

# MANUAL OF M305 RIFLE



**DO NOT ATTEMPT TO LOAD YOUR M305 UNTIL YOU HAVE READ THIS MANUAL!  
REVIEW THE SAFE HANDLING RULES PRIOR TO EACH USE**

## **IMPORTANT SAFETY INFORMATION INSIDE**

Keep this manual with your rifle and review it before each use. Do not allow others to handle or fire your rifle until they have read this manual. Transfer this manual with the firearm upon ownership change.

**Be a responsible gun owner. Use it safely, store it securely, and always transfer a gun responsibly and legally.**

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## **Before loading and firing this rifle read and understand the information in this manual**

This is an auto-loading rifle. It is immediately loaded and ready to fire again after each shot until all shells loaded in the magazine have been fired. The rifle is able to fire both with and without the magazine in place.

**Removing the magazine does not unload the rifle nor engage the safety. The rifle is not unloaded until the chamber is empty.**

## **About your owners manual**

This is an instruction booklet on how to operate this firearm with some basic safe handling rules. It does not attempt to provide information about using a gun to defend yourself, how to hunt, or for competitive or target shooting. It is important to get instruction from a competent instructor prior to engaging in any of these activities. The National Rifle Association, your local or state authorities or your gun dealer may provide information regarding available instructors or training courses. Using a gun for self defense is a complex subject with dangers and risks for which you must be properly trained. **Know and understand the laws regarding self defense.**

## **Gun safety is no accident**

Every safety rule has a reason behind it – read the rule carefully and understand why the rule is important

for safety. It is recommended that every person receive instructions from a competent firearms instructor before handling this or any other firearm. Know and obey all gun laws. Do not give a gun to someone who is not allowed to own a gun or who may use it for a criminal purpose.



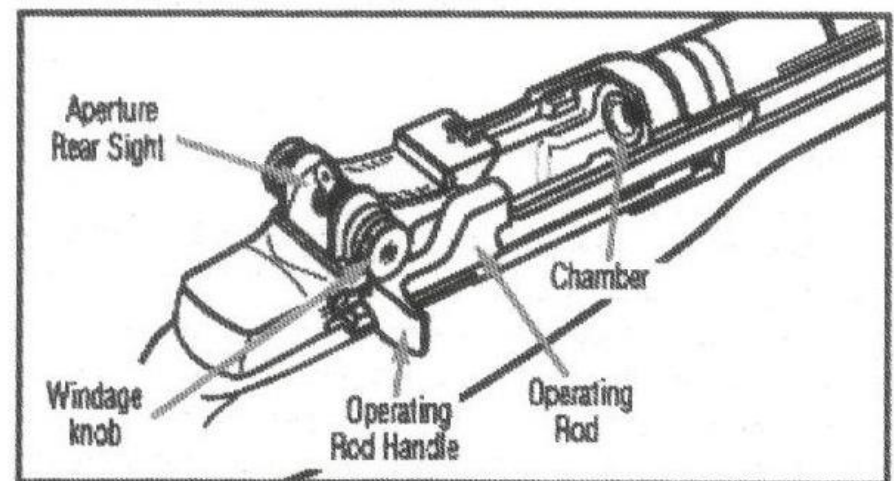
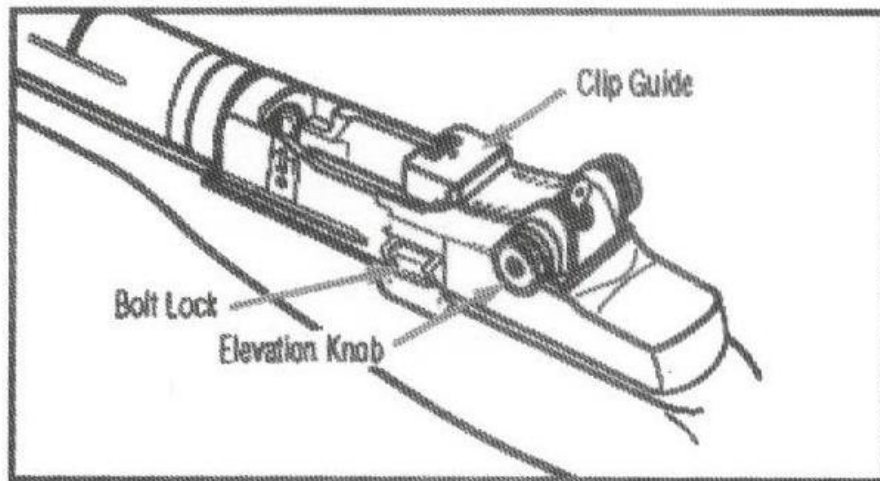
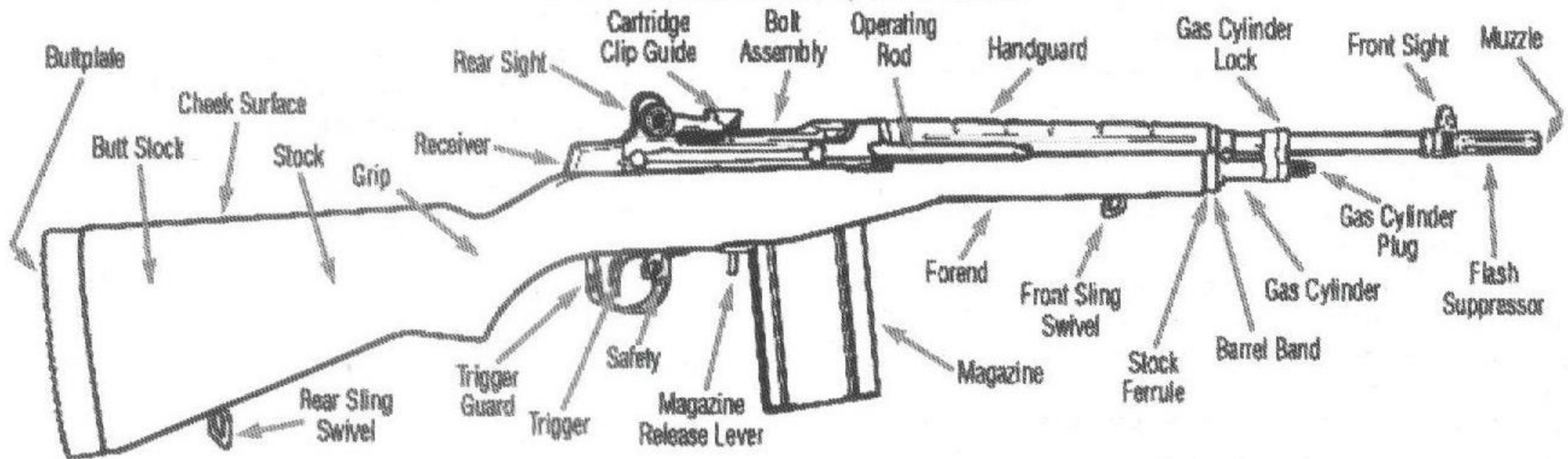
## **Used guns**

If you purchased this firearm as a used gun, have it inspected and tested by a competent gunsmith before you use it. Guns are sometimes altered and may require repair before they can be used safely.

## **Store guns safely in the home**

Store guns unloaded, locked and in a secure place. Obey gun storage laws. Store guns and ammunition separately. Because your children may be in other homes where guns are stored, you should show them what to do if they see or find a gun.

# NOMENCLATURE





# USE OF THE M305



Before handling or using your M305 inspect the chamber to make sure the gun is unloaded.

1. Your firearm is delivered factory packaged and preserved with a light coating of protective grease and oils. Before loading make certain that all packing grease and oil has been cleaned from the bore and exposed mechanism.
2. Your firearm comes equipped with an effective, well-designed safety device. **HOWEVER, NEVER RELY COMPLETELY ON ANY SAFETY MECHANISM.** It is **NOT** a substitute for cautious gun handling. **NO** safety, however positive or well-designed, should be totally trusted. Like all mechanical devices, the safety is subject to breakage or malfunction and can be adversely affected by wear, abuse, dirt, corrosion, incorrect assembly, improper adjustment or repair, or lack of maintenance. Moreover there is no such thing as a safety which is "child-proof" or which can completely prevent accidental discharge from improper usage, carelessness, or "horseplay". The best safety mechanism is your own good sense; **USE IT!** Always handle your firearm as though you expect the safety **NOT** to work!

## AMMUNITION

3. The M305 is designed and built to specifications to shoot standard factory military 7.62 NATO ammunition. The specifications for standard military ammunition include harder primers to withstand the slight indentation from the firing pin when the bolt chambers a cartridge. This slight indentation is normal. The use of civilian ammunition with more sensitive primers or handloads with commercial primers and/or improperly seated primers increase the risk of primer detonation when the bolt slams forward. This unexpected "slam fire" can occur even if the trigger is not being pulled and if the safety is on. Use of military specification ammunition will help avoid this. Every shooter should use extreme caution when loading this or any other firearm. See page 15 for instructions on proper loading to help avoid a "slam fire". Also see enclosed article on "Slam Fire".



4. Use only recently made high quality, original military or factory-manufactured ammunition of 7.62 caliber. Old ammunition may deteriorate from age causing it to be dangerous. Do not use cartridges that are dirty, wet, corroded, bent or damaged. Do not oil cartridges. Do not spray aerosol-type lubricants, preservatives or cleaners directly onto cartridges or where excess spray may flow into contact with cartridges. Defective ammunition is the primary cause of mishaps and can cause injury or death to you and bystanders.



Lubricant or other foreign matter on cartridges can cause potentially dangerous ammunition malfunctions. Store ammunition in a cool dry place to prevent contamination and deterioration of the primer and powder. Use only ammunition of the caliber for which your firearm is chambered. The proper caliber is permanently engraved on your firearm; never attempt to use ammunition of any other caliber. Defective ammunition can create excessive pressures resulting in an explosion and cause injury or death to you and/or those nearby. You must assume responsibility for using proper and safe ammunition.

Keep ammunition separated by caliber at home and on the range. This can be done by keeping it in the original box. Throw ammunition away that has been dented or deformed, shows signs of wear such as split or cracked necks, cratered or flattened primers, or punctured cases. If you have any reason to question the safety of any cartridge do not use it and safely discard it immediately.

### **DO NOT UNDER ANY CIRCUMSTANCES USE OLD OR RELOADED AMMUNITION PURCHASED AT GUN SHOWS, ESTATE SALES OR AUCTIONS**

**5. The use of reloaded, "remanufactured", hand-loaded, or other non-standard ammunition voids all warranties. Reloading is a science and improperly loaded ammunition can be extremely dangerous. Severe damage to the firearm and serious injury to the shooter or to others may result. Reloaded ammunition that may function in a bolt or slide action firearm may not properly function and may even explode in a semi-automatic.** The risk of a mishap is reduced by using current clean military ammunition or ammunition that complies with the industry performance standards established by the Sporting Arms and Ammunition Manufacturers' Institute, Inc. of the United States, (SAAMI).

**6. Firearms may be severely damaged and serious injury to the shooter or to others may result from any condition causing excessive pressure inside the chamber or barrel during firing.** Excessive pressure can be caused by obstructions in the barrel, propellant powder overloads, or by the use of incorrect cartridges or defectively assembled cartridges. In addition, the use of dirty, corroded, or damaged cartridges may cause personal injury from the sudden escape of high-pressure propellant gas within the firearm's mechanism.

**7. Immediately stop shooting and check the barrel for an obstruction whenever:**

- ~ You have difficulty in, or feel unusual resistance in, chambering a cartridge
- ~ A cartridge misfires (does not go off)
- ~ The mechanism fails to extract a fired cartridge case
- ~ Unburned grains of propellant powder are discovered spilled in the mechanism

~ A shot sounds weak or abnormal. In such cases it is possible that a bullet is lodged part way down the barrel. Firing a subsequent bullet into the obstructed barrel can destroy the firearm and cause serious injury to the shooter and to bystanders.





8. Bullets can become lodged in the barrel:

~If the cartridge has been improperly loaded without propellant powder, or if the powder fails to ignite.

(Ignition of the cartridge primer alone will push the bullet out of the cartridge case, but usually does not generate sufficient energy to expel the bullet completely from the barrel.)

~ If the bullet is not properly seated tightly in the cartridge case. When such a cartridge is extracted from the chamber without being fired, the bullet may be left behind in the bore at the point where the rifling begins. Subsequent chambering of another cartridge may push the first bullet further into the bore.

**9. If there is any reason to suspect that a bullet is obstructing the barrel, immediately unload the firearm and look through the bore. It is not sufficient to merely look in the chamber. A bullet may be lodged some distance down the barrel where it cannot easily be seen.**

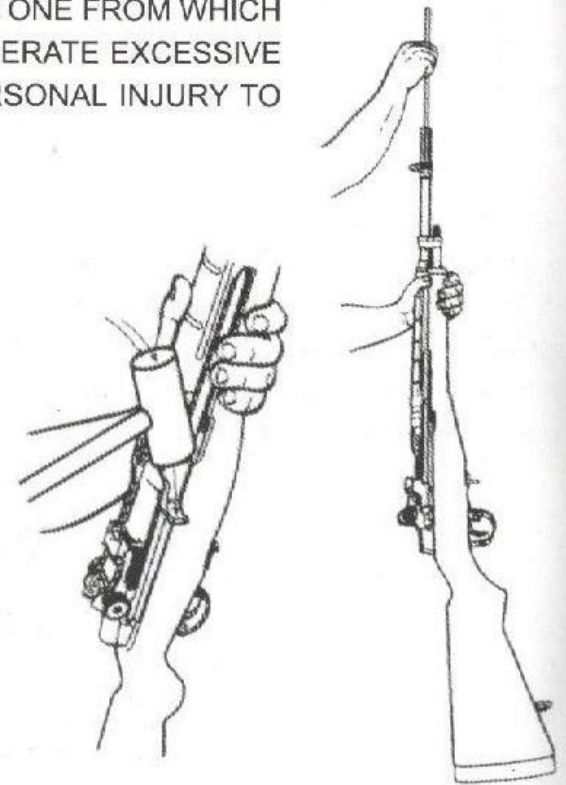


IF A BULLET IS IN THE BORE, DO NOT ATTEMPT TO SHOOT IT OUT BY USING ANOTHER CARTRIDGE, OR BY BLOWING IT OUT WITH A BLANK OR ONE FROM WHICH THE BULLET HAS BEEN REMOVED. SUCH TECHNIQUES CAN GENERATE EXCESSIVE PRESSURE, DESTROY THE FIREARM AND CAUSE SERIOUS PERSONAL INJURY TO YOU AND BYSTANDERS.

If the bullet can be removed by pushing it out with a cleaning rod, clean any unburned powder grains from the bore, chamber, and mechanism before resuming shooting. If the bullet cannot be dislodged by firmly tapping it with a cleaning rod, take the firearm to a gunsmith.

10. While shooting any semi-automatic firearm, an unfired cartridge or fired cartridge case may occasionally become jammed between the bolt and the barrel. Clear the jam as follows, WHILE KEEPING THE MUZZLE POINTED IN A SAFE DIRECTION,

Remove the magazine, then pull back the bolt and hold or lock it to the rear. The jammed cartridge or case now can be removed by shaking it out or by picking with the fingers. When the bolt is jammed closed put the safety "ON", remove the magazine and point the gun in a safe direction. Place the butt of the rifle on a hard surface and strike the bolt handle to the rear using a wooden or plastic mallet to open the bolt. **If this fails to open the bolt take the gun to a gunsmith immediately. Determine what caused the jam before resuming shooting.**



11. Dirt, corrosion, or other foreign matter on a cartridge can impede complete chambering and may cause the cartridge case to burst upon firing. The same is true of cartridges which are damaged or deformed.

12. Do not oil cartridges, and be sure to wipe the chamber clean before commencing to shoot. Oil actually interferes with the friction between cartridge case and chamber wall that is necessary for safe functioning, and subjects the firearm to stress similar to that imposed by excessive pressure.

13. Use lubricants sparingly on the moving parts of your firearm. Avoid excessive spraying of any aerosol gun care product, especially where it may get on ammunition. All lubricants, and aerosol spray lubricants in particular, can penetrate cartridge primers and cause misfires. Some highly penetrative lubricants can also migrate inside cartridge cases and cause deterioration of the propellant powder, and on firing the powder may not ignite. If only the primer ignites there is danger that the bullet may become lodged in the barrel.

14. Never fire any semi-automatic firearm with your finger, hand, face, or other part of your body over or adjacent to the ejection port, or in any position where you may be struck by the reciprocating movement of the operating rod or bolt. Both the ejection of empty cartridge cases and the movement of the operating rod and bolt are part of the normal operating cycle of semi-automatic firearms and pose no safety hazard to the shooter if the fire arm is held in a normal grip and fired at arms' length as intended by its design.

All firearms require periodic maintenance and inspection which may reveal a need for adjustment or repair. Have your firearm checked by a competent gunsmith annually even if it seems to be working well, since breakage, improper functioning, undue wear, or corrosion of some components may not be apparent from external examination. If you notice ANY mechanical malfunction, DO NOT continue to use the firearm. UNLOAD the firearm and take it to a competent gunsmith immediately. Similarly, if water, sand, or other foreign matter enters the internal mechanism, the firearm should be dismantled for complete and thorough cleaning. Failure to keep your firearm clean and in proper working order can lead to a potentially dangerous condition.



Always wear eye and ear protection when using any firearm.

**ALWAYS POINT YOUR GUN A SAFE DIRECTION.**



# **BEFORE USING OR HANDLING REVIEW THE FOLLOWING RULES FOR SAFE SHOOTING**

## **ALWAYS FOLLOW THESE RULES TO BE A SAFE SHOOTER!**

### **READ THESE AND BE A SAFE SHOOTER**

**ACCIDENT** An unintentional or unexpected happening that is undesirable or unfortunate, esp. one resulting in injury, damage, harm or loss.

**Don't be the cause of an accident!**



A responsible gun owner is safety minded and always handles guns in a safe manner by following the basic rules of safe shooting and using common sense in the use of a firearm.

# BE A RESPONSIBLE GUN OWNER...

**Read these rules! Use common sense!**

- Always keep the muzzle pointed in a safe direction.
- Keep your finger off the trigger until you are actually aiming at the target and ready to shoot.
- Treat every gun as if it is **LOADED...ALL THE TIME!**
- Be sure of your target and backstop before you shoot. Ask yourself what your bullet will hit if it misses or goes through the target. The bullet can travel over a mile.
- Place the safety ON when not shooting.
- **DO NOT DROP YOUR GUN.** If it falls, it may fire even with the safety on. If you do drop it, unload it and check if it works correctly before using it again. When firing this or any other high power rifle always keep a firm hold on the gun. Anticipate the noise and recoil.
- Never put your hand over the muzzle of a gun.
- Never rely on a gun's "safety" to protect you from unsafe gun handling. A safety is only a mechanical device, not a substitute for common sense.
- Be sure the barrel is clear of obstruction before shooting.
- If anything does get into the barrel, remove cartridges and clean bore immediately before attempting to shoot. Obstructed barrels can burst and injure you or bystanders.

## BE A SAFE SHOOTER...

- Never let water, snow, mud or other material enter the barrel.
- Never pull a gun towards you by the muzzle. Do not climb a tree or cross a fence or ditch with a loaded gun.
- Guns and alcohol or drugs do not mix. Do not use them before or during shooting activities.
- Get instructions from a competent firearms instructor before using any gun.
- Always keep and carry your rifle with an empty chamber until you intend to shoot.
- Firearms should be unloaded when not actually in use. This means the chamber is empty and the magazine is removed.
- When receiving a gun always open the action and check that it is unloaded.
- Load the gun only when on the range preparing to fire, and unload it before leaving the range.
- Load and unload with the muzzle pointed in a safe direction.



- Be certain the gun is unloaded before cleaning.
- Always empty guns before entering a house, car, truck, boat, RV, camp or any building.
- Never leave a loaded gun unattended.
- Store guns and ammunition separately beyond the reach of children.
- Never place a gun where it could fall and fire.
- Children do not really believe that guns can kill. Keep every gun secure so kids can not get to it. If a child finds your gun and plays with it, tragedy may result.
- Use a rifle case with safety flap or strap when transporting your M305.
- Old or reloaded ammunition may be dangerous. Use only clean, dry, original, high-quality, commercially manufactured ammunition.
- Many ammunition identifications sound similar. Make sure you use the right size ammunition in your gun.
- If a gun fails to fire when the trigger is pulled, keep it pointed at the target for at least 10 seconds before removing the cartridge from the chamber. Sometimes slow primer ignition will cause a "hang-fire" and the cartridge will go off after a short pause.
- Spectators should be 10 feet behind and away from the shooter while loading, firing and unloading.
- Always wear protective eyewear when shooting or near shooting activities.
- Always wear hearing protection when shooting, at a shooting range, or near shooting activities.
- Never shoot at hard flat surfaces, the ground, water or rocks...bullets will ricochet unpredictably.
- Do not alter or modify your gun, and have guns serviced regularly.
- Do not attempt to change your gun's trigger pull, because alterations of trigger pull usually affect sear engagement and may cause accidental firing.
- Stop using your gun if it fails to function properly. Have the gun examined by a competent gunsmith.
- Do not "horseplay" with a gun. Your gun can not think...but you can. Firearm safety depends on you.
- Use a gun lock when gun is not in use and store firearms in a secure place.
- Never assume or take someone's word that a gun is unloaded. Always check it yourself.
- Always carry a gun so you can control the direction of the muzzle in the event you fall or stumble.
- Never transfer a gun to someone who is not legally permitted to possess it or who might use it unlawfully.
- Know and obey all laws of firearms ownership.



**WARNING: WHEN THE TRIGGER IS PULLED YOU MUST EXPECT THE GUN TO FIRE, AND YOU MUST TAKE FULL RESPONSIBILITY FOR FIRING IT.**

# WHEN YOU PULL THE TRIGGER AND NOTHING HAPPENS

You can expect your M305 to fire when you pull the trigger, but there may be times when you pull the trigger and the gun does not fire. When this happens it is important to understand the various conditions that could cause this to happen. In every instance it is important to keep the muzzle pointed in a safe direction while you identify what happened. Wait 10 seconds in case there is a "hang-fire"- where the primer delays igniting the powder. After 10 seconds you can begin to take corrective action.

## WHAT TO DO

First look at the bolt. If the bolt appears to be closed pull the bolt back by pulling rearward on the operating rod handle. If no shell is ejected and the chamber is empty there was a failure to feed. Release the bolt then pull back on the operating rod handle just far enough to allow you to see if a shell was chambered. If there is a shell in the chamber the gun is ready to fire. If there is no shell in the chamber check the magazine to make sure it is properly inserted. Then pull the operating rod handle back and release it. If the magazine is properly seated the gun should be ready to fire. If there is another failure to feed, remove the magazine and insert a different one. If there is a continued failure to feed, unload the gun and take the gun to a competent gunsmith.

If there is a cartridge in the chamber, remove the magazine and release the operating rod handle smartly and open the bolt again. If the cartridge continues to remain in the chamber pull the operating rod handle back and lock it open. Point the gun in a safe direction and insert a cleaning rod in the muzzle. Keeping your hands away from the muzzle, tap the cartridge until it comes out.

Check the extractor and clean the chamber. If this problem repeats itself, unload the gun and take it to a gunsmith for inspection and repair. Do not use the gun if this problem persists. Safely dispose of the cartridge.

If an unfired cartridge is ejected, unload the gun and inspect the primer on the cartridge. If there is a small or faint indentation, the bolt may not have been fully closed. If the primer mark is deeply indented the primer is defective. Both cartridges should be safely discarded. Reload the magazine and chamber a cartridge. Check the bolt to see if it is fully closed. If not, unload the gun and inspect the ammunition and chamber to see if they are clean. A dirty chamber or deformed ammunition will prevent the bolt from properly closing. Properly loading the first cartridge from the magazine requires you to properly insert the magazine and to pull the operating rod handle back fully and release it smartly to allow the bolt to slam forward and strip the cartridge from the top of the magazine. If the bolt continues to not close fully, try a different magazine. Take the gun to a competent gunsmith if the problem continues.



If a cartridge is ejected without the bullet **DO NOT ATTEMPT TO RELOAD THE GUN UNTIL YOU HAVE LOOKED DOWN THE BARREL AND DETERMINED THAT THE BARREL IS FREE FROM OBSTRUCTION.** A bullet stuck somewhere in the barrel will cause the gun to explode if another shell is fired. You can only remove a bullet stuck in the barrel by pushing it out with a wooden dowel or cleaning rod. Do not try to remove the bullet any other way.

Always load the M305 from the magazine. Laying a shell on the magazine without placing it in the magazine or by placing the shell directly in the chamber allows the bolt to slam forward harder than it would if the shell had to be stripped from the magazine. When this occurs the inertia firing pin can come in contact with the cartridge primer with sufficient force to cause a "slam fire". A "slam fire" can occur even if you are not pulling the trigger and even if the safety is on. The use of handloads increase the chance of a "slam fire" and should not be used. When releasing the bolt to place a cartridge in the chamber you should always hold the gun firmly and keep it pointed in a safe direction.

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## **NOTE TO LEFT HANDED SHOOTERS**

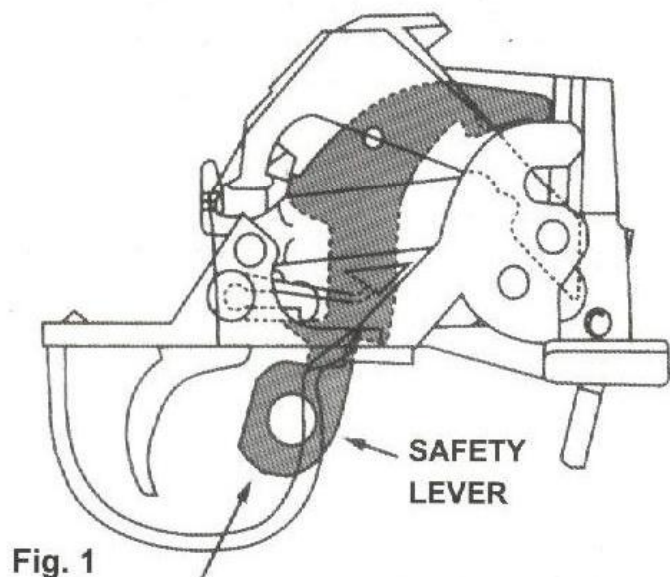
The M305 was designed to be operated and fired right handed. That's the way Uncle Sam wanted it and that's the way instructions on use were given. If you are left handed and normally shoot left handed take the time to practice using the M305 right handed. If this does not work for you, you must develop safe handling procedures that work for you.

When the hammer is cocked the gun may be placed on "SAFE". To do this press firmly on the safety lever until it snaps rearward into the trigger guard to put the safety "ON" [see figure 1]. When the safety is "ON" the trigger cannot be depressed because the trigger is blocked and the hammer is locked in place.

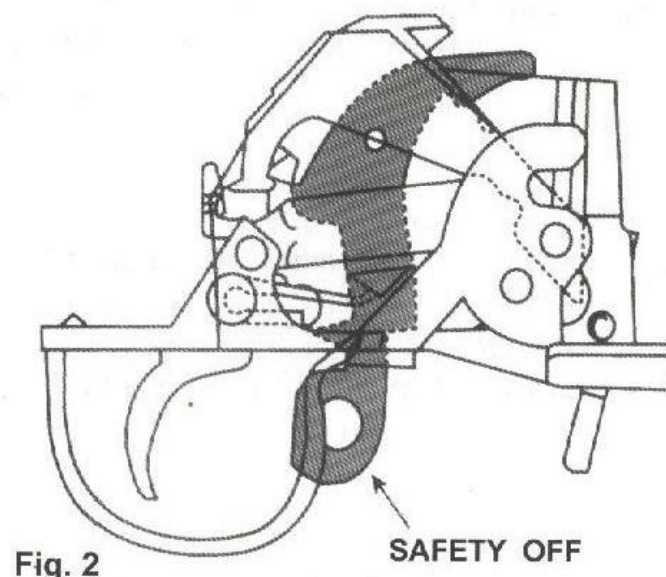
To take the safety "OFF" place your finger inside the trigger guard and press the safety lever firmly forward until it snaps in place in front of the trigger guard [see figure 2]. When the safety is "OFF" the gun will fire when the trigger is pulled.

The rifle should be unloaded with the safety "ON" by removing the magazine and ejecting the cartridge in the chamber by pulling the bolt to the rear.

**The rifle should always be loaded and unloaded with the safety "ON".**



SAFETY PLACED IN THE "SAFE" OR "ON" POSITION



**WARNING: THE SAFETY IS SIMPLY A MECHANICAL DEVICE AND CAN BE BROKEN OR MALFUNCTION DUE TO BREAKAGE, IMPROPER ASSEMBLY, WEAR OR ABUSE. THE SAFETY DOES NOT REPLACE SAFEGUN HANDLING PROCEDURES.**



# LOADING AND UNLOADING



**CAUTION: WHEN LOADING AND UNLOADING ALWAYS PREPARE THE RIFLE BY HAVING THE SAFETY ON AND THE RIFLE POINTED IN A SAFE DIRECTION.**

1. Load the magazine by inserting the cartridges one at a time into the magazine [see figure 3]. Place the rifle on safety and point it in a safe direction.

2. Insert the magazine into the magazine well with the rear of the magazine slightly lower than the front. When the front of the magazine is fully inserted, firmly rock the magazine up and to the rear until it locks [see figure 4]. You may have to push hard to accomplish this. When the magazine is properly in place it cannot be removed without pressing the magazine release.

3. Pull the operating rod handle and thus the bolt, fully to the rear and release it smartly. If done properly a cartridge should be in the chamber and the rifle ready to fire after the safety is moved to the off position. Do not touch the operating rod while it moves forward, as it needs the fast forward movement to strip a cartridge from the magazine, push it into the chamber and lock up.



Fig. 3

## TO UNLOAD

1. Place the gun on safety, point it in a safe direction, and remove the magazine. Push the magazine release with your thumb and rock the magazine down and forward [see figure 5].

2. If the operating rod handle is not already locked back and the chamber empty, pull the operating rod handle fully to the rear to eject the shell in the chamber.

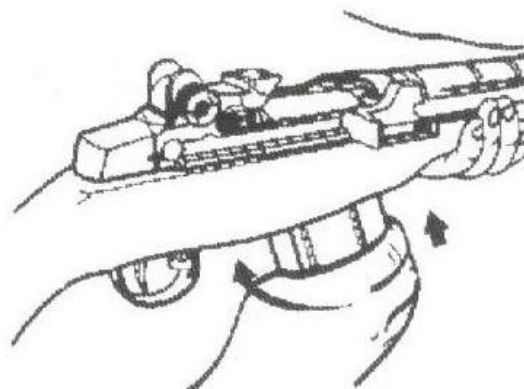


Fig. 4



Fig. 5



**WARNING: REMOVING THE MAGAZINE DOES NOT UNLOAD THE RIFLE. YOU MUST ALWAYS PULL THE OPERATING ROD HANDLE TO THE REAR AND LOOK INTO THE CHAMBER TO MAKE SURE IT IS EMPTY. PRACTICE THIS UNTIL IT BECOMES A HABIT.**

## **FIRING THE RIFLE**

**WARNING: BEFORE AIMING AND FIRING YOUR RIFLE BE SURE IT IS SAFE TO DO SO. KNOW WHERE YOUR BULLET WILL BE STOPPED.**

When the rifle is loaded and you intend to fire, aim at your target, move the safety to the off position and pull the trigger. Expect the gun to fire loudly and recoil. Do not drop the rifle. The M305 will automatically chamber a live round from the magazine after each shot until the magazine is empty. When through firing put the safety "ON" and unload the gun. Always keep the muzzle pointed in a safe direction.

A rifle may be fired from various positions. [See illustrations at the back of the manual.] If you are unfamiliar with shooting a rifle you should get instructions from a competent instructor before attempting to fire your rifle.

This manual does not attempt to provide instruction on marksmanship, hunting, self defense or the many other uses of a rifle. Each firearm discipline requires training and practice from a competent instructor. Do not attempt to use any high power rifle such as an M305 for home or neighborhood defense without prior training and consideration of other options.

## **MAINTENANCE**

Your M305 rifle is one of the finest military-type rifles ever built. Very little maintenance is needed to keep your M305 in superb condition. Disassembly should be kept to an absolute minimum.

The only normal maintenance procedure requiring any disassembly pertains to gas system care [see figure 6]. After clearing the action, making sure the rifle is unloaded and safe, remove gas cylinder plug (29) using a Springfield Armory combination tool or a socket wrench by turning it counterclockwise and withdrawing it from the gas cylinder (23). Tilting the rifle muzzle down, remove the gas piston (27), clean with bore solvent and wipe dry. Clean the inside of the gas cylinder and wipe dry. Remove carbon from inside the piston and plug and buildup on the outside of the



piston. Insert the piston into the gas cylinder with the flat side up toward barrel. Make sure the piston is completely below the threads in the gas cylinder before replacing plug. Re-assemble dry - apply a SMALL dab of grease to the threads on the plug. CAUTION: The gas piston was designed to operate dry.

## CLEANING

The bore and chamber should be regularly cleaned using proper equipment. Modern barrels shoot better when clean. To properly clean the barrel you should remove powder fouling and gilding metal from the bore, clean the flash suppressor and clean various residue from the chamber. When cleaning the barrel, place the rifle upside down to prevent solvent, oil, etc. from entering the stock and the gas system.

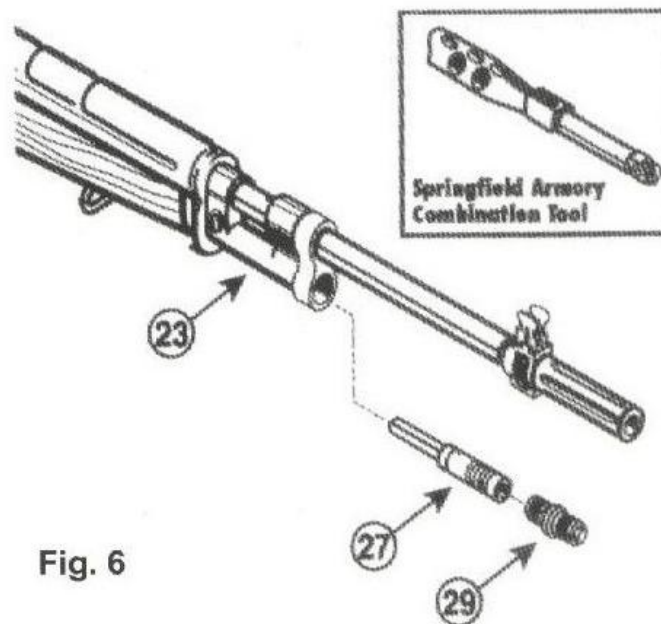


Fig. 6

## CLEANING THE BORE

Bore solvent is recommended when cleaning your M305 bore. Place rifle with sights down and run wet patch through the bore. Let soak for 20 to 30 minutes then run dry patches through bore until patch comes out clean. Use bronze bore brush sparingly to help loosen particles.

NOTE: Put solvent on brush - not brush in solvent! Clean brush thoroughly afterward with gun scrubber, lighter fluid, etc. Good solvent will attack the brush.

## CLEANING THE CHAMBER

The chamber should be cleaned periodically with the chamber cleaning brush. The following procedure is used with the rifle ASSEMBLED and the magazine removed and the safety on. Screw the threaded end of the cleaning rod section into the ratchet base of the brush [see figure 6a]. Pull the operating rod handle rearward and engage the bolt lock to hold the bolt back. Apply a light coating of bore cleaner in the chamber. Insert brush into chamber. Pull the operating rod handle rearward to release the bolt lock and slowly allow the bolt to move forward to push the brush into the chamber. Move the rod section up and down several times to scrub chamber interior [see figure 6b]. Lock the bolt to the rear. Grasp the brush

handle next to the receiver and remove the brush from the chamber. Use a clean patch to wipe the chamber. Repeat with clean patches until patches come out clean. ***Do not oil chamber as chamber was designed to operate dry.***

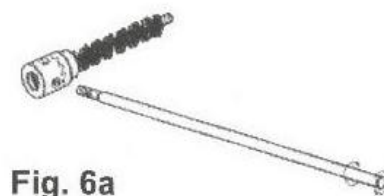


Fig. 6a

## STOCK

Once a year, on oil-finished stocks, a light coat of tung oil or boiled linseed oil applied to the exterior wood surface is favorable but not necessary. After applying, immediately wipe wood dry with paper towel.

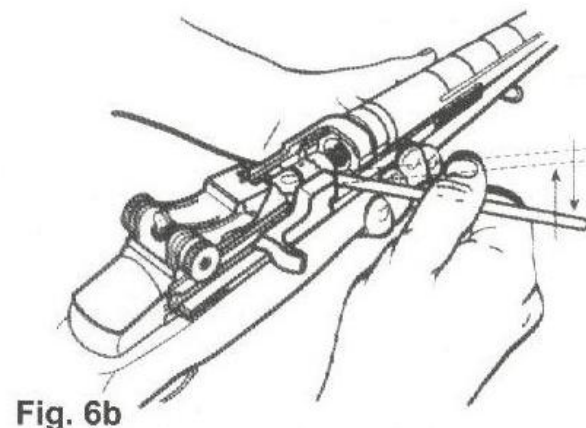


Fig. 6b

## STORAGE

Consideration toward safety is paramount in storing your M305. The rifle should be unloaded with the safety on. A very light film of high quality oil should coat the bore and all metal surfaces. Periodic inspection of your M305 should be performed, especially in environments where high or fluctuating temperatures and/or humidity is present. Use a gun lock when the rifle is stored [see figure 7].

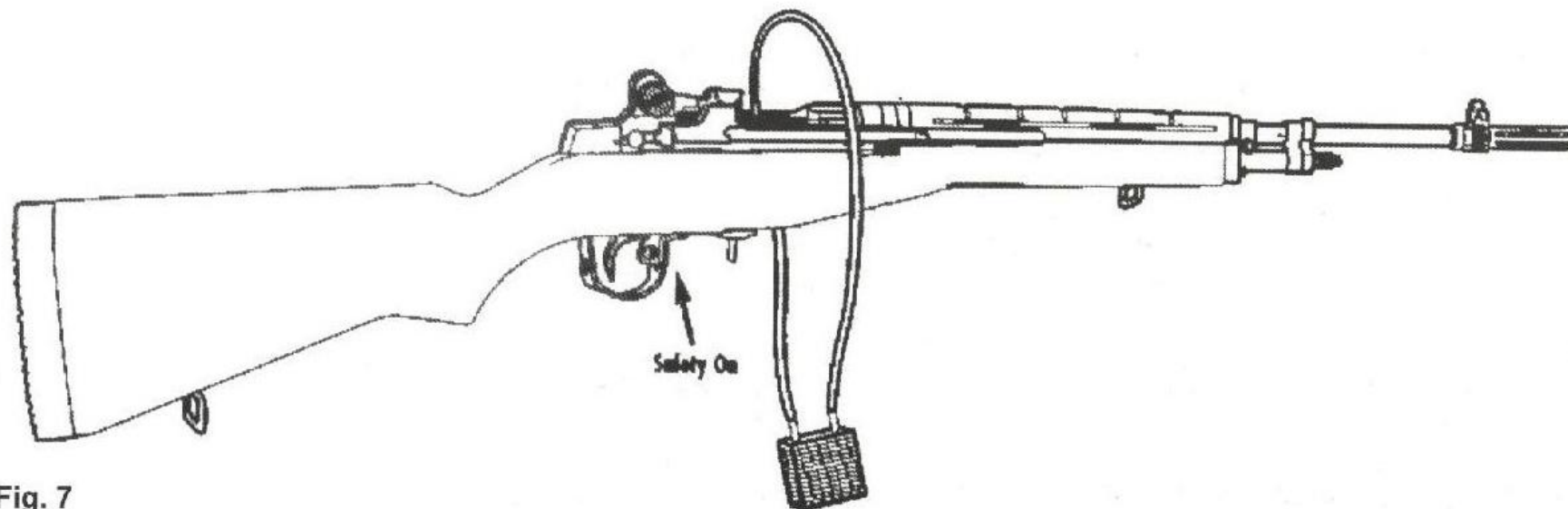


Fig. 7



# SIGHTS

**CAUTION:** The sights are not zeroed at the factory. All sights should be "adjusted and sighted in" immediately in order to shoot accurately.

## DISASSEMBLY/ASSEMBLY

The Standard M305 has been designed to be taken apart and put together easily. No force is needed if it is disassembled and assembled correctly. However, the frequency of disassembly and assembly should be kept to a minimum. Constant disassembly causes excessive wear of the parts and leads to their early unserviceability and to inaccuracy of the rifle.

**This is especially true with National Match and Super Match rifles, whose actions are glass bedded to their stocks. Unnecessary removal promotes wear, sloppy fit, inaccuracy and defeats the purpose of the bedding. Please do not field strip your match rifle unless it is absolutely necessary.**

## THE THREE MAIN GROUPS

The three main groups are the trigger housing group, the barrelled receiver group, and the stock group [see figure 8].

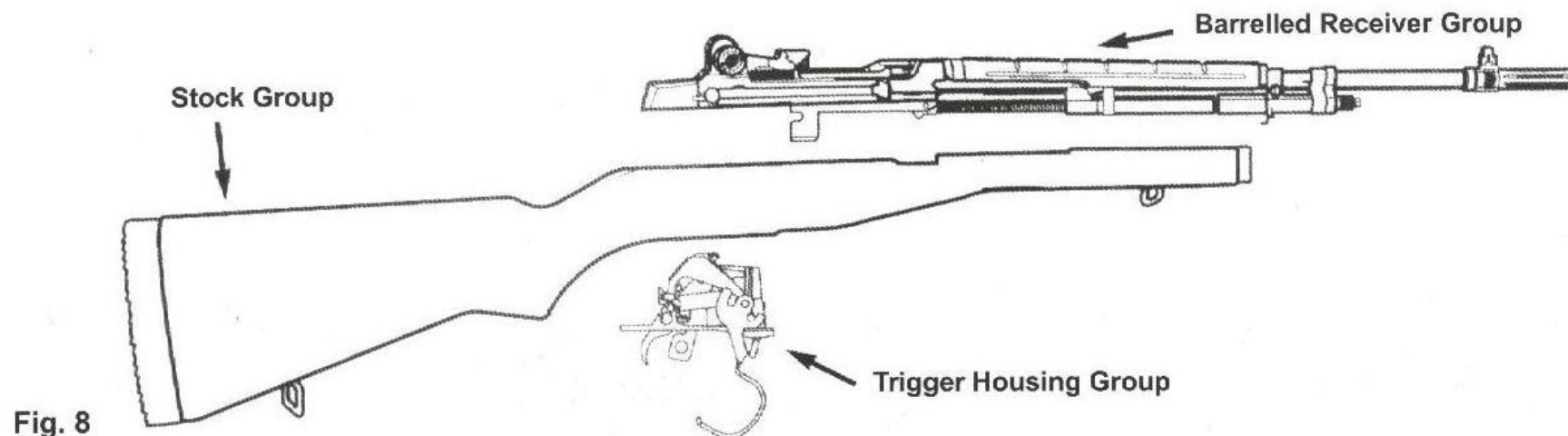


Fig. 8

**Prior to disassembly, put safety on and unload the rifle!**

# DISASSEMBLY

After the rifle is unloaded, remove the magazine and close the bolt prior to disassembly. To do this, pull back on the operating rod handle and allow the bolt to go forward [see figure 9].

To remove the trigger housing group place the rifle upside down with barrel pointing away from you. Grasp the forend with your left hand. Grasp the rear of the trigger guard with the thumb and forefinger of your right hand and pull upward and outward until the mechanism is released. Lift out the trigger housing group [see figure 10].

To separate the barrel and receiver from the stock, lay the rifle on a flat surface with the sights down and muzzle to the left. Grasp the top of the grip of the forend with the left hand and with right hand grasp the rear sights/receiver and pull down. With a standard rifle the stock should separate easily. If not, or for a match rifle, with the rifle in this upside down position, raise the buttstock and strike down firmly on a hard surface against the stock's cheek surface while pulling the receiver down with right hand [see figure 11].

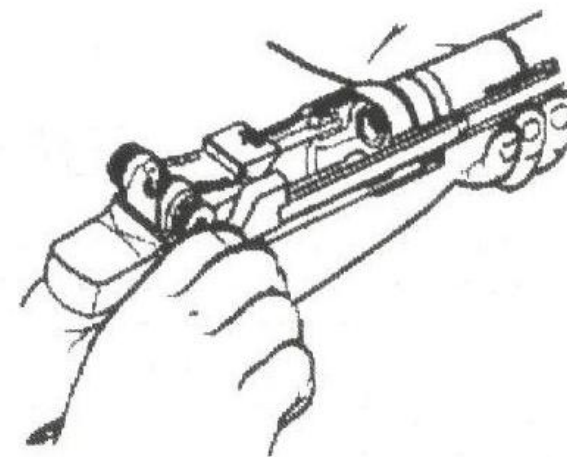


Fig. 9

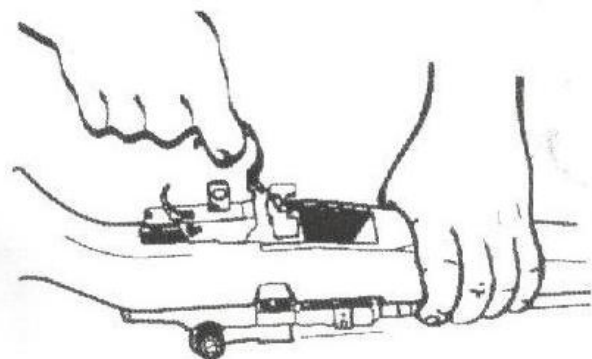


Fig.10

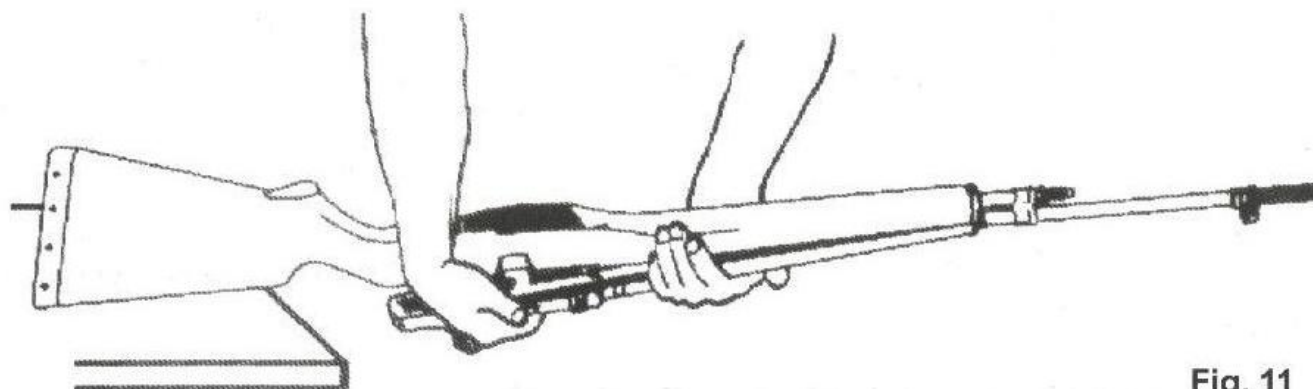


Fig. 11



# DISASSEMBLY OF BARREL AND RECEIVER GROUP

## REMOVING THE OPERATING ROD SPRING AND OPERATING ROD SPRING GUIDE



**Warning:** Removing the operating rod spring is a dangerous procedure. If not properly held, the spring will eject the operating spring guide and could injure you or a bystander. Wear eye protection at all times.

Place the barrel and receiver group on a flat surface, sights down, muzzle to the left. With your left hand, pull toward the muzzle on the operating rod spring and spring guide to relieve pressure on the connector lock [see figure 12]. With your right forefinger pull or slide the connector lock toward the operating rod handle side of the rifle [see figure 12]. Allowing the operating rod spring to expand slowly, disconnect and remove the operating rod spring and operating rod spring guide [see figure 13]. Separate these two parts.

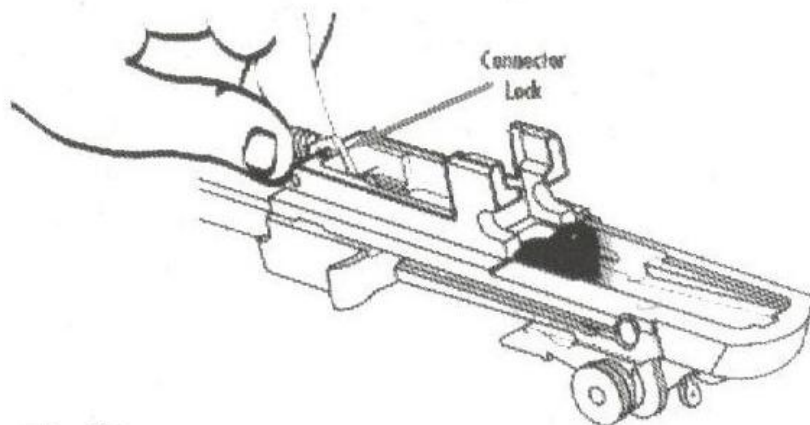


Fig.12

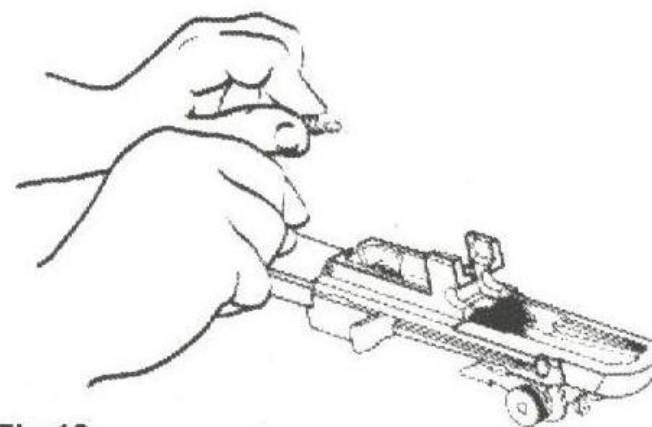


Fig.13

# REMOVING THE OPERATING ROD

Turn the barrel and receiver group so the sights are up and the muzzle is pointing away from you. Pull back the operating rod handle until the guide lug in its inside surface is aligned with the disassembly notch on the right side of the receiver [see figure 14] Rotate the operating rod upward and outward, then pull it to the rear disengaging it from the operating rod guide [see figure 15].

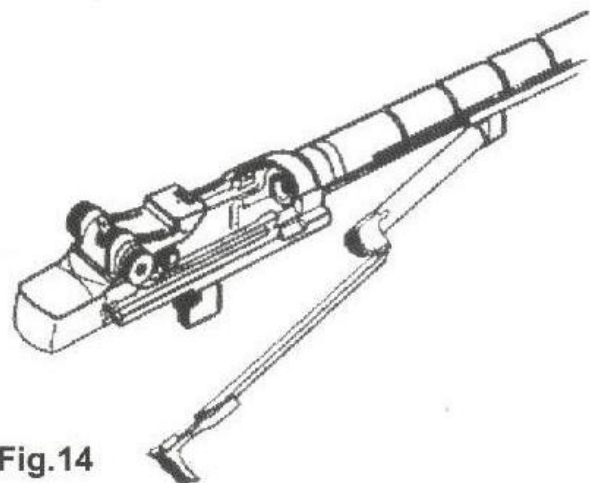


Fig.14

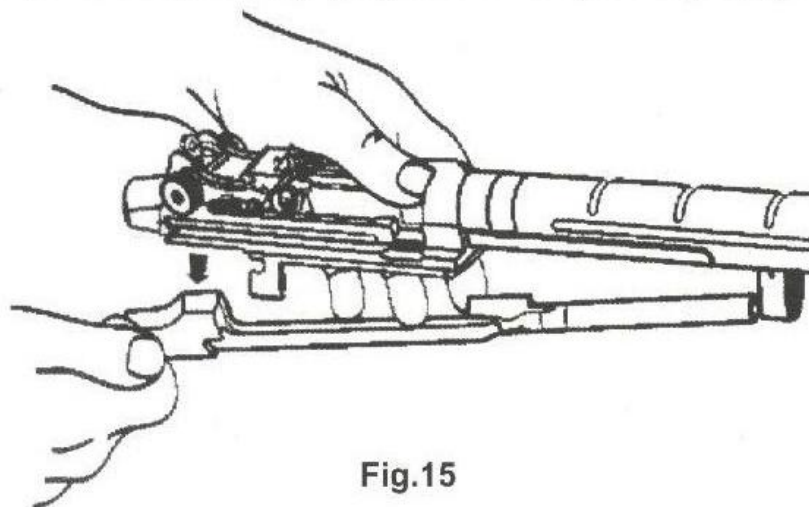


Fig.15

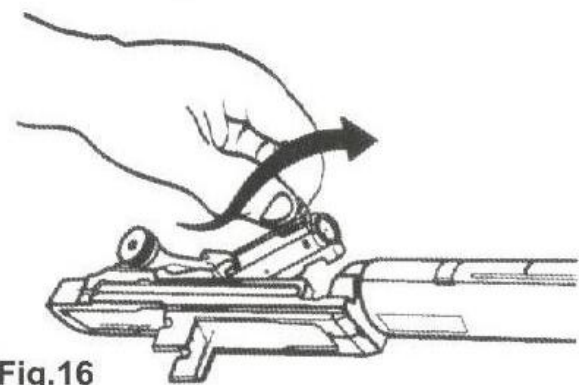
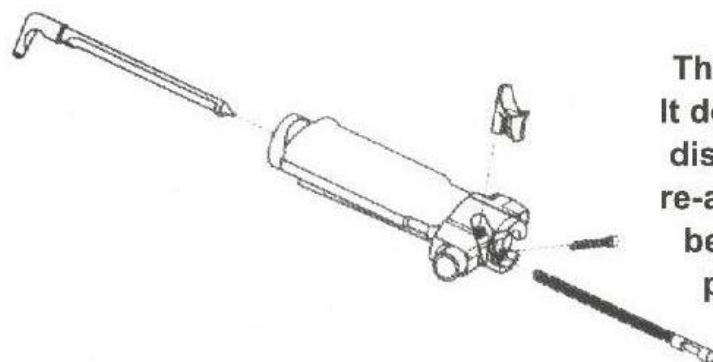


Fig.16



## BOLT EXPLODED VIEW

The bolt should NOT be disassembled. It does NOT require internal cleaning. To disassemble the bolt requires a special re-assembly tool. Any problems with the bolt should be dealt with directly by a professional Springfield technician.

# REMOVING THE BOLT

Grasp the bolt roller and, while sliding it forward, lift it upward and outward to the right front with a slight counterclockwise rotating motion [see figure 16].



# **ASSEMBLY OF BARREL & RECEIVER GROUP**

## **REPLACING THE BOLT**

Place the barrel and receiver on the table, sights up, muzzle pointing away from you. Hold the bolt by the roller and locking lug and place the rear of the bolt on the bridge of the receiver, with the firing pin tang pointed down. Turn the bolt slightly clockwise until the tang of the firing pin clears the bridge. Guide the left locking lug of the bolt into its groove in the left slide of the receiver. Lower the right locking lug on its bearing surface and slide the bolt halfway to the rear.

**IMPORTANT:** Because of the close tolerance of headspace critical to safe function and accuracy, it is imperative that bolts NEVER be exchanged from rifle to rifle. Never dry fire or pull the trigger when bolt is not completely closed, (out of battery condition), as this could result in serious damage to your rifle.

## **REPLACING OPERATING ROD**

Holding the operating rod at the handle, place the front end into the operating rod guide, and position the rod so that the recess in the operating rod hump fits over the bolt roller. Move the operating rod handle to the left until the operating rod guide lug fits into the disassembly notch on the receiver. Then push the operating rod forward until the bolt is closed.

## **REPLACING THE OPERATING ROD SPRING GUIDE**

Turn the barrel and receiver over so the sights are down and muzzle is to the left. Place the operating rod spring guide with hump up into the operating rod spring, and feed the loose end of the spring into the operating rod. Grasp the spring and guide with the left hand and compress the spring until the hole in the guide can be aligned with the connector lock. Lower the guide and push the connector lock in with your right thumb.

# ASSEMBLY OF THE THREE MAIN GROUPS

Place the barrel and receiver group on a flat surface, sights down. Pick up the stock group and engage the stock ferrule in the barrel band, then lower the stock group onto the barrelled receiver group.

Open the trigger guard and place the trigger housing group straight down into the stock, making sure that the guide rib on the trigger housing group enters the slot in the receiver. Place the buttplate of the rifle on the left thigh, sights to the left, insuring the trigger guard has cleared the trigger. With the palm of your right hand, firmly strike the trigger guard fully engaging it to the receiver.



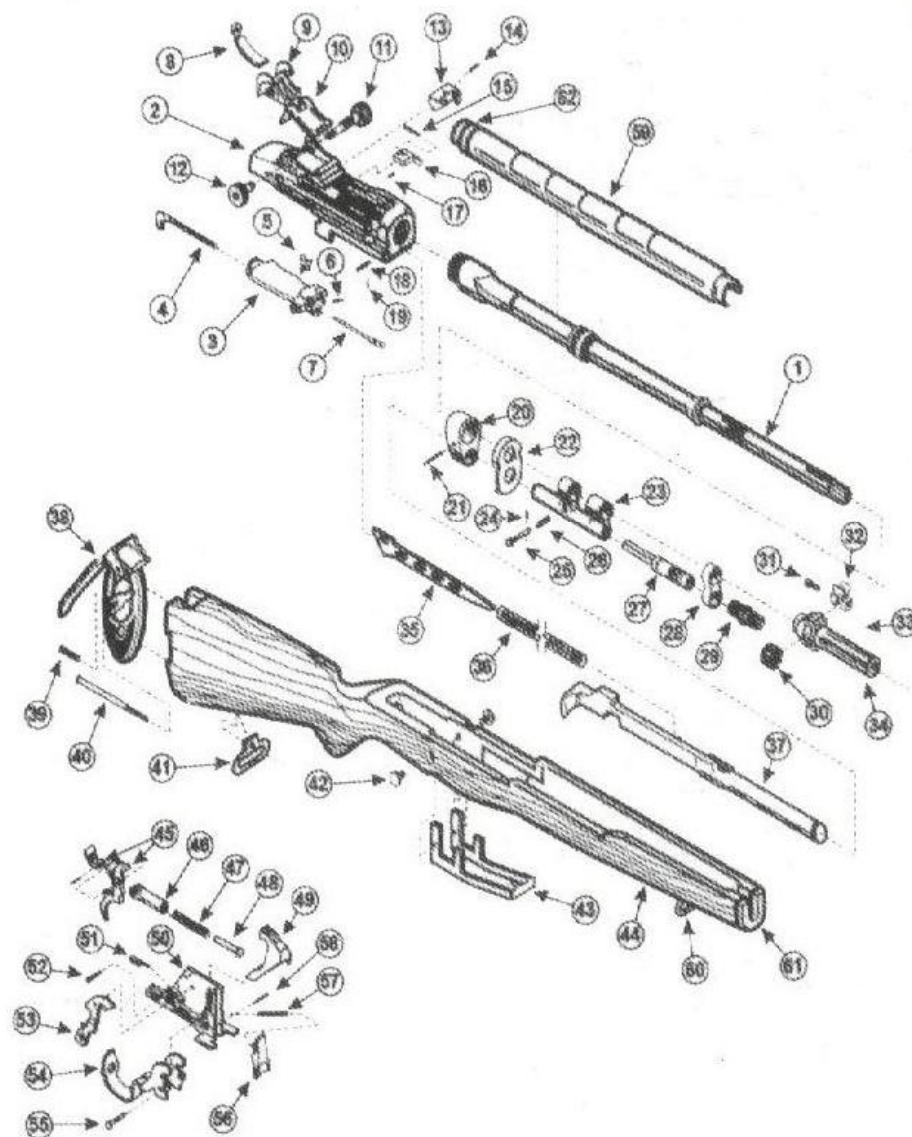
Always wear eye and ear protection when using any firearm.



# M305 MODEL EXPLODED VIEW

1. 308 G.I. Chrome Lined Barrel
2. Receiver
3. Bolt with Roller and Clip
4. Firing Pin, Chrome Plated
5. Extractor
6. Extractor Spring  
Extractor Plunger
7. Ejector Spring  
Ejector
8. Aperture Rear Sight
9. Rear Sight Base
10. Rear Sight Cover (Metal)
11. Elevation Knob
12. Windage Knob (Complete)
13. Clip Guide
14. Clip Guide Pin 3/32x5/8
15. Bolt Stop Pin 3/32x1'
16. Bolt Stop
17. Bolt Stop Spring
18. Connector Lock
19. Connector Lock Pin 5/64x5/16
20. Op Rod Guide
21. Op Rod Guide Pin 1/8x3/4
22. Barrel Band
23. Gas Cylinder
24. Spindle Valve Pin 5/64 x 5/16
25. Spindle Valve
26. Spindle Valve Spring
27. Piston
28. Gas Cylinder Lock
29. Gas Cylinder Plug
30. Castle Nut
31. Front Sight Set Screw
32. Front Sight

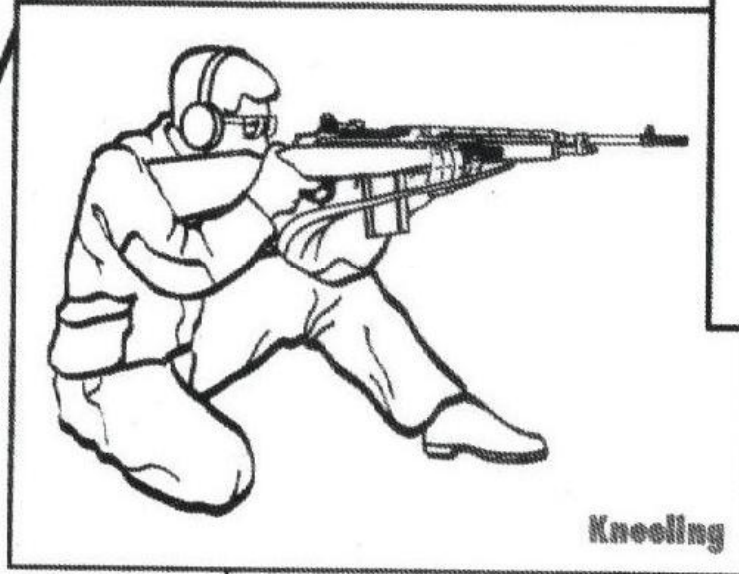
33. Castle Nut Set Screw (Cap socket)
34. Flash Suppressor
35. Op Rod Spring Guide
36. Op Rod Spring
37. Op Rod
38. Complete Butt Plate Assembly
39. Butt Plate Wood Screw
40. Butt Plate Machine Screw
41. Rear Swivel
42. Stock Liner Screw
43. Stock Liner (Not sold separately)
44. New Walnut Stock w/liner/ferrule
45. Trigger & Sear Assembly  
Trigger Stripped  
Sear  
Trigger/Sear Pin (Small)
46. Hammer Spring Housing
47. Hammer Spring
48. Hammer Spring Plunger
49. Hammer
50. Trigger Housing
51. Safety Spring
52. Trigger Pin
53. Safety
54. Trigger Guard
55. Hammer Pin
56. Magazine Catch
57. Magazine Catch Spring
58. Magazine Catch Pin
59. Handguard, Solid Fiberglass
60. Front Swivel  
Front Swivel Rivet  
Front Swivel Washer
61. Front Ferrule
62. Handguard Clip



# THE FOUR BASIC SHOOTING POSITIONS



Standing



Kneeling



Sitting



Prone



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