

TM 9-1295

WAR DEPARTMENT

TECHNICAL MANUAL



ORDNANCE MAINTENANCE

PISTOLS AND REVOLVERS

NOVEMBER 9, 1942

Section II

GENERAL CHARACTERISTICS —
AUTOMATIC PISTOL, CAL. .45, M1911 AND M1911A1

Paragraph

Description 2
General data 3

2. DESCRIPTION.

a. The Automatic Pistols, Cal. .45, M1911 and M1911A1, are recoil-operated, magazine-fed, self-loading hand weapons (figs. 1, 2, and 3). The gas generated from a cartridge fired in either pistol is utilized to extract and eject the empty cartridge case, cock the hammer, and force the slide to the rearmost position, thereby compressing the recoil spring. The action of the recoil spring forces the slide forward. This feeds a live cartridge from the magazine into the chamber leaving the weapon ready to fire again.

b. The M1911A1 Pistol is a modification of the M1911 Pistol, (figs. 2 and 4) but its operation is exactly the same and the differences do not affect the maintenance. In the model M1911A1 the differences are:

- (1) The tang of the grip safety is extended to provide better protection for the hand.
- (2) A clearance cut is made on the receiver for the trigger finger.
- (3) The face of the trigger is cut back and knurled.
- (4) The mainspring housing is raised in the form of a curve to fit the palm of the hand and is knurled.
- (5) The top of the front sight is widened.

c. The pistol is designed to fire CARTRIDGE, ball, Cal. .45, M1911. The magazine holds seven cartridges. The upper cartridge is stripped from the magazine and forced into the chamber by the forward motion of the slide. The pistol fires once at each squeeze of the trigger. When the last cartridge in the magazine has been fired, the slide remains open. The magazine catch is then depressed and the magazine is forced out by the magazine spring. The rate of fire is limited only by the ability of the operator to insert magazines and to squeeze the trigger (fig. 6).

3. GENERAL DATA.

a. Characteristics.

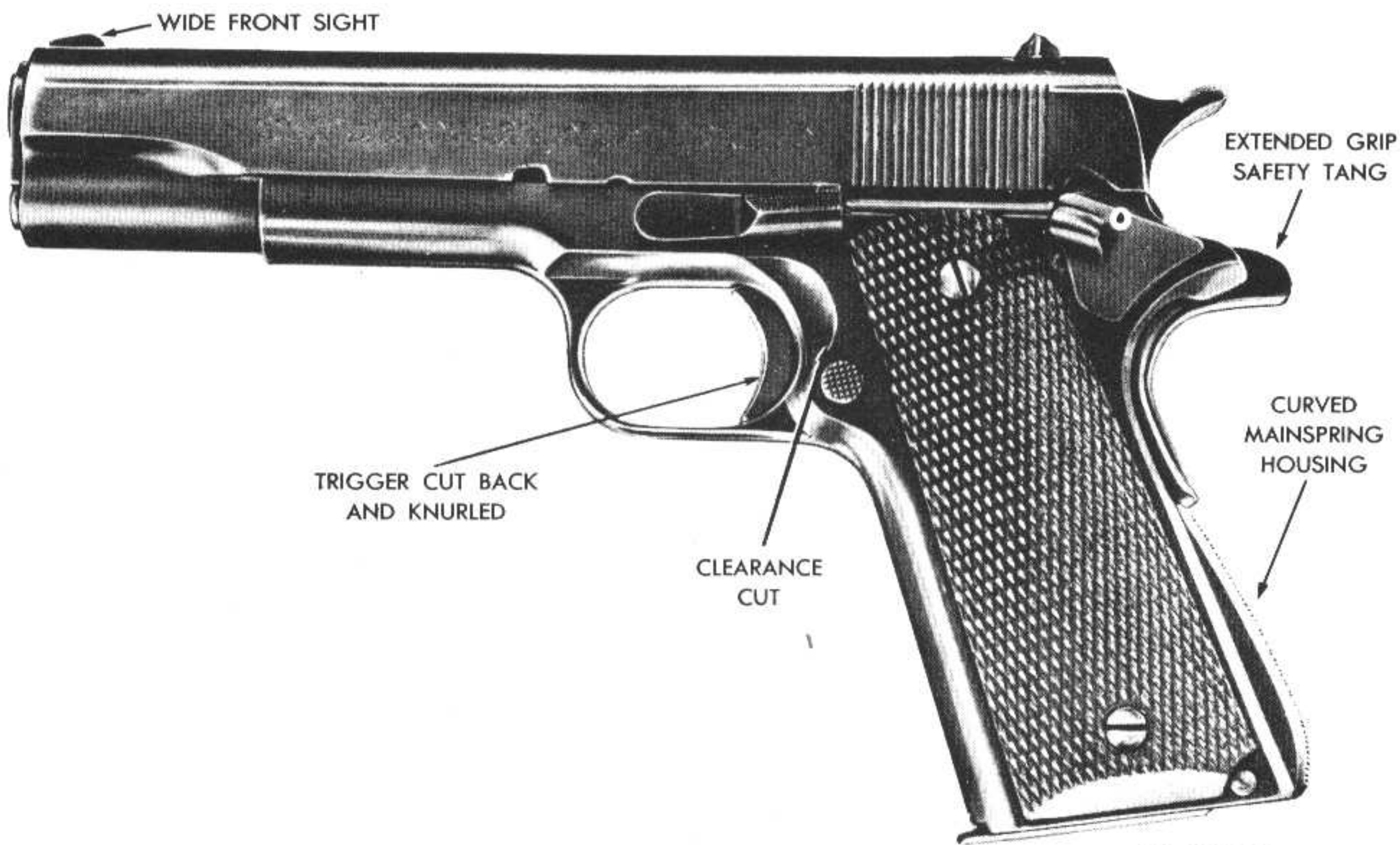
Barrel.

Caliber of bore.....	0.45 in.
Number of grooves.....	6 in.
Twist in rifling, uniform L. H., (one turn).....	16 in.
Length of barrel.....	5.03 in.



RA PD 10441

Figure 1 — Right Side of Pistol M1911A1



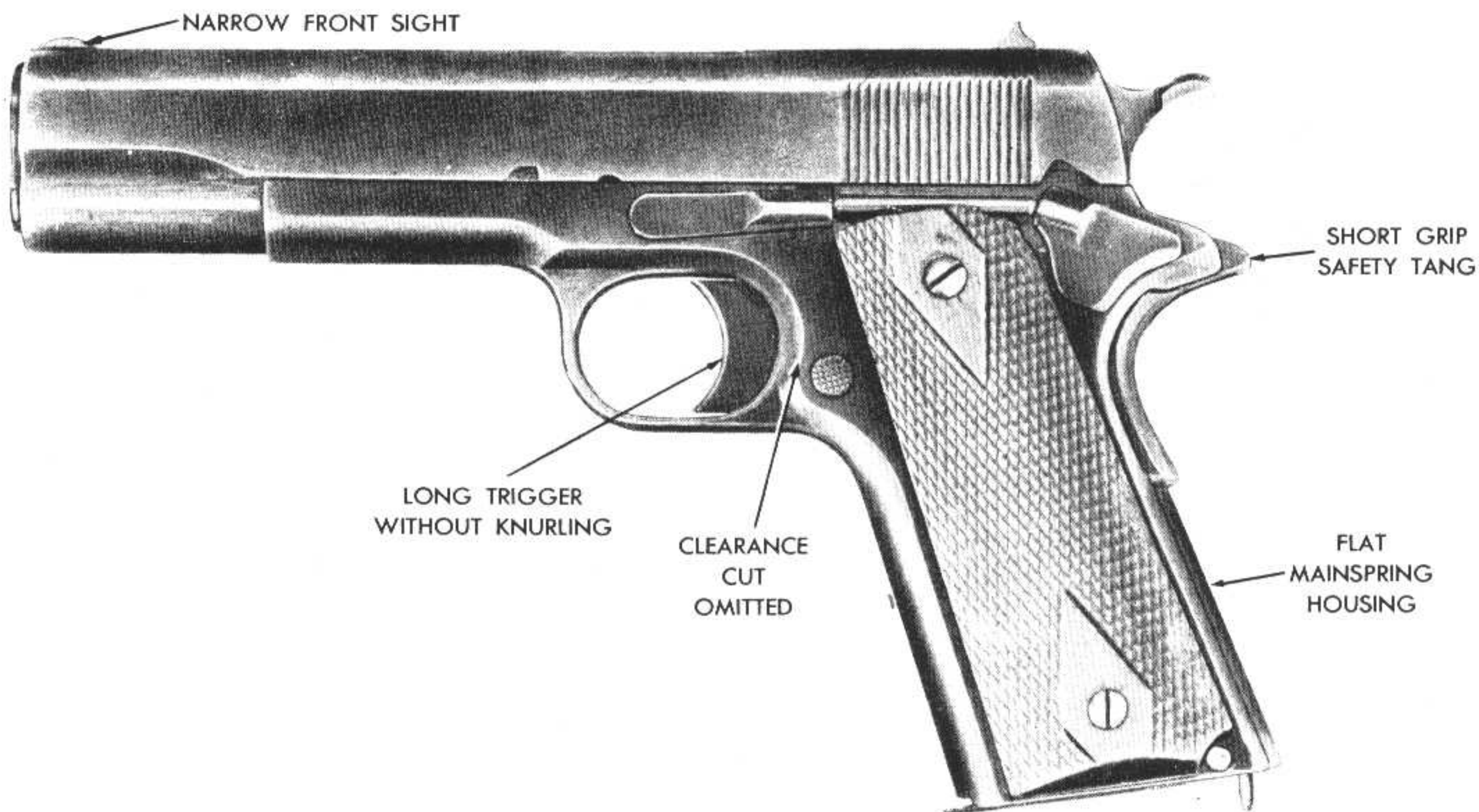
RA PD 10442

Figure 2 — Left Side of Pistol M1911A1 Showing Exterior Difference Between It and M1911



RA PD 10443

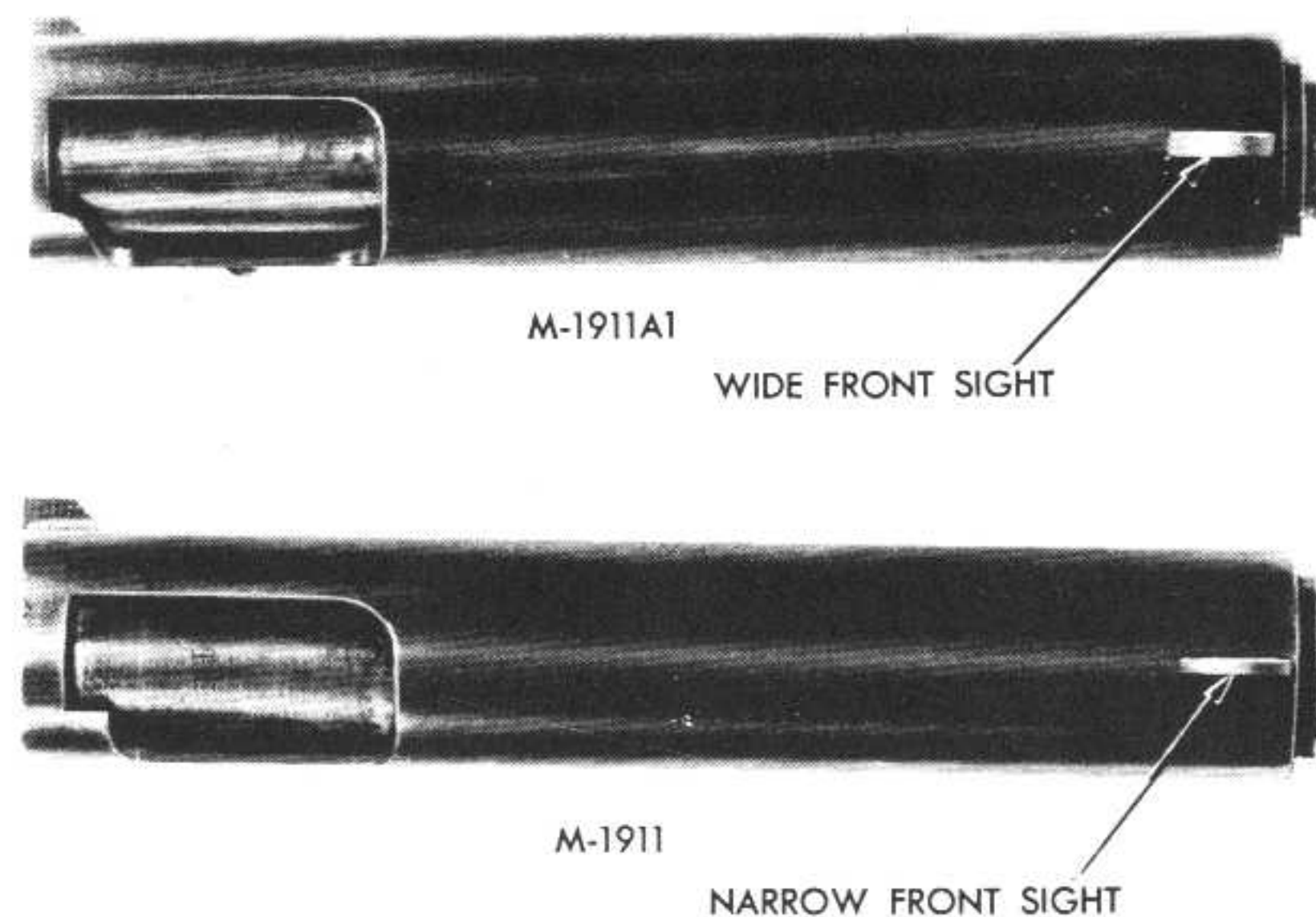
Figure 3 — Right Side of Pistol M1911



RA PD 10444

Figure 4 — Left Side of Pistol M1911 Showing Exterior Differences Between It and M1911A1

ORDNANCE MAINTENANCE — PISTOLS AND REVOLVERS



RA PD 10445

Figure 5 — Top of Pistols M1911A1 and M1911 Showing Difference in Width of Sights

Pistol.

Over-all length of pistol.....	8.593 in.
Height of front sight above axis of bore.....	0.5597 in.

Weights.

Weight of pistol with magazine	2.437 lb
Weight of loaded magazine, with 7 rounds approximate.	0.481 lb
Weight of empty magazine	0.156 lb

Trigger pull.

Pistols, new or repaired.....	5½ to 6½ lb
Pistols, in hands of troops.....	5 to 6½ lb

b. For information concerning the exterior ballistics, including accuracy, drift, velocity with striking energy, penetration, and trajectory, refer to Basic Field Manual, FM 23-35 Automatic Pistol, Cal. .45, M1911 and M1911A1.

GENERAL CHARACTERISTICS, AUTOMATIC PISTOL CAL. 45, M1911 AND M1911A1

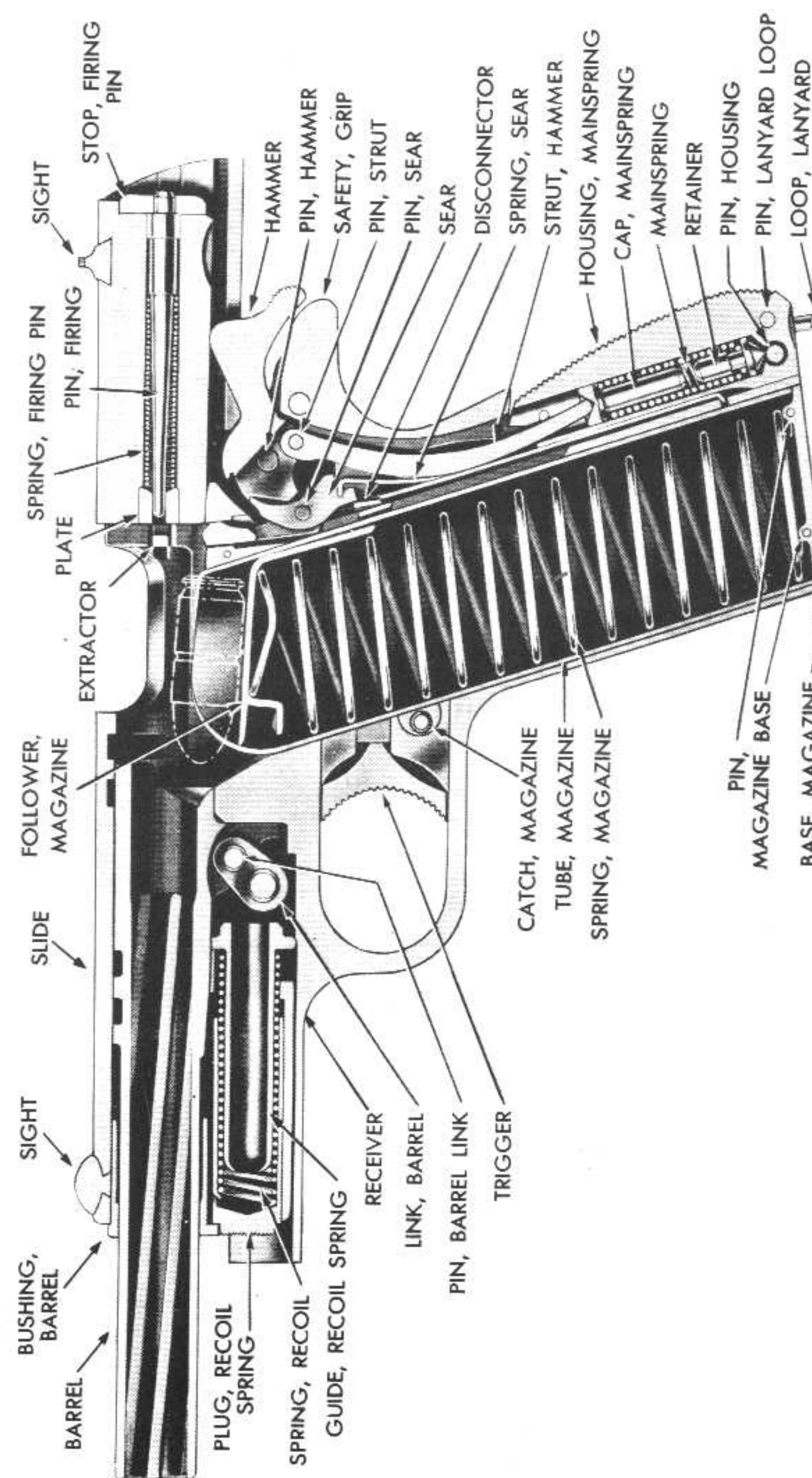


Figure 6 — Sectional View of Pistol M1911A1

ORDNANCE MAINTENANCE — PISTOLS AND REVOLVERS

Section III

FUNCTIONING

Paragraph

Functioning 4

4. FUNCTIONING.

a. In loading, the charged magazine is inserted in the receiver (fig. 7) and the slide is drawn once to the rear. This movement cocks the hammer and compresses the recoil spring (fig. 8). The magazine follower then raises the upper cartridge into the path of the slide (fig. 9). When the slide is released, it is forced forward by the recoil spring and carries the first cartridge into the chamber of the barrel. As the slide approaches its forward position, it encounters the rear extension of the barrel and forces the barrel forward. The rear end of the barrel then swings upward on the barrel link as on a pivot. When the slide and barrel reach their forward position, they are positively locked together by the locking ribs on the barrel and slide. Their joint forward movement is arrested by the barrel lug encountering the pin on the slide stop. The pistol is then ready for firing (fig. 10).

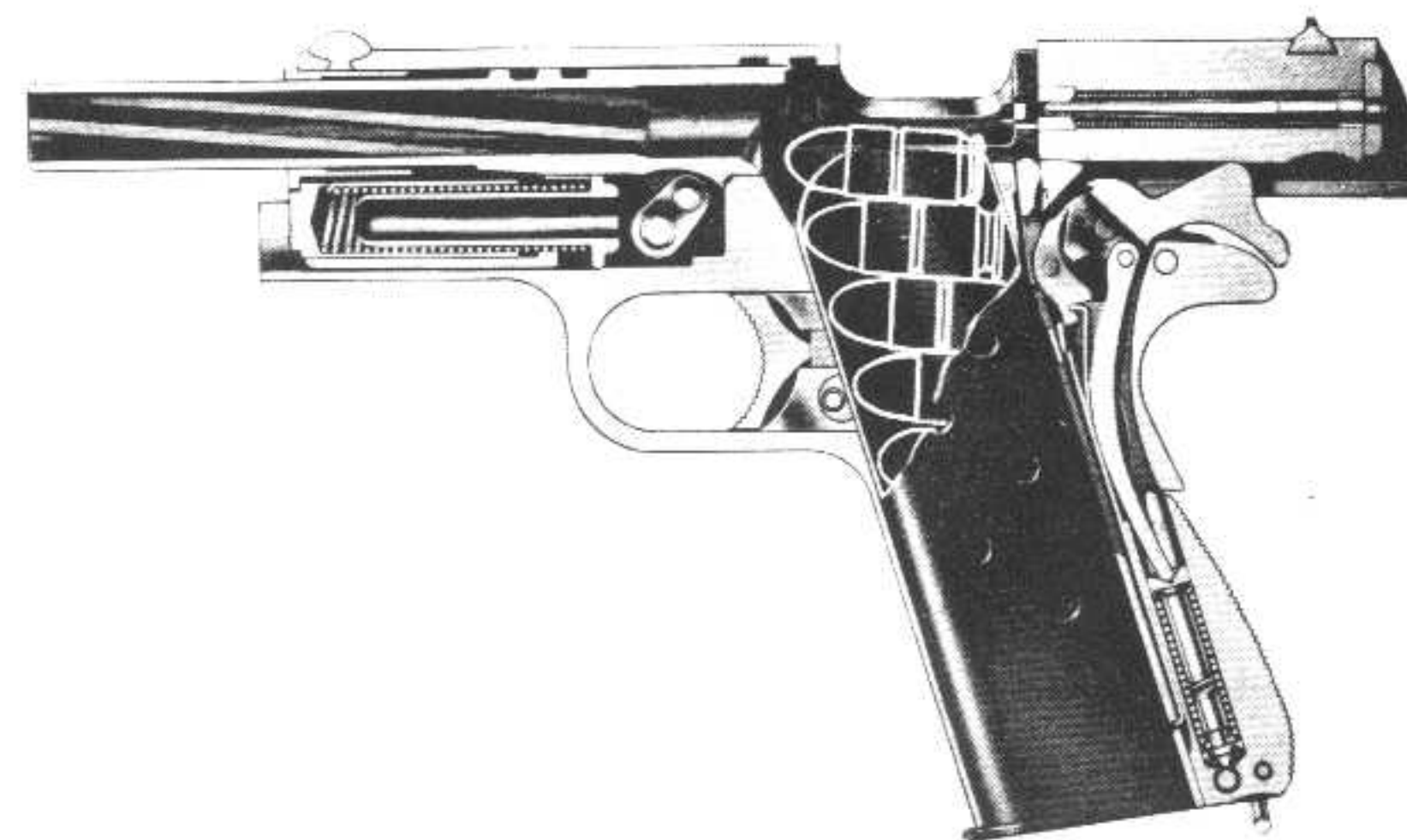
b. If it is desired to fire more than the magazine limit of seven cartridges at one loading, an additional cartridge is inserted by hand into the chamber of the barrel prior to inserting a loaded magazine. This is



RA PD 10447

Figure 7 — Sectional View of Pistol M1911A1, Slide Forward, Magazine Loaded, Chamber Empty, Hammer Down

FUNCTIONING



RA PD 10448

Figure 8 — Sectional View of Pistol M1911A1, Slide Back, Hammer Back, Magazine Full (Enclosed)



RA PD 10449

Figure 9 — Sectional View of Pistol M1911A1, Slide Partly Forward, Cartridge Entering Chamber, Hammer Back

accomplished by drawing back the slide, inserting the cartridge, allowing the slide to close, then locking the slide and the cocked hammer by pressing the safety lock upward. The slide and hammer are thus positively locked and the pistol may be carried safely at full cock. It is only necessary to press down the safety lock to make the pistol ready to fire.

ORDNANCE MAINTENANCE — PISTOLS AND REVOLVERS

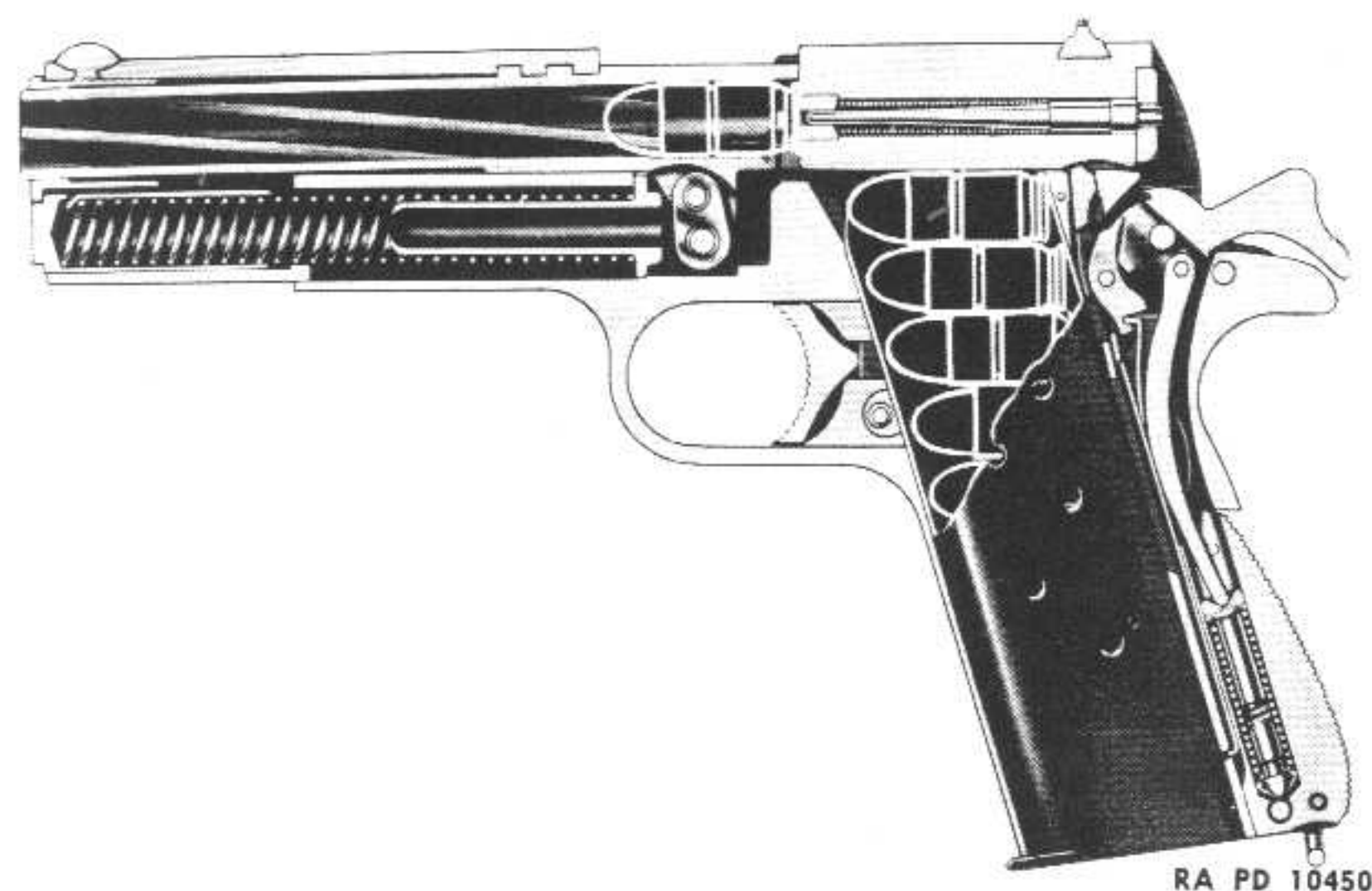


Figure 10 — Sectional View of Pistol M1911A1, Slide Closed, Cartridge in Chamber, Hammer Back

c. When the hammer is cocked, the hammer strut moves downward compressing the mainspring. The sear under the action of the long leaf of the sear spring engages its nose or tip in the notch on the hammer, holding it in the cocked position.

d. In order that the pistol may be fired, the following conditions must exist:

(1) The grip safety must be pressed in permitting the trigger to move.

(2) The slide must be in its forward position, properly interlocked with the barrel, so that the disconnecter is well in the recess on the underside of the slide, under action of the center leaf of the sear spring. In this position, it transmits any motion of the trigger to the disconnecter and sear.

(3) The safety lock must be down, in the unlocked position, so that the sear will be unblocked and free to release the hammer. The slide will then be free to move back.

e. Squeezing the trigger disengages the sear from the sear notch, releasing the hammer and letting it strike the firing pin. The blow overcomes the inertia of the pin and causes it to move forward. The forward end of the pin then strikes the primer of the cartridge, causing it to fire (fig. 11).

NOTE: The primer of the cartridge is the cap inserted in the center

FUNCTIONING



Figure 11 — Sectional View of Pistol M1911A1, Hammer Down, Firing Pin Striking Cartridge

of the head of the cartridge case. It contains the detonating charge which is ignited by the impact of the firing pin. Detonation of this charge then ignites the propelling powder charge contained in the cartridge case.

f. The pressure of the gases generated in the barrel by the explosion of the powder in the cartridge is exerted in a forward direction against the bullet, driving it through the bore. Pressure is also exerted in a rearward direction against the face of the slide, driving it and the barrel backward together. The slide travels the full distance while the barrel moves about $\frac{1}{8}$ inch. The downward swing movement of the barrel disengages it from the corresponding grooves in the slide. The barrel is then stopped in its lowest position. The slide continues to move to the rear, opening the breech, cocking the hammer, extracting and ejecting the empty shell, and compressing the recoil spring until the slide reaches its rearmost position (fig. 12). The return movement of the slide under the pressure of the recoil spring catches the cartridge, forcing it forward. The lips on the magazine, as well as the loading ramp on the rear end of the barrel, guide the cartridge into the chamber.

g. The weight, and consequently the inertia of the slide and the barrel, is so much greater than the weight and inertia of the bullet that the latter is driven from the muzzle before the slide and barrel have recoiled to the point where the barrel commences its unlocking movement. Thus, the opening of the breech of the barrel is delayed until

ORDNANCE MAINTENANCE — PISTOLS AND REVOLVERS



Figure 12 — Sectional View of Pistol M1911A1, Slide Back, Cartridge Being Ejected, Hammer Back, Magazine Empty

after the bullet has left the muzzle and the escape of any of the powder gases to the rear is practically prevented. This factor of safety is further increased by the tension of the recoil spring and mainspring, both of which oppose the rearward movement of the slide.

h. The comparatively great weight of the slide of the pistol not only prevents premature opening of the breech, but also assures operation of the pistol. This is because the heavy slide attains a sufficient momentum to enable it to complete the rearward movement, allowing the cartridge to be forced into position by the magazine follower under pressure of the magazine spring.

i. When the magazine has been emptied, the pawl-shaped slide stop is raised into the front recess on the lower left side of the slide by the magazine follower under the action of the magazine spring. This locks the slide in the opened position and serves as an indicator to remind the operator that the empty magazine must be replaced by a loaded one. Pressure upon the magazine catch quickly releases the empty magazine from the receiver, thus permitting the insertion of a loaded magazine.

j. To release the slide from the open position, it is only necessary to press upon the thumb piece of the slide stop. The slide will then go forward to its closed position carrying a cartridge from the magazine into the barrel and the pistol is ready to fire again.

Section IV

INSPECTION PRIOR TO DISASSEMBLY

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Safety tests	8

5. GENERAL.

Inspections prior to disassembly include a careful visual inspection of the assembled pistol, trigger pull tests, and four safety tests.

CAUTION: *When a pistol is received for repairs, make certain that the chamber is unloaded. It is possible that a cartridge has become jammed so that the pistol is in a dangerous condition when received. Proceed with caution when removing the damaged cartridge. It should be removed by inserting a cleaning rod into the muzzle and pushing the cartridge out.*

6. VISUAL INSPECTION.

a. The pistol is inspected as a unit to note its general appearance, the action of the slide, and the smoothness of operation. The alinement of sights is also verified. Examination is made for split stocks and missing stock screws.

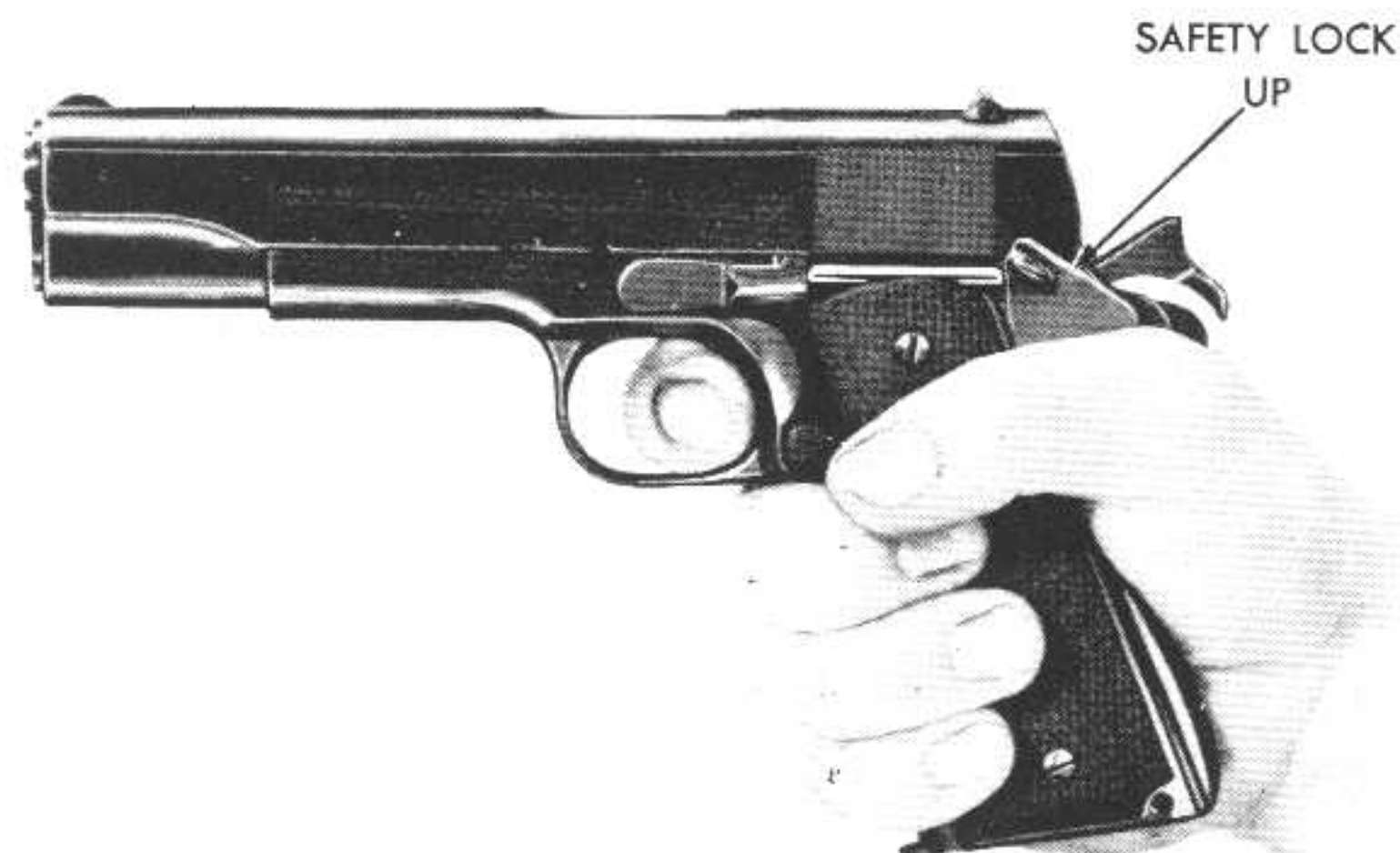
7. TRIGGER PULL TESTS.

a. Trigger pull tests are made to determine the number of pounds pull required to move the trigger causing the hammer to fall. To make the test, the hammer is cocked and the grip safety depressed. Two weights (see par. 3 a for weights to be used) and a piece of wire are required to make the tests. The wire should be looped at one end so that it will hook over the trigger without contacting the side of the pistol. Its lower end should be arranged to hold the necessary weights. The pistol is held in the hand in a vertical position, the thumb depressing the grip safety. With the lighter weight attached to the lower end, the wire is then hooked over the trigger; the lower end with the weight resting on the bench or floor. The pistol is then lifted carefully. This weight should not cause the hammer to fall. It is then replaced by the heavier weight which should cause the hammer to fall. If the lighter weight causes the hammer to fall, the trigger pull is below the specified limit. If the heavier weight does not cause it to fall, the pull is too heavy. In either case, correction of trigger pull must be made (par. 15 b).

8. SAFETY TESTS.

a. The following safety tests should be performed on each pistol prior to disassembly:

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RA PD 10453

Figure 13 — Pistol M1911A1, Hammer Back, Safety Lock Upward in Safety Position, Hand Grasping Stock So Grip Safety Is Depressed, Finger Squeezing Trigger

(1) SAFETY LOCK TEST (fig. 13). With the pistol unloaded, cock the hammer and press the safety lock upward into the safe position. Grasp the stock so that the grip safety is depressed and squeeze the trigger



RA PD 10454

Figure 14 — Pistol M1911A1, Hammer Cocked, Grip Safety Not Depressed, Finger Squeezing Trigger

INSPECTION PRIOR TO DISASSEMBLY



RA PD 10455

Figure 15 — Pistol M1911A1, Hammer at Half-Cock Notch, Finger Squeezing Trigger



RA PD 10456

Figure 16 — Pistol M1911A1, Hammer Back Nearly to Full Cock, Thumb Slipping Off Hammer

tightly three or four times. If the hammer falls, the safety lock is not safe and must be repaired.

(2) GRIP SAFETY TEST (fig. 14). With the pistol unloaded, cock the hammer, and without depressing the grip safety, point the pistol

ORDNANCE MAINTENANCE — PISTOLS AND REVOLVERS



RA PD 10457

Figure 17 — Pistol M1911A1, Hammer Cocked, Slide Partly Back, Finger Squeezing Trigger

downward and squeeze the trigger three or four times. If the hammer falls or the grip safety is depressed by its own weight, the grip safety is not safe and must be repaired.

(3) **HALF-COCK TEST** (fig. 15). With the pistol unloaded, draw back the hammer until the sear engages the half-cock notch. Then squeeze the trigger. If the hammer falls, the hammer or sear must be replaced or repaired. Draw the hammer back nearly to full cock and then let it slip (fig. 16). It should fall only to half cock, otherwise it should be replaced.

(4) **DISCONNECTOR TEST** (fig. 17). With the pistol unloaded, cock the hammer. Shove the slide $\frac{1}{4}$ inch to the rear, and holding it in that position, squeeze the trigger. Let the slide go forward, maintaining the pressure on the trigger. If the hammer falls, the disconnecter is worn on top and must be replaced. Pull the slide all the way to the rear and engage the slide stop. Squeeze the trigger and at the same time release the slide. The hammer should not fall. If it does the disconnecter is faulty (fig. 18). Now release the pressure on the trigger and then squeeze it. The hammer should then fall. If it does not check the sear spring for weakness, and if not weak, then the disconnecter is faulty. The disconnecter normally prevents the release of the hammer unless the slide and barrel are in the forward position, safely interlocked. This also prevents the firing of more than one shot at each squeeze of the trigger.

INSPECTION PRIOR TO DISASSEMBLY



RA PD 10458

Figure 18 — Pistol M1911A1, Slide Fully Back, Slide Stop Engaged, Finger Squeezing Trigger, Thumb Releasing Slide, Hammer Back

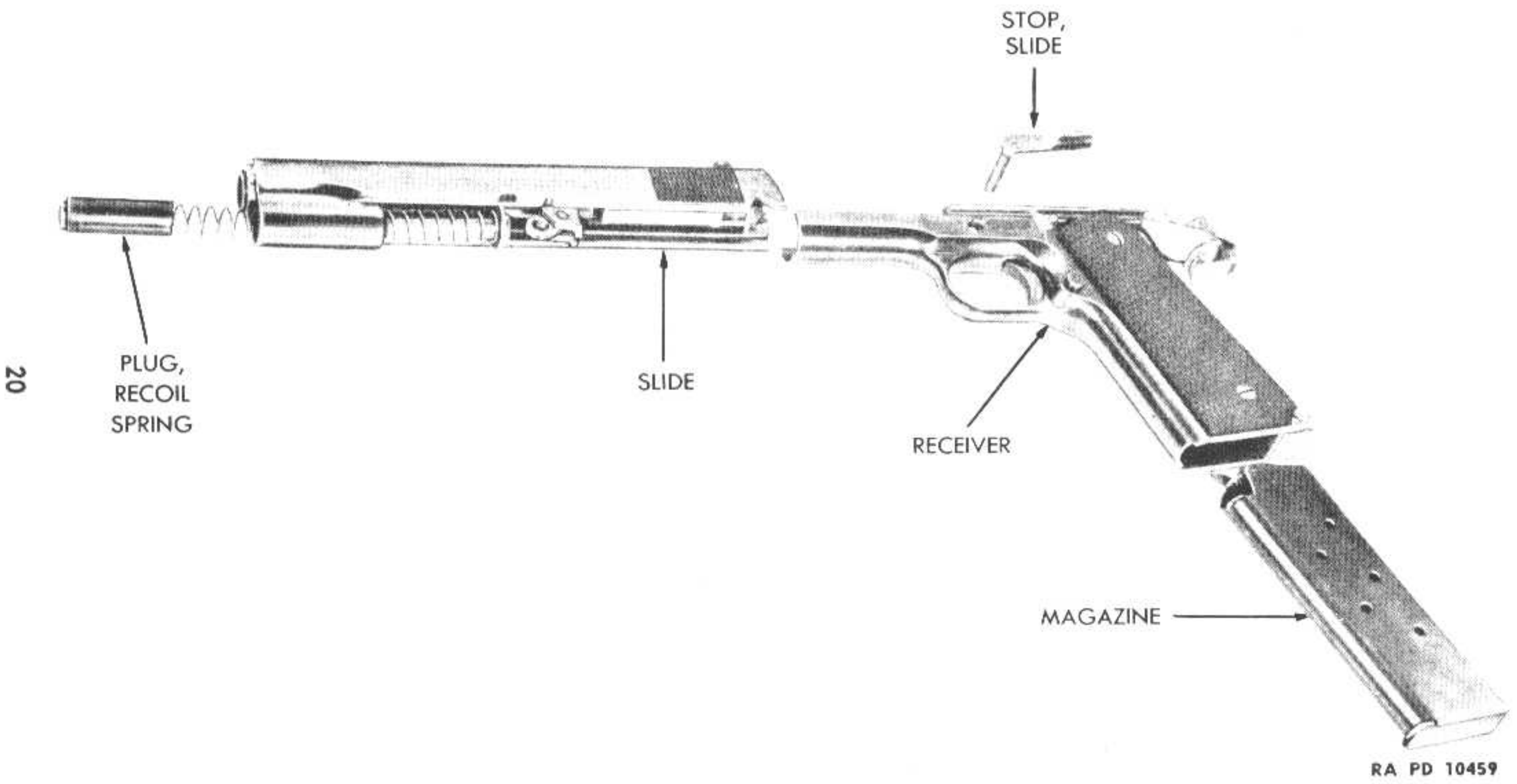
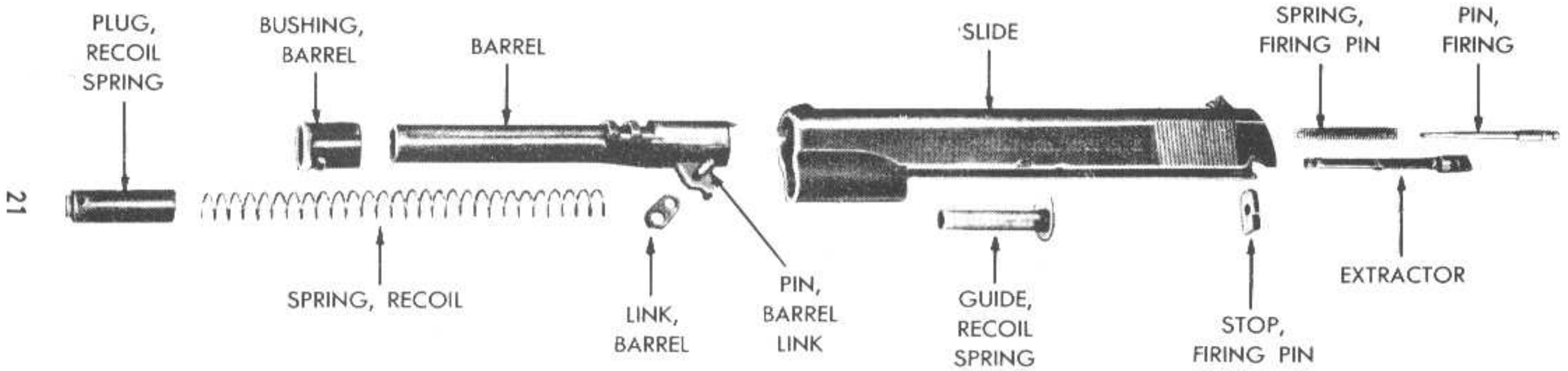
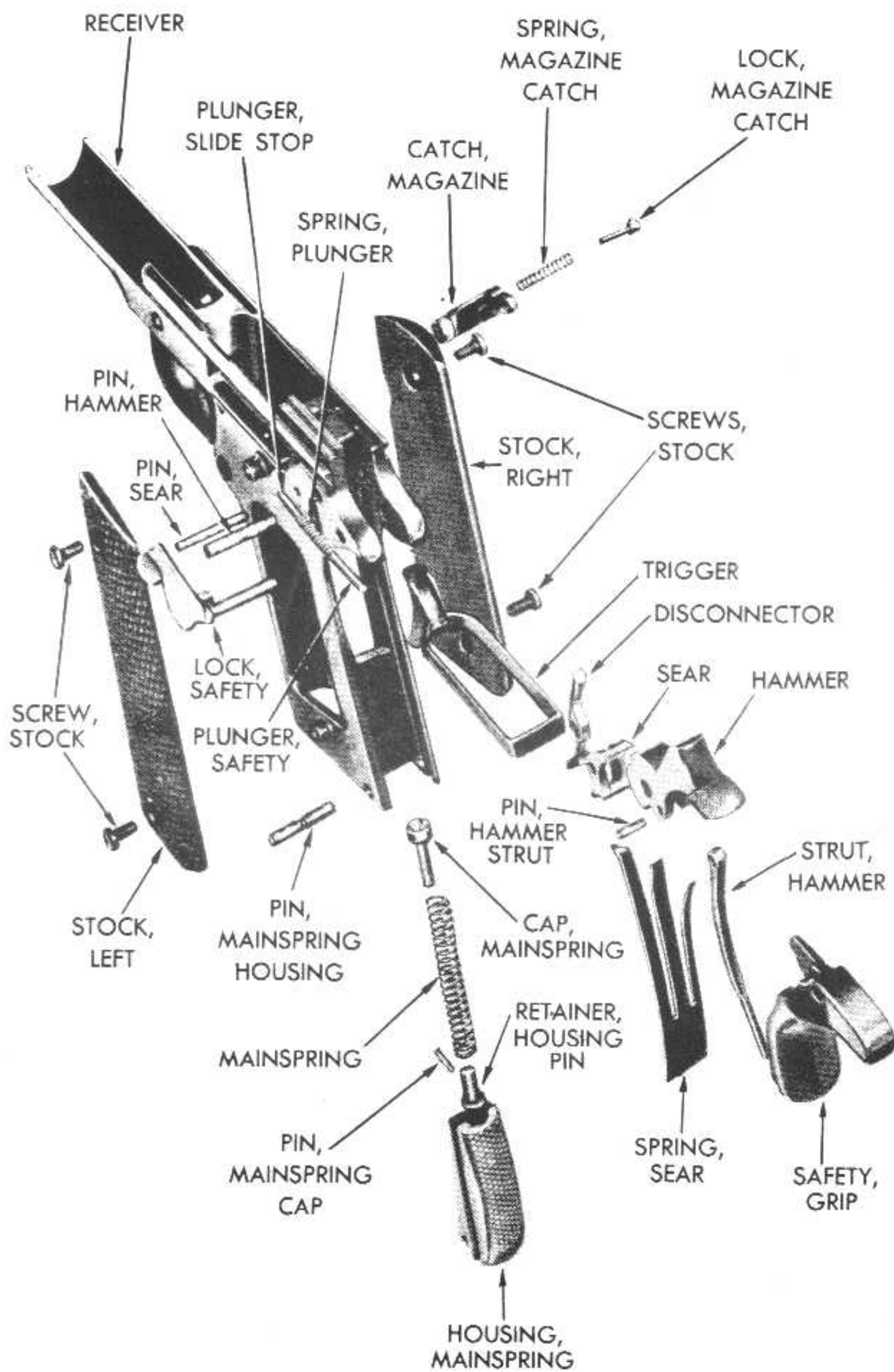


Figure 19 — Subassemblies of Pistol M1911A1 — Exploded View



ORDNANCE MAINTENANCE — PISTOLS AND REVOLVERS



RA PD 10451

Figure 21 — Receiver Group of Pistol M1911A1 — Exploded View

INSPECTION PRIOR TO DISASSEMBLY



ORDNANCE MAINTENANCE — PISTOLS AND REVOLVERS

Section V

DISASSEMBLY

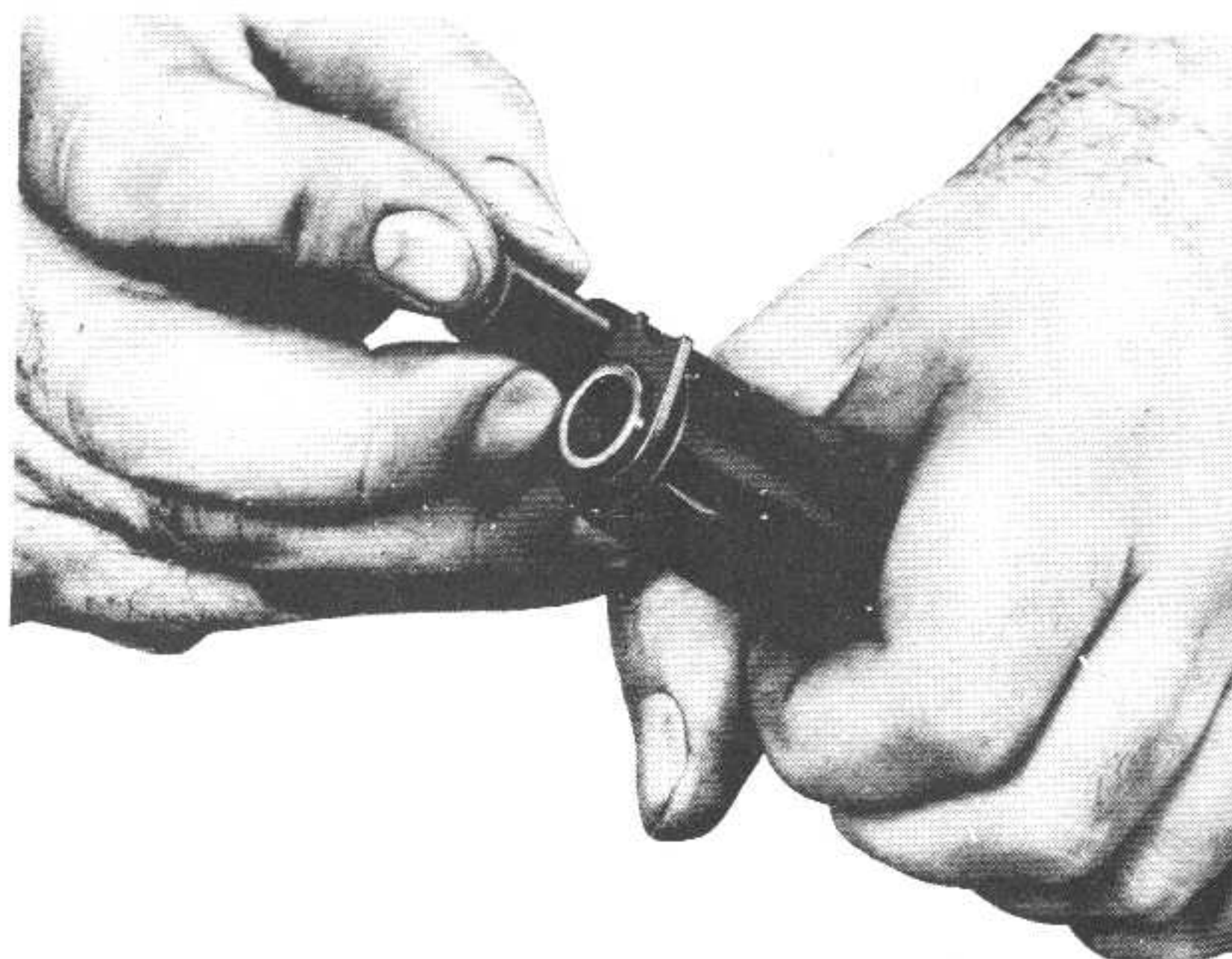
	Paragraph
Disassembly of pistol	9
Disassembly of magazine	10

9. DISASSEMBLY OF PISTOL.

a. To disassemble the pistol, proceed as follows: (figs. 19, 20, 21, and 22).

(1) Remove the magazine by pressing the magazine catch. Press the recoil spring plug inward and turn the barrel bushing clockwise until the recoil spring plug and the end of the recoil spring protrude from their seat (fig. 23). This releases the tension of the recoil spring. The finger and thumb should be kept over the recoil spring plug so that it will not jump away and be lost or strike the operator.

(2) Draw the slide rearward until the middle notch of the slide stands above the projection on the thumb piece of the slide stop (fig. 24). Now press gently against the end of the pin of the slide stop which protrudes from the right side of the receiver above the trigger guard.



RA PD 10463

Figure 23 — Removing Recoil Spring Plug from Pistol M1911A1

DISASSEMBLY



RA PD 10464

Figure 24 — Lining Up Slide Stop of Pistol M1911A1

Push the slide stop from the right side and pull it out from the left side (fig. 25). This releases the barrel link, allowing the barrel with the link and the slide assembly to be drawn forward, together, from the receiver.

(3) Withdraw the recoil spring plug from the recoil spring by twisting counterclockwise slightly. Then pull out the spring and spring guide from the rear of the slide.

(4) Next, turn the barrel bushing counterclockwise until it may be drawn forward from the slide (fig. 26). This releases the barrel, which with the barrel link, may be drawn forward from the slide. By pushing out the barrel link pin, the barrel link is released from the barrel.

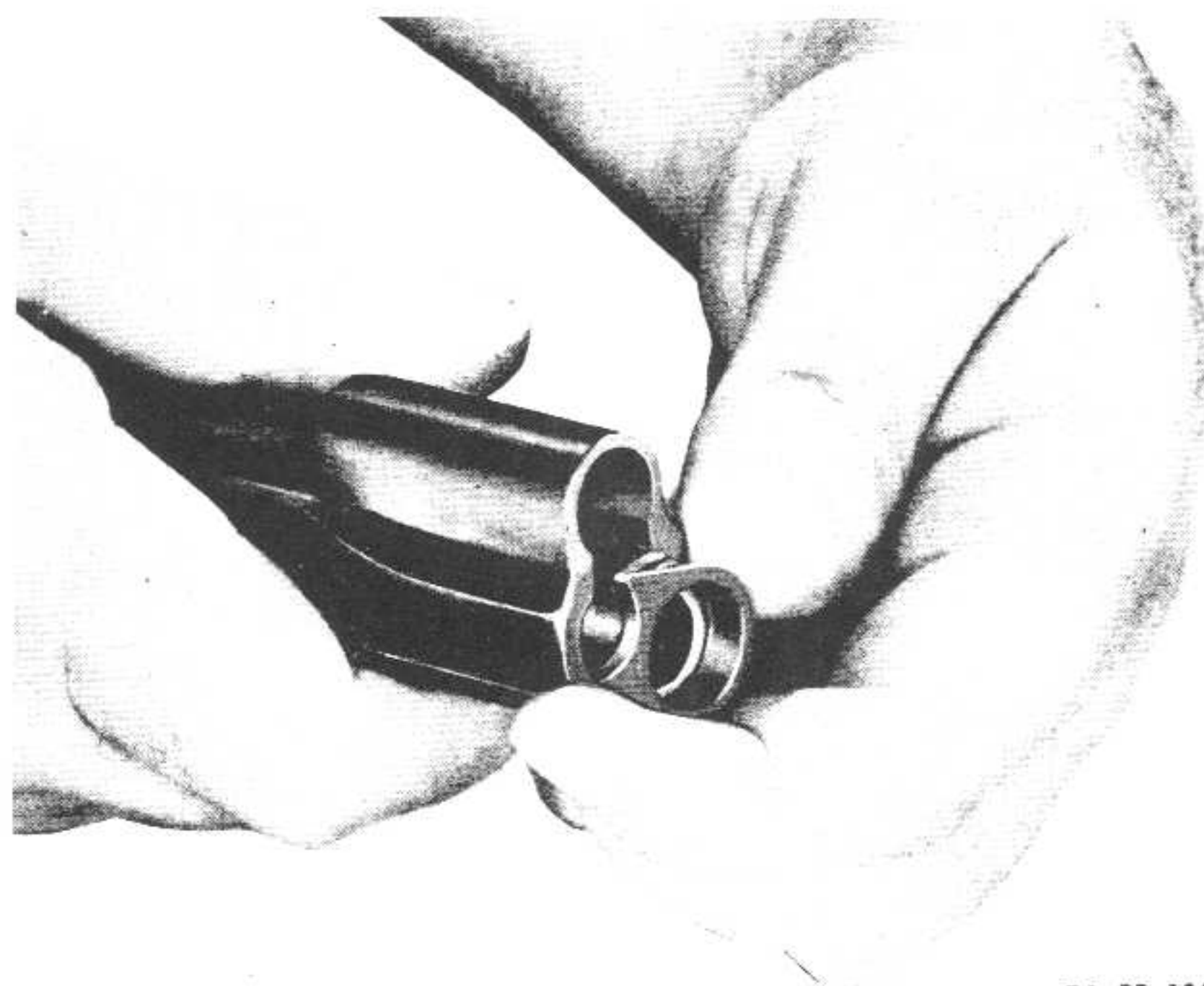
(5) Press the rear end of the firing pin forward with a small punch until it clears the firing pin stop. The stop can then be drawn downward from its seat in the slide. The firing pin and firing spring are then removed from the rear of the slide. The finger and thumb should be kept over the spring so it will not jump away. The extractor is pried out to the rear with a punch or screwdriver. This completes the disassembly of the slide

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RA PD 10465

Figure 25 — Removing Slide Stop Pin from Pistol M1911A1



RA PD 10466

Figure 26 — Removing Barrel Bushing from Pistol M1911A1

DISASSEMBLY



RA PD 10467

Figure 27 — Removing Safety Lock from Pistol M1911A1

(6) The safety lock (thumb safety) is readily withdrawn from the receiver by cocking the hammer, placing the lock midway between the upper and lower positions (fig. 27), and pushing from the right on the pin part.

(7) After removing the hammer pin from the left side of the receiver, lower and remove the cocked hammer with the hammer strut.

CAUTION: Retard the hammer with the thumb to avoid breaking it.

(8) Push or drive the mainspring housing pin from the right side of the receiver by placing a punch on the recessed end of the pin. This allows the mainspring housing to be withdrawn downward and the grip safety rearward from the handle. The sear spring may then be removed. By pushing out the sear pin from the right to the left side of the receiver, the sear and disconnect are released. To remove the mainspring, mainspring cap, and housing pin retainer from the mainspring housing, mount the housing in a vise having protected jaws, compress the mainspring by placing a punch on the mainspring cap, and push out the mainspring cap pin with a small drift.

b. **Old Style Magazine Catch Lock.** Special care should be used when removing the magazine catch from the receiver. Its checkered left end must be pressed inward flush with the receiver. Its right end

ORDNANCE MAINTENANCE — PISTOLS AND REVOLVERS



RA PD 10468

Figure 28 — Disassembling Old Design Magazine Catch from Pistol M1911

will then project so far from the right side of the receiver that it may be rotated counterclockwise one-half turn (fig. 28). This movement will release the magazine catch lock from its seat in the receiver, when the catch, the catch lock, and the spring may be removed. Note that the magazine catch pin is removed by pushing and rotating it as indicated above. It is not a screw.

c. New Style Magazine Catch Lock. With the improved design of magazine catch lock, the operation of dismounting the magazine catch is simplified. Press the magazine catch inward and turn the magazine catch lock a quarter turn counterclockwise by means of a screwdriver (fig. 29). The magazine catch with its contents can then be removed. The improved design will be recognized from the fact that the head of the magazine catch lock is slotted.

(1) The trigger can now be removed rearward from the receiver.
(2) The long arm of a screwdriver can be used to push out all the pins except the mainspring cap pin, the lanyard loop pin, and the ejector pin. For these pins, a drift of proper size must be used.

(3) The slide stop plunger, the safety lock plunger, and the plunger spring may be pushed to the rear, out of the plunger tube.

DISASSEMBLY



RA PD 10469

Figure 29 — Disassembling New Design Magazine Catch from Pistol M1911A1

10. DISASSEMBLY OF MAGAZINE.

a. Ordinarily the magazine should not be disassembled except for cleaning or to replace the magazine follower or the magazine spring. When it is required, proceed as follows:

(1) Push the magazine follower downward about $\frac{1}{4}$ inch. This compresses the magazine spring. Hold the magazine spring by inserting the end of a drift through one of the small holes in the side of the magazine and then slide out the magazine follower. Hold the hand over the end of the magazine before removing the drift from the hole in order to prevent the magazine spring from jumping out of the magazine. (The floor of the magazine may also be removed by knocking out the two floor plate pins, but this is done only in making emergency repairs.)

Section VI

INSPECTION AFTER COMPLETE DISASSEMBLY

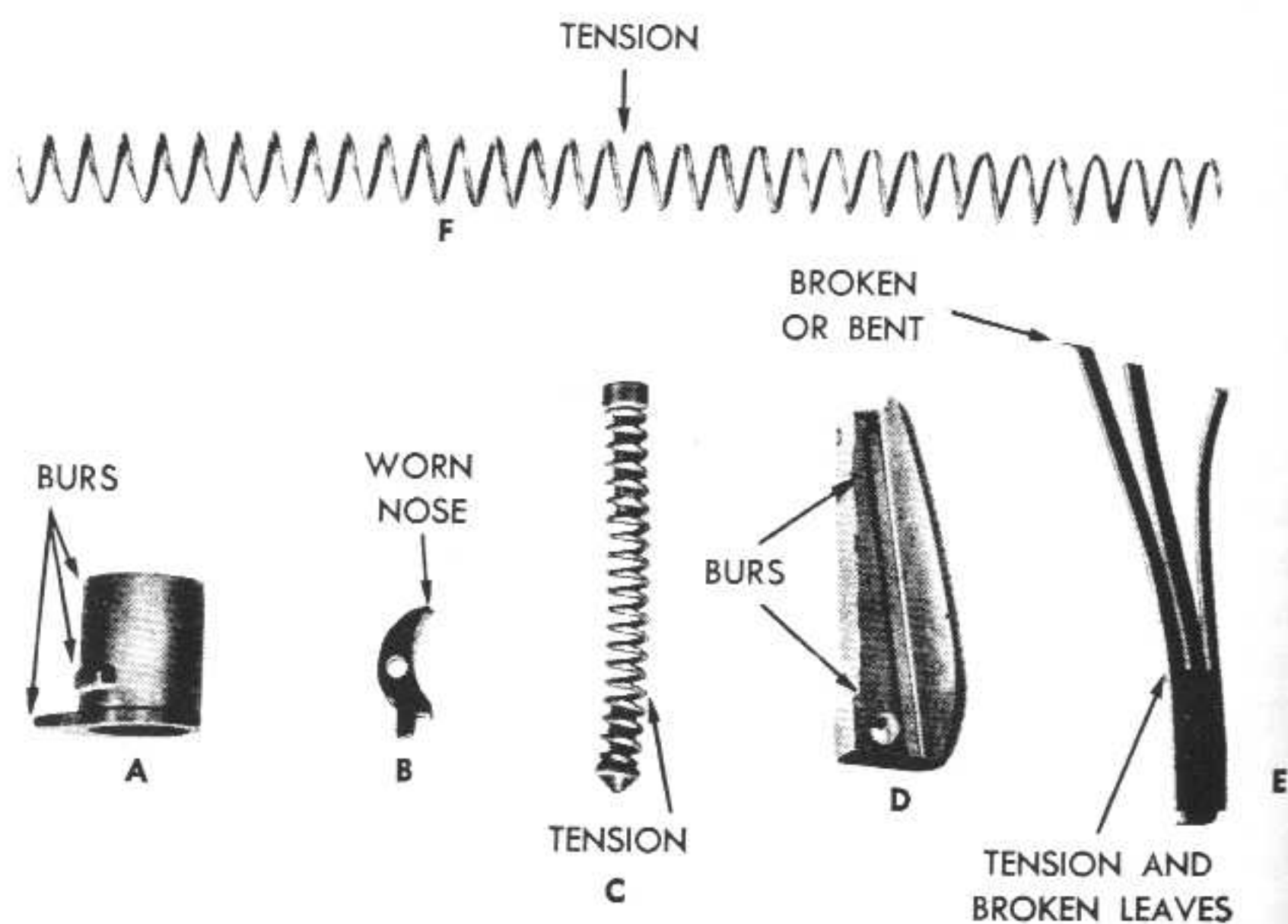
Causes of malfunctioning.....	11
Inspection procedure	12

11. CAUSES OF MALFUNCTIONING.

a. Important causes of malfunctioning of the parts of the pistol are as follows:

(1) MAJOR MOVING PARTS.

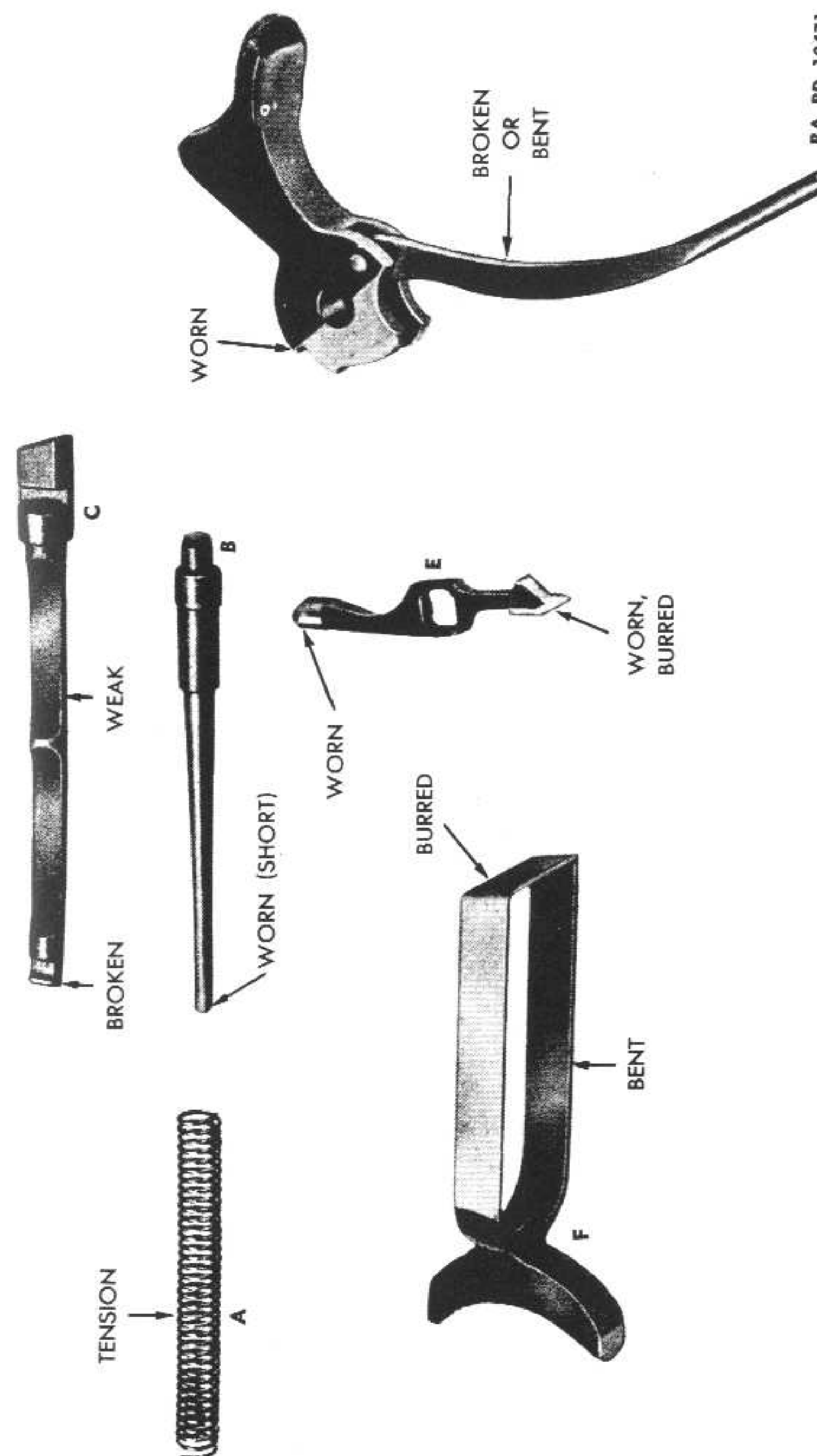
Part	Condition to be Checked
Barrel bushing, (fig. 30)	Burs.
Recoil spring	Tension.
Mainspring housing	Burs and tension of mainspring.
Sear spring	Tension and broken leaves.
Sear	Worn nose or tip and breakage and wear of lugs.
Hammer, (fig. 31)	Worn sear notches and broken hammer strut.



RA PD 10470

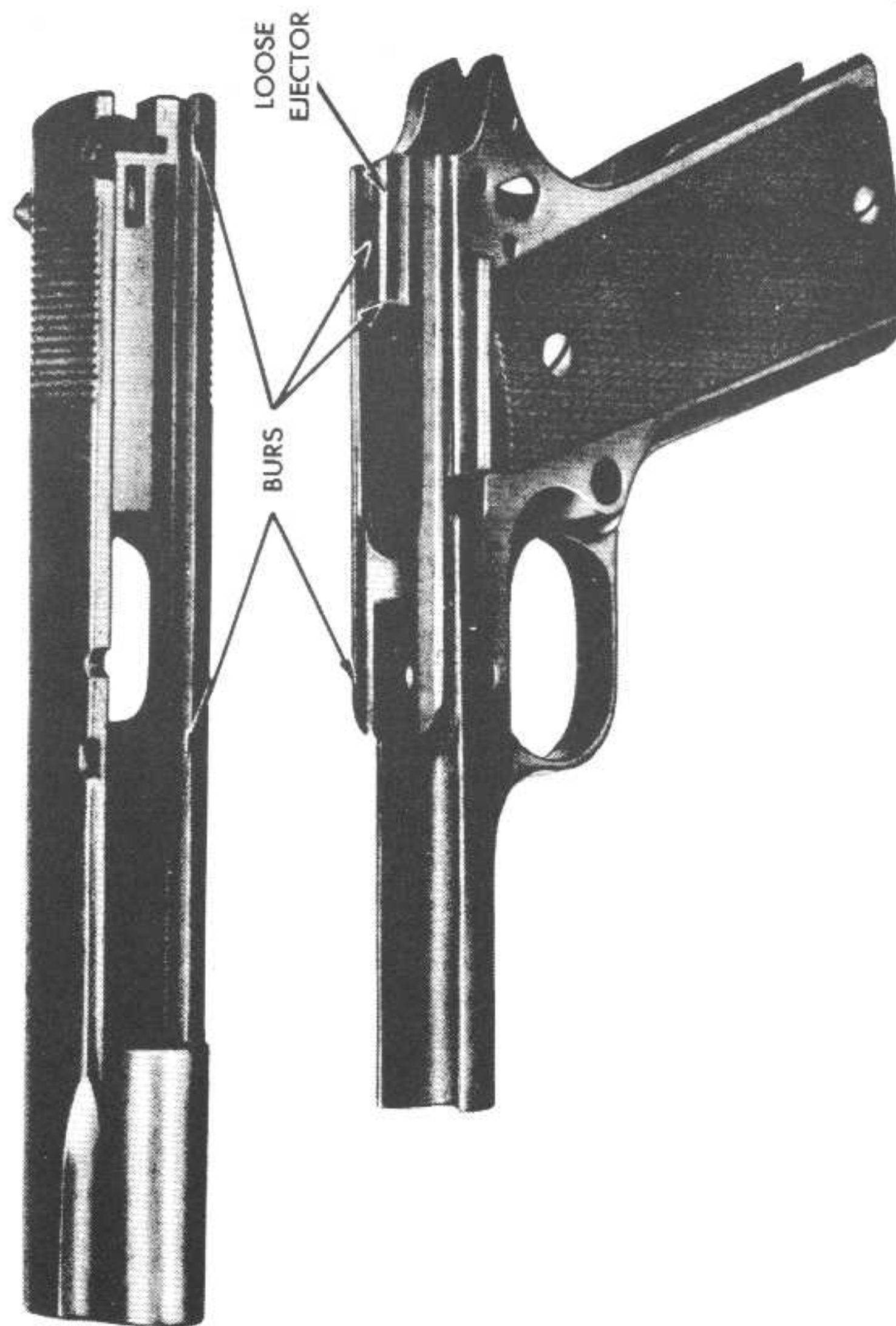
Figure 30 — Showing Points to Be Inspected On:
a. Barrel bushing; b. Sear; c. Mainspring; d. Mainspring housing;
e. Sear spring; f. Recoil spring

INSPECTION AFTER COMPLETE DISASSEMBLY



RA PD 10471

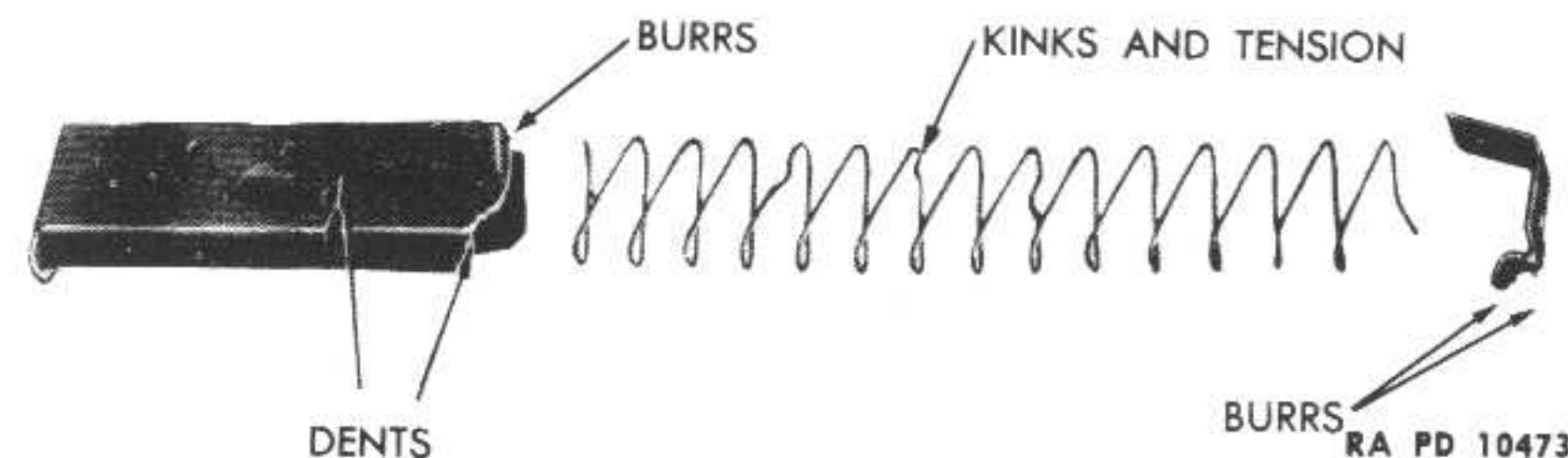
Figure 31 — Showing Points to Be Inspected On:
a. Firing pin spring; b. Firing pin; c. Extractor; d. Hammer; e. Disconnector; f. Trigger



RA PD 10472

Figure 32 — Slide and Receiver of Pistol M1911A1 Showing Points to Be Inspected

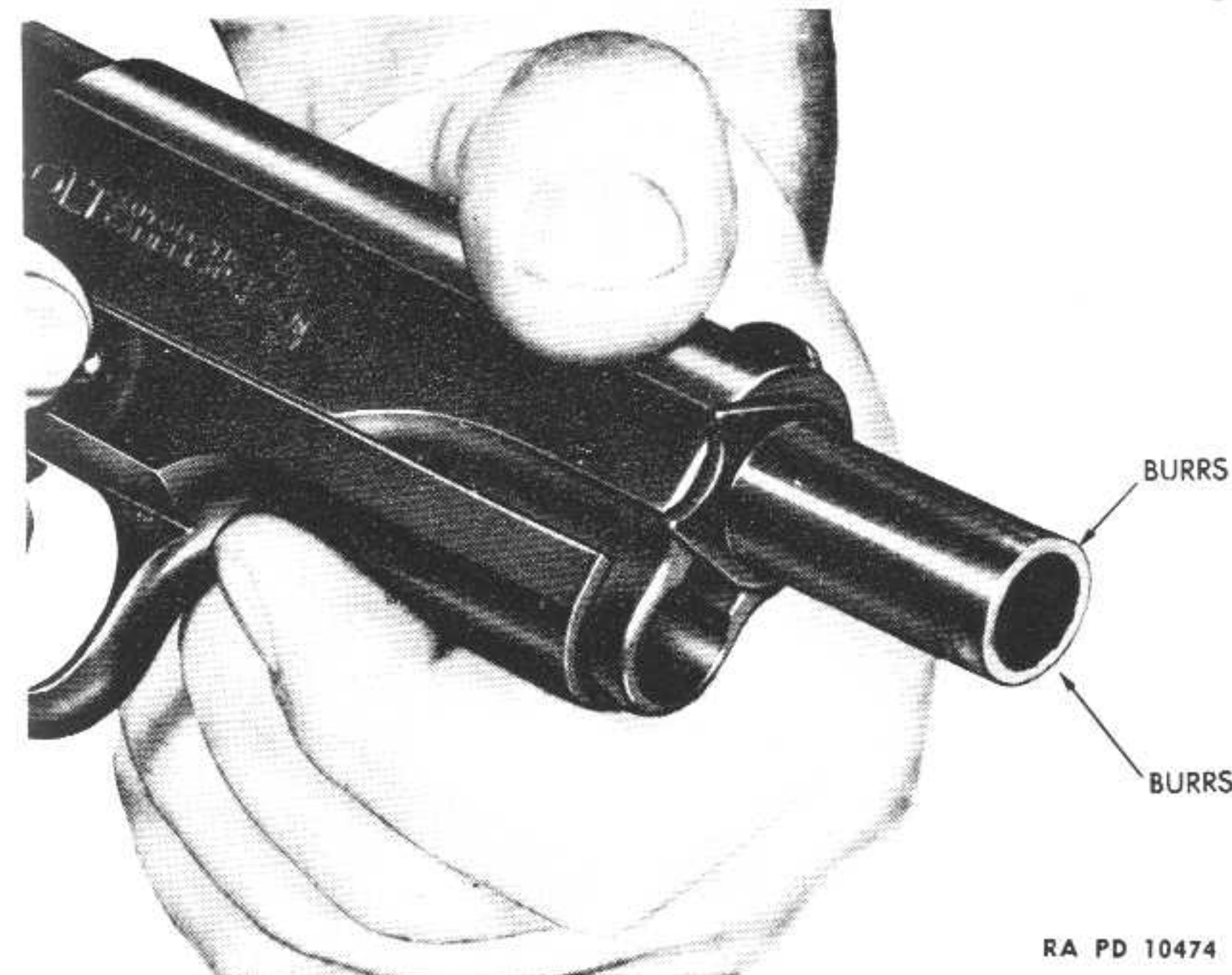
INSPECTION AFTER COMPLETE DISASSEMBLY



RA PD 10473

Figure 33 — Magazine of Pistol M1911A1 — Exploded View Showing Points to Be Inspected

Part	Condition to be Checked
Disconnecter	Burs or wear.
Trigger	Burs or bending.
Firing pin	Short length or wear.
Firing pin spring	Tension.
Extractor	Broken or weak claw.
Receiver (fig. 32)	Burs, loose ejector, and defacement of markings.
Slide	Burs on recoil guideways and locking recesses, and front and rear sight.




RA PD 10474

Figure 34 — Exterior of Muzzle End of Barrel of Pistol M1911A1 Showing Points to Be Inspected

RA PD 10475

RA PD 10476



RA PD 10477

(2) MAGAZINE.

Burs and dents.

Kinks and tension.

Burs and bending.

(c) If the barrel is pitted, but free from bulges and has sharp lands, it is still serviceable and will be sufficiently accurate. However, this implies that the barrel has not been given proper care and should be so reported (fig. 36).

b. Improvised Report Form. Pending the publication of TM 9-1100 (now in preparation) which prescribes standard forms. Reports of pistol inspection may be submitted on an improvised form approximately as given below:

No. of Pages. _____

Page No. _____

Inspection Record — Pistol

Report condition of bore as: Check (X) for OK; LP for lightly pitted; BP for badly pitted; UP for unserviceable due to pitting. See "Instructions for inspectors, No. 4" for other abbreviations.

[illegible]

Inspected by _____ and _____ Date _____

Organization _____ Station _____

ORDNANCE MAINTENANCE — PISTOLS AND REVOLVERS

(1) The inspector will fill in the serial number, defects noted, and corrective action to be taken. Where necessary corrections can be made within the organization, the inspector will consult with and advise the organization commander as to the proper methods to be followed. Where the corrections to be made are extensive, complicated, or of a technical nature, the inspector will so indicate in the column under the heading "Action" and note that the firearm is being sent to the post, camp, station, or field depot for replacement. The inspector's report will be quoted as authority for making the exchange. Should the inspection disclose that the firearm has been damaged or rendered unserviceable through causes other than fair wear and tear, the inspector will so state in the inspection report in order that necessary action may be instituted to place responsibility should his opinion be sustained.

(2) This form is used by the small-arms inspector in submitting reports upon the completion of inspection, and by organization commanders in reporting upon the completion of the corrective action noted by the inspector. Four copies are to be made and distributed as follows: one copy to the service command, division, or other ordnance officer under whose supervision the inspection is made; two copies to the organization commander responsible for firearms inspected; and one copy retained for the inspector's files.

Section VII**REPAIRS AND REPLACEMENTS**

	Paragraph
General	13
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Repairs	15

13. GENERAL.

a. Since all parts of the pistol are standardized as to their dimensions, repairs to a large degree consist of making the necessary replacement of worn, bent, or broken parts. In some cases, parts can be bent back or otherwise returned to their proper shape with satisfactory results. This applies to the leaves of the sear spring, the trigger, and the hammer strut. A worn sear notch in the hammer may be corrected by stoning or filing. Dents in the magazine usually may be removed and the lips returned to original shape by bending. Burs on the muzzle of the pistol should be stoned off as outlined in paragraph 11 d (1).

14. REPLACEMENT OF PARTS.

a. Where parts or assemblies are broken or worn so as to render them unserviceable, they must be replaced from stock. Often only parts of the assembly will be worn or broken and others can be salvaged. However, should it take more time to remove serviceable parts than they are worth, the entire assembly should be scrapped. In quantity overhauling of pistols, the parts of each should be kept separate for ease in determining to which pistol they belong.

15. REPAIRS.

a. Burs on cams and on other smooth surfaces should be removed to make the part serviceable. A very fine file is used, and care is taken to remove as small an amount of metal as possible. Where roughened surfaces are present on moving parts, an oil stone should be used.

b. **Correction of Trigger Pull.** Pistols received from the field usually have a trigger pull varying over a slightly wider range than new or repaired pistols (par. 3 a for trigger-pull data). Too heavy or too light pull may be corrected by stoning the mating surfaces of the sear and hammer until they meet squarely. Do not stone off the notch in the hammer at an angle as this may decrease the safety of the pistol. The trigger pull also may be varied up to approximately ½ pound by bending the leaf of the sear spring slightly. The mainspring may require replacement if the pull remains too light after making these corrections. All pistols should be tested for trigger pull, as outlined in paragraph 7, after making repairs, and before they are again placed in storage or service.

ORDNANCE MAINTENANCE — PISTOLS AND REVOLVERS

Section VIII

REASSEMBLY

	Paragraph
Reassembly of magazine	16
Reassembly of pistol	17

16. REASSEMBLY OF MAGAZINE.

a. To reassemble the magazine, proceed as follows: Use a blunt-ended tool to compress the magazine spring into the magazine about $\frac{1}{4}$ inch below the top to permit inserting the end of a drift through one of the small holes in the side of the magazine. The spring should be held below the slot where the magazine follower enters and leaves the magazine. Then insert the magazine follower and withdraw the drift.

17. REASSEMBLY OF PISTOL.

a. Assemble the slide stop plunger, the safety lock plunger, and the plunger spring forward into the plunger tube.

b. Install the ejector pin, the lanyard loop pin, and the hammer strut.

c. Push the trigger forward into position through the receiver.

d. To replace the improved design of magazine catch, insert the catch and turn it one-quarter turn to the right with a screwdriver. To replace the old type magazine catch, carefully insert it in the receiver, press inward and turn it clockwise one-half turn. The difference between the old and improved design magazine catch locks is described in paragraph 9 b and c.

e. To replace the mainspring, mainspring cap and housing pin retainer in the mainspring housing, insert the retainer, the mainspring and cap in the housing, compress the spring with a punch, and insert the small cap pin. Do not insert in receiver, see operation h.

f. To reassemble the disconnecter and sear, first place the cylindrical part of the disconnecter in its hole in the receiver with the flat face or lower part of the disconnecter resting against the yoke of the trigger (fig. 38). Then place the sear (lugs downward) so that it straddles the disconnecter. By squeezing the trigger slightly, the three parts will snap into alinement. Next, insert the sear pin from the right side so that it passes through both the disconnecter and the sear.

g. Replace the hammer in the uncocked position and insert the hammer pin from the left side of the receiver.

h. To replace the sear spring (the sear, disconnecter and hammer being in place and hammer down), locate its lower end in the cut in

REASSEMBLY



RA PD 10478

Figure 38 — Reassembling Sear and Disconnecter on Pistol M1911A1



RA PD 10479

Figure 39 — Replacing Sear Spring on Pistol M1911A1

ORDNANCE MAINTENANCE — PISTOLS AND REVOLVERS



RA PD 10480

Figure 40 — Pressing Safety Lock Plunger Home on Pistol M1911A1, to Allow Seating of Safety Lock: Hammer Cocked

the receiver with the end of the long leaf resting on the sear (fig. 39). Now insert the mainspring housing until its lower end projects below the frame about $\frac{1}{8}$ inch. Next, put the grip safety into position, cock the hammer and replace the safety lock.

i. To assemble the safety lock to the receiver, use a screwdriver to press the safety lock plunger home (fig. 40). This allows the seating of the safety lock. Now release the cocked hammer. (Be sure the strut enters the recess in the cap in the housing.)

j. To reassemble the slide, first insert the firing pin spring, firing pin, and extractor into the rear end of the slide. Push the firing pin forward until it clears the firing pin stop position and insert the firing pin stop. Be sure the extractor is aligned to allow the firing pin stop to enter its recess. Note that the rounded top edge matches the curve on the surface in the slide.

k. To reassemble the barrel into the slide, push the barrel link into position in the barrel and insert the barrel link pin. Now insert the barrel in the slide from the forward end. Insert the barrel bushing in

REASSEMBLY



RA PD 10481

Figure 41 — Replacing Slide and Barrel on Receiver, Barrel Link Tilted Forward and Link Pin In Place On Pistol M1911A1

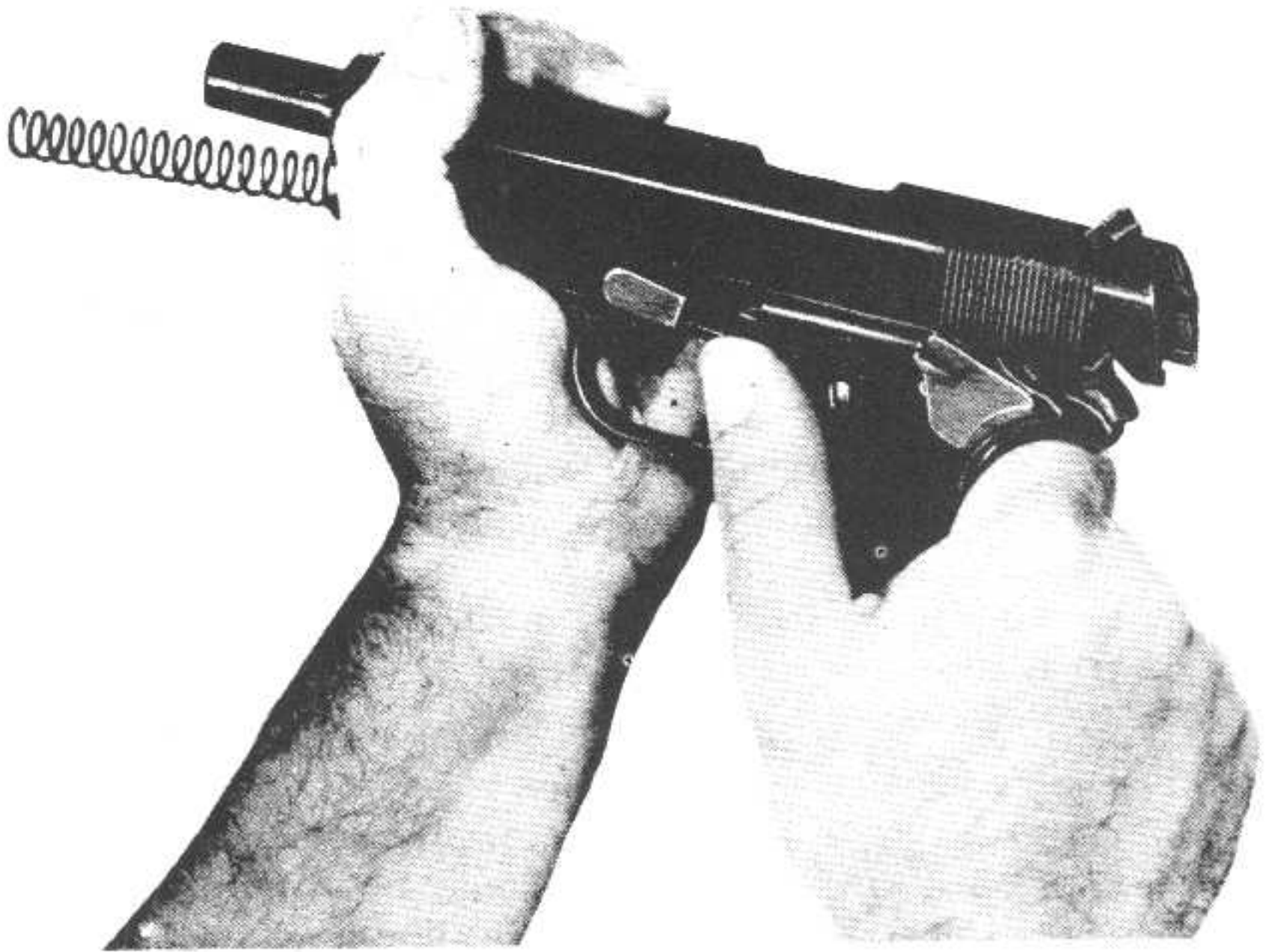
the slide and turn counterclockwise until locked. Place the recoil spring in position.

l. Now hold the slide upside down with the barrel outward and push the barrel and guide forward as far as possible. Turn the receiver group upside down and assemble it to the slide in that position (fig. 41). Make sure that the barrel link is tilted forward as far as possible when assembling the receiver to the slide. Push the receiver forward as far as possible.

m. Turn the pistol right side up, and making sure that the hole in the barrel link is lined up with the hole in the receiver, insert the pin end of the slide stop from the left side of the pistol. Move the slide forward until the projection on the slide stop is opposite the middle notch of the slide. Press the slide stop inward and upward into position (fig. 42). Allow the slide to move to its foremost position.

n. Cock the hammer and engage the safety lock. Place the recoil spring plug over the end of the recoil spring and push the spring and

ORDNANCE MAINTENANCE — PISTOLS AND REVOLVERS



RA PD 1048:

**Figure 42 — Reassembling Slide Stop Pin After Replacing Slide
On Pistol M1911A1**

plug into position. Turn the barrel bushing until its lips are alined around the plug and release the pressure on the plug.

o. Insert the magazine by pushing smoothly yet firmly into position until it is engaged by the magazine catch.

Section IX

GENERAL CHARACTERISTICS — COLT REVOLVER, CAL. .45, M1917

Paragraph

Description	18
General data	19

18. DESCRIPTION.

a. The Colt Revolver, Cal. .45, M1917, is a six-shot, breech-loading, hand weapon (figs. 43, 44, and 45). It is provided with a swing-out type cylinder having six chambers arranged about a central axis so that six shots may be fired before reloading is necessary. The chambers of the cylinder are loaded with six cartridges in clips of three rounds. When the cylinder is closed, the revolver is ready for firing. It may be fired either single-action or double-action.

b. The action of cocking the hammer, either in single- or double-action firing, causes the cylinder to rotate and aline the next chamber with the barrel. The rate of fire is limited only by the dexterity of the operator in reloading the cylinder and his ability to aim and squeeze.

c. The Colt revolver is designed to fire CARTRIDGE, ball, cal. .45, M1911.

19. GENERAL DATA.

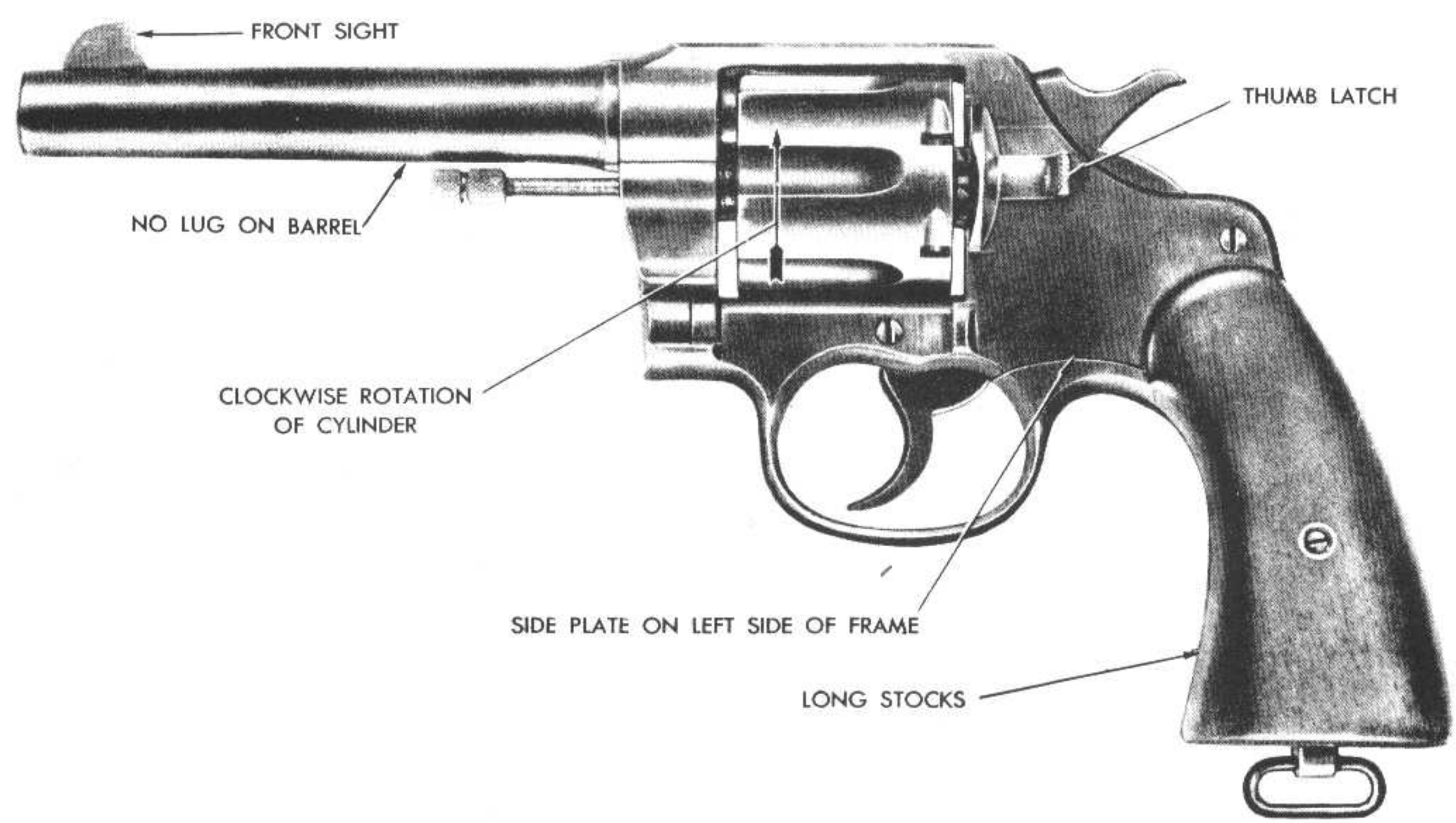
a. Characteristics.

Weight	2½	lb
Total length	10.8	in.
Barrel.		
Length	5.5	in.
Diameter of rifling	0.452	in.
Diameter of bore	0.445	in.
Rifling, number of grooves	6	
Grooves:		
Width	0.156	in.
Depth	0.0035	in.
Twist, one turn in	16	in.
Front sight above axis of bore	0.7325	in.
Lands, width	0.073	in.
Cylinder:		
Length	1.595	in.
Diameter	1.695	in.



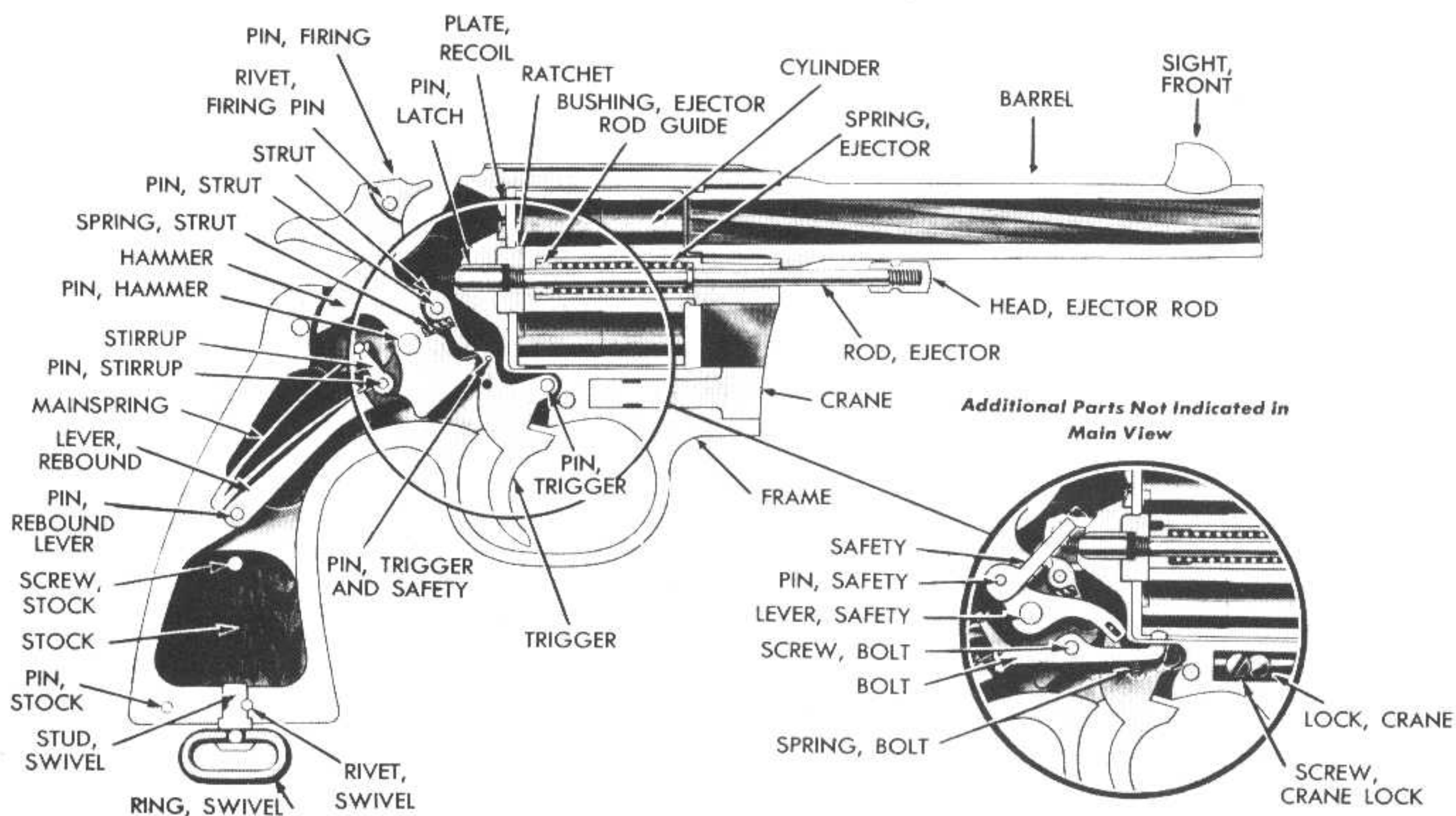
RA PD 10483

Figure 43 — Right Side of Colt Revolver M1917



RA PD 10484

Figure 44 — Left Side of Colt Revolver M1917 Showing Exterior Differences Between It and Smith and Wesson M1917



RA PD 10485

Figure 45 — Sectional View of Colt Revolver M1917

GENERAL CHARACTERISTICS —
COLT REVOLVER, CAL. 45, M1917

Number of chambers	6
Diameter of chambers:	
Maximum	0.4795 in.
Minimum	0.473 in.
Trigger pull	5 to 6½ lb

ORDNANCE MAINTENANCE — PISTOLS AND REVOLVERS

Section X

FUNCTIONING

Paragraph

Functioning 20

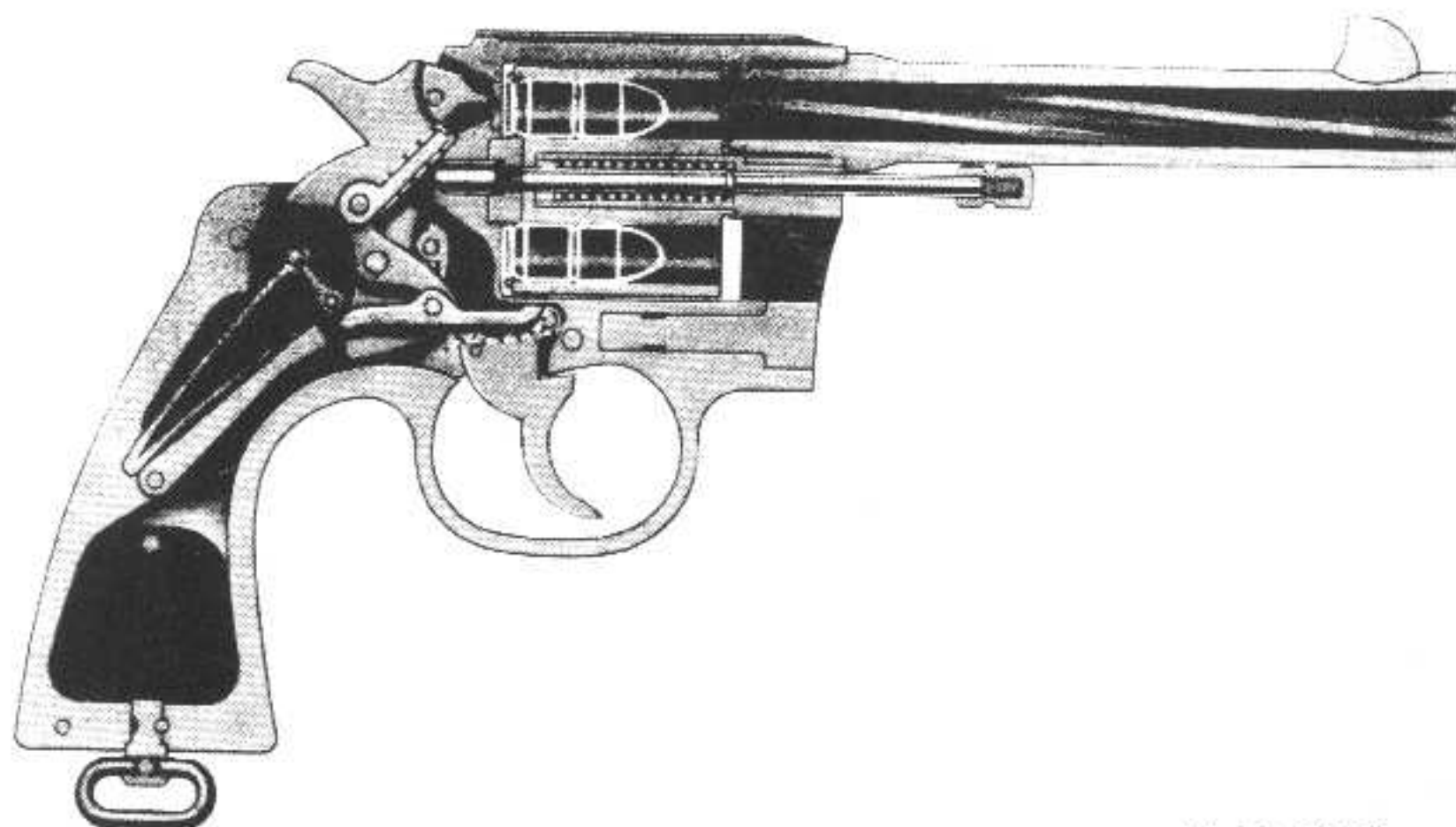
20. FUNCTIONING.

a. Pulling backward on the latch with the thumb disengages the latch pin from the ejector and permits the cylinder to pivot on the crane and swing outward to the left. The cylinder can then be loaded with two clips of three cartridges each.

NOTE: This action should never be accomplished with a snap or jerk since doing so might strain the crane.

b. The latch pin is under pressure of the latch spring, which is located in a hole in the side plate to the rear of the latch slot. Under this pressure, the latch pin is forced into the recess in the ejector when the cylinder is swung back into the frame. The cylinder is thus locked in position for firing (fig. 46).

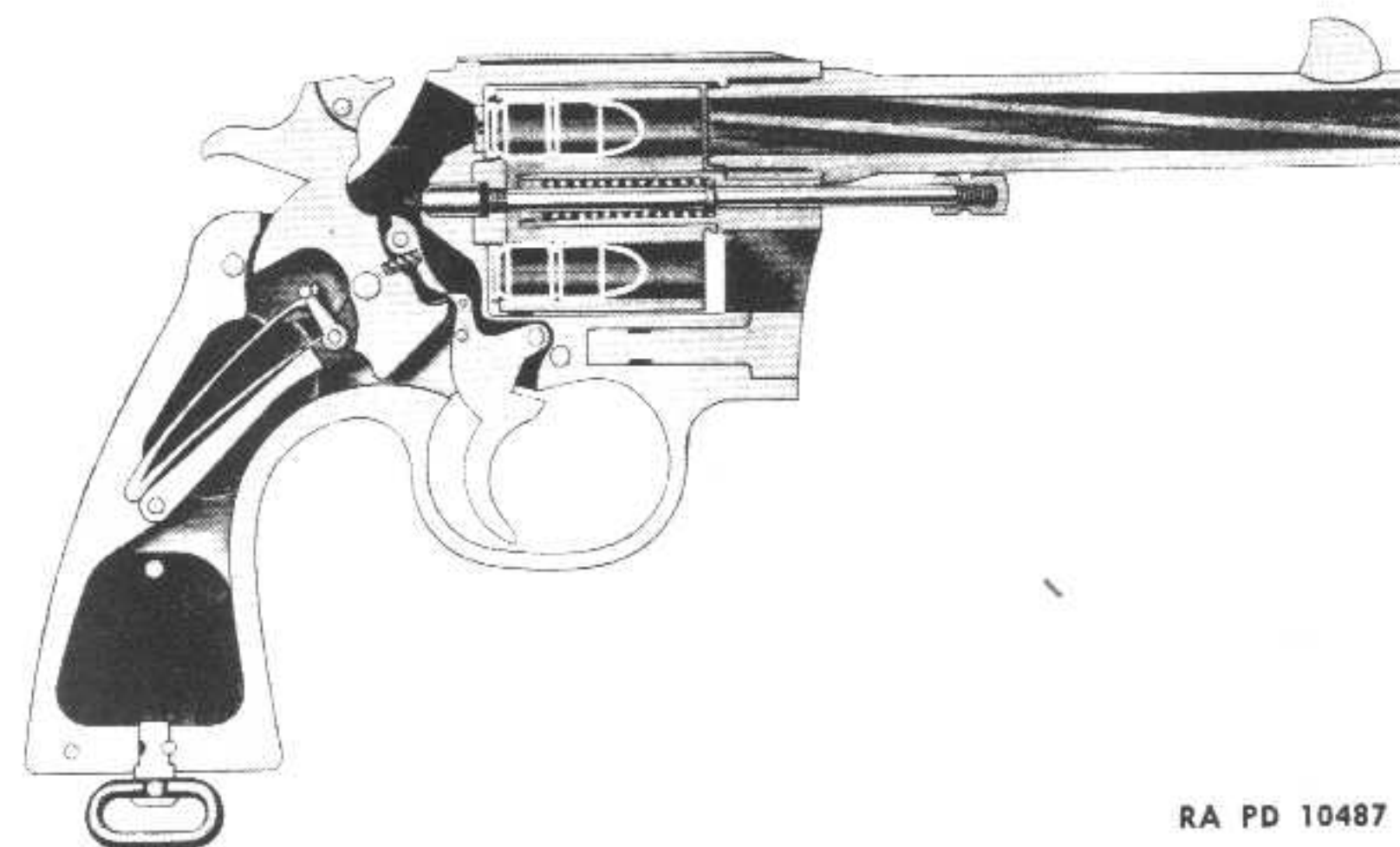
c. In firing double-action, pressure of the finger upon the trigger causes the upper edge of the trigger to engage the hammer strut. The hammer is thereby raised until nearly in full-cock position, when the strut escapes from the trigger, allowing the hammer to fall. Also, when the trigger is pulled back, the safety lever which is attached to it, pulls



RA PD 10486

Figure 46 — Sectional View of Colt Revolver M1917, Hammer Down, Cylinder Loaded

FUNCTIONING



RA PD 10487

Figure 47 — Sectional View of Colt Revolver M1917, Hammer Back, Trigger Back

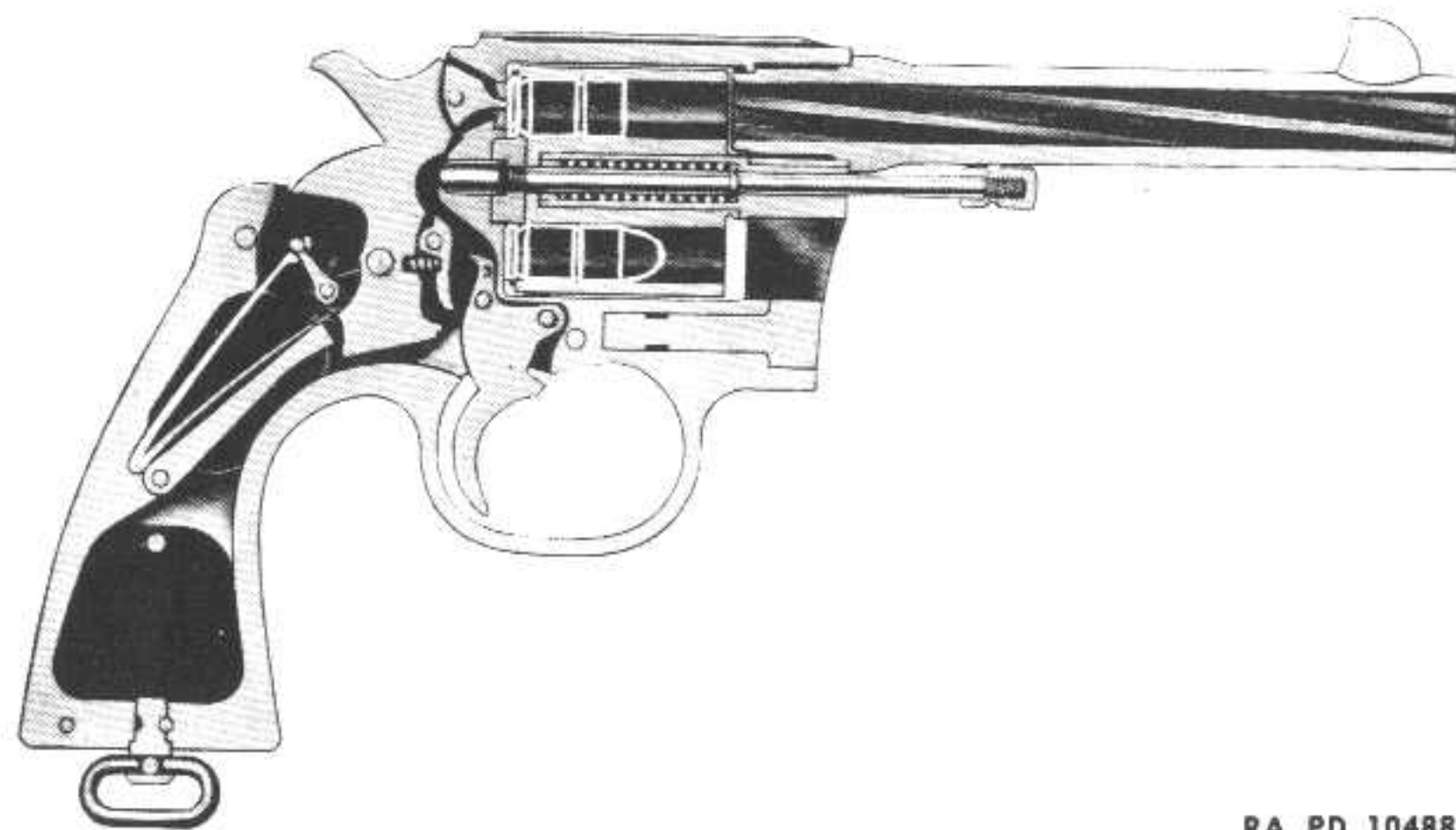
the safety out of the path of the hammer, so that when the hammer falls it will strike the cartridge.

d. In firing single-action, the hammer is first pulled back with the thumb until the upper edge of the trigger engages in the full-cock notch in the front end of the lower part of the hammer. The backward movement of the trigger also disengages the safety as when firing double-action (fig. 47).

NOTE: In firing single- or double-action, notice that the trigger must remain back while the hammer falls, so that the safety will remain out of the path of the hammer and can strike the cartridge. If the trigger is allowed to return to its normal position between the time the hammer falls and comes close to the cartridge, the safety will be re-engaged and prevent the hammer from striking it.

e. Simultaneously with the movement of the trigger in cocking the hammer, the nose of the bolt is withdrawn from the cylinder. This is caused by the rear end of the bolt coming into contact with the lug on the rebound lever. The hand can then rotate the cylinder. The hand which is pivoted to the trigger, swings on its pin and is raised. Its upper nose engages the ratchet on the cylinder causing it to revolve.

f. As the trigger continues its rearward movement, the lug on the rebound lever slips off the rear end of the bolt. This permits the nose of the bolt to drop into the proper recess in the cylinder the instant the hand has rotated it. In this manner, the next chamber is brought



RA PD 10488

Figure 48 — Sectional View of Colt Revolver M1917, Hammer Striking Cartridge, Trigger Back, Cartridge Empty

into alinement with the barrel. When the hammer falls at the time of firing, both the hand and the bolt, thus lock the cylinder in such a position that the chamber of the cylinder coincides with the axis of the barrel (fig. 48). The pressure of the rebound lever on the lug on the hand insures its engagement with the ratchet until the trigger is released.

NOTE: The bolt also prevents the cylinder from making more than one-sixth of a revolution each time the revolver is cocked.

g. When the trigger is released after firing a shot, the rebound lever, under the pressure of the lower arm of the main spring, forces the hammer back to its safety position. The trigger is also forced forward. The safety lever moves the safety upward in front of the hammer by this same motion. Thus, the hammer can strike the cartridges only when the trigger is pulled.

h. After firing, the cylinder is again swung open and cartridges or cartridge cases, including clips, are ejected from the cylinder by pressure of the finger on the front end of the ejector rod to the rear end of which the ejector and ratchet are attached. This action counteracts the pressure of the ejector spring inside the center arbor of the crane and pushes the ejector out of its recess in the rear end of the cylinder. The spring also forces the ejector to return to its position inside the cylinder, when pressure is released from the forward end of the rod.

INSPECTION PRIOR TO DISASSEMBLY

	Paragraph
General	21
Visual and manual inspection	22
Trigger pull tests	23
Safety tests	24

21. GENERAL.

The tests made on assembled Colt revolvers to check their condition, include a visual and manual inspection, trigger pull tests and tests of safety devices.

22. VISUAL AND MANUAL INSPECTION.

The revolver is inspected for general appearance, smoothness of operation, missing side plate screws, missing or burred crane lock and screw.

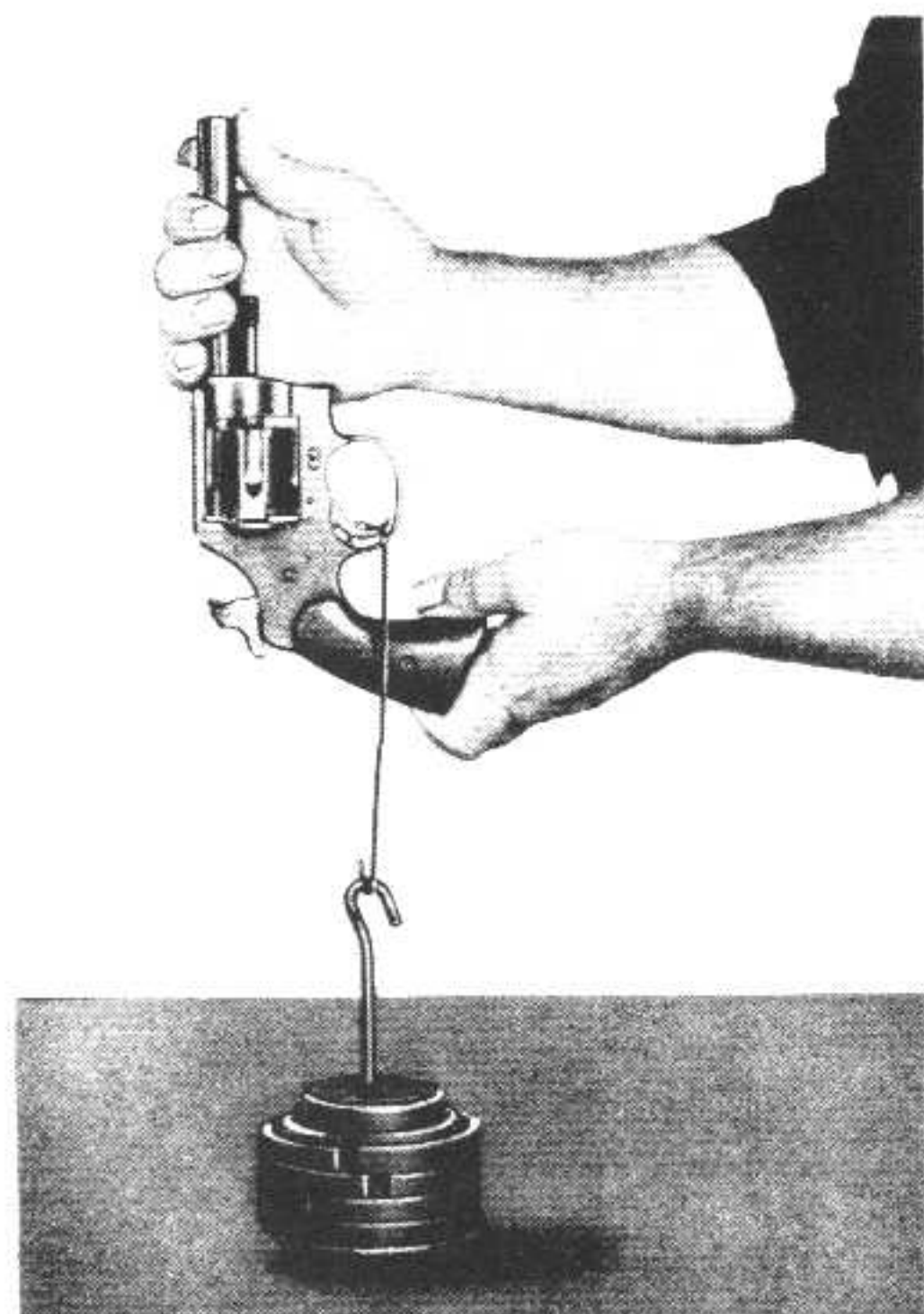
- a. Check the smoothness of the action by pulling the trigger in double-action three or four times.
- b. Examine carefully for cracks in the frame, where the barrel is screwed in, and for defaced markings.
- c. Check the condition of the stocks for cracks and loose stock screw.
- d. Inspect the front sight for burs and alinement.
- e. Inspect the barrel for looseness in the frame.
- f. Pull the hammer back slowly, noting cylinder movement. If the cylinder bolt does not engage the recess in the cylinder, the cylinder is not in alinement with the bore, which indicates that the hand or ratchet is faulty.
- g. Look for rust where the trigger enters the frame. The presence of rust here frequently indicates that internal parts are rusted.

23. TRIGGER PULL TESTS.

a. Trigger pull tests are made to determine the number of pounds pull required to move the trigger, causing the hammer to fall, with the revolver ready to fire in single-action, that is, with the hammer in the cocked position.

b. Two weights (see par. 19 a for correct trigger pull weights) and a piece of wire looped, as shown in figure 49, are required to make the tests. The revolver is held in the hand or mounted in a vise in a vertical

ORDNANCE MAINTENANCE — PISTOLS AND REVOLVERS



RA PD 10489

Figure 49 — Checking Trigger Pull on Colt Revolver M1917

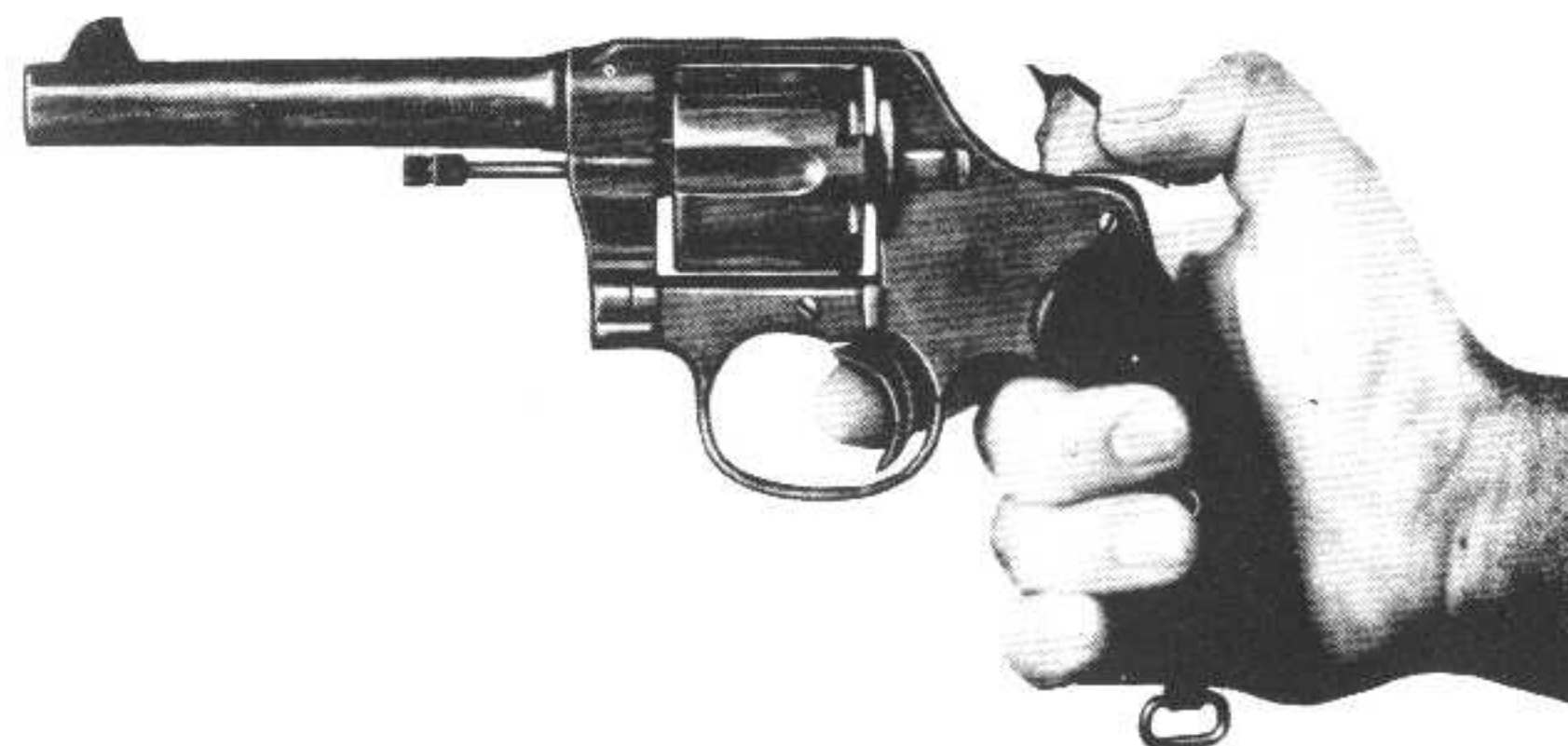
position. The latter is preferable, since it prevents any movement of the operator's hand from affecting the accuracy of the tests. With the lighter weight attached to the lower end, the wire is then hooked over the trigger. This weight should not cause the hammer to fall. It is then replaced by the heavier weight, which should cause the hammer to fall. If the lighter weight causes the hammer to fall, the trigger pull is below the specified limit. If the heavier weight does not cause it to fall, the pull is above the specified limit. In either case, correction of trigger pull must be made as described in paragraphs 31 b (1) and (2).

24. SAFETY TESTS.

a. The following safety tests should also be made:

(1) With the revolver unloaded and the cylinder closed, cock the hammer. Holding the hammer back with the thumb, press the trigger and let the hammer move forward about 1/4 inch (fig. 50). Release the trigger, then release the hammer and let it fly forward (fig. 51). If the firing pin projects through the hole in the frame, the safety is faulty.

INSPECTION PRIOR TO DISASSEMBLY

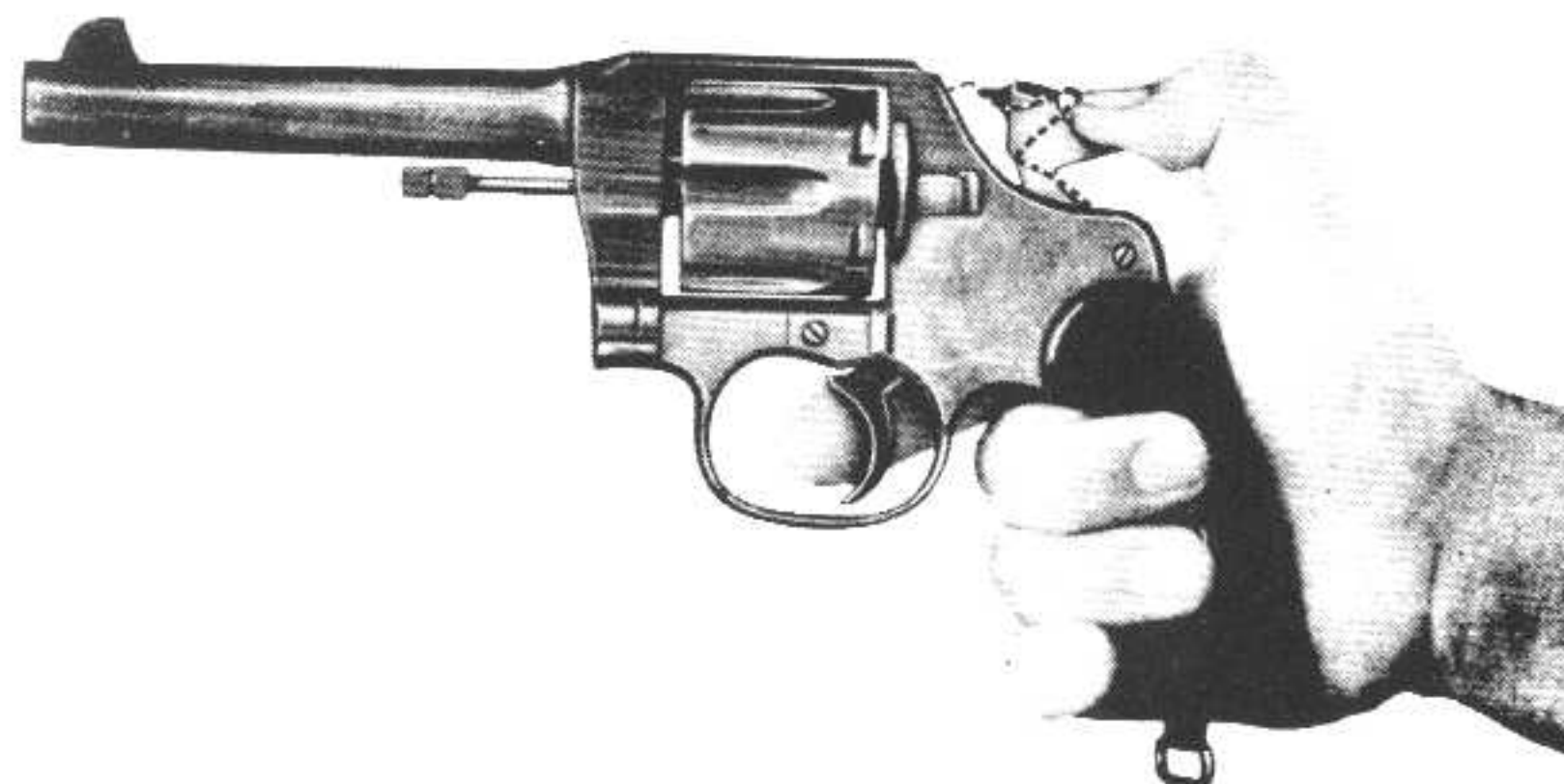


RA PD 10490

Figure 50 — Colt Revolver M1917, Unloaded, Cylinder Closed, Hammer Cocked, Hammer Held Back, Trigger Held Back

(2) With the hammer down, attempt to rotate the cylinder (fig. 52). If more than 1/16 inch in rotation is possible, the cylinder bolt is faulty. Repeat this test with the hammer fully cocked.

NOTE: With the hammer about one-fourth cocked, the cylinder rotates freely.



RA PD 10491

Figure 51 — Colt Revolver M1917, Hammer Slightly Forward, Still Held by Thumb, Trigger Released

ORDNANCE MAINTENANCE — PISTOLS AND REVOLVERS



RA PD 10492

Figure 52 — Colt Revolver M1917, In Right Hand, Thumb and Finger of Left Hand on Cylinder, Hammer Down

Section XII DISASSEMBLY

Paragraph

Disassembly of Colt revolver	25
Special disassemblies	26

25. DISASSEMBLY OF COLT REVOLVER.

a. To disassemble the Colt revolver proceed as follows:

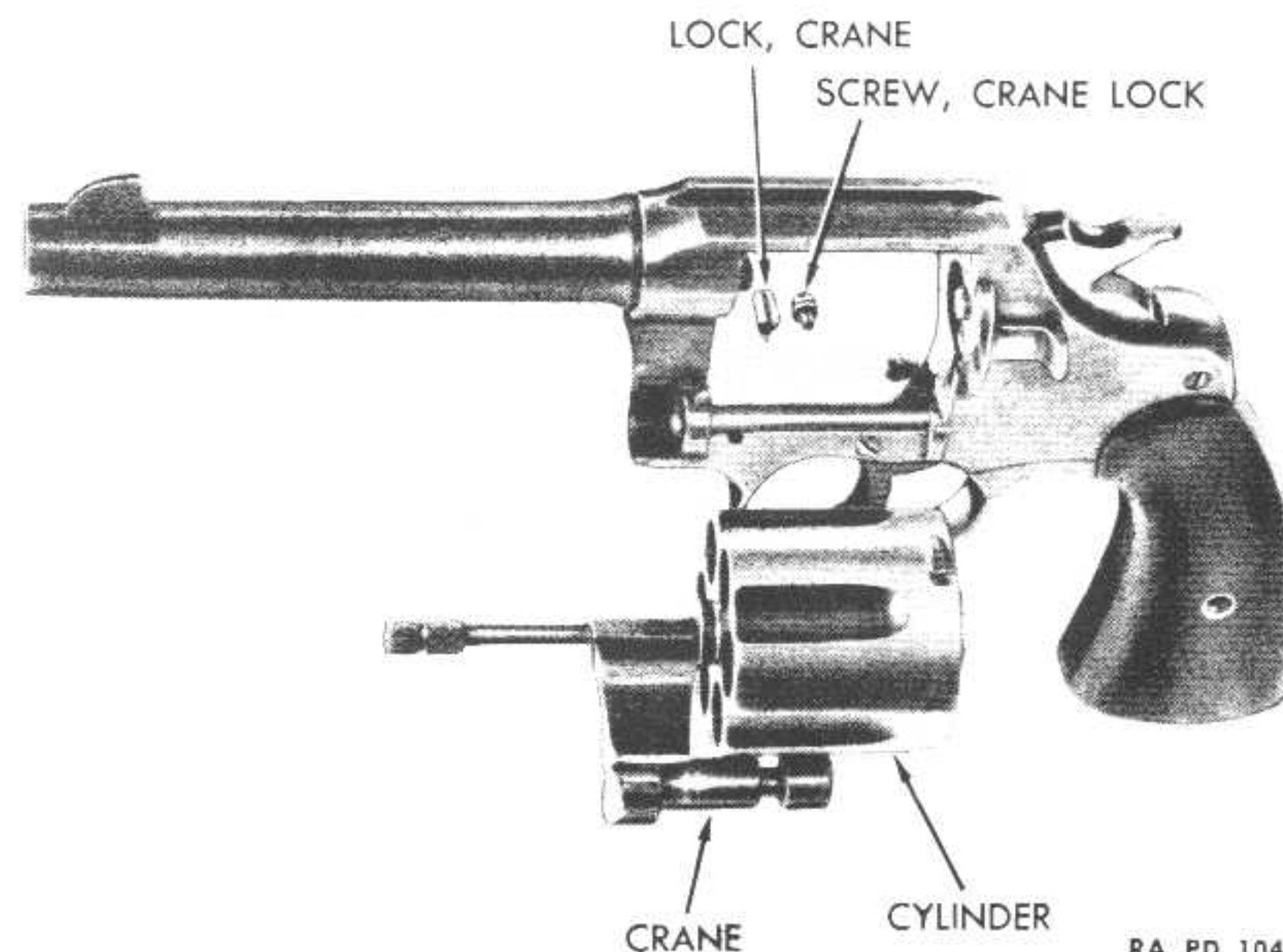
(1) With a screwdriver of proper size, remove the crane lock screw and crane lock from the right side of the frame just above and forward of the trigger.

(2) Press the latch to the rear, push the cylinder to the left and remove the cylinder and crane assembly by pushing to the front (fig. 53).

(3) Remove the stock screw and stocks using a small screwdriver of proper size to fit the slot of the screw.

(4) Remove the side plate screws with screwdriver of proper size.

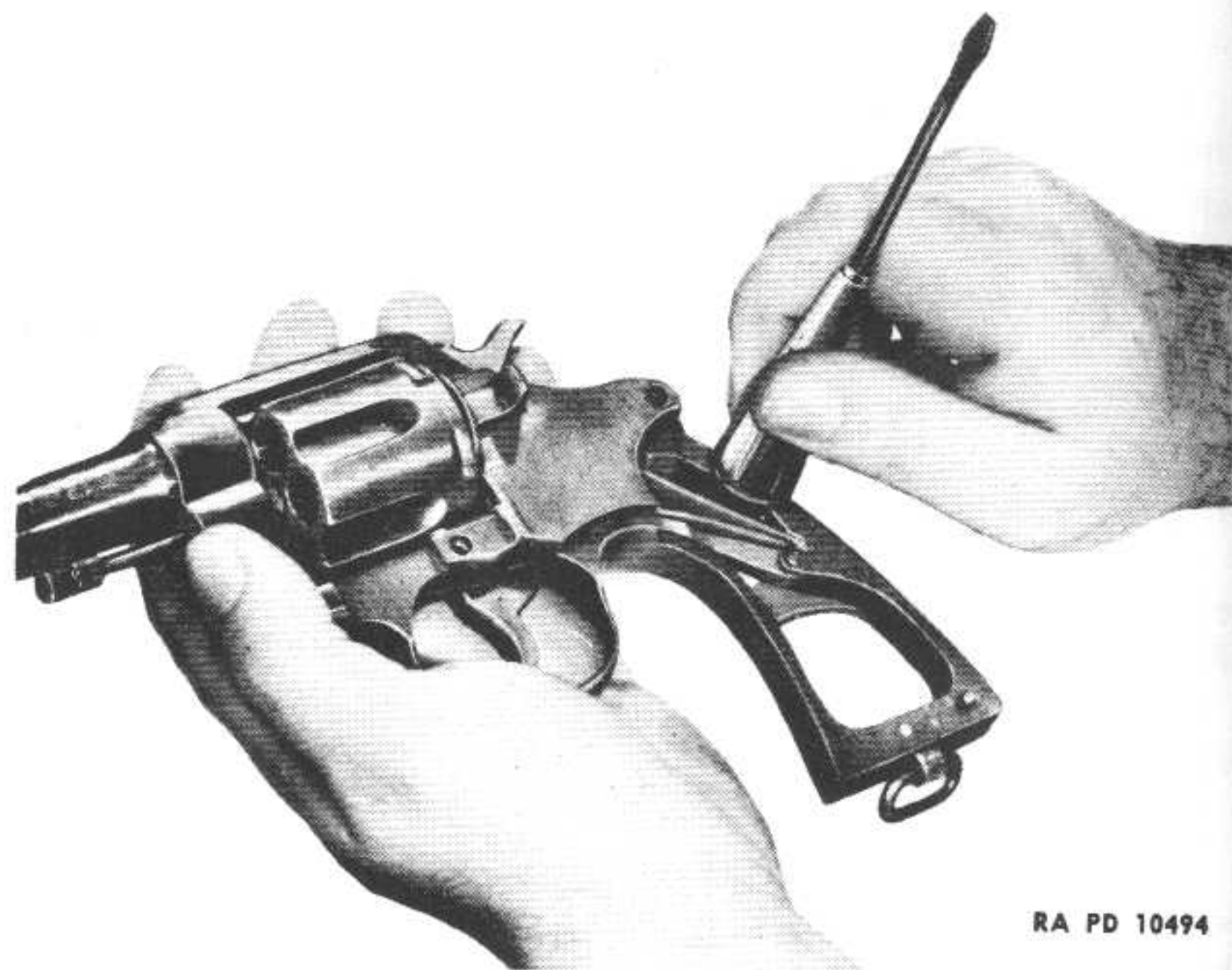
(5) Remove the side plate. In performing this operation, do not pry the plate from its position. Use the wooden handle of a tool to tap the frame until the plate loosens, when it can be lifted out (fig. 54).



RA PD 10493

Figure 53 — Colt Revolver M1917, Cylinder and Crane Removed — Exploded View

ORDNANCE MAINTENANCE — PISTOLS AND REVOLVERS

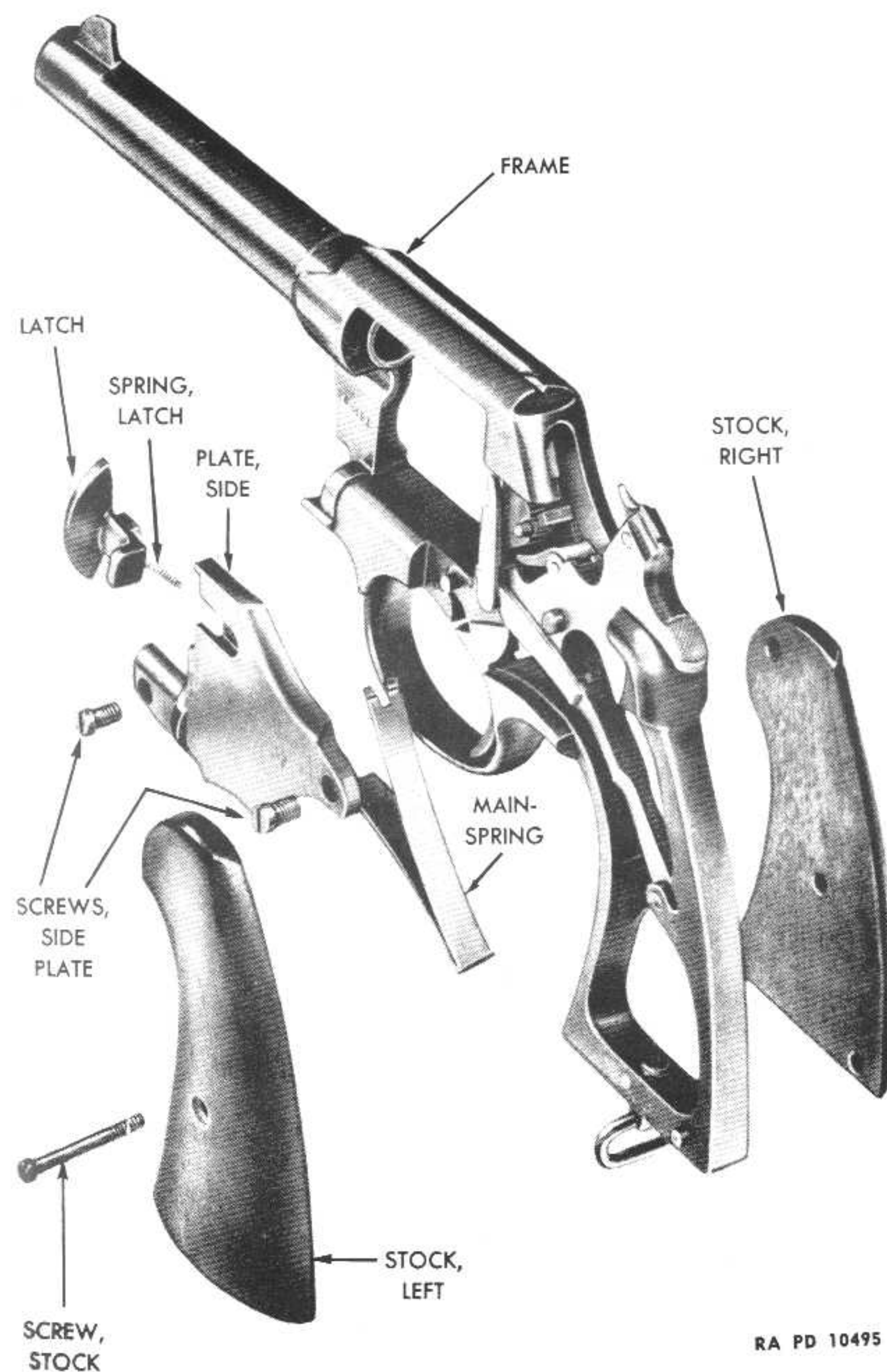


RA PD 10494

Figure 54 — Removing Side Plate from Colt Revolver

- (6) Remove the latch and spring from side plate.
- (7) Remove the mainspring by lifting the rear end from its seat, and disengaging the long end from the hammer stirrup (fig. 55).
- NOTE: A pair of long nose pliers used to squeeze the spring together about two-thirds of the distance from the butt end will make this operation easier.
- (8) Remove the hand.
- (9) With a drift, drive the rebound lever pin to the right and remove the rebound lever (fig. 56).
- (10) Remove the trigger by lifting it from the trigger pin.
- (11) Draw the hammer to its rearmost position and lift it from the hammer pin (fig. 57).
- (12) With a small drift, drive out the strut pin and remove the strut and strut spring.
- (13) Drive out the hammer stirrup pin with a small drift and remove the hammer stirrup.
- (14) Remove the safety lever from its pivot.
- (15) Remove the safety from its seat in the frame.
- (16) Remove the latch pin from its seat in the frame.

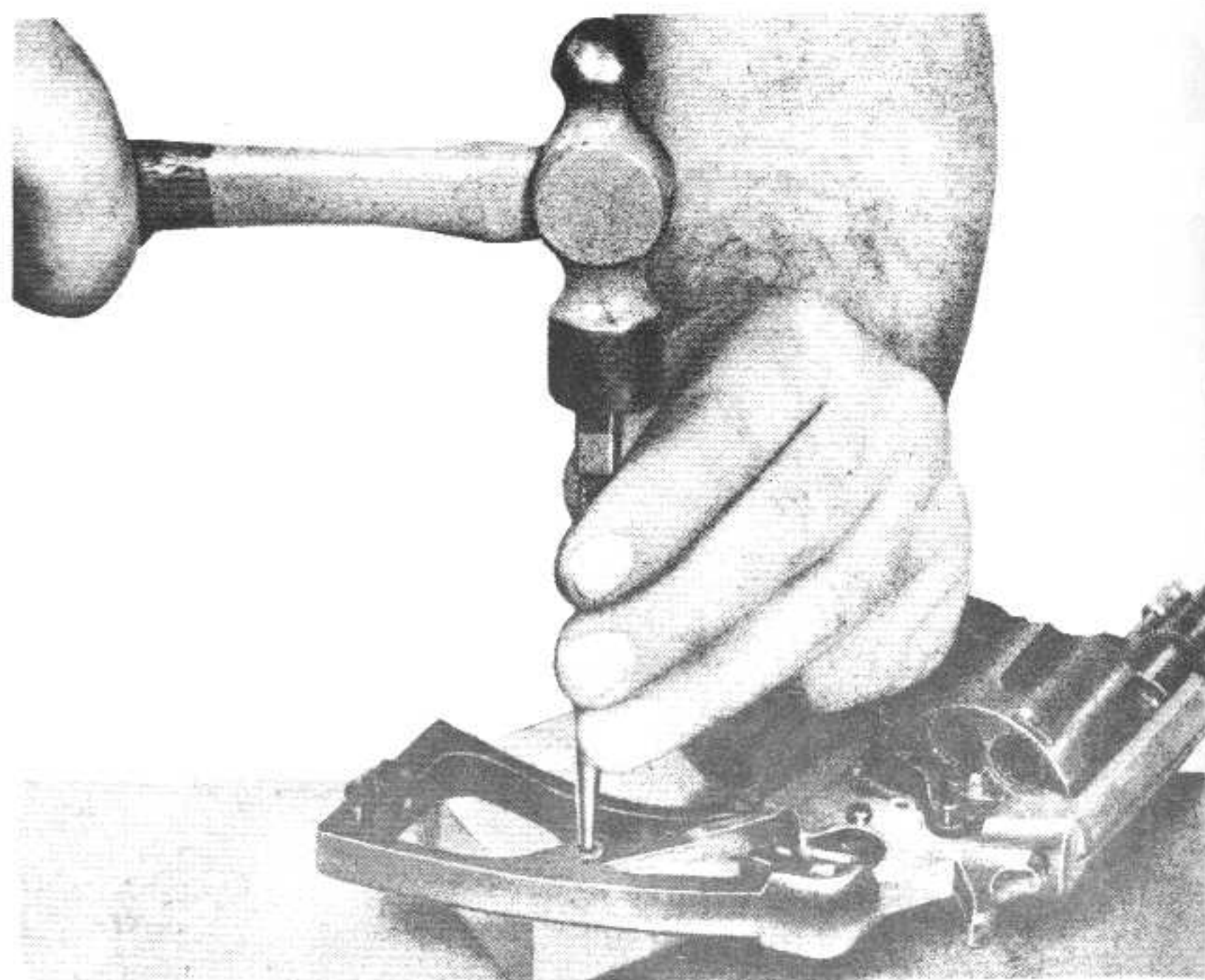
DISASSEMBLY



RA PD 10495

Figure 55 — Colt Revolver M1917, Side Plate, Stocks, Mainspring and Latch Removed — Exploded View

ORDNANCE MAINTENANCE — PISTOLS AND REVOLVERS



RA PD 10496

Figure 56 — Removing Rebound Lever Pin from Colt Revolver M1917

(17) Remove the bolt screw and lift out the bolt and bolt spring (fig. 58).

26. SPECIAL DISASSEMBLIES.

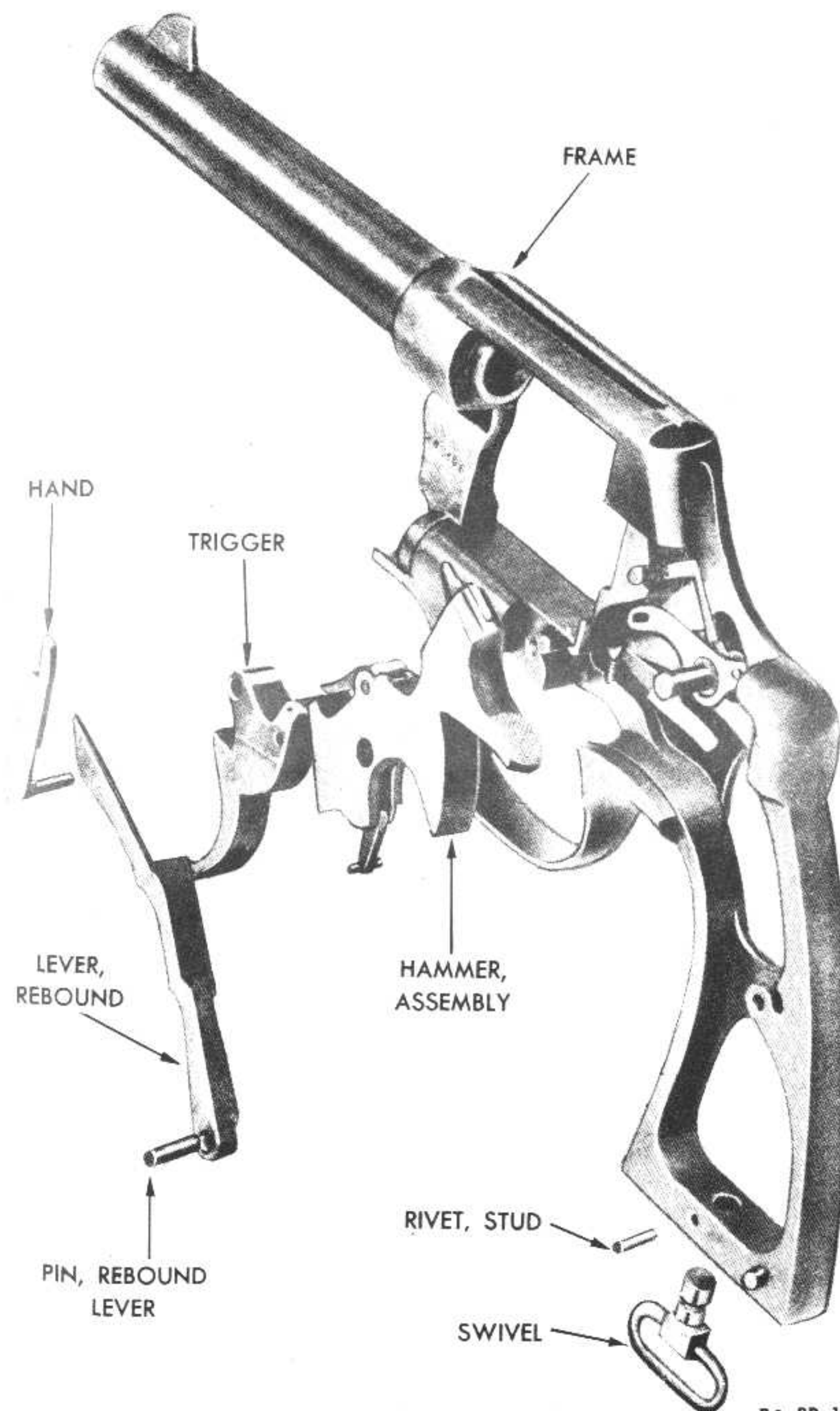
a. The following pins and units are to be disassembled only when it is necessary to replace the pins or units concerned:

(1) To remove hammer, trigger, stock, and swivel stud pins from the frame (fig. 59) use a drift of proper size and strike the pins a sharp blow with a hand hammer while the frame is mounted in a vise.

NOTE: These pins are riveted to the frame and will need re-riveting to replace.

(2) **CYLINDER AND CRANE GROUP.** Hold the forward end of the ejector rod firmly in a vise having leather-covered jaws, press downward on the cylinder so that the ejector and ratchet are withdrawn from the recess in the cylinder, and unscrew the ejector from the rod. The end of the ejector rod is peened into the bore of the ratchet slightly to prevent its working loose. Hence, care should be exercised while unscrewing

DISASSEMBLY



RA PD 10497

Figure 57 — Hammer, Trigger, Rebound Lever, Hand and Swivel Stud Pin of Colt Revolver M1917 — Exploded View

ORDNANCE MAINTENANCE — PISTOLS AND REVOLVERS



RA PD 10498

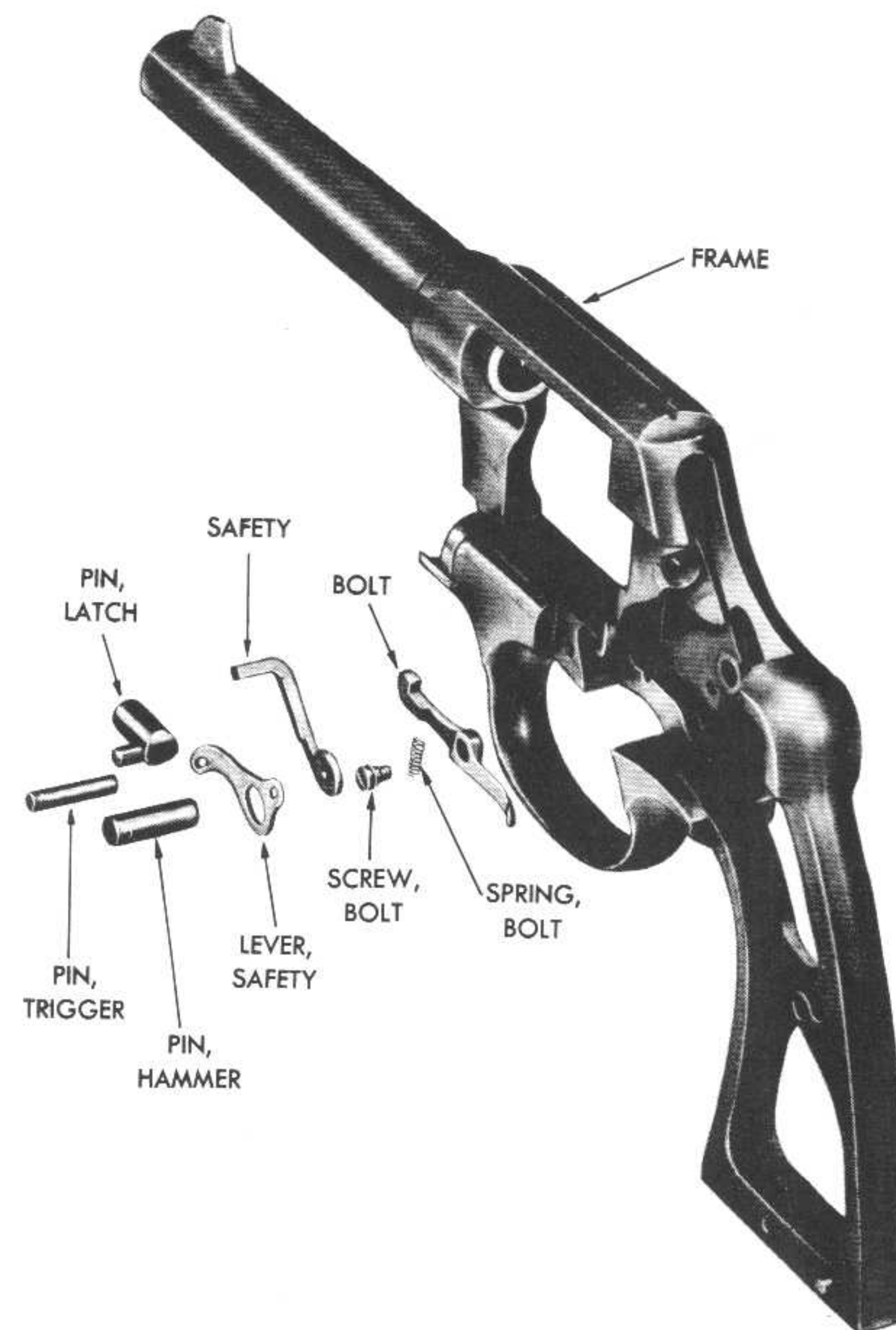
Figure 58 — Removing Bolt Screw from Colt Revolver M1917

this part from the ejector rod. Upon removal of the ejector, the cylinder, ejector spring, and ejector rod may be removed from the crane (fig. 60).

(3) **BARREL FROM FRAME.** To disassemble the barrel from the frame a special set of barrel jaws must be used in the vise and a frame wrench that sets tightly to the frame junction of the barrel and frame. Both jaws and wrench must be improvised by the shop concerned with the work. If these tools cannot be improvised readily, clamp the barrel in a vise having lead jaws, and unscrew the frame from the barrel by using a hardwood stick approximately $1\frac{3}{8}$ inches square and 20 inches long as a lever in the cylinder opening in the frame. Under no conditions use a metal bar. The barrel and frame are fitted with right-hand threads so that the frame is unscrewed by turning it counterclockwise when facing the butt end of the revolver (fig. 61). To assist in locating the barrel when replaced, a light scribe mark should be made across the shoulder and frame in an inconspicuous place, such as beneath the crane recess.

(4) **FIRING PIN FROM HAMMER.** The firing pin is removed from the hammer by driving out the retaining pin which holds it in place (figs. 62 and 63).

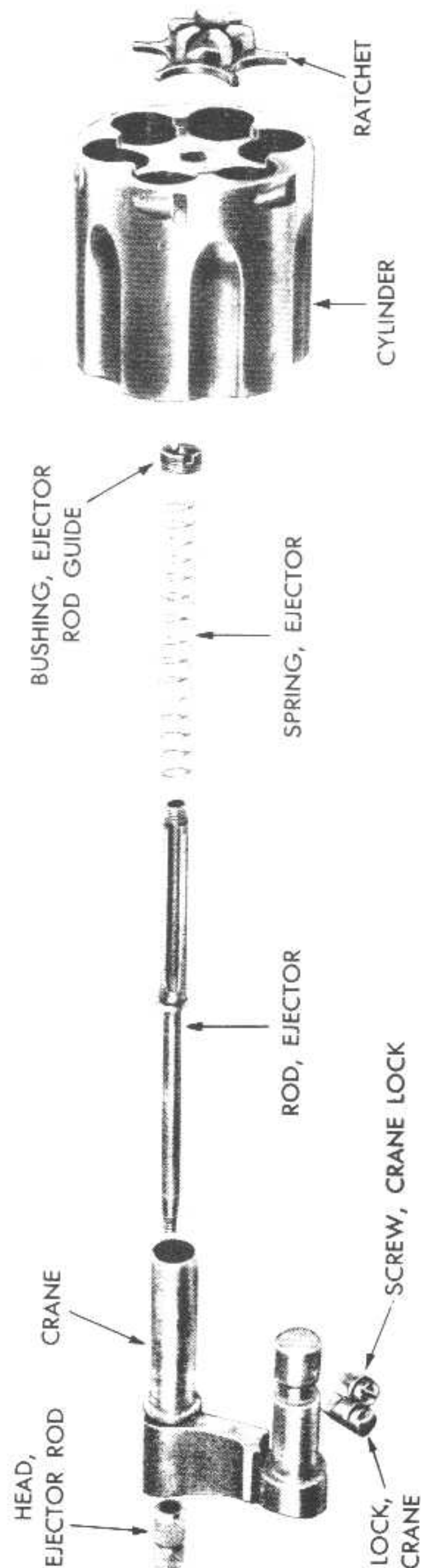
DISASSEMBLY



RA PD 10499

Figure 59 — Safety and Safety Lever, Latch, Hammer and Trigger Pins and Cylinder Bolt of Colt Revolver M1917 — Exploded View

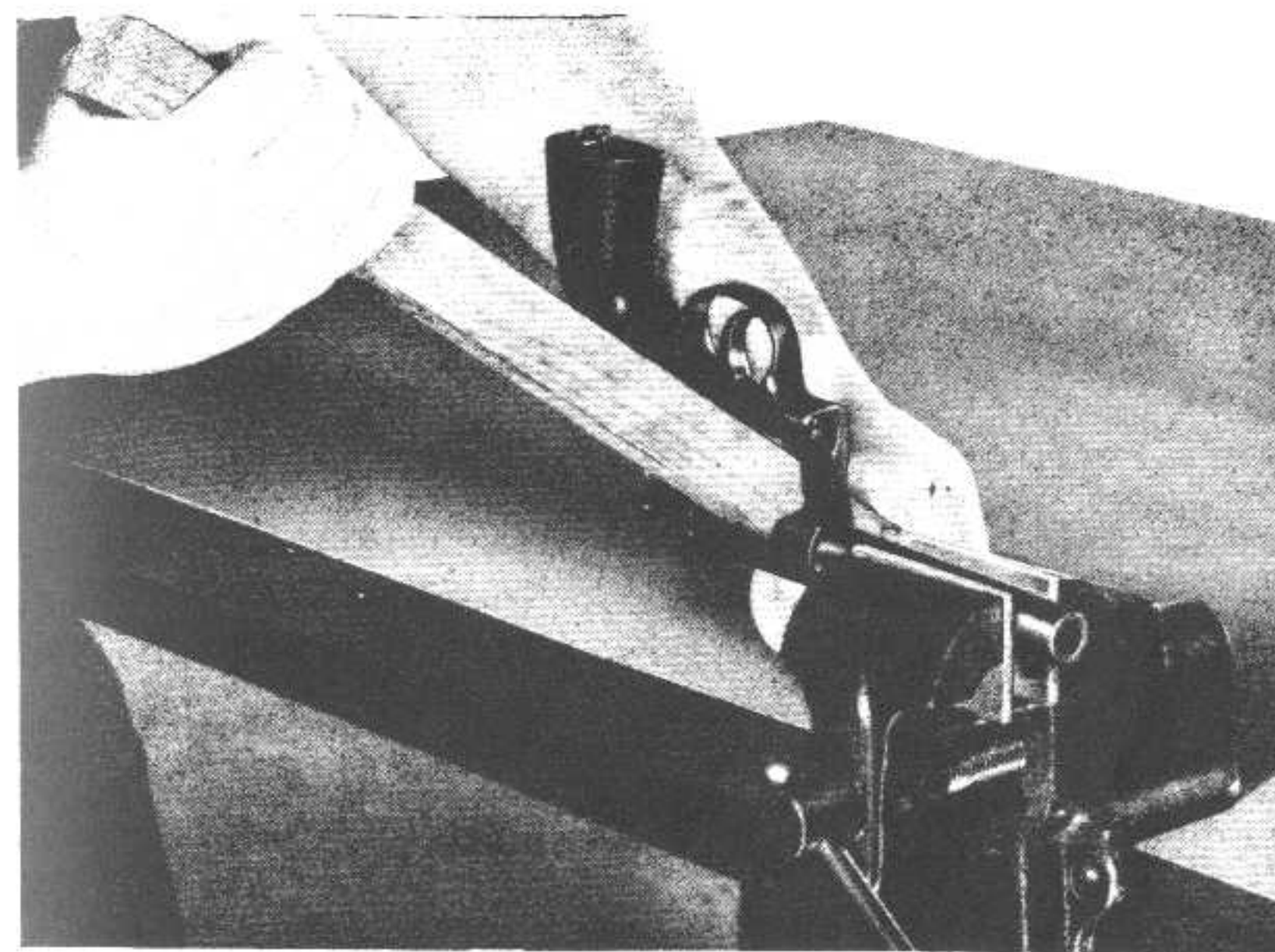
ORDNANCE MAINTENANCE — PISTOLS AND REVOLVERS



RA PD 10500

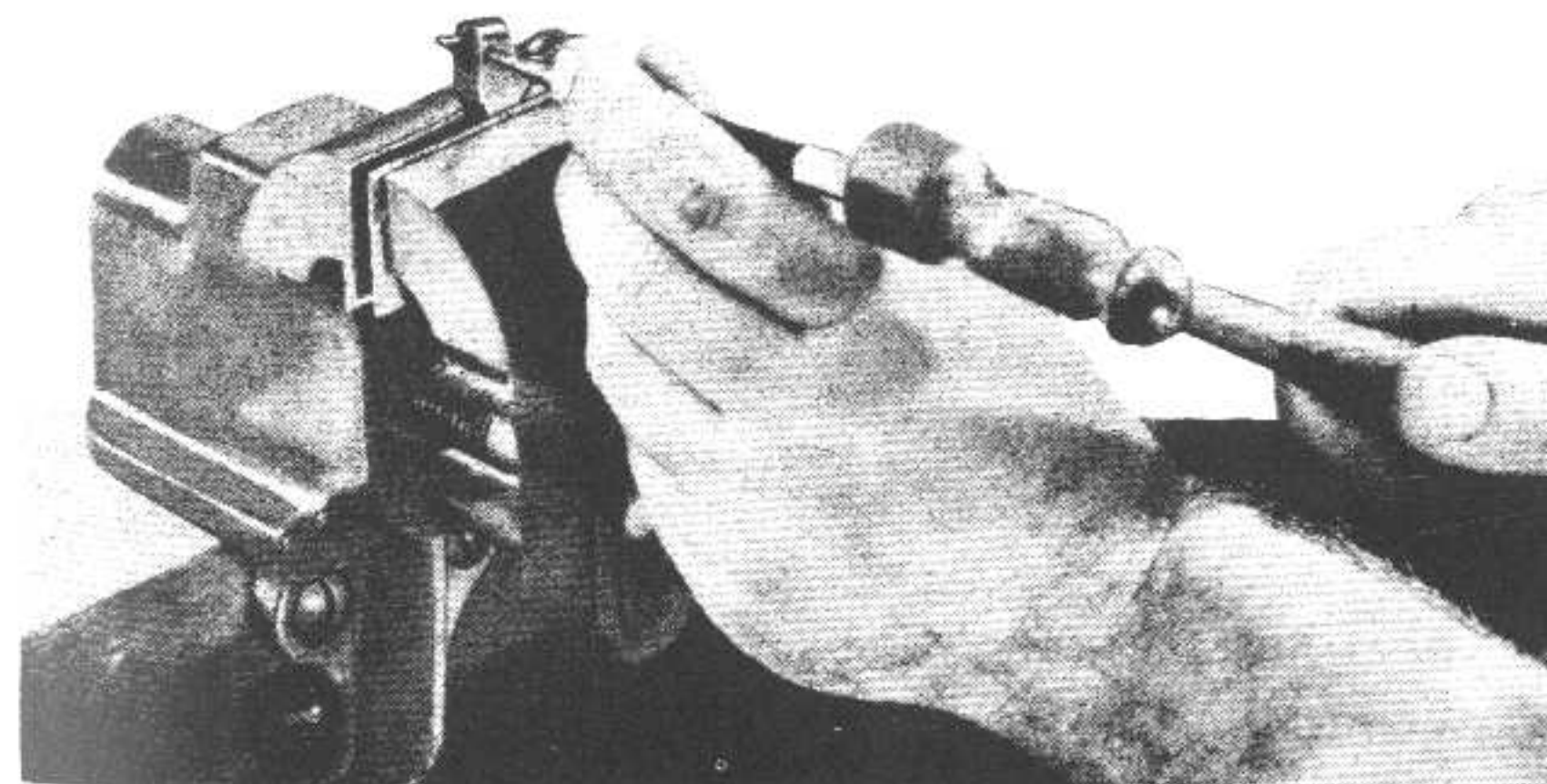
Figure 60 — Cylinder Assembly of Colt Revolver M1917 — Exploded View

DISASSEMBLY



RA PD 10501

Figure 61 — Removing Barrel from Colt Revolver M1917 — Exploded View



RA PD 10502

Figure 62 — Removing Firing Pin from Hammer of Colt Revolver M1917

(5) SAFETY PIN FROM TRIGGER. Removing the safety pin from the trigger is also accomplished by driving out the retaining pin, with the trigger mounted in a vise.

ORDNANCE MAINTENANCE — PISTOLS AND REVOLVERS

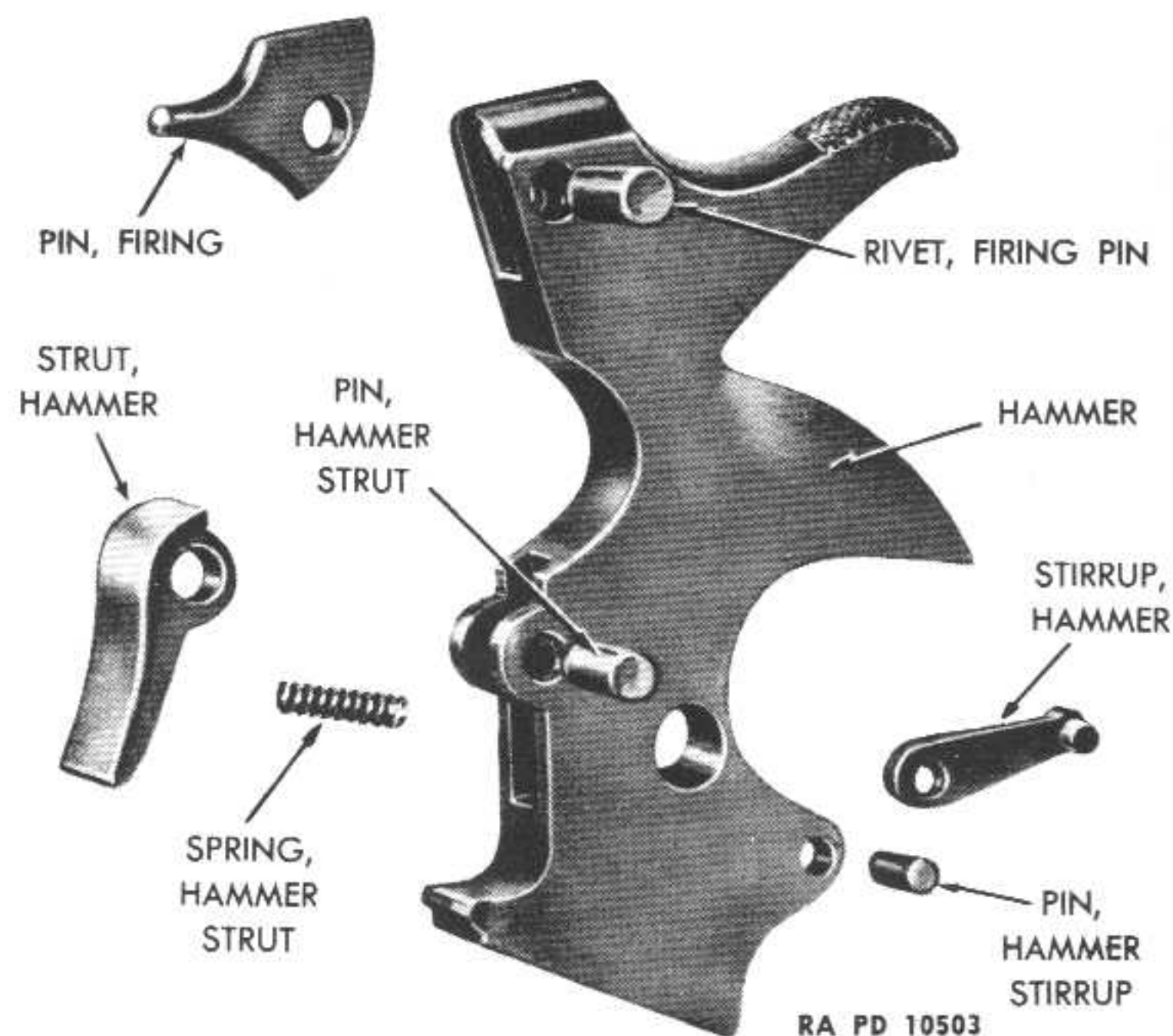


Figure 63 — Hammer Assembly of Colt Revolver M1917

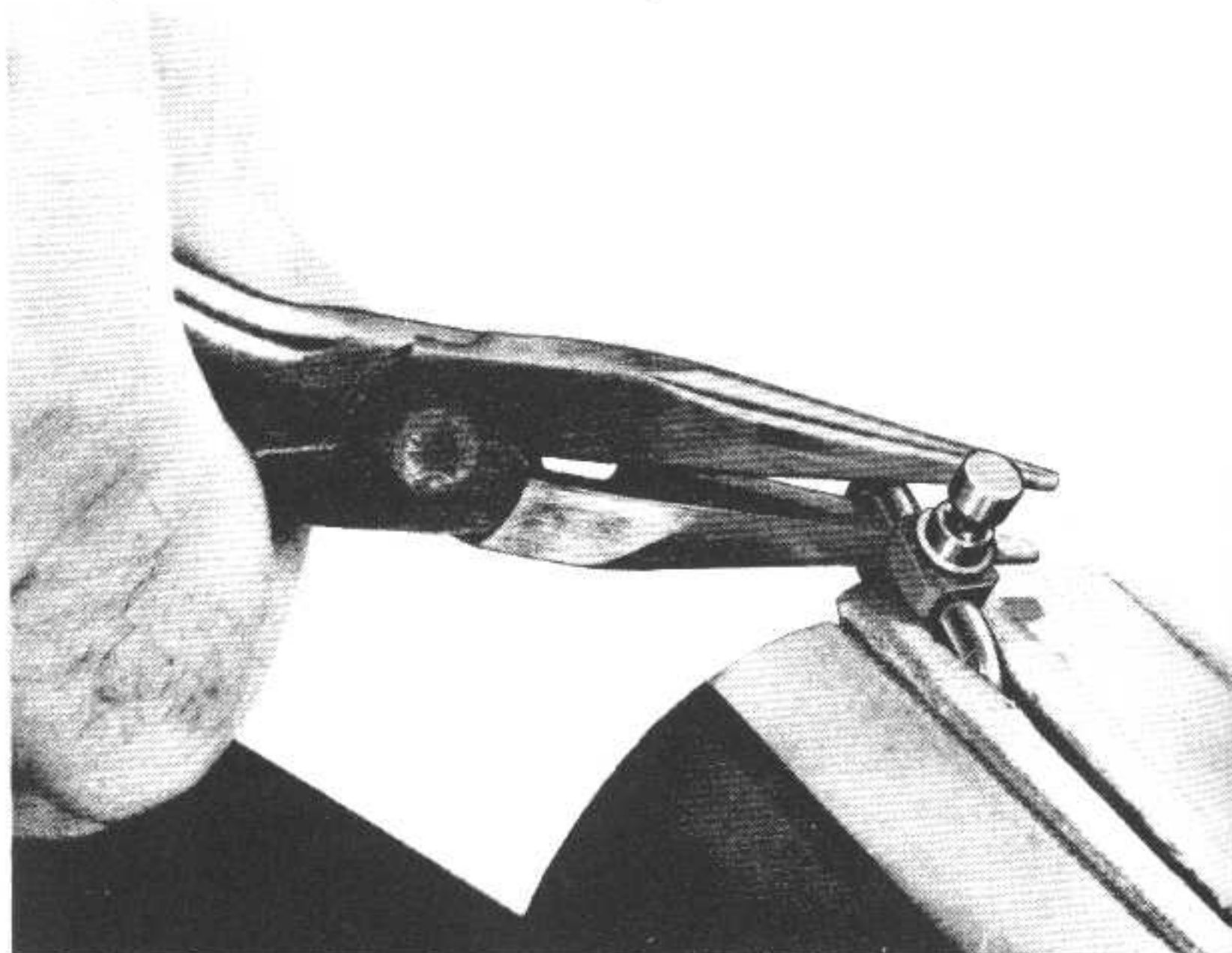


Figure 64 — Removing Swivel Ring from Swivel Stud of Colt Revolver

DISASSEMBLY

(6) SWIVEL RING FROM SWIVEL STUD. Removal of the swivel ring from the swivel stud is accomplished by tightly holding one end of the ring in the vise and pulling the ring open far enough with a pair of pliers to release it from the swivel stud (fig. 64).

(7) ESCUTCHEONS FROM STOCKS. The escutcheons are expanded into the stocks when originally inserted. They may be removed with a drift slightly larger than the hole in the stock and driven outward carefully. Rolling the hand of a punch or drift in the hole prior to driving out the stocks may make them easier to remove.

ORDNANCE MAINTENANCE — PISTOLS AND REVOLVERS

Section XIII

INSPECTION AFTER COMPLETE DISASSEMBLY

	Paragraph
Parts to be inspected	27
Inspection report and improvised report form.....	28

27. PARTS TO BE INSPECTED.

a. The parts to be inspected and the order of inspection are as follows:

Part	Points To Be Observed
Latch (fig 65)	Smoothness of operation. Tension of latch spring.
Crane (fig. 65)	Burs, alinement. Number of crane should correspond with number on frame.
Cylinder (fig. 65)	Burs, rust, powder fouling, and pits.
Ejector (fig. 65)	Burs and alinement.
Ejector spring (fig. 65)	Tension.
Hammer (fig. 66)	Smoothness of operation; broken firing pin.
Cylinder Bolt (fig. 66)	Tension of spring; function. (Cylinder bolt should hold cylinder firmly in place when hammer is down and when hammer is cocked.)
Stocks (fig. 66)	Cracks, loose stock screw.
Front sight (fig. 66)	Burs and alinement.
Barrel (fig. 66)	Looseness in frame.

NOTE: All parts concealed by the side plate should be checked for rust.

28. INSPECTION REPORT AND IMPROVISED REPORT FORM.

a. For procedure to be followed relating to inspection and maintenance see paragraph 12.

INSPECTION AFTER COMPLETE DISASSEMBLY

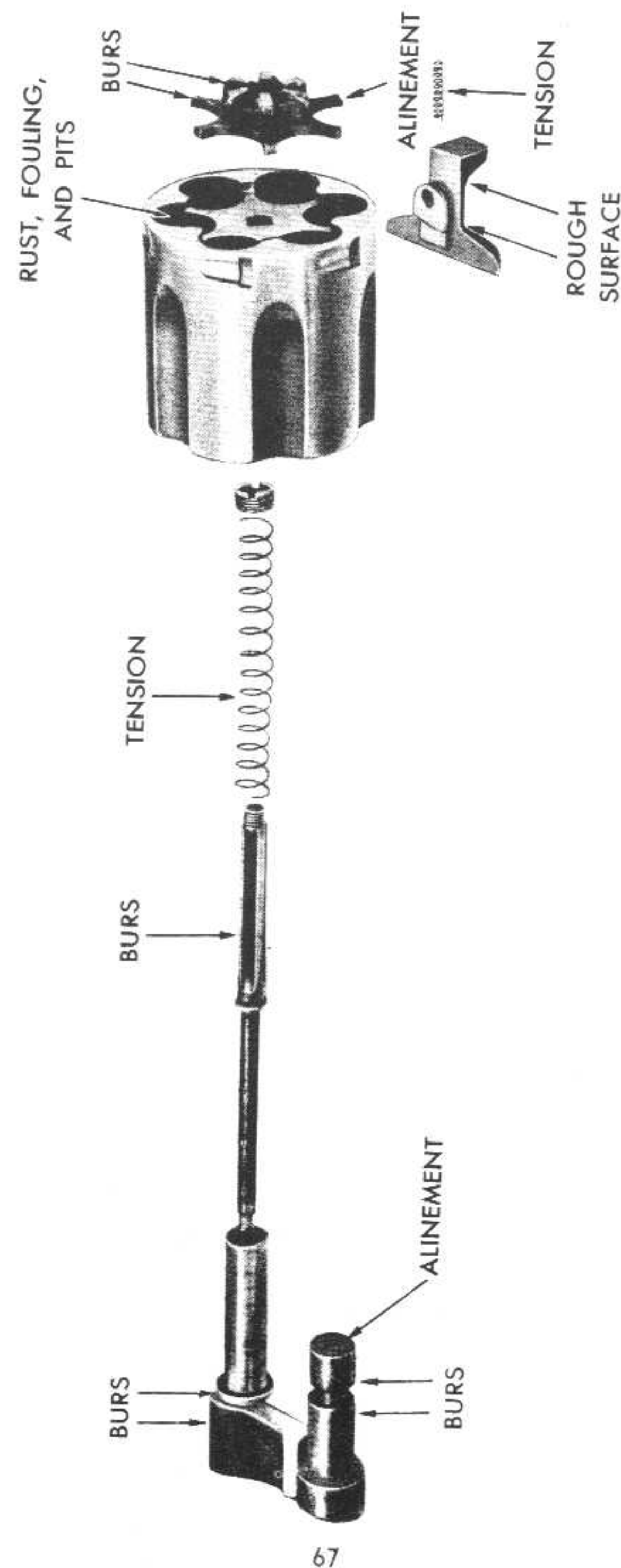


Figure 65 — Colt Revolver M1917, Cylinder Assembly, Showing Points to Be Inspected

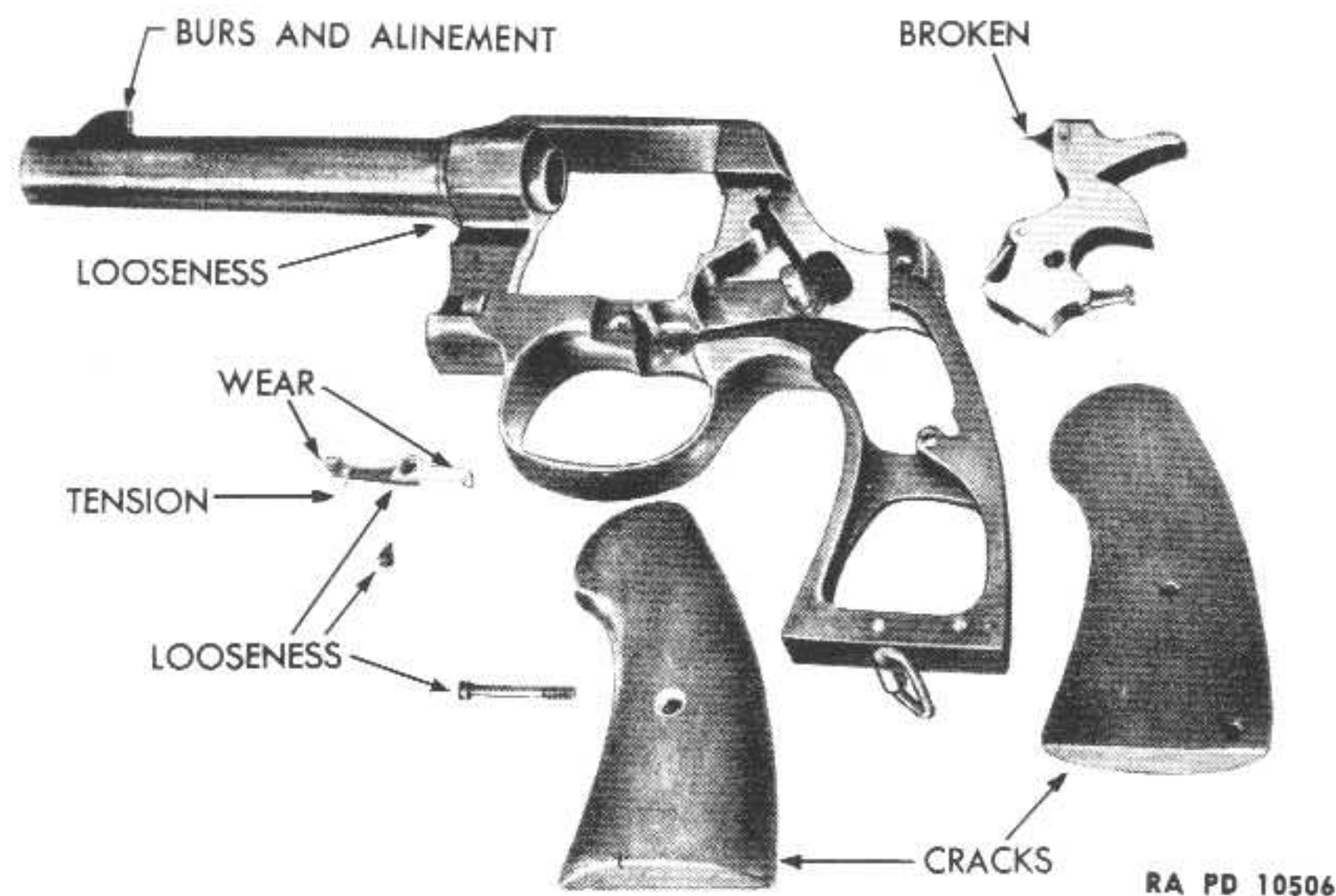


Figure 66 — Colt Revolver M1917, Hammer, Cylinder Bolt, Stocks, Front Sight and Barrel, Showing Points to Be Inspected

REPAIRS AND REPLACEMENTS

	Paragraph
General	29
Replacement of parts	30
Repairs	31

29. GENERAL.

a. Maintenance of the Colt revolver consists primarily of replacement of worn or broken parts. However, a certain amount of hand fitting is required, which is described later in this section.

30. REPLACEMENT OF PARTS.

a. Where parts or assemblies, or parts of assemblies, are broken or worn so as to make them unserviceable, they must be replaced from stock. Often only parts of the assembly will be worn or broken while others can be salvaged. However, should it take more time to remove serviceable parts than they are worth, the entire assembly should be scrapped. In quantity overhauling of Colt revolvers, parts of each should be kept separate. Certain parts of each revolver, such as the crane, side plate, etc., are not interchangeable.

31. REPAIRS.

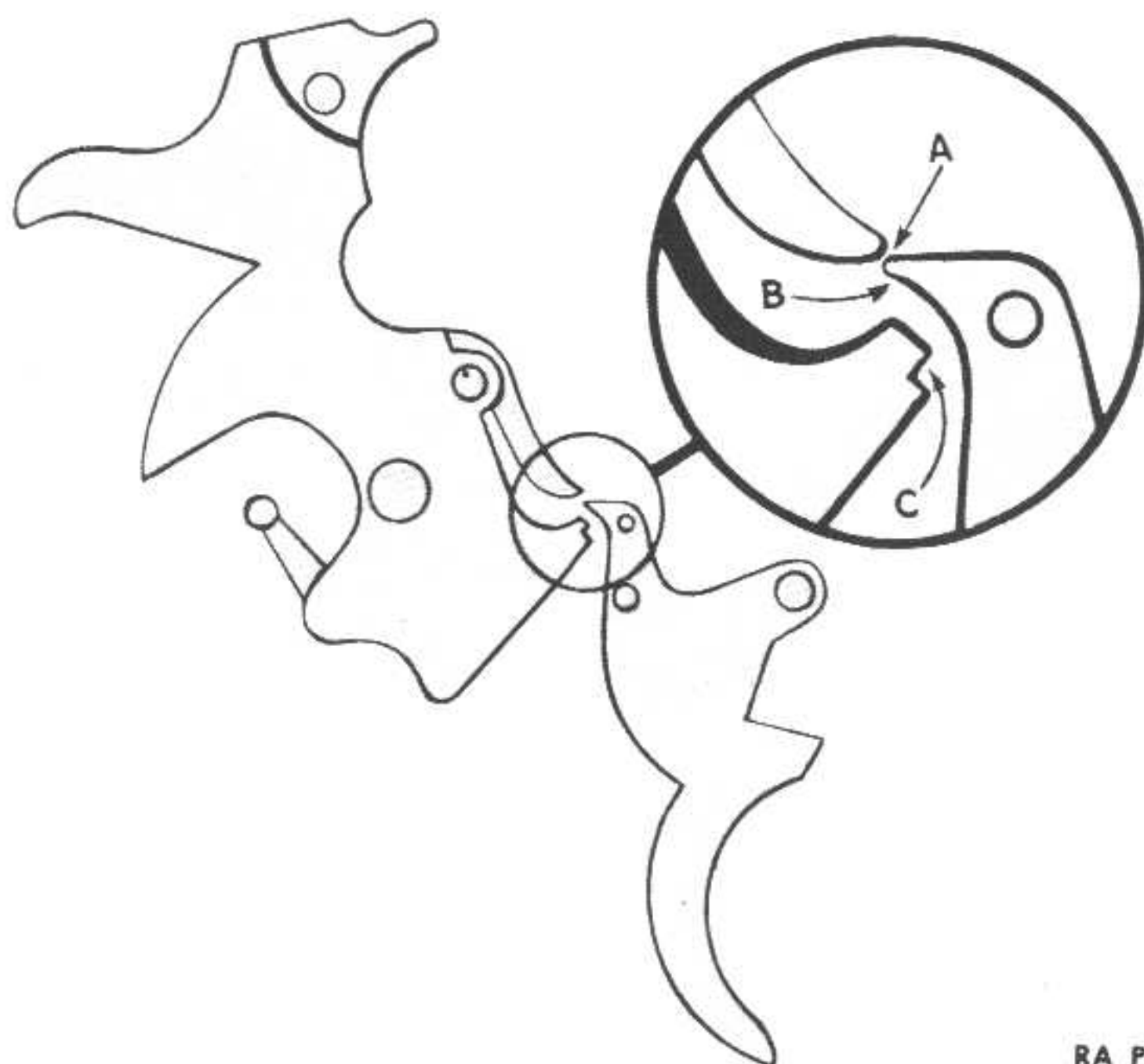
a. Burs on cams, or on other smooth surfaces, should be removed to make the part serviceable. A very fine file is used and care is taken to remove as small an amount of metal as possible. Where roughened surfaces are present on moving parts, an oil stone should be used.

b. **Trigger Pull.** The trigger pull in single-action should be between 5 and 6½ pounds. A weak trigger pull is one which requires less than 5-pound pressure on the trigger to release the hammer. A heavy trigger pull is one which requires more than 6½ pounds on the trigger to release the hammer in single-action (fig. 49). (See par. 23 for trigger pull tests.)

(1) **TO CORRECT WEAK TRIGGER PULL.** Weak trigger pull may be caused by a weak main spring, worn trigger, worn cock notch on the hammer, or a combination of all three. To correct this condition, first stone the rear of the trigger and the cock notch to their correct relation. Polish surfaces "A" and "B" on the trigger and "C" on the hammer as shown in figure 67. Should this fail to produce the desired result, replacement of the main spring is necessary.

(2) **TO CORRECT HEAVY TRIGGER PULL.** Heavy trigger pull is usually caused by dry, roughened surfaces, or binding of the parts due to burs

ORDNANCE MAINTENANCE — PISTOLS AND REVOLVERS

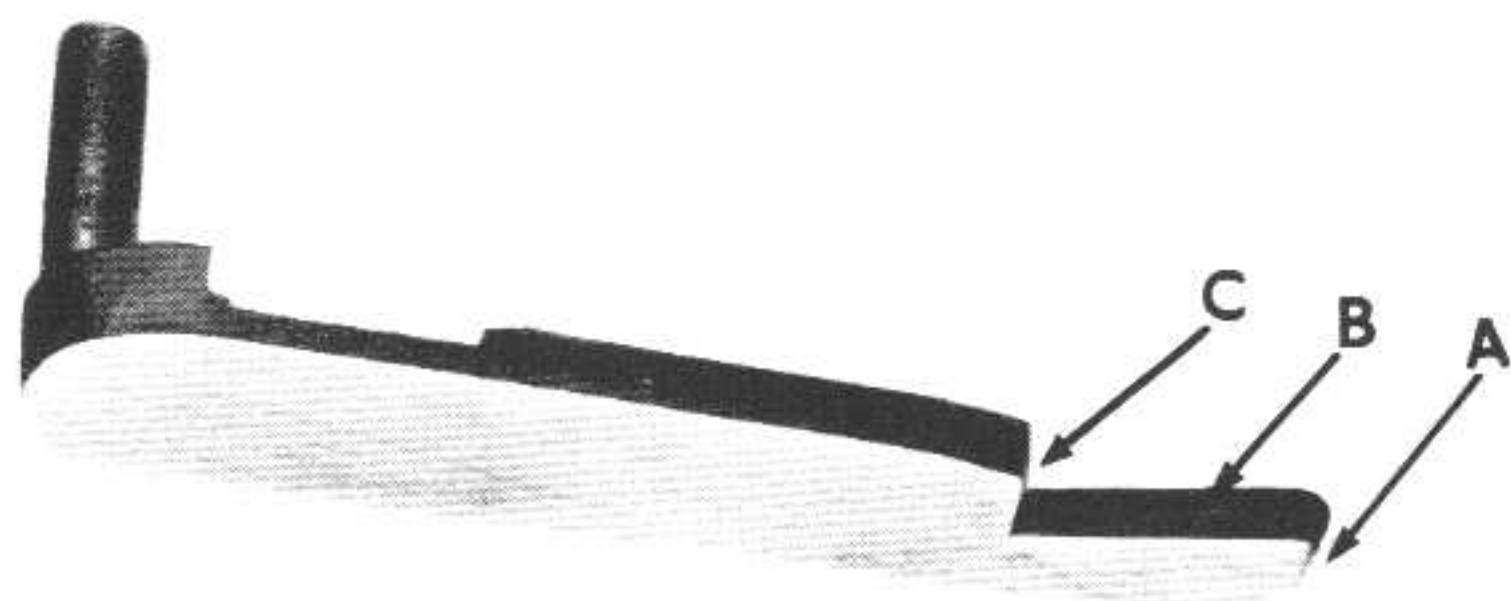


RA PD 10507

Figure 67 — Colt Revolver M1917, Hammer and Trigger Mechanism Showing Corrections to Be Made by Filing and Stoning

or fouling. Polish the various surfaces with a fine stone and correctly lubricate the parts to remedy this condition.

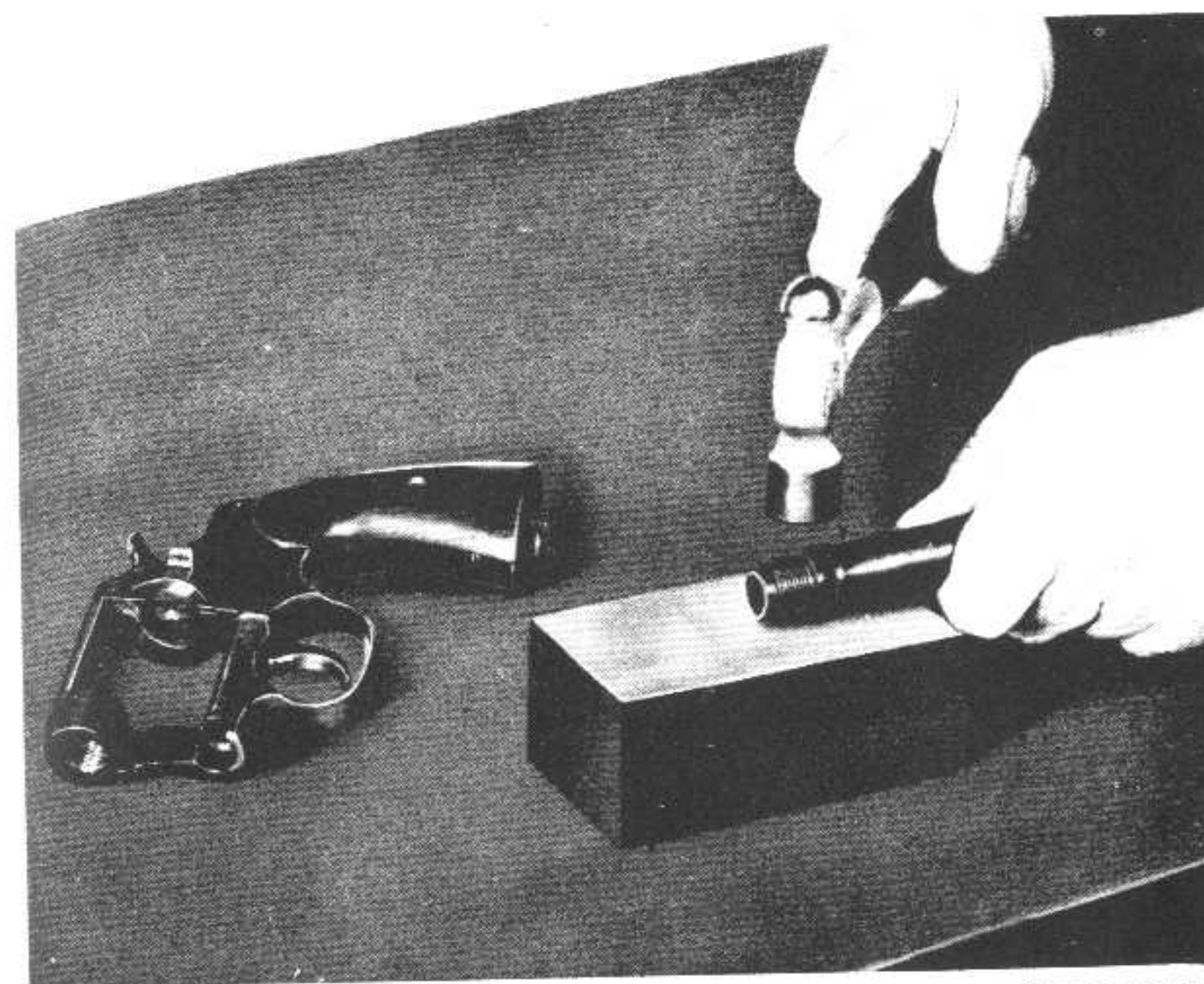
(3) **TO FIT A NEW HAND.** It may be necessary to stone the top surface at point "A," (fig. 68). Install the hand, and slowly cock the hammer, observing surfaces marked "B" and "C." If surface "B" does not clear the ratchet, the necessary clearance should be obtained by



RA PD 10508

Figure 68 — Hand of Colt Revolver M1917 Showing Surfaces Requiring Fitting

REPAIRS AND REPLACEMENTS



RA PD 10509

Figure 69 — Peening Shoulder of Barrel of Colt Revolver M1917

filing or stoning the surface. Surface "C" if necessary, can be lowered by filing and stoning so that it will engage the lower side of the corresponding flange of the ratchet and continue the rotation of the cylinder. When the cylinder is stopped by the cylinder bolt, the surface "C" should be resting firmly underneath the flange of the ratchet.

c. To Tighten a Loose Barrel. First unscrew the barrel as described in paragraph 26 c.

(1) Clean the threads in the frame and on the barrel. Then lightly peen the shoulder of the barrel which fits against the frame (fig. 69). Peen it just enough to tighten the barrel when it is screwed back into its original position. If this method does not tighten the barrel sufficiently, a thin brass shim or washer may be placed between the barrel and frame. However, this practice is recommended for emergency repairs only.

d. Replacement of Barrel. When necessary to replace the barrel, the new one should be selected so that a minimum amount of fitting is required to obtain proper alignment. If necessary to draw it up to correct alignment, a small amount of metal may be removed from the shoulder of the barrel with a fine file or lathe. It may be necessary to stone the rear end to obtain the proper clearance between the rear end

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of the barrel and the front end of the cylinder. This clearance should be between 0.002 inch and 0.006 inch.

e. Rotational Play in the Cylinder. This may be due to a loose fit of the bolt in the cylinder or between the bolt screw and bolt. Slightly peening the end of the bolt or the latching notches around the cylinder will reduce this play. Peening of the latching notches must be limited to replacement of the metal pushed out at the sides. Replacement of the bolt screw and the bolt may be necessary to reduce the play to the specified limit given in paragraph 24 a (2).

Section XV

REASSEMBLY

Paragraph

Reassembly of Colt revolver 32

32. REASSEMBLY OF COLT REVOLVER.

a. Complete reassembly procedure for the Colt revolver is as follows:

(1) **REPLACING BARREL ON FRAME.** Place the barrel in a vise, the jaws of which are protected by thick leather. Manually screw the frame onto the barrel for a few turns to make sure the threads are meshing properly. Do not force the frame to turn as it should engage the threads easily. Then tighten the frame onto the barrel with a stick approximately $1\frac{3}{8}$ inches square and 20 inches long placed through the opening in the frame. Do not use metal bar. Be sure the frame and barrel are in alignment so that the front sight is in correct position. If the same barrel is used in reassembly, and a very light scribe mark has been made on the barrel and frame to indicate the position of the barrel, correct alignment can be quickly checked.

(2) Reassemble any pins which have been removed from the frame, such as the hammer, trigger, stock, and swivel stud pins, by driving them into position with a light hand hammer. The frame should be held in the vise for these operations.

(3) Install the firing pin on the hammer and the safety pin on the trigger (if removed for replacement).

(4) Assemble the crane, ejector spring and cylinder on the ejector rod. Then screw the ejector on the rod and peen the end of the rod to prevent the ejector from loosening. If a new ejector is being installed, screw it on the rod until the end is approximately flush with the surface in the bored end of the latch pin seat in the ratchet. Aline the ejector so it will seat properly in the cylinder. With a punch, upset the rear end of the ejector rod, sufficiently to prevent the ejector from unscrewing.

(5) Replace the cylinder bolt, cylinder bolt spring and cylinder bolt screw.

(6) Place the safety assembly in its seat in the frame.

(7) Place the safety lever over its pivot with the slot in the short end engaging the stud on the safety. (Special care should be exerted to see that the safety lever is in position at all times.)

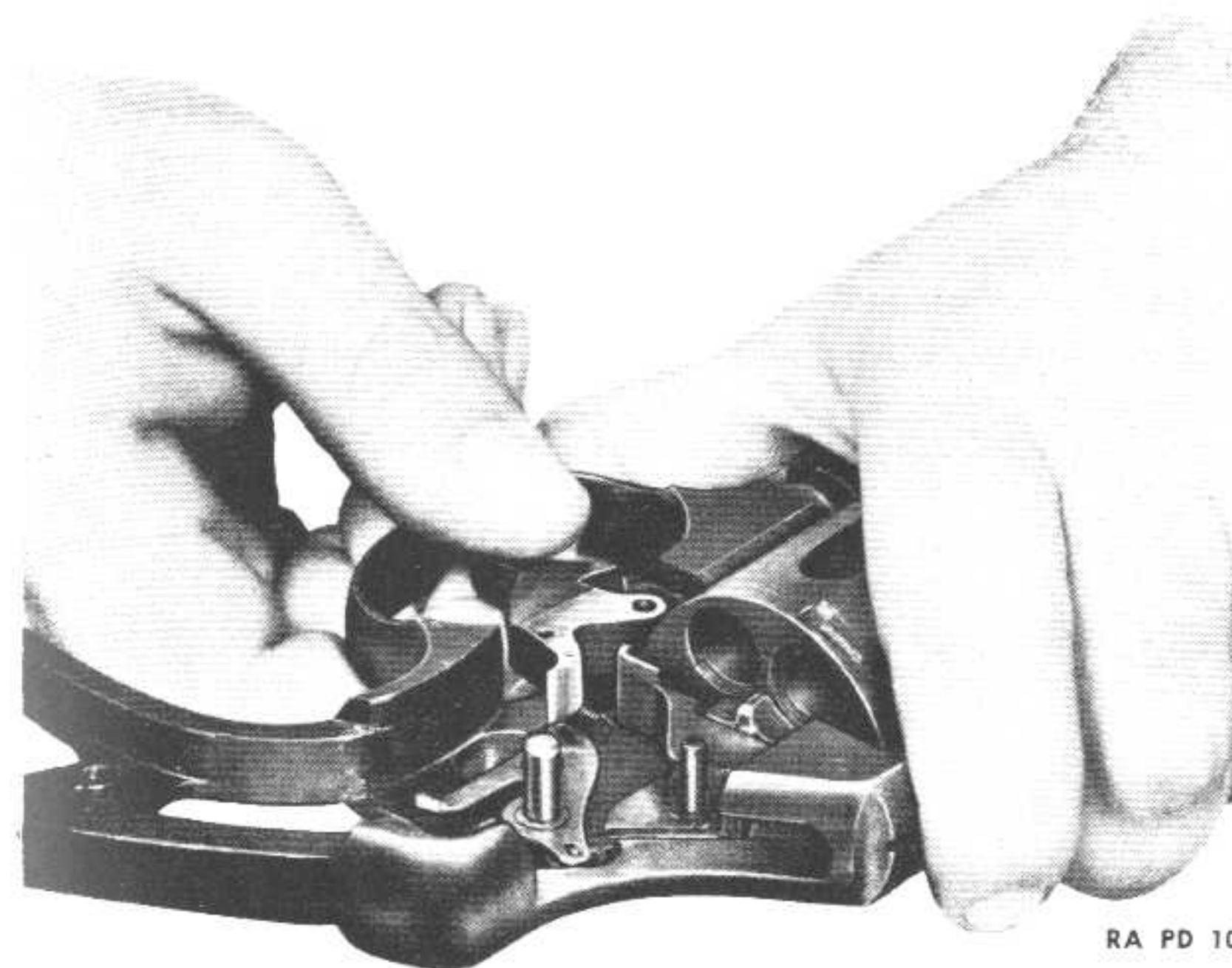
(8) Replace the latch pin assembly in its seat in the frame.

(9) Replace the trigger on the trigger pin so that the safety pin on the right side of the trigger engages the slot in the longer end of the safety lever (fig. 70).

ORDNANCE MAINTENANCE — PISTOLS AND REVOLVERS

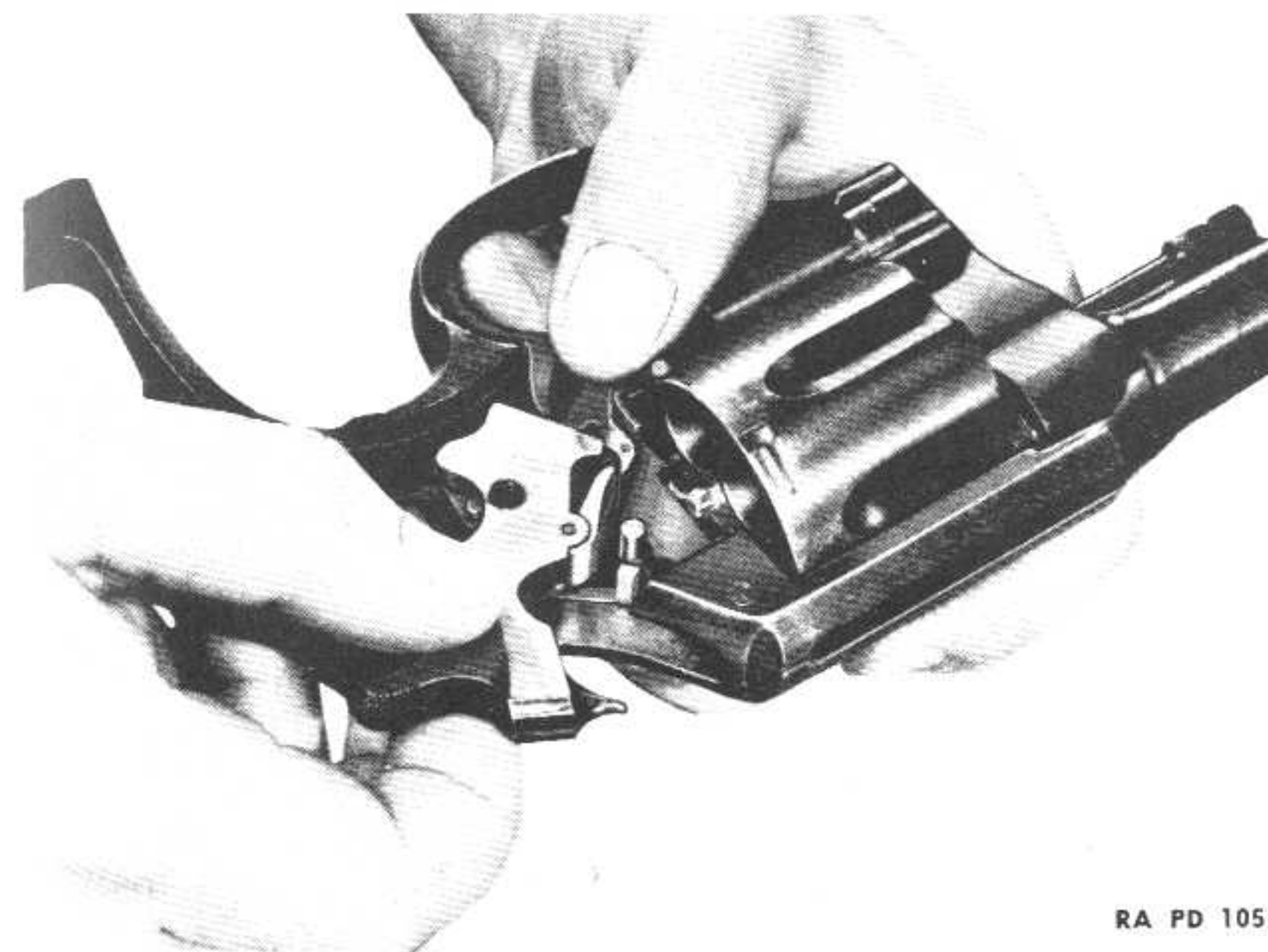
NOTE: Test by working trigger forward and back. If the safety lever and safety operate, the assembly is correct.

- (10) Assemble the strut, strut spring, and strut pin to the hammer.
- (11) Assemble the hammer stirrup and hammer stirrup pin to the hammer.
- (12) Place the hammer assembly in place on the hammer pin making sure that the sear is in correct position relative to the trigger (fig. 71).
- (13) Assemble the rebound lever to the frame with the rebound lever pin.
- (14) With the hammer in the forward position, replace the main-spring so that the notched end engages the hammer stirrup.

REASSEMBLY

RA PD 10510

Figure 70 — Replacing Trigger on Trigger Pin of Colt Revolver M1917



RA PD 10511

Figure 71 — Replacing Hammer and Sear on Colt Revolver M1917

ORDNANCE MAINTENANCE — PISTOLS AND REVOLVERS

(15) Insert the stud on the hand in its hole on the trigger. Press upward on the rebound lever to permit the hand to be fully seated.

(16) Replace the latch pin spring in its seat in the side plate.

(17) Put the side plate in position but do not fully seat it.

(18) Place the latch in its slot in the side plate so that the latch pin stud engages in the hole in the latch.

(19) Seat the side plate fully and replace the side plate screws.

(20) Replace the cylinder and crane, crane lock, and crane lock screw. In inserting the screw, see that it is engaged in the slot in the lock and engage both parts at once.

(21) Replace stocks after replacing escutcheons (if removed).

Section XVI

GENERAL CHARACTERISTICS — SMITH AND WESSON REVOLVER M1917, CAL. .45

Paragraph

Description	33
General data	34

33. DESCRIPTION.

a. The Smith and Wesson Revolver Cal. .45, M1917 is a six-shot, breech-loading, hand weapon. It is provided with a swing-out type cylinder having six chambers about a central axis so that six shots may be fired before reloading is necessary (figs. 72 and 73). The chambers of the cylinder are loaded with six cartridges, in clips of three rounds. When the cylinder is closed, the revolver is ready for firing. It may be fired either single-action or double-action.

b. The action of cocking the hammer, either in single- or double-action firing, causes the cylinder to rotate and aline the next chamber with the barrel. The rate of fire is limited by the dexterity of the operator in reloading the cylinder and his ability to aim and squeeze.

c. The Smith and Wesson revolver is designed to fire cartridge, ball, cal. .45, M1911.

34. GENERAL DATA.

a. Characteristics.

Weight	2 1/4	lb
Total length	10.8	in.
Barrel:		
Length	5.5	in.
Diameter of bore	0.445	in.
Diameter of rifling	0.452	in.
Rifling, number of grooves	6	in.
Grooves:		
Width	0.156	in.
Depth	0.0035	in.
Twist, one turn in	16	in.
Front sight above axis of bore	0.7325	in.
Lands, width	0.073	in.

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Cylinder:

Length 1.595 in.

Diameter 1.695 in.

Chambers:

Number 6

Diameter:

Maximum 0.4795 in.

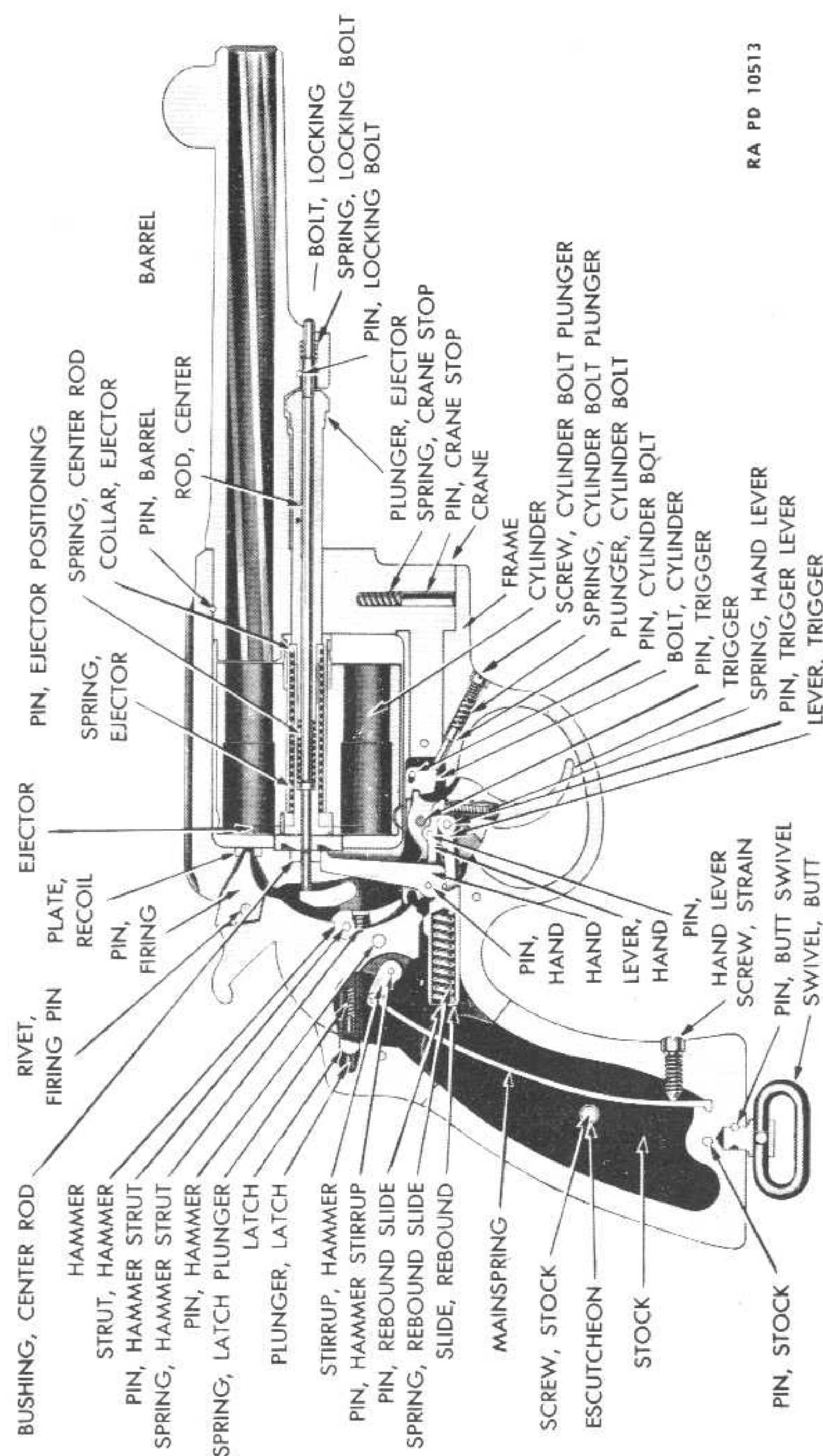
Minimum 0.473 in.

Trigger pull 5 to 6½ lb

GENERAL CHARACTERISTICS— SMITH AND WESSON REVOLVER M1917, CAL. .45



Figure 72 — Left Side Smith and Wesson Revolver M1917 Showing Exterior Differences Between It and the Colt M1917



RA PD 10513

Figure 73 — Sectional View of Smith and Wesson Revolver M1917

FUNCTIONING

Paragraph

Functioning 35

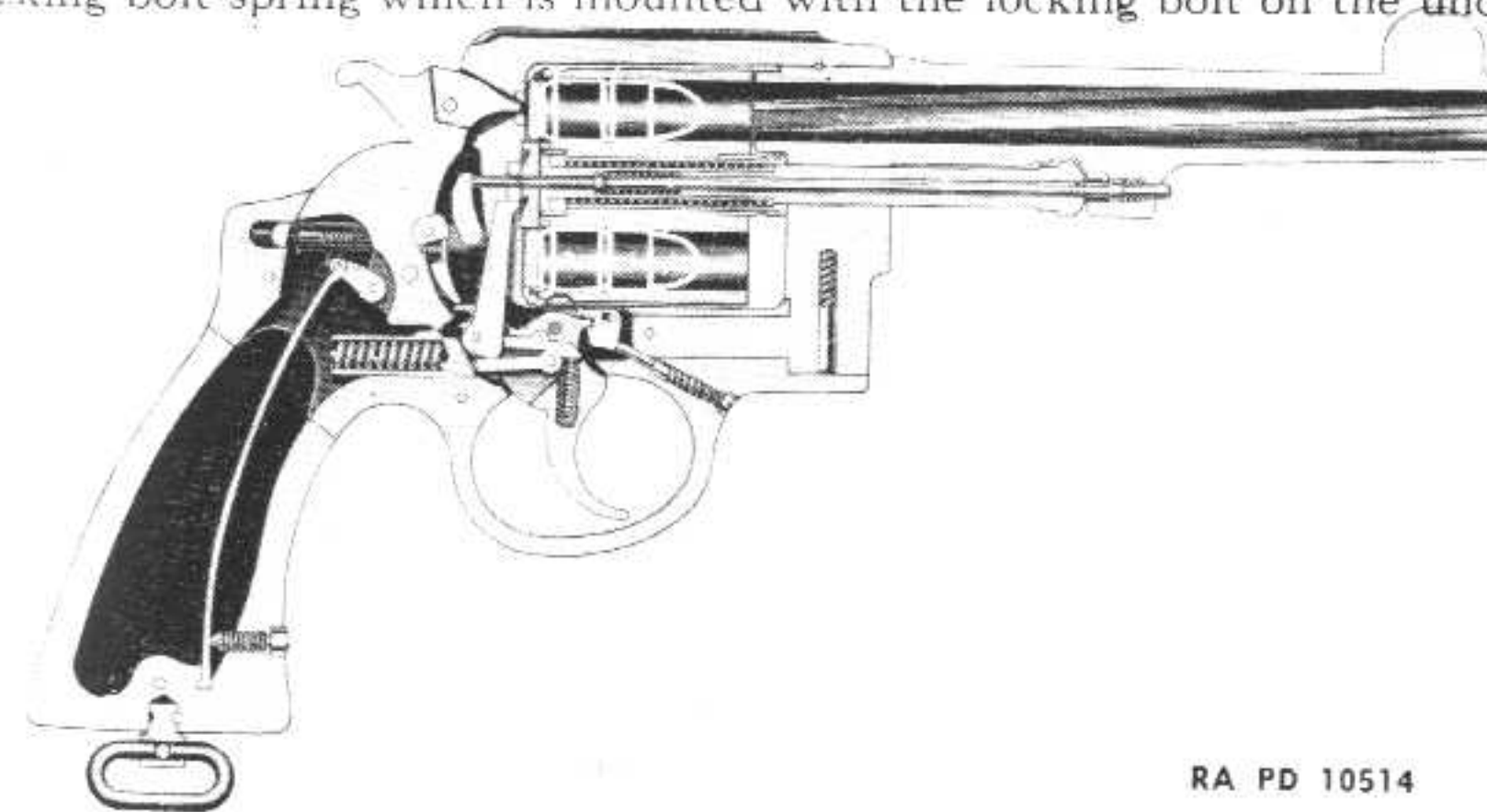
35. FUNCTIONING.

a. Pushing on the thumb piece forces forward the latch to which it is attached by the thumb piece nut. The nose of the latch presses against the end or center rod within the ejector plunger and, in turn, pushes it into the arbor of the crane. This releases the cylinder so that it can pivot on its crane and swing outward to the left. The cylinder can then be loaded with two clips of three cartridges each.

NOTE: This action should never be accomplished with a snap or jerk as it might damage the crane.

While the cylinder is open, the hammer cannot be raised, since the pressure of the latch plunger spring holds the latch forward. In this position, a lug on the rear of the latch is under the rear edge of the hammer.

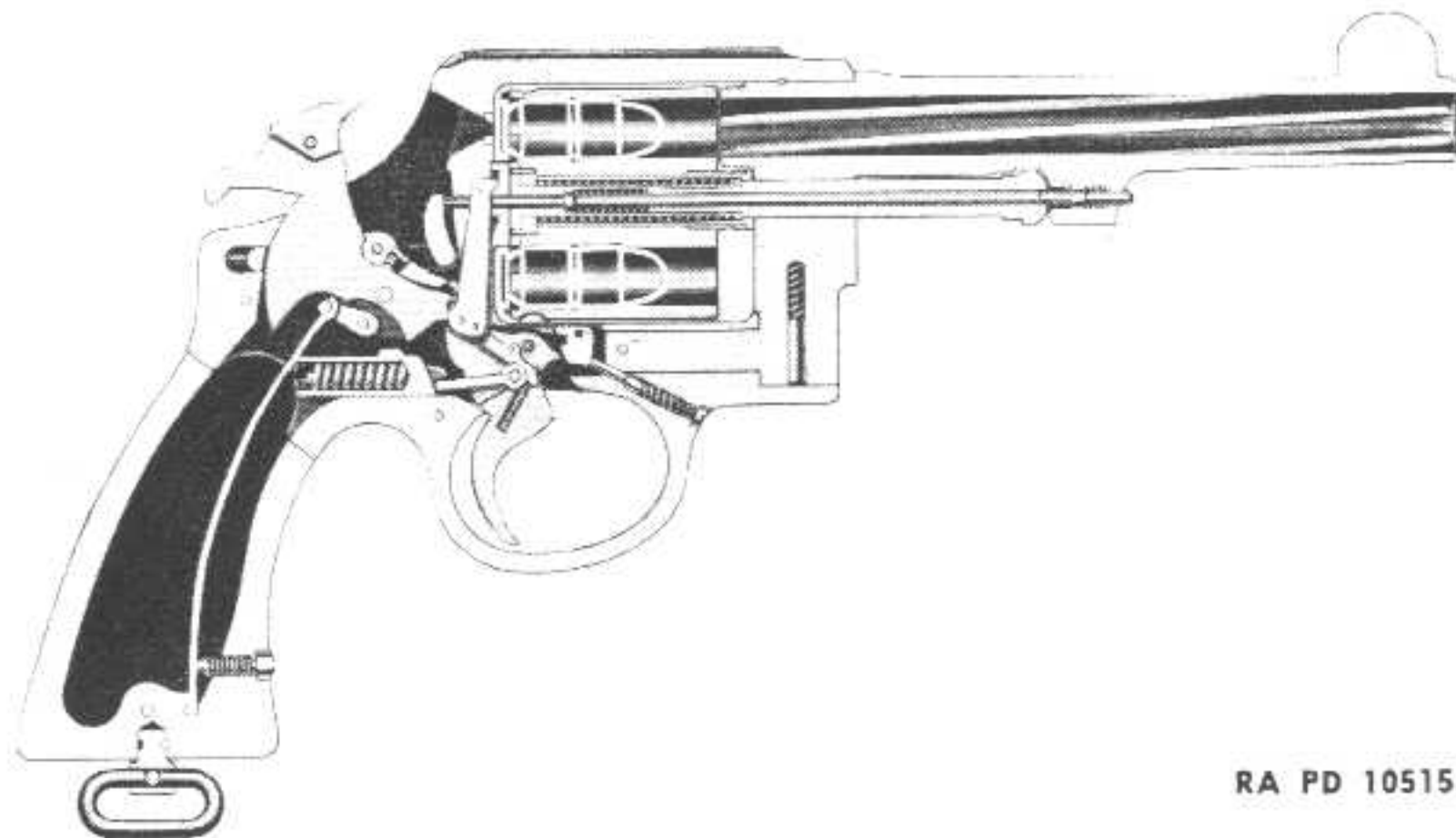
b. When the cylinder is swung back into the frame (fig. 74), the center rod spring, which has a greater pressure than that of the latch plunger spring, forces the end of the center rod into engagement in the frame by pushing the latch backward, thus locking the cylinder in place. At the same time, it disengages the interlocking lug of the latch from under the hammer. The cylinder is thus locked into position for firing, and the hammer can then be raised. In the closed position of the cylinder, the pressure of the center rod spring is assisted by that of the locking bolt spring which is mounted with the locking bolt on the under



RA PD 10514

Figure 74 — Sectional View of Smith and Wesson Revolver M1917
Hammer Down, Cylinder Loaded

ORDNANCE MAINTENANCE — PISTOLS AND REVOLVERS



RA PD 10515

Figure 75 — Sectional View of Smith and Wesson Revolver M1917, Hammer Back, Trigger Back

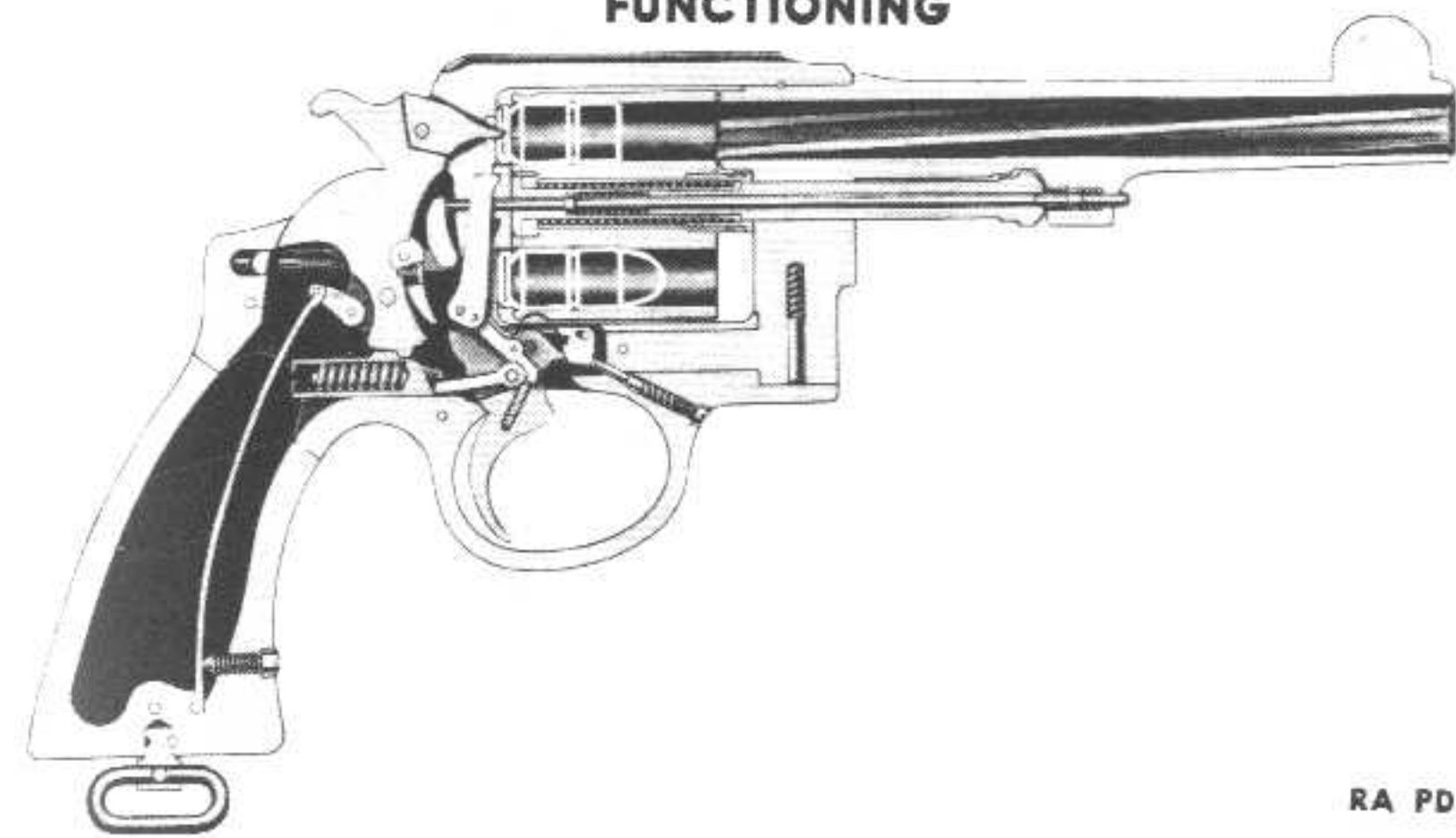
side of the barrel. This bolt also assists in maintaining the alinement of the ejector plunger and cylinder when the cylinder rotates.

c. In firing double-action, pressure of the finger upon the trigger causes the upper edge of the trigger to engage the hammer strut and raise the hammer until the nose of the trigger comes into contact with the hammer. Then, the trigger continues to raise the hammer until the latter is nearly in its full cock position (fig. 75), when it will escape from the trigger nose and fall, due to the pressure of the mainspring. When the trigger is pulled back, the rebound slide is also pushed rearward to a point where a projection on the slide is far enough back to prevent the lug on the hammer from coming in contact with it. This permits the hammer to fall the full distance and strike the cartridge.

d. In firing single-action, the hammer is first pulled back with the thumb until it is in the full-cock position (fig. 75). In this position, a notch in the front end of the lower part of the hammer is engaged with the nose of the trigger. Pressure on the trigger disengages it from the notch in the hammer, thereby releasing the hammer and permitting it to fall. The hammer will fall the full distance due to the position of the rebound slide. If the trigger is allowed to return to its normal position

NOTE: In firing either single- or double-action, the trigger must remain back while the hammer falls, so that the lug on the lower edge of the hammer will not come in contact with the projection on the rebound slide. If the trigger is allowed to return to its normal position between the time the hammer falls and comes close to the cartridge, the projection on the slide will prevent the hammer from falling the full distance and in turn prevent it from striking the cartridge.

FUNCTIONING



RA PD 10516

Figure 76 — Sectional View of Smith and Wesson Revolver M1917, Hammer Striking Cartridge, Trigger Back, Cartridge Empty

Also note that the cylinder cannot be opened while the hammer is cocked, since the lug on the rear of the latch is held by the hammer against forward movement.

e. Simultaneously with the movement of the trigger in cocking the hammer, a lug on the upper front edge of the trigger engages in the slot in the cylinder bolt and forces it downward against the pressure of the cylinder bolt plunger and spring. This withdraws the nose of the bolt from the cylinder and permits the cylinder to rotate under the action of the hand. The hand, which is pivoted to the trigger, swings on its pin, thus raising it into engagement with the ratchet on the ejector and revolving the cylinder.

f. As the trigger continues its rearward movement, the bolt is released from the trigger, permitting its nose to drop into the proper recess in the cylinder as soon as the hand has rotated it enough to bring the next chamber into alinement with the barrel. When the hammer falls, both the hand and the bolt lock the cylinder in such a position that the chamber of the cylinder coincides with the axis of the barrel. Pressure of the hand in engagement with the ratchet is maintained by the hand lever and hand lever spring mounted within the trigger.

NOTE: The bolt also prevents the cylinder from making more than one-sixth of a revolution each time the revolver is cocked.

g. When the trigger is released, the rebound slide, under pressure of the rebound slide spring, forces the trigger forward. The lug on the top edge of the slide also comes into contact with the mating lug on the lower edge of the hammer forcing the hammer backward until the firing pin is withdrawn into the frame of the revolver. As long as the

ORDNANCE MAINTENANCE — PISTOLS AND REVOLVERS

trigger remains in normal position, a blow on the hammer cannot cause it to strike the cartridge, since the lug on the slide will prevent forward movement of the hammer. The hammer can strike the cartridge only when the trigger is pulled the full distance rearward.

h. After firing, the cylinder is again swung open and the cartridges or empty cartridge cases (including clips) are ejected from the cylinder by pressure of the finger on the head of the ejector plunger to the rear end of which the ratchet is attached. Rearward movement of the cylinder, when the plunger is depressed, is prevented by a lug riveted into the left side of the frame.

Section XVIII**INSPECTION PRIOR TO DISASSEMBLY**

	Paragraph
General	36
Visual and manual inspection	37
Trigger pull tests	38
Safety tests	39

36. GENERAL.

a. The tests made on assembled Smith and Wesson revolvers to check their condition, include a visual inspection, trigger pull tests, and safety tests.

37. VISUAL AND MANUAL INSPECTION.

a. The revolver is inspected for general appearance, smoothness of operation, missing side plate screws, and defaced markings.

(1) Check the functioning by snapping the hammer.

(2) Examine the frame carefully for cracks where the barrel is screwed into the frame.

(3) Check the condition of the stocks for cracks and loose stock screw.

(4) Inspect the front sight for burs and alinement.

(5) Inspect the barrel for looseness in the frame.

(6) Pull the hammer back slowly, noting cylinder movement. If the cylinder bolt does not engage the recess in the cylinder, the cylinder is not in alinement with the bore, which indicates that the hand or ratchet is faulty.

(7) Look for rust where the trigger enters the frame. The presence of rust here frequently indicates that internal parts are rusted.

38. TRIGGER-PULL TESTS.

a. Trigger-pull tests have been described in paragraph 23. For method of testing trigger pull see paragraph 23, and for proper weights to use with Smith and Wesson revolver, see paragraph 34 a.

39. SAFETY TESTS.

a. The following safety tests should also be made: With the revolver unloaded and the cylinder closed, cock the hammer (fig. 77). Holding the hammer back with the thumb, press the trigger and let the hammer move forward about 1/4 inch (fig. 78). Release the trigger, then release the hammer and let it fly forward. If the firing pin projects through the hole in the frame, the hammer or the rebound slide is faulty.

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b. With the hammer down attempt to rotate the cylinder (fig. 79). If more than $\frac{1}{64}$ inch in rotation is possible, the cylinder bolt is faulty. Repeat this test with the hammer fully cocked.

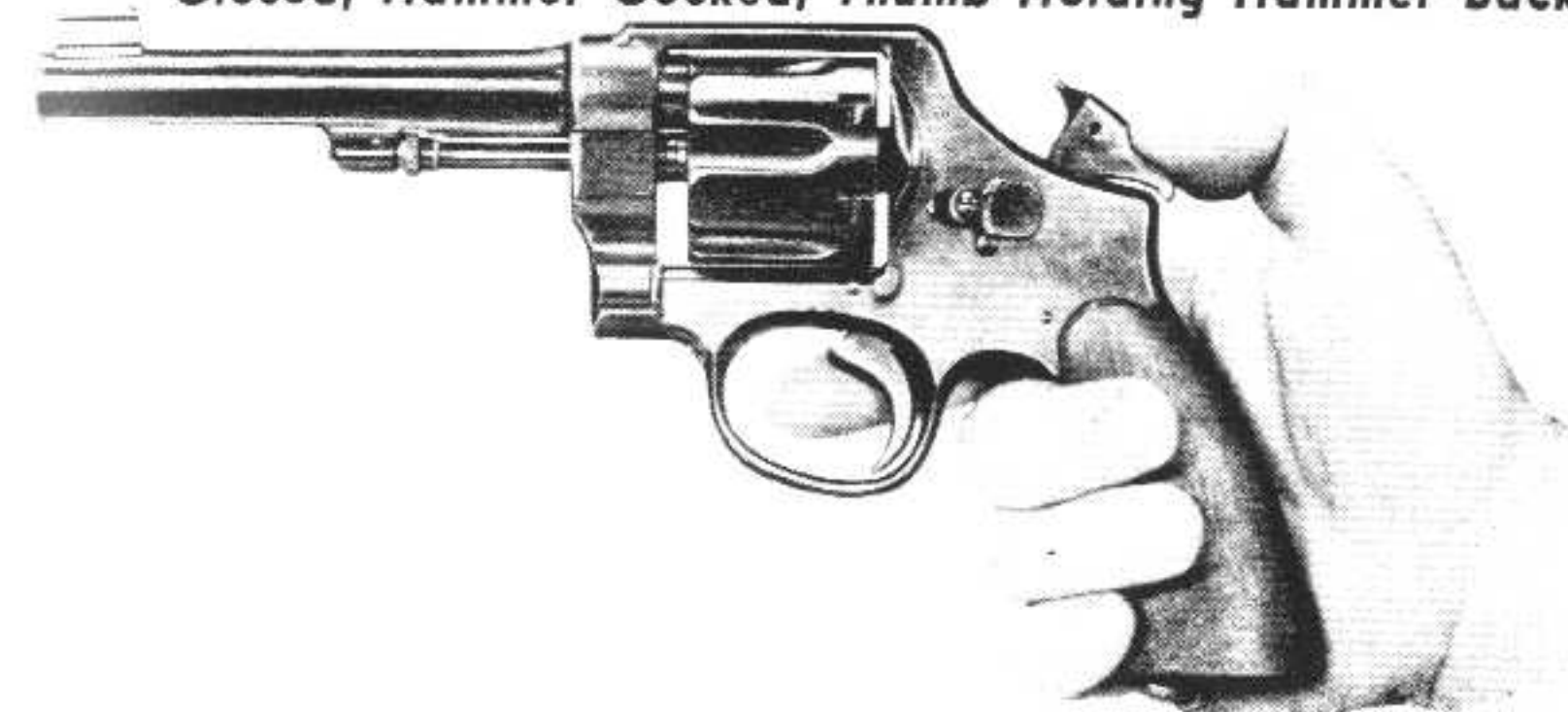
NOTE: With the hammer about one-fourth cocked, the cylinder rotates freely.

INSPECTION PRIOR TO DISASSEMBLY



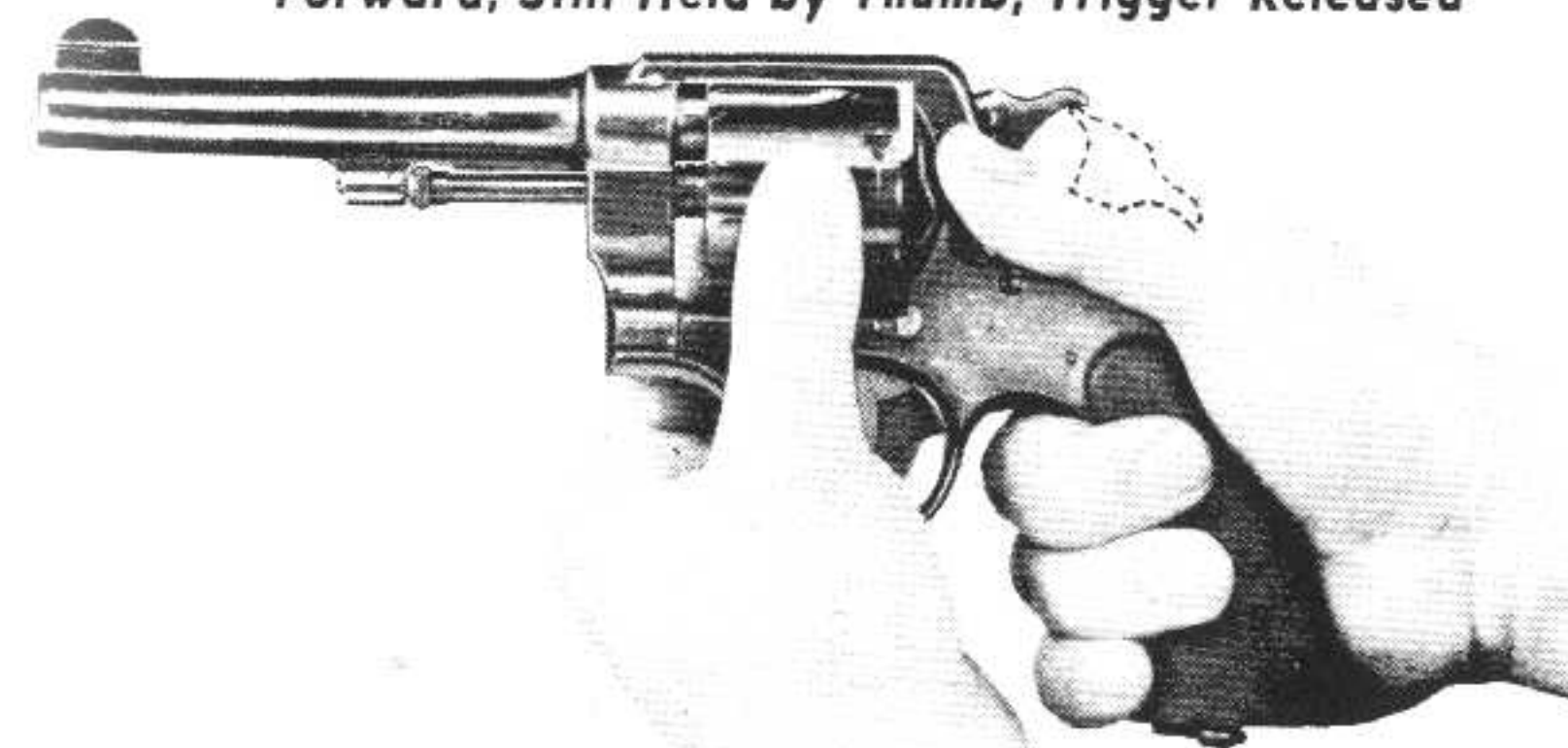
RA PD 10519

Figure 77 — Smith and Wesson Revolver M1917, Unloaded Cylinder Closed, Hammer Cocked, Thumb Holding Hammer Back



RA PD 10518

Figure 78 — Smith and Wesson Revolver M1917, Hammer Slightly Forward, Still Held by Thumb, Trigger Released



RA PD 10520

Figure 79 — Smith and Wesson Revolver M1917, In Right Hand, Thumb and Finger of Left Hand on Cylinder, Hammer Down

ORDNANCE MAINTENANCE — PISTOLS AND REVOLVERS

Section XIX

DISASSEMBLY

	Paragraph
Disassembly of Smith and Wesson revolver	40
Special disassemblies	41

40. DISASSEMBLY OF SMITH AND WESSON REVOLVER.

a. To disassemble the Smith and Wesson revolver, proceed as follows:

- (1) Remove the stock screw and stocks.
 - (2) Remove the side plate screw near the forward end of the trigger guard.
 - (3) Press forward on the latch to release the cylinder. Push the cylinder counterclockwise and withdraw the cylinder and crane assembly to the front. Be careful to prevent the crane stop plunger and crane stop spring from flying out (fig. 80).
 - (4) Unscrew the ejector plunger from the ejector and pull the ejector collar, plunger and spring, and the center rod and spring out of the cylinder. Carefully note the position of these parts to assist in re-assembly. Then remove the crane from the cylinder (fig. 81).
 - (5) Unscrew the thumb piece nut and remove the thumb piece.
 - (6) Remove the remaining three side plate screws and remove the side plate. Do not pry the side plate from its seating. With the wooden handle of a tool, tap the plate and frame until the side plate loosens, then lift it from its seat (fig. 82).
 - (7) Remove the strain screw from the recess in the butt end of the frame (fig. 83).
 - (8) Remove the mainspring by pushing the bottom end to the right from its recess in the frame (fig. 84).
 - (9) Remove the rebound slide and rebound slide spring by pressing the rear end of the slide to the right until it clears the rebound slide pin (fig. 85).
- NOTE: Hold the thumb over the rear end of the slide as it is removed from the pin in order not to lose the spring.
- (10) Remove the hand assembly.
 - (11) Pull the latch back until it clears the rear of the hammer, then pull the hammer to the rear. It may be necessary to press the latch away from the frame to allow the hammer to pass. Lift the hammer off the hammer pin (fig. 86).
 - (12) Press the trigger assembly to the right and remove it from the trigger pin.

DISASSEMBLY

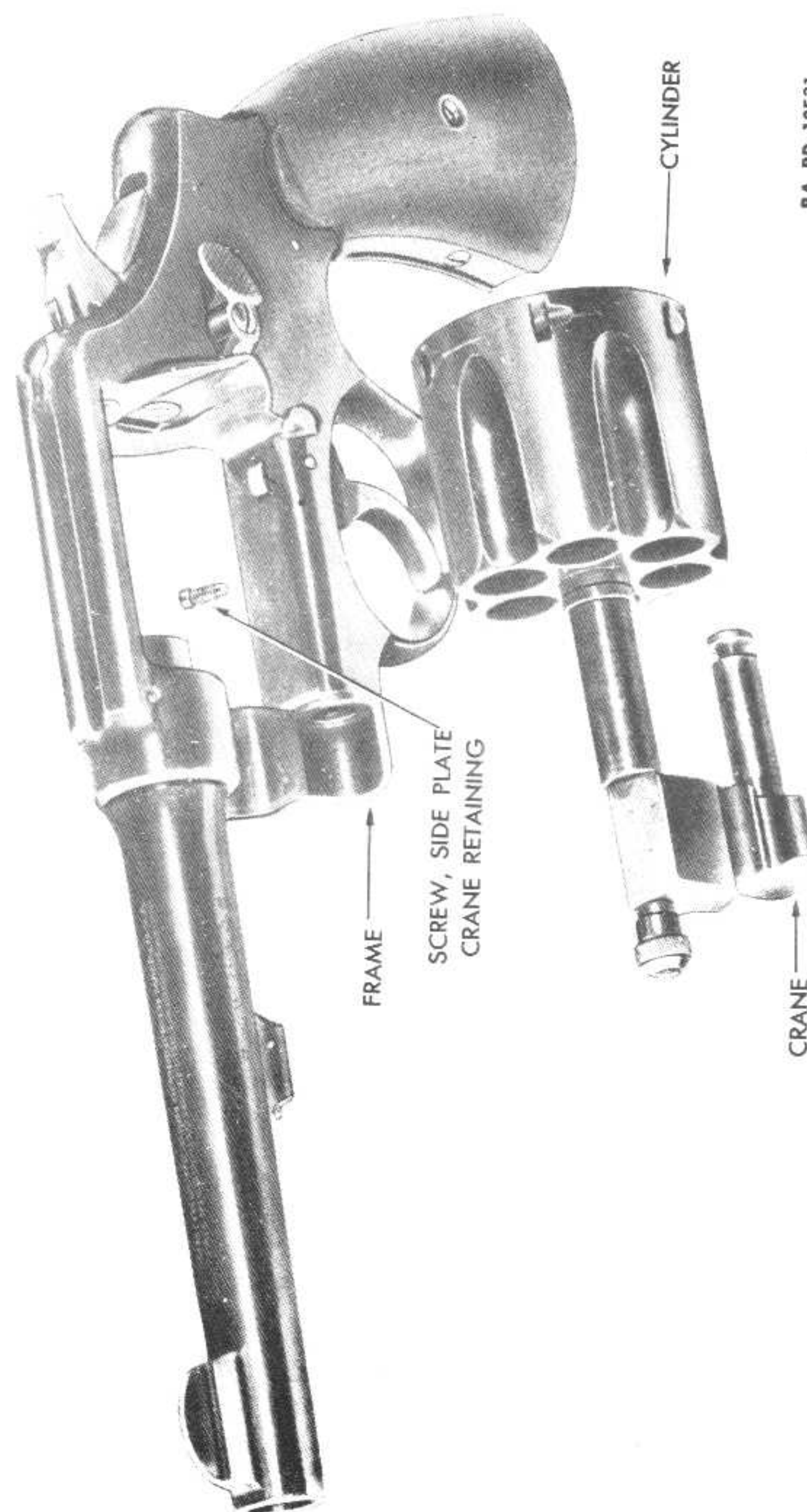
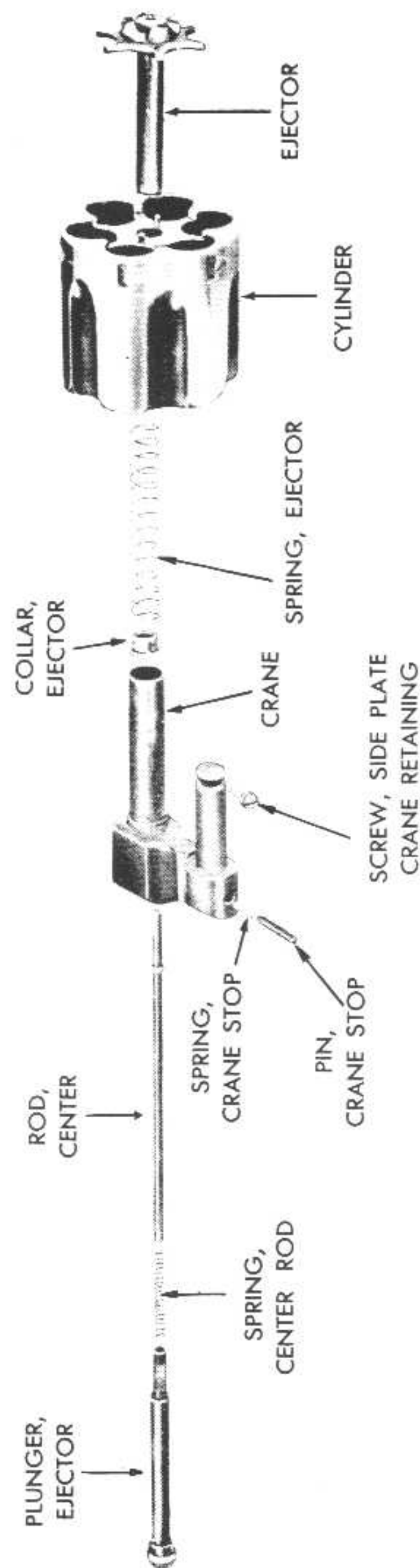
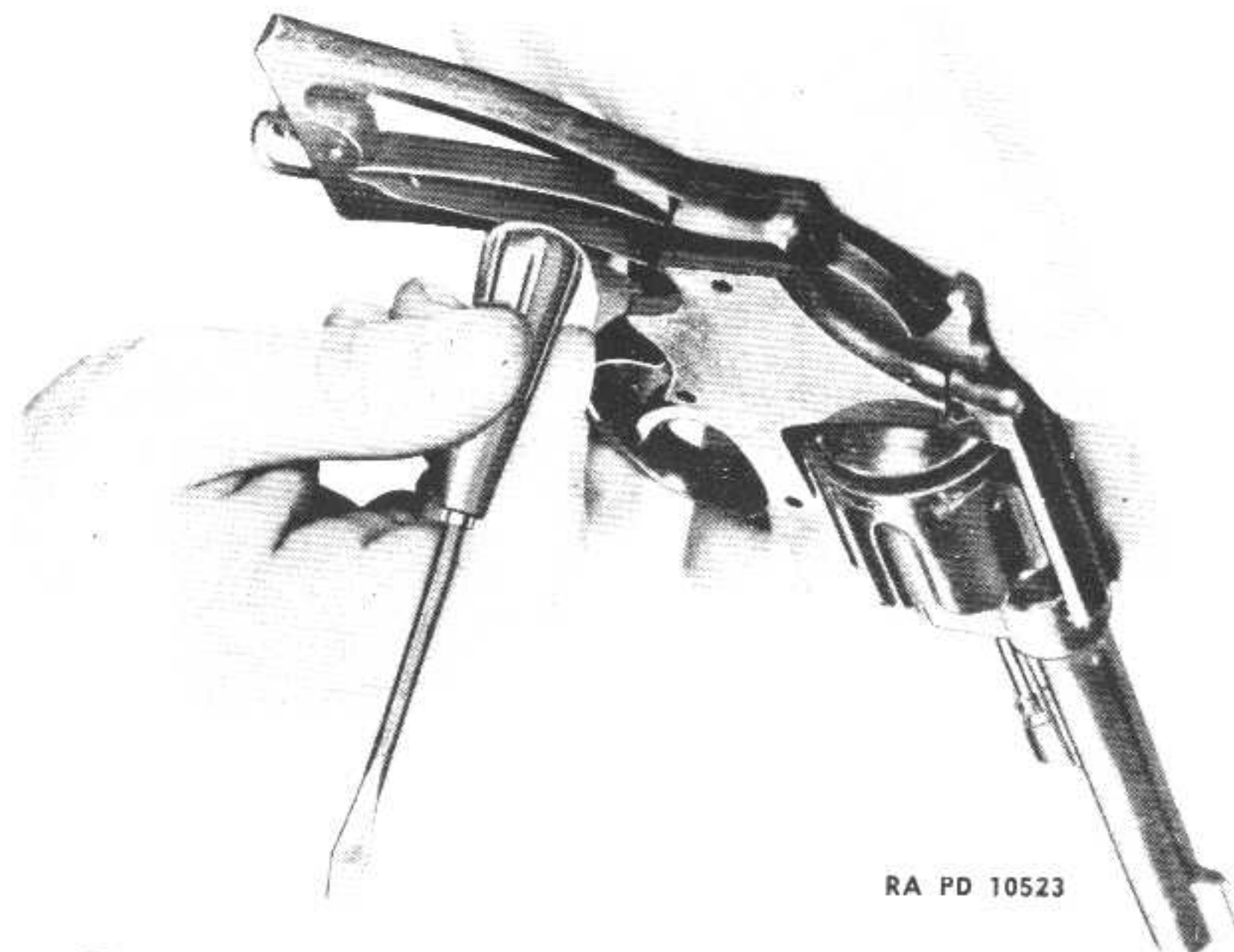


Figure 80 — Smith and Wesson Revolver M1917, Cylinder Removed from Revolver — Exploded View



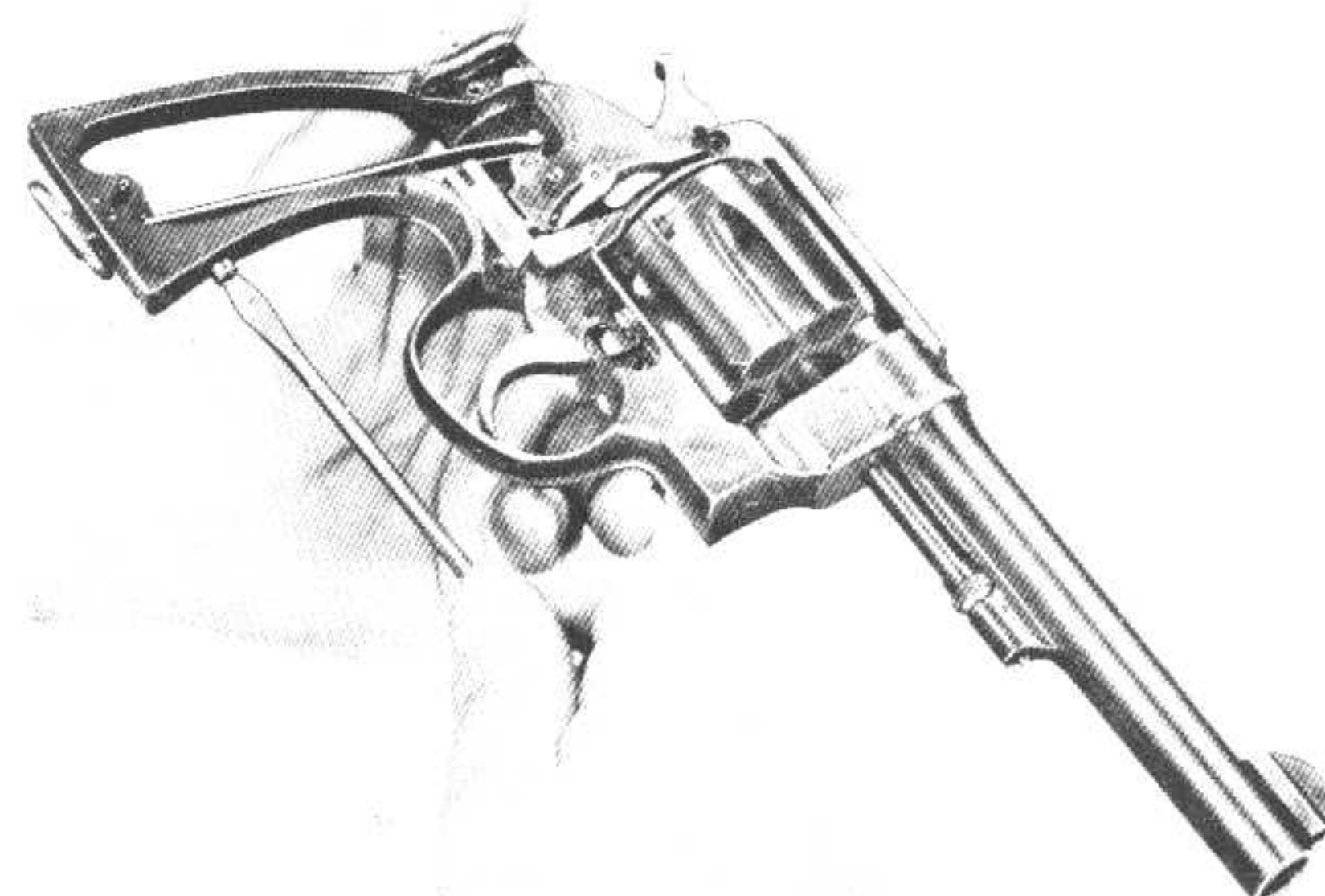
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Figure 81 — Smith and Wesson Revolver M1917, Cylinder Assembly — Exploded View



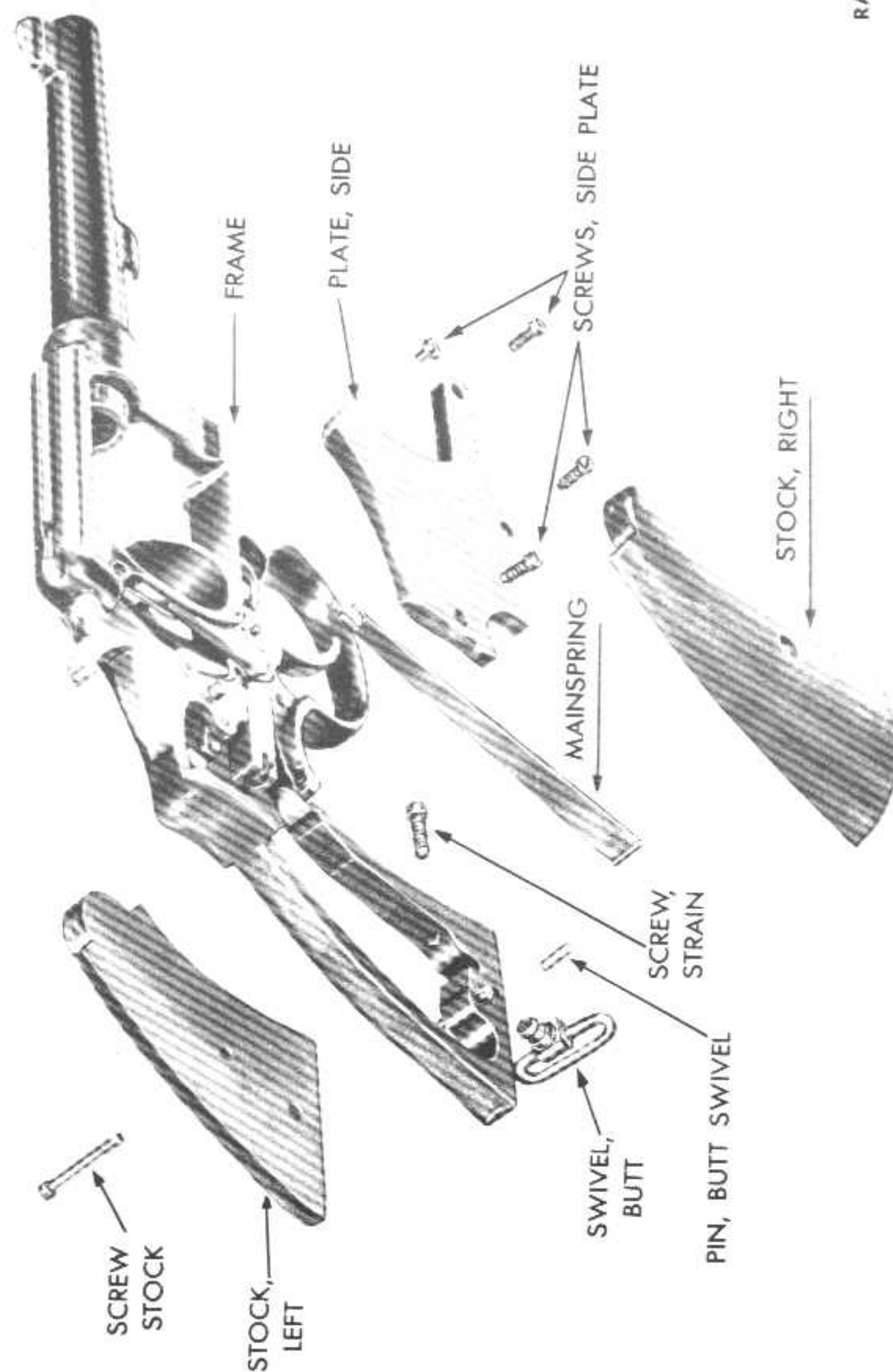
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Figure 82 — Removing Side Plate from Smith and Wesson Revolver M1917



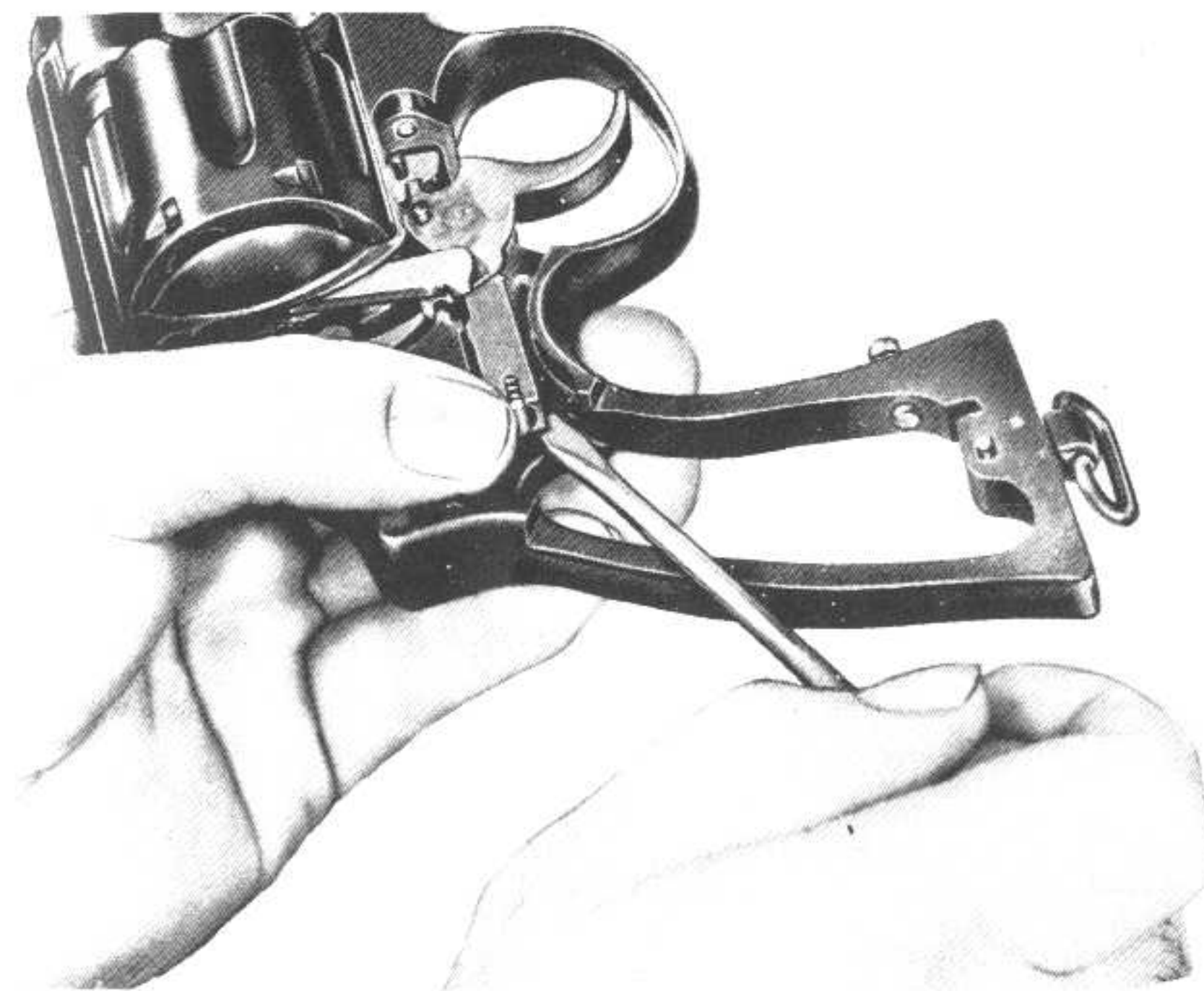
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Figure 83 — Removing Main Spring Strain Screw from Smith and Wesson Revolver M1917



RA PD 10525

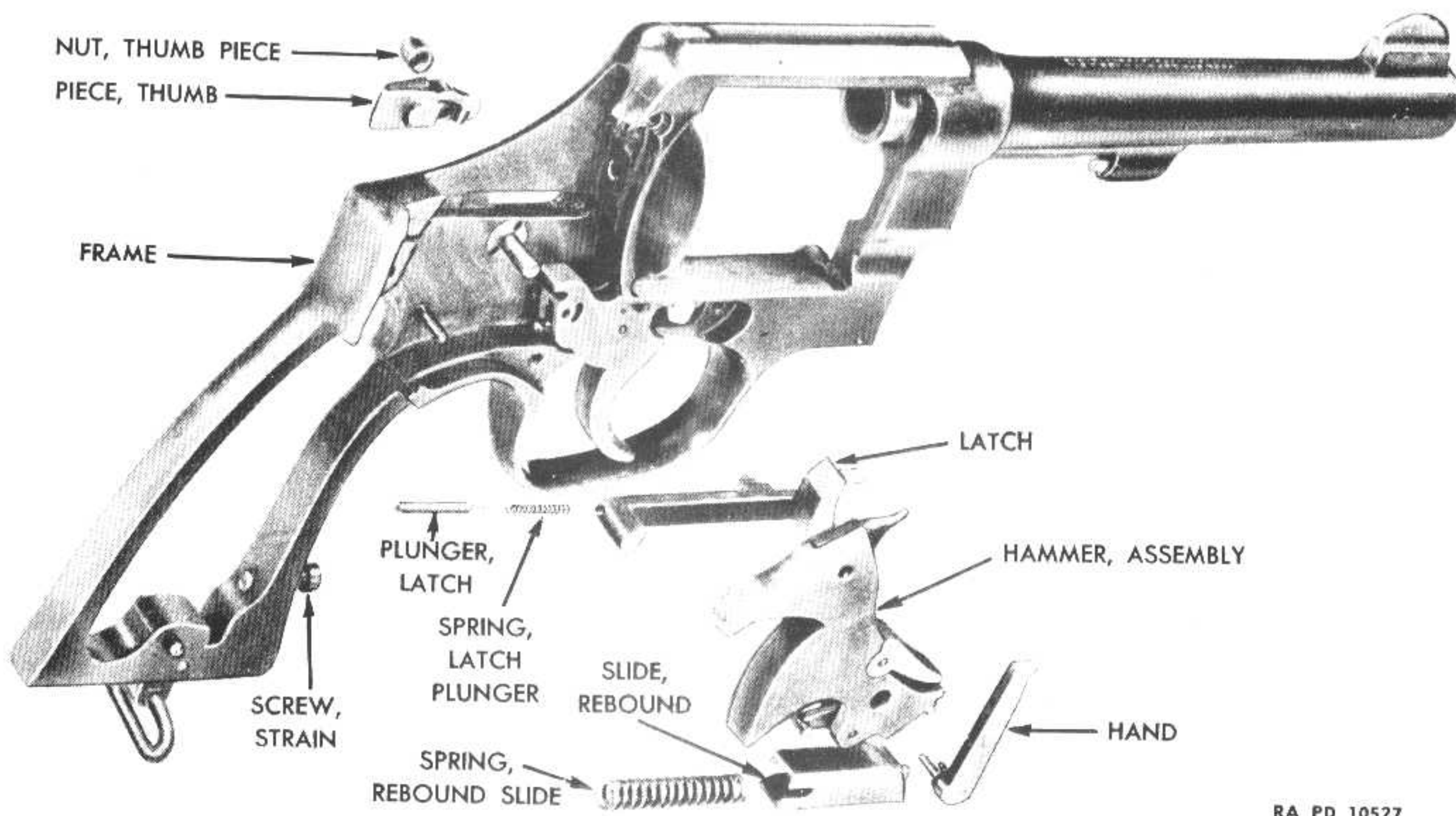
Figure 84 — Smith and Wesson Revolver M1917 Showing Side Plate, Stocks, Mainspring and Swivel Removed — Exploded View



RA PD 10526

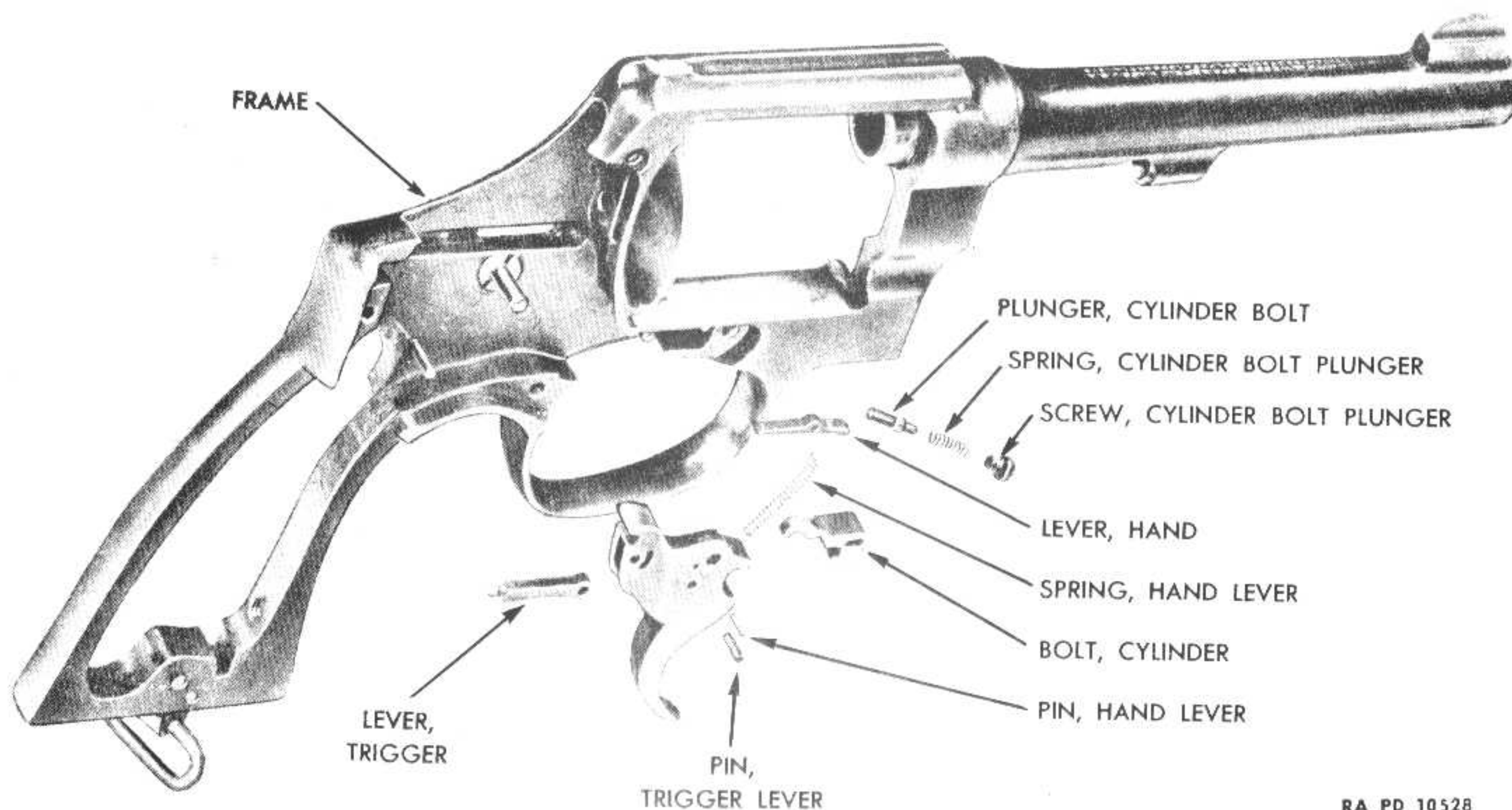
Figure 85 — Lifting Rebound Spring Housing from Smith and Wesson Revolver M1917

- (13) Remove the cylinder bolt plunger screw and cylinder bolt plunger.
- (14) Lift the cylinder bolt from its pin and remove it (fig. 87).
- (15) Push the latch to its rearmost position and remove it by pushing the rear end to the right.
- (16) Withdraw the latch plunger and spring.
- (17) The hammer, trigger, rebound slide, and cylinder bolt pins are to be removed by personnel only when equipped with proper tools for unscrewing these parts from the frame.



RA PD 10527

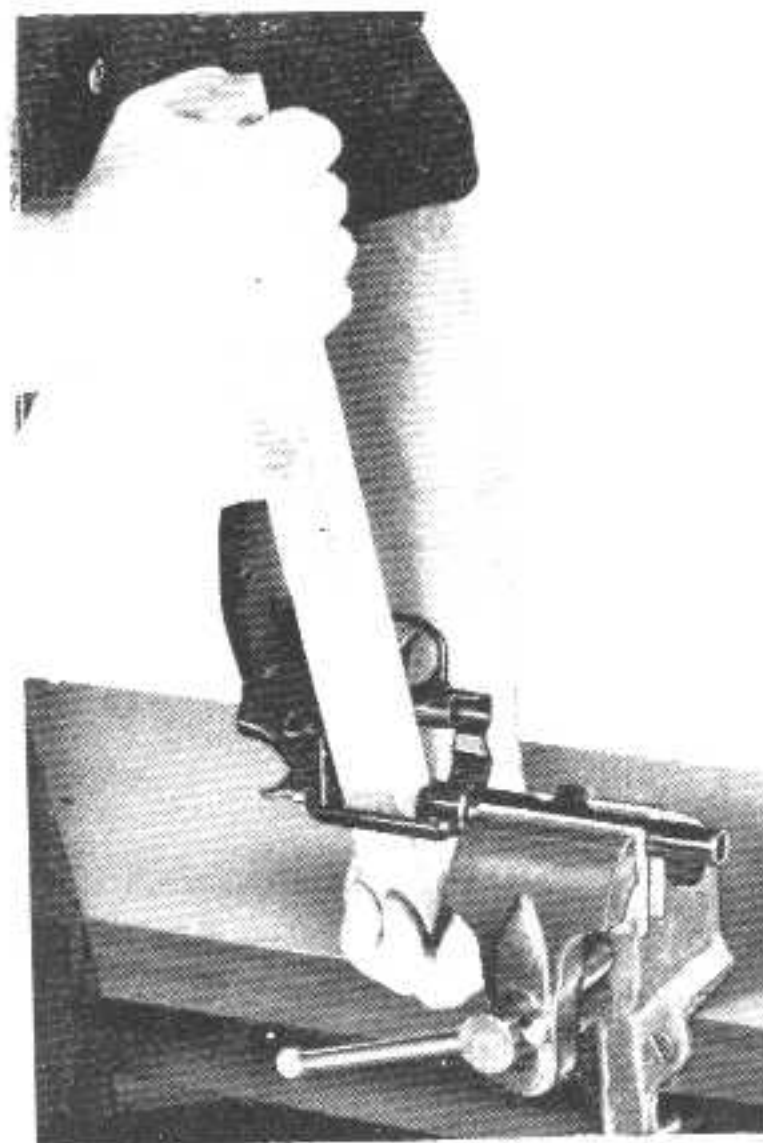
Figure 86 — Smith and Wesson Revolver M1917, Hammer, Hand, Catch, Plunger and Spring, Thumb Piece, Rebound Slide and Pin Removed — Exploded View



RA PD 10528

Figure 87 — Smith and Wesson Revolver M1917, Trigger, Cylinder Bolt, and Related Parts Removed — Exploded View

ORDNANCE MAINTENANCE — PISTOLS AND REVOLVERS



RA PD 10529

Figure 88 — Removing Barrel from Frame of Smith and Wesson Revolver M1917

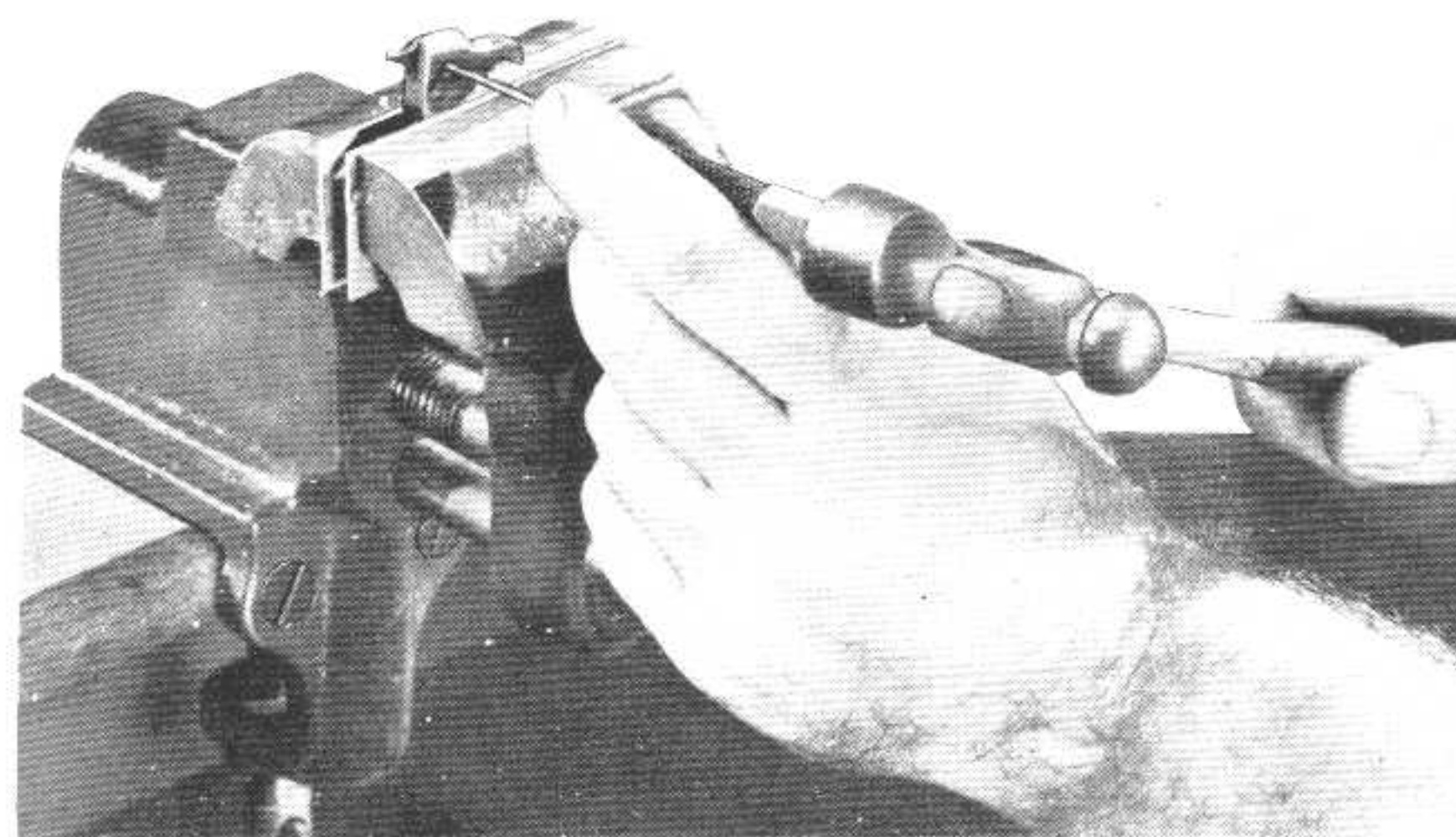
41. SPECIAL DISASSEMBLIES.

a. The following parts are to be disassembled only for replacement purposes:

(1) **BARREL FROM FRAME.** To disassemble the barrel from the frame, a special set of barrel jaws must be used in the vise and a frame wrench that sets tightly to the frame junction of the barrel and frame. Both jaws and wrench must be improvised by the shop concerned with the work. If these tools cannot be improvised readily, clamp the barrel in a vise having lead jaws, and unscrew the frame from the barrel by using a hardwood stick, approximately $1\frac{3}{8}$ inches square and 20 inches long, as a lever in the cylinder opening in the frame. Under no conditions use a metal bar. The barrel and frame are fitted with right-hand threads so that the frame is unscrewed by turning it counterclockwise when facing the butt end of the revolver (fig. 61). To assist in locating the barrel when replaced, a light scribe mark should be made across the shoulder and frame in an inconspicuous place, such as beneath the crane recess. The barrel and frame are fitted with right-hand threads so that the frame is unscrewed by turning it, counterclockwise when facing the butt end of the revolver (fig. 88).

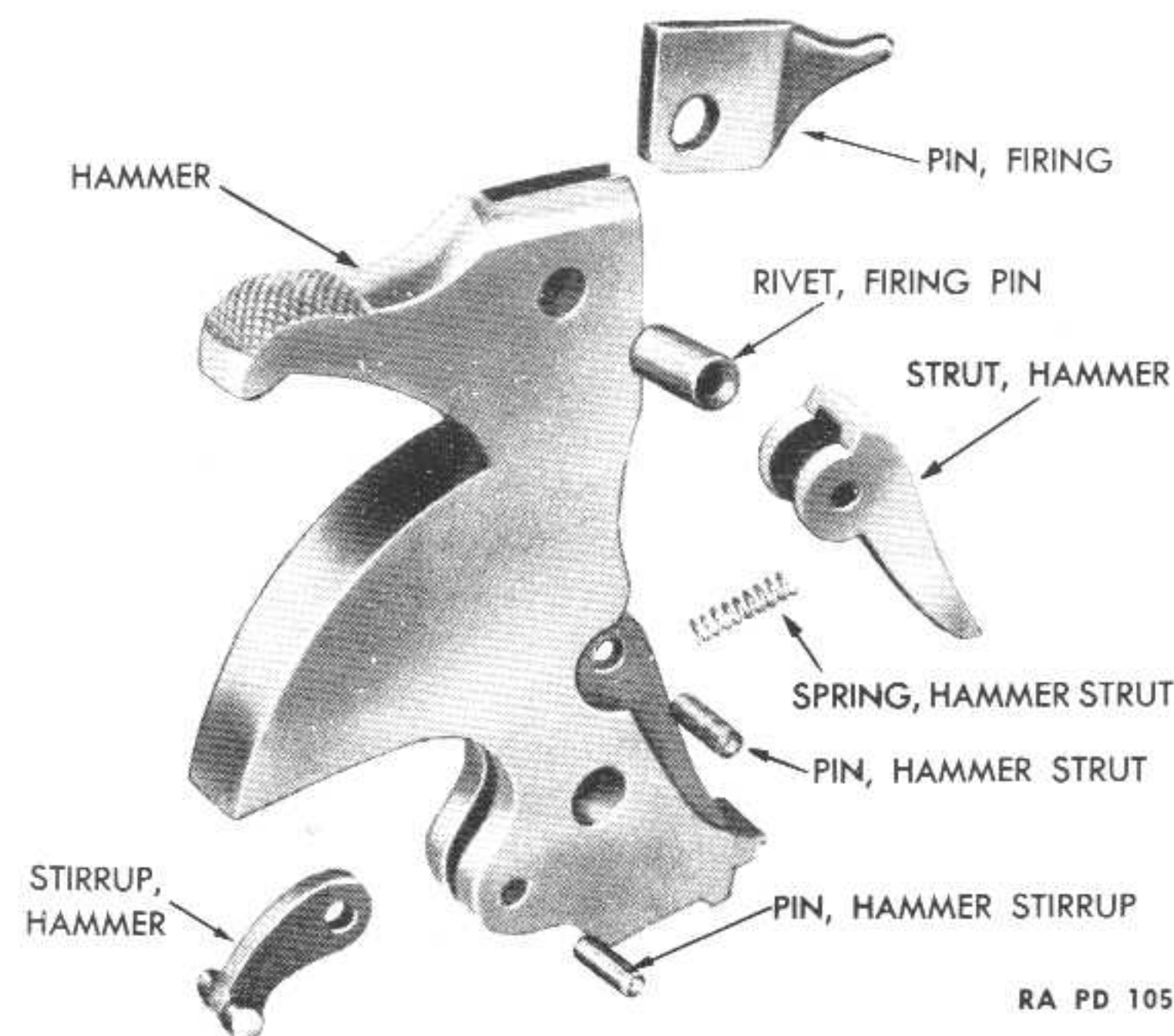
(2) **FIRING PIN, STRUT AND STIRRUP PINS FROM HAMMER.** Removal

DISASSEMBLY



RA PD 10530

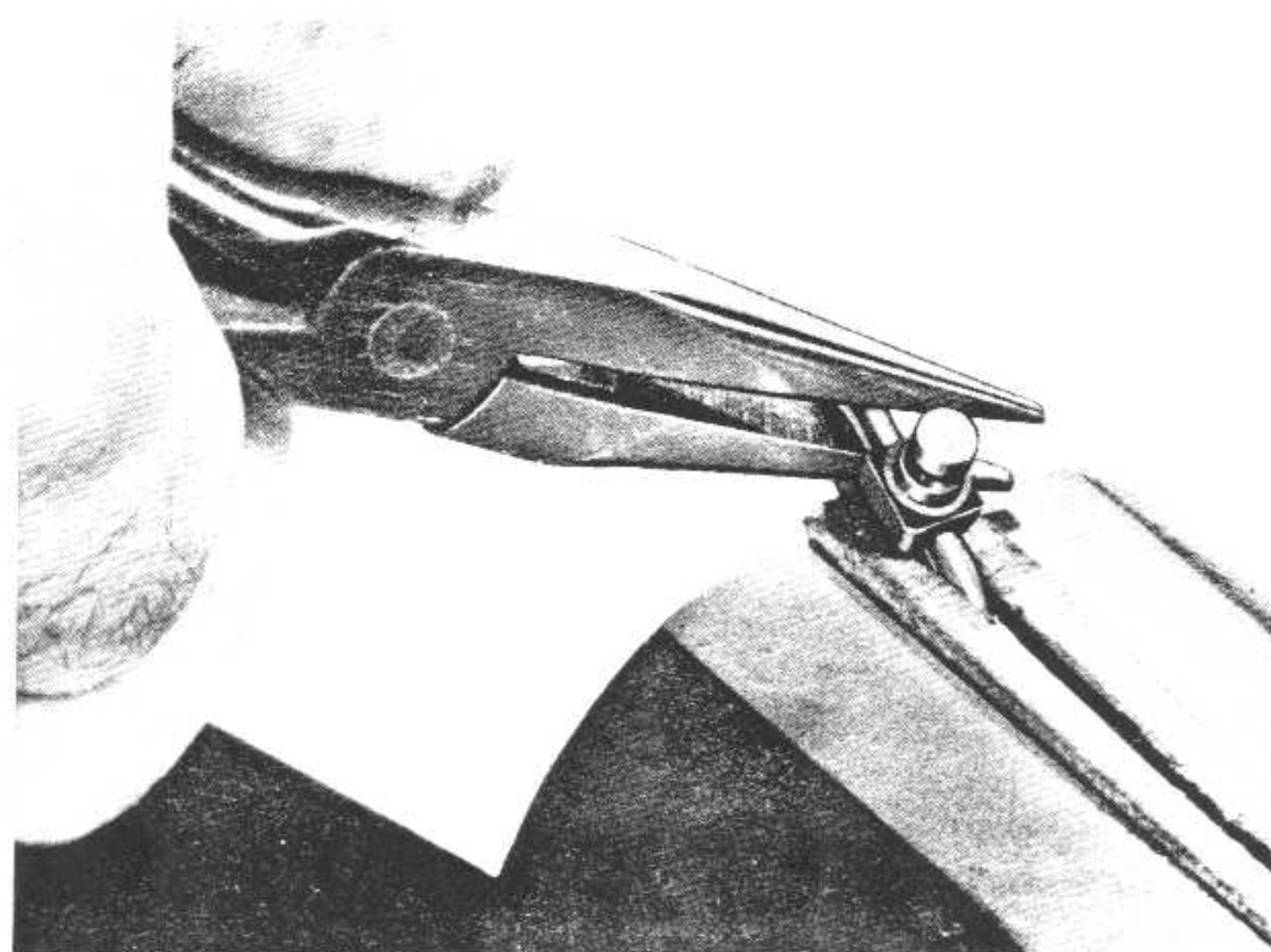
Figure 89 — Removing Firing Pin from Hammer of Smith and Wesson Revolver M1917



RA PD 10531

Figure 90 — Hammer Assembly of Smith and Wesson Revolver M1917 — Exploded View

ORDNANCE MAINTENANCE — PISTOLS AND REVOLVERS



RA PD 10532

Figure 91 — Removing Swivel Ring from Swivel Stud of Smith and Wesson Revolver M1917

of the firing pin, strut and stirrup pins from the hammer is accomplished by placing the hammer in a vise and driving out the pins with a drift of proper size. When removing the hammer strut pin, be careful that the strut spring does not fly out (figs. 89 and 90).

(3) **TRIGGER LEVER AND HAND LEVER PINS FROM TRIGGER.** Removal of the trigger lever and hand lever pins is accomplished by placing the trigger in a vise and driving out the pins with a drift of proper size. When removing the hand lever and pin, be careful that the hand lever spring does not fly out.

(4) **STOCK AND SWIVEL STUD PINS FROM FRAME.** Removal of the stock and swivel stud pins from the frame is accomplished by placing the frame on a wood block or in a vise and driving out the pins.

(5) **SWIVEL RING FROM SWIVEL STUD.** Removal of the swivel ring from the swivel stud is accomplished by holding one end of the ring in the vise tightly and pulling the ring open far enough with a pair of pliers to release it from the swivel stud (fig. 91).

(6) **ESCUTCHEONS FROM STOCKS.** To remove the escutcheons from the stocks, insert a small bar in the stock of approximately the same diameter as the hole. Then, by working the end of the bar against the inner edge of each escutcheon, it can be loosened sufficiently to lift it out.

Section XX

INSPECTION AFTER COMPLETE DISASSEMBLY

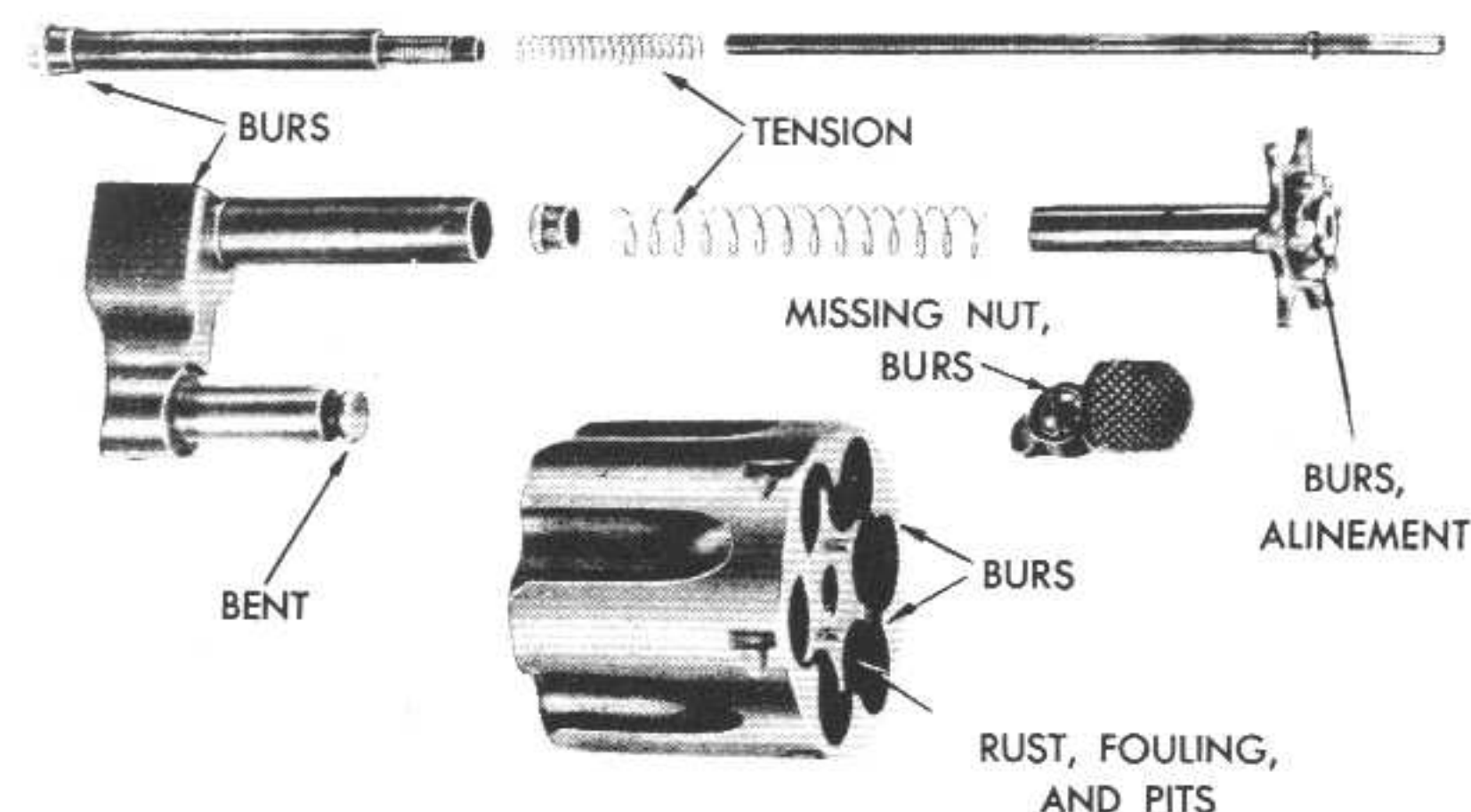
Paragraph

Parts to be inspected	42
Inspection report and improvised report form	43

42. PARTS TO BE INSPECTED.

a. Parts to be inspected in the order of inspection are as follows:

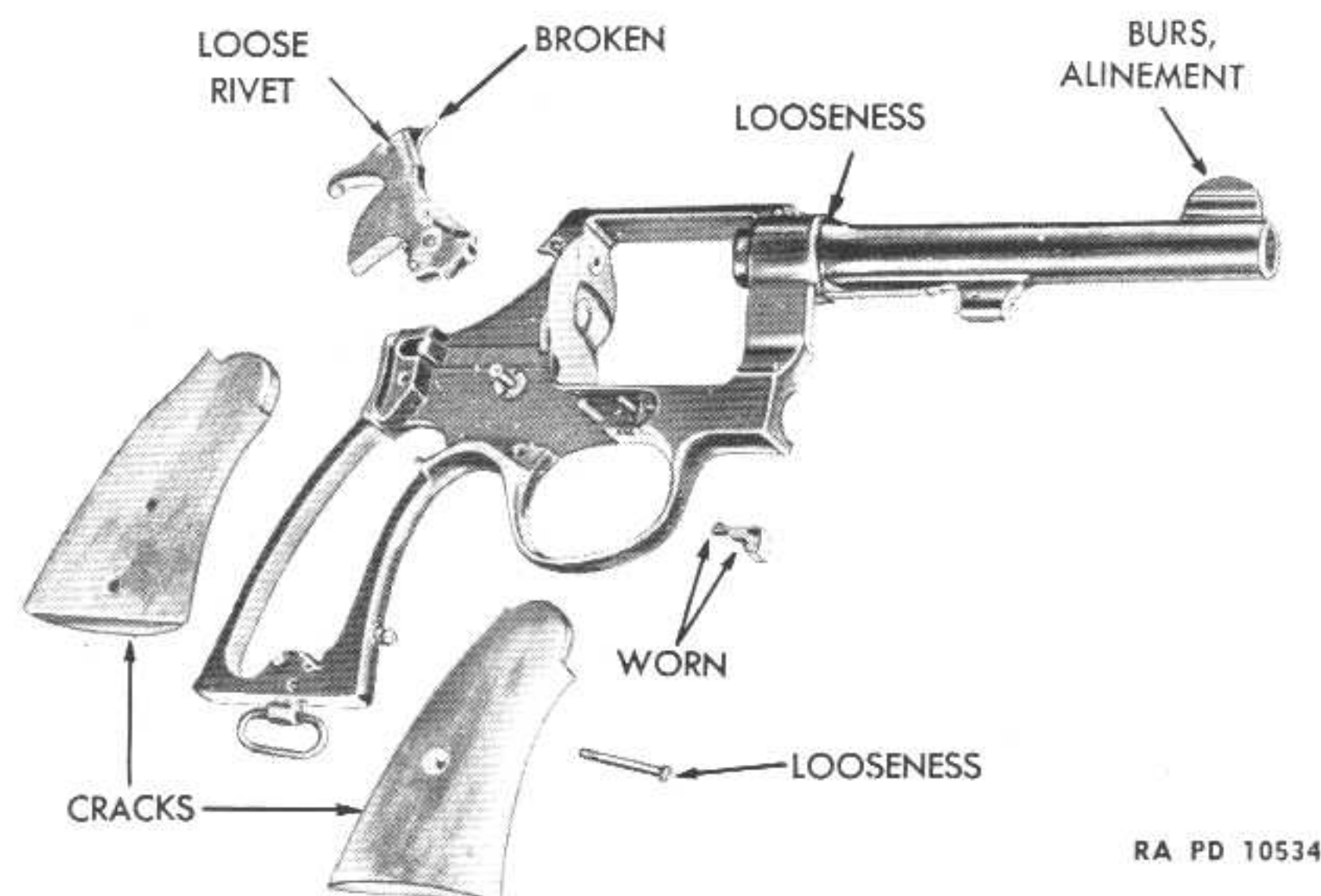
Part	Condition to be Checked
Thumb piece (fig. 92)	Function, missing nut, burs.
Crane (fig. 92)	Burs, alinement. Number of the crane should correspond with the number on the frame.
Cylinder (fig. 92)	Burs, rust, powder fouling, and pits.
Ejector (fig. 92)	Burs and alinement.
Ejector spring (fig. 92)	Tension.
Center rod (fig. 92)	Function and tension of spring.
Hammer (fig. 93)	Smoothness of operation, broken firing pin, excessively loose firing pin rivet.



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Figure 92 — Smith and Wesson Revolver M1917, Thumb Piece, Crane, Cylinder, Ejector and Ejector Spring, and Center Rod Showing Points to Be Inspected

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Figure 93 — Smith and Wesson Revolver M1917, Hammer, Cylinder Bolt, Stocks, Front Sight and Barrel, Showing Points to Be Inspected

Part	Condition to be Checked
Cylinder bolt (fig. 93)	Function, tension of the spring (the cylinder bolt should hold the cylinder firmly in place when the hammer is down, also when the hammer is cocked.)
Stocks (fig. 93)	Cracks, loose stock screw.
Front sight (fig. 93)	Burs and alinement.
Barrel (fig. 93)	Looseness in frame.

43. INSPECTION REPORT AND IMPROVISED REPORT FORM.

- For procedure to be followed relating to inspection and maintenance see paragraph 12 b.

Section XXI

REPAIRS AND REPLACEMENTS

	Paragraph
General	44
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Repairs	46

44. GENERAL.

- Maintenance of the Smith and Wesson revolver consists primarily of replacement of worn or broken parts. However, certain hand fitting operations are required when some parts are replaced. These are explained later in this section.

45. REPLACEMENT OF PARTS.

- Where parts or assemblies, or parts of assemblies, are broken or worn so as to make them unserviceable, they must be replaced from stock. Often only parts of the assembly will be worn or broken. Should it take more time to remove serviceable parts from the assembly than the parts are worth, the assembly should be scrapped. In quantity overhauling of Smith and Wesson revolvers, care should be taken in disassembling that the parts of each be kept separate. Certain parts of each revolver, such as the crane, side plate, etc., are not interchangeable.

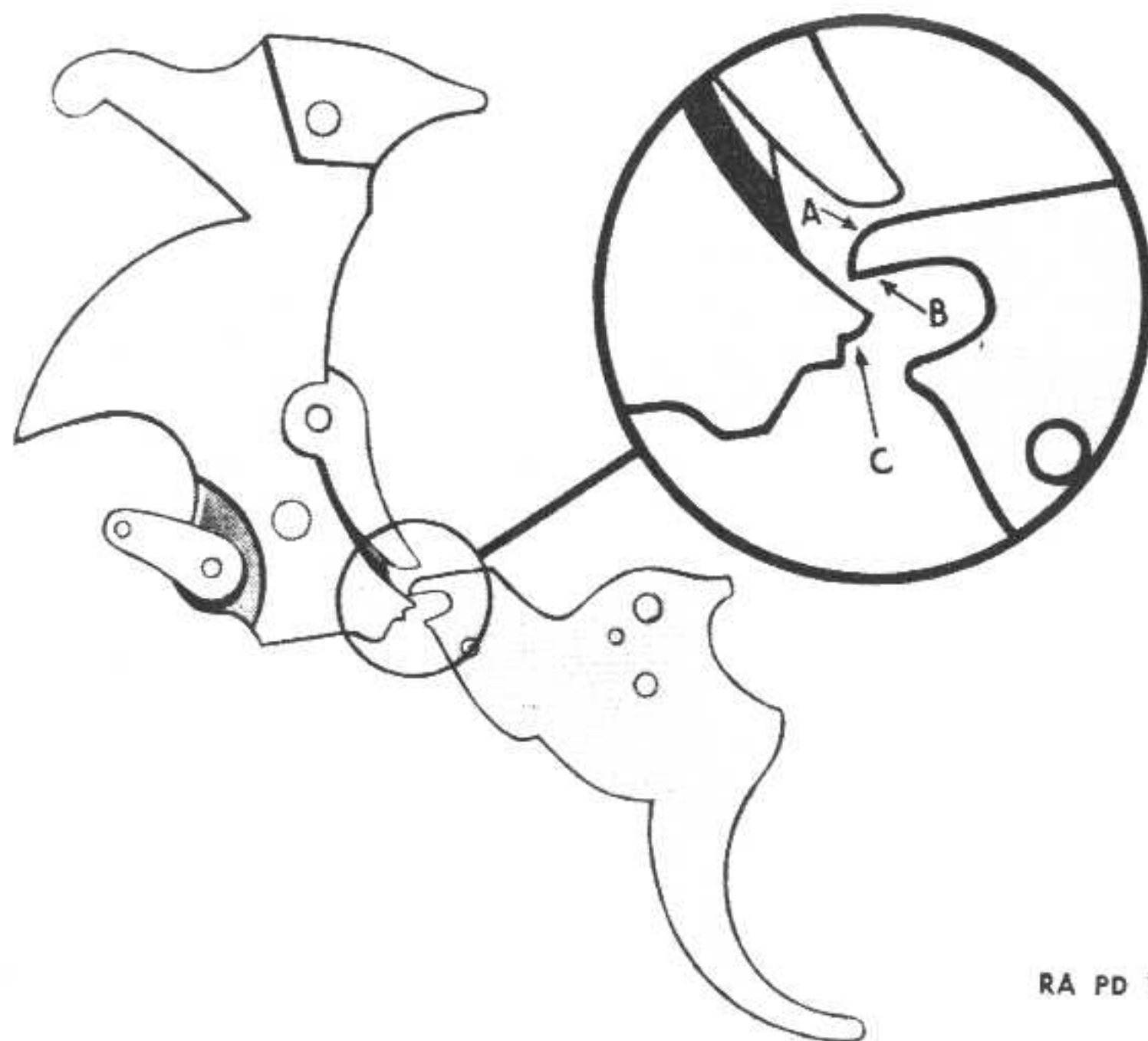
46. REPAIRS.

- Where there are burs on cams or on other smooth surfaces, the part usually can be made serviceable by removing the burs. A very fine file is used, and care is taken to remove as small an amount of metal as possible. Where roughened surfaces are present on moving parts, an oil stone should be used.

- Trigger Pull.** The trigger pull in single-action should be between 5 and 6½ pounds. A weak trigger pull is one which requires less than 5 pounds pressure on the trigger to release the hammer. A heavy trigger pull is one which requires more than 6½ pounds on the trigger to release the hammer in single-action (fig. 78 and par. 38 for trigger pull tests).

- (1) **TO CORRECT WEAK TRIGGER PULL.** First check the condition of the springs. Loosen the mainspring strain screw until the mainspring becomes loose in its seat in the frame. If serviceable, the mainspring should become almost perfectly straight when all strain is relieved. If the mainspring remains considerably curved, a new spring should be installed. This will increase the trigger pull slightly. The rebound slide spring may be considered serviceable if it snaps the trigger forward smartly when pressed to the rear and released. Wear of the surface

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Figure 94 — Hammer and Trigger Mechanism of Smith and Wesson Revolver M1917 Showing Points Where Corrections Are to Be Made by Filing and Stoning

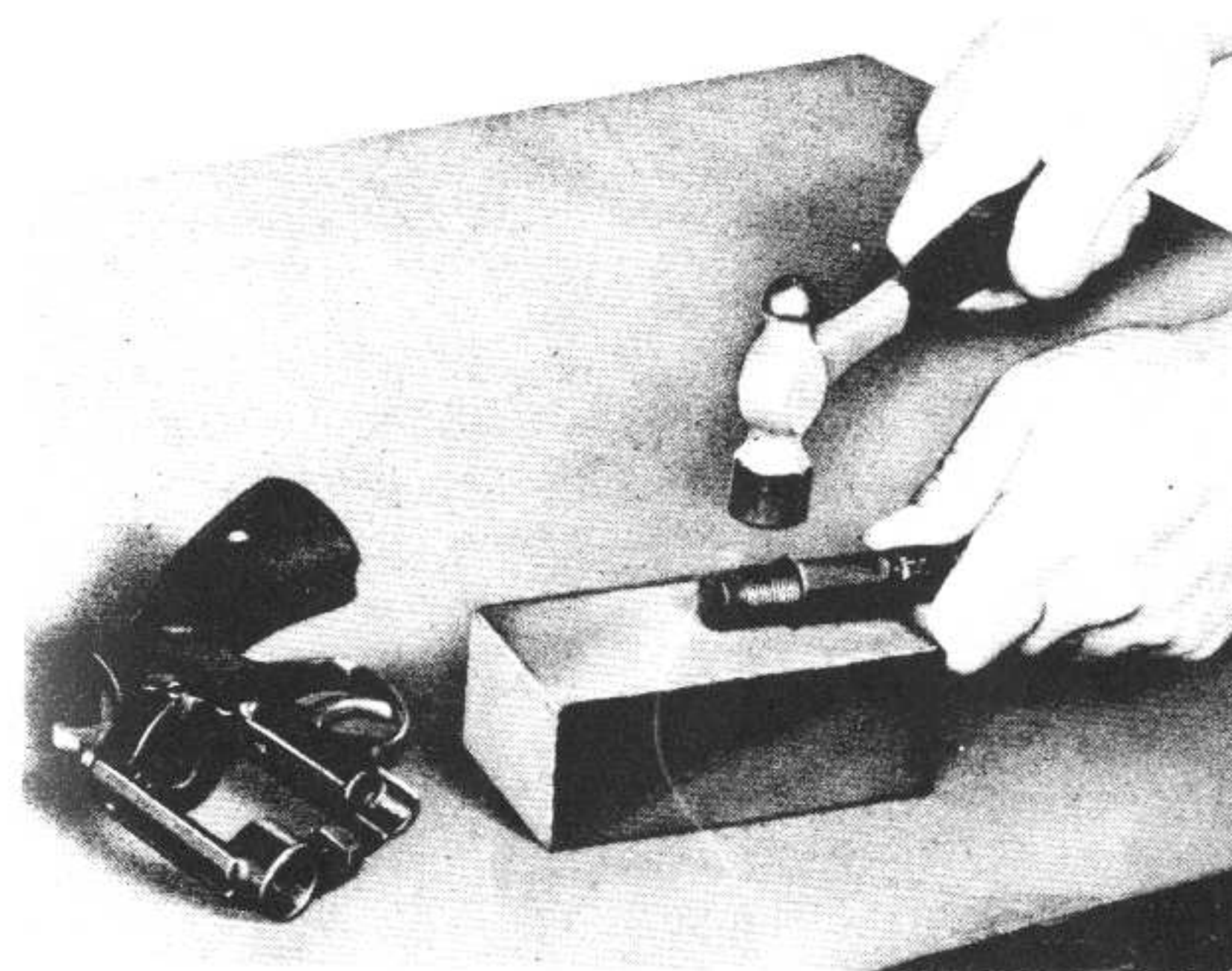
on the rear of the trigger and the cock notch on the lower front projection of the hammer may cause a weak trigger pull. Such surfaces can be restored to their original shape by careful use of a fine file and polishing with a fine stone, provided the wear is not excessive. Polish surfaces "A" and "B" on the trigger and surface "C" on the hammer (fig. 94) with a fine stone, being careful to remove as small an amount of metal as is necessary.

(2) **TO CORRECT HEAVY TRIGGER PULL.** Heavy trigger pull is usually caused by dry, roughened surfaces or binding of the parts due to burs or fouling. Polish the various surfaces with a fine stone and correctly lubricate the parts to remedy this condition.

c. To Tighten a loose Barrel. First remove the barrel pin, then unscrew the barrel, as described in paragraph 41 a (1). Clean the threads in the frame and on the barrel. Lightly peen the shoulder of the barrel, which fits against the frame, enough to tighten the barrel when it is screwed back into its original position (fig. 95).

d. Replacement of Barrel. The replacement barrel should be selected so that a minimum amount of fitting is required to obtain

REPAIRS AND REPLACEMENTS



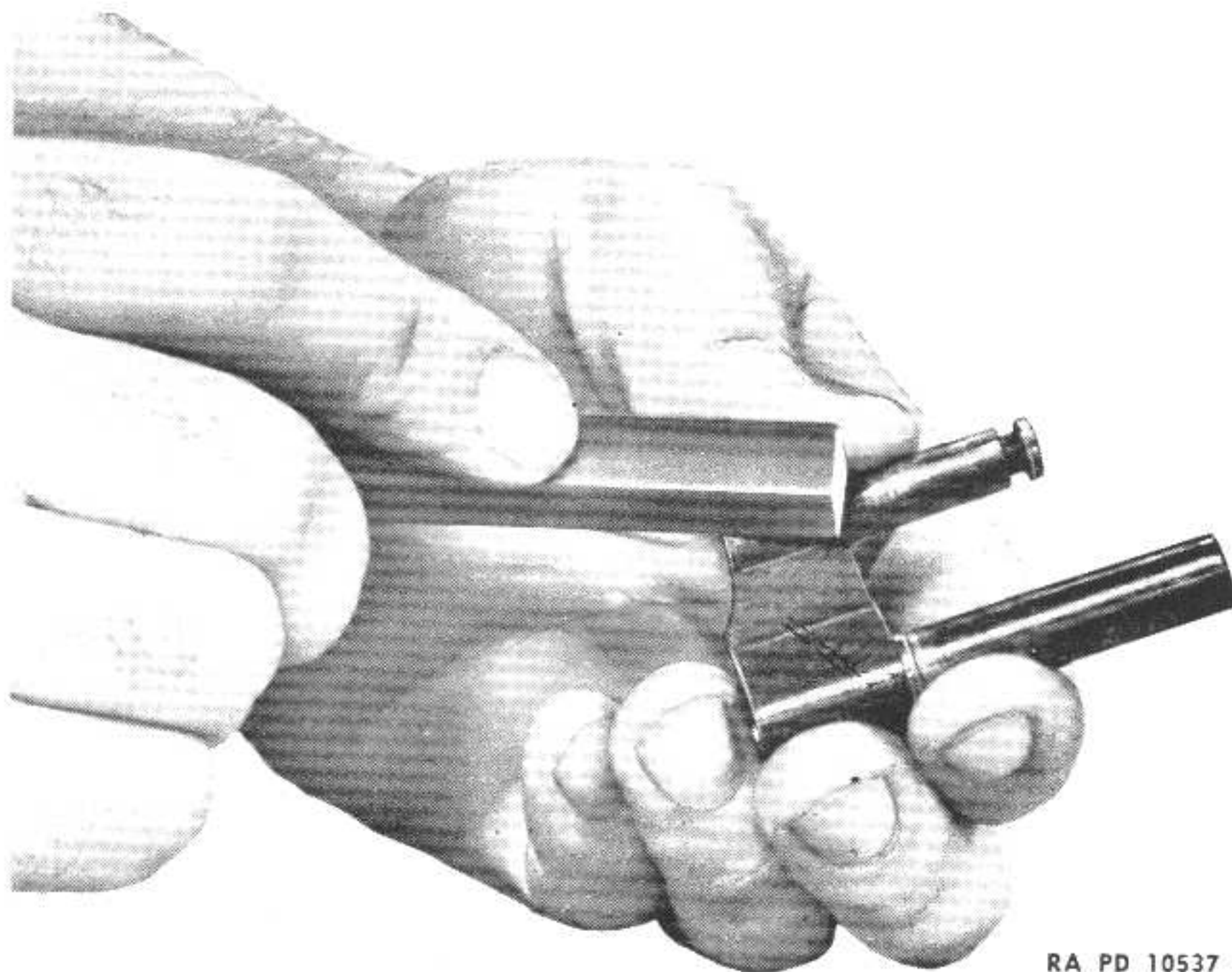
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Figure 95 — Peening Shoulder of Barrel of Smith and Wesson Revolver M1917

proper alinement. If necessary, a small amount of metal may be removed from the shoulder of the barrel by using a fine file or lathe which will permit correct alinement. It may be necessary to stone the rear end of the barrel and the front end of the cylinder. This clearance should be between 0.002 of an inch and 0.006 of an inch.

e. Rotational Play in the Cylinder. The slight rotational play in the cylinder which develops after considerable firing is caused by wear of the cylinder bolt, and wear or increase in width of the latching notches around the rear of the cylinder. Replacement of the cylinder bolt will reduce this play. The latching notches in the cylinder may be reshaped by lightly peening the contact sides. This peening must be limited to replacement of the metal pushed out to the sides.

f. Crane. Replacement of the crane is seldom necessary. Burs which might interfere with the latching of the cylinder in the firing position should be removed from the edges of the crane and the frame by stoning. If a new crane is to be fitted, considerable stoning is usually necessary on the surface of the crane, which fits against the frame to line up the cylinder with the bore. (fig. 96).



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**Figure 96 — Stoning Crane of Smith and Wesson Revolver M1917
Showing How New Crane Is to Be Fitted**

REASSEMBLY

Paragraph

Reassembly of Smith and Wesson revolver 47

47. REASSEMBLY OF SMITH AND WESSON REVOLVER.

a. Complete reassembly procedure for the Smith and Wesson revolver is as follows:

(1) **REPLACING BARREL ON FRAME.** Place the barrel in the vise, the jaws of which are protected by thick leather. Then manually screw the frame onto the barrel for a few turns to make sure the threads are meshing properly. Do not force the frame to turn, as it should engage the threads easily. Tighten the frame onto the barrel with a stick, approximately 1 $\frac{3}{8}$ inches square and 20 inches long, placed through the opening in the frame. Do not use a metal bar. Tighten until the frame and barrel are in correct position for inserting the barrel pin. Replace the barrel pin.

(2) Reinstall any pins removed from the frame, such as the stock and swivel stud pins.

(3) Reinstall any pins and allied parts which may have been removed from the hammer and trigger. The hammer and trigger should be held in a vise for these operations.

(4) Replace the locking bolt spring and bolt with flat surface up. Replace the locking bolt pin.

(5) Replace the cylinder bolt on its pin. Replace the cylinder bolt plunger, cylinder bolt spring, and cylinder bolt screw.

(6) Assemble the hand to the trigger. With the blade of a screwdriver or drift, depress the forward end of the hand lever against the hand lever spring. Place the hand pin in its hole in the trigger so that the lug alongside the hand pin is engaged below the rear end of the hand lever (fig. 97). Check for correct assembly by making sure there is spring pressure on the hand.

(7) Replace the assembled trigger and hand on the trigger pin, holding the upper end of the hand to the rear to clear the frame, with the rear end of the trigger lever in its topmost position.

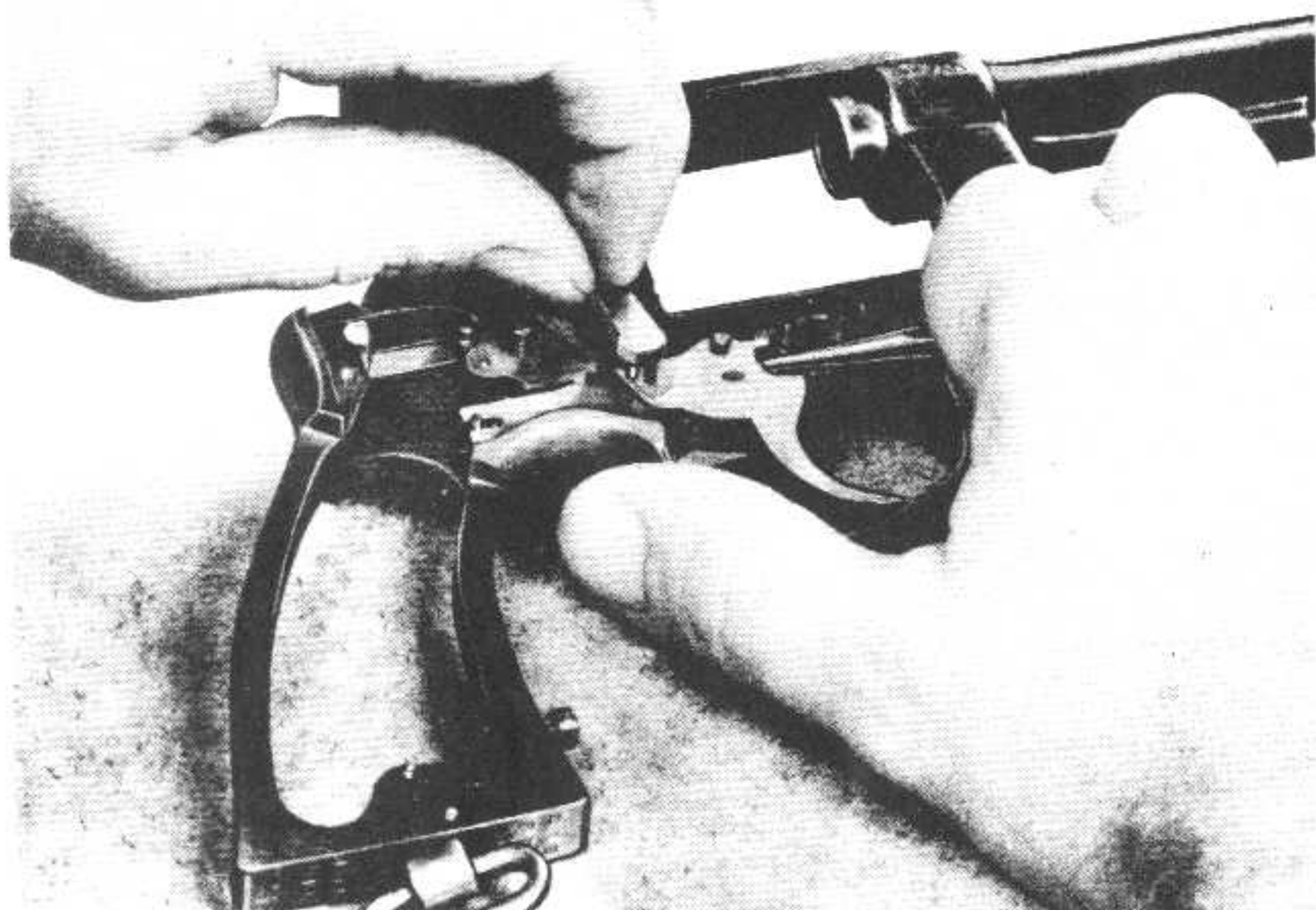
NOTE: If the hand is to be assembled without removing the trigger, the hand lever may be pushed with a drift by reaching under the trigger and pressing the lever downward.

(8) Replace the latch plunger and latch plunger spring in the recess in the rear end of the latch.

(9) Replace the latch in its guide in the frame by pressing the plunger forward.

(10) Replace the hammer assembly on the hammer pin (fig. 98).

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Figure 97 — Replacing Hand On Smith and Wesson Revolver M1917

NOTE: To accomplish this, the trigger should be in the rearmost position and the latch should be held to the rear.

(11) Put the rebound spring into the rebound slide and replace the assembly on the rebound slide pin with beveled end forward, so that the rear end of the trigger lever engages the notch in the forward face of the rebound slide.

(12) Replace the mainspring by engaging the hooks on the upper end with the hammer stirrup and then pressing the lower end into its recess in the frame.

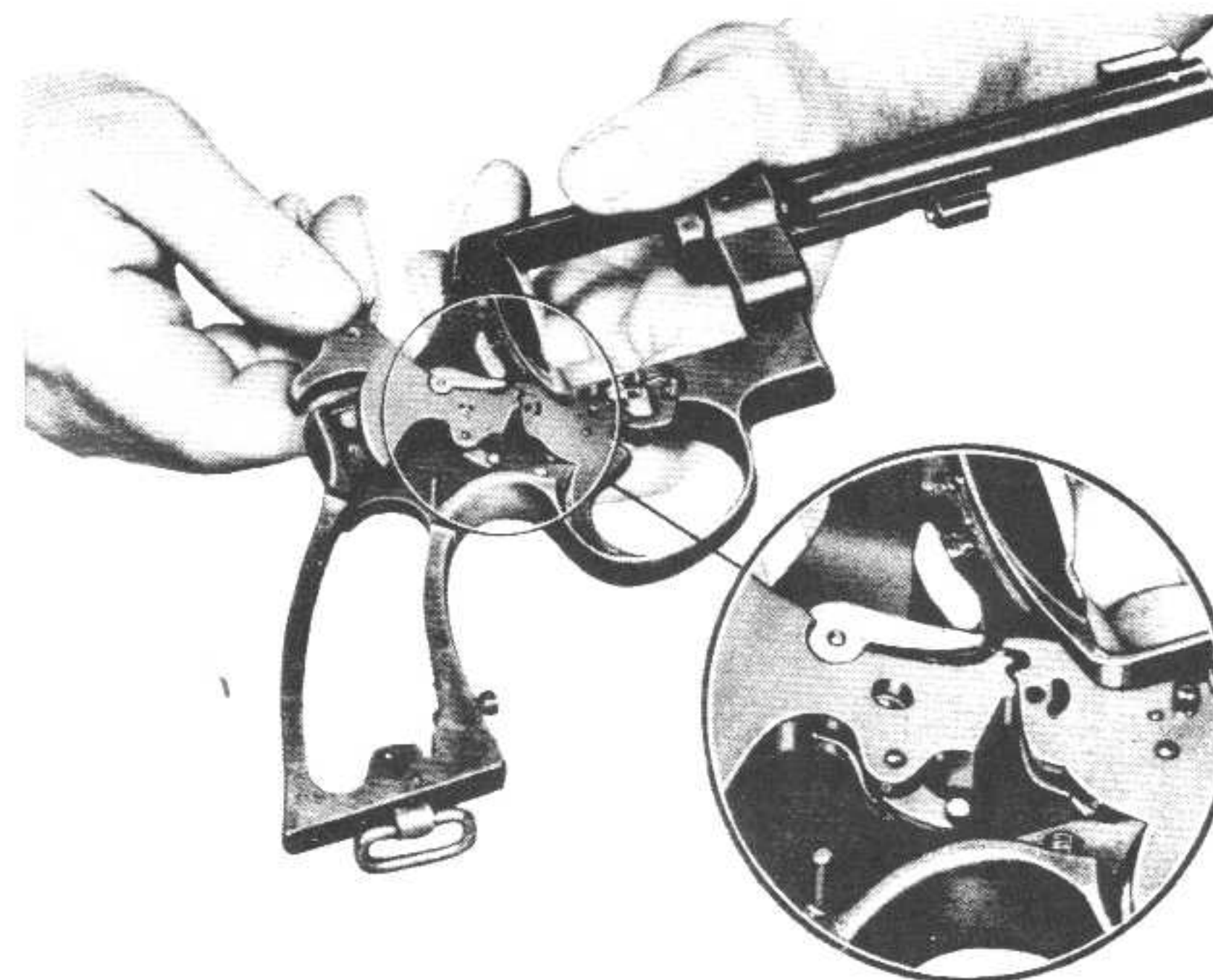
(13) Replace the mainspring strain screw.

(14) Replace the side plate and all side plate screws except the forward one which holds the cylinder assembly in place.

NOTE: In some Smith and Wesson revolvers all side plate screws may be interchangeable. In others, the screw which holds the crane in place may be smooth at its end to fit into the groove in the crane, whereas the others are threaded their entire length.

(15) Assemble the cylinder and crane group. Insert the ejector in the cylinder. Then insert the ejector spring in the cylinder over the arbor of the ejector. Now, holding the cylinder vertically, insert the

REASSEMBLY



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Figure 98 — Replacing Hammer Assembly On Hammer Pin of Smith and Wesson Revolver M1917 Showing How Trigger Should Be In Rearmost Position

center rod and its spring, followed by the ejector collar, the latter with the small end over the end of the ejector spring. Put the crane over the center rod and push the arbor into the hole in the cylinder. Insert the ejector plunger and while pushing on the head end, screw it with the fingers into the arbor of the ejector until tight.

(16) Replace the crane stop plunger and crane stop plunger spring in the hole in the crane.

(17) Assemble the crane and cylinder assembly to frame.

(18) Replace the remaining side plate screw.

(19) Replace the thumb piece and thumb piece nut.

(20) Replace the stocks, escutcheons, and stock screw.