

**ORDNANCE MAINTENANCE — U.S. RIFLES, CAL. .30  
M1903, M1903A1, M1903A3 AND M1903A4**

**Section I  
INTRODUCTION**

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**1. SCOPE.**

a. This Technical Manual is published for the information and guidance of ordnance maintenance personnel. It contains detailed instructions for disassembly, assembly, inspection, maintenance, and repair of the materiel listed below. Additional descriptive matter and illustrations are included to aid in providing a complete working knowledge of the materiel. These instructions are supplementary to those in Field Manuals and Technical Manuals prepared for the using arms.

Rifle, U. S., cal. .30, M1903

Rifle, U. S., cal. .30, M1903A1

Rifle, U. S., cal. .30, M1903A3

Rifle, U. S., cal. .30, M1903A4 (Snipers)

Sight, telescopic, M73B1 (Weaver No. 330 C)

Bayonet, M1905

Bayonet, M1

Scabbard, bayonet, M3

Scabbard, bayonet, M1910

Scabbard, bayonet, M7

Sling, gun, M1907

Sling, gun, M1

Cover, front sight

b. This manual differs from TM 9-1270, Ordnance Maintenance: Rifles, U. S., cal. .30, M1903 and M1903A1, dated 19 May 1942 as follows:

(1) Information added on U. S. Rifles M1903A3 and M1903A4 (Snipers), Bayonet M1, Bayonet Scabbard M7, and Gun Sling M1.

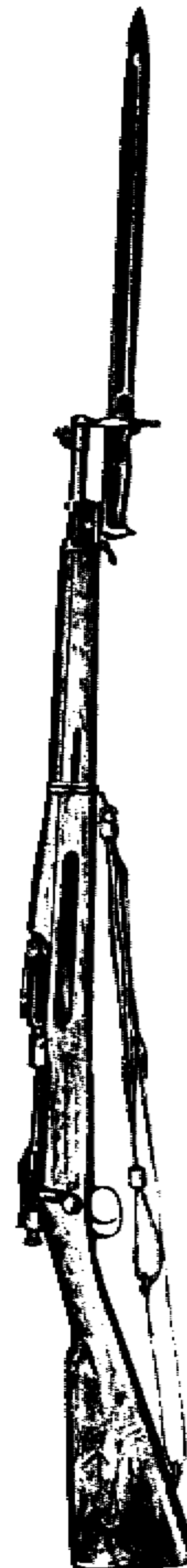
(2) Information added on telescopic sight used with the Rifle M1903A4 (Snipers). This information is supplementary to that contained in TM 9-270.

(3) Changes in information contained in sections on maintenance and repair and special maintenance.

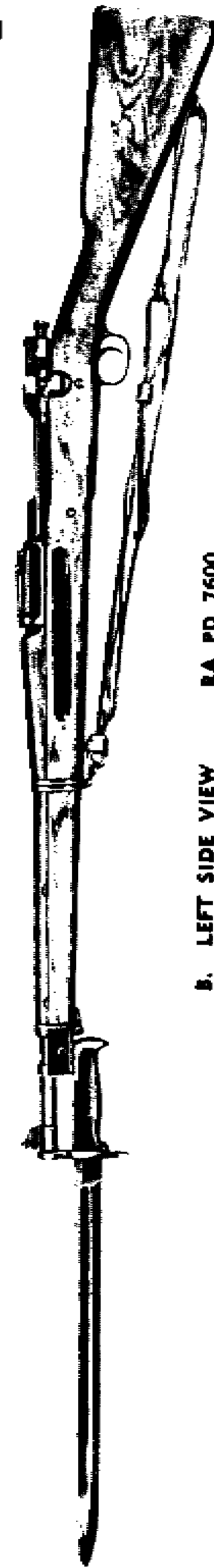
**2. GENERAL.**

a. The basic rifle of the group covered in this manual is the U. S.

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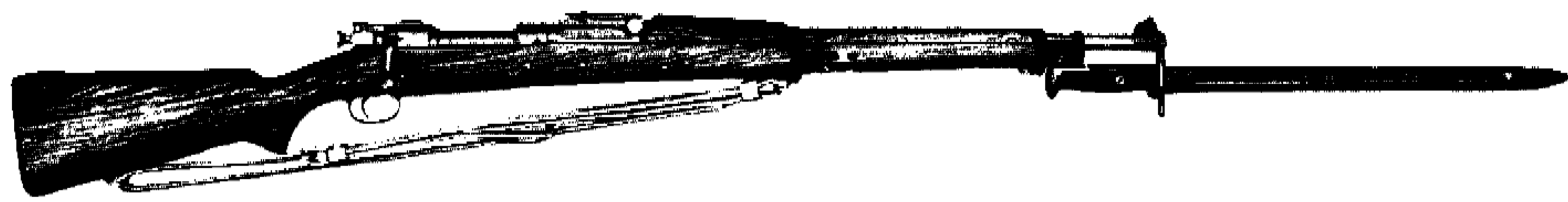


A. RIGHT SIDE VIEW RA PD 7599



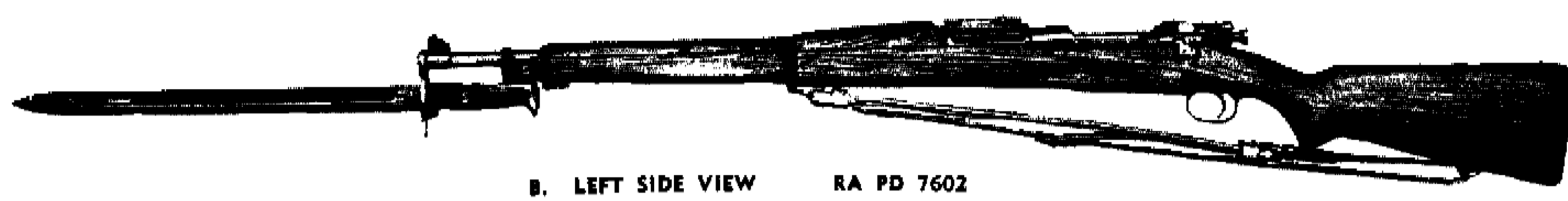
B. LEFT SIDE VIEW RA PD 7600

Figure 1 — U.S. Rifle, cal. .30, M1903 With Bayonet M1905 and Sling M1907



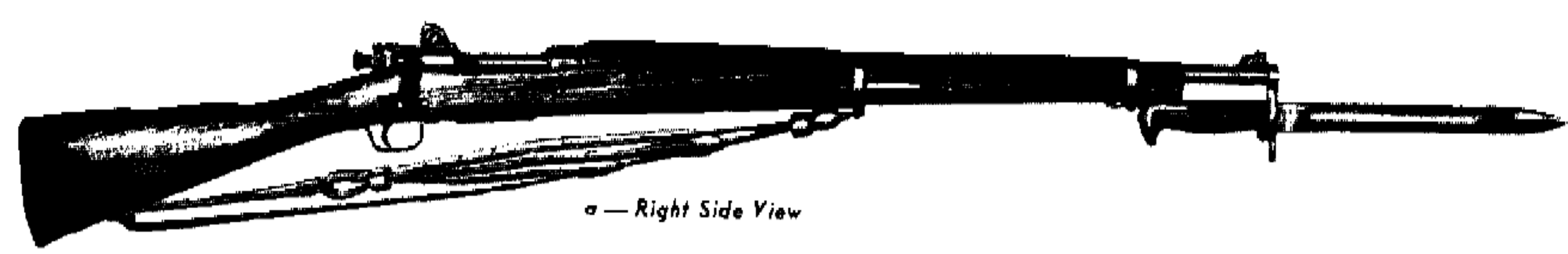
A. RIGHT SIDE VIEW RA PD 7601

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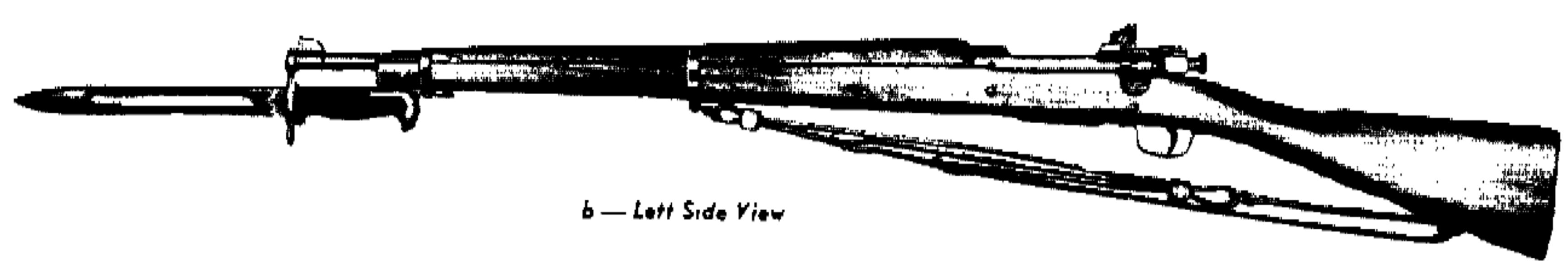


B. LEFT SIDE VIEW RA PD 7602

**Figure 2 — U.S. Rifle, cal. .30, M1903A1 With Bayonet M1905 and Sling M1907**



a — Right Side View



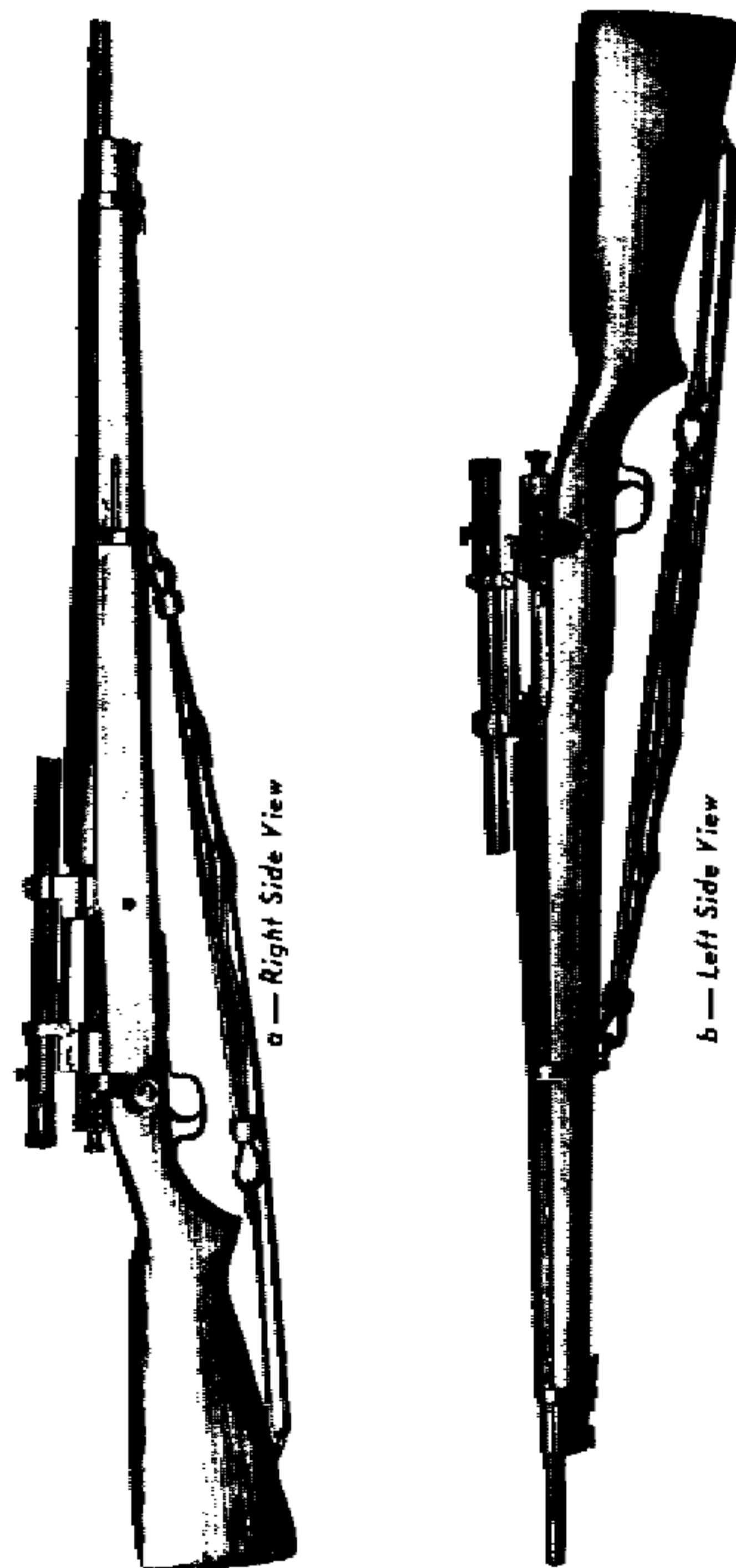
b — Left Side View

RA PD 79912

**Figure 3 — U.S. Rifle, cal. .30, M1903A3 With Bayonet M1 and Sling M1907**

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**Figure 4 — U.S. Rifle, cal. .30, M1903A4 (Snipers) With Telescopic Sight M73B1  
(Weaver No. 330 C) and Sling M1907**

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Rifle, cal. .30, M1903 (fig. 1). This rifle, generally known as the Springfield rifle, has been in service for many years. Subsequently a pistol grip type stock replaced the straight grip type stock and, with the rifle so modified, the designation was changed to U. S. Rifle, cal. .30, M1903A1 (fig. 2). Later, the Rifle M1903 was modified in manufacturing details, the rear sight and fixed base removed and an adjustable rear sight of different design mounted on the bridge of the receiver, a barrel guard longer than and substituted for the hand guard, and a stacking swivel band added. This modified rifle was designated as U. S. Rifle, cal. .30, M1903A3 (fig. 3). Still later, the Rifle M1903A3 was modified by removing front and rear sight groups, assembling an M1903A1 type stock, mounting a telescopic sight on the top of the receiver, and designated as U. S. Rifle, cal. .30, M1903A4 (Snipers) (fig. 4). Detailed characteristics of the various models are explained in paragraph 3. An enlarged view of the mid-sections of the M1903A1, M1903A3, and M1903A4 Rifles is shown in figure 5 for the purpose of easy identification.

**NOTE:** Recently manufactured stocks do not have the grooves cut in the sides for gripping, as shown in figure 1.

b. As the Rifle M1903 is the basic rifle and the Rifle M1903A1 identical with the exception of the stock, these two may be considered as one rifle in this manual. As all of the four rifles covered herein are basically the same in mechanism, operation, and functioning, the disassembly and assembly, inspection, maintenance, and repair are covered to apply generally. Exceptions with regard to the models are noted where they apply. General illustrations are of the Rifle M1903A1, but apply to the other models unless specified otherwise in the text. Likewise, illustrations of the Rifle M1903A3 apply to the M1903A4 unless specified otherwise.

c. A list of parts for all four rifles covered herein is contained in SNL B-3, with parts common to any one model only, so indicated.

**3. CHARACTERISTICS.**

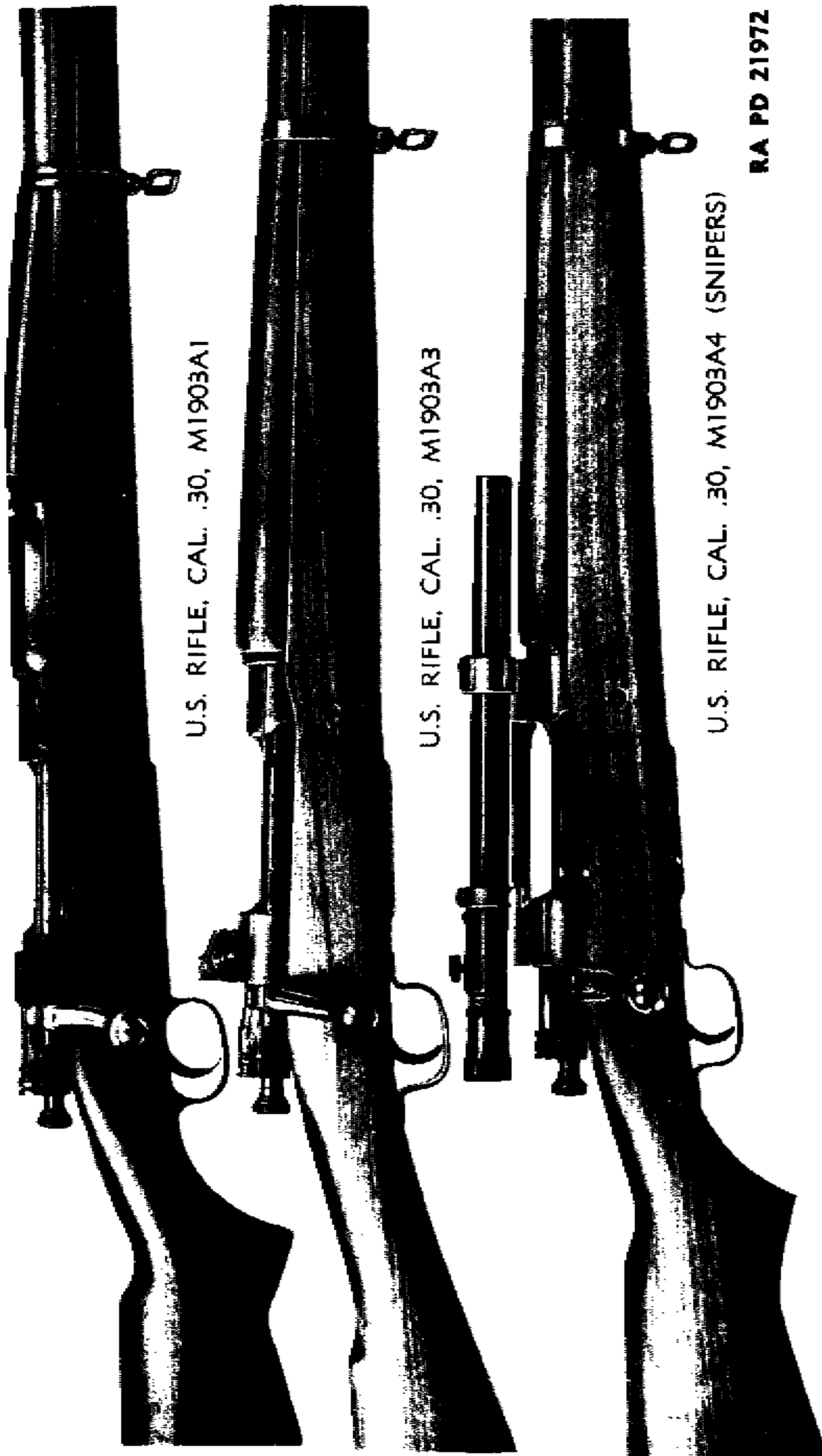
**a. U. S. Rifle, Cal. .30, M1903.**

(1) **LOADING.** This rifle is a breech-loading magazine weapon of the bolt type. The magazine will hold five cartridges, and one additional cartridge may be inserted in the chamber, thus making the maximum capacity for any one loading six shots. To facilitate the loading of the magazine, cartridges are ordinarily put up in brass clips holding five cartridges each. The magazine, however, may be loaded by inserting single cartridges by hand, one after the other.

(2) **REAR SIGHT** (fig. 6).

(a) The rear sight is adjustable for windage, and the drift of the bullet to the right is offset automatically by the construction of the rear sight leaf. The leaf is graduated from 100 to 2,850 yards. The lines extending completely across the branches of the leaf are alternate

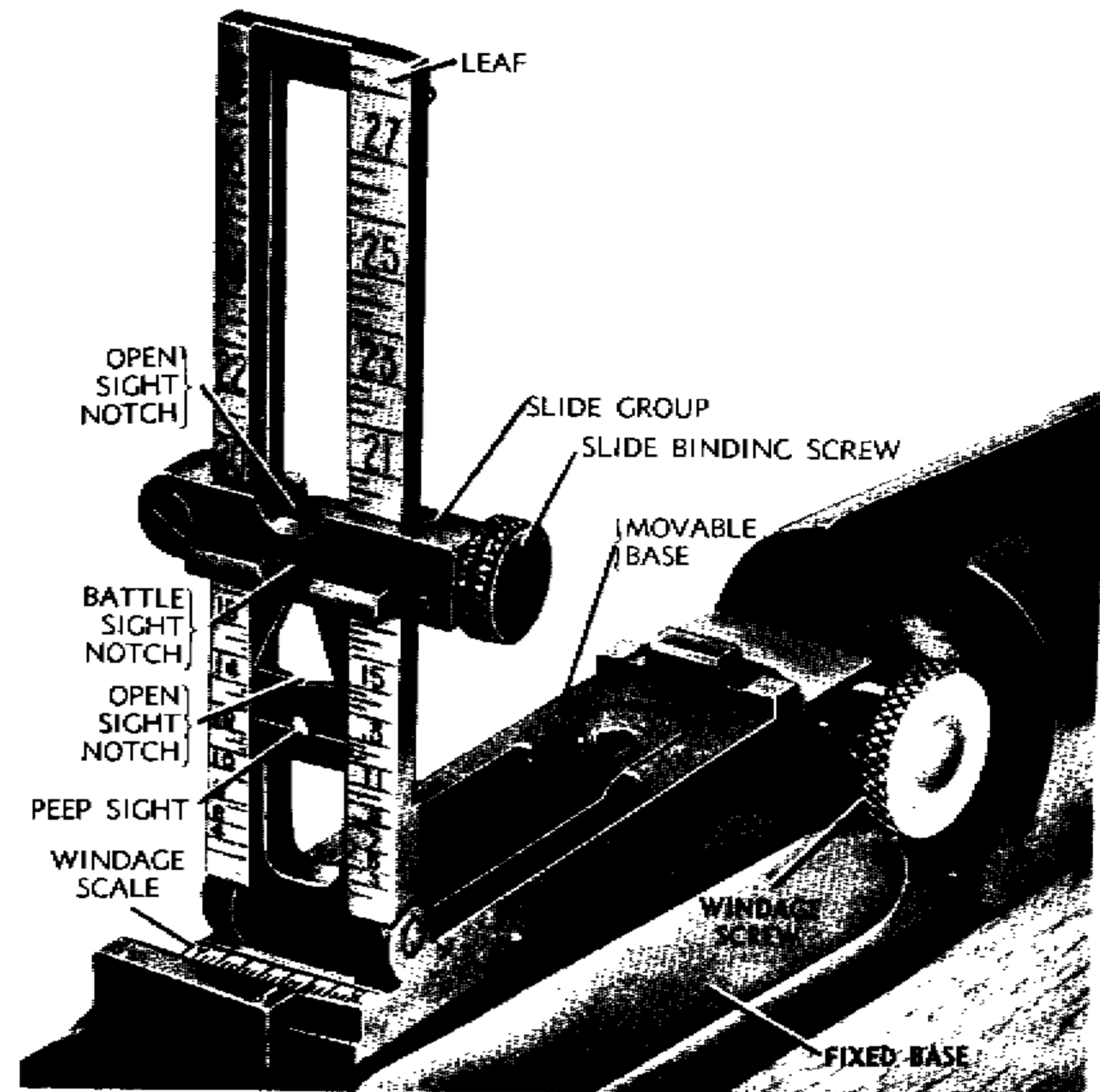
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Figure 5—U.S. Rifles, cal. .30, M1903A1, M1903A3, and M1903A4 (Snipers) —Midsection —Right Side View  
— Showing Characteristics for Identification

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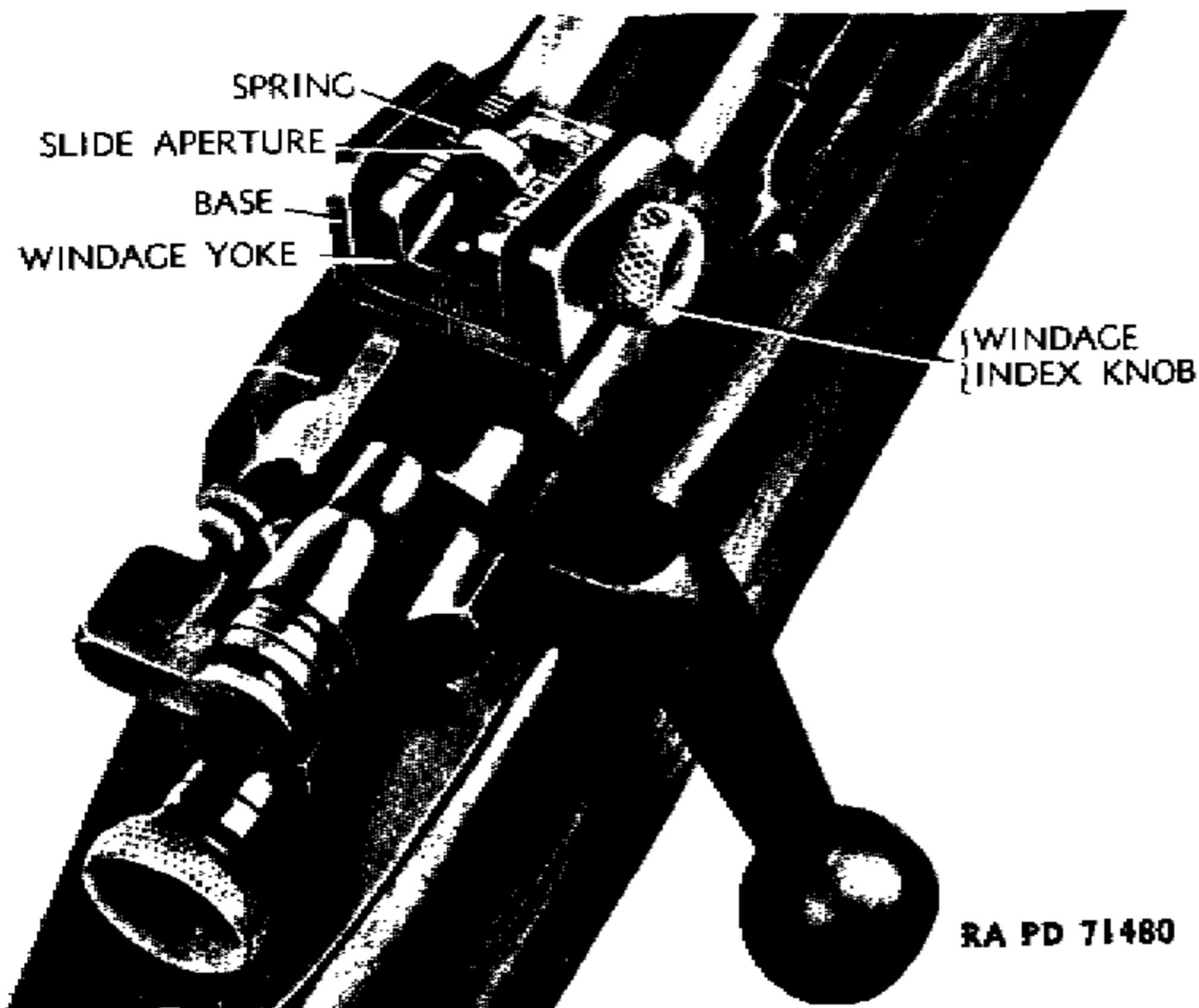
Figure 6 — Rear Sight Group Showing a Setting for Range and Windage — U.S. Rifles, cal. .30, M1903 and M1903A1

100-yard divisions, the longer of the short lines 50-yard, and the shorter lines 25-yard divisions. The drift slide, which may be moved up or down on the leaf, has two notches called open sights and a circular hole called the peep sight. With the leaf raised to the vertical position, the lines on either side of the peep sight and on either side of the lower open sight notch enable the user to set the drift slide accurately at any desired graduation on the leaf. With the leaf and slide in the down position, and using the battle sight notch which is cut in the slide cap, the sights are set for 547 yards.

(b) The rear end of the rear sight movable base is marked with wind gage graduations. Each graduation corresponds to a lateral deviation in the point of impact of the bullet of 4 inches for each 100 yards of range to the target.

(3) RATE OF FIRE AND EFFECTIVE RANGE. The maximum rate

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**Figure 7 — Rear Sight Group — U.S. Rifle, cal. .30, M1903A3**

of accurate fire with this weapon depends upon the skill and the position of the operator and the visibility of the target. It varies from 10 to 15 shots per minute. The effectiveness of rifle fire during combat decreases as the range to the target increases. Its use at ranges greater than 600 yards is unusual.

(4) **BORING.** Originally the barrel of this rifle was bored with four grooves with a right-hand twist, and 1 turn in 10 inches. Recently manufactured barrels are bored similarly but with only two grooves instead of four. This change in boring applies to all models of this rifle covered in this manual.

**b. U. S. Rifle, Cal. .30, M1903A1.** This rifle is identical with the Rifle M1903 described in subparagraph a, above, with the exception of the stock assembly. The Rifle M1903A1 has a pistol grip type stock whereas the Rifle M1903 has a straight grip type stock.

**c. U. S. Rifle, Cal. .30, M1903A3.** This rifle is basically identical with the Rifle M1903 described in subparagraph a, above. Principal variations are in the front and rear sight groups and the design of a few parts as explained below. Like parts are not all interchangeable, and replacements should be made according to parts listed in SNL B-3.

**NOTE:** Parts of the Rifle M1903A3 which vary in design may be found in recently manufactured M1903 and M1903A1 Rifles, provided they are interchangeable.

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(1) **STOCK.** The stock is similar to that of the Rifle M1903, except that the pistol grip is optional on the M1903A3, whereas the M1903 did not have the pistol grip. Some of the M1903A3 Rifles issued had front and rear stock screw pins running laterally through the center portion of the stock to reinforce the trigger guard and magazine aperture in place of the front and rear stock screws and nuts assembled to the Rifle M1903. Front and rear stock screws and nuts are now standard for the Rifle M1903A3.

**NOTE:** SCREW, stock, front, B146876, is now used for both front and rear and nomenclature changed to "SCREW, stock."

(2) **REAR SIGHT.** In this rifle, the folding leaf type of rear sight and fixed base, such as used on the Rifles M1903 and M1903A1, are removed from the rear end of the barrel; and a rigid, wing type of rear sight is assembled to the bridge of the receiver (fig. 7). This sight consists of a base, windage yoke, slide aperture, spring, and windage index knob, and their components. The range scale on the windage yoke is marked in 100-yard graduations, and has 50-yard adjustments. The slide aperture can be moved up and down this scale for various ranges. Turning the windage index knob moves the yoke to the right or left to allow for windage. Each click represents a change of 1 minute of angle or a horizontal change of impact of 1 inch at a range of 100 yards. Each division or mark on the windage scale represents 4 minutes of angle or a change in the point of impact of 4 inches at a range of 100 yards.

(3) **BARREL GUARD.** In this rifle, a barrel guard (fig. 53) extending from the bayonet stud band to the front face of the receiver, takes the place of the hand guard (fig. 45) on the Rifle M1903 which extends from the upper band to the front face of the fixed base of the rear sight. (The bayonet stud band (fig. 53) corresponds to the upper band (fig. 51) of the Rifle M1903.)

(4) **STACKING SWIVEL, BAYONET STUD BAND, AND LOWER BAND ASSEMBLIES** (fig. 53).

(a) The stacking swivel is of stamped metal and secured to the forward end of the stock just to the rear of the bayonet stud band, by the stacking swivel band. In the Rifle M1903, the stacking swivel is of round wire and pivoted to the upper band.

(b) The bayonet stud band which replaces and is shorter than the upper band of the Rifle M1903, is solid on top and has two bayonet mounting studs on the bottom. In the Rifle M1903 there is an opening in the top of the upper band, and but one bayonet stud.

(c) The lower band swivel is a flat metal stamping pivoted in a flat lower band. The swivel in the Rifle M1903 is of round wire, and the lower band is grooved for reinforcement.

(5) **TRIGGER GUARD MAGAZINE ASSEMBLY** (fig. 49).

(a) The magazine, trigger guard, and floor plate are of stamped sheet metal, staked and welded together to form a single unit, and

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called the "trigger guard magazine assembly." In the Rifle M1903, the magazine and trigger guard are an integral machined piece called the "trigger guard," and the floor plate is a separate machined piece assembled to the bottom of the magazine section of the trigger guard by means of a spring-operated catch assembled to the trigger guard (fig. 47).

(b) In the Rifle M1903, the magazine spring is clipped to the follower and floor plate, and the spring and follower are removed from the receiver together with the floor plate by disengaging the floor plate catch. In the Rifle M1903A3, the magazine spring is clipped to the follower only, which may be either the M1903 or M1903A3 follower, and must be removed from the top opening of the magazine, or together with the trigger guard magazine assembly as explained in paragraph 7 d.

(6) **FRONT SIGHT GROUP** (fig. 54). The front sight group is composed of a flat front sight pinned in a slot in a ring type sight base which is keyed and pinned to the muzzle end of the barrel. The sight is furnished in five heights, from 0.537 inch to 0.477 inch. The front sight group of the Rifle M1903 is composed of a flat front sight, a movable stud, and a fixed stud (fig. 51) which are assembled and pinned to each other and to a spline on the barrel.

(7) **BUTT PLATE AND SWIVEL GROUP** (fig. 50). This group is similar to that of the Rifle M1903 but composed of metal stampings instead of machined pieces. The butt plate trap is fastened in the butt plate assembly and not easily removable as in the case of the butt plate cap M1903 (fig. 48).

(8) **BOLT GROUP** (fig. 43). The parts comprising the bolt group are basically the same as those of the Rifle M1903 (fig. 42) but differ slightly in design, and are not all interchangeable.

(9) **MAGAZINE SPRING AND FOLLOWER GROUP** (figs. 49 and 37). The follower is a sheet metal stamping with a straight ridge running longitudinally on the top side. A portion of the follower near the front (narrow) end is bent downward and inward on both sides to seat the magazine spring, and there is a projection on the rear end to hold it in position. The follower M1903 is a machined piece with an undercut pad on the bottom of the front end to seat the magazine spring, and a pad on the bottom of the rear end to hold it in position (fig. 37). The raised ridge on the top of the follower M1903 has two relief cuts on the left side. As either of these followers may be found assembled in any of the rifles covered in this manual, identification is necessary when removing the follower, as explained in the section on disassembly and assembly. Figure 37 shows top and bottom views of both types of followers for identification.

**d. U. S. Rifle, Cal. .30, M1903A4 (Snipers).**

(1) This rifle was designed for "sniping" and is identical with

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