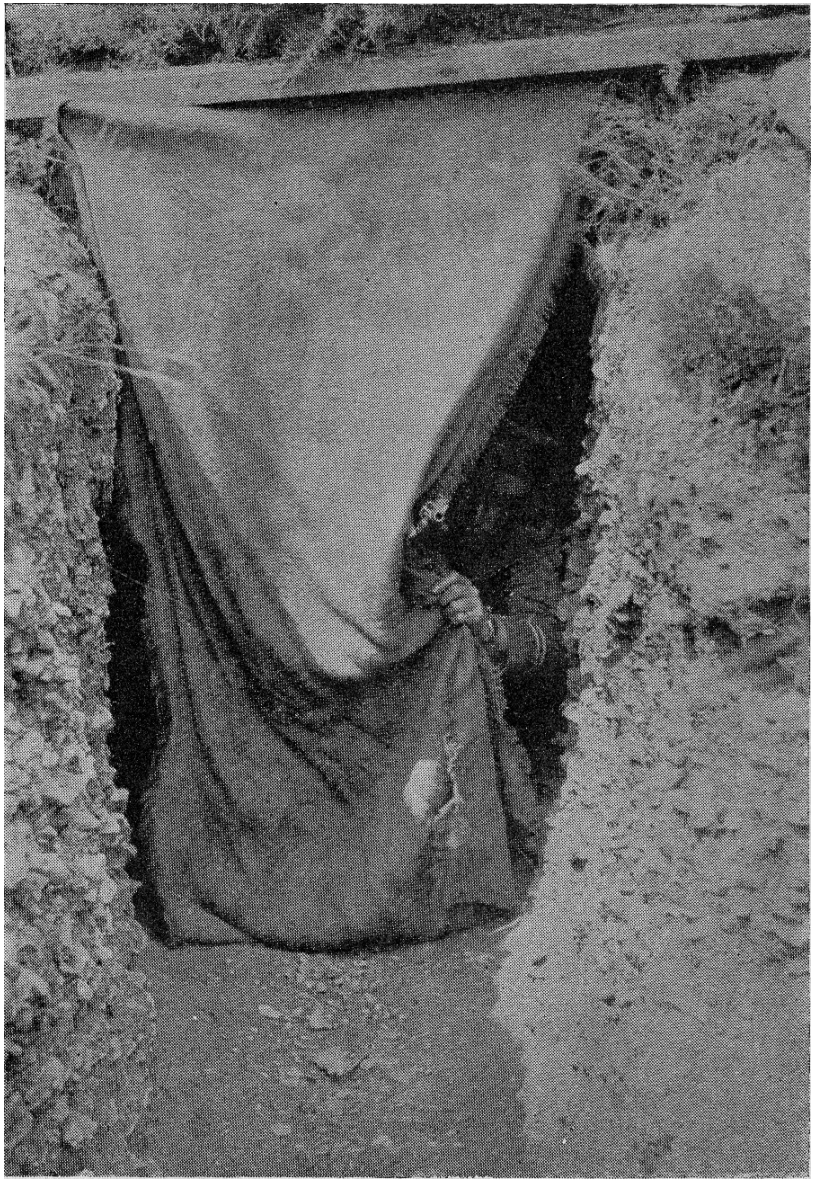
Special training for firing in darkness, is well worth while. This can be carried out by some one lightly tapping any hard

Fig. 26.

CURTAINS.

The right way of lifting when the pistol is in the right hand.

Fig. 27.



CURTAINS.

The wrong way of lifting when the pistol is in the right hand.

object in a darkened room, and the student pointing his pistol at the spot he supposes the sound to come from, keeping his direction of aim steadily, until by a flashlight it can be verified, or the error noted.

The principle of this practice can be applied in daylight by closing the eyes.

The training for accuracy of the hearing sense, combined with pointing as above indicated, will prove helpful. With a little practice, acuteness in distinguishing by sound the kind of material which is touched, and its approximate direction and distance, is quickly gained, and is an accomplishment not without value, either on active service or at home.

If attempting to shoot an opponent in the dark, in addition to alertness for any sound he may make which will indicate his position, the firer should remember that a shot may disclose his own position to his opponent, so on firing he should instantly jump aside or drop.

If the enemy adopts similar tactics when firing, and should he miss his opponent, the latter may pretend that the shot is successful by falling and groaning, and thus trap his enemy into giving away his position.

ON ACTIVE SERVICE.

When loading, unloading, or firing under Active Service conditions, apply the principles of the range method as near as possible, *e.g.*, loading at the firing point on the range. (*a*) The barrel is kept pointing towards the target—that means away from yourself or your own party; (*b*) a clean break to avoid jams.

The firer re-loading his revolver in a trench would probably be crouching down close to a traverse or corner. The object is to keep the barrel pointing in the direction of the unexplored part of the trench, or that probably occupied by the enemy—not towards oneself or any part of one's person, or the side of the trench on the flank. For in the latter case, should the revolver be accidentally fired on closing, the rebounding lead or stones might injure the firer or one of his party behind him.

Always reload as soon as possible. Even if three rounds remain unfired in the pistol, the position and occasion may demand quick re-loading. In such a case break the pistol cleanly, and get the live rounds to fall into your right hand by pressing the butt against your body, using the hand to

catch the rounds at the moment of ejection, and not letting then fall on the ground—the latter may mean their loss in mud or darkness. Replace the ejected rounds first in the 10, 8, and 6 o'clock chambers, then proceed to load from pouch or pocket.

SELECTION OF ROUNDS.

The officer should personally inspect his revolver and see that it is clean, in working condition, and properly loaded before he "goes over the top" or, in fact, whenever carrying his revolver on duty. He should also see that none of the cartridges have visible defects, such as extra thickness in the rim or a "proud" (projecting) cap.

Either of these faults may cause the revolver to fail to operate with the trigger action. The latter may cause a premature explosion when closing the pistol. There is another important feature to be observed when selecting the rounds for use in action. See that all caps are level with the brass base of the cartridge. The defect of a sunken cap. *i.e.*, the the centre of the cap placed below the level of the cartridge base, is very liable to cause a misfire, especially when the trigger action is employed.

Gritty or dirty cartridges must not be used or injury to the barrel may ensue.

THE TRENCH ATTACK PRACTICE.

This practice is designed to be a practical test of the knowledge inculcated during previous instruction.

Conditions are made as realistic as possible by the use of surprise and attacking targets, and the firing of powder puffs, thunder flashes, &c.

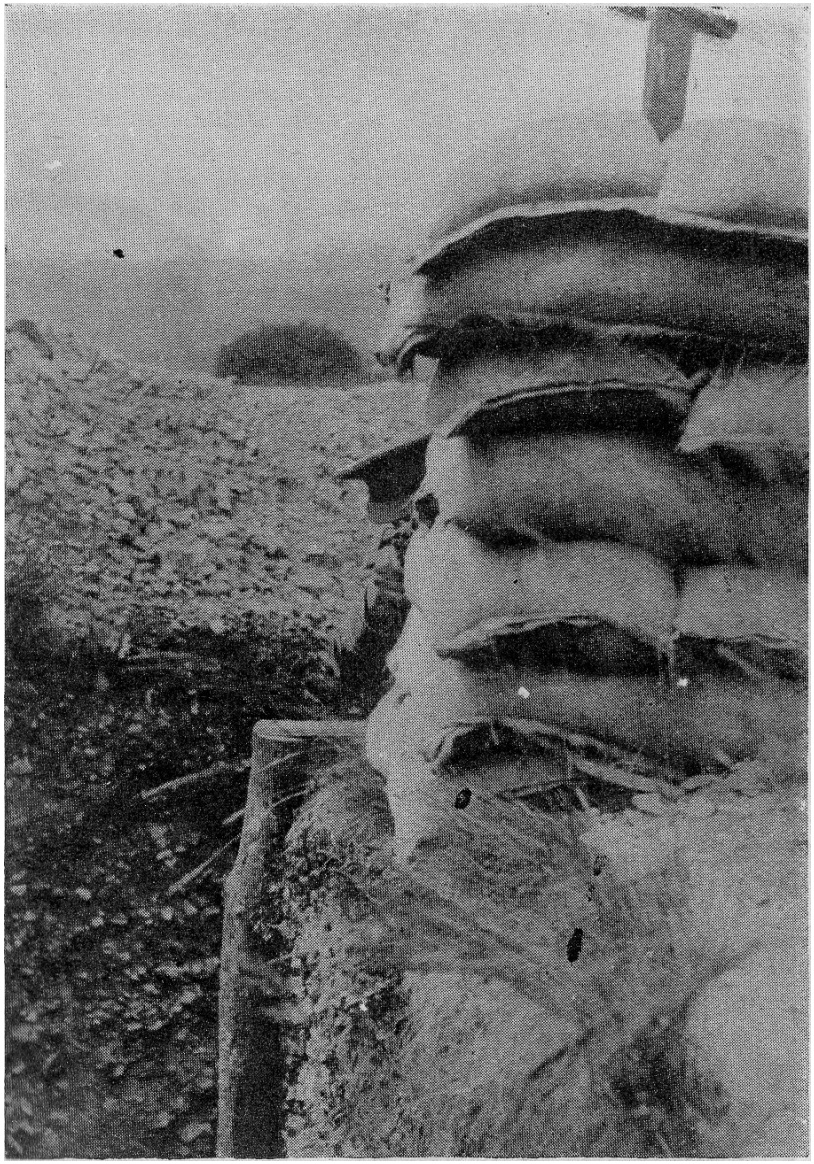
The pupil should be encouraged to show the offensive spirit and to act with quick decision.

In making the attack, the following points should be remembered :—

Whilst in the open, and whilst crossing wire or other obstacles the hammer should be down, and the trigger finger should be outside the trigger guard.

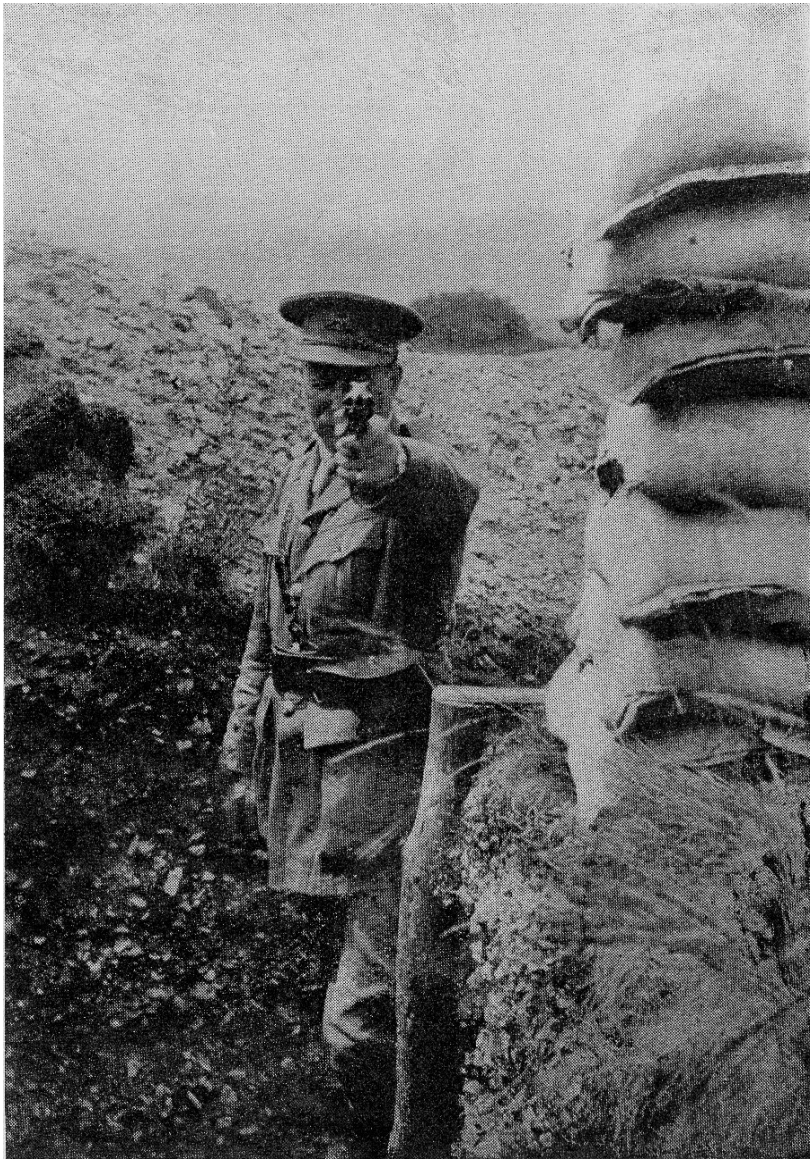
However hurried a firer may be, he must never fail to pick a spot on his target as his aiming mark; nor to keep his eye focussed on this spot whilst firing. He should shoot quickly and from the extended arm whenever possible.

Fig. 28.



FIRING FROM A CORNER.—The right way.

Fig. 29.



FIRING FROM A CORNER.—The wrong way.

The pupil must count his rounds as he fires; failing such precaution he is liable to be caught with an empty weapon.

He must remember to reload, if possible before his last round has been fired; and must use circumspection in choosing place and time for doing so.

Correct manipulation of the pistol must be borne in mind: *e.g.*, by uncocking and re-cocking the pistol a live round may be passed over.

The body must not be unnecessarily exposed. When shooting from a corner the pistol should be in the firer's outside hand. (*See* Figs. 28 and 29.)

As a general rule, cover should be taken advantage of, but not to the extent of impeding the free use of his weapon.

If meeting an enemy bomber in a straight piece of trench, it is better to deal with him there, than from behind cover where he may make use of his bomb without risk to himself.

HINTS TO INSTRUCTORS AT THE FIRING POINT.

The strictest regard to correct form at the firing point must be insisted on.

No fault in position or manipulation should be passed over.

Any breach of range rules should be severely checked.

As a rule the instructor should place himself close up to, and just behind the pupil's firing arm.

Occasionally the observation of a fault may necessitate the instructor placing himself more to one side of his pupil, but in so doing he must be careful not to be in line of, or beyond, the firing point.

If it is necessary to adjust the pupil's firing hand when the pistol is loaded, the first thing to do after warning him, is to see that the trigger finger is removed from the trigger and pressed against the inside forward part of the trigger, guard.

If the pupil is a flincher, it is wise not to trust to his keeping his linger in that position, but the instructor should hold it there with one hand, whilst adjusting the grip with the other.

Many pistols "spit" lead from the space between the chamber and the breech end of the barrel. A piece of lead thus projected may severely injure a man's eye at a distance of four or five yards, The instructor should, therefore, be careful that his face is never in a position to incur this risk.

The behaviour of the pistol at the moment of firing, when properly controlled, resembles that of a gun—that is to say—

the muzzle is thrown upwards in the vertical plane, and at the same time the weapon thrusts backward.

If the instructor is standing behind the pupil's firing arm, he is in a good position to observe whether the pistol is brought up to the mark, and the behaviour of its muzzle at the moment of firing.

By getting the pupil to take a preliminary aim on the mark, the instructor can note some spot on the background, immediately over the foresight of the pistol from his point of view; by keeping his eye fixed on the spot on the background, he will see whether the pistol comes to the mark, and note its exact behaviour at the moment of discharge.

If the muzzle of the pistol moves outwards, at the moment of firing, the fault is generally that of pulling with the trigger finger. If it moves downwards, it will be that of either "Following through," or "Thrusting."

An inward movement of the pistol muzzle generally denotes a grab—but it may be any of the other faults described on page 40. (Inward shooting).

By close attention, and some experience in this way of noting faults, a man may soon be able to tell approximately where a shot has gone, without first looking at the target. In empty pistol training, these errors of the firer's hand are easily noted by the instructor when his eye is the aiming mark. But in judging errors at the firing point, the recoil and jump of the pistol have also to be taken into consideration in conjunction with the faulty "let off."

A small stick or cane in the instructor's hand is a very useful article at the firing point with which to fend off the pistol, when a beginner, forgetting range rules, inadvertently points the pistol at his own, or the instructor's foot, or elsewhere, involving danger to others.

It is always best to give the command "Fire!" distinctly, but quietly. If given sharply a nervous pupil is liable to the loss of control of his reflexes, and consequent premature firing of his pistol.

Should a pupil let off his pistol at the "Ready" position, it is better not to reprove him, but quietly point out that he can learn a lesson from it, on the importance of pointing the pistol towards the ground, and the target. Then give him another round to replace the fired one.

Finally, alertness to prevent accident, insistence of the observance of range rules, and range drill, quick observation, and correction of faults, patience and sympathetic help, are the chief duties of the instructor at the firing point.

CHAPTER XIV.

The Pistol Hand.

Left or Right.

The term "pistol hand" is often used. This means the hand which a man will naturally adopt for use in preference to the other.

The majority of people are "right handed," the right hand being generally the "pistol hand." It has, nevertheless, been proved in practice that the beginner who is "right handed" will often succeed better when shooting with his left hand, especially during the early stages of his training.

The explanation of this may be that the left hand obeys or carries out the instructions more literally—just as a child obeys orders. But in the case of the right hand there is a tendency to introduce one's own way of doing a thing, *e.g.*, if the right handed man attempts to write with his left hand, we find that there is little of his individuality shown in the result, rather does it tend to follow copy-book style.

Whereas, with his right hand he shows his own individuality.

From the above remarks it is not to be concluded that a man is to master the firing of the pistol with only one of his hands; on the contrary, equal proficiency with either is very desirable.

There may not be time in a course of instruction to apply equal attention to both hands, but having acquired skill with one hand the pupil should have received sufficient training in the use of the other to give him a knowledge of its common errors, and their corrections, and some confidence in employing that hand, which comes the least naturally into use.

After being trained he should practise for facility with either, for it must be remembered on active service that in firing round corners, traverses, &c., as a general rule the f1rer's body has to be kept behind cover.

In firing from a right hand corner of a trench, the pistol should be in the left hand, so that when shooting an enemy

the firer does not expose more than his firing hand and a part of his face, instead of presenting the whole of himself as a target to an alert enemy, as would be the case if using the right hand. There is, also, the possibility of one or other hand being disabled during a fight.

Ambidexterity with the revolver is a great advantage, and can be picked up by assiduous practice.

There is more than one instance in this war of an officer successfully attacking with a revolver in each hand.

HANDLING TWO PISTOLS AT THE SAME TIME.

With a little practice it is possible at close quarters to fire effective shots simultaneously from two revolvers at two separate objects not very far apart.

The writer finds that this can be done by fixing the gaze on a spot at a point half-way betweem the two objects.

The fact is easily proved in the following way;—Get two people to verify your aim by standing about ten feet apart and facing you, at a distance of 15 to 20 feet. Glance at the left eye of the man to your left, and at the right eye of the man to your right, and then at a spot midway between the two people, level with their eyes. Keep your gaze on this central spot, fully extend each arm, pointing with index fingers, or two unloaded revolvers, at the two original aiming points (viz., the men's eyes). This method has its value when "holding up" or taking a number of prisoners and preventing or dealing with a return to hostilities on their part.

SPEED SHOOTING.

The speed with which effective shots from a revolver can be fired is much greater than the majority of people would believe possible. The following results actually obtained in practice may, therefore, be of interest:—

Six shots fired by use of trigger action, at a range of 5 yards.

Time . . . . . .1 second.

Result . . . . . .4-inch Group.

Six shots fired by cooking action (cocking for each shot) at a range of 10 yards.

Time . . . . . 2½ Seconds.

Result . . . . . 8-inch Group.

THE STOP WATCH.

The starting and stopping of a "stop" watch in such a small fraction of time as one-fifth or one-tenth of a second, and the ability to synchronise the act with the report of a pistol, is not by any means an easy accomplishment.

For those of phlegmatic temperament, whose reflexes do not respond readily, it is apparently an extremely difficult act to acquire. Even those who are naturally quick handed require considerable practice before they can correctly "time" with the "stop" watch, when tenths of seconds are important factors.

The watch should be started and stopped by pressure of the *finger nail*, and not the fleshy tip of the finger—for by use of the latter, a tenth or more of a second is easily lost. The "stop" watch should be used so that in speed firing the aspirant to expert work in this direction will be able to gauge his progress.

CHAPTER XV.

The Webley Pistol.

(*i.e.*—The Service Pistol).

Six patterns may be met with, viz., Mark I, Mark I*, II, III, IV, V, and VI.

Some of the latter Marks and Mark VI are provided with 6-inch barrels.

The Webley was introduced in 1890. It consists of—

1. The Barrel.
2. The Body.
3. The Cylinder.

The barrel is connected to the body by a knuckle joint and a strap with spring catch. The body is slotted out to form seatings and bearings for the various parts of the breech action, and is provided with vulcanite stocks.

The cylinder has chambers for six cartridges and is pivoted on a tubular axis attached to the barrel.

The extractor works in this axis, surrounded by a spiral spring, and is actuated by a lever carried in the knuckle joint.

The weight is 2 lb. 3 oz. to 2 lb. 6½ oz. (approximately). Calibre .441. The barrel is bored to take the .455 bullet.

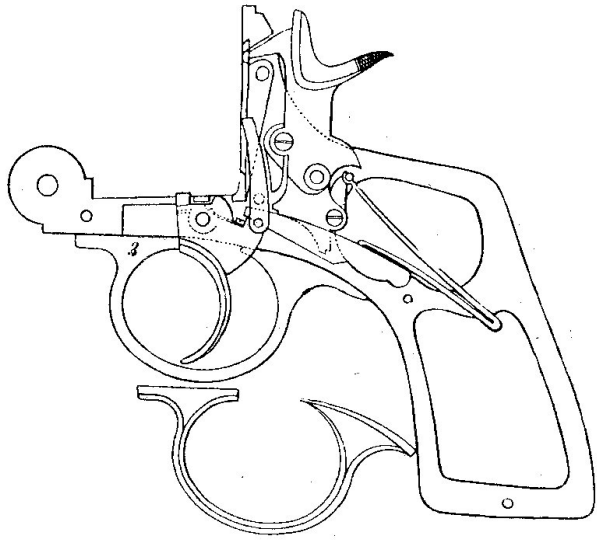
The rifling has seven grooves, one turn in 20 calibres right handed. The bullet is lead, 265 grs. The propellant, cordite 4¾ grs., or about 3½ grs. of another character of powder.

The muzzle velocity varies with different batches of ammunition, and different lengths of barrel. With the 6-inch barrel it is approximately 586 foot seconds. The striking energy at 20 yards is about 194 foot lbs. The pistol is sighted for 20 and 50 yards. The extreme range 1,550 yards, at an angle of projection of 35 degrees, and extreme accurate range is approximately 300 yards.

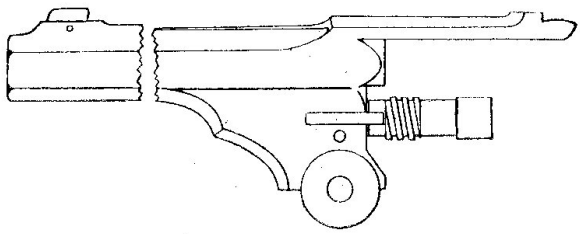
Its velocity at 300 yards (based on 586 m.v.) is 432 f.s., and striking energy about 109 foot lbs.

The registered number is on the barrel, body and cylinder. The Mark and pattern on the body and strap.

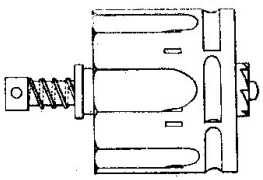
Diagram (h).



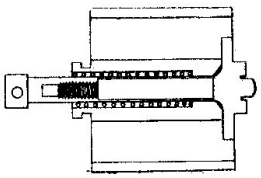
Guard.



Barrel and Axis Complete.

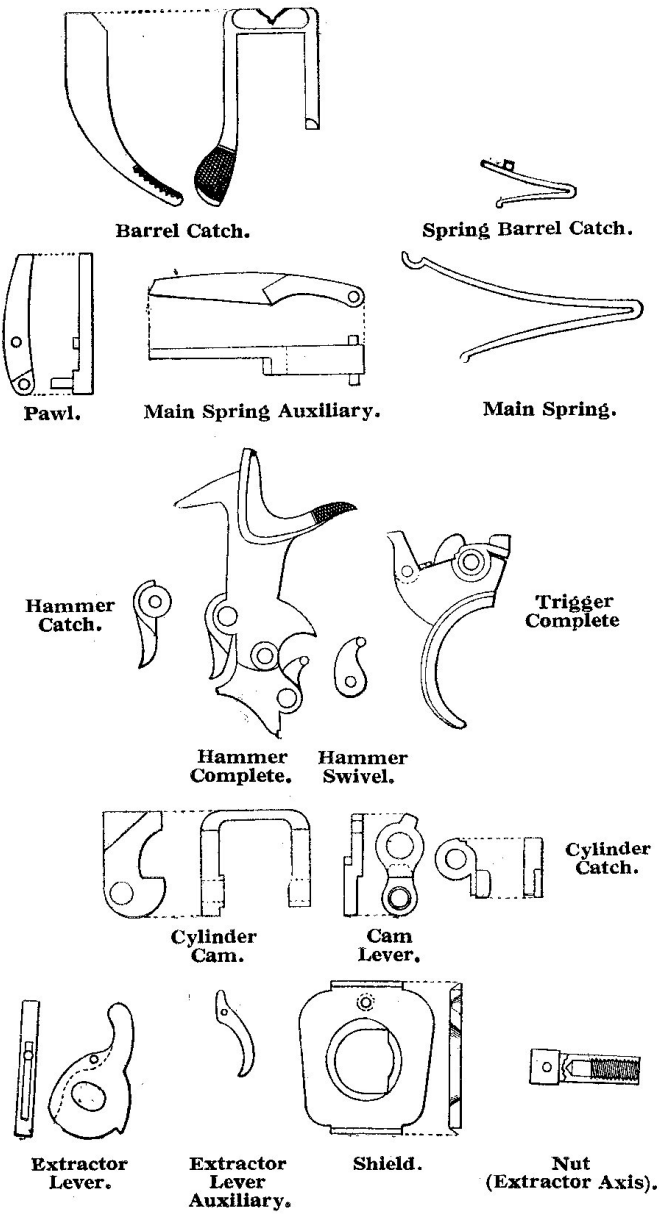


Cylinder and
Extractor Complete.



Cylinder and
Extractor Complete.

Diagram (i).


Barrel Catch.
Spring Barrel Catch.
Pawl.
Main Spring Auxiliary.
Main Spring.
Hammer Catch.
Trigger Complete
Hammer Complete.
Hammer Swivel.
Cylinder Catch.
Cylinder Cam.
Cam Lever.
Extractor Lever.
Extractor Lever Auxiliary.
Shield.
Nut (Extractor Axis).

MECHANISM.

A superficial knowledge of the pistol mechanism is desirable.

The names of the visible parts, and their functions should be learned.

VISIBLE PARTS.

Body	Barrel	Cylinder
Foresights chair	Strap	Barrel catch and back sight
Hammer	Hammer nose	Hammer comb
Stocks	Trigger guard	Trigger
Shield		Pawl
Ratchet	Extractor	Extractor stem
Cylinder stop	Cylinder catch	
Chambers	Cones	Cylinder tube
Bracket	Knuckle joint	Extractor lever
Cam	Cam lever	Cam lever fixing screw

FUNCTIONS OF PARTS.

(*a*) The cam retains the cylinder in its forward position when the revolver is open.

The lever is for lowering the cam to release the cylinder.

(*b*) If necessary to open the Webley revolver without the functioning of the extractor, this can be done by pressing in the lower and visible part of the extractor lever at the knuckle joint.

(*c*) The action of cooking, or that of lifting the hammer by trigger pressure, causes the cylinder to rotate, and bring another chamber in alignment with the bore.

At the moment this hammer falls forward, the cylinder is locked in position by the engaging of the cylinder catch in the narrow slot, assisted by the nose of the pawl under a tooth of the ratchet.

In the Webley and Colt revolvers the fall of the hammer, the return of the trigger to its forward position, and the functioning of the rebound action, are actuated in the same manner by a V-shaped spring, the apex of which is fixed to the centre part of the butt. The upper arm is hooked on to the hammer swivel at the base of the hammer, and the nose of the lower arm bears on a lever known as the main spring auxiliary.

On the release of the trigger, the "auxiliary" pushes it forward to its original position, the hammer at the same time being brought back to the rebound position, by the shorter side of the auxiliary, actuating the rebound arm.

This and further details are given in M. Regs. Part I, paras. 79 and 80, but they deal solely with the Webley pistol

The mechanism of the "Smith and Wesson" .455 revolver differs somewhat from the Webley and Colt.

It has a flat main spring, the tension of which can be adjusted by a screw placed low down in the butt. The forward action of the trigger, and the rebound, being actuated by a spiral spring placed in a rectangular casing.

On the trigger being pressed back, the spring is compressed by the platform sliding back a short distance.

This platform and the hammer have slight shoulders on them which, coming in contact with each other, when the trigger is forward, and the hammer is in the safety position, prevent the striker from penetrating the firing hole, and reaching the cap of a cartridge.

On the platform sliding back a11d the hammer falling, these shoulders do not touch each other, and the hammer is free to go fully forward so that the striker penetrates the firing hole.

On releasing the trigger it is forced forward by a coil spring, the platform at the same time sliding forward into its original position, its shoulder arriving under the hammer shoulder, thus actuating the rebound of the hammer.

FAULTS IN MANIPULATION.

Faults.

1. When employing the trigger action, the trigger is not pressed back to its full extent, resulting in a round passing the firing hole. This is caused by the pawl having risen sufficiently to rotate the cylinder, but the trigger nose has not forced the hammer back far enough to disengage from under the hammer catch, and to allow the hammer to fall forward.

2. In the "Colt" and "Smith and Wesson" revolvers, a point is reached before this action, which, if the trigger is pressed, results in a deadlock, owing to the pawl having engaged, but the short arm on the trigger having not engaged in the recess of the trigger catch, the trigger catch is consequently not depressed, and continues to prevent the rotation of the cylinder.

3. After firing a shot by the cooking action, the trigger is not released until after the hammer is drawn back again, thus preventing the pawl from coming down and engaging under the next tooth of the ratchet.

The trigger nose, however, comes again into the hammer bent, thus retaining it in the fully cocked position, the result being that when the trigger is pressed the hammer falls to the empty case of the last round.

DIRECTIONS FOR DISMOUNTING THE WEBLEY REVOLVER.

The dismounting or stripping of the revolver is unadvisable without proper facilities.

Method of procedure is also essential.

Remove stocks.

Take off trigger guard.

Remove cylinder.

Full cock hammer.

Apply cramp or pair of pliers to the main spring.

Release trigger, lift stud of main spring from stud-hole, and take out main spring.

Take out main spring auxiliary.

Take out trigger.

Take out hammer.

DIRECTIONS FOR ASSEMBLING WEBLEY REVOLVER.

Replace the hammer, and screw in the axle screw.

Replace the trigger with pawl attached, and screw in trigger screw.

Replace auxiliary.

Replace the main spring, fix stud in stud-hole.

Put the hammer to full cock, and take off cramp or release grip of pliers.

Replace trigger guard.

Replace stocks and stock screw.

WEIGHT OF TRIGGER PULL.

The cooking action trigger pull for active service should be 6 lbs.

This is not too heavy for a good “let-off” for fine shooting, and at the same time not too easily let off by accident.

In the hands of an expert a 4-lb. trigger pull would be suitable.

The adjustment of the "let off"—that is the weight of the pressure required on the trigger to fire the pistol from the full cock—is dependent on the angle of the "bent" of the hammer (a small notch in which the nose of the trigger engages when the hammer is at full cock).

The easing off of the face of the bent is the work of the makers' expert filer.

The touch which reduces the "pull" by half a pound is so fine that it is sometimes a matter of only polishing it with a razor hone.

It is therefore easily realised that such a delicate operation must not be attempred by the amateur.

The weight of the trigger pull to operate the trigger action, is dependent on the strength of the main spring.

With the Webley and Colt revolvers it generally requires about 10 to 12 lbs. pressure.

The "Smith and Wesson," somewhat less.

CARE AND CLEANING OF THE REVOLVER.

The revolver is a long-suffering weapon, and will give faithful service with very little care, but it will well repay proper attention.

With good care and cleaning it is not likely to fail its owner at a critical moment.

When not in use it should be examined for rust or dirt, and cleaned as in the case of the rifle.

It should be carefully gone over before taken into action, and always cleaned as soon as possible after firing.

A brass wire brush should be used to remove the hard deposit of fouling which accumulates close to the cone in the chambers.

Regulation flannelette, and rifle oil, will do for the rest of the work. A brass cleaning rod with a screw end to take the brass wire brush, and a needle eye for the flanelette should be carried attached to the back of the holster.

A cleaning outfit—comprising oil bottle, brass wire brush, and flannelette, in a small leather case is of value. (See Fig. 20 (*a*).)

During empty pistol practice, certain screws in the weapon are liable to work loose. Pistols should be frequently examined for this, and when discovered, the screws should be turned well home.

If a screw is a frequent offender, it may be cured by having one or two of the threads near the head slightly burred, thus causing it to bind when returned to its seating.

For thorough cleaning of the Webley revolver the cylinder should be removed. This can be done by withdrawing the cam lever fixing screw, which is slotted so that it can be easily turned with a coin. The lever is then pressed so that its nose engages with the tooth of the cam, pressing the cam back, and releasing the cylinder.

The owner of a pistol should know its registered number. Cylinders of revolvers must not be exchanged. Each cylinder is carefully fitted to the barrel, and the use of a wrong cylinder will upset the accuracy of the weapon.

The number is stamped on the cylinder and should agree with that on the body and barrel of the weapon.

CHAPTER XVI.

Cartridge Carriers.

Speed in loading depends somewhat on the accessibility of the cartridges for use.

Extra rounds are generally carried in a pocket. Provided equipment does not interfere the outside lower *right-hand* pocket of the tunic is a good one for the purpose.

Breeches pockets are also useful.

The regulation pouch is not recommended, for if not re-buttoned immediately after use, the cartridges are liable to drop out.

A cartridge belt, whilst useful for carrying a number of extra rounds, is not conducive to quick loading.

A small leather wristlet carrier is a handy article from which to draw single rounds.

If carrying rounds loose in a pocket, and one is in a hurry to re-load, these rounds have a remarkable way of coming to the fingers, bullet first instead of base.

If one pulls out five or six in the hand at a time, one or two generally manage to fall out of it.

It is not a bad plan to utilise the ordinary service rifle cartridge clips, which will hold five rounds of revolver ammunition.

A number of these clips fully filled, and carried in the tunic pocket with half-a-dozen loose rounds, can be recommended as a practical way of carrying the extra rounds.

A clip full is quickly brought out, and held by the forefinger of the left hand against the barrel of the pistol on its right side whilst re-loading.

With a little practice one can become fairly quick in the use of this little contrivance.

THE "PRIDEAUX REVOLVER CARTRIDGE LOADER."

As an adjunct to the service revolver, this device is an invaluable one.

By its use the revolver can be re-charged as quickly as the automatic pistol—thus nullifying the only point on which

the automatic pistol of to-day could claim an advantage over the revolver for active service. (*See* Fig. 30.)

Fig. 30.

THE PRIDEAUX LOADER—IN USE .

By means of this invaluable device, the revolver can be re-charged as quickly as an automatic pistol.

REVOLVER BAYONETS.

A small bayonet, suitable for quickly attaching to the Mk. VI Webley revolver, is a thoroughly practical idea, and is of value in hand-to-hand fighting.

A bayonet of this sort should be made as light in weight as practicable. Such a weapon has been produced by the makers of the Webley pistol.

When such accessories are attached, the revolver will shoot a few inches low at medium ranges.

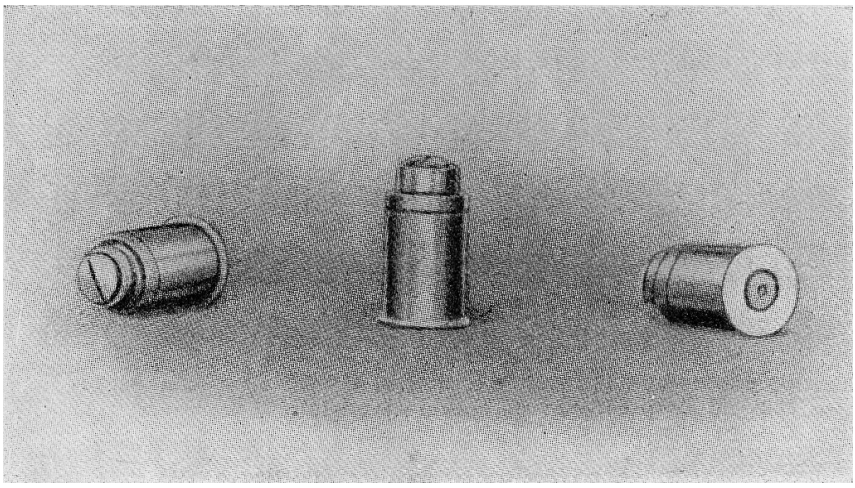
CARTRIDGES.

The automatic pistol cartridges .455 rimless with nickel covered bullet should never be confused with the service revolver .455 cartridge with lead bullet. If the former is fired in a revolver, it is liable to burst the chamber, or otherwise injure the weapon.

"DUMMY" CARTRIDGES.

The use of properly made "snap-cap" cartridges for empty pistol practice will prolong the life of the pistol mechanism.

Fig. 31.



SNAP CAP DUMMY CARTRIDGES.

These cartridges are made with vulcanite spring "caps" which greatly ease the jar of the hammer blow. (*See* Fig. 31.)

Dummy cartridges are necessary for rapid loading practice, and for use with live rounds in preliminary firing practice.

They can be easily made by utilising misfire cartridges.

These misfire cartridges should be lightly gripped in a vice by the base rim, and the lead bullet carefully extracted by the use of a pair of pincers.

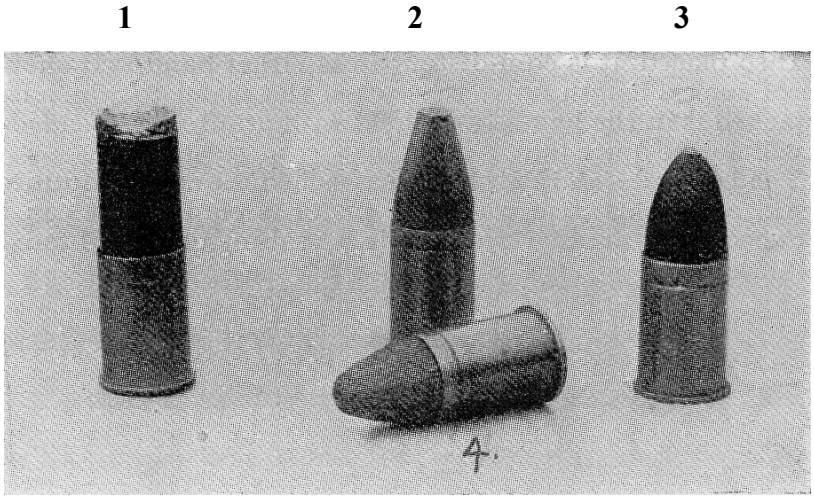
The unfired propellant is then emptied from the case, and a wooden bullet pushed home so as to fill the case and project the same distance as the exposed part or the properly seated lead bullet in the normal cartridge.

Two stabs should be made to keep the wooden bullet in its place. (*See* Fig. 32.)

The use of "misfire" cartridge cases is better than that of empty fired cases, if not distorted in the operation or withdrawing the bullet, as the latter are expanded in firing, and require some re-sizing if adapted as dummies.

Lead bullets should not be replaced in empty cases, and used in dummy cartridges, as live rounds may easily be confused with such dummies and lead to fatal accidents.

Fig. 32.



DUMMY CARTRDIGES.

No. 1.—Shows the section of Bamboo with lead core.
No. 2.—Shows the section stage—the Bamboo whittled down
No. 3.—Shows the section of Bamboo bullet completed, seated and stabbed
No. 4.—Shows a wooden bullet dummy made without lead core.

There are advantages, and disadvantages, in the use of the lanyard.

The consensus of opinion seems to be equally divided for, and against its use during daylight, but it is generally agreed that it should be worn at night.

If the revolver is dropped during darkness, or when the owner falls down, the lanyard, if attached, may make recovery of the weapon easy.

But in the turmoil of trench fighting, the lanyard is very apt to foul up with the equipment, catch on some obstacle, or even prevent the firing of the pistol at a critical moment by catching the hammer.

An instance in the war is known where the latter occurred, costing the owner his life.

HOW TO WEAR THE LANYARD.

Probably the best place to attach the body end of the lanyard is at the centre of the waist, to, or near the buckle of the "Sam Browne," or equipment belt.

If so placed, it is equi-distant from either hand, It should be of such a length only, that when the pistol to which it is attached is in the hand—and held with arm fully extended—it will not be quite taut.

The lanyard should always be attached for use in mounted work, as in this case when the pistol is emptied, it can be dropped, and another weapon (*e.g.*, sabre) quickly brought into use.

CHAPTER XVII.

Revolver Practice Ranges.

As the extreme range of the 265-gr. bullet fired from the Webley service revolver is 1,550 yards, adequate precautions should be taken for safety during firing.

Old quarries, sand, or chalk pits, often provide excellent sites for revolver ranges. When these are not available, a stop butt of at least 18 feet in height should be provided for 20 yard ranges, where there is no danger area.

Natural stop butts, composed of rock, broken stone, or chalk with flint deposits, are liable to be sources of danger to firers at short ranges.

Owing to the curved and hollow surfaces of flints in chalk, or broken rock, portions of bullets will sometimes be turned back at acute angles. Such natural stop butts should be revetted with turfs, or faced with timber to prevent the return of the lead.

Sand, or soft earth, make the most satisfactory stop butts, as such material quickly catches the lead, and also the recovery of metal is comparatively easy.

Flank butts should be at right angles to the stop butt, and of a minimum height of 8 feet, and extending back to the 10 yards firing point line. The floor of the range should be level, free from stone, and properly drained.

Close up to the stop butt, wooden box sockets should be sunk into the ground, and made so as to take the legs of the grouping targets, or stakes of the fixed and disappearing figure targets.

It is best to place these target sockets behind a small protecting parapet, otherwise they are liable to be damaged by bullets. The use of wooden plugs to as into each socket to prevent earth or sand, &c., filling them when not in use will save much time in setting up targets.

DANGER AREAS.

Where there is a danger area, the depth measured from the firing point should be at least 1,000 yards—the width at 1,000 yards can be found by drawing lines from the outer

ends of the firing point line, at 30 degrees from the centre, and joining up the Hank lines with a circle. That part of each radius which passes beyond the firing point line, to measure 1,000 yards. (*See* Diagram (*j*)).

Ranges should be sited so that a firer, when facing his target, does not have the sun in his eyes.

RANGE APPLIANCES.

Traversing and advancing targets may be run by gravity, on rails, or overhead wires, or man-hauled on sledges.

The latter is a satisfactory method, as the exact speed of a man walking or running can thus be obtained.

Another way of hauling moving targets is to have a rope from each one attached to a wooden winch, much like the ordinary well-winch, placed behind the firing line. The winch should have a large drum, and an iron crank handle.

Two or more targets can be handled at one time by such a device. Different lengths of rope being used, so that targets advance any desired distance between ranks.

Slats of wood placed vertically parallel to each other, and attached to the top and bottom of the frame of the winch, are necessary to guide each rope if more than one target is being hauled at a time. The winch is most suitable for working advancing targets, but traversing can also be run by its use.

In the latter case, the ropes must be made to travel through sheaves, and fairleads, attached to a post at the side of the range and near the stop butt, the ropes being turned at this position at right angles, and towards the firing point.

All figure targets should be properly marked as shown in diagrams. Criminal-type paper faces are a useful addition. Paste-pots, brushes, and patching papers in all necessary colours, should be at hand, before firing begins.

Many surprise targets can be arranged for "trench" and "ruined village" practices. Targets for such practices should be made as realistic as possible. Papier maché is useful for this purpose, and can be painted to represent the enemy.

"Bobbing" targets, which can be made to appear or disappear round corners in a trench, can be very simply constructed.

"Door" targets to appear and disappear from the side of a trench, are also easily arranged.

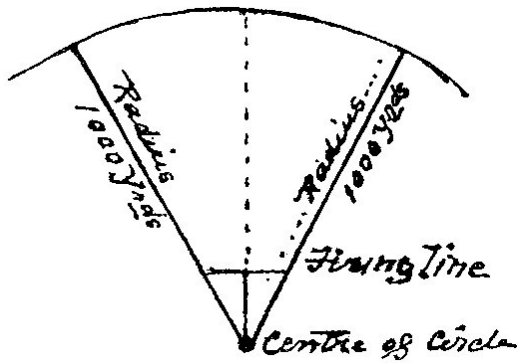
Dead falls for the firing of blank rounds into small cans of black powder, give realistic effects in dark communication trenches, dug-outs, &c., and can be used to illuminate targets during the instant of the explosion, thus providing useful practice for snap shooting in the dark.

Small tables for cartridges, somewhat like a tray on cross legs, are very useful at the firing point. These should be made about 2 feet in height. The top, 2 feet square, with raised edges, 2 inches in height, divided in the middle by a 2 by 2 inch piece of deal, attached to which by hinges is a piece of three-ply wood, made so that it will cover either the one or the other half of the table top at will.

By its use, cartridges and score books can be protected from the sun or rain, whilst there is a convenient space left uncovered, on which to place other articles.

The rectangle grouping measures as described on page 68, should be made of stout wire.

Diagram (j).



CHAPTER XVIII.

Range Rules.

1. A pistol must never :

(*a*) be brought loaded to a range ;

(*b*) be so pointed that if accidentally discharged, it might endanger the firer himself or others.

2. Pistols are to be carried in holsters, and only drawn when an order to that effect is given.

3. A pistol must never be carried, or put into the holster at full cock.

4. On being drawn from the holster, the pistol must immediately be opened and examined.

5. When drawn, a pistol must be carried to and from the firing point broken open.

6. Whenever a pistol is picked up it is to be immediately opened and examined.

7. Pistols *must be proved immediately before all empty pistol practice*.

EXERCISES.

It is necessary to train the muscles which control the pistol, but discretion is required in carrying out the exercises for this purpose, the object being to tone up the muscles, not over tire them. The beginner should, therefore, practise the following exercises every day regularly and systematically.

MUSCLE EXERCISES.

1st Practice.

The pupil, standing at attention, should push out his arms at an angle of 45 degrees from his body, and towards the ground, the back of his hands up, and with fingers strongly separated and extended, he should then slowly turn his hands over, clench the fists, draw them back, fore-arms level with the waist, and elbows as far back as possible. This must be repeated, muscles being kept tense.

2nd Practice.

1st Part.—With the pistol in the right hand, and correct grip, the pupil assumes the "Ready" position. With eyes on the mark level with the face, brings the pistol steadily up to aiming position, then lowers the arm and pistol to the "Ready" position. This must be repeated.

2nd Part.—As above, but with the back of the hand held upwards.

3rd Part.—As above, but with the palm of the hand held upwards.

All these movements should be done slowly, and with the muscles tense.

EMPTY PISTOL EXERCISES.

"Off-Hand" Practices.

From the "Ready" position, the pistol is raised to a mark level with the face, and the pressure completed. The pistol is then lowered in the vertical plane, about two feet, re-cocked, and the practice repeated. (Standard—40 per minute.)

"Rapid Fire" Practice.

The pistol is held out at an, angle of 45 degrees from thc body, and pointing to the ground. Continuous trigger pressing is then performed, the muscles of the forearm being kept tense, the wrist stiff, and the grip firm.

The practice must not be rushed, or the muscles over-strained. (Standard—60 per minute.)

Cocking and Uncocking Practice.

The pistol is quickly drawn from the holster, the "Ready" position assumed, the pistol is then cocked and uncocked, six times; the unloading motions performed, the pistol returned to the holster, and the practice repeated.

NOTE.—When cooking and uncocking, the palm of the hand is brought away from the butt. This should be done with little disturbance of the direction of the barrel. Care must also be taken to retain the correct position of the three fingers on the butt.

Duelllng Practice.

Two pupils facing each other at about 5 yards apart, prove arms and assume the "Alert" position. (*See* page 85.) On the word "Fire"—they must "draw" and fire at each other's eye, employing the trigger action.

Then return the pistols to their holsters, and repeat the practice.

Mirror Practice.

Practise "Off-Hand" method at the reflection of the pupi1's own eye in a mirror, at about two yards distant. (Two seconds to cock and fire.)

Pointing Practice.

The pupil must look well at selected aiming mark, close his eyes, raise the pistol, press off the shot, hold on, open his eyes, and note his error, if any.

CHAPTER X.

Mounted Firing.

Firing from horse-back should not be attempted before some standard of skill in firing on foot has been reached. In fact it should not be attempted at all until the firer is a practical revolver shot, and has also acquired "correct" habit in handling his pistol for safety.

The tractability of the horse must also be considered.

To attempt practice from the back of a horse unaccustomed to the reports of pistols fired near it, is exceedingly dangerous, and an unnecessary handicap to training.

The method about to be described for firing from horse-back—that of bringing the pistol down to the mark—is only for the use of mounted troops, not for infantry.

One reason for raising the pistol to the vertical position when mounted, and thus carrying it vertically in the hand shortly before firing—is that of safety.

It is assumed that in action others of one's own side are liable to be on each flank.

Also the safety of the horse's head is to be considered, and finally the fact that the target is likely to be one which occupies a comparatively low position (such as infantry), and is being rapidly approached by the mounted firer.

All these conditions are markedly at variance with those in the case of the man on foot, and demand this different style of handling the weapon and delivering the shot.

"Throwing the gun" style was a practical way of firing at short ranges from a galloping horse moving over rough ground—but as this method of snap-shooting is adapted only for use with the "single action" pistol, as already explained—the following method will be found more suitable for firing with the service revolver from a horse in movement.

The weapon should be drawn from the holster only a short time before it comes into use for the first shot, but allowing sufficient time for making sure of correct grip, and the raising of the pistol to the vertical position near the shoulder, with the elbow touching the side of the body.

When in this position the hammer should be cocked by the thumb, if the "cooking action" is to be employed.

About five yards from, and before passing the firing point for each target, the pistol should be lowered, with extended arm pointing towards the target. The shot should be fired as the alignment is caught, without any attempt to improve the aim.

Directly the shot is delivered, the pistol will again be raised to the shoulder position, if another shot is to be fired, and the same series of actions repeated.

The pistol should be returned to the holster immediately after the last shot of a practice has been discharged. With objects coming under fire on either flank, let the point of aim be on the edge of the target nearer to the approach, and level with the centre.

Time the pressure so that the pistol fires just as the alignment is caught coming on to this part of the target.

As a precaution of safety in all the early stages of mounted training and practice, the trigger action should be employed in preference to the cocking action.

Some empty pistol and blank round practice should be done before firing live rounds.

Preliminary empty pistol practice on the following lines should be carried out dismounted.

EMPTY PISTOL PRACTICE—DISMOUNTED.

(Prove pistol, and return to holster.)

1. Stand facing a mark, such as No. 5 target, placed five yards away level with the feet, the body turned one—quarter left.

2. Place the feet apart about one yard, and bend the knees imitating as nearly as possible the position when in the saddle

3. Draw the pistol, with the right hand, and raise it, the butt level with, and close to, the outside part of the shoulder, the elbow touching the side of the body, barrel vertical.

(If employing cocking action the hammer should be cocked as the pistol arrives at this position.)

4. Bring the pistol down on the mark, arm fully extended, and timing the "squeeze off" so that the hammer falls as the pistol covers the point of aim.

The firer should then note his error, if any, and continue the practice.

Similar practice should be carried out to the half right, and half left front, to the right flank, and to the right rear, turning on the feet without moving them away from their original places.

FIRING PRACTICE.

Preliminary firing (dismounted) should then be carried out on the lines of the *Empty Pistol Practice.*

After this, the pupil should rehearse the mounted practices, using blank rounds, and schooling his horse to the work.

PRACTICES—MOUNTED.

An elliptical track 200 yards by 50 yards will be found suitable for firing practices mounted.

Targets should be placed on the right side of the track 10 to 20 yards apart, and from 2 to 10 yards distant at right angles from the track, according to the practice.

For the first practice, five 4 by 4 feet grouping targets (with 2 inch black aiming mark) should be placed at 20 yards intervals, 10 yards to the right of the track, facing the firing point.

When approaching the targets, the firing point for each target is on the track 10 yards from the spot where a straight line drawn from the target meets the track at right angles. Each shot is to be fired before passing this point, and within five yards from it.

This practice should be carried out at the walk.

Practice 2.—The same as above, only the pace in this case will be the canter.

In practice 3.—Five No. 1 figure targets are placed 10 yards apart—2 yards to the right of the track, the firing point being five yards from each target. The pistol is to he fired by trigger action. Pace—the canter.

In practice 4, right flank and right rear—Four No. 3 figure targets.

The first two targets are placed 10 yards apart, and 5 yards to the right of the track—the firing point being a spot where a line from the target would meet the track at right angles.

The second two targets, at same intervals, the firing point for these being on the track 5 yards beyond each target. The trigger action is employed in this practice. Pace-the canter.

The firing point for each practice, and target, should be marked by a small coloured flag at the side of the track.

TRACTABILITY OF HORSES.

During dismounted practice horses should be picketed some 5 to 10 yards behind the firing point, to accustom them to the reports of the pistols.

When they will stand quietly at such distances during tiring, they should have blank rounds fired near, and finally over them.

It is very important that horses be brought quietly up for such training, and for the mounted practices.

Horse aid is of great value during the mounted practices. The horse should carry his head pointing away from the side the pistol is to be fired.

At the canter the animal should be trained to lead his near, or off forefoot, according to requirements. This can be brought about by a pressure of the rider's leg on the horse's side, just behind the saddle flap.