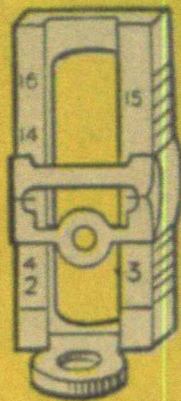
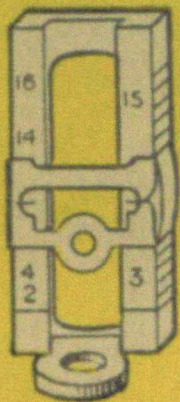


MANUAL OF RIFLES

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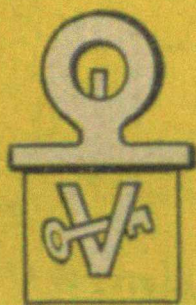


S.M.L.E
MAUSER
ROSS
GARAND-
AUTOMATIC
ETC.

SPRINGFIELD
SNIPING
P14
MANNLICHER-
CARCANO
ETC



LOADING FIRING STOPPAGES
IMMEDIATE ACTION STRIPPING
CLEANING ASSEMBLING
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THE P. 14 RIFLE.

DETAILS.

Service name—No. 3 Mark I .303.

Length—3 ft. 10 in. approximately.

Weight—about 9½ lbs. without bayonet.

Bayonet weight—approximately 1 lb.

Magazine capacity—5 rounds.

Loaded by means of charger.

Aperture pattern sights adjustable from 200--1,650 yds.

An aperture battle sight is fitted for 400 yds. range.

Length of butt from trigger—1 ft. 1½ in.

Length of rifle with bayonet fitted—5 ft. 3 in. approx.

Barrel length—2 ft. 2 in.

Left-hand rifling—1 revolution in 10 ins., fitted with 5 grooves.

Muzzle velocity with standard ammunition 2,380 ft. per sec.

Long range sights graduated from 1,500-2,300 yds.

Trigger pressure—primary pull about 2½ lbs.

second pull about 5½ lbs.

STRIPPING. Removal of bottom plate magazine platform and stripping.—Turn the rifle in an upside down position and, using the point of a bullet nose, push down the small spring catch which is found in the centre of a hole in the back of the magazine bottom plate, then press the bullet nose in the direction of the trigger guard—this automatically frees the bottom plate and together with the magazine platform and spring can then be removed complete in one unit.

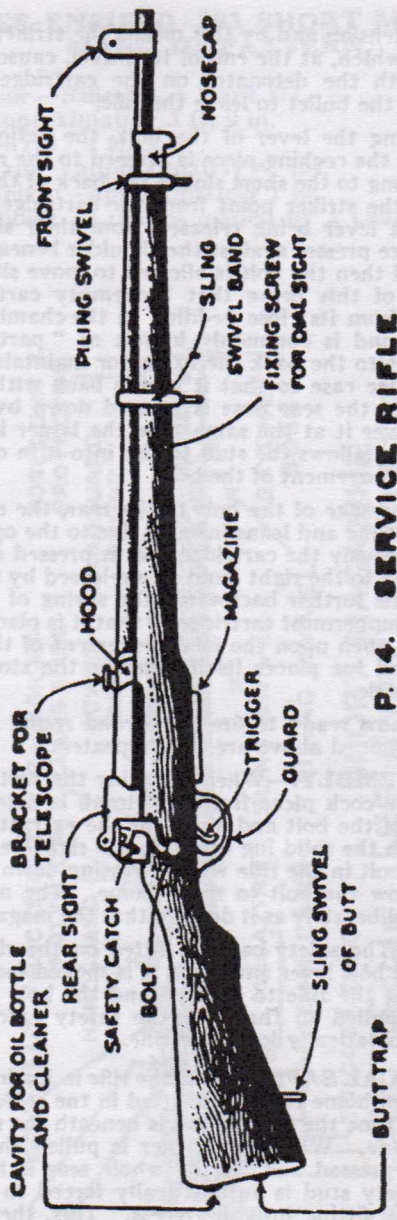
To reassemble, refit the whole assembly as one unit in the magazine opening beneath. Fit the front end of the bottom plate in the front of the magazine opening and press downwards and to the fore until automatically engaged by the spring catch.

STRIPPING BOLT.—Press to the fore the safety catch which is situated on the right-hand side of the weapon at the back of the body to the rear of the bolt lever, then lift the bolt lever up to the left and push the bolt to the back; press out the bolt retaining catch, which is on the left side of the body, leftwards and completely withdraw the bolt.

THE P. 14 RIFLE.

MECHANISM AND HOW IT WORKS.

After an empty charger has been ejected the bolt face meets the rim of the uppermost cartridge in the magazine and, due to the moving to the fore of the bolt this cartridge is carried into the firing chamber. During this operation the ejector is pressed in an outer direction, the cartridge elevates and the rim round the base automatically fits beneath the extractor claw; near the end of the forward movement the cocking piece bent makes contact with the sear nose and stops any further forward movement of the striker and cocking piece. When the bolt movement to the fore is finished, the mainspring is automatically squeezed between the bolt plug front wall and the striker collar at the same time the striker and cocking piece remaining motionless. As soon as the knob of the bolt is pressed downwards the lugs at the fore end of the bolt fit into the grooves in the body and the lever of the bolt then fits its slot in the back of the body thus automatically locking the whole action and allowing the safety catch to be used just so long as the bolt lever is sufficiently down to enable it to accept the actual locking bolt. Whilst closing the bolt, the cocking piece does not turn due to a groove in the body and the extractor stays on a horizontal plane and the long slot on the bolt lines up with the cocking piece and a small indent automatically lines up over the safety stud.



P. 14. SERVICE RIFLE

As the primary pressure is put on the trigger the curved head presses against the body lower part, this pushes the sear nose down and squeezes the sear spring at the same time forcing the safety stud to elevate into the indent on the bolt; naturally, this is subject to the bolt itself being pressed down to its fullest extent. On further pressure of the trigger its point makes contact with the body and in turn forces down the sear nose so that it releases itself from the cocking piece bent, at the same time causing the safety stud to elevate to a further extent; this allows the mainspring to be

released from its tension and by this means the striker and cocking piece to the fore which, at the end of its travel, causes its point to make contact with the detonator on the cartridge, turning the charge and forces the bullet to leave the rifle.

Upon elevating the lever of the bolt, the action that takes place is such that the cocking piece is pressed to the rear so that it moves from the long to the short slot in the back of the bolt. This motion removes the striker point from the cartridge case. Upon the lugs and bolt lever being released from their slots, the bolt lever's sloping edge presses against the shoulder beneath the bed of the backsight and then the bolt is allowed to move slightly further back, the effect of this being that the empty cartridge case is released slightly from its close bedding in the chamber by means of the extractor and is commonly known as "part extraction." As the bolt moves to the back the extractor maintains its hold on the empty cartridge case so that it moves back with it. As this action commences, the sear nose is pressed down by the cocking piece travelling over it at the same time the larger indent is over the safety stud and allows the stud to rise into it in order to effect an easy rearward movement of the bolt.

During the passage of the bolt to the rear, the ejector inserts itself into the split lug and leans inwards due to the operation of its spring; simultaneously the cartridge case is pressed against it and ejected downwards to the right hand side released by the extractor. As the bolt travels further backwards the spring of the magazine elevates the next uppermost cartridge so that it is placed to the fore of the bolt face; then upon the final movement of the bolt to the rear, the left hand lug places itself opposite the stop of the bolt on the body left side.

The rifle is now ready to fire the second round and the cycle of operations explained above are then repeated.

BOLT ASSEMBLY.—When replacing the bolt always make sure first that the cock piece front end tooth is fitted in the shot slot on the rear of the bolt and also that the extractor is in direct line of travel with the solid lug fitted on the right-hand side of the bolt. Refit the bolt in the rifle whilst pressing down the magazine platform and allow the bolt to move home. The magazine platform interferes deliberately as it denotes that the magazine is empty.

SAFETY.—The safety catch is fitted on the right-hand side to the rear of the bolt lever and when it is moved forward it is out of action allowing the rifle to be fired and the bolt to be worked, but when it is pulled to the back the safety catch comes into position and automatically locks the rifle.

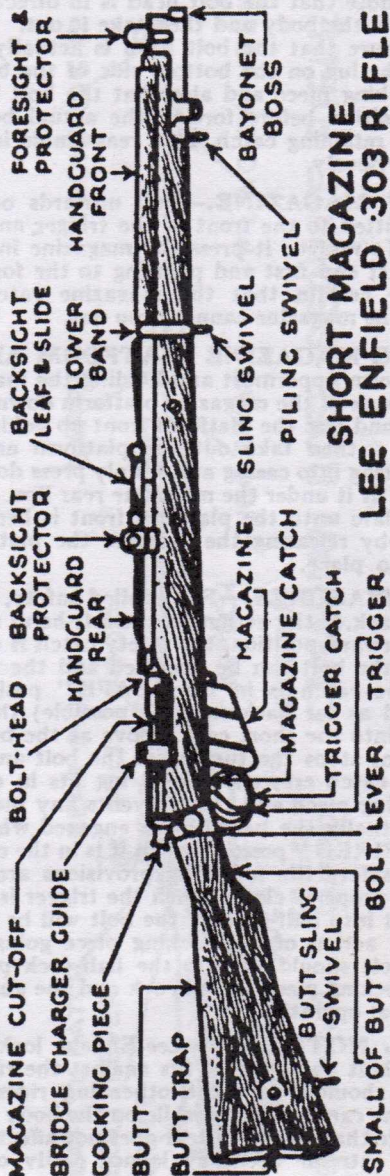
MECHANICAL SAFETY.—If the rifle is loaded and the bolt lever is fully down home the sear is fitted in the cocking piece bent and at the same time the safety stud is beneath the small recess in the bolt under-side. When the trigger is pulled the sear nose is automatically depressed and, as the whole sear is hinged on this axis pin, the safety stud is automatically forced to elevate; this it can only do by fitting into the recess. This, then, means that should the bolt lever not be fully down home it is impossible for the safety stud to rise when the trigger is pulled—therefore the sear nose will not depress enough to free itself from the cocking piece bent and this prevents the rifle from being fired.

GENERAL NOTES.—The general design of the trigger and bolt mechanism of this rifle are very similar to the standard "Mauser" pattern rifle. The locking lugs are at the fore end of the bolt and they fit in slots in the front of the body just at the back of the barrel rear end. It should be noted that these slots must be kept absolutely clean. This rifle is sometimes fitted with telescopic sights and then is suitable for use as a most efficient sniping rifle.

THE LEE-ENFIELD .303 SHORT MAGAZINE MARK III PATTERN.

DETAILS.

- Service name—Rifle No. 1 Mark III.
- Length—approximately 3 ft. 9 in.
- Bayonet length 1 ft. 5 in.
- Weight of rifle—approximately 8½ lbs.
- Bayonet weight—approximately 1 lb.
- Magazine holds 10 rounds loaded by a charger 5 rounds at a time.



**SHORT MAGAZINE
LEE ENFIELD .303 RIFLE**

Notch and blade open type sights adjustable from 200-2,000 yds.

Some types of these are fitted with a magazine cut-off and some without.

Muzzle velocity with Mark VI ammunition is 685 yds. per sec.

Muzzle velocity with Mark VII ammunition is 815 yds. per sec.

STRIPPING.—To remove the bolt press to the fore the safety catch which is fitted at the back of the action on the left-hand side, then lift the bolt lever by pressing it up to the left and take the bolt to the rear as far as possible. Put your thumb on the bridge charger guide left side and fit your forefinger beneath the bolt head, by leverage you can then elevate the bolt head; this automatically will allow it to free itself from the spring retaining catch. Finally, note that the bolt head is in direct line with bolt way in the back of the body and then take it out. To replace the bolt, first make sure that the bolt head is actually fully screwed home and that the lug on the bottom side of the bolt is in direct line with the cocking piece and also that the bolt is pulled to its furthest back position before forcing the actual bolt head down above the spring retaining catch, then reassemble in reverse order to that given previously.

TO STRIP MAGAZINE.—Pull upwards or press in the magazine catch fitted to the front of the trigger and then remove the magazine. To replace it press the magazine into the opening with the narrowest end first and pointing to the fore. Push fully home and make certain that the magazine catch is correctly engaged so that the magazine cannot drop out.

STRIPPING MAGAZINE PLATFORM AND SPRING.

—With the platform uppermost and holding the magazine in your hand, press the back of the magazine platform downwards into the magazine casing and free the platform front up behind the two lips of the magazine; then take out the platform and spring. To replace, fit the spring into casing and simply press down the back of the platform and fit it under the magazine rear lips. Then, by still pressing, manipulate until the platform front is beneath the magazine front lips, by releasing the pressure the platform will then rise upwards into place.

SAFETY MEASURES.—For applied safety, a safety catch is fitted on the back of the action on the left-hand side of the rifle and when in a forward position, the safety catch is out of action—this means that the bolt can be operated and the rifle is suitable for firing. If the catch is in the "SAFE" position (which is when it is pulled as far backwards as possible) the safety catch locking bolt fits into the short cam groove at the back of the bolt and by this means stops the turning of the bolt and, at the same time, the safety catch crescent-shaped lug fits in one of the two slots in the cocking piece and this prevents any movement of the latter parts. Actually the back slot is engaged when the cocking piece is in the "FIRED" position when it is in the cocked position. For mechanical safety the following provisions are made so that if the bolt is not properly closed when the trigger is released either the action will fit into half-cock or the bolt will be forced into the shut position by action of the cocking piece going forward. To correct, if the bolt should go into the half-cock position, simply press back the cocking piece to full cock and the gun is then ready for further normal operation.

SPECIAL NOTES.—The Lee-Enfield locking lugs are at the back of the bolt and one lug fits against the right side of the body resistance shoulder and the other lug rides upwards and presses against the cam slot back while on the body left side. This has the advantage that wear and tear does not affect its functioning very much but extreme accuracy is not easily obtainable thus

making this rifle really unsuitable for the purpose of sniping but it is ideal for general service use because the bolt action is simple and easy being particularly useful for rapid firing; furthermore, under active service conditions, dirt, etc., do not tend to affect the efficient functioning of the weapon and cleaning is quite easy.

.303 ROSS SERVICE RIFLE.

DETAILS.

Service name Ross Service Rifle.

Weight about 9½ lbs., with bayonet fitted 11 lbs.

Length approximately 4 ft. 2 in.

Length with bayonet fitted, approximately 5 ft.



Rifling 1 anti-clockwise turn in 10 in. with 4 grooves.
5-round magazine fitted of charger type.
Aperture and semi-open sights fitted.
Sighted aperture 200-1,200 yds.
Long range sight (semi-open) sighted 1,000-1,600 yds.
Battle sight (semi-open) 400 yds.

This gun is fitted with a straight pull bolt which opens and closes the breech in a single movement. The barrel has 4 grooves and the rifling twist is left-handed.

THE MAGAZINE holds 5 rounds and is not removeable. Charger loading is achieved by means of a guide placed above and a little to the right of the bolt way. To empty the magazine, move the bolt fully backwards and forwards without touching the trigger until all the rounds have been ejected, then close the bolt, press the trigger and apply the safety catch. The ejection will be found to be quite powerful and out to the right-hand side.

STRIPPING. To remove bolt.--This rifle has the safety catch fitted on the right-hand side of the bolt lever. This catch is of the "swing-over" type and on it is stamped on either side the following words: "SAFE" and "READY." Place the catch to the "READY" position. On the left-hand side of the body will be found a thumb piece which has 3 positions in the vertical plane—viz:—up, centre, down. Put the thumb piece in the centre position; this allows the bolt to be taken out. To take out the bolt, move it straight to the rear by using the bolt lever. The action is of the straight pull type and is not in the usual class of rotating bolt actions. To replace the bolt, note that the bolt-head lugs should be in the same horizontal plane as the bolt-lever because in this position the bolt-head is proud of the sleeve approximately 1 inch and the mainspring is compressed, therefore, it is quite possible for the bolt-head to spring back against the sleeve, due to the action of the compressed mainspring; further, it is absolutely vital to note that the lugs are in the same horizontal plane as the bolt-lever. Viz.:—the mainspring compressed and the bolt extended. With the bolt in this condition, fit it into the rifle noting that the slots on the bolt and the body runners coincide and then press home. Then put the thumb piece on the left side up to its top position.

MECHANISM.—The bolt is fitted with Mauser pattern locking lugs which operate in the locking lug recesses provided in the hood which is situated at the front end of the bolt-way and into which the barrel is screwed with a left-hand thread. Some early models of this rifle had the locking lug manufactured in the solid, but in the later models they were manufactured in the form of a coarse, interrupted screw thread—very similar in type to big gun breech blocks. The bolt body is in one piece with the bolt-lever and it is carried and stopped from turning by its slots which move on guides in the bolt-way. The locking and rotating of the bolt-head is achieved by a screw thread cut on the sleeve of the turning member which is carried in and fits with a similar type of thread on the bolt body interior. The striker, with cocking piece attached passes through an aperture in the sleeve. The locking lugs are partially freed with the first outward movement of the bolt and preliminary extraction of the cartridge-case is caused and at the same time the striker is cleared from the bolt face due to withdrawal as the further outward movement of the bolt is effected; this causes the locking lugs to disengage completely and the mainspring to be compressed and in the event of a cartridge-case being in the chamber this is automatically moved back at the bolt-head, due to the extractor and is then ejected by action of the ejector on the inside left of the bolt-way. On closing the bolt and cocking piece bent is prevented from moving by the sear and also the bolt-head is rotated and locked by the sleeve screw action. Upon pressing the trigger, the

sear nose is withdrawn from the bent and then the cocking piece with striker flies forward due to the action of the mainspring and this, naturally, fires the cartridge.

A safety measure which operates by the trigger, consists of a stop fitted on the sear arm front end which elevates the engages with two small lugs on bolt under-side when the trigger is fully pressed home. The trigger is fitted with two pressures, the first being approximately 3 lbs. and the second approximately 6½ lbs.

APPLIED SAFETY.—A safety catch is fitted on the right-hand side of the bolt-lever; this is of the "swing-over" type and operates backwards and forwards. When it is pushed forward the rifle can be fired and the bolt operated. The word "READY" will then appear uppermost. When the safety catch is pressed to the back, the catch is in operation and the word "SAFE" is visible. It is important to note that on this weapon the safety catch works in the opposite way to that on either the P. 14 or the S.M.L.E. rifle in that the lever is moved to the fore when at "SAFE" and *vis versa*.

NOTES.—Always inspect to see that the distance between the rear of the bolt-head and the front end of the sleeve is approximately 1 inch. This denotes that the bolt is correctly assembled. Should this distance appear to be approximately ½ inch or less, the bolt is wrongly assembled and should an attempt be made to fire the rifle in this condition it is more than likely that the bolt will blow back from out of the rifle and probably wound or kill you.

THE SPRINGFIELD .300".

DETAILS.

Service name—"U.S. .300" Springfield Model '03.

Weight with bayonet—10½ lbs. approx.

Weight without bayonet—9½ lbs. approx.

Length approximately 3 ft. 8 in.

Fitted with bayonet 4 ft. 11 in. approximately.

Small brass charger type of loading—sighted by adjustable means from 100-2,850 yds.

STRIPPING. To remove the bolt:—Place the magazine cut-off in the centre position as with the Ross Rifle, then lift the bolt lever and take out the bolt. To replace the bolt see that the cut-off is in the centre position then press down the magazine platform and slide the bolt into the bolt-way in the body. Lower the bolt lever, turn the safety catch and cut-off outwards to the left and then depress the trigger to release the springs.

To remove the magazine platform, bottom plate and spring, follow instructions given as for the P. 14. For assembly of these parts see also the P. 14.

U.S.A. MODEL 17 .300".

DETAILS.

Service name—U.S. Model 17".

Dimensions approximately similar to the P. 14.

5-round magazine operating by small brass type charger.

Similar types of sights and range of adjustment as for the British P. 14.

The mechanical details and safety identical to the P. 14.

For details of stripping and assembling refer to the P. 14 rifle.

Rifling has five grooves and the spiral is uniform with a left-hand twist having one turn in ten. The bayonet supplied with this weapon weighs approximately 1 lb. 2 oz. A bullet leaves the muzzle at a velocity of 2,700 feet per second and its weight is approximately 150 grs. whilst the powder charge is about 50 grs. in weight.

BALLISTICS—DETAILS.—This weapon has been known to fire over 30 well aimed shots in one minute using magazine fire. A maximum range of approximately 4,750 yards can be achieved with the rifle elevated at 45° and the time required for the flight of the bullet for a range of this distance is approximately 40 seconds. This weapon has very good penetrative powers and herewith is given a small table covering the penetration of various materials at various distances :—

TARGET MATERIAL.	PENETRATION.			
	50 ft. Inches	100 yds. Inches	500 yds. Inches	1000 yds. Inches
Semi-solid butt made of soft wood boards 1" in thickness and placed approximately 1" apart one behind the other... ..	58	52	25	9
Wet sand	9	13	15	12
Very dry sand... ..	6	6	12	10
Hard wood against the grain... ..	30	28	12	6
Thick, solid earth	18	16	22	15
Steel plate (bright mild)	½	½	½	—

With the battle sights fitted the bullet leaves the rifle at a trajectory of approximately 0°14 ft. and it should hit its objective at a distance of between 400 to 450 yards.

SAFETY DEVICES.—Applied safety is ensured by safety catch fitted on the back of the bolt and working laterally. It operates in three positions thus :—

(1) If it is turned to the right (this can only be done when the rifle is cocked) the catch is in action and the rifle is at "Safe."

(2) When the safety catch is placed in the vertical position the bolt can be stripped by unscrewing the cocking piece and assembly away from the bolt body.

(3) Finally when turned to the left the catch does not operate ; in other words, the bolt can be manipulated and the rifle can be fired.

Mechanical safety is ensured by the fact that if the bolt has not closed properly the cocking piece cam will strike the bolt cocking ram and the mainspring energy will simply be lost in closing the bolt instead of in striking the cartridge cap. This prevents any chance of the cartridge being fired until the bolt is fully closed—otherwise dangers would naturally exist.

NOTES.—This is the only service rifle which tries to correct for drift on firing.

.300 GARAND SELF-LOADING RIFLE (AMERICAN).

DETAILS.

Service name—" U.S. Rifle, Calibre 30 M. 1."

Length— 3 ft. 7 in. approximately, with bayonet fitted 4 ft. 11 in.

Weight approximately 9½ lbs. without bayonet.

Weight of bayonet—1 lb.

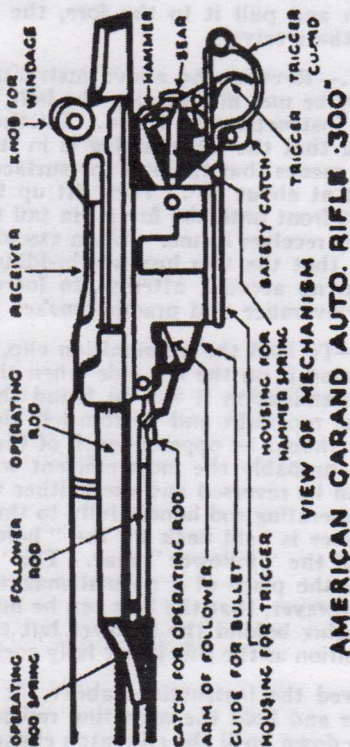
Magazine capacity—8 rounds with clip loading.

Gas-operated gun with ejection from the right side in an upwards direction to the right front. The cocking lever is fitted on the right-hand side and when the gun is at " Cease Fire " the breech is closed except when the magazine is empty and then the breech is open. No repetition firing is possible as this gun is designed for single shot use.

Aperture sights adjustable for 200–1,200 yards are fitted.

MECHANISM.—The Garand is a self-loading rifle and when the trigger is pressed a round is fired, the cartridge case is then ejected and a fresh round is then fitted into the chamber and the breech automatically closed without any further action being required on the part of the firer. These operations are mechanically carried out due to a part of the gases being trapped at the muzzle and being utilised to operate a piston which is fitted on the barrel underside.

As soon as the clip is empty it is automatically ejected from the rifle and the bolt is held to the back so that the action remains open enabling another clip to be immediately loaded. It is always possible to tell when the empty clip has been ejected as a pronounced "pinging" noise is made.



VIEW OF MECHANISM
AMERICAN GARAND AUTO. RIFLE .300"

STRIPPING & ASSEMBLY.—Place the rifle upside down, undo the trigger guard by pulling up and to the back and then by continued upward pressure take out the trigger group complete. Then turn the rifle over and take out the barrel groups and receiver from the front end.

To assemble the rifle, reverse the above instructions—ensuring in addition that the rifle action is cocked before inserting and that the trigger group is correctly bedded—(viz.: stud fitted on either side of the action is at the top and the slanting grooves in the receiver) before the trigger guard is fully pressed down and locked.

To effect fully adequate cleaning it may be necessary to strip further and this is effected as follows:—Place the action upside down and take away the follower rod and operating rod spring by pushing the follower rod against the spring and undoing its claws from the follower arm studs, then with a nail, penknife or punch press out the follower axis pin and remove the operating rod catch, follower arm, bullet guide, follower and slide; then turn the action so that the right side is uppermost and pull back the operating rod until the rod lug coincides with the dismount notch which is just to the fore of the right thumb screw of the back sight. The rod can then be undone from the bolt by elevating the rod towards the sight, then push the rod to the fore again so as to clear the receiver front and finally withdraw it to the back.

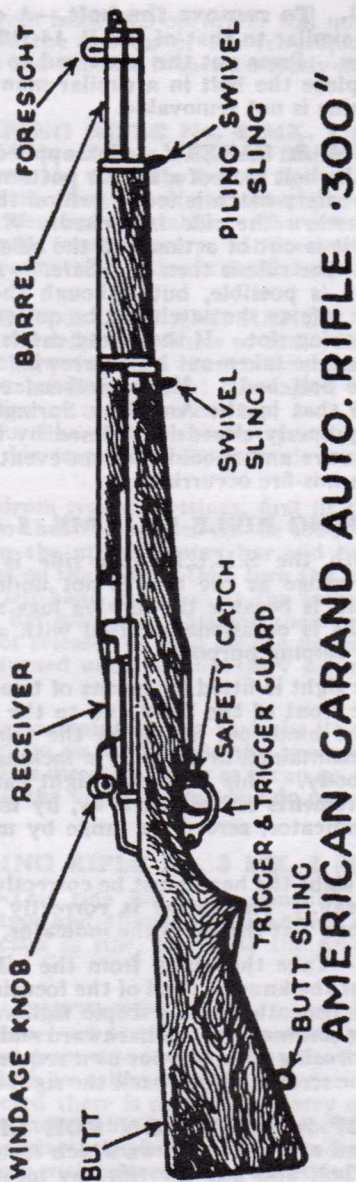
To remove the bolt, lift the bolt-head upwards by pulling it to the right, this will automatically depress the tail, then, by holding the bolt-head, twist the lug on the left back side until it is in its assembly slot on the receiver left side, then turn the bolt in a clockwise direction and pull it to the fore, the bolt can then be taken away from the receiver.

ASSEMBLY.—Reverse the above instructions and as some little difficulty may be met in replacing the bolt back it is advised that the following instructions be noted. Fit the bolt rear end in the runway, seeing that the left rear lug is in its assembly slot—this automatically means that the bolt top surface is sloping downwards to the right at about 30°. Then lift up the bolt-head and turn it to the right front until the firing pin tail moves through its assembly slot in the receiver frame. When assembling the follower arm make certain that the two lugs are bedding correctly in the follower slots. On no account attempt to force any parts back into place but perseverance and practice makes perfect.

LOADING.—To load the ammunition clip, fit the rounds so that the lowest round is on the left side when the clip is fitted to the rifle. Upon examination it will be found that the clip has a small nipple on the top right and bottom left sides. The highest and lowest rounds should be opposite each of these nipples. This is not vital but is probably the most efficient way of loading the clip. The clips can be reversed and used either way up. To load the rifle, pull the operating rod handle fully to the back and in this position the bolt face is held back by the "holding open" catch and is well clear of the "follower" rear. The "follower" is the part which checks the place of a normal magazine platform. It should be noted, however, that the bolt can be held to the back by the bolt face engaging behind the follower but the clip cannot be inserted in this position as the rifle is not fully cocked.

Having followed the instructions above, fit a loaded clip on top of the follower and hold the operating rod handle to the rear then press the clip down until the clip latch engages with it. Now release the operating rod and, due to the action of its spring, it will move forward and the bolt will feed the top round out of the clip and place it in the chamber. Finally, apply the safety catch which will be found just in front of the trigger guard. It is set at "Safe" by pulling it back towards the trigger. The safety catch operates only when the rifle is cocked.

UNLOADING.—Place the safety catch to the fore if it has been applied, then pull the handle of the operating rod to the rear and hold it; this has the effect of ejecting the live round in the chamber. Then press in the clip latch and the remaining rounds will then be ejected in an upwards motion. Finally, by keeping the operating rod handle to the back, depress the follower, this will close the bolt. Slightly ease the operating rod and press the trigger.



7.92 mm MAUSER RIFLE (GERMAN).

DETAILS.

Weight without bayonet 9½ lbs.
 Length without bayonet approximately 4 ft. 5 in.
 Has a 5-round magazine charger loading of the small brass type
 Open " V " notch and barleycorn sights are fitted adjustable
 for 400-2,000 metres.

STRIPPING. To remove the bolt.—A catch is fitted on the body left side similar to that of the P. 14 rifle and it operates in the same fashion. Press out the front end to the left and take out the bolt. Replace the bolt in a similar manner to the P. 14. The Mauser magazine is not removable.

MECHANISM & SAFETY.—For applied safety a safety catch is fitted on the bolt plug of a similar pattern as the American Springfield. This safety catch is found behind the bolt and it can only be operated when the rifle is cocked. When the catch is turned to the left it is out of action and the rifle can be fired. If turned to the right the rifle is then at "Safe." A middle position between these two is possible, but although the rifle cannot be fired it is not very safe as the catch can be quite easily moved out of the small positioning slot. If the safety catch is in this vertical position the bolt can be taken out by unscrewing the cocking piece assembly from the bolt body. Mechanical safety is ensured in a similar manner to that in the American Springfield rifle. Thus, if the bolt is not properly closed it is closed by the cocking piece hitting the cam groove and should such an event take place there is a possibility of a mis-fire occurring.

SNIPING RIFLE No. 3 MK. I (T).

Compared with the S.M.L.E. this rifle is far superior in accuracy at short range as the bolt is not under pressure when a shot is fired; this is because the locking lugs are to the fore of the bolt. This rifle is occasionally fitted with a telescopic sight which is useful for sniping purposes.

The telescopic sight is fitted by means of two pins which hook into fittings in the front of the body and to the left of the back-sight bracket. The hindmost fitting on the telescopic sight has one pin which is maintained in place by a locking bolt on the left hand side of the body. This telescopic sight can be adjusted to suit any eye requirements either lateral or, by means of an intersecting wire and indicator, zeroed for range by means of a range-drum.

To get a good sight the head must be correctly poised—usually about 2 inches away. The target is correctly sighted when it appears at "6 o'clock" at the tip of the indicator.

TO FOCUS.—Take the sight from the rifle and invert it. It will be found that the knurled head of the focusing slide is bedded in the middle and beneath the telescopic sight. Give a turn or two to the clamping screw and so, by backward and forward manipulation, adapt the focusing slide to your own requirements. Do not forget to tighten the screw and put back the sight on the rifle.

METHOD OF ADAPTATION FOR LINE.—After disclosing the scale and easing the screws which turn the triple prism cell, take out the bolt and put the rifle, by means of firm props, in an aiming position and, looking along the bore, pick any convenient target. Looking through the telescope do any adjusting that is necessary as follows:—

If the target needs moving to the right move scale in a clockwise direction.

If target needs moving to the left an anti-clockwise movement of the scale is indicated.

RANGE ADAPTATION.—At the range-drum head and holding range scale will be found two retaining screws, these must be slightly loosened. If the range required is say 400 yards the scale must be turned until the figure 4 appears in line with the indicating mark at the side. As the scale has been disengaged

from the range-drum head this operation will not effect the place of the indicator in the interior of the telescopic sight. Tighten up the two screws and the rifle is then correctly adapted and ready for firing.

SNIPING RIFLE No. 4 MK. I (T).

DETAILS.—This rifle has a special fitting to take the new telescopic sight—the No. 32. The battle sight is removed so that there may be as little elevation of the telescopic sight as possible. This rifle has no focusing adaptation. The telescopic sight is so made that adjustment is unnecessary. It does not matter in which order line and elevation adaptation is carried out.

ADJUSTING FOR LINE AND RANGE.—Alter the range and, if necessary, the deflection drums so that your group M.P.I. is similar to your aiming point, then change the range and if necessary the deflection drum readings so that they agree with the distance which you are firing at and, if necessary, zero for line. Always attempt to zero for line at the shortest possible range so as to prevent mistakes due to possible atmospheric conditions.

To alter the drum reading settings, first fit the tools supplied above the drum so that the spigots on the lower tommy bar base and the groove on the upper tommy bar end both fit into their respective positions on the drum; then turn the lower bar approximately 180° in a left-hand direction at the same time preventing the upper tommy bar moving. This will then permit the scale to be turned. Do not release the hold on the upper tommy bar and the scale is then turned until the necessary setting is in line with the indicator.

Finally, so as to maintain the scale in its new position, all that it is necessary to do is to rotate the lower tommy bar backwards in a right-hand direction as far as it can go, making sure that the drum itself and the upper tommy bar do not move during this operation.

SNIPING RIFLE No. 3 MK. I (T) A.

DETAILS.—This rifle has a permanently fitted telescopic sight of the Aldis type and, therefore, has a cheek rest which is now universal in this class of rifle, to enable the firer to keep a firm grip on the butt.

LATERAL ADAPTATION.—The telescopic sight is maintained in place at the end of the rifle by means of a screw which allows of movement from side to side. The back of the telescopic sight is held in place in a like manner. As lateral adaptation is automatically effected there is no need to carry out the operation of range adaptation last of all; it will, in fact, be easier to adjust for line when the range adaptation has already been done—as previously explained for dealing with correction on the Rifle No. 3 Mark I (T).

FOCUSING ADAPTATION.—The same as for the P. 18.

RANGE ADAPTATION.—The same as for the P. 18.

ITALIAN MANNLICHER-CARCANO RIFLE.

DETAILS.

Calibre—.256".

Has a magazine capacity of 6 rounds with clip loading.

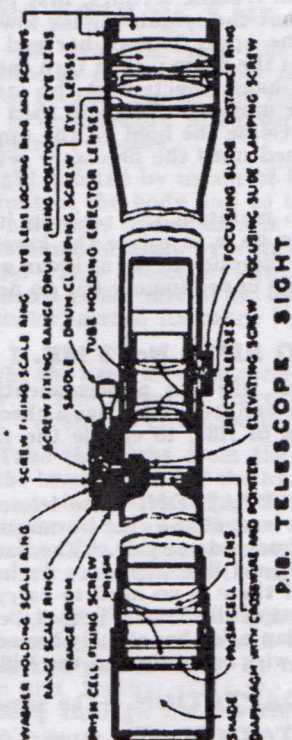
This weapon weighs approximately 9 lbs. without its bayonet and has a length of 4 ft. 3 in.

A barley-corn and "V" pattern sights are fitted and are adjustable for range of 600 to 2,000 metres.

STRIPPING.—To take out the bolt, all that is necessary is to drop the retaining bolt fitted on the body right side and just pull the trigger. To replace the bolt always make certain that the trigger is kept in a pulled position and simply place the bolt back in action.

This rifle has no normal magazine fitted, but to replace it an arm, spring supported but with no rear plate, is supplied. This arm rises in the interior of the clip middle and as this weapon is clip loaded the empty clip falls out through the bottom aperture.

MECHANICAL DETAILS.—The safety catch will be found on the back of the bolt plug. To utilise it, simply press it in a turn in an anticlockwise direction. The weapon is now at "Safe." If the weapon is required to fire, all it is necessary to do is to reverse these instructions. The mechanical safety is ensured in a similar manner to that fitted to the Mauser Rifle, in as much as if the bolt has not closed fully it is automatically closed by the cocking piece hitting the cam slot. Naturally it is quite possible that a mis-fire may occur if this takes place.



P.18. TELESCOPE SIGHT

NOTES ON THE CARE OF ARMS.

The pull-through and oil bottle are contained in the rifle butt on service this is probably the only means of cleaning that is available.

Always clean immediately after firing if possible and while the barrel is still hot; this will enable you to effect efficient cleaning with the least labour.

Always clean from the breech to the muzzle and draw the pull-through through in one movement.

If using wire gauze, make certain it is well oiled.

See that the recess for the extractor spring is clear.

Always dry the barrel and breech before firing.

When firing blank ammunition it is much more trouble to clean the gun than after firing ball ammunition.

Always check the magazine and clean the platform—noting that the spring works easily.

Always wipe the inside of the body of the chamber entrance with an oily rag.

If possible always endeavour to clean the inside of the barrel with boiling water, but make certain that it is always dried out afterwards and thoroughly oiled.

HINTS FOR NIGHT FIRING.

A khaki uniformed soldier is visible on a dark night at about 12 yards and on a star-lit night at about 24 yards. Columns of fours are visible on a star-lit night at about 35 yards and on a moon-lit night at about 50 yards. A man is visible at about 100 yards if the moon is behind him.

NIGHT FIGHTING.

1. Silent movement is a vital necessity, as the enemy can always detect your presence by sound.

2. A good hint is to always wear shoes heeled and soled with rubber to prevent excessive noise.

3. **A Tip.**—The old sweats' invention of the last war of rubbing the back of the rifle foresight with a phosphorous match, which has been moistened, is a very good one when sniping at night, as, due to the darkness, the foresight appears phosphorescent when viewed from the backsight. This will enable you to aim quickly and accurately.

SNIPING.

1. When in the open country never operate from the same spot twice.

2. Always endeavour, if it is night-time, to keep yourself and your gun as much under cover as possible, to prevent the flash making your position obvious to the enemy.

3. The effect of continually being on the move is of great value, as your enemy is often inclined to over-estimate the number of opponents against him, thereby sometimes causing him to alter his plans.

SPECIAL HINTS & TIPS FOR THE PRACTICE & USE OF RIFLES.

MAKING MINIATURE OBJECTS & FIGURES TO CORRECT SCALE FOR USE ON PRACTICE FIRING RANGES.—It is very often necessary to scale down long distance firing due to difficulty in obtaining sufficiently large spaces for practice work, and it is quite easy to actually obtain the same effect on the ordinary small length range. For instance, supposing it is required to illustrate the effect of firing at a 12 feet high object at 750 yards. This can be very easily represented on a 50 yards range by use of the following equation, the result of which gives the size of the object which has to be placed at the end of a 50 yards range so as to obtain the same optical view as though it were at 750 yards

distance. First divide the height of the object in feet so as to reduce it to yards, then multiply this by the length of the range in yards, finally dividing the result by the actual length in yards at which the object normally would be at. Thus :—

$$\frac{4 \times 50}{750} = \frac{4}{15} \text{ yards, or approximately } 9\frac{1}{2} \text{ inches in height.}$$

In other words, a target having a figure 9½ inches in height placed at the end of a 50-yard practice range requires the same accuracy to hit it, as firing at a 12 feet high object at a distance of 750 yards.

TO CALCULATE SPEED OF MOVEMENT SCALED DOWN FOR PRACTICE RANGE USE.—When firing on a short practice range, scaled down objects that are supposed to be moving should move at approximately the correct speed so as to enable the firer to get the best possible type of practice. Let us imagine that it is required to simulate on a 30 yards range a 6-foot man at 1,000 yards distance, and running at a speed of 200 yards a minute. First of all multiply the speed in yards per minute of the moving object by the length of the range, then divide the result by the distance of the object; this gives the speed in yards per minute at which the object has to move across the actual practice range. Thus :—

$$\frac{200 \times 30}{1,000} = 6 \text{ yards per minute speed of moving object.}$$

Therefore, the object must move across the back of the range at a speed of 6 yards per minute or 3.6 inches per second. To actually calculate the size of the moving object use the equation previously given. Thus :—

$$\frac{2 \times 30}{1,000} = .006 \text{ yards, or approximately } 2 \text{ inches.}$$

Therefore, to simulate the 6-foot man running at 200 yards per minute at a distance of 1,000 yards on a 30 feet practice range, a figure approximately 2 inches in height moving at a speed of 3.6 inches per second is required.

