

REMINGTON FIELD SERVICE MANUAL

DISMOUNTING & ASSEMBLING

1. Take Down

Unscrew take down screw and pull it outward until stopped by retainer in receiver bushing which prevents its dropping from the receiver (Fig. 1). Pull stock and trigger guard away from receiver.

2. Put Gun Together

Cock the hammer; see that take-down screw is unscrewed and pulled out as far as possible; put the trigger guard into receiver being careful to align tongue and groove at front end and dowel pins with holes at rear end of guard; push take-down screw through guard and turn it tightly into threaded bushing in right side of receiver.

3. Breech Block From Receiver

Press action bar button in until action bar will go rearward to allow breech block to enter well hole in top of receiver. Pull action bar forward to clear breech block. Lift breech block out of receiver.

4. Breech Block Components

Drive out firing pin stop pin and guide pin from breech block. Remove firing pin with spring and spring guide. Insert screw driver blade between extractor and plunger and press plunger rearward and pry out extractor A (Fig. 2). Release and remove extractor spring and plunger.

5. Butt Plate

Take out two butt plate screws and remove butt plate.

6. Stock

Unscrew stock bolt with screw driver in deep hole in rear end of stock. Remove stock bolt and washer. Pull stock off guard.

7. Guard Components

Uncock hammer. Push rear end of main spring forward and put a short pin in hole through main spring rod to retain spring upon the rod.

Drive out hammer bushing and remove hammer with main spring rod and spring.

Pull carrier forward out of guard while holding palm of hand over trigger to catch trigger spring and case as rear end of carrier is pulled off the case.

Drive out trigger pin and remove trigger.

Drive out safety switch plunger pin and release safety switch spring and plunger. Remove safety switch.

Assemble in reverse order. (When replacing trigger spring and case, hold the case into trigger with screw driver blade while carefully placing carrier over it.) Take out ejector spring screw and remove ejector spring.

8. Action Bar

Remove two fore-end check screws and fore-end screws. Remove inner magazine tube. Push fore-end forward upon magazine tube. Press action bar plunger and pull action bar plunger pin forward out of hole and remove plunger and spring. Slide action bar rearward out of receiver. This will release cartridge retainer in top slot of action bar. (This should be carefully noted as in assembling it must be carefully replaced in same position.) A (Fig. 3).

9. Action Bar Components

Drive out carrier dog pin and remove carrier dog with spring. Remove magazine screw and unscrew magazine tube from action bar, (when replacing, turn the tube so holes in tube will coincide before screw is put into screw hole.

10. Inner Magazine Tube

Drive out magazine pin and remove plug with magazine lever attached. Take out magazine spring and follower. Drive out magazine lever pin from the magazine plug and remove lever with spring.

11. Assemble All Parts in Reverse Order.

REPAIRS WHICH MAY BE DONE WITHOUT SPECIAL FACTORY TOOLS

Action Bar

Do operations 1, 3, 8 and 9. Put old magazine tube into new action bar, being sure the screw hole in the tube coincides with screw hole in bar before putting in the magazine screw. (If this is not carefully done, the screw will bend the thin tube wall inward and cause shells to catch during feeding). Assemble the carrier dog with spring and pin into action bar. Turn receiver bottom up. Lay cartridge retainer upon barrel with notch in retainer over wall of receiver as shown at A (Fig. 3). Place fore-end upon barrel near receiver. Carefully slide magazine tube with action bar through receiver from rear end being sure to engage slot in action bar with cartridge retainer, the bar should also pass into fore-end. Put action bar plunger and spring with pin into action bar and fasten with two fore-end screws. The bar should slide freely of its own weight from front to rear through receiver and magazine rings. If it binds, the tube should be straightened near action bar to correct the binding. Put in the breech block. The bar should engage with bottom of breech block and raise it to lock into recoil shoulder when block is closed. If it should close too hard, a little metal may be stoned off bottom of supporting surfaces of breech block. Assemble complete guard into receiver. Open and close action. The carrier should drop freely

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to its lowest position when breech is closed. If it does not, remove the action bar and polish out any roughness or burrs in carrier slot. Assemble arm, cock and close the action. The action bar should be locked forward by the carrier dog. If it can be opened (without pressing upward on exposed lower part of carrier or pulling trigger) the carrier dog is held too high by the action bar. Fit in a new carrier dog having a wider rear end. If by pulling the trigger, action bar is not released so it can be opened (fault is due to carrier not raising high enough to clear carrier dog). Correct by removing main spring rod, bend middle downward so it will press rear end of carrier farther downward. Assemble the arm and fill magazine. Open and close action. If shell does not feed through action bar, remove cartridge stop and grind off only enough metal at A (Fig. 4) to allow head to pass over. If shells do not feed up the incline of cartridge stop, but catch on corner B, the beveled surface should be cut lower at B and taper to nothing at A, then polish it smooth.

Breech Block

Do operations 1, 3 and 4. Assemble old parts into new breech block. Push firing pin forward, the rear end A (Fig. 5) which engages hammer should not project beyond rear of block. If it does project beyond, remove the firing pin and file more clearance at B (Fig. 5). Assemble breech block into receiver and engage it with action bar, move action forward and close action, if the bar moves hard after block has moved into top locking shoulder, remove the block and cut away a little metal at surfaces B (Fig. 2). Assemble arm and try shells through magazine, open action and close again to feed shell into barrel. The shell head should pass upward freely from action bar into groove in block at C (Fig. 2). If shell heads do not enter slot freely at C, remove the block and round over the corners of slot slightly.

Carrier

Do operations 1, 3, 5, 6 and 7, except do not remove trigger and safety switch. Put in new carrier and assemble arm except do not put on the stock. Open and close action. The front end of carrier should lock behind rear of carrier dog. If it does not prevent action bar from opening, remove the carrier and cut away enough metal from carrier at A (Action Closed) to allow a good engagement with carrier dog. Assemble arm, close action, pull trigger, the front end of carrier should raise clear of carrier dog at B (Action Closed) and allow action to be opened. If it does not, remove hammer and bend main spring guide rod downward at point of contact with rear end of carrier only enough to raise the front end above carrier dog

Carrier Dog

Do operations 1, 3, 8 and drive out carrier dog pin and remove carrier dog spring. Put in new carrier dog with old spring and pin. Swing rear end outward as far as it will go and let it snap back. It should move freely and without any side rubbing. Assemble arm and put some cartridges in magazine. Operate action bar and note that cartridge should be lifted by the carrier high enough to enter chamber without shaving or catching bullet on lower edge of chamber. If it does this, the carrier dog is not large enough at lug which engages with carrier cam slot. A carrier dog having a slightly large lug should be fitted.

Cartridge Stop

Do operations 1, 3, 8 and drive out carrier dog pin and remove carrier dog with spring and slide cartridge stop rearwardly out of action bar. Put in new cartridge stop, it should slide freely of its own weight from end to end in the hole and slot. Assemble arm and put cartridges into magazine, operate action, the first cartridge should pass freely over point A (Fig. 4) and engage vertical slot leading upward to breech block, see (Open Action). If it does not pass point A, the cartridge stop should be cut away only enough to allow shell head to pass. If shell head caught at lower corner of bevel at B (Fig. 4) the whole beveled surface should be lowered by cutting away a very little metal until shell will pass up the incline.

Extractor

Do operations 1, 3 and remove extractor only. Put in new extractor and try shell under claw. Pressure of claw against shell should prevent any looseness side wise or vertically. If there is side play remove the extractor and file stop shoulder at C (Fig. 5). Do not cut away too much at this point as it will cause shell to feed hard when raising through slot in face of breech block. The space from claw to face of block at D should be only slightly larger than thickness of shell rim.

Ejector Spring

Do operations 1, 5, 6 and take out ejector spring screw and remove spring. Put in new spring and assemble arm except do not put on stock. Put in some shells and open action, close slowly and see that when head shell raises to level of firing pin, the pin does not protrude beyond face of block and intercept shell head at A (Fig. 6). If it does the ejector spring should be moved and closed together a little.

Firing Pin

Do operations 1, 3 drive out two pins and remove firing pin with spring and guide. Put old spring and guide into new firing pin, carefully place firing pin into breech block so that rear pin hole will align with space between end of slot and end of spring guide, then drive pointed end of pin into position. The spring should move firing pin promptly to rear position, so that front end of firing pin will not protrude at A (Fig. 6). If firing pin does not retract at A, the point B should be reduced a little. Assemble arm and close action with shell in barrel and fire by pulling trigger. If misfire results, point C may be too long and strike seat in end of barrel before point A has indented shell deeply enough. Cut back point C only enough to allow a good indent at A.

Firing Pin Fitting

Model 12 & 121 have round firing pin. Fit in same manner as old style flat firing pin.

Fore-end

Do operations 1, 3 and 8. Put on new fore-end and assemble arm. Start one fore-end screw about one thread to hold position then start the other screw and turn both a little alternately until tight, this method will preserve alignment of holes and prevent spoiling threads. It may be found that fore-end

rub barrel; if so reduce the wood until clear, by using round file.

Hammer

Do operations 1, 3, 5, 6 and remove hammer as in operation 7. Drive out hammer pin and remove main spring rod. Assemble rod and pin into new hammer and put them into the arm. Open and close action to cock hammer set safety switch on and try to pull trigger. If it pulls partly off and does not spring back into the notch, replace hammer. If carrier does not raise to clear carrier dog when trigger is pulled, remove the hammer and bend the main spring rod downward at point where it touches rear of carrier as in (Action Closed). If carrier does not swing down far enough to engage carrier dog and lock action bar forward, the main spring rod is bent too low and should be raised at point where it touches carrier.

Magazine Tube (Outer)

Do operations 1, 3, 8 and remove magazine screw and take out magazine tube. Screw new tube into action bar until loading opening is at bottom side and holes in action bar tube coincide and put in the screw. Remove the tube and file any burr from inside tube made from screw. Assemble the complete arm. If action bar binds when sliding from end to end of receiver, the tube should be bent to relieve the friction. With fore-end off, slide down tube and action bar from front end and compare with the barrel. They should be parallel.

Try inner magazine tube into position. If it does not stay open for loading when held with muzzle up, bend down the friction strip near front end in top of tube.

Receiver Bushing (Threaded)

Take down the arm. Turn take-down screw one thread into bushing and drive out the threaded bushing by striking head of screw with mallet, then turn bushing off the screw and drive in a new bushing until shoulder is tight against receiver. File inner end of bushing level with inside wall of receiver.

Safety Switch

Do operations 1, 3, 5, 6, and 7 except ejector spring. Fit in new safety switch and assemble parts into guard in reverse order except do not put on the stock. Open and close action to cock the arm. Push safety switch on.

Stock

Do operations 1, 3, 5 and 6. Try on new stock carefully. If it is too tight on tang to be pushed on, clean the sides and end of slot of all varnish or other residue, also any that may be lodged at corner of tenon at front end of stock. Put stock on and draw up tightly with stock bolt. The bolt hole may be slightly too deep and require an extra washer under the bolt head. Cock the hammer to be sure of clearance for main spring rod. If this touches front end of stock bolt, add one or more stock bolt washers or cut bolt shorter.

Take down the arm. Engage take-down screw with threaded receiver bushing one or two threads and drive out the threaded bushing by striking screw head with mallet, then unscrew the bushing. Use a punch large enough to nearly cover end of

other receiver bushing and drive it from receiver together with take-down screw and retainer. Fit in new retainer with new take-down screw into bushing and insert bushing into receiver until retainer is covered by receiver hole, then drive the bushing fully into receiver by striking take-down screw head with mallet. Put in threaded bushing and assemble arm.

FAILURES TO OPERATE

Action fails to release when fired.

Cause: Carrier does not raise high enough at front end to clear carrier dog.

Correction: Adjust main spring rod by bending its middle slightly down where it engages with rear of carrier.

Action fails to lock forward when arm is cocked.

Cause:

1. Carrier does not go down far enough at front end to engage properly with carrier dog.
2. Carrier worn, rounded at corner with which engages carrier dog.
3. Carrier dog worn rounded at corner which engages carrier.
4. Carrier dog spring weak or broken.

Correction:

1. Remove carrier and cut away some metal from carrier where it rests at front end of guard.
2. Fit new carrier.
3. Fit new carrier dog.
4. Fit new carrier dog spring.

Breech block starts forward hard.

Cause: Recoil lug of breech block catches into well hole in rear top of receiver which is slightly rounded at corner.

Correction: Peen metal of receiver to make front corner of well hole reach farther toward the rear or fit a new breech block.

Carrier fails to lift cartridges when action is moved forward.

Cause:

1. Carrier dog spring weak or broken.
2. Carrier dog broken.

Correction:

1. Fit new carrier dog spring.
2. Fit new carrier dog.

Cartridge strikes edge of chamber.

Cause:

1. Dirt under extractor preventing it to swing far enough toward cartridge.
2. Extractor has too much space between claw and face of block.
3. Extractor spring fails to act.

Correction:

1. Clean the breech block thoroughly.
2. Bend lug of extractor forward to shorten distance from front of lug to claw.
3. Clean spring of gummed oil if rusty, fit new spring.

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Cartridge tip up in action bar and jam the action.

Cause:

1. Cartridge fails to go back far enough to engage vertical slot.
2. Carrier raises too high when arm is fired and intercepts cartridge head during rear stroke.

Correction:

1. Smooth out the cartridge hole in action bar and adjust rear lower end of cartridge stop to allow cartridge more rearward travel.
2. Adjust main spring rod at middle so it will not press rear end of carrier down so far.

Extraction fails.

Cause:

1. Extractor claw dull or spring weak.
2. Extractor clearance cut in barrel too deep, allowing shells to swell under extractor and cause it to slip off shell rim.
3. Edge of chamber has heavy burr turned in by striking of firing pin.

Correction:

1. Sharpen claw or fit new extractor spring.
2. Fit new barrel.
3. Ream out burr from chamber or fit new barrel.

Ejection fails.

Cause:

1. Extractor has too much space between claw and face of breech block.
2. Firing pin not properly fitted or worn at ejecting cam.

Correction:

1. Bend extractor lug to shorten space at claw.
2. Fit new firing pin.

Feeding fails from magazine to action bar.

Cause:

1. Magazine follower sticks due to rust, dirt or dents in tube.
2. Cartridge stop catches shells at front end of its incline.

Correction:

1. Remove magazine plug, spring, and follower, and clean inside of tube or if dented, select steel or brass rod to fit inside the tube and drive it into tube until under dents then peen dents out lightly with small hammer.
2. Reduce bevel at lower front end.

Feeding fails from bottom of breech block to barrel.

Cause:

1. Guide ways in face of breech block too wide allowing shell head to fall out.
2. Firing pin held too far forward by ejector spring and shell head catches bottom of firing pin point.

Correction:

1. Fit new breech block.
2. Bend ejector spring front prong slightly toward rear of arm.

Feeding fails from action bar to breech block guide ways.

Cause:

Lug of breech block cut away too much at incline, where action bar engages to move the block forward. This allows action bar to move cartridge too far forward in relation to breech block.

Correction:

Fit new breech block.

Hammer fails to remain cocked.

Cause:

Notch of hammer broken.

Correction:

Fit new hammer.

Misfire.

Cause:

1. Firing pin broken.
2. Main spring weak.
3. Firing pin rusted at striking point.
4. Shell supporting surface at end of barrel where firing pin strikes, has become upset allowing shell rim to bend without pinching priming.

Correction:

1. Fit new firing pin.
2. Fit new main spring.
3. Fit new firing pin.
4. Fit new barrel and firing pin.

Stock loose.

Cause:

Stock bolt loose.

Correction:

Tighten bolt or fit extra stock bolt washer.

Take-down loose.

Cause:

Tongue on front end of trigger guard not wide enough to fill slot in receiver.

Correction:

Upset the metal of the tongue until thick enough to fill the slot.

Short cartridge fails to eject.

Cause:

Hammer bears on rear of firing pin when cocking, causing firing pin point to contact and loosen fired case from grip of extractor.

Correction:

Fit new style hammer.

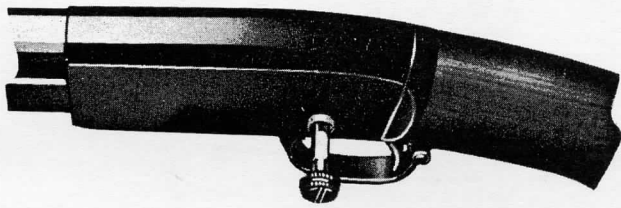


Fig. 1

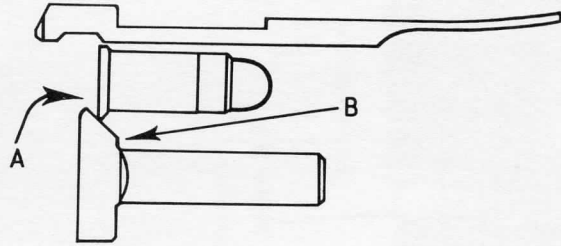


Fig. 4

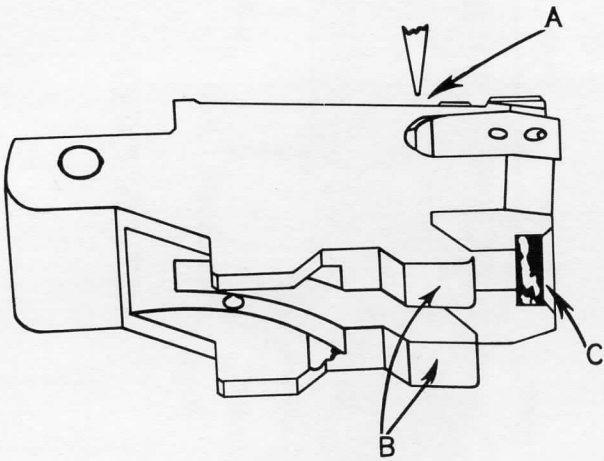


Fig. 2

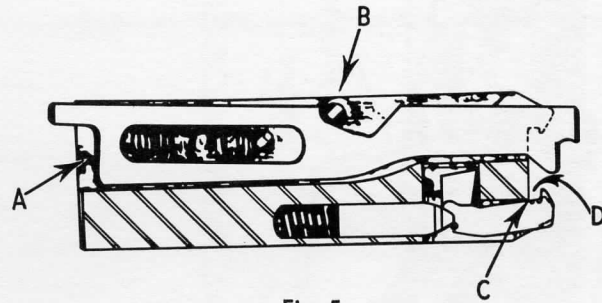


Fig. 5

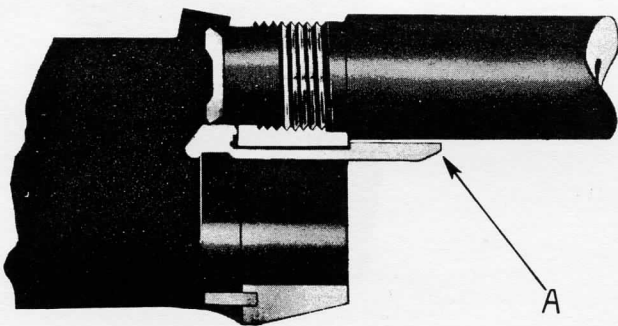


Fig. 3

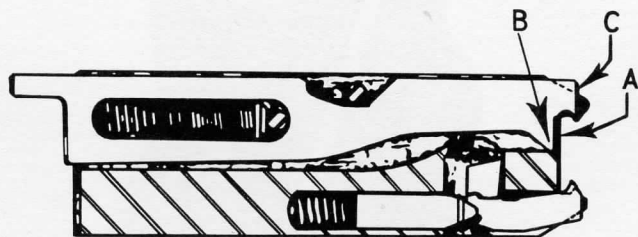
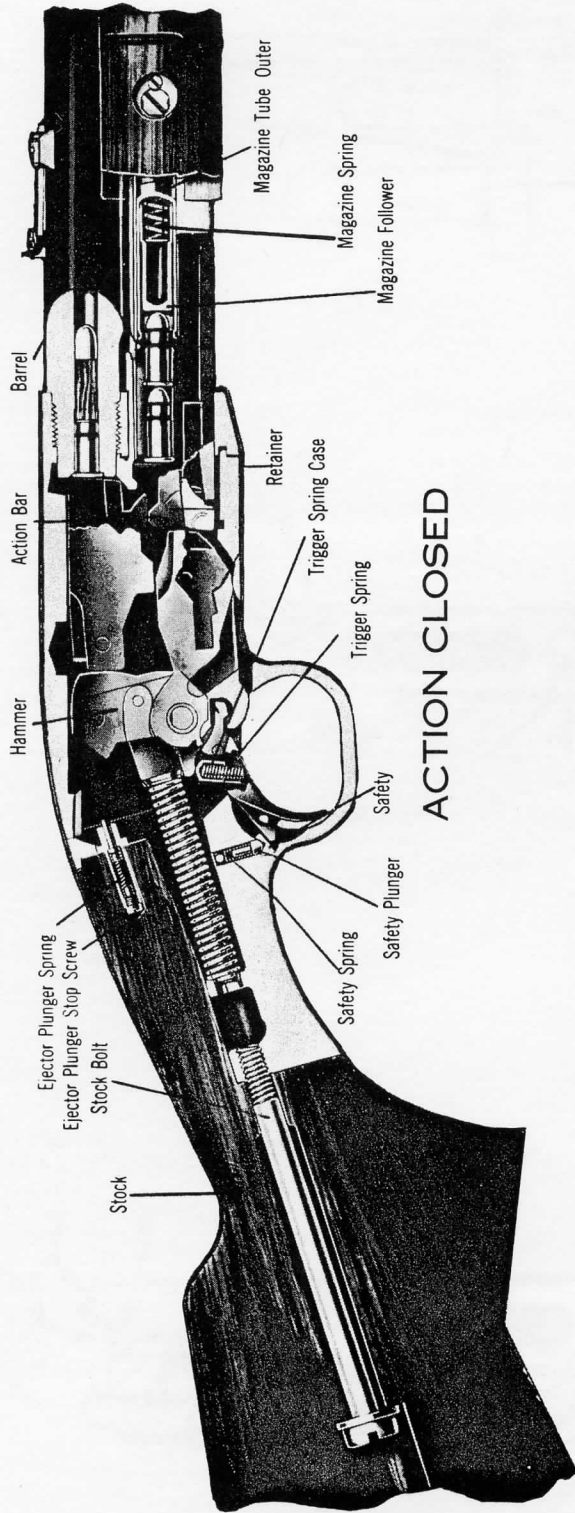
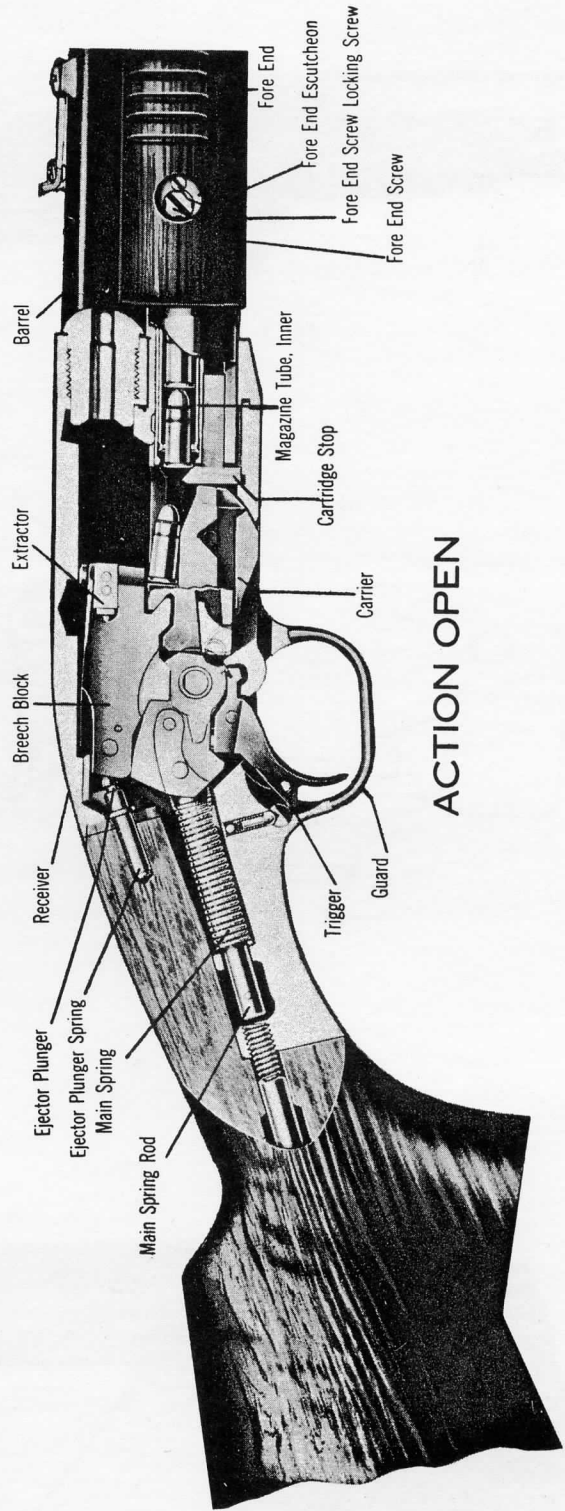


Fig. 6



ACTION CLOSED



ACTION OPEN

CYCLE OF OPERATION

FIRING

With the cross bolt safety switch located at rear of trigger in "OFF" position (red band showing) the rifle may be fired each time by pulling trigger. This movement releases hammer which in turn is rotated forward, urged by an attached spring loaded rod. The hammer strikes the spring retracted firing pin protruding from rear of locked up breech block. Sufficient pressure is thereby made upon cartridge rim to indent and ignite primer, burn the powder charge, and drive bullet through barrel.

UNLOCKING

As hammer goes forward to strike firing pin, the attached main spring rod thrusts upon a projecting surface on rear of carrier. This movement pivots front end of carrier from a position blocking action bar, thereby unlocking action. The initial movement rearward of action bar lowers breech block from recoil shoulder recess at top inner surface of receiver. This shifting of breech block to this lowered position slides cartridge upward in the cartridge ways of breech block, thereby moving middle of cartridge into alignment with firing pin. This unseating movement is effected by a ramp-like slot at rear top of action bar engaging a matching foot on bottom of the breech block as action bar starts rearward.

EXTRACTING

After unseating breech block from recoil shoulder in receiver, further movement of action bar carries the now attached breech block rearward, withdrawing cartridge case from barrel chamber. The cartridge case is secured to face of breech block by the tight grip of extractor as extraction progresses. The extractor, located in a recess at ejection port side of block is under constant tension. This tension is applied to rear of extractor by a spring loaded plunger located in this same recess.

EJECTING

The cartridge case is ejected from the open port of receiver as final rearward movement of action bar is completed. The breech block is carried sharply to rear of receiver by this final movement of the action bar, striking ejector plunger. This spring loaded plunger attached to rear of guard, drives retracted firing pin forward again against center base of cartridge. Pivoted in the firm grip of extractor, the opposed forward thrust of ejector-driven firing pin ejects cartridge case from receiver.

COCKING

The breech block carried rearward during extraction and ejection cycles by action bar, rotates hammer backward, compressing main spring upon main spring rod. During initial return movement of action bar, the hammer is intercepted and notched in a cocked position by trigger ready for firing.

FEEDING

After ejection cycle has terminated, the return stroke of action bar raises carrier between cartridge ways of action bar. The first cartridge placed in feeding position over cartridge stop and onto carrier by pressure from a spring loaded follower in magazine tube during preceding extraction cycle, is raised into cartridge ways of breech block. Meanwhile, next cartridge from magazine tube is intercepted by cartridge stop to allow carrier free travel while feeding first cartridge. A positioning recess in forward tongue of guard holds cartridge stop in this cartridge restricting position as action bar slides forward. The retainer located at base of barrel breech also helps to hold this next cartridge down and level in action bar as first cartridge is feeding and loading into barrel.

NOTE: The carrier dog, spring loaded and attached to end of action bar, follows a pattern forming channel in carrier to guide movement of carrier during cartridge carrying cycles.

LOADING

The cartridge, secured in cartridge ways of advancing breech block by tension from the overhanging extractor claw, is loaded into barrel chamber.

LOCKING

The final return movement of action bar, with the breech block halted against barrel breech, carrier block upward, free of cam slots in action bar. This shifting of breech block to this upper position slides cartridge downward in cartridge ways of breech block, thereby moving rim of cartridge into alignment with firing pin in "ready" position for firing. This lifting motion seats heading lug at top section of breech block into recoil shoulder of receiver, thereby locking cartridge into chamber. The breech block is supported from beneath in this position by end of action bar as its forward movement is completed. Only then can the spring-urged carrier, free from the restraining carrier dog, be lowered to a position at end of action bar. There it remains, locking action closed, until released manually from beneath guard, or raised by forward travel of main spring rod as hammer is released to fire rifle.

SAFETY SWITCH

A cross bolt type of safety switch, located at rear of trigger guard, will in its "ON" position, block rearward movement of trigger to fire rifle. In the "OFF" position, red band showing, trigger is free to fire rifle.